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Analysis of Student's Numeracy Literacy Skill Based on Reflective-Impulsive Cognitive Style

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ABSTRAK

Penelitian ini merupakan penelitian deskriptif kualitatif tipe studi kasus yang bertujuan untuk mendeskripsikan kemampuan literasi numerasi siswa kelas VIII SMPN Kota Baru ditinjau dari gaya belajarnya. Subjek penelitian ini adalah 8 siswa yang mewakili siswa dengan gaya belajar reflektif dan siswa dengan gaya belajar impulsif. Teknik pengumpulan data yaitu, matching familiar figure test (MFFT) untuk mengelompokan siswa berdasarkan gaya belajarnya, tes literasi numerasi, dan wawancara. Teknik analisis data yang digunakan adalah reduksi data, penyajian data, dan penarikan kesimpulan. Hasil penelitian ini menujukkan tingkat kemampuan literasi numerasi siswa reflektif (SR) berturut-turut adalah SR 1 mencapai 88%, SR 2 mencapai 67%, SR 3 mencapai 79% dan SR 4 mecapai 91%. Tingkat kemampuan literasi numerasi siswa impulsif (SI) berturut-turut adalah SI 1 mencapai 58%, SI 2 mencapai 67%, SI 3 mencapai 50% dan SI 4 mencapai 63%. Subjek reflektif memiliki kategori tingkat kemampuan literasi numerasi tinggi dan sangat tinggi sedangkan subjek impulsif memiliki kategori tingkat kemampuan literasi numerasi sedang dan tinggi. Siswa yang reflektif membutuhkan waktu yang lama untuk memahami masalah dengan cara menggambarkannya dalam bentuk model matematika sehingga siswa reflektif unggul dalam aspek penalaran. Siswa yang impulsif cenderung cepat dalam menjawab soal namun kurang memperhatikan jawaban yang tepat sehingga siswa impulsive menonjol dalam aspek komunikasi.

ABSTRACT

The research belongs to a qualitative descriptive study that aims to describe the numeracy literacy skills students grade 8 of State Junior High School of Kota Baru I (SMPN Kota Baru) *in terms of their cognitive styles. The subjects of this study were eight students representing students with reflective cognitive styles yet impulsive cognitive styles. Data collection techniques were, matching familiar figure test (MFFT) to classify students based on their cognitive styles, numeracy literacy tests, and interviews. Data analysis techniques used were data reduction, data presentation, and drawing conclusions. The results of this study showed that the level of numeracy literacy skills of reflective students (SR) was respectively SR 1 is 88%, SR 2 is 67%, SR 3 is 79% and SR 4 is 91%. The level of numeracy literacy skills of impulsive students (SI) was respectively SI 1 is 58%, SI 2 is 67%, SI 3 is 50% and SI 4 is 63%. Reflective subjects have a category of high and very high numeracy literacy ability levels while impulsive subjects have a category of medium and high numeracy literacy ability levels. Reflective students need a long time to understand the problem by describing it into a mathematical model so that reflective students excel in the reasoning aspect. Impulsive students tend to be quick in answering questions but pay less attention to the right answers so that impulsive students stand out in the communication aspect.*

INTRODUCTION

In terms of terminology, the word "literacy" comes from the Greek literatus (littera), which is equivalent to the word "letter" in English, whose meaning "the ability to read and write." The word literacy is defined as "the ability to read and write," which then evolves into the ability to master knowledge in

specific fields. According to Law of Republic of Indonesia number 3 on 2017 concerning the literacy bookkeeping system, literacy is defined as the ability to interpret information critically so that everyone able to access knowledge and technology as an effort to improve their quality of life. Numeracy is related to the ability to differentiate the quantity of an object such as more, less, higher, or shorter. Arithmetic operation is the ability to perform basic mathematical operations such as addition, subtraction, multiplication, and division (Sudarwono, 2020).

According to (Han, W., Susanto, Dewayani, S., Pandora, P., Hanifah, N., Miftahussururi, M., Akbari, 2017) numeracy literacy has knowledge and skills including using numbers and symbols related to mathematics in solving daily problems, studying the information displayed to make decisions. Meanwhile, another opinion regarding numeracy literacy according to (R. H. N. Sari, 2015) is the ability to manage numbers and data and evaluate statements that involve mental thinking and estimates according to problems and reality. Numeracy literacy is also the ability to interpret meaning and use reasoning to make decisions based on facts and mathematical concepts (Siahaan et al., 2022). Based on the definition above, it can be concluded that numeracy literacy is students' ability to understand, apply and interpret mathematical concepts using reasoning in the form of symbols and numbers to solve problems in daily life.

It is important to develop the numeracy literacy skills of secondary school students. In reality, students' ability to solve various problems in daily life tend to low. The results of the 2018 Program of International for Student Assessment (PISA) show that students' reading ability scored 371 in 74th position, mathematics ability got 379 in 73rd position and science ability with a score of 379 was in 71st position out of 79 countries (OECD, 2013). PISA to assess students aged 15 years. PISA test results on 2022 showed that reading literacy has increased by 5 positions, mathematics literacy has increased by 5 positions, and scientific literacy has increased by 6 positions from before. Indonesia is ranked 68th with scores in mathematics (379), science (398) and reading (371). The average results for the three subjects are; mathematics, reading and science in 2022 showed a declining result (learning loss) reaching 12-13 points compared to 2018. In solving PISA questions, students have difficulty understanding the questions and creating mathematical models.

There is a need for strengthening numeracy literacy learning in the Minimum Competency Assessment (MCA) because one of the competencies of students' learning outcomes measured in the national assessment starting from 2021 is reading literacy and numeracy literacy (Kementerian Pendidikan dan Kebudayaan., 2020). The basic numeracy competence being measured includes skills in logical-systematic thinking, reasoning skills using concepts and mathematical knowledge that have been learned, as well as skills in sorting and processing quantitative and spatial information.

Nowadays, many cognitive styles are known. Among them are reflective cognitive style and impulsive cognitive style. Students who have a reflective cognitive style tend to use more time to respond and contemplate the accuracy of their answers. Reflective individuals are very slow and cautious in giving responses, but tend to provide correct answers (Imama, M., & Siswono, 2017). On the other hand, individuals who have an impulsive style tend to respond quickly. A true impulsive individual is an individual who responds quickly, but also has few errors in the process (Agustina, S., & Patimah, 2019).

These are two cognitive styles are very unique in knowing their level of ability in numeracy literacy because between the two learning styles there are differences in the accuracy and speed of thinking of each reflective or impulsive student, so it is very important to study students' abilities in depth. (Murtafiah & Nursafitri Amin, 2018) states that cognitive style is a person's style of thinking which is related to how a person receives, stores, processes and presents information. These various cognitive styles are relatively persistent personality traits, so they can be used to explain a person's behavior in facing situations. (Warli, 2013) revealed that children who have the characteristic of being slow in answering problems, but careful/thorough, so that the answers tend to be correct, are called a reflective cognitive style. Meanwhile, children who have the characteristic of being quick in answering problems, but not careful enough so that the answers tend to be wrong are Impulsive students.

Based on the initial observations of researchers at SMPN Kota Baru (State Junior High School of Kota Baru) in Kefamenanu, it was found that students have different ways of solving problems. Students used to solve problems at different times according to their abilities. There are some students who need more time to solve the problem because they are very meticulous with the given questions and their answers tend to be correct. In other hand, there are some students who need more to complete the problem, but their answers are wrong. Some students need to answer the questions quickly and in-a-rush so that their answers tend to be wrong, while there are students who complete the problems quickly but their answers tend to be correct. According to different abilities of students and problem-solving approaches, it is important to conduct research using the reflective-impulsive cognitive style. The finding of the research might be supported teachers to accommodate the students' learning needs

that impact to innovation of teaching and learning method. By this implication, the students' numeracy literacy skill yet be improved.

METHOD

The research belongs to a qualitative descriptive study. According (Sugiyono., 2015) qualitative research is a research method based on the philosophy of postpositivism, used to research the conditions of natural objects, where the researcher is the key instrument. The research was conducted at SMPN Kota Baru, Kefamenanu, East of Nusa Tenggara. The research was conducted in grade VIII A, B and C, which are 43 students. The subjects chosen in this research were 8 students with representation of 4 students as reflective subjects and 4 students as impulsive subjects. The data used in this research is primary data where the data is obtained directly in the form of test result data, MFFT (Matching Familiar Figure Test), numeracy literacy test, data from interviews and documentation. The research stage manages and analyzes data obtained from the results of written test answers according to (Miles,M.B, Huberman, 1992)

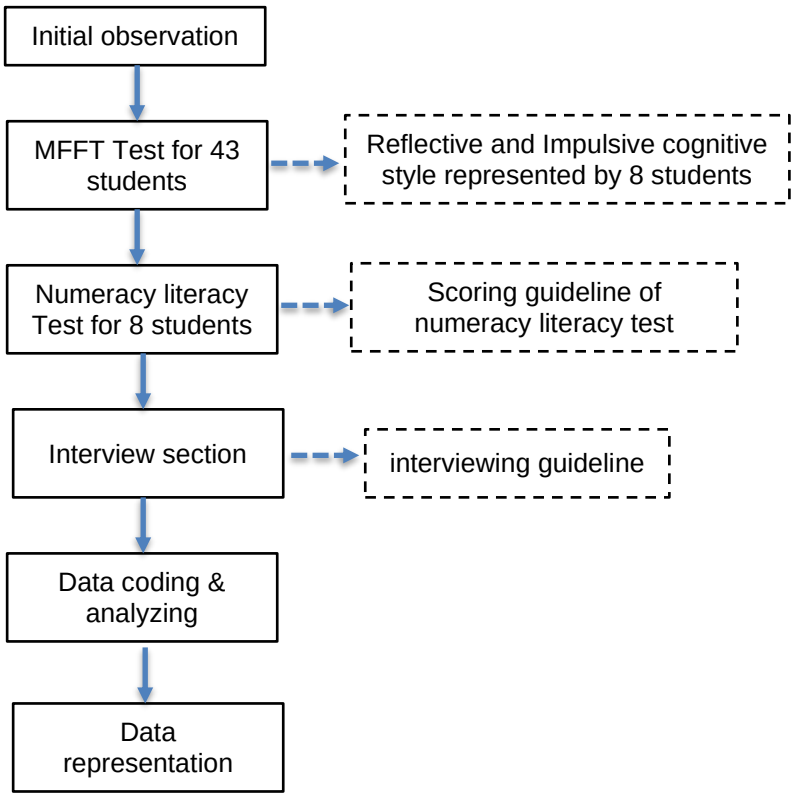

Figure 1. Research Procedure

To determine the MFFT results using Frequency (F) could be found by the student's incorrect answers (fs) divided by the time (t):

$$F = \frac{f_s}{t}$$

(Warli, 2013)

Note:
F = Frequency of student answers
fs = Number of wrong student answers
t = Time needed for doing MFFT
The percentage level of students' numeracy literacy skills is found using a formula to see what percentage of students are able to solve the formula problem, namely:

$$P = \frac{F}{N}$$

(Warli, 2013)

Note:
P = Percentage of score obtained
F = Total score for each achievement
N = Maximum Score

To determine the level of students' numeracy literacy skills in the test and calculate the average percentage using the value intervals presented in the following Table 1 (Syahwani Umar dan Syahmbasril, 2011)

Table 1. Interval of Numeracy Literacy Skills

No.	Interval	Category
1	81% – 100%	Very High
2	61% - 80%	High
3	41% – 60%	Currently
4	0% – 40%	Low

RESULTS AND DISCUSSION

Results

MFFT is the instruments used to determine students' cognitive styles, in this case are reflective and impulsive cognitive style. MFFT instrument used in this research was developed by Warli which consists of 2 experimental question items and 13 test question items. In each question item there is 1 standard figure and 8 variation figures. From 8 variation figures, there is one image that is similar to the standard image. The student's task is to choose a variation image that is the same as the standard image. The time specified for working on the questions is that each number has a time limit as much 2 minutes. The tool used to calculate time is a stopwatch.

Table 2. Results of Measuring Students' Cognitive Styles

Class	Number of students	Time (t)			Frequency (f)		
		Min	Max	Med	Min	Max	Med
VIII	43	8,06	41,01	19,36	0,03	0,83	0,25

Table 2 explained the time needed by students to complete MFFT questions and frequency of students that obtained from number of wrong answers divided by time needed. The data represented by maximum, minimum, and median value.

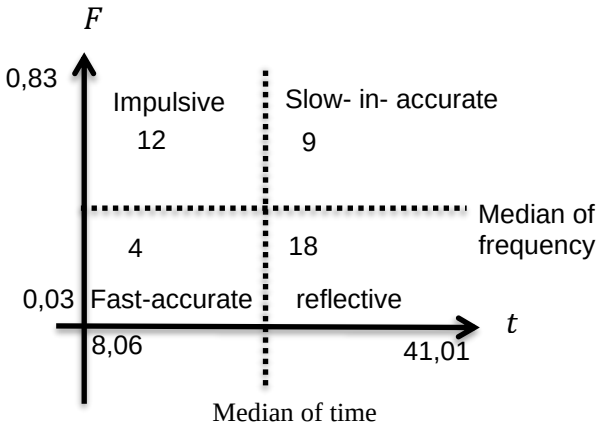

Figure 2. MFFT Graphic

Figure 2 clarified the Table 2 that fast-accurate and reflective cognitive style have least of frequency which mean they have least of wrong-answer number of question. Contrary with impulsive and slow-in-accurate cognitive style, they have more score of frequency. Based on time needed, fast-accurate and impulsive cognitive style need least time than reflective and slow-in-accurate cognitive style for complete the question.

Table 3. The Classification of Students' Cognitive Style

Learning Style	Number of students	Percentage Of Students
Fast accurate	4	9,3 %
Reflective	18	41,9 %
Impulsive	12	27,9 %
Slow inaccurate	9	20,9 %

Table 4. Research Subjects

No	Student Name	Code	Time	Correct Answer	Wrong Answer	Frequency F = fs/t	Learning Style
1	RTF	SR 1	33,02	9	4	0,12	Reflective
2	FAO	SR 2	29,25	10	3	0,10	Reflective
3	MF	SR 3	29,51	11	2	0,07	Reflective
4	MVN	SR 4	33,08	12	1	0,03	Reflective
5	FK	SI 1	14,09	5	8	0,57	Impulsive
6	RA	SI 2	15,06	5	8	0,53	Impulsive
7	GMB	SI 3	17,16	4	9	0,52	Impulsive
8	MSS	SI 4	15,06	1	12	0,80	Impulsive

Based on Table 3 and Table 4, it revealed that reflective students working on questions takes quite a long time, but the answers they give tend to be correct. Meanwhile, impulsive students need a fairly quick time to work on questions, but the answers they give tend to be wrong. Included in reflective students are RTF, FAO, MF and MVN.

Reflective Students

The student numeracy literacy test consists of 4 numbers. This question is a form of the MCA TEST which includes Numbers, Algebra, Geometry & Measurement and Data & Uncertainty topics. The score for each question is 3. Based on the results of the MFFT, four reflective subjects were RTF, FAO, MF and MVN. The next step is these four subjects held an interviewing section. Following are the results of the analysis of the 4 subjects.

Students who satisfy the first numeracy literacy indicator is students are able to use various kinds of numbers and symbols as frequencies and data for the problem given. The second numeracy literacy indicator is students are able to tabulate known data in the form of tables consisting of frequency and data. The third numeracy literacy indicator is the student is able to sort data from smallest to largest in table form. Based on the results of coding carried out on reflective students in problem number 1, two of four reflective subjects met all the numeracy literacy indicator yet the two other subjects did not fulfill the third indicator. Subject who did not meet the numeracy literacy indicator 3 is because students failed to figure out what is asked in the problem given.

Figure 2. Reflective Student Work on Problem Number **1**

Based on the picture above, it shows that reflective students have been able to use various kinds of numbers and symbols as frequencies and data from the questions given and reflective students have been able to tabulate known data in the form of tables consisting of frequencies and data, but reflective students have not been able to sort the data from smallest to largest in table because the expected solution to problem number 1 is that the data is arranged from the number of books owned by students from smallest to largest.

For problem number 2, students expected to meet the numeracy literacy indicator 1 when students are able to use numbers and symbols to calculate the unit price of headbands and hair clips. Students are said to meet the numeracy literacy indicator 2 when students are able to use a certain method to calculate the unit price of 1 headband and 8 hair clips. Students are said to meet the numeracy literacy indicators when students are able to determine the total costs that Yeni must prepare to buy 1 headband and 8 hair clips.

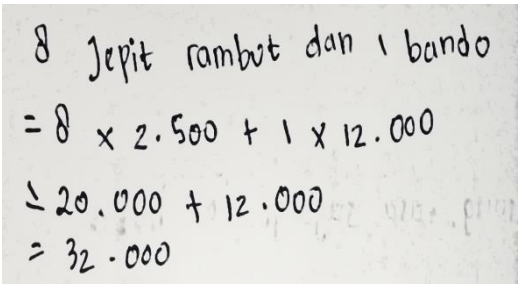

Figure 3. Reflective Student Work on Problem Number **2**

The finding is three of four reflective subjects satisfied the three numeracy literacy indicators. There is only one reflective subject who satisfied numeracy literacy indicator 1 and 2. Figure 3 showed that SR1 able to create a mathematical model to calculate the total price of eight hairpins and one headband. The error in this subject is incorrectly determining the unit price of the hairpin. It is known from the question that the price of 5 hairpins is IDR 2,500.00 so the unit price is IDR 500.00. In this case, SR 1 did not process the information correctly in determining the unit price of the hairpin.

For problem number 3, students are said to meet the numeracy literacy indicator 1 when students are able to use various numbers and symbols to calculate the ratio of the composition of the ingredients needed to make sponge cake. Students are said to meet the numeracy literacy indicator 2 when students are able to use a certain method to determine the amount of ingredients used to make 3 sponge cakes in a 10 X 20 baking dish. Students are said to meet the numeracy literacy indicator 3 when students are able to draw conclusions about the number of ingredients needed to make 3 sponge cakes in a 10 X 20 baking dish.

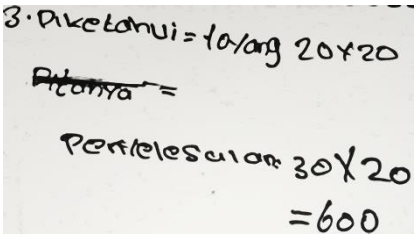

Figure 4. Reflective Student Work on Problem Number **3**

Based on the picture above, it shows that reflective students (SR2) do not have any ideas in solving problems regarding the application of portion and ratio problems in daily life. The finding is in indicators 2 and 3 there are only 3 students who are capable of these indicators. SR 2 was not yet capable of indicators 2 and 3 because the student was not able to analyse the questions given so his work results were as follows (3 X 10) X 20. After being interviewed he said that he immediately calculated 3 cakes multiplied by his mother's baking dish, namely 10 X 20.

For problem number 4, students are said to meet the numeracy literacy indicator 1 when students are able to use various numbers and symbols to differentiate units of time; hours, minutes and seconds. Students are said to meet the numeracy literacy indicator 2 when the students are able to use a certain method to calculate the length of exercise time used by the Ayu group. Students are said to meet the numeracy literacy indicator 3 when the students are able to conclude the total amount of exercise time used by the Ayu's group in minutes.

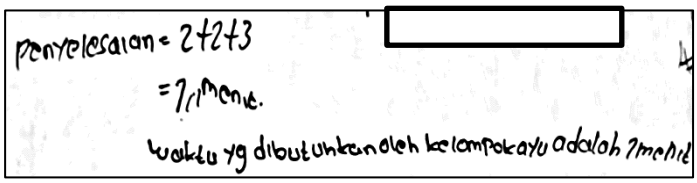

Figure 5. Reflective Student Work on Problem Number **4**

Based on the picture above, it shows that reflective students are not yet able to use various kinds of numbers and symbols to differentiate units of time; hours, minutes and seconds. Reflective students were also not able to use a particular method to calculate the length of exercise time used by the Ayu's group and reflective students were also unable to conclude the total length of exercise time used by the Ayu's group in minutes.

The finding is in indicator 1, out of 4 students, there are 3 students who meet this indicator. In the 2nd and 3rd indicators, there are 2 students who are capable of these indicators. There is 1 student who is not capable of indicator 1 (SR3) and there are 2 students who are not capable of indicators 2 and 3 (SR2 and SR3).

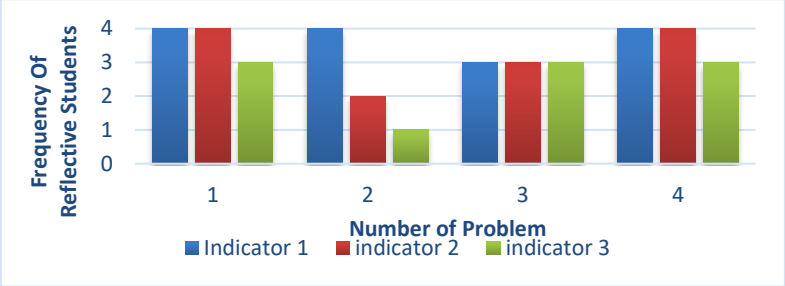

Figure 6. Diagram of Reflective Students Work on Numeracy Literacy Test

Impulsive Students

Based on the results of work and interviews with impulsive students, it shows that impulsive students work on questions in a hurry without paying attention to the appropriate results.

In problem number 1, only SI3 have met all numeracy literacy indicator and SI1, SI2, and SI4 did not satisfy indicator of numeracy literacy 2 and 3.

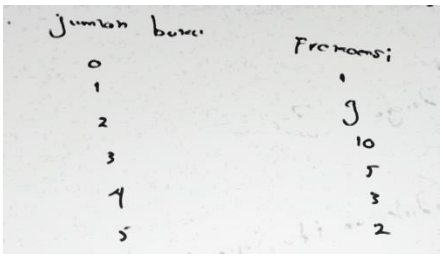

Figure 7. Impulsive Students Work on Problem Number 1

Based on the picture above, it shows that impulsive students have been able to use various kinds of numbers and symbols as frequencies and data from the questions given, but impulsive students have not been able to tabulate known data in the form of tables consisting of frequencies and data, impulsive students have also not been able to sort the data from smallest to largest in table.

In problem number 2 there are 3 students who meet indicator 1, while in indicators 2 and 3 there is only one student who meets this indicator (SI2).

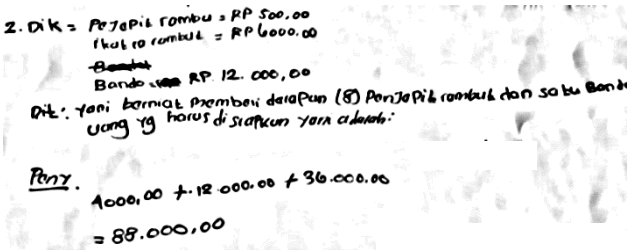

Figure 8. Impulsive Students Work on Problem Number 2

Based on the picture above, it shows that SI3 is not even able to create a mathematical model to calculate the operation of two variables; hairpins and headbands. SI3 writes as if there are three variables being operated. From the results of this work, it can be concluded that students do not understand the meaning of the written mathematical sentences.

In problem number 3 all students met indicator 1, in indicators 2 and 3 there was only 1 student who met it (SI2).

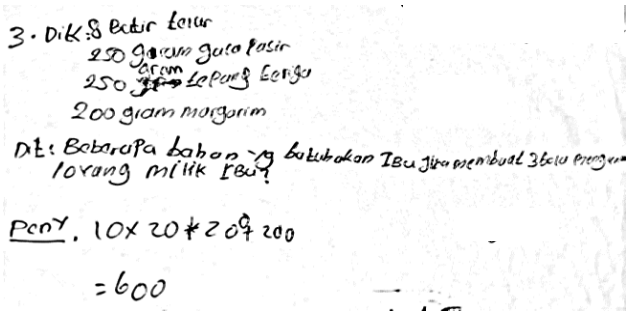

Figure 9. Impulsive Students Work on Problem Number 3

Based on the picture above, it shows that impulsive students do not have any ideas in solving problems regarding the application of portion and ratio problems in everyday life.

In problem number 4, three subjects impulsive able to differentiate the unity of minute and second yet they did not convert the second into minute. The answer of problem 4 is 7 minutes 45 second which is 7,75 minutes while three subjects (SI1, SI2, and SI3) just answer as 7:45. Figure below is the answer of SI4.

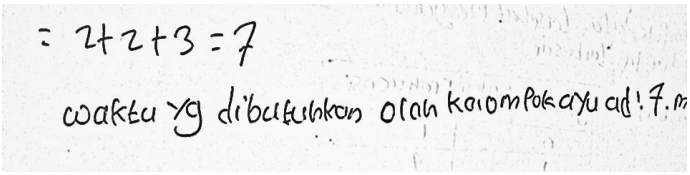

Figure 10. Impulsive Students Work on Problem Number 4

Based on **Figure 10**, it shows that impulsive students are able to use various kinds of numbers and symbols to differentiate units of time; hours, minutes and seconds, but impulsive students have not been able to use certain methods to calculate the length of exercise time used by the Ayu group and have not been able to conclude the total length of exercise time used by the Ayu group in minutes.
From the results of interviews with impulsive students, it shows that impulsive students work on questions in a hurry without paying attention to the appropriate results.

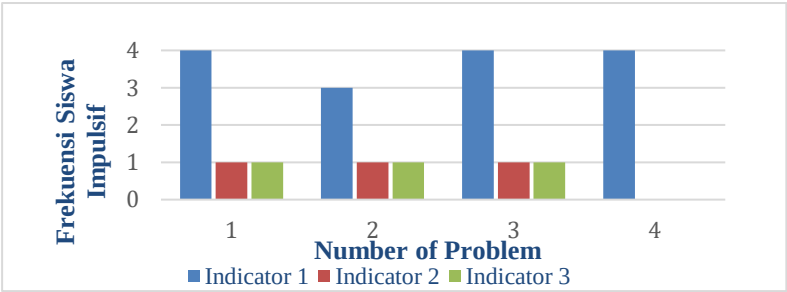

Figure 11. Diagram of Impulsive Students Work on Numeracy Literacy Test

Discussion

Reflective Students

In this research, reflective students were able to develop and work using various models in various situations. Reflective students were able to identify problems from the questions given and make decisions. Reflective students are able to reflect on actions by formulating and communicating them in mathematical models so that when working on problems, reflective students are able to interpret problems according to the existing situation. Students with a reflective cognitive style tend to examine

the results of problem solving by looking back at the results they have obtained (Warli, 2013) According to (Simamora & Akhiruddin, 2022), reflective students solve problem calmer; less hasty to determine a problem solving strategy. Furthermore, (Patta, R., Muin, A., & Mujahidah, 2021) revealed that Reflective students solve problems that take quite a long time, but the answers they get tend to be correct. According to these characteristics, reflective students have outstanding abilities in the reasoning and argument aspects (Nurdianasari, 2015). (Ghufron, N., & Risnawati, 2014) adding explained that reflective cognitive style has the characteristic of being slow in solving problems but the answers tend to be correct. This is in line with the research results obtained that reflective students use quite a long time beyond the specified time limit to work on the questions and answers given. according to the actual answer, this is because reflective students read the question carefully and understand what is asked in the question.

Based on the coding results of reflective students, it shows that in question number 1, of the 4 reflective students, all students were able to fulfill indicators 1 and 2, but there was one student who was not yet capable of numeracy literacy indicator 3, while the other two reflective students had fulfilled the indicators. 3rd numeracy literacy. Question number 2 in indicator 1 all students have fulfilled this indicator. In the 2nd indicator there are only 2 students who are capable of this indicator and in the 3rd indicator there is only 1 student who is capable of this indicator. In question number 3, there were 3 students who were capable of these 3 indicators, there was only 1 student who was not capable of the three numeracy literacy indicators. Question number 4 in indicators 1 and 2 all students have fulfilled these indicators, while in indicator 3 there are only 3 students who are capable of these indicators.

Reflective students can provide reasons for the answers given and provide conclusions from their logical thinking in linking elements in solving existing problems. Reflective students are also able to connect some information that leads to mathematical solutions and can explain existing mathematical solutions to problems in contextual form (P. O. Sari & Wulan, 2024). Based on the research results, it shows that reflective students use quite a long time to provide answers. The more time a reflective student needs to answer, the more the answer is in line with what was expected, because the reflective student is careful enough in reading the question so that he understands what the question is asking, so that he can do it correctly. The following are the percentage results of reflective students' numeracy literacy ability tests, the SR 1 numeracy literacy ability level reached 88%, the SR 2 ability level reached 67%, the SR 3 ability level reached 79% and the SR 4 ability level reached 91%. This shows that reflective students meet the criteria for numeracy literacy indicators.

Impulsive Students

The 4 students have tried to solve the questions given even though the answers given tend to be wrong. This error occurs because impulsive students do the questions in a hurry. Impulsive students have the ability to think spontaneously (Warli, 2014) This causes students to be less careful in working on questions so that the answers they give tend to be wrong. Students can complete problem solving effectively in concrete situations. For further, (Patta, R., Muin, A., & Mujahidah, 2021) impulsive students solve questions quickly enough but the answers they get tend to be wrong. Individuals who have an impulsive style tend to respond quickly. A true impulsive individual is an individual who responds quickly, but also makes a few mistakes in the process (Wulan, N., Sukmawati, B., 2021). (Afifah, 2019) defines impulsive students as students who react quickly to situations, but their first response is often wrong. Impulsive students are students who have the characteristics of solving questions quickly but are not careful enough so that the answers are usually wrong.

Based on the results of coding impulsive students, it shows that impulsive students work on questions in a hurry without paying attention to the appropriate results. In question number 1, all students met indicator 1, there was 1 student who met indicator 2 and indicator 3. In question number 2 there were 3 students who met indicator 1, while in indicators 2 and 3 there was only one student who met these indicators. in question number 3 all students meet indicator 1, In indicators 2 and 3 there is only 1 student who meets it. In question number 4 of the 4 impulsive students only met indicator 1, while indicators 2 and 3 did not meet these indicators.

Impulsive students do not meet the 2nd and 3rd indicators, namely being able to analyze information displayed in the form (graphs, tables, charts) and interpreting mathematical skills in everyday life and being able to interpret the results of analyzes that have been carried out to describe and draw conclusions. SI 2 has been able to connect some information that leads to mathematical solutions, but students have not been able to provide explanations to maintain the truth of the answers given. Based on the research carried out, it shows that impulsive students are able to work on questions quite quickly, but the answers given are less precise because impulsive students are less careful in solving questions, because they are in a hurry when working on questions. Impulsive students have also forgotten the

material related to the questions given because impulsive students are less interested in the material in the questions given (Haryani et al., 2023). The following are the percentage results of the numeracy literacy ability test for impulsive students whose SI 1 ability level reached 58%, SI 2 ability level reached 67%, SI 3 ability level reached 50% and SI 4 ability level reached 63%. This shows that impulsive students do not meet the criteria for numeracy literacy indicators.

Table 5. Classification Numeracy Literacy Ability Level Based on Cognitive Style

Cognitive Style	Time (Minutes)	Numeracy Literacy Ability Level	Classification
Reflective	92 – 101	67 – 91 %	Very High-High
Impulsive	65-81	50 – 67 %	High-Medium

CONCLUSION

Based on the results of research and discussion regarding students' numeracy literacy abilities in terms of reflective-impulsive cognitive style, it can be concluded that students who have a reflective cognitive style spend quite a long time before the specified time limit in working on questions and tend to be careful when working on numeracy literacy test questions. Reflective students need a long time, but reflective students understand the problem by describing it in a mathematical model so that students rewrite what they know and ask about the problem and are able to apply mathematical concepts from the problem given and are able to provide conclusions from the problem they have worked on. The SR 1 numeracy literacy level reached 88%, the SR 2 ability level reached 67%, the SR 3 ability level reached 79% and the SR 4 ability level reached 91%. This shows that reflective students meet the criteria for numeracy literacy indicators.

Students who have an impulsive cognitive style use time quite quickly than the specified time limit. Impulsive students rush to answer questions without paying attention to the appropriate answer. Impulsive students have also forgotten the material related to the questions given because impulsive students are less interested in the material in the questions given. Impulsive students have not been able to decipher the questions given in the mathematical model, because students answered the questions given not in accordance with the question instructions and students have not been able to draw conclusions from what they have done. The SI 1 capability level reached 58%, the SI 2 capability level reached 67%, the SI 3 capability level reached 50% and the SI 4 capability level reached 63%. This shows that impulsive students do not meet the criteria for numeracy literacy indicators.

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