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Student's Numeracy on A Space and Shape Problem with Second-Order Level Use of Context in Terms of Self-Efficacy

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Abstract: This is a qualitative research study which aims at describing the numeracy of students with three different self-efficacy levels in solving space and shape problem with second-order use of context. Data were collected from low, medium, and high self-efficacy students' written responses and semi-structured interviews on a space and shape problem. Data were analyzed using the framework of numeracy processes adopted from the mathematical processes of mathematical literacy: formulate, employ, and interpret. Students with high and medium self-efficacy did the formulation process by mentioning the mathematical aspects that are known in the problem and assuming the mathematical aspects needed in solving and making appropriate pictures as mathematical representations. On employing process students with high and medium self-efficacy explained the strategies used in solving and employing appropriate mathematical concepts at each step of completion. Students with high and medium self-efficacy interpret math answers by writing down the answers according to the context requested. But students with high and medium self-efficacy cannot show the evaluation process. Students with low self-efficacy only did first sub-indicators of the mathematical process such as identifying mathematical aspects of the problem and cannot show the next mathematical processes such as formulating, employing, interpreting, and evaluating.

INTRODUCTION

A person needs the ability to make decisions in various areas of life in order to be a reflective individual in the 21st century (OECD, 2018; Kemendikbud, 2021). The ability in this situation is numeracy. Numeracy is the key for students to access and understand the world, equipping students with awareness and understanding of the important role of mathematics in the modern world (Kemendikbud, 2021). Numeracy is a person's ability to carry out mathematical processes and use mathematics in various contexts that are encountered in daily life. In each numeracy problem there is a context domain, in AKM numeracy is divided into 3 contexts, namely, personal, socio-cultural, and scientific. While PISA divided the context into 4 namely, personal, occupational, societal, and scientific. The distribution of contexts in AKM Numeracy and PISA is divided based on fields in daily life. Apart from being based on fields, this context can also be divided based on its level. This level context of use is formed because there are many "camouflage context" found in math problems created by teachers. This "camouflage context" is a context that is not used and is needed by students to determine the solution to the problem. This context is only used by teachers to make problems like real-world problems (OECD, 2009). In this case, the OECD

(2009) also notes that problems with the highest level use of context can facilitate students to carry out all the mathematical processes in solving problems.

In Salgado and Stacey's research (2021), the level of using context is divided into 3, namely zero-order level of context use, first-order level of context use, and second-order level of context us. The level of context use is the degree to which solving problem requires engagement with the context to formulate a problem in mathematical terms, solve it in its mathematical form, and interpret and validate the answer in relation to the context of the given problem (Salgado, 2020). This study uses a second-order level of context use to facilitate students to carry out all mathematical processes in solving numeracy problems and improve students' cognitive strategies when solving problems (Salgado, 2017). A person's numeracy is also influenced by content in mathematics, research conducted by Wardani (2022) shows that content in numeracy questions affects students when solving numeracy problems. Based on several studies, there were errors made by students in solving numeration questions on space and shape content, namely understanding errors, transformation errors, process skills errors, and answer writing errors (encoding) (Cahyanto, 2017; Rahmatika 2018). This error is caused because students do not master the material, do not understand the questions so that students are not able to change the questions into their mathematical form, students do not write down what is known what is being asked, students are confused about which formula to use, students are not used to writing down the answers required by the questions, students are in a hurry so they don't recheck their work (Rahmatika, 2018). Based on the description above, the researcher will use space and shape content in this study.

Evidence shows that there are several factors that affect students' mathematics learning achievement not only from the cognitive aspect but also from the affective aspect (Alam, 2018). This affective domain is contained in the five goals of learning mathematics for all students described in the NCTM (Rutherford-Becker, 2009). Being confident in doing math is one of the five general goals of learning math in NCTM. The affective domain that is in line with this goal is self-efficacy. Bandura (1997) argues that "self-efficacy is an individual's belief about his ability to complete tasks or actions required to achieve certain results". According to Bandura (1997), self-efficacy is influenced by three dimensions, level, generality, and strength. Based on these three dimensions, self-efficacy can be measured according to what problems are faced. One example is mathematical self-efficacy, which measures a person's belief in realizing a mathematical situation, task, or problem, or skill in solving it (Hackett and Betz, 1989). This study will describe student numeracy so that the self-efficacy used is mathematical literacy self-efficacy or numeracy self-efficacy (Ozgen & Bindak, 2011). Ozgen & Bindak (2011) stated that numeracy self-efficacy can be defined as an individual's belief or judgment in his ability to process mathematics and mathematical skills in various contexts encountered in daily life.

Research conducted by Mellyzar et al. (2021) found that there is a relationship between self-efficacy and numeracy with a high and positive correlation. Research conducted by Salsabilah and Kurniasih (2022) explains that students with high self-efficacy fulfill 4 (four)

numeracy indicators, namely the process of understanding the problem, the process of modeling the problem, the process of using concepts in solving problems, and the process of interpreting and evaluating problems. Students with moderate self-efficacy fulfill 3 (three) numeration indicators. At the same time, students with low self-efficacy meet 1 (one) numeration indicator, namely the process of understanding the problem. Based on some of the research above, shows that there is a relationship between self-efficacy and student numeracy, but there has been no research on junior high school students' numeracy in terms of space and shape with a second-order level of context use, so researchers will do that.

Therefore, this study aims to describe students' numeracy on space and shape problem with second-order use of context.

METHOD

This research is a descriptive study with a qualitative approach emphasizing the description of facts through a series of observations from the point of view of the subjects studied. The source of the data in this study was class VIII junior high school students who have studied the area of a rectangle. In this study, one class was taken to work on a numeracy self-efficacy questionnaire. From the results of the questionnaire, students were classified into categories of high self-efficacy, medium self-efficacy, and low self-efficacy levels. From the results of this categorization, one student with a high level of self-efficacy, one student with a medium level of self-efficacy, and one student with a low level of self-efficacy were taken for space and shape with second-order level use of context problem. Taking this subject aims to describe the numeracy of students to work on questions related to space and shape with second-order level use of context problem on the basis of a review at the level of self-efficacy. To get more in-depth results about student numeracy in space and shape with second-order level use of context problem, after solving the problem given, the subject were interviewed personally.

Then one student with a high level of self-efficacy, one student with a medium level of self-efficacy, and one student with a low level of self-efficacy are taken for getting a question of space and shape with second-order level use of context problem. The self-efficacy questionnaire in this study was adapted from Ozgen & Bindak (2011) for statements about generality dimension and Nursilawati (2010) for statements about magnitude and strength dimension. The questionnaire consists of 25-item statements. After obtaining data in the form of students' self-efficacy questionnaire scores then the data is analyzed based on the score range which refers to calculations from (Salsabilah. et.all., 2022). The reason for adopting the instrument form Ozgen & Bindak (2011) and Nursilawati (2010) is because some of the statement items in the self-efficacy questionnaire are relevant to the process of solving numeracy problem.

The form of the scale used in this study is the Likert model scale, with four alternative answer choices consisting of favorable and unfavorable item groups consisting of SS (strongly agree), S (agree), TS (disagree), STS (strongly disagree). The unfavorable statement

group consists of negative statements, while the favorable item group consists of positive statements. The explanation regarding the scoring for the self-efficacy scale is as follows:

Table 1. Scoring for Questionnaire

Favorable	Unfavorable
4	1
3	2
2	3
1	4

After obtaining data in the form of student self-efficacy questionnaire scores, the data was then analyzed based on the score range which refers to calculations from Salsabilah. dkk (2022). Thus, the categories of student self-efficacy can be seen in the following table,

Table 2. Interval Score of Self-Efficacy Categories

No.	**Interval Score**	***Self-Efficacy***
1.	$25 \leq x < 51.245$	Low
2.	$51.245 \leq x < 72.004$	Medium
3.	$72.004 \leq x \leq 100$	High

There are 24 children from class VIII-B were given a self-efficacy questionnaire. The following is a chart of students' self-efficacy in this study,

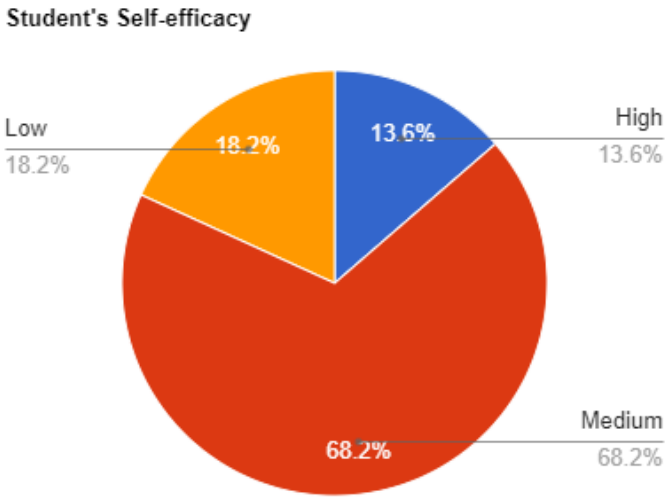

Figure 1. Chart of Students's Self-Efficacy

Data collection techniques used in this research are written tests and interviews. The written tests are self-efficacy questionnaire and numeracy test. The numeracy test is a problem with second-order level use of context. The researcher used the second-order level use of context because this problem can facilitate students' performance in carrying out the mathematical process. This is in line with the indicators used in this study. Numeracy test results are analyzed based on the indicators in the table as follows. Numerical indicators are compiled based on the activities carried out by students in the mathematical process of mathematical literacy from PISA which have been adapted to the space and shape content (OECD, 2019). The mathematical process in PISA are formulating situations mathematically, employing mathematical concepts, facts procedures, and reasoning, interpreting, applying, and evaluating mathematical outcomes.

Table 3. Coding for Numeration Indicators

No.	Numerical Indicator	Sub-indicator	Code
1.	*Formulate*	Identify the mathematical aspects of the problem	F1
		Identify the terms and assumptions behind each mathematical modeling and simplifications derived from context	F2
		Translate a problem into mathematical language or mathematical representation using appropriate symbols, images or models	F3
2.	*Employ*	Devise a strategy to find a mathematical solution	E1
		Apply the necessary mathematical concepts during the process of finding solutions by means of geometric representations and analyzing data	E2
3.	*Interpret and evaluate*	Interpret mathematical results back into real-world contexts	I1
		Explain the reasons why the results or conclusions are in accordance with the context of the problem given	I2
		Evaluate the reasonableness of mathematical solutions in the context of real-world problems	I3

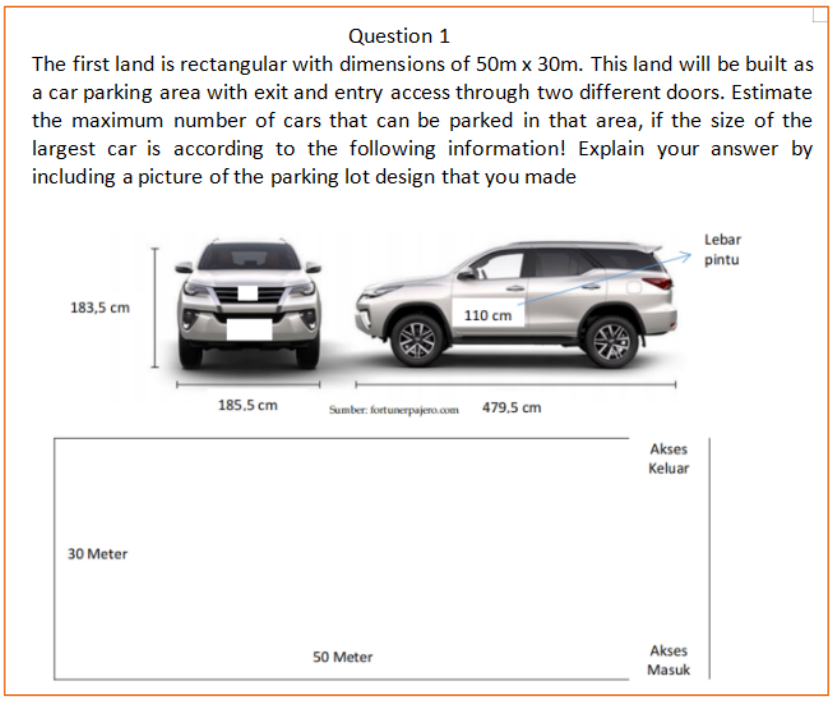

Figure 2. Parking Area Problem

Based on the two indicators for formulation of the mathematical problem and interpretation of mathematical results by Salgado (2022) the question above is a problem with second-order level use of context. The first indicator is the formulation of the mathematical problem namely formulating the problem mathematically requires further consideration of the context to retrieve information, variables, and relationships, or make assumptions, which are not explicitly provided (Salgado, 2022). The second indicator is the interpretation of mathematical results, namely, context is used to judge the adequacy of the mathematical results or arguments in terms of the assumptions made for the mathematical formulation of a problem. That is to say, context and mathematical results or arguments need to be reconciled globally for a valid solution that satisfies the requirements of the problem (Salgado, 2022).

The questions above are questions with the second-order level use of context. In the questions, there is information needed in solving the problem and is provided in the questions, such as the size of the car, and the shape and size of the area used for parking. In addition, there is information needed in solving the problem but not provided, such as the width of the way used for access in and out of the car. There is also information that is not needed but is provided in the question, such as the height of the car. Students are required to identify the mathematical aspects needed to formulate problems. Students are required to use the size of the car in the problem to determine the parking size of one car so that the car can be parked. In addition, the width of the car door is also used to determine the width of the size of the parking lot for one car. In solving the problem of entry access, exit access, and way width, it is necessary to describe the plan that will be made for parking and to determine the maximum number of cars that can be parked on that land. The context of car parking is also used in interpreting mathematical results because if the results obtained are decimal numbers, students must round down because the unit for cars uses integers. Researchers call this problem as the parking area problem.

After the analysis of data for the numeracy test, subjects were interviewed. Interview guidelines according to the numeration indicators to help gather information about the students' mathematical process. Interview data analysis was carried out according to the Miles & Huberman model (2014), namely data condensation, presenting data, and drawing conclusions.

RESULT AND DISCUSSION

There are 3 students with different self-efficacy who worked on numeracy question with the second-order level use of context. Following are the results and analysis of numeracy tests based on high, medium, and low self-efficacy.

High Self-Efficacy

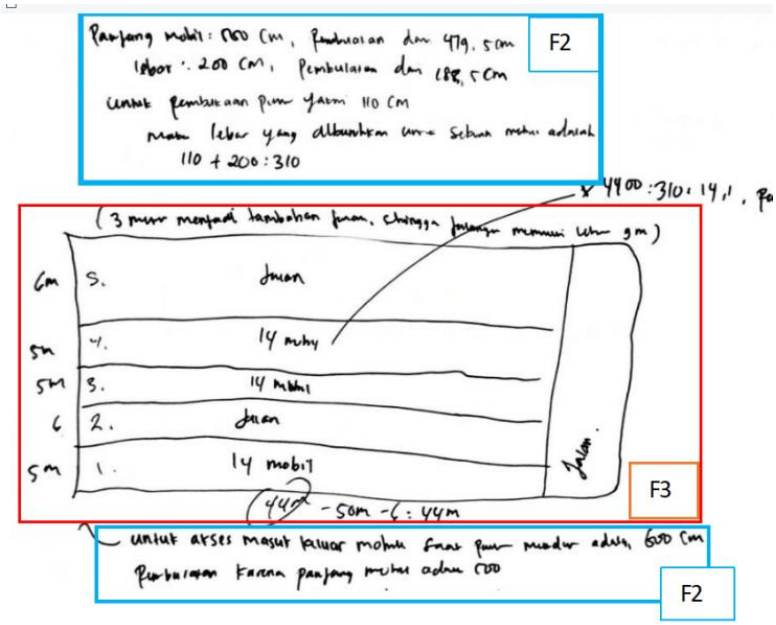

Figure 3. The Answer of SET in the Formulating Process

R : What information did you get after reading the question?
SET : The length of the parking area is 50 meters, the width of the parking area is 30 meters, and the length of the car is 479.5 cm, the width of the car is 185.5 cm and the width of the car door is 110 cm. In addition, there is information related to the shape of the area, which is a rectangle ***(F1)****.*
R : What ere asked in the question?
SET : Maximum number of cars that can be parked in that area? ***(F1)***

Based on the interview, SET identified mathematical aspects in the questions, so that SET fulfilled the F1 indicator even though he did not write it directly on the answer sheet. Then for the F2 indicator, SET writes down what is known, such as area size and car size. SET also assumes that the width of the road required for access and entry of the car when parking backward is 600 cm, which is obtained from the length of the car, which is 500 cm. SET also assumes that the parking width for one car is 310 cm which is obtained from the sum of the width of the car and the width for opening the car door. This can be seen in the answers written by SET. For the F3 indicator, SET does not symbolize the width of the car as L, or the length of the car as P, but SET describes the layout of the car park that was made as shown in Figure 3. Based on the SET answers, SET translated the questions into mathematical language using the appropriate pictures. SET draws a parking plan using the P-W-P-P-W system, P for parking, and W for way.

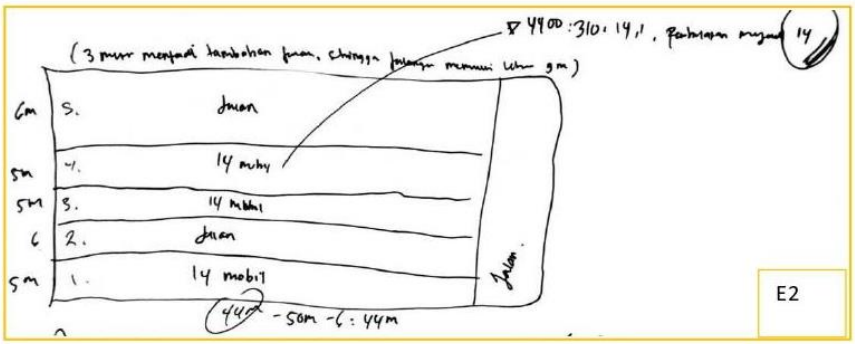

Figure 4. The Answer of SET in the Employing Process

R : What is the solution strategy you do?
SET : After assuming a road size of 6 m for entry access, exit access, and for reverse parking access ***(E1)****. I subtracted the length of the 50 m land with the road width of 6 m so that the land length was 44 m or 4400 cm* ***(E2)****. Then I divided the length of the land by the width of the car that I had previously determined, namely 310 cm* ***(E1)****. So obtained, then the car that can be parked is 14 cars* ***(E2)****.*
R : Then how about after getting 14 cars?
SET : I divided the parking area into several lines as shown in the picture, namely row 1 for car parking, then for row 2 I made a road for car access in the 1st row and 3rd row. I made the 3rd and 4th rows for car parking and the 5th row I made for the road ***(E1)****. Then there is a remaining 3 meters which cannot be used as a car park, so the remaining 3 meters are used as roads. So the road in the 5th row of the road has a width of 9 m* ***(E2)****.*

Based on the interview, SET explains the settlement strategy, SET assumes the parking size for one car first, then SET looks for how many cars can be parked in 1 row by subtracting 50 m by the road width of 6 m, then SET divides 44 m by 310 cm. After that, SET divides the area into several lines as shown in Figure 4 (E1). SET also apply the mathematical concepts given, this can be seen from how SET divides the length of the reduced land by the width of the road and divides it by the width of the parking lot for one car. Then SET can divide

the land into several rows based on the length of the car and the width of the road needed for car access. This can be seen in Figure 4. So that SET meets the E2 indicator.

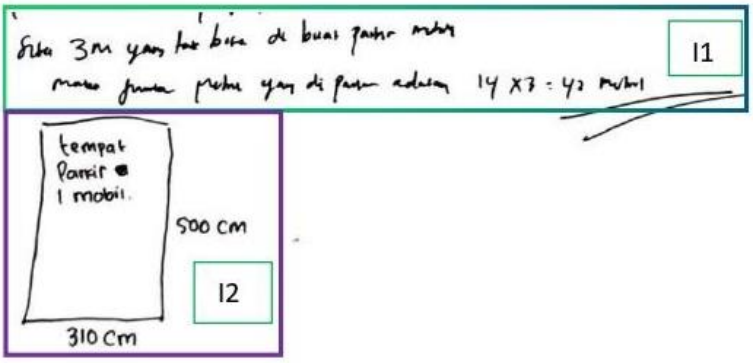

Figure 5. Answer of SET in Interpreting and Evaluating Process

R : Then what is the maximum number of cars that can be parked on that land?
*SET : Because there are 3 rows that are used as car parks, and there are 14 cars in each row, the maximum number of cars that can be parked in that area is a car **(I1)**.*
R : Explain the reasons why the results or conclusions are in accordance with the context of the problem given.
*SET : Because the car park that I made is, so the car in the question can park in that area **(I2)**.*
R : How do you know that the answer is in accordance with the question given?
*SET : Because what was asked was the maximum number of cars, the answer I gave was the maximum **(I3)**.*

Based on the SET answers in Figure 5, SET interprets the mathematical results obtained according to the context by writing the results in car units. Based on the interview, SET fulfills indicator I2 because SET describes the parking size for 1 car, and based on Figure 5 the cars in the question can park in that place. Whereas for indicator I3, SET does not show it either in the interview or on the answer sheet.

Medium Self-Efficacy

The following are the results of work on subjects with high self-efficacy and their analysis:

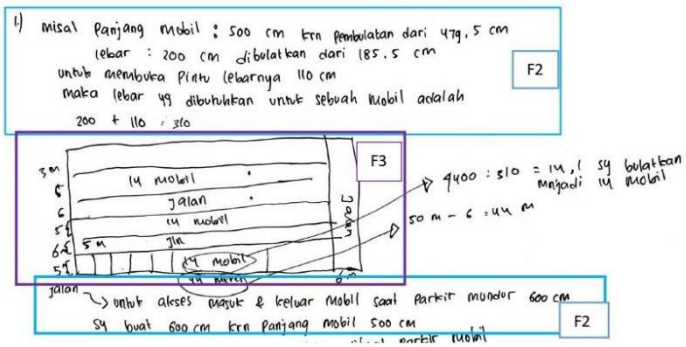

Figure 6. Answer SES in Formulating Process

R : What information do you get after reading the question?
*SES : The parking lot is rectangular in shape. Besides that, the length of the car is 479.5 cm, the width of the car is 185.5 cm and the width of the door is 110 cm **(F1)**.*
R : What is asked in the question?
*SES : Estimate the maximum number of cars that can be parked in that area? **(F1)***

Based on the interviews, SES identified the mathematical aspects in the questions by mentioning it. Then for the F2 indicator, the SES writes down what is known in the problem

such as the size of the area and the size of the car, then rounds off the size of the car. SES assumes the size used for parking for one car and assumes the width of the road used for access and exit of cars when parking backward so that SES fulfills indicator F2. For the F3 indicator, the SES does not symbolize the width of the car as L, or the length of the car as P, but the SES describes the layout of the car park that was made as shown in Figure 6. Based on SES's answers, SES fulfills indicator F3 by translating the questions into mathematical language using appropriate pictures, SES describes the parking plan with P-W-P-W-P-W, P for parking and W for way.

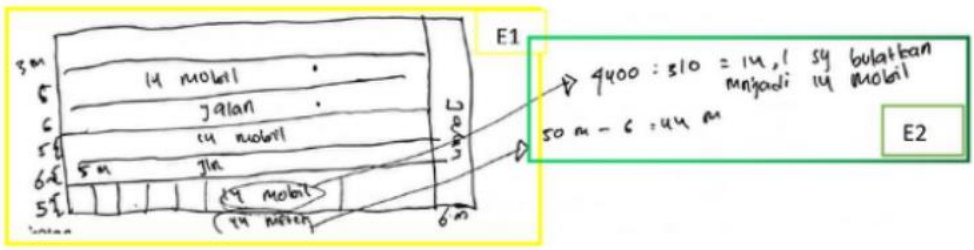

Figure 7. Answer of SES in the Employing Process

R : What is the solution strategy you do?
*SES : The length of the car is 479.5 cm then I round it up to 500 cm, the width of the car is 185.5 cm I round it up to 200 cm, to open the car door the width is 110 cm. Then the width needed to park one car is 310 cm. Then for exit access and entry access is 6 m. After assuming a road size of 6m for entry access, exit access and for reverse parking access. I subtracted the length of the 50 m land with the road width of 6 m so that the land length was 44 m or 4400 cm **(E2)**. Then I divided the length of the land by the width of the car that I had previously determined, namely 310 cm **(E1)**. So obtained, then the car that can be parked is 14 cars **(E2)**.*
R : Why did you make access in and out of the car 6 m wide?
*SES : The road is 6 m because the length of the car is 500 cm, I increased it to 6 m because so that if the car is parked backwards there is more road **(E1)**.*
R : After determining the 6 m road, how?
*SES : Then I searched for how many cars in 1 row **(E1)**. So the length of the land is 50 m minus 6 m equals 44 m. Then 4400 cm divided by the width of the car park, which is 310 cm equals 14.1. So that one row can be used for parking for 14 cars **(E2)**.*
R : Then how about after getting 14 cars?
*SES : I made a 6 m wide road after one parking line, then another parking line, then another 6 m wide road, then another parking area as shown in the picture **(E1)**. So for the width. So there is a remaining 3 m which cannot be used for parking **(E2)**.*

Based on the interview, SES can explain the settlement strategy by assuming the size of the road and the size of the parking lot for one car, SES looks for the maximum number of cars contained in one row. Then SES makes a parking plan which were made according to figure 7. So that SES fulfills the E1 indicator. Based on the SES answers in Figure 7, SES can apply the mathematical concepts used in solving so that SES fulfills the E2 indicator.

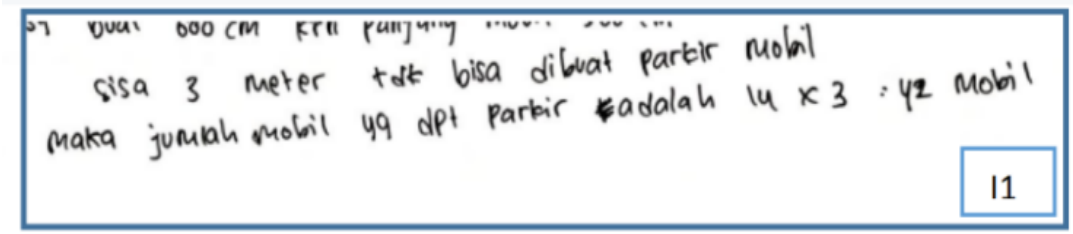

Figure 8. The Answer of SES in the Interpreting and Evaluating Process

R : Then what is the maximum number of cars that can be parked on that land?
SES : Because there are 3 rows that are used as car parks, and there are 14 cars in each row, the maximum number of cars that can be parked in that area is a car ***(I1)****.*
R : Explain the reasons why the results or conclusions are in accordance with the context of the problem given?
SES : Yeah, it is like that ***(I2)****.*
R : How do you know that the answer is in accordance with the question given?
SES : Yeah, it is like that ***(I3)****.*

Based on the answers in Figure 8 and the interview, SES interprets mathematical results according to the context by writing the results in car units. Furthermore, for indicator I2, SES did not explain the reasons why the results he wrote were in accordance with the context. SES also does not show that the area required for the car park that he made was no more than the area of the parking space provided, but the SES did not do this either in the interview or on the answer sheet (I3).

Low Self-efficacy

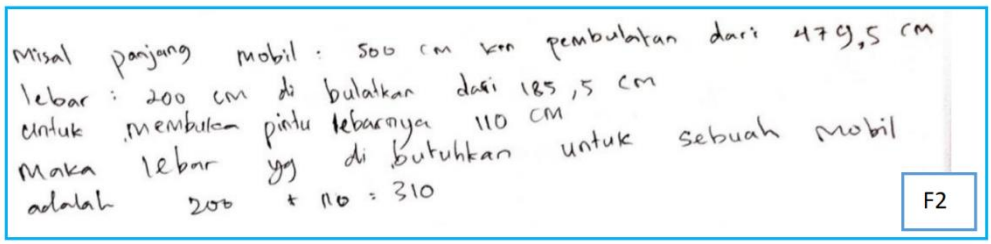

Figure 9. Answer SER in the formulating process

R : What information did you get after reading the question?
SER : The length of the car is 479.5 cm, the width of the car is 185.5 cm and the width of the car door is 110 cm. In addition, there is information related to the shape of the land, namely a rectangle with dimensions. There is a car height of 183.5 cm ***(F1)****.*
R : What was asked next in the question?
SER : Maximum number of cars that can be parked in that area? ***(F1)***

Based on the SER interview, the information contained in the questions such as the size of the car, and the size and shape of the parking lot, so that the SER fulfills the F1 indicator. Based on SER's answer above, SER can assume that the length of the car is 500 cm and the width of the car is 200 cm. In addition, the SER can also determine how much width is needed for a car so that the car door can be accessed. SER determines that the parking width for 1 car is 310 cm obtained from adding up the width of the car to 200 cm and the width of the door to 110 cm. However, the SER did not assume the width of the road for access and exit parking. Because of this, the SER does not fulfill the F2 indicator. Likewise, with the F3 indicator, the SER cannot translate a problem into mathematical language or a mathematical representation using appropriate symbols, images, or models.

R : What is the solution strategy you do?
SER : I don't know ***(E1)****.*

Based on the interview SER could not explain the strategy for solving the problem. This can also be seen from the results of SER's answers on the answer sheet, he did not write anything other than what was known in the questions. So that the SER does not meet the next indicators from indicator E1 to indicator 13.

Based on the previous explanation, the following is a summary of the numeracy of students in solving second-level use of context problems in the domain space and shape based on high, medium, and low self-efficacy.

Table 4. Similarity and Difference of Subject in Mathematical Process

Indicators	Similarity	Difference
Identify the mathematical aspects of the problem (F1)	SET, SES, and SER specify the size of the car and the size of the parking space provided. Whereas in questions with the level of context use order 1 SET and SES can carry out all indicators of the formulating process by mentioning what is known, writing explanations on what is known, and adding explanations to pictures.	
Identify the terms and assumptions behind each mathematical modeling and simplifications derived from context (F2)	SET and SES write down what is known and can assume the required road width	The SER assumes a parking size for one car but does not assume the required road width
Translate a problem into mathematical language or mathematical representation using appropriate symbols, images or modeling (F3)	SET and SES translate questions using pictures	SET draws a parking lot by dividing its parking space into P-W-P-P-W. SES divides its parking space into P-W-P-W-P-W (F3) SER did not write down anything in this process
Design a strategy to find a mathematical solution (E1)	SET and SES perform rounding for the parking size of one car, then assume the width of the road, draw a parking plan, then determine the maximum number of cars.	SER did not write down anything in this process
Applying the necessary mathematical concepts during the process of finding solutions by means of geometric representations and analyzing data (E2)	SET and SES perform rounding up for the size of one car park and the width of the road, then find the width of the land that can be occupied by parking by subtracting the length of the land from the width of the road, determine the maximum number of cars that can be parked on the land by multiplying it.	SER did not write down anything in this process
Interpret math results back into real-world context (I1)	SET and SER write the results in car units.	SER did not write down anything in this process
Explain the reasons why the results or conclusions are in accordance with the context of the problem given (I2)	SES & SER not write down anything in this process	SET describes the size used to park one car
Evaluate the reasonableness of mathematical solutions in the context of real-world problems (I3)	SET, SES & SER do not evaluate the results obtained	

Based on the results of research and discussion that have been done, students with high self-efficacy performs the process of formulating by mentioning the mathematical aspects that are known in the problem such as the size of the car and the size of the parking space and assuming the mathematical aspects needed in solving such as a parking size for one car

and assume the required road width and making appropriate pictures as mathematical representations by drawn a parking lot by dividing its parking space into P-W-P-P-W, while P for parking lot and W for way. For the process of applying, he explained the strategies used in solving and employing appropriate mathematical concepts at each step of completion. For the process of interpreting, he interprets math answers by writing down the answers according to the context requested such as writing the results in car units. Students with high self-efficacy also explained the reasons why the results or conclusions are in accordance with the context of the problem given by describing the size used to park one car. But the subject with high self-efficacy does not carry out the process of evaluating this is not in accordance with research conducted by Salsabilah and Kurniasih (2022) which states that subjects with high self-efficacy show all processes, such us the process of formulating, the process of employing, the process of interpreting and the process of evaluating problems. Based on research conducted by Nurtiana and Adirakasiwi (2023) subjects with high self-efficacy shows all indicators, such as indicators of the process of understanding the problem, indicators of the problem modeling process, indicators of the process of using concepts and indicators of the process of interpreting and evaluating problems. So the results found by researchers are not in accordance with the results found by Nurtiana and Adirakasiwi (2023) because the difference lies in the indicators of the process of interpreting and evaluating. However, these results are in accordance with research conducted by Pertiwi (2021) which states that students with self-efficacy are capable of carrying out the process of formulating, the process of applying, and the process of interpreting.

Subject with medium self-efficacy shows the process of formulating by mentioning the mathematical aspects that are known in the problem such as the size of the car and the size of the parking space and assuming the mathematical aspects needed in solving such as a parking size for one car and assume the required road width and making appropriate pictures as mathematical representations by drawn a parking lot by dividing its parking space into P-W-P-W-P-W, while P for parking lot and W for way. For the process of applying, he explained the strategies used in solving and employing appropriate mathematical concepts at each step of completion. For the process of interpreting, he interprets math answers by writing down the answers according to the context requested such as writing the results in car units. Students with medium self-efficacy cannot explain the reasons why the results or conclusions are in accordance with the context of the problem given. So the subject with medium self-efficacy does not carry out the process of interpreting and evaluating this according to research conducted by Salsabilah and Kurniasih (2022) which states that subjects with medium self-efficacy is fulfilling the process of formulating and the process of employing while the subject with medium self-efficacy is not fulfilling the process of interpreting and evaluating the problem. These results are also consistent with research conducted by Laily (2022), which states that subjects with medium self-efficacy only fulfilling two numeration indicators, such as the process of formulating and the process of implementing. However, these results differ from research conducted by

Pertiwi (2021) which states that subjects with medium self-efficacy are not doing all the math processes when solving the given numeration problem. The results found by researchers are the same as those found by Nurtiana and Adirakatiwi (2023) which state that subjects with self-efficacy currently fulfilling the indicators of the process of understanding the problem, indicators of the process of modeling problems, indicators of the process of using concepts, indicators of interpreting results but cannot evaluate the problem by providing appropriate conclusions.

Subject with low self-efficacy only carry out the process of formulating the first sub-indicator, namely identifying the mathematical aspects of the problem. Subject with low self-efficacy does not carry out further processes. this is in accordance with research conducted by Salsabilah and Kurniasih (2022) which states that subjects with self-efficacy low only meet the process of understanding the problem. This is also in accordance with research conducted by Laily (2022) which states that subjects with self-efficacy low does not meet the three indicators, both in the process of formulating, the process of applying, and the process of interpreting. These results are also in accordance with research conducted by Nurtiana and Adirakatiwi (2023) which states that subjects with self-efficacy low does not meet all numeration indicators, namely the process of understanding the problem, the process, the process of modeling the problem, the process of applying concepts and the process of interpreting and evaluating the problem.

CONCLUSION AND SUGGESTIONS

Depend on the analysis of the results, students with high self-efficacy perform the process of formulating by mentioning the mathematical aspects that are known in the problem and assuming the mathematical aspects needed in solving and making appropriate pictures as mathematical representations. For the process of applying, he explained the strategies used in solving and employing appropriate mathematical concepts at each step of completion. For the process of interpreting, he interprets math answers by writing down the answers according to the context requested. Students with high self-efficacy also explained the reasons why the results or conclusions are in accordance with the context of the problem given. But the subject with high self-efficacy does not carry out the process of evaluating he cannot show it on the answer sheets or when interviewing. Subject with medium self-efficacy shows the process of formulating by mentioning the mathematical aspects that are known in the problem and assuming the mathematical aspects needed in solving and assuming the required road width and making appropriate pictures as mathematical representations. For the process of applying, he explained the strategies used in solving and employing appropriate mathematical concepts at each step of completion. For the process of interpreting, he interprets math answers by writing down the answers according to the context requested. Students with medium self-efficacy cannot explained the reasons why the results or conclusions are in accordance with the context of the problem given. So the subject medium self-efficacy does not carry out the process of interpreting and evaluating the subject and cannot show it on the answer sheets or when interviewing. Students with

low self-efficacy only did first sub-indicators of the mathematical process such as identifying mathematical aspects of the problem. For the next mathematical process such as formulate, employ, interpret, and evaluate process, students with low self-efficacy can not show it on the answer sheet and while interviewing.

Based on the findings, discussions, and conclusions that have been described previously. Therefore, it is advisable for teachers to make students always evaluate every result that has been found in the calculation. Because based on the results of student research with high, medium and low *self-efficacy* have not carried out an evaluation process on each issue. Students always stop after getting results without being able to explain the reasons why these results are appropriate and evaluate these results. Teacher also can give motivation to students with low *self-efficacy* so the students have the motivation to solve the questions given. Teachers make sure that students can work on questions in the context of everyday life

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