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The Influence of the Modified Free Inquiry Learning Model on Students' Critical Thinking Skills in Science Learning in Elementary Schools

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ABSTRACT

This study aims to determine the effect of the Modified Free Inquiry learning model on students' critical thinking skills in the subject of Science in grade IV of SD Negeri 097820 Bah Jambi in the 2023/2024 Academic Year. The independent variable in this study is the Modified Free Inquiry learning model (X) and the dependent variable in this study is students' critical thinking skills (Y). The research method used is an experimental method with a quantitative research type and the number of samples in this study is 25 students based on the Saturated Sampling technique. The research instrument is a questionnaire, a multiple-choice test instrument. The results of students' critical thinking skills show an average pretest of 64.84 while the average posttest value is 82.80 and for the questionnaire students get an average value of 90.24. Furthermore, the hypothesis tester shows that the t count is 6.599 while the t table is 2.069, it is proven that the hypothesis is greater, so Ho is rejected and Ha is accepted. With a determination coefficient value of 0.65, it can be explained that students' critical thinking is 65% determined by the magnitude of the modified free inquiry learning model and 35% is caused by other factors not examined in this study. Based on this, it shows that there is an influence between the Modified Free Inquiry learning model and students' critical thinking skills.

Keywords*: *modified free inquiry model, critical thinking

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INTRODUCTION

Education is an important thing that is very necessary for the progress of the nation. Because education functions to develop attitudes, abilities and improve the quality of life and human dignity in realizing the goals of education itself. Education is a process to create human resources who have critical, creative, logical, and systematic thinking. Renewal efforts in the field of education are basically directed at efforts to master the materials, tools and learning media used to improve the quality of education (Tanjung, et all, 2024:307).

Elementary school is an important stage of education in a child's development, because at this stage children begin to learn and understand their surroundings. Therefore, the development of critical thinking skills in elementary school students is very important for child development. Critical thinking skills are very important in dealing with problems in everyday life, because by having critical thinking skills students can analyze and evaluate the information obtained. However, in reality there are still many elementary school students who lack critical thinking skills.

The development of technology and science requires students to balance with the millennial era, the goal is for students to master knowledge, skills, and be able to think critically and creatively. Improving human resources can be done through education, namely by training students to think critically in the learning process.

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Thinking is a process or effort of the brain in producing knowledge. Critical thinking is an activity of finding solutions to solve problems and thinking about what actions to take. So, critical thinking skills are the ability to examine or analyze a source, identify relevant and irrelevant sources, identify and evaluate assumptions, apply various strategies to make decisions that are in accordance with assessment standards (Nursyifah, 2019:812).

Critical thinking indicators are: (1) being able to understand the problem, (2) providing reasons based on relevant evidence, (3) making a correct conclusion, (4) finding an answer according to the context of the problem, (5) providing an explanation of the conclusion made and/or providing an explanation if there are terms in answering the question, and (6) checking the answer again (Ennis, 2014:2). Through critical thinking ability indicators, students are trained to solve every problem faced and can be developed through science learning. Natural Science (IPA) is a very necessary lesson for students in elementary school that discusses events that occur in nature and the surrounding environment.

One of the factors that causes the level of critical thinking ability of students to be classified as low is the lack of student involvement in the learning process in learning activities. The lack of critical thinking ability of students in solving problems is the cause of Indonesia's low achievement, (Siregar, dkk, 2023:9648). This can be due to learning methods that are less effective in improving students' critical thinking skills. Several other factors are learning methods that are less enjoyable, and the lack of challenging learning activities. Therefore, in implementing learning, you should be careful and precise in choosing a learning model that is appropriate to the material so that the material delivered to students can be achieved optimally and in accordance with the expected target.

The right learning model must be able to provide space for students to be actively involved in the learning process, students' critical thinking skills. This is evidenced by student learning outcomes that are not yet optimal due to the low level of students' critical thinking skills. This problem also occurs in SD Negeri 097820 Bah Jambi.

Based on the results of observations in class IV of SD Negeri 097820 Bah Jambi, the level of students' critical thinking skills is relatively low. In the implementation of the learning process, there are 10 students who have been able to analyze, solve problems, synthesize or conclude an understanding of the material taught. These students are said to be able to meet the criteria for critical thinking because during the learning process students are active and when given questions students can understand the problems in the questions given by the teacher, students can provide reasons based on facts in making a conclusion or new understanding of the material presented by the teacher. The students are also able to find answers according to the problems. This can be seen from the students' activeness during learning and the way students solve a problem or question in learning.

Several fourth grade students at SD Negeri 097820 Bah Jambi, there are 15 students who have not met the criteria for critical thinking, when in the learning process the students are still less actively involved and have not been able to analyze (understand the problems given), some students still do not dare to express their opinions when students are asked to convey the understanding they know. In solving problems or questions, students still answer the problems given by memorizing the material that has been studied. This can be seen from the way students explain the answers in solving questions that are not in accordance with the context of the problem.

The indicators used to measure students' critical thinking skills use critical thinking indicators, one of which is measuring students' critical thinking skills by giving problems. Nufus & Kusaeri (2020:53), said there is a relationship between critical thinking skills and students' ability to solve a problem, in solving a problem there are four steps: students are able to understand the problem, then plan to solve the problem, implement the plan and the last is to interpret the results.

The right learning model used in science learning to improve students' critical thinking is to use one of the Modified Free Inquiry learning models. This model is very effective for training students' critical thinking skills. In this model, the teacher gives a problem and then students are asked to solve the problem

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through observation, exploration, and procedures in inquiry-based learning. Based on an interview with the homeroom teacher IV of SD Negeri 097820 Bah Jambi regarding the implementation of the modified free inquiry learning model, it has been implemented in the previous learning process, but not all stages of implementation of the modified inquiry learning model have been achieved. The homeroom teacher IV of SD Negeri 097820 Bah Jambi said that the implementation of this learning model was not optimally implemented, its implementation was limited to the teacher giving a problem, then students observing the problem given without carrying out the exploration stage (students actively find new information or knowledge) and have not fully implemented the inquiry-based learning procedure.

Inquiry-based learning aims to encourage students to be more courageous and creative in their imagination. The results of research from (Siregar, dkk, 2023:9646) shows that in improving critical thinking skills, the inquiry learning model is declared valid to be determined by the teacher. Therefore, students will be helped in improving their critical thinking skills. By using this model, students can be more active in seeking information and finding answers to the desired questions.

Based on the description of the problem above, the author raised a study entitled "The Effect of the Modified Free Inquiry Learning Model on Students' Critical Thinking Skills in the Science Subject of Grade IV at SD Negeri 097820 Bah Jambi in the 2023/2024 Academic Year".

LITERATURE REVIEW

Understanding Critical Thinking

Thinking is inseparable from human activity, thinking is the process of brain effort in producing knowledge. Contextually, thinking can be classified into two parts, namely, high-order thinking and low-order thinking. Critical thinking is a process of using thinking skills effectively to help someone make something, evaluate and apply decisions according to what is believed or done.

According to the view (Sihotang, 2019:34) related to critical thinking states that:
Critical thinking is the activity of analyzing and evaluating something with the aim of increasing understanding, expanding appreciation, or helping to improve work. Critical thinking is generally used to indicate the level of cognitive skills and intellectual dispositions needed for various activities, namely identifying, analyzing, evaluating arguments and claims, finding and overcoming preconceptions and personal biases, formulating and presenting reasons that support conclusions.

One of the competency needs required by every student is critical thinking. Novitasari (2023:85-94) states that "critical thinking skills are the ability to think logically, reflectively and productively, so that they can assess situations to make the right decisions". Critical thinking is one of the high-level thinking skills to find out the right problems and ideas to solve a problem according to what is believed.

Furthermore, (Lestari & Zakiah, 2019:3) explains "critical thinking is a reflective thinking process that focuses on deciding what to believe or do". Critical thinking skills are activities that collect various information using the knowledge that students already have to draw a conclusion.

Critical Thinking Indicators

Critical thinking indicators can be seen from their characteristics, so that by having these characteristics a person can be said to have critical thinking skills. According to Ennis (2014:3) "a person is said to have carried out critical thinking activities if he is able to: (a) understand the problem, (b) provide reasons based on relevant evidence or facts, (c) draw conclusions correctly, (d) find answers according to the context of the problem, (e) provide an explanation of the conclusions made and provide an explanation if there are terms in answering the question, and (f) re-check the answer".

Characteristics of Critical Thinking

Understanding the characteristics of critical thinking can help us make better decisions. According to Lestari (2019:10-11) mentions the characteristics of critical thinking, namely: "(a) knowing in detail the parts

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of a decision, (b) being good at detecting problems, (c) being able to distinguish relevant ideas from irrelevant ideas, (d) being able to distinguish facts from fiction or opinions, (e) being able to distinguish between constructive and destructive criticism, (f) being able to identify the attributes of humans, places, and objects, such as in nature, shape, form, and others, (g) being able to register all possible consequences or alternatives to solving problems, ideas, and situations, (h) being able to make sequential relationships between one problem and another, (i) being able to draw general conclusions from available data with data obtained in the field, (j) being able to make predictions from available information, (k) being able to distinguish between wrong and correct conclusions regarding the information received, (l) being able to draw conclusions from existing and selected data". Critical thinking has several characteristics or traits. Lai, (2019:10) stated that what must be possessed in critical thinking skills are: (a) analyzing arguments, claims and evidence, (b) making conclusions using inductive or deductive reasoning, (c) assessing or evaluating, (d) making decisions or solving problems.

Modified Free Inquiry Learning Model

Inquiry in English, inquiry means questions, or examinations, investigations. Inquiry as a general process carried out by humans to seek or understand information (Zai, dkk, 2020:883). This learning model places students as the subject of learning, where the learning process is centered on students, can be applied in groups, namely students are given the opportunity to think independently and guide students to have a sense of responsibility for themselves and their groups.

According to Jauhar (2014: 190-193), the inquiry approach is divided into three types based on the extent of teacher intervention towards students or the extent of guidance given by the teacher to their students. The three types of inquiry approaches are:

a. Guided Inquiry (guided inquiry approach)

The guided inquiry approach is an inquiry approach where the teacher guides students to carry out activities by giving initial questions and directing them to a discussion

b. Free Inquiry (free inquiry approach)

In general, this approach is used for students who have experience learning with the inquiry approach. Because in this free inquiry approach, students are placed as if they were working like a scientist. Students are given the freedom to determine the problems to be investigated, find and solve problems independently, design the procedures or steps needed.

c. Modified Free Inquiry (modified free inquiry approach)

This approach is a collaboration or modification of the two previous inquiry approaches, namely: the guided inquiry approach and the free inquiry approach. Even so, the problems that will be used as topics for investigation are still given or guided by existing curriculum references. In this approach, students cannot choose or determine problems to be investigated independently, but students receive problems from their teachers to solve and still receive guidance.

This learning does not only contain investigation activities, but there are exploration activities, namely seeking information in new places with the aim of expanding their knowledge. Fatmawati (2020: 22) argues that "the modified free inquiry model is a type of structured inquiry, namely students conduct investigations and discoveries based on questions and procedures provided by the teacher". The basic procedure in the modified free inquiry learning model is a step in implementing the inquiry method, but there are several things that differentiate it where educators also act as resource persons in implementing learning.

A learning model that emphasizes the process of thinking systematically and analytically, to find and find their own answers to a problem faced by students. Amien (2015:104) states that "In the modified free inquiry learning method, students must be encouraged to solve problems in group or individual work". The teacher is a resource person whose job is only to provide the necessary assistance to ensure that students do not become frustrated or fail. The assistance provided must be in the form of questions to students that allow students to think by finding the right research methods. For example, teachers must ask questions that can help

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students understand the direction of solving a problem. In this case, teachers are required not to rob students of the opportunity to act and think more creatively.

METHOD

The research method used is quantitative research. Quantitative research is an approach to testing certain theories by examining the relationship between variables. Quantitative research methods can be interpreted as research based on the philosophy of positivism, used to research certain populations or samples, sampling techniques are generally carried out randomly, data collection uses research instruments, data analysis is quantitative / statistical in nature with the aim of testing the hypothesis that has been set. (Sugiyono, 2019:14)

The sampling technique used in this study is non-probability sampling with a saturated sample method. For the research design used by researchers to determine whether or not there is an effect of the modified free inquiry learning model on students' critical thinking skills, the researcher uses a pre-experimental design research design, with a one-group pretest-posttest design.

RESULTS AND DISCUSSION

Research Data Description

The study was conducted at SD Negeri 097820 Bah Jambi, Jawa Maraja District, Pematang Siantar, Simalungun Regency. This study was conducted to determine how much influence the Modified Free Inquiry learning model has on students' critical thinking skills in grade IV of SD Negeri 097820 Bah Jambi. This study is a quantitative study involving grade IV students using the Modified Free Inquiry learning model.

The form of data collection in this study used tests and questionnaires. The tests used were 23 valid questions and the questionnaires were 26 valid questions. Before collecting data on the actual sample/respondents, the researcher first conducted a trial of the questions at another school, namely SD Negeri 060933 Medan Johor to test the validity of the questions. Of the 40 questions, 23 were declared valid, and out of 50 questionnaires, 26 were declared valid. After getting valid results, the questions will then be distributed to the actual respondents or to the fourth grade students of SD Negeri 097820 Bah Jambi in the 2023/2024 Academic Year totaling 25 students.

Correlation Coefficient Test

The coefficient test is used to determine whether or not there is an influence between the independent variable (X) and the dependent variable (Y), and the requirements for the correlation coefficient test are to see rcount> rtable with the product moment correlation formula can be seen in table 1 below:

Table 1. Correlation Coefficient Value of the Effect of the Modified Free Inquiry Learning Model on Students' Critical Thinking Skills

No	X	Y	X2	Y2	XY
1	80	78	6400	6084	6240
2	87	69	7569	4761	6003
3	90	87	8100	7569	7830
4	90	82	8100	6724	7380
5	98	87	9604	7569	8526
6	98	91	9604	8281	8918
7	87	80	7569	6400	6960
8	80	65	6400	4225	5200

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9	88	82	7744	6724	7216
10	102	95	10404	9025	9690
11	82	60	6724	3600	4920
12	96	82	9216	6724	7872
13	90	87	8100	7569	7830
14	82	78	6724	6084	6396
15	88	82	7744	6724	7216
16	97	95	9409	9025	9215
17	95	87	9025	7569	8265
18	96	89	9216	7921	8544
19	70	69	4900	4761	4830
20	89	87	7921	7569	7743
21	100	94	10000	8836	9400
22	96	85	9216	7225	8160
23	100	90	10000	8100	9000
24	85	82	7225	6724	6970
25	90	87	8100	7569	7830
N=25	**2256**	**2070**	**205014**	**173362**	**188154**

The following is the calculation of the correlation coefficient test using SPSS Version 22 which can be seen in Table 2 as follows:

Table 2. Correlation Coefficient Results

Correlations			
		MFI	Critical Thinking
MFI	Pearson Correlation	1	.809**
	Sig. (2-tailed)		,000
	N	25	25
Critical Thinking	Pearson Correlation	.809**	1
	Sig. (2-tailed)	,000	
	N	25	25
****. Correlation is significant at the 0.01 level (2-tailed).**			

So there is a positive correlation of 0.809 between the modified free inquiry learning model and students' critical thinking skills. This means that the greater the modified free inquiry learning model, the greater the level of students' critical thinking skills. Whether the correlation coefficient of the calculation results is significant (can be generalized) or not, it needs to be compared with rtable, with a certain level of error. If the level of error is set at 5%, (95% confidence level) and N = 25, then the rtable value = 0.396. It turns out that the rcount value is greater than the rtable value, so Ho is rejected and Ha is accepted. So the conclusion is that there is a positive relationship and the correlation coefficient value between the modified free inquiry learning model and students' critical thinking skills is 0.809.

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In correlation analysis there is a number called the Coefficient of Determination, the value of which is the square of the correlation coefficient (r2). This coefficient is called the coefficient of determination, because the variance that occurs in the dependent variable can be explained through the variance that occurs in the independent variable. For the calculation above, r = 0.809 was found. The coefficient of determination = r2 = 0.8092 = 0.65. This means that the variance that occurs in the variable of students' critical thinking skills 65% can be explained through the variance that occurs in the variable of the modified free inquiry learning model, or critical thinking skills 65% are determined by the size of the learning model, and 35% by other factors not studied in this study.

Hypothesis Test (t-Test)

After the data is stated to be normally distributed and the sample comes from the same or homogeneous population, then the hypothesis testing can be carried out using the "t-test". The statistics used to test the research hypothesis is the t-test. The proposed hypothesis is:

Ho : There is no effect of the Modified Free Inquiry learning model on students' critical thinking skills.
Ha : There is an effect of the Modified Free Inquiry learning model on students' critical thinking skills.

The t-test criteria can be carried out significantly if they are obtained to determine whether or not there is an effect on critical thinking skills. Hypothesis testing using the t-test is carried out by comparing t count> t table the hypothesis is accepted and if t count < t table is rejected. The following will be tested using the t_{test}.

The following table presents the results of hypothesis testing using the SPSS version 22 program.

Table 4. Hypothesis Test (t-Test)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2,693	13,011		-,207	,838
	MFI	,947	,144	,809	6,599	,000

a. Dependent Variable: Berpikir Kritis

Based on the table above, it can be seen that the calculation results obtained a t-value of 6.599 and a t-table of 2.069 so that t-value > t-table, then Ha is accepted, namely the Modified Free Inquiry learning model (X) has a positive and significant influence on students' critical thinking skills (Y).

Research Discussion

This research was conducted at SD Negeri 097820 Bah Jambi. The researcher used tests and questionnaires as data collection tools with a total sample of 25 students. The sampling in this study was Saturated Sampling. The purpose of this study was to determine how much influence the use of the Modified Free Inquiry learning model had on students' critical thinking skills in the subject of Science on Energy and Its Changes in class IV of SD Negeri 097820 Bah Jambi.

The correlation coefficient test of the results of this study shows that the Modified Free Inquiry learning model has a relationship with learning outcomes. This is evident from the Rxy value of 0.809, it can be concluded that there is an influence between the Modified Free Inquiry learning model variable and students' critical thinking skills which have a very strong relationship. Hypothesis Testing The results of the hypothesis test research (t-test) show that the Modified Free Inquiry learning model is one of the learning models that encourages students to be active in learning. Based on the results of the study, it shows that the Modified Free Inquiry learning model has a significant positive influence, this is from the tcount value>

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ttable of 6.599> 2.069, thus Ha is accepted, namely there is an influence between the Modified Free Inquiry learning model (X) and students' critical thinking skills (Y). Students' critical thinking skills are a success achieved and the abilities possessed by students after learning, both affective, cognitive and psychomotor, which are manifested in the form of numbers obtained through tests given to students after going through the learning process. There is an increase in students' critical thinking as seen from the students' scores after being given treatment, namely the average pretest score is 64.84 and increases in the posttest by 82.80.

From the results of the tests carried out, it shows that the Modified Free Inquiry learning model has an influence on students' critical thinking skills, where the higher the influence of the Modified Free Inquiry learning model, the higher the influence of the critical thinking scores obtained and vice versa, the lower the influence of the Modified Free Inquiry learning model, the lower the critical thinking scores obtained by students.

CONCLUSIONS AND RECOMMENDATION

Based on the researcher's discussion about the influence of the Modified Free Inquiry learning model on students' critical thinking skills in the subject of Science on Energy and Its Changes in class IV of SD Negeri 097820 Bah Jambi in the 2023/2024 academic year, it can be concluded: implementation of the Modified Free Inquiry learning model at SD Negeri 097820 Bah Jambi in the 2023/2024 academic year by providing a pretest before giving treatment to students in class IV at the beginning of the study, the researcher first conducted a reliability test on 23 valid questions with the alpha formula, the results obtained were 0.789, so the reliability index was in the high category, then the researcher gave a posttest to students as many as 23 questions and after the researcher gave the treatment, the last step was that the researcher gave a questionnaire to find out students' responses to the Modified Free Inquiry learning model that had been carried out.

Students' critical thinking skills in class IV using the Modified Free Inquiry learning model where the pretest obtained by students in class IV had an average value of 64.84. After that, the researcher gave treatment using the Modified Free Inquiry learning model when teaching, then the researcher re-tested the students by giving a posttest of 23 questions, then the students' posttest scores increased with an average score of 82.80. So the last step the researcher took was to give 26 questionnaire items using the Modified Free Inquiry learning model, the results obtained were 90.24. So that the research conducted by the researcher by applying the Modified Free Inquiry learning model has been proven to improve students' critical thinking skills in the material Energy and Its Changes in class IV of SD Negeri 097820 Bah Jambi in the 2023/2024 academic year. 3. There is a significant influence of the Modified Free Inquiry learning model on students' critical thinking skills in the material Energy and Its Changes in SD Negeri 097820 Bah Jambi in the 2023/2024 academic year.

This can be seen from the results of the normality test using a significance level of 5% or 0.05 with lhitung <ltabel which is 0.161 ≤ 0.062 and the results of the correlation test rhitung> rtable which is 0.809 ≥ 0.396 which is in a very strong interpretation of the results of the hypothesis test thitung> ttable which is 6.599> 2.069 at a significance level a = 0.05. Thus Ha is accepted and Ho is rejected, namely there is an influence of the Modified Free Inquiry learning model on students' critical thinking skills in the material on Energy and Its Changes in class IV of SD Negeri 097820 Bah Jambi in the 2023/2024 academic year.

REFERENCES

Abi, A. R., Juliana, Tanjung, D. S., & Tamba, G. R. F. (2023). Analisis Komunikasi Pembelajaran Guru Kelas dengan Siswa Kelas VI di Sekolah Dasar. *School Education Journal PGSD FIP Unimed*, *13*(2), 148–152. https://doi.org/10.4324/9781003156703-6

Aqib, Z., & Dkk. (2016). *Penelitian Tindakan Kelas untuk guru SD, SLB, Dan TK*. Bandung:YramaWidya.

Arikunto. (2018). *Prosedur Penelitian* (14th ed.). PT Rineka Cipta.

Ennis, R. H. (2014). *Sifat Berpikir Kritis: Garis Besar Disposisi dan Kemampuan Berpikir Critikal*. Universitas Illinois.

Jurnal PAJAR (Pendidikan dan Pengajaran)
Volume 9 Nomor 2 March 2025 | ISSN Cetak : 2580 - 8435 | ISSN Online : 2614 - 1337
DOI : http://dx.doi.org/10.33578/pjr.v9i2.10068

Juliana. (2020). Pengaruh Pendekatan Saintifik dan Aktivitas Siswa terhadap Kemampuan Menulis Deskripsi Siswa di Kelas V SDS Gracia Sustain Medan. *Jurnal Tunas Bangsa*, *7*(2), 295–309.

Juliana. (2021). Penerapan Metode SQ3R untuk Meningkatkan Kemampuan Membaca Pemahaman Siswa Kelas IV SD. *Jurnal Ilmiah Aquinas*, *4*(2), 260–274.

Juliana, Prayuda, M. S., & Tanjung, D. S. (2023). Penerapan Strategi Directed Reading Thinking Activity (DRTA) Untuk Meningkatkan Keterampilan Membaca Pemahaman Siswa Kelas Sekolah Dasar. *Journal on Education*, *5*(4), 11503–11520.

Lestari, I., & Zakiah, L. (2019). *Berpikir Kritis dalam Konteks Pembelajaran* (1st ed.). Erzatama Karya Abadi.

Noor, J. (2017). *Metodologi Penelitian Skripsi, Tesis, Disertasi, dan Karya Ilmiah*. Kencana Prenada Media Group.

Nufus, H., & Kusaeri, A. (2020). Analisis Tingkat Kemampuan Berpikir Kritis Siswa Dalam Memecahkan Masalah Geometri. *Jurnal Pendidikan Matematika Indonesia*, *5*(2), 49–55.

Nursyifah, E. (2019). Penggunaan Model Pembelajaran Inkuiri dalam Membangun Kemampuan Berfikir Kritis Siswa Sekolah Dasar. *Seminar Nasional Pendidikan*, *9*(4), 810–817.

Pardosi, B., Tanjung, D. S., & Anzelina, D. (2020). Pengaruh Model SAVI terhadap Hasil Belajar pada Tema Organ Gerak Hewan dan Manusia di Kelas V SD Negeri 173593 Parsoburan. *ESJ (Elementary School Journal)*, *10*(3), 175–184.

Ritonga, C. C., Tanjung, D. S., & Sitepu, A. (2021). Pengaruh Model Pembelajaran Circuit Learning terhadap Hasil Belajar Siswa Tema Daerah Tempat Tinggalku Kelas IV SD Negeri 101735 Sei Semayang. *Elementary School Journal PGSD FIP Unimed*, *11*(3), 246–255.

Sigalingging, R., Tanjung, D. S., & Gaol, R. L. (2021). Pengaruh Model Quantum Teaching terhadap Hasil Belajar Siswa pada Pemebelajaran Tematik Kelas V di Sekolah Dasar. *School Education Journal Pgsd Fip Unimed*, *11*(3), 263–268.

Sihotang, K. (2019). *Berpikir Kritis, Kecakapan Hidup di Era Digital* (5th ed.). PT. Kanisius.

Siregar, H., Panjaitan, S. M., & Sitepu, C. (2023). Efektivitas Model Pembelajaran Inkuiri terhadap Kemampuan Berpikir Kritis Matematis Peserta Didik Kelas VIII SMP Negeri 4 Sipahutar. *Innovative: Journal of Social Science Research*, *3*(3), 9646–9657.

Sugiyono. (2019). *Metode Penelitian Kuntitatif, Kulitatif, dan R&D*. Alfabeta.

Tanjung, D. (2016). *meningkatkan hasil belajar IPS siswa dengan menerapkan model pembelajaran kooperatif tipe time gemes tournament (TGT) di kelas V SDN 200111 Padang sidempuan*. *IV*.

Tanjung, D. S., Ambarwati, N. F., Juliana, & Prayuda, M. S. (2024). Application of the Problem Based Learning Model to Improve Students ' Learning Outcomes and Critical Thinking Ability on Mathematics Lessons in Primary School. *Jurnal Pa*, *8*(3), 307–318.

Tanjung, D. S., & Juliana. (2022). Pengaruh Model Pembelajaran Berbasis Proyek terhadap Hasil Belajar Matematika Siswa Sekolah Dasar. *Elementary School Journal PGSD FIP Unimed*, *12*(1), 37–44.

Tanjung, D. S., & Juliana. (2023). *The Effect of Giving Rewards on Fifth-Grade Elementary Students ' Mathematics Learning Outcomes Pengaruh Pemberian Reward Terhadap Hasil Belajar Matematika Siswa Kelas V Sekolah Dasar*. *12*(6), 1396–1406.

Tanjung, D. S., Juliana, & HS, D. W. S. (2023). Improving Fourth-Grade Students' Learning Outcomes Using the Discovery Learning Method in Indonesian at SD Negeri 200111 Padangsidimpuan. *Primary: Jurnal Pendidikan Guru Sekolah Dasar*, *12*(5), 1302–1313.

Tanjung, D. S., Mahulae, S., & Tumanggor, A. F. M. (2022). Pengaruh Model Pembelajaran Picture and Picture Berbantuan Media Audio Visual Terhadap Hasil Belajar Siswa. *Jurnal Mutiara Pendidikan Indonesia*, *7*(2), 145–154.

Tanjung, D. S., Sembiring, R. K., & Habeahan, D. F. (2022). Pengaruh Penggunaan Gadget terhadap Hasil Belajar Siswa Pada Mata Pelajaran Bahasa Indonesia Kelas III di Sekolah Dasar Medan. *School Education Journal PGSD Fip Unimed*, *12*(2), 176–184.

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Zai, K., Abi, A. R., & Tanjung, D. S. (2020). The Effect of Inquiry Model on Students' Learning Outcomes on the Theme of "Benda-benda di sekitarku" at Grade V SDN 076713 Zuzundrao. *Primary: Jurnal Pendidikan Guru Sekolah Dasar*, *9*(6), 836–842.