



Analysis of Learning Difficulties in Problem Solving Viewed from STIFIn Personality

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ABSTRACT

The purpose of this research is to analyze students' learning difficulties in solving mathematical problems on fraction material based on the Sensing, Thinking, Intuiting, Feeling, Instinct (STIFIn) personality type. This type of research is descriptive qualitative at SDN 47 Jambi using a purposive sampling technique with 5 selected students in class IV for the 2022/2023 academic year based on the recommendation of the mathematics teacher who teaches. The data collection techniques used in this research were written tests and interview sheets. The research results show that each subject experiences different learning difficulties when solving problems using Polya steps. In particular, in the step of re-checking answers, all subjects did not know exactly what the appropriate steps were to re-check the correctness of the answers they obtained. Overall, learning difficulties often occur when students want to develop and implement problem solving plans.

Keywords: learning difficulties; problem solving; STIFIn personality

INTRODUCTION

Mathematics is one of the subjects that must be taught at all levels of education, because mathematics has an important role for other sciences. In line with this Yadav (2019) in education system, mathematics plays an important role in shaping the future probability of young people. Education is to develop an individual, to make her/him self-reliant, to make her/him wise, to make her/ him a social contributor and in our education system, for almost every subject, we study math in school and university. However, during the process of learning mathematics in class, there are times when the teacher finds students who have learning difficulties in solving a given math problem.

According to Marlina (2019) difficulty learning mathematics is a condition where there is a deviation between actual abilities and achievements shown in three basic academic fields such as reading, writing, and arithmetic. Based on the results of the documentation at SDN 47 Jambi City, it was also found that students experienced learning difficulties when solving math problems, marked by low learning outcomes in one of the materials, namely fractions. The learning outcomes obtained in class 4 fraction material at SDN 47 Jambi City also have not fully reached the learning objectives achievement criteria (KKTP), as shown in Table 1.

Table 1. Learning Outcomes			
Class	Number of Students	Average	KKTP
A	25	70	73
B	26	67	
C	25	66	
D	24	67	
E	24	65	

Based on table 1 above according to Diswantika, et al (2019) the low learning outcomes obtained by students are an indicator of learning difficulties in mathematics that occur in class. Referring to Rahman et al (2023), learning difficulties are a common and common problem that occurs among students in academics. However, the problem of learning difficulties among students should not be taken lightly. Special action or treatment should be taken as soon as possible to ensure that students are able to successfully complete their studies at school. Departing from that opinion, the researcher is interested in further analyzing the learning difficulties experienced by students. As for students' learning difficulties, later researchers grouped them based on theory Cooney (1975), namely difficulties in using concepts, difficulties in using principles, and difficulties in solving verbal problems, as well as the stages of problem solving according to Polya (1975) namely understanding problems, making plans, implementing plans and checking return.

Students' learning difficulties in solving mathematical problems can be seen from the types of students both in terms of their interests, learning styles and types of personality. According to Muhaiba et al, (2020), personality differences are one of the causes of various learning difficulties faced by students. Based on this, the researcher wants to review or analyze further related to learning difficulties in solving problems from student personality types.

In a theoretical review regarding the concept of personality to be used, researchers use the concept of personality according to Poniman (2016), namely STIFIn which is an acronym for Sensing, Thinking, Intuitive, Feeling, and Instinct. He continued that the concept of STIFIn itself combines various theories of psychology, neuroscience, and human resources. The test is done by scanning the tenth fingertip. Fingerprints that carry information about the composition of the nervous system are then analyzed and linked to a particular brain hemisphere that is dominant as an operating system and at the same time a type of intelligence.

The reason for using the personality concept is considering that STIFIn uses the latest technological developments to determine a person's personality by reading the character possessed through fingerprints using a fingerprint test tool which has just been introduced at SDN 47 Kota Jambi. In line with this, the advantages of the fingerprint concept put forward by Karthik et al (2020) fingerprint recognition is one of the most popular and successful methods used for person identification, which takes advantage of the fact that the fingerprint has some unique characteristics.

Based on the description above, it can be understood that there are learning difficulties that occur and must be identified immediately by some unique characteristics to

minimize the difficulties and failures of students as well as equip students with new things that can facilitate the learning process. This information can be used as reflection material for teachers to improve the learning process on topics that are considered difficult by students. Therefore, it is clear that the purpose of this study is to describe the learning difficulties experienced by students with the STIFIn personality type in solving problems in fractional material using indicators of student learning difficulties according to Cooney (1975), as well as the stages of problem solving according to Polya (1975).

RESEARCH METHODS

This research is included in the type of qualitative approach with this type of research is a case study. The data collection instrument uses 1 problem-solving description problem with the think aloud method and interviews to obtain in-depth information from informants, of course all instruments have been validated by experts. This research was conducted in the even semester of the 2022/2023 Academic Year.

Next, subject selection using purposive sampling with 5 subjects was carried out based on the results of the STIFIn personality test on grade 4 students at SDN 47 Jambi City, namely 5 subjects (Sensing, Thinking, Intuiting, Feeling, Instinct) which represented each personality who had taken the personality test. The STIFIn personality test noted that their learning results were indeed low on fraction material based on the recommendation of the class teacher. Checking the validity of the findings using source triangulation by comparing test results and interviews in order to obtain in-depth information regarding what is the difficulty.

The subject's learning difficulties are grouped based on theory Cooney (1975), namely difficulty using concepts, principles and difficulty solving problems with reference to problem-solving steps by Polya (1975), namely, understanding problems, compiling, implementing plans and checking again. The indicators of learning difficulties in question can be seen in Figure 1.

Jenis kesulitan	Indikator
Kesulitan dalam menggunakan konsep	1 Ketidakmampuan untuk mengingat atau menuliskan satuan yang digunakan
	2 Ketidakmampuan untuk menyatakan arti istilah yang menunjuk pada konsep tertentu.
	3 Ketidakmampuan untuk mengingat satu atau lebih kondisi yang diperlukan bagi suatu objek untuk dinyatakan dengan istilah yang ditunjuk.
	4 Ketidakmampuan untuk membedakan objek dari suatu konsep.
	5. Ketidakmampuan untuk menyimpulkan suatu informasi penting dari konsep.
Kesulitan dalam menggunakan prinsip	1 Ketidakmampuan melakukan kegiatan penemuan tentang sesuatu yang tidak teliti dalam perhitungan atau operasi aljabar.
	2 Ketidakmampuan untuk memahami prinsip-prinsip sejak awal, sehingga tidak dapat mengaitkan dengan prinsip atau permasalahan yang lain.
	3 Dapat menyatakan suatu prinsip tetapi tidak dapat mengutarakan artinya, dan tidak dapat menerapkan prinsip tersebut.
Kesulitan dalam menyelesaikan masalah	1 Ketidakmampuan untuk memahami makna suatu istilah yang mengacu pada konsep atau prinsip yang berkaitan dengan permasalahan.
	2 Cenderung memaksakan untuk mengaplikasikan konsep-konsep dan prinsip-prinsip matematika yang tidak ada kaitannya dengan permasalahan.
	3 Tidak memeriksa bahwa jawabannya memenuhi kondisi masalah.
	4 Ketidakmampuan untuk memahami hakikat masalah matematika yang dihadapi.

Figure 1. Indicators of Learning Difficulties

RESULT AND DISCUSSION

Overview of Student Learning Difficulties

Based on Cooney's indicators of learning difficulties, learning difficulties are categorized into 3 types, namely (1) difficulty using concepts, (2) difficulties using principles, (3) difficulties in solving problems. So the researcher examines each type of difficulty at each step of Polya's problem solving, namely (1) understanding the problem (Code A), (2) developing a plan (Code B), (3) implementing the plan (Code C) and (4) checking again (Code D). The symbol (✓) indicates a difficulty, the symbol (-) does not occur difficulty, and the symbol (x) the subject does not reach this step in solving the problem. An overview of student learning difficulties with each STIFIn personality in problem solving steps on fractional material is presented in Figure 2 below:

Subjek	Indikator Kesulitan Belajar	Langkah Pemecahan Masalah			
		A	B	C	D
S-1 (Sensing)	Kesulitan menggunakan konsep	-	✓	✓	
	Kesulitan menggunakan Prinsip	-	-	✓	x
	Kesulitan menyelesaikan masalah verbal	-	-	-	
S-2 (Thinking)	Kesulitan menggunakan konsep	-	✓	✓	
	Kesulitan menggunakan Prinsip	-	✓	-	x
	Kesulitan menyelesaikan masalah verbal	-	-	-	
S-3 (Feeling)	Kesulitan menggunakan konsep	✓	✓	✓	
	Kesulitan menggunakan Prinsip	-	-	✓	x
	Kesulitan menyelesaikan masalah verbal	-	-	-	
S-4 (Intuiting)	Kesulitan menggunakan konsep	✓	✓	✓	
	Kesulitan menggunakan Prinsip	-	✓	-	x
	Kesulitan menyelesaikan masalah verbal	-	-	-	
S-5 (Insting)	Kesulitan menggunakan konsep	-	✓	✓	
	Kesulitan menggunakan Prinsip	-	-	✓	x
	Kesulitan menyelesaikan masalah verbal	-	-	-	

Figure 2. General Description of Learning Difficulties Experienced by Students

Based on Figure 2, it can be seen that each subject has learning difficulties at each step of problem solving. However, specifically at the re-examining stage, all subjects did not reach that stage in re-checking the correctness of the answers they obtained. Each student's learning difficulties at each step of problem solving will be described in more detail as follows.

Difficulty learning when understanding the problem

Subject 3 (Feeling)

Based on Figure 2, it can be seen that subject 3 (S-3) indicated having learning difficulties at the stage of understanding the problem. The learning difficulties he experienced were related to conceptual difficulties. The learning difficulties can be seen in Figure 3.

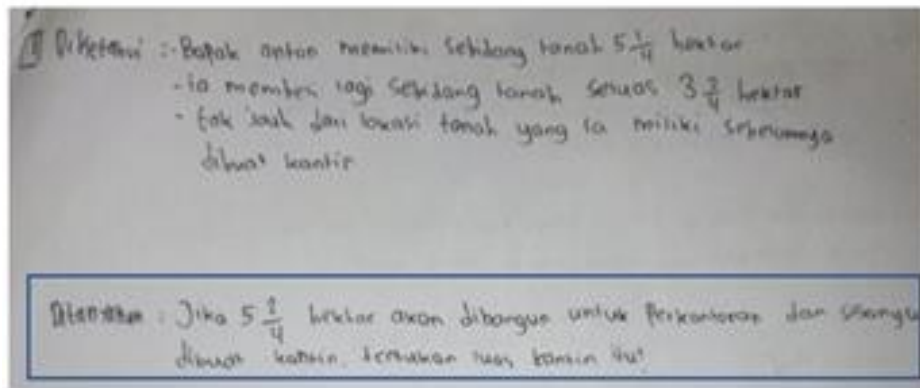


Figure 3 The difficulty of learning concepts experienced by S-3

In Figure 2, S-3 is identified as having difficulty using the concept in his inability to distinguish what includes information in the known and asked sections. The S-3 answer is not in accordance with the answer key at the stage of understanding the problem. The information on $52/4$ hectares should be written in the "known" section, not "inquired".

Subject 4 (Intuiting)

Based on Figure 2, it can be seen that subject 4 (S-4) is indicated to have learning difficulties at the stage of understanding the problem. The learning difficulties he experienced were related to conceptual difficulties. The learning difficulties can be seen in Figure 4.

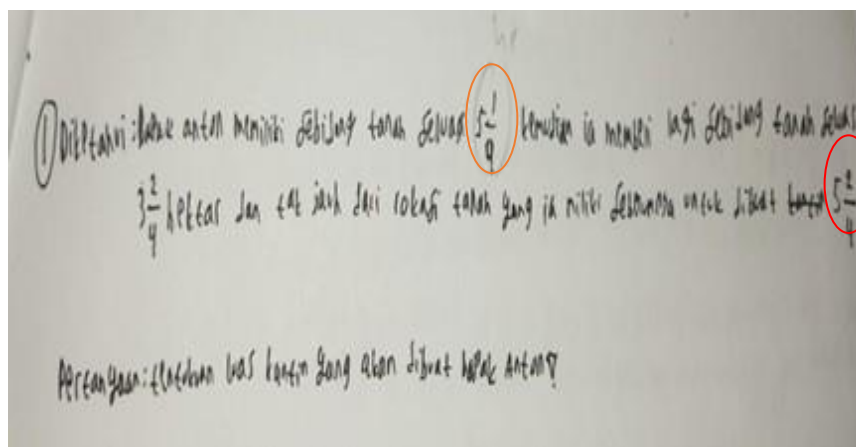


Figure 4 The difficulty of learning concepts experienced by S-4

Based figure 4, S-4 was identified as having difficulty using the concept in his inability to write down the unit used in the question, namely hectares in full marked with an orange circle in figure 4, then incomplete in writing down information for important information from the question, namely $52/4$ hectares as The area of land for which the office will be built is marked with a red circle in Figure 4.

At the stage of understanding the problem, the subject experienced indications of learning difficulties such as being unable to write down facts correctly and students incompletely concluding important information related to difficulties using concepts. Related to the known and asked section, there were also subjects who were unable to

distinguish between what was known and asked information. This result is in line with the research of Andriani et. al (2019), in difficulty understanding the problem, students cannot distinguish what is known and what is asked in the problem. Finally, the simplest at the stage of understanding the problem the researcher finds indications of learning difficulties is not to write down the types of units used in the problem. This result is in line with Asrofiyah et al., (2022), namely the difficulty in the stage of understanding the problem is that the information written at the stage of understanding the problem is incomplete.

Learning Difficulties When Making and Implementing Plans

Subject 1 (Sensing)

Based on Figure 2, it can be seen that subject 1 (S-1) is indicated to have difficulty learning concepts at the stage of understanding the problem. Furthermore, at the stage of implementing the plan, he experienced difficulties in concepts and principles. The learning difficulties can be seen in Figure 5.

Handwritten work for Subject 1 (S-1) showing calculations for land area. The work includes the following steps:

$$\text{Jawab: } 5\frac{1}{4} = \frac{21}{4} \text{ - Sebidang tanah}$$

$$\frac{21}{4} - \frac{14}{4} = \frac{7}{4} \text{ - membeli tanah lagi}$$

$$\frac{7}{4} + \frac{22}{4} = \frac{29}{4} \text{ - akan dibangun perkantoran}$$

$$\frac{21}{4} + \frac{14}{4} - \frac{35}{4} - \frac{22}{4} = \frac{10}{4}$$

Jadi, luas kantin yang akan dibuat adalah $\frac{10}{4}$

Figure 5. S-1 Learning Difficulties at the stage of compiling and implementing plans

Based on Figure 5, S-1 was identified as not writing down the type of unit used completely marked with a blue box in Figure 5. Then, he drew the wrong conclusion, namely $10/4$ as the area of land made for the canteen. This relates to students' difficulties using the identified principles when carrying out plans where students enter data incorrectly to find the area of the canteen which also causes students to make mistakes in drawing final conclusions on solving the problem, namely being $10/4$ hectares, which is marked with a red box in Figure 4.

Subject 2 (Thinking)

Based on Figure 2, it can be seen that subject 2 (S-2) indicated having difficulty learning concepts and principles at the planning stage. Furthermore, at the stage of carrying out the plan he had difficulty learning the concept. The learning difficulties can be seen in Figure 6.

Handwritten mathematical work for Figure 6. The work includes several calculations involving fractions and decimals. A blue box highlights a section of the work, and a red box highlights another section at the bottom.

Figure 6. Learning Difficulties for S-2 at the stage of compiling and implementing plans

In Figure 6, S-2 is identified by the researcher identifying learning difficulties in preparing plans including not writing down the type of units used. Furthermore, he did not state or search for the entire area of Mr. Anton's land, so he did not know what conditions were needed to solve the problem marked with the blue box in Figure 6. Furthermore, in carrying out the plan, among others, he did not write down the type of unit used, was unable to remember or write down the conditions or requirements needed to solve the problem so that he was wrong or incorrect in drawing the final conclusion of solving the problem which is marked with a red box in Figure 5.

Subject 3 (Feeling)

Based on figure 2, it can be seen that S-3 indicated having difficulty learning concepts when making plans. Furthermore, at the stage of carrying out the plan, it was identified that they had difficulty learning concepts and principles. The learning difficulties can be seen in Figure 7 below.

Handwritten mathematical work for Figure 7. The work includes calculations for land area and a blue box highlighting a specific part of the work.

Figure 7. Difficulties in Studying S-3 at the stage of compiling and implementing plans

Based on Figure 7, S-3 had difficulty using the concept in preparing the plan, namely not writing down the hectare unit as the technical name used marked with a blue box. Furthermore, the researcher identified learning difficulties at the stage of carrying out the plan and found that students

were wrong in drawing conclusions from the calculation process so that they were not precise in drawing final conclusions to answer problems, this included learning difficulties in principles marked with a red box.

Subject 4 (Intuiting)

Based on Figure 2, it can be seen that subject 4 (S-4) is indicated to have difficulty learning concepts and principles at the planning stage. Furthermore, at the stage of carrying out the plan he had difficulty learning the concept. The learning difficulties can be seen in Figure 8 below.

Handwritten work for Subject 4:

$$\text{pengubahan: } 5\frac{1}{4} = \frac{21}{4} \quad 3\frac{2}{4} = \frac{14}{4} \quad 5\frac{2}{4} = \frac{22}{4} \quad 5\frac{2}{4} - 5\frac{1}{4} = \frac{12}{4}$$

jadi jawabannya adalah: ~~$\frac{12}{4}$~~ hektar

Figure 8. S-4 Learning Difficulties at the stage of compiling and implementing plans

Based on Figure 8, S-4 was identified as having difficulties using the concept in compiling and carrying out plans including not writing down the types of units used in the questions, not stating or looking for the term Mr Anton's entire land area as one of the problem solving plans which resulted in incomplete information required in problem solving. Furthermore, students do not understand that there are other problems that must be looked for first to solve problems related to difficulties using principles and only changing mixed fractions into ordinary fractions.

Subject 5 (Insting)

Based on figure 2, it can be seen that subject 5 (S-5) is indicated to have difficulty learning concepts at the planning stage. Furthermore, at the stage of carrying out the plan, he was identified as having difficulties with concepts and principles. The learning difficulties can be seen in Figure 9.

Handwritten work for Subject 5:

1 Ditanyakan, berapa luas kebun Bapak Anton

1 Jawaban: $\frac{21}{4}$ dan $\frac{14}{4}$ dan $\frac{22}{4}$

Jadi luas kebun Bapak Anton adalah $\frac{57}{4}$ hektar

$\frac{21}{4} + \frac{14}{4} = \frac{35}{4} + \frac{22}{4} = \frac{57}{4}$

$\frac{21}{4}$
 $\frac{14}{4}$
 $\frac{35}{4}$

... lebih banyak

Figure 9. S-5 Learning Difficulties at the stage of compiling and implementing plans

In Figure 9, S-5 was identified as having difficulty using the concept in preparing plans, namely not writing the hectare unit as the technical name used. Furthermore, the researcher identified the difficulty of learning concepts at the stage of implementing the plan and found that he was not right in determining the conditions for finding the area of the canteen, so he was wrong in drawing final conclusions, and also indicated that he was not right in using arithmetic operations related to his difficulties using principles.

At the planning stage, the subject experienced indications of difficulties such as not knowing what conditions must be needed to solve the problem and not correctly stating important information so that the problem was not resolved. This, according to Radiusman (2020) Student must be correct understanding of mathematical concepts will help students in matters understand advanced lessons. Besides that, understanding of mathematical concepts will also help students solve problems. Finally, the simplest thing the researcher found was that there were subjects who did not write down the type of unit when preparing the problem solving plan, this indicated that the students were not carefully reading. According to Frans et, al (2023) who said that reading without understanding the content of the reading will result in the reader not gaining information or knowledge from the reading activity.

At the stage of carrying out the plan, the subject experienced indications of difficulties such as making mistakes in drawing conclusions from the calculation process and incorrectly inputting data. This difficulty is in line with the results of a study by Sulistiowati (2022) Students' inability to carry out procedures includes difficulties in carrying out procedures calculates and is not precise in carrying out the work process.

There are also those who are unable to remember or write down the conditions or conditions needed to solve the problem so that they are wrong or not right in drawing final conclusions about solving the problem. This is in line with Midawati's research (2022) where the subject revealed that they did not understand the work on the problem and the subject could not use other methods to obtain answers.

Finally, when carrying out the plan, the subject was wrong in using arithmetic operations. Hastuti et al. (2022) which states that many students experience difficulties at the stage of carrying out plans because students often still have difficulty determining the arithmetic operations strategy used, namely addition, subtraction, multiplication and division of fractions, besides that students are still weak in the process of arithmetic skills

Learning Difficulties When Checking Back

All subjects based on student answer sheets, did not see the subject's steps in their activities of checking answers, by associating answers to problem solving and previously known information, as shown in Figure 10 below.

To double check the correctness of the answer can be obtained from,
Land area where offices are built + Land area where canteen is built
 =
 The total of all land owned by Mr. Anton

$$5\frac{2}{4} + \frac{13}{4} = \frac{35}{4} \text{ Hectares}$$

 It turns out that it is true that the total land area owned by Mr. Anton is
 the total of the land area where the office was built + the land area where
 the canteen was built, namely $\frac{35}{4} \text{ Hectares}$

Figure 10. The right formulation in checking back

Based on the analysis of the results of the subject's test answers and interviews, the results are in line with research conducted by Sulistiowati (2022) when they have obtained a solution, students rarely check the solution again. This results in unknown calculation errors, errors in using information, or other errors. Factors that can cause students not to recheck the correctness of the solutions they obtain are because the efforts made by students are not optimal, with the problems in the questions given, and in line with Enlisia et al. (2020) the difficulty for students in the review step is that students do not know how to look back correctly and are unwilling or lazy to re-check.

CONCLUSION

Based on the results of research conducted by researchers at SDN 47 Jambi City, it can be concluded that each subject experienced learning difficulties only in the use of concepts and principles. Difficulty using concepts is characterized by an inability to remember technical names, an inability to state the meaning of terms denoting a particular concept, an inability to remember one or more conditions necessary for an object to be expressed by its designated term, an inability to distinguish objects from a concept. , the inability to infer some important information from the concept. Then the difficulty of using principles is characterized by the inability to carry out discovery activities about something that is not accurate in algebraic calculations or operations, the inability to understand the principles from the start, so that they cannot relate them to other principles or problems, can state a principle but cannot express it. In particular, in the step of re-examining the answers, all subjects did not know for sure what the right steps were in re-checking the correctness of the answers they obtained. For this reason, students need to be accustomed to solving problems systematically and arriving at the stage of re-examining, namely associating the final answer with what is asked in the problem. Given that there are still many limitations in this study, it is hoped that other researchers can conduct similar research by involving more diverse research subjects and choosing other mathematical materials.

REFERENCES

Andriani, N., Sutarto, S., & Febrilia, B. R. A. (2019). Analisis kesulitan siswa dalam menyelesaikan soal cerita matematika pada materi keliling dan luas lingkaran SMPN

- 3 Narmada ditinjau dari peta kognitif. *Jurnal Pendidik Indonesia (JPIn)*, 2(1), 20-32. <https://doi.org/10.47165/jpin.v2i1.64>
- Asrofiah, R., Rahmawati, I. & Cahyadi, F. (2022). Analisis kesulitan Siswa dalam Menyelesaikan Soal Cerita Matematika Berdasarkan Langkah Polya Materi Volume Kelas V SD Negeri 1 Rajekwesi Jepara. *Wawasan Pendidikan*, 2(1), 49-60. <https://doi.org/10.26877/wp.v2i1.9617>
- Cooney, T. J., Davis, E. V., & Henderson, K. B. (1975). *Dynamics Of Teaching Secondary School Mathematics*. Boston: Houghton Mifflin.
- Diswantika, N., Wahyudi, A., Irawan, D., Nguyen, P. T., Laxmi Lydia, E., & Shankar, K. (2019). Efforts to overcome mathematics learning difficulty for dislexic discalcular of elementary school students. *International Journal of Engineering and Advanced Technology*, 8(6 Special issue), 932–936. <https://doi.org/10.35940/ijeat.F1176.0886S19>
- Enlisia, A. P., Rahardjo, S., & Sisworo, S. (2020). Kesulitan Siswa Dalam Menyelesaikan Masalah Matematika Berdasarkan Langkah Polya. *Jurnal Pendidikan: Teori, Penelitian, Dan Pengembangan*, 5(12), 1820-1826. <http://dx.doi.org/10.17977/jptpp.v5i12.14347>
- Frans, S. A., Ani, Y., & Wijaya, Y. A. (2023). Kemampuan Membaca Pemahaman Siswa Sekolah Dasar. *Diligentia: Journal of Theology and Christian Education*, 5(1), 54-68.
- Hastuti, P.S.D., Cahyadi, F., & Subekti, E.E. (2022). Ragam Kesulitan Belajar Pemecahan Masalah Matematika Siswa Kelas V Pada Materi Operasi Hitung Pecahan. *Wawasan Pendidikan*. 2(1), 189-198. <https://doi.org/10.26877/wp.v2i1.9858>
- Karthik Narayan, L., Sonu, G., & Soukhya, S. M. (2020). Fingerprint recognition and its advanced features. *Int. J. Eng. Res. Technol*, 9(04), 424-428.
- Marlina, M. (2019). *Asesmen Kesulitan Belajar*. Jakarta: Kencana
- Midawati, M. (2022). Analisis Kesulitan Siswa dalam Menyelesaikan Soal Pemecahan Masalah Berdasarkan Langkah Polya. *Jurnal Educatio FKIP UNMA*, 8(3), 831-837. <https://doi.org/10.31949/educatio.v8i3.2589>
- Muhaiba, R., Aisy, R. R., Imaniyah, N., Sari, S. M., & Agustina, S. D. (2020). Faktor penyebab kesulitan belajar dan dampak terhadap perkembangan prestasi siswa kelas 1-6 SDN Gili Timur 1. *Prosiding Nasional Pendidikan: LPPM IKIP PGRI Bojonegoro*, 1(1).
- Polya, George. 1975. *How to Solve It A New Aspect Of Mathematical Method*. By Princeton University Press PT. Refika Aditama.
- Poniman, Farid. 2016. *STIFIn Personality Mengenali Mesin Kecerdasan Anda*. Bekasi : Griya STIFIn
- Radiusman, R. (2020). Studi literasi: Pemahaman Konsep Siswa Pada Pembelajaran Matematika. *FIBONACCI: Jurnal Pendidikan Matematika Dan Matematika*, 6 (1),
- Rahman, A. A., Darmiany, D., & Wardani, K. S. K. (2023). Analisis Kesulitan Peserta Didik Dalam Keterampilan Membaca Permulaan Di Kelas I SDN 26 Ampenan Tahun Ajaran 2021/2022. *Renjana Pendidikan Dasar*, 3(2), 123-129.
- Sulistiowati, D. L. (2022). Faktor penyebab kesulitan siswa dalam memecahkan masalah geometri materi bangun datar. *BULLET: Jurnal Multidisiplin Ilmu*, 1(05), 941-951.
- Yadav, S. (2019). Role of mathematics in the development of society. *IJRAR-International Journal of Research and Analytical Reviews (IJRAR)*, E-ISSN, 2348-1269.