

NUMERATION ABILITY OF GRADE IV STUDENTS OF STATE ELEMENTARY SCHOOL 18 PANGKALAN PISANG, SIAK REGENCY

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ABSTRACT

Study This aim analyze in a way comprehensive ability numeracy student Grade IV of SD Negeri 18 Pangkalan Pisang. Research method use approach data triangulation through observation learning , interviews deep with teachers and students , as well as analysis mark test ability numeracy . Findings study indicates existence challenge significant in mastery draft numeracy , in particular related distribution stacked , and implications to ability student in interpret and apply results numeracy in context life daily . Observation results show domination method conventional in learning mathematics , the lack of interaction active students , as well as optimization facility supporters who have not maximum . Interview with the teacher revealing that around 60% of students Still not enough understand draft distribution stacked , difficulty in interpreting the results data division , and constraints Power remember . This is consistent with interview students , where students category low (for example , Alfarizi Febrian) admitted Not yet understand distribution stacked and difficult interpret question story , meanwhile student category currently (Gladis Susanti) still Confused with number many and questions story long . Students category height (Miwan Samsurizal) shows understanding Good However sometimes Still difficulty with question story complex . Recapitulation mark test confirm that majority students (56.25%) obtained value below 70. Research novelty This lies in the use in-depth data triangulation , providing validity and description holistic about complexity problem numeracy students . Implications study This emphasize urgency further improvement of learning strategies interactive and contextual For increase ability numeracy student in a way comprehensive

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INTRODUCTION

Mathematics is one of the discipline knowledge essential that holds role crucial in form method think logical , analytical , and systematic in individuals (Wahyuni et al ., 2022; Nuriyah et al., 2021). in control concepts mathematics since early become foundation important for success study at the level education furthermore , even For face challenge life everyday life that is getting more and more complex (Saputra et al., 2023; Lestari & Annur, 2022). One of the fundamental aspects in learning mathematics is ability Numeracy No only limited by ability counting , but rather covers understanding draft numbers , operations count , until ability apply draft mathematics in various context life (OECD, 2021; Lestari & Annur, 2022). Therefore that , strengthening ability numeracy student since level school base become very vital in order to provide they with skills solution problems and decisions effective decisions in the future (Yuwanda & Hidayati , 2023; Safitri & Wahyuni, 2023).

In Indonesia, the government through the Ministry of Education and Culture has initiating the Literacy Movement

School (GLS) as effort For increase interest reading and ability literacy as well as numeracy student in a way comprehensive (Wiyono et al., 2020; Setiawati et al., 2021). GLS includes various designed activities For get used to student with environment learning rich in literacy and numeracy , one of them is 15 minute activity before learning started (Andriani & Nurdyansyah , 2021; Wardani & Lestari, 2023). However , based on results interviews that have been conducted in Class IV of SD Negeri 18 Pangkalan Pisang, it was revealed that despite the Literacy Movement School Already implemented , focused its implementation Still dominated by activities literacy read . Related activities with strengthening numeracy Not yet walk optimally . This is seen from many students who experience difficulty in understand operation count basic , complete question stories involving draft mathematics , up to connect draft mathematics with application in life daily (Fitri et al., 2022; Amalia & Afriansyah , 2023).

In addition , other related problems with ability numeracy students at State Elementary School 18 Pangkalan Pisang are lack of attention school to provision supporting facilities and infrastructure strengthening Numeracy . Limitations source relevant learning with numeracy , both in class and in the environment school , participate become obstacle in develop ability (Pratiwi & Dewi, 2023; Nurhayati & Fauziah, 2022). Perception students who think learning mathematics difficult and lacking it's getting more and more interesting lower motivation Study they (Hutagaol & Siahaan, 2022; Siregar et al., 2023). The situation This become a research gap that needs to be filled overcome , where still there is gap between policies and practices in the field , in particular in implementation of the numeracy program is not optimal at the school level unit education (Sari et al., 2021; Utami et al., 2022). Leave from problem said , research This own novelty with focus on analysis deep about ability numeracy student Class IV of SD Negeri 18 Pangkalan Pisang, as well as identify factors that influence achievements numeracy they . Research This in line with urgency improvement quality education basic , especially in aspect numeracy , which becomes attention national both global and international.

Therefore Therefore , the role of teachers becomes very important in increase motivation and ability numeracy students . Teachers are required For capable create learning innovative , interactive , and relevant mathematics with life students , so that perception negative to mathematics can changed (Surya & Herlambang , 2020; Puspita & Putri, 2021). Research This aim For analyze in a way deep ability numeracy student Class IV of SD Negeri 18 Pangkalan Pisang, Siak Regency . Research results This expected can give comprehensive information about level ability numeracy students , as well as give recommendation for teachers and parties school in designing more learning strategies effective For increase ability numeracy student .

RESEARCH METHODS

Study This aim For analyze ability numeracy student Class IV of SD Negeri 18 Pangkalan Pisang, Siak Regency . Research location located at SD Negeri 18 Pangkalan Pisang, which is located at Pangkalan Pisang, Koto Gasib District , Siak Regency , Riau 28672. The election location This based on findings beginning about level ability numeracy student class IV which is still varies , as well as existence challenge in implementation of effective learning strategies For increase numeracy students . Research This implemented for two months , namely from May to June 2025. Research This use approach qualitative with types of primary and secondary data . Primary data is obtained direct from the source , including results test ability numeracy and interviews . Temporary that is secondary data is information supporters obtained from various source No direct like books and journals relevant . Primary data sources in study This is a fourth grade teacher and participant educate Grade IV of SD Negeri 18 Pangkalan Pisang, Siak Regency . The secondary data sources used is relevant books and journals with topic study .

Data collection techniques used in study This covering tests , interviews , and documentation . Tests aim For measure ability numeracy students , especially on the material distribution with number One numbers (division stacked). Test this is also used For identify strategies or steps think student in finish question . After test , six student chosen as source person For interview deep to dig understanding and constraints they . Interview done with teachers and students class IV for get information regarding teaching strategies numeracy , obstacles faced by teachers, as well factors that influence results Study Numeracy . Interview data This functioning For support findings from results test . Documentation used For collect data in the form of archives from document school , pictures , and notes relevant related with research . Data collection tools used is guidelines test shaped essay that covers ability state situation distribution in sentence mathematics , solving operation distribution stacked , verified results , and solve problem contextual . In addition , guidelines are also used interview for teachers and students , as well as guidelines documentation For archival data collection . For ensure validity of field data , research This apply technique triangulation , namely : triangulation source , with compare results interview from various informants (teachers and students) regarding teaching strategies and understanding numeracy ; triangulation technique , with compare capability data numeracy students obtained through

interviews and tests ; and triangulation time , with collect data at different periods (interviews at different times) different , and test given before as well as after intervention learning) for ensure data objectivity .

Data analysis was performed in a way systematic based on collected data through interviews and tests numeracy . Approach analysis of this data refers to the Miles and Huberman model, which includes three Stage : Data Reduction , namely the process of filtering and summarizing information from results interviews and tests , with eliminate unnecessary data relevant and classify data accordingly category research . Test data write reduced with inspect results and classify them , while the results data interview transcribed , compiled , and reviewed . Data Presentation , where the data that has been reduced served in a way clear and simple in form narrative . Drawing conclusions, namely stage the end where the researcher interesting conclusion based on emerging and existing data patterns answer question research , as well as has checked validity and accuracy .

RESEARCH RESULTS

Study This aim For get description comprehensive about ability numeracy student class IV of SD Negeri 18 Pangkalan Pisang through approach data triangulation , namely observation learning , interviews deep with teachers and students , as well as analysis results test numeracy . Focus study directed at mastery operation distribution stacked as part from ability numeracy the basics that include use numbers and symbols mathematics , visual data analysis (graphs , tables , diagrams), and interpretation results For taking decision in context life daily .

1. Use Various Numbers and Symbols Mathematics For Solve Problem

Observation results show that part big student Still limited in apply symbols and operations mathematics base in a way functional . Learning process dominated by lectures and exercises questions of a nature procedural , without Lots give room to student For understand meaning symbols such as ":", " $\div$ ", and the sign remainder in distribution stacked . The teacher becomes center information , while student only copy and imitate examples given without understand objective use symbols said . This is seen when student requested finish question contextual , they tend confusion determine symbol appropriate mathematics , as well as not enough capable connect between mathematical questions and models .

Interview data with the teacher strengthening matter this , where about 60% of students assessed Still difficulty finish question distribution stacked , especially when form question demand conversion from verbal problems to form mathematical . They more often memorize procedure , instead understand meaning from symbols and steps used . In interviews with student , Alfarizi convey that He only follow example without understand the meaning of every numbers used in division . On the other hand , Miwan show high mastery in use numbers and symbols , he capable explain that number numerator shows the total number of objects divided and the number denominator show amount groups that are formed . This is show variation level mastery numeracy between students , which leads to the need for approach differentiation in learning .

2. Analyze Information in Various Forms (Graphs , Tables, Diagrams)

Ability student in analyze visual information such as graphs , tables , or diagrams are still classified as low in a way general . In one of the session learning , the teacher displays table amount books in the library For shared to in a number of shelves . Most of them student No can understand connection between data and experience difficulty interpret number in table become relevant information For compile operation division . They No capable identify which variables play a role as numerator or denominator , and No used to read information from visual data.

Findings from interview state that teachers rarely use tool visual aids such as chart or graph , so that student No used to with non-verbal data representation . In the test numeracy , there is questions that display bar charts amount student in a number of group , which must shared on average. Students with ability numeracy tall like Miwan capable read the diagram , calculate the total, and develop a division strategy . However , students like Gladis and Alfarizi experience confusion , especially in convert information diagrammatic become number mathematically possible operated . This shows that ability visual data literacy yet integrated optimally in learning numeracy .

3. Interpreting Analysis Results For Predicting and Making Decisions

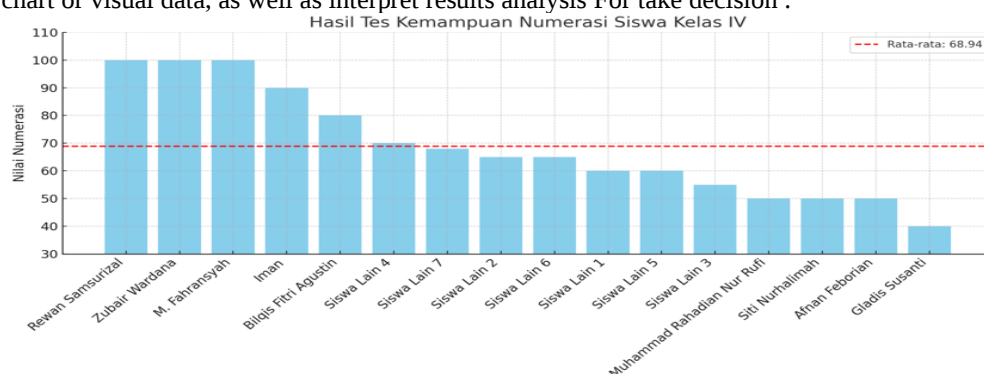
Aspect third from numeracy , namely interpret results analysis and use it For take decision , to be challenge main for part big students . In the matter contextual requesting student determine amount remainder goods after the distribution process , only a handful capable students conclude the meaning of " remainder " in context real , for example : how much students who have not get book If distribution No evenly distributed . The majority student only stop at the results operation without linking meaning results the in context life real .

The teacher stated that Lots student No capable take decision based on results calculations , such as estimate

minimum quantity of goods additional for distribution evenly . For example , when asked What should done If There is 2 books left of the total 26 divided to in 4 shelves , students No capable give solution like add 2 books to make 28 and divide evenly . Only students with ability numeracy high , such as Miwan , who is capable take decision based on results analysis , including in anticipate remainder or shortcomings . He is also capable of predict what happened If amount group plus or reduced , and give justification logical on his decision .

4. Test Results Summary

Test results given numeracy to 16 students show distribution values that reflect variation level mastery third indicator numeracy . Three students (18.75%) achieved value 100, indicates mastery full to symbols , data analysis , and withdrawal conclusion in context real . Five students (31.25%) are in the category good (value 80–90), indicating mastery procedural but Still difficulties in aspects data interpretation or application contextual . While that , more from half students (56.25%) obtained value below 70 , which indicates weakness in apply draft distribution in context life real , reading chart or visual data, as well as interpret results analysis For take decision .



Following is chart stem results test ability numeracy student Class IV. Graphics This show variation mark of 16 students , including three students who achieve mark perfect and the majority who get it value below 70. Red line shows the average value all over students . Data from observation , interviews , and tests show that ability numeracy student Class IV of SD Negeri 18 Pangkalan Pisang has not yet evenly and still face challenges , especially in understand and apply draft distribution stacked in a way intact . Inequality in mastery draft This is also reinforced by the method learning that has not been done fully facilitate exploration and understanding deep students . Therefore that , is necessary intervention more learning innovative , such as use of concrete media , approach contextual , as well as strengthening activity discussion and collaboration so that the ability numeracy student can increase in a way comprehensive .

Figure 1. Learning Process in Class



DISCUSSION

Ability numeracy is foundation important in learning mathematics that is not only limited by ability counting , but also involves understanding concept , analysis information and application in various context life daily life (Han, 2017). Based on results research , ability numeracy student Class IV of SD Negeri 18 Pangkalan Pisang shows significant

variations, with part big student Still is in the category low until medium. One of the indicator ability numeracy is use various related numbers and symbols with mathematics For solve problem in context life different daily life (Han, 2017). Interview results with the teacher showing that although student can apply draft distribution simple in life everyday, the majority students (60%) still difficulty understand draft distribution stacked in a way deep. This is in line with research conducted by Wati and Dewi (2020) which found that student often experience difficulty in operation count mixture, including distribution stacked, because lack of understanding draft basics and skills procedural. Students tend memorize steps without understand the meaning behind it, as expressed by Alfarizi Febrian who is "guessing" the result.

Indicator numeracy furthermore is ability analyze the information presented in various formats (diagrams, tables, graphs, etc.) (Han, 2017). Although study This No in a way specific using diagrams or graphics, capabilities student in read and understand the results data division (for example from question story or results calculation) still need improved. The teacher stated that part student not enough understand the results data division. Difficulty This aggravated with problem Power remember student to draft or technique settlement. This is consistent with findings of Fahmi and Nuraini (2022) which highlight that one of reason low ability numeracy student is difficulty in interpret information mathematical from various form presentation.

In addition, the ability interpret results analysis For make prediction and taking decisions also become indicator crucial in numeracy (Han, 2017). Interview show that understanding student in interpret results distribution For take decision Still less. As example, students category currently like Gladis Susanti, even though can count distribution with remaining, still difficulty in use it For more problems complex. Phenomenon This supported by research by Supriadi et al. (2023) which emphasizes importance ability student in interpret and apply results calculation numeric For make the right decision in life real.

Aspect collaboration and discussion also become part from development ability numeracy. The teacher said that 50% of students Still passive in discuss. In fact, the discussion can help student For construct his understanding and seeing various perspective in finish problem. Research by Lestari and Rahayu (2021) underlines that interaction and discussion structured groups can increase ability numeracy student Because they trained For put forward opinion, explain reasoning, and accepting input from Friend peers. The low ability numeracy in part big students, as reflected from mark the majority of tests were below 70, indicating existence gap between hope curriculum and achievements students. This is possibility big caused by several factors, including: (1) Learning methods that have not been Variative: Observation show domination lectures, which are lacking facilitate exploration and understanding draft in a way deep. (2) Lack of varied exercises: The questions given Possible Not yet Enough practice ability data analysis and interpretation. (3) Needs individual guidance: Teachers acknowledge that part student easy forget and need individual guidance. Research by Sari and Handayani (2020) also emphasizes that learning that is not contextual and lack of individual approach becomes constraint in improvement ability numeracy. Therefore that, it is necessary existence intervention in the form of enrichment or repair material for students who are still difficulties, as well as giving award for students who demonstrate ability numeracy high to stay motivated, as suggested by Pratiwi et al. (2023) in context literacy mathematics.

In a way overall, findings This consistent with Lots other research in Indonesia shows that ability numeracy students, especially at the level school basic, still need attention serious. The role of teachers in designing innovative learning, providing varied exercises, as well as give individual guidance and facilitation discussion group, very crucial For increase ability numeracy student in a way comprehensive.

CONCLUSION

Study This analyze in a way comprehensive ability numeracy student Class IV of State Elementary School 18 Pangkalan Pisang with apply in-depth data triangulation covering observation learning, interviews deep with teachers and students, as well as analysis mark test ability numeracy. Approach triangulation This become a research novelty Because give a clearer picture holistic and valid regarding challenge numeracy students, who often No revealed only through One method data collection. Findings show existence challenge significant in mastery draft numeracy, in particular related distribution stacked and its implications in interpret as well as apply results numeracy in context everyday. The majority student Still show varying understanding, with trend mark test below standards and difficulties in Power remember concept. Learning methods that are still dominant conventional, lack of facility supporters interactive, as well as limited discussion active student participate contribute to the low ability numeracy in a way overall. Students with ability numeracy low tend difficulty understand question story and interpretation results, whereas student category medium and high show progress However Still face challenges on complex issues or a lot of data. uru recommended For adopt variation method more learning interactive and contextual, such as use of learning models based problem (problem-

based learning) or project -based learning that integrates draft numeracy with situation life daily use . Utilization tool props concrete and interactive digital learning media need optimized For visualize draft abstract , especially distribution stacked .

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