Numeracy Literacy Ability in Learning Mathematics Viewed from High Learning Independence

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ARTICLE INFO	ABSTRACT
Keywords: litercy Numeracu Ability, Mathematics Learning, High Learning Independence	The purpose of this research is to describe the ability of numeracy literacy in terms of student learning independence. This research method is qualitative with the type of phenomenological research . The subjects of this study consisted of six subjects, each of which was two independent learning students, high, medium and low. Data collection in this study used self-learning questionnaire sheets, numeracy literacy ability test sheets and interview sheets. Data analysis techniques are data reduction, data presentation, and data verification . The results showed that students with high and moderate learning independence were able to apply the three indicators of numeracy literacy, but students with moderate learning independence had little difficulty. Meanwhile, students with low learning independence have not been able to apply the three indicators in a sense that they still need a lot of guidance, both from the school, from their parents, or the surrounding environment. Factors that influence mathematical numeracy literacy abilities in terms of learning independence in fractional material are generally influenced by internal factors, namely factors from the students themselves, namely the lack of ability to understand, accept, or digest subject matter, students have difficulty planning strategies in solving problems.

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INTRODUCTION

Ability literacy numeration is close knowledge and skills _ relation with understanding numbers , symbols and analysis information quantitative (graphs , tables, charts and so on), which is very important owned generation moment this . With own ability literacy good numeracy , students _ in a manner competent capable apply knowledge the math in life real . Literacy numeration too _ studied through habituation , integrated in learning until extracurricular development . _ Scope literacy very wide numeration , no only mathematics , but also related with literacy others , for example culture or nationality .

Literacy numeration needed in aspect activities , both at home and school or environment public like arrange time , determining the length of work , shopping , planning holiday or activity other need ability literacy numeration . With ability literacy numeration , student will capable solve problem related life _ with math . Related abilities _ is ability apply draft numbers , measurements nor operation count . Ability literacy numeration covers Skills apply concepts and rules mathematics in situation real everyday . Own ability mathematics just No make somebody own ability numeration . For strengthen prowess numeration for students , necessary improved related activities _ with payload numeration .

thought process literacy eye numeration _ lesson mathematics This can categorized as into 3 main processes that is formulate , apply , and interpret result . Literacy good numeration _ will grow character independent in students , because students who have ability literacy good numeration _ will used to finish question nor task in a manner independent . understanding to mathematics really important especially ability enable literacy numeration in solve problem life everyday .

Study results introduction shows that at SDN 1 Surodikraman part big student experience difficulty in do question related stories _ with life everyday . Student Still Lots do error in answer question . this _ happen Because student used to with questions that the teacher has explained so that student difficulty if the teacher gives different matter _ with example . Student difficult analyze problem in questions and create lazy students to do it . as a result student not enough hone ability thinking and reasoning For analyze problem in question that and the question No done . Besides it is also found part big student Still difficult For solve problem shaped related stories _ with life everyday . Most _ student No can identify questions and students No can change question story to in form math . Even For write What only that is known in question , in part student something is not can write it down because student Still difficulty For analyze question story in context related with life daily especially

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in material fraction .

Student with own attitude independent Can get more optimal and more achievements ok . In line with matter those , Tanti & Surya quoted by Mutiara Putri at the time student have independence study , they Can own not quite enough answer to self they For Study without coercion in environment (Pearl Princess, 2021) . so student have ability literacy numeration good math , independence _ student For do learning that is something such a thing important noticed .

According to Fitriana, independence Study or *self-regulated learning* necessary for students have not quite enough answer in organize and discipline himself , besides That in develop ability Study on will alone . independence role important to ability literacy mathematical student , if students who have independence in learn so student capable For finish solving problem with Good in the process of learning and will influential to results learn it . independence Study show readiness a student in determine capable or nope a student in determine the learning strategy (Fitriana, 2010) so without exists good will _ For write so ability literacy owned numeration _ No Good in the independent process learn . Literacy good numeration _ will capable produce students who have Skills in apply mathematics with believe self , fine in learning at school nor in life everyday . Based on exposure background back above _ so study This aim For describe ability literacy the displayed numeration from independence Study student .

RESEARCH METHOD

Type study This is study qualitative with method phenomonology . subject in study This is 1 student class V SDN 1 Surodikraman which has independence Study high . The research instrument used researcher in do study This is sheet questionnaire , sheet test , and sheets interview . Questionnaire sheet arranged based on indicator : unreliable towards others, have trust yourself , behave discipline , have a sense of responsibility , behave based on initiative , and exercise self -control (Amral , 2020). Test sheet ability literacy numeration arranged based on indicator literacy numeration mathematics ie formulate situation in a manner math , apply draft mathematics , facts , procedures and reasoning , as well as interpret results settlement (Aniar , 2020). And sheets interviews were also arranged in accordance with indicator literacy numeration math .

Data analysis technique used in study This is technique analysis interactive developed by Miles and Huberman (Sugiyono , 2017) , namely data reduction (*data reduction*), data

presentation (*data display*) and withdrawal conclusion (*verification*) (Sugiyono, 2016) . In study This will data obtained _ quantitative so that For analyze the data obtained from gift test ability literacy numeration mathematics , questionnaire independence study and interview to 6 students as subject interview related results test .

RESEARCH RESULT

Research results from subject ST -1 ie A representative student with characteristics results test ability literacy category numeration _ high . Students coded ST- 1 get question test ability literacy numeration , ST-1 do reading and understanding of the questions . ST-1 's subject finish existing questions . _ Below _ there is answer subject ability Literacy Numeration with independence Study tall question number 1:[1]

Figure 1. ST-1 Answer Sheet Number 1

Based on answer ST-1 in question number 1 already Can seen ST-1 according to the indicator formulate situation in a manner mathematical caused Can do understanding of intent question through writing is known as well as asked use appropriate sentence . _ then ST-1 already in accordance with indicator apply draft mathematics because capable do internal strategy planning finish problem with coherent use draft math used _ in question fraction . As well as on indicators interpret results completion ST-1 capable do conclusion on the problem with in accordance proven at the end answer written so . Under there is results interview researcher with ST-1 inside question number 1:[2]

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[1]Answer Sheet Transcript Appendix Student High category -1/10-3-/2023
[2]Transcription Appendix Interview Code 1/17-03/2023

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" Problem this number 1 about addition to fractions Sis , what was asked in the question number 1 is the total payload cart Sir jono , me use these symbols in accordance request from question , and me match especially formerly the denominator so that it can summed up method I finish question number 1 is $\frac{2}{5} + \frac{5}{10} + \frac{3}{4} = \frac{8}{20} + \frac{10}{20} + \frac{15}{20} = \frac{23}{20} = 1\frac{3}{20}$, and at the end I give it so, the answer $1\frac{3}{20}$"

In accordance results interview with ST-1 explained He Can do exposure is known asked and answered questions _ based on sheet answer , though not enough right . ST-1 can do exposure material and concept fractions through making mathematical models fractions as settlement question . ST-1 subject can do explanation method do with appropriate . Then ST-1 can give conclusion answer in accordance with results the count he got .

Whereas For question results answer subject ability Literacy Numeration with independence Study tall number 2 will served picture following :[3]
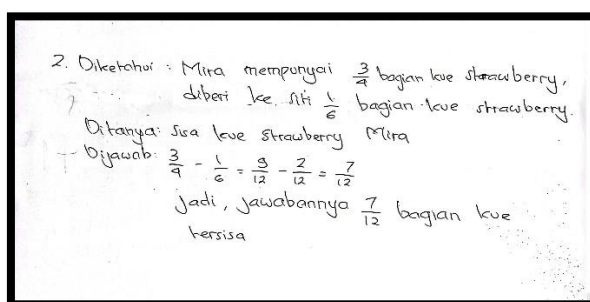

Figure 2. ST-1 Answer Sheet Number 2

Based on ST-1 answer on the question number 2 has is known that ST-1 complies indicator formulate situation in a manner mathematical because Can do understanding question through writing known and asked use sentence proper math . _ Then ST-1 is appropriate indicator apply draft mathematics because capable do settlement strategy design problem with Good use draft math used _ in question fractions although There is A little error experienced by ST-1. As well as on indicators interpret results completion ST-1 capable do conclusion on the problem with in accordance proven at the end answer written so . Under there is results interview researcher with ST-1 inside question number 2:[4]

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[3]Answer Sheet Transcript Appendix Student High category -1/10-3-/2023

[4]Transcription Appendix Interview Code 1/17-03/2023

"which I know the question this number 2 about reduction in fractions Sis , what was asked in the question this number 2 is remainder the strawberry cake belongs Mira , I use these symbols in accordance request from question , and me match especially formerly the denominator so that it can summed up method I finish question number 2 is $\frac{3}{4} - \frac{1}{6} + = \frac{9}{12} + \frac{2}{12} = \frac{7}{12}$ and at the end I gave the answer $\frac{7}{12}$, but I made a mistake, it turned out that the question had a number $\frac{1}{2}$, which should also be subtracted in this problem .

In accordance results interview with ST-1 explained He Can do exposure is known asked and answered questions _ based on sheet answer , though not enough focus in read question . ST-1 can do exposure material and concept fractions through making mathematical models fractions as settlement question . ST-1 subject can do explanation method do with appropriate . Then ST-1 can give conclusion answer in accordance with results the count he got . Furthermore results answer subject ability Literacy Numeration with independence Study tall question number 3 is presented in the figure following :[5]

Figure 3. ST-1 Answer Sheet Number 3

In accordance answer ST-1 in question number 3 has looks ST-1 accordingly indicator formulate situation in a manner mathematical because Can do understanding question through writing known and asked use sentence proper math . _ Then ST-1 is appropriate indicator apply draft mathematics because capable do settlement strategy design problem with Good use draft math used _ in question fractions although There is A little error experienced by ST-1. As well as on indicators interpret results completion ST-1 capable

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do conclusion on the problem with in accordance proven at the end answer written so . Under there is results interview researcher with ST-1 inside question number 3:[6]

" for question Number 3 is what is asked in the question is How many remainder the apple that dad had , on the problem this number 3 about reduction in fractions So method answer I The same as in the question number 2, and for this number 3 I Certain Because I Already read and answer them with really ."

In accordance results interview with ST-1 explained He Can do exposure is known asked and answered questions _ based on sheet answer and answered with ok . ST-1 can do exposure material and concept fractions through making mathematical models fractions as settlement question . ST-1 subject can do explanation method do with appropriate . Then ST-1 can give conclusion answer in accordance with results the count he got . For results SKT answers based on independence Study tall question number 4:[7]
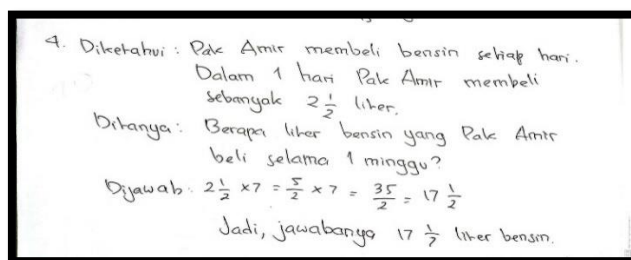

Figure 4. ST-1 Answer Sheet Number 4

In accordance answer ST-1 in question number 4 has looks ST-1 accordingly indicator formulate situation in a manner mathematical because Can do understanding question through writing known and asked use sentence proper math . _ Then ST-1 is appropriate indicator apply draft mathematics because capable do settlement strategy design problem with Good use draft math used _ in question fractions although There is A little error experienced by ST-1. As well as on indicators interpret results completion ST-1 capable do conclusion on the problem with in accordance proven at the end answer written so . Under there is results interview researcher with ST-1 inside question number 4:[8]

" question this number 4 about multiplication fractions and what is asked in the problem this number 4 is How many liter sir petrol _ emir buy for 1 week , because shape

[6]Transcription Appendix Interview Code 1/17-03/2023
[7]Answer Sheet Transcript Appendix Student High category -1/10-3-/2023
[8]Transcription Appendix Interview Code 1/17-03/2023

multiplication So No I match the denominator , but direct I do with method like this $2\frac{1}{2} \; x \; 7 = \frac{5}{2} \; x \; 7 = 17\frac{1}{2}$, at the end of the answer I also give it as the answer $17\frac{1}{2}$ liter petrol ."

In accordance results interview with ST-1 explained He Can do exposure is known asked and answered questions _ based on sheet answer and answered with ok . ST-1 can do exposure material and concept fractions through making mathematical models fractions as settlement question . ST-1 subject can do explanation method do with appropriate . Then ST-1 can give conclusion answer in accordance with results the count he got . Furthermore is picture sheet answer ST-1 based independence Study tall question number 5:[9]
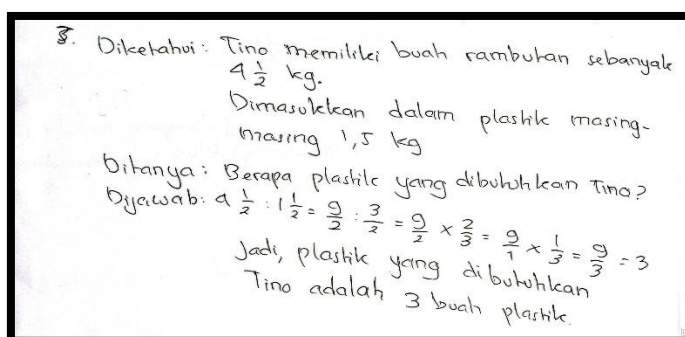

Figure 5. ST-1 Answer Sheet Number 5

In accordance answer ST-1 in question number 5 has looks ST-1 accordingly indicator formulate situation in a manner mathematical because Can do understanding question through writing known and asked use sentence proper math . _ Then ST-1 is appropriate indicator apply draft mathematics because capable do settlement strategy design problem with Good use draft math used _ in question fractions although There is A little error experienced by ST-1. As well as on indicators interpret results completion ST-1 capable do conclusion on the problem with in accordance proven at the end answer written so . Under there is results interview researcher with ST-1 inside question number 5:[10]

> " question Number 5 is what is asked in the question is How many a lot of plastic is needed tino , on the question this number 5 about me distribution fractions , so almost the same like number 4 no need to be matched Formerly the denominator . Solution method his is $4\frac{1}{2} : 1\frac{1}{2} = \frac{9}{2} : \frac{3}{2} = \frac{9}{2} \; x \; \frac{2}{3} = \frac{9}{1} \; x \; \frac{1}{3} = \frac{9}{3} = 3$, so the plastic needed by

[9]Answer Sheet Transcript Appendix Student High category -1/10-3-/2023

[10]Transcription Appendix Interview Code 1/17-03/2023

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tino is 3. For this number 5 I Certain Because I Already read and answer them with really ."

In accordance results interview with ST-1 explained He Can do exposure is known asked and answered questions _ based on sheet answer and answered with ok . ST-1 can do exposure material and concept fractions through making mathematical models fractions as settlement question . ST-1 subject can do explanation method do with appropriate . Then ST-1 can give conclusion answer in accordance with results the count he got .

DISCUSSION

In accordance results analysis performed _ researchers at some subject in accordance provision results test ability literacy numeration reviewed from independence Study tall Ability literacy numeration as close knowledge and skills _ relation with understanding numbers as well as symbols , so important belongs to generations successor nation . from exists ability good numeracy , students _ Can do implement knowledge of life everyday .

From the results research on students with independence Study tall so will have ability literacy numeration high mathematics . _ Findings _ Supratinah , Budiyono Subanti , explained , students who have independence Study tall will more Good than lazy students to Study (Supratinah, 2015) . This caused , if student have independence For learn , then student Can do planning under circumstances Study with maximum , yes understand What advantages and disadvantages when learn .

Student with independence Study Good in ability literacy numeration math , students Can write and explain What only that is known in question , do alteration question be a mathematical model as well as Can write with shaped table , students Can apply symbols and formulas with right . This in line with the findings Khotimah , Utami, & Citroresmi , explained capable people literacy numeration mathematical Can capable do communication (Khotimah, Utami, 2018) . Fit on that another opinion was also expressed by Mahiuddin & Pratama , who explained ability literacy numeration mathematics student superior do communication , formal language , usage symbol , usage operations and techniques (Mahiuddin, 2019) . Besides that's the influencing factor independence Study tall in finish question ability literacy numeration mathematical student . Student with independence Study tall influencing factors _ subject among other things understanding student to material nor

questions and less thorough because during the learning process student No can focus in accept material .

CONCLUSION

Result _ study show that , students with category results test tall from three component indicator , he capable apply three component with right and right . Influencing factors _ ability literacy numeration math you reviewed from independence study on the material fractions in a manner general influenced by internal factors viz factor from student That yourself , student not enough capable For understand , accept , or digest material lessons , students difficulty in internal strategy planning solving problem Good in use formula to be used , rule in operation , no give exact steps _ in answer question .

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