Reading, Writing, Counting (CALISTUNG) Abilities In Mathematics Of Street Children At The Mandiri Shelter House In Yogyakarta

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ABSTRACT

The type of this research is descriptive qualitative research. The study subjects amounted to five people package B Mandiri Yogyakarta Halfway House. Data collection techniques use tests of reading ability, writing skills, numeracy skills and interviews. Data analysis uses data reduction, data display, and conclusion drawing/verification. The validity of the data used triangulation of the source. The results of the study showed that based on the results of data analysis and discussion that had been put forward in the previous chapter, it can be concluded that (1) The ability to read math package B of Community Learning Activity Center (PKBM) Anak Mandiri in the category is lacking. Some subjects are less precise in reading loud sentence after sentence in paragraphs and using pronunciation and intonation, subjects are unable to read symbols (< and >), and the speed of mathematical reading is still in the low category. (2) The ability to write math Package B children PKBM Anak Mandiri in the category is very good. However, there is one subject that is lacking in writing negative integer symbols. (3) The ability to count mathematics Package B children PKBM Anak Mandiri in the category is less. Some subjects encountered difficulties in completing addition operations, subtraction, multiplication, division, sorting, and comparing integers..

Keywords: *Reading Ability, Writing Ability, Numbers Ability, Mathematics Ability, Street Children.*

1. INTRODUCTION

Children are assets as the successors of the future generation of a nation, where education protects and cares for children by educating and directing them to become future leaders. In order to produce a quality successor generation, child welfare must be prioritized. However, creating quality human resources tends to experience problems and even become a problem. One of the problems that occurs is the phenomenon of street children who are considered a problem that gives a negative view and their existence is used as an indicator of poverty and social crises [1]. In the digital era, information and technology are developing rapidly, as is education, but there is a community life that ends in poverty. Children are still seen choosing to meet their daily lives by taking to the streets without any skills [2]. Becoming buskers, clown dancers, newspaper or tissue sellers, and vehicle cleaning services are professions to earn money.

Based on data (Yogyakarta Special Region Development Planning Agency), the number of street children, especially in the Special Region of Yogyakarta in 2021 was 55 people (temporary) with the number of street children in Yogyakarta City being 12 people (very temporary). Street children need special attention and handling, because they have the ability and potential to be developed and improved to get a more decent life. In general, street children of school age have a weak economic life. The background of street children's lives is often with inability (economic), lack of affection, violence in the family, broken homes that burden the soul and make them behave deviantly. The residences of street children vary. Some live on the streets, live with their parents, and live separately from their parents but still often return to family such as siblings from their mother or father, there are even street children who do not live with their parents and do not know their family. Street children who are still of school age should receive formal education, as mandated in the 1945 Constitution Article 31 "All Indonesian Citizens Have the Right to Education", with the hope that education can be useful as a provision of knowledge to find work when they are adults. However, in the reality of everyday life, it is often

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found that street children of school age do not attend school for various reasons [3]. We know that the government requires 12 years of study from elementary, middle, and high school levels by providing free school funds.

According to Wredi Wyandani, Head of the Women and Children Protection Division of the Special Region of Yogyakarta in Tribun Jogja, several school-age children in the Special Region of Yogyakarta were forced to take to the streets and try their luck at a young age [4]. In general, the problem of children having to take to the streets to earn a living. This is due to the family's weak economic factor because the daily income is only enough to eat that day. Another reason is that schools are unable to improve the quality of life and answer the problems faced by children. One of the problems faced is related to school operational costs such as buying uniforms, stationery, and other necessities needed at school. There are some lucky and unlucky children, because there are still children who are forced to spend time on the streets, and use the streets as a place to meet their daily needs. Street children are not everyone's choice, living on the streets all day long [5]. As the next generation of a nation, especially if they are equipped and fostered in the field of education, they will produce results and can develop gradually in the activities they have. Although they have not had the opportunity to take formal education, they have the opportunity to get non-formal education. However, in non-formal education, only basic lessons are emphasized in formal schools. As with CALISTUNG (reading, writing, and arithmetic) and other skills such as computer training, cellphone technician training, hair cutting training. CALISTUNG (reading, writing, arithmetic) is one form of a person's basic skills to open the horizon of knowledge for humans.

Thus, everyone should be able to master CALISTUNG, but the backwardness of CALISTUNG results in ignorance of many things. Public awareness should be the initial key to eradicating illiteracy and numeracy. Because the ability to read, write, and count can fill a better life. Shelter House as a vehicle prepared as an intermediary for street children with parties who will help them with guidance and coaching in a family atmosphere. PKBM (Community Learning Activity Center) Mandiri is an educational institution under the auspices of Mandiri Shelter House which is organized outside the formal education system. With the aim of being able to help street children in overcoming problems and meeting their life needs, especially in education, skills, and so on. Based on the description above, the researcher is interested in conducting research to determine the ability of CALISTUNG in mathematics learning in non-formal schools, especially for street children who are studying at the Community Learning Activity Center for Independent Children at Mandiri Shelter House Yogyakarta.

2. RESEARCH METHODS

The type of research used in this study is qualitative descriptive research. Research data were obtained from the results of students' work in working on mathematical reading, writing and arithmetic ability questions, interviews with research subjects and mathematics tutors. Research data from student work were used to determine the ability to read, write and count in working on integer operations. Research data from interviews with research subjects were used to find out more deeply and describe how the ability to read, write and count mathematics in integer operations. Meanwhile, interviews with mathematics tutors were used to strengthen the research results by exploring other information that had not been obtained.

The data source was street children Package B PKBM Mandiri at the Mandiri Shelter Hause Foundation Yogyakarta. The data source was selected using a purposive sampling technique. Purposive sampling is a sampling technique with the consideration of street children package B who have good communication with mathematics tutors (easy to contact)[6][7][8].

Data collection techniques in this study were tests, interviews, and documentation. The instruments used in this study were Mathematics Reading, Writing, and Arithmetic Ability Questions and interviews. The data analysis used in this study was the Miles and Huberman model data analysis, namely Data Reduction, Data Display, Conclusion Drawing/Verification [9][10]. The data validity check in this study is source triangulation. Source triangulation is a technique of comparing and checking the degree of trustworthiness of information obtained through different times and tools. The source triangulation conducted by the researcher is to compare the data from the results of the mathematics reading, writing and arithmetic ability test with the results of interviews with street children and mathematics tutors.

3. RESULTS AND DISCUSSION

3.1. Results

Based on the research that has been conducted, a Recapitulation of Reading Speed was obtained from each subject which is described in Table 1.

Table 1 Reading Speed Recapitulation

Subj.	Time	Number of Words Obtained	KPM	Criteria
BPH	1.39	131	94,25	Less
APP	4.48	460	102,68	Enough
TDK	6.03	460	76, 29	Less
RS	3.42	299	87, 43	Less
ASO	6.31	460	72,91	Less
Average			**86, 72**	**Less**

Based on the results of the data collection, the summary of writing ability is shown in table 2:

Table 2 Writing Skills Recapitulation

Subject	Total Score	Value	Assessment Criteria
BPH	14	46,67	Less
APP	28	93,34	Very Good
TDK	24	80	Good
RS	30	100	Very Good
ASO	30	100	Very Good
Total Score	126	420,01	
Average		**84,002**	**Very Good**

And based on the results of data collection, the recapitulation of numeracy skills is presented in table 3.

Table 3 Recapitulation of Numeracy Skills

Subject	Total Score	Value	Assesment Criteria
BPH	28	70	Less
APP	16	40	Less
TDK	14	35	Less
RS	30	75	Medium
ASO	36	90	Very Good
Total Score		310	
Average		**62**	**Less**

3.2. Discussion

The ability to read, write, and count in mathematics can be explained after taking several tests, subject interviews, and mathematics tutor interviews as follows:

3.2.1. Reading Ability

3.2.1.1. Subject BPH Reading Ability

Subject BPH only read 131 words out of 460 words that should be read. The time taken to read 131 words was 1.39 minutes with a reading speed of 94.25 WPM (words per minute). The first indicator of the BPH subject is quite accurate in reading aloud sentence by sentence in a paragraph and using pronunciation and intonation. Subject BPH in reading there are still sentences that cannot be heard properly (convoluted). The second indicator of the TDK subject is not accurate in reading mathematical symbols, in the symbols more than and less than (> and <) the TDK BPH subject skips the symbol. Subject BPH in reading narrative text of integers with a reading speed of 94.25 WPM according to [11] has a reading speed level in the less category.

3.2.1.2. Subject APP Reading Ability

Subject APP is able to read 460 words in 4.48 minutes with a reading speed of 102.68 WPM (words per minute). The first indicator of the APP subject is able to read aloud (heard well) sentence by sentence in a paragraph and use pronunciation and intonation with a very good category. The second indicator of the APP subject is able to read mathematical symbols well with a very good category. Subject APP in reading narrative text of integers with a reading speed of 102.69 WPM according to [12] has a reading speed level in the fairly good category.

3.2.1.3. Subject TDK Reading Ability

Subject TDK is able to read 460 words in 6.03 minutes with a reading speed of 76.29 WPM (words per minute). Subject TDK in reading does not reach the indicator, the first indicator of the TDK subject does not read aloud (heard well) sentence by sentence in a paragraph and uses pronunciation and intonation. Subject TDK in reading narrative text of integers still stutters in each sentence so that it cannot be heard properly. Then the subject makes many word errors in reading several sentences. The second indicator of subject TDK is not correct in reading mathematical symbols. Subject TDK is unable to read mathematical symbols more than and less than (> and <). In reading the symbol (>) subject TDK mentions the letter V to the right and (<) mentions V to the left. Subject TDK in reading narrative text of integers with a reading speed of 76.29 KPM according to the opinion of [11] has a reading speed level in the less category.

3.2.1.4. Subject RS's Reading Ability

Subject RS only read 299 words out of 460 words that should be read. The time taken to read 299 words was 3.42 minutes with a reading speed of 87.43 WPM (words per minute). The first indicator is that subject RS is not accurate in reading aloud sentence by sentence in a paragraph and using pronunciation and intonation in the good category. Subject RS in reading there are several words that are spelled but can be read well. The second indicator is that subject RS is not accurate in reading mathematical symbols in the good category. Subject RS is able to mention numbers in the good category. Subject RS in reading narrative text of integers with a reading speed of 87.43 WPM according to [8] has a reading speed level in the poor category.

3.2.1.5. Subject ASO's Reading Ability

Subject ASO is able to read 460 words in 6.31 minutes with a reading speed of 72.91 WPM (words per minute). Subject ASO in reading reaches the indicator. The first indicator of ASO subjects is correctly able to read aloud (heard well) sentence by sentence in a paragraph and use pronunciation and intonation with a very good category. The second indicator of ASO subjects is correctly able to read mathematical symbols with a very good category. ASO subjects in reading narrative texts of integers with a reading speed of 72.91 KPM according to [11][13] have a reading speed level in the less category.

3.2.2. Writing Ability

3.2.2.1. Writing Ability of Subject BPH

Subject BPH in completing the writing ability test questions obtained a total score of 14 with a value of 46.67. Based on the assessment criteria, subject BPH is in the low category, namely not yet achieving the ability to write mathematical symbols or symbols correctly. In completing writing ability questions, subject BPH was unable to complete questions by writing negative integers, and this can be proven by the answer sheet explained in the attachment. Questions related to negative numbers, subject BPH was unable to complete. From the analysis, the subject BPH's score was 46.67 with the assessment criteria of less or unable to write mathematical symbols or symbols correctly.

3.2.2.2. Writing Ability of Subject APP

Subject APP in completing the writing ability test questions obtained a total score of 28 with a value of 93.34. Based on the assessment criteria, subject APP is in the very good category, namely correctly writing mathematical symbols or symbols correctly. In completing writing ability, subject APP was able to complete 14 questions out of 15 questions well. From the analysis, the subject APP's score was 93.34 with the criteria of very good or correctly being able to write mathematical symbols or symbols correctly.

3.2.2.3. Subject Writing Ability TDK

Subject TDK in completing the writing ability test questions obtained a total score of 24 with a value of 80. Based on the assessment criteria, the TDK subject is in the good category, namely achieving the ability to write mathematical symbols or symbols well. In completing the writing ability, the TDK subject was able to complete 12 questions out of 15 questions well. From the analysis, the TDK subject's score is 80 with the criteria of good or correctly able to write mathematical symbols or symbols correctly.

3.2.2.4. Subject Writing Ability RS

Subject RS in completing the writing ability test questions obtained a total score of 30 with a value of 100. Based on the assessment criteria, the RS subject is in the very good category, namely being able to write mathematical symbols or symbols correctly. In completing the writing ability test questions, the RS subject did not experience any obstacles as evidenced by the answer sheet that achieved the maximum value. From the analysis, the RS subject's score is 100 with the assessment criteria of very good or being able to write mathematical symbols or symbols correctly.

3.2.2.5. Writing Ability of ASO Subject

The ASO subject in completing the writing ability test questions obtained a total score of 30 with a value of 100. Based on the assessment criteria for the ASO subject in the very good category, namely correctly writing mathematical symbols or symbols well and accurately. So completing the writing ability test questions of the ASO subject did not experience any obstacles as evidenced by the answer sheet that achieved the maximum value. From the analysis of the ASO subject value of 100 with the assessment criteria of very good or being able to write mathematical symbols or symbols correctly.

3.2.3. Numeracy Ability

3.2.3.1. Subject BPH's Numeracy Ability

Subject BPH in completing the numeracy ability test questions obtained a total score of 28 with a value of 70. Based on the assessment criteria, subject BPH is in the less/low category, namely not yet achieving numeracy ability. In completing the numeracy ability questions, subject BPH has difficulty in numbers (13-16) in the category of sorting integers. Subject BPH has difficulty in sorting negative integers from smallest to largest, this is evidenced by the answer sheet of subject BPH in questions 15 and 16. From this analysis, the subject BPH's score is 70 with the assessment criteria of less or not meeting the standard of mathematical numeracy ability.

3.2.3.2. Subject APP's Numeracy Ability

Subject APP in completing the numeracy ability test questions obtained a total score of 16 with a value of 40. Based on the assessment criteria, subject BPH is in the less/low category, namely not yet achieving numeracy ability. In completing the numeracy ability questions, subject APP has difficulty in numbers 1-20 in the category of addition, subtraction, multiplication, division, sorting, and comparing integers. Subject APP had difficulty in adding positive and negative numbers, where subject APP added both numbers to become a negative number. Then in subtracting positive and negative numbers, where subject APP directly subtracted both numbers without paying attention to the negative number sign. In multiplication and division, subject APP had difficulty in first completing multiplication and division problems if there were curly brackets. Then in sorting integers, subject APP was not careful with numbers and was unable to distinguish between the smallest and largest negative numbers so that subject APP's answer was reversed in sorting the smallest to the largest negative numbers. Then in comparing integers, subject APP had difficulty in determining the less than and more than signs. Proven by all of subject APP's

answers being less than (<). From the analysis, subject APP's score was 40 with the criteria of lacking or not meeting the standard for mathematical arithmetic ability.

3.2.3.3. Subject TDK's Arithmetic Ability

Subject TDK in completing the arithmetic ability test questions obtained a total score of 14 with a value of 35. Based on the assessment criteria, subject BPH is in the less/low category, namely not yet achieving arithmetic ability. In completing the math problem, the BPH subject had difficulty in numbers 1-20 in the categories of addition, subtraction, multiplication, division, sorting, and comparing integers. The TDK subject had difficulty in adding positive and negative numbers, where the TDK subject added both numbers to become a negative number. Then in subtracting positive and negative numbers, where the TDK subject immediately subtracted both numbers without paying attention to the negative number sign. In multiplication and division, the TDK subject had difficulty in first completing the multiplication and division problems if there were curly brackets. Then in sorting integers, the TDK subject was unable to complete the problem, the TDK subject was not careful in sorting positive integers and in sorting negative numbers inversely in sorting the smallest to the largest negative numbers. Then in comparing integers, the TDK subject got 1 error in the problem due to lack of care in comparing thousands. From this analysis, the TDK subject's score was 40 with the criteria of lacking or not meeting the standard for mathematical math ability [14][15].

3.2.3.4. Subject RS's Arithmetic Ability

Subject RS in completing the arithmetic ability test questions obtained a total score of 30 with a value of 75. Based on the assessment criteria, subject RS is in the moderate category, namely moderate/sufficiently achieving arithmetic ability. In completing the arithmetic ability questions, subject RS had difficulty in numbers 9-12 and 13-16 in the category of multiplication and division and sorting integers. Subject RS was not careful in doing multiplication calculations and in sorting negative numbers, subject RS was reversed in sorting the smallest to the largest negative numbers. From this analysis, the value of subject RS with the moderate or sufficient criteria in meeting the arithmetic ability standard [16][17].

3.2.3.5. Subject ASO's Arithmetic Ability

Subject ASO in completing the arithmetic ability test questions obtained a total score of 36 with a value of 90. Based on the assessment criteria, subject ASO is in the very good category, namely achieving arithmetic ability very well. In completing the arithmetic ability questions, subject ASO made mistakes in numbers 9-12, namely multiplication and division of integers. Subject ASO was not careful in doing multiplication and division calculations. From this analysis, the ASO subject score is 90 with very good assessment criteria in meeting the standards of mathematical calculation ability [18].

4. CONCLUSION

Based on the results of data analysis and discussion that have been presented in the previous chapter, it can be concluded that.

The ability to read mathematics package B of PKBM Anak Mandiri children is in the category of lacking. Several subjects are less precise in reading aloud sentence by sentence in a paragraph and using pronunciation and intonation, subjects are unable to read symbols (< and >), and the level of mathematical reading speed is still in the low category.

The ability to write mathematics Package B of PKBM Anak Mandiri children is in the category of very good. However, there is one subject who is less/inaccurate in writing symbols/symbols for negative integers.

The ability to calculate mathematics Package B of PKBM Anak Mandiri children is in the category of lacking. Several subjects have difficulty in completing addition, subtraction, multiplication, division, ordering, and comparing integers.

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