THE EFFECT OF STUDENTS 'READING ABILITY AND LEARNING MOTIVATION TOWARDS THE ABILITY TO SOLVE MATHEMATIC STORIES STORY V SD IN PADANG CITY YEAR 2019/2020

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ABSTRACT

This study aims to determine 1) whether reading ability affects the ability to solve math story problems in grade V SD in Padang City teaching 2019/2020; 2) whether there is an effect of student learning motivation on the ability to solve math story problems in grade V SD in Padang City, 2019/2020 teaching; and 3) whether there is an effect of reading ability and student learning motivation on the ability to solve math story problems in grade V SD in Padang City teaches 2019/2020. The results showed that the effect of reading ability on the ability to solve math story problems was F 23.86> F 4.15. The influence of learning motivation on theme 6 sub-theme 1 learning 4 is F 68.27> F 4.15 and the influence of reading ability and student learning motivation on the ability to solve math story problems F 62.78> F 4.16. So it can be concluded that there is a significant influence between reading ability and student learning motivation on the ability to solve math story problems in 4th-grade elementary school students in Padang City 2019/2020.

Keywords: reading ability, learning motivation, mathematical story questions

INTRODUCTION

In dealing with math storey questions, students often lack learning motivation and positive attitudes towards lessons, so they cannot achieve optimal learning outcomes. Thus the ability of students in solving math story problems apart from being influenced by their ability to read, on the other hand, is influenced more specifically, i.e the motivation of students in solving math story problems also cannot be ignored.

Motivation comes from the word motive, but motive and motivation are often interpreted differently. The word "motive" is defined as an effort to encourage someone to do something. Motivation itself is the overall driving force both from within and from outside by creating a certain series of efforts that ensure continuity and provide direction to activities so that the desired goals can be achieved. Therefore, the authors conducted a study entitled "The Effect of Reading Ability and Student Motivation on the theme of 6 sub-themes 1 learning 4 class V

SD in Padang City 2019/2020".

Based on the above background, the problems can be identified, i.e: The ability of students in mathematics subjects is lower than other subjects used for the National Examination, i.e Science and Indonesian, the ability of students in solving problems in the form of story problems is still low, and student learning motivation in solving Mathematics learning problems, especially solving problems in the form of story problems, are still lacking. For this research to be directed and as expected, the research is limited to fifth-grade elementary school students in Padang City 2019/2020 and only in mathematics subjects about math story problems.

The research objectives to be achieved are 1) To determine whether there is an effect of reading ability on the solving ability of fifth-grade elementary school students in mathematics; 2) To determine whether there is an effect of student learning motivation in mathematics on the ability to solve math story problems of fifth-grade elementary school students in Padang City; and 3) To determine whether there is an effect of reading ability and student motivation in mathematics together on the ability to solve maths story problems of fifth-grade elementary school students in Padang City.

This research is expected to provide benefits, i.e: 1) able to improve the competence of educators regarding the effect of reading ability and motivation in mathematics on the ability to solve math problems in the form of story problems in grade V Elementary School; 2) can contribute to and can provide input and insight for future researchers and educational institutions in increasing the efficiency and effectiveness of the teaching and learning system in schools; and 3) As information for teachers, students 'reading skills and motivation need special attention about students' abilities in solving math story problems.

The technique of collecting data using questionnaires and tests was stated by Arikunto (2006); Nova *et al* (2020); Chandra *et al* (2019), Suasti *et al* (2018); Putra (2009). The questionnaire here is used to measure the learning motivation that exists in students. While the test is used to measure reading ability and ability to solve math story problems.

The analysis prerequisite test was used to test whether or not the questionnaire was valid and reliable, and the reading ability questions and math story problems. The validity test uses the formula Pearson Product Moment while the data reliability test uses the method Alpha. Riduwan (2012). The normality test of the research data used the chi-square formula. Before the data is processed for hypothesis testing, it is first tested whether the samples taken come from normally

distributed populations.

METHODS

The research carried out is a descriptive type of research which is then analyzed with quantitative data. Darsinah *et al* (2013) This research was conducted in elementary schools in Padang City from December 2019 to January 2020. The population in this study were all students in grade V (five) SD in Padang City, amounting to 34 students. And the sample used all fifth-grade elementary school students in Padang City. The variable consists of the independent variable and the dependent variable. The independent variables in this study were reading ability and learning motivation. While the dependent variable is the ability to solve math story problems. The technique of collecting data using questionnaires and tests was stated by Arikunto (2006). The questionnaire here is used to measure the learning motivation that exists in students. While the test is used to measure reading ability and ability to solve math story problems. The analysis prerequisite test was used to test whether or not the questionnaire was valid and reliable, and the reading ability questions and math story problems. The validity test uses the formula *Pearson Product Moment* while the data reliability test uses the method *Alpha.* Riduwan (2012). The normality test of the research data used the chi-square formula. Before the data is processed for hypothesis testing, it is first tested whether the samples taken come from normally distributed populations. The data analysis technique uses simple regression and multiple regression with the following test rules:

If $\geq$ then H_o is rejected, it means that it is significant.

If $\leq$ then H_o is accepted, it means that it is not significant.

RESULTS AND DISCUSSIONS

3.1 General description of the research location

The research was conducted in elementary schools in Padang City. The population in this study were all fifth-grade elementary school students in Padang City. The number of students in grade V SD in Padang City was 34 students.

3.2 Description of Data

The data used in this study were the results of learning mathematics for fifth-grade elementary school students in Padang City as samples.

Table 1. Results of the validity test of the learning motivation questionnaire

No. Item Question	Coefficient Correlation	Price		Decision
1.	0,570	2,86	1,740	Valid
2.	0,376	1,802	1,740	Valid
3.	0,570	2,867	1,740	Valid
4.	0,361	1,59	1,740	Invalid
5.	0,056	0,23	1,740	Invalid
6.	0,558	2,771	1,740	valid
7.	0,11	0,45	1,740	Invalid
8.	0,345	1,56	1,740	Invalid
9.	0,207	0,88	1,740	Invalid
10.	0,376	1,802	1,740	Valid
11.	0,837	6,308	1,740	Valid
12.	0,5003	2,381	1,740	valid
13.	0,532	2,592	1,740	Valid
14.	0,277	0,9569	1,740	Invalid
15.	0,544	2,673	1,740	Valid
16.	0,455	2,110	1,740	Valid
17.	0,422	1,9194	1,740	Valid
18.	0,15	0,625	1,740	Invalid
19.	0,423	1,924	1,740	Valid
20.	0,4777	2,27	1,740	Valid
21.	0,442	2,047	1,740	valid
22.	0,607	3,151	1,740	Valid
23.	0,407	1,837	1,740	Valid
24.	0,389	1,749	1,740	Valid
25.	0,437	2,0033	1,740	Valid

From the data Table 1, it can be concluded that out of 25 There are 18 valid question items and 7 invalid questions.

Table 2. Reading ability test validity

No	Coefficient Correlation	Price		Decision
1	0,398	1,822	1,740	valid
2	0,392	1,77	1,740	valid
3	0,535	2,613	1,740	valid
4	0,178	0,745	1,740	Invalid
5	0,464	2,173	1,740	valid
6	0,376	1,864	1,740	valid
7	0,723	4,32	1,740	valid
8	0,629	3,367	1,740	valid
9	0,425	1,946	1,740	valid
10	0,497	2,382	1,740	valid
11	0,26	1,12	1,740	Invalid
12	0,699	4,036	1,740	valid
13	0,929	10,407	1,740	valid
14	0,527	2,55	1,740	valid
15	0,071	0,293	1,740	Invalid

From the data Tabel 2 above, it can be concluded that of the 15 questions 12 questions are valid or can be used and as many as 3 questions are invalid or cannot be used.

Table 3. The validity test of mathematical story questions

No	Correlation Coefficient	Price	Price	Decision
1	0,407	1,864	1,74	Valid
2	0,395	1,728	1,74	Valid
3	0,538	2,64	1,74	Valid
4	0,545	2,684	1,74	Valid
5	0,524	2,547	1,74	Valid
6	0,227	0,95	1,74	Invalid
7	0,172	0,732	1,74	Invalid
8	0,012	0,156	1,74	Invalid
9	0,596	1,063	1,74	Invalid
10	0,383	1,544	1,74	Invalid

From the above data Tabel 3, it can be concluded that of the 10 questions contained five questions are valid or can be used and as many as 5 questions are invalid or unusable.

3.3 Testing Requirements Analysis

Analyst prerequisite test in this study is the normality test: 1) Data normality test of the ability to read: Decisions by comparing x_t^2 with x^2. Evidently $x_t^2 \leq x^2$ or $x_t^2 = 5{,}25$ is smaller than x^2 table = 11.070. So the reading ability data for grade 5 SD Kota Padang is normally distributed; and 2) Normality test of student learning motivation data: Decisions by comparing x_t^2 with x_t^2. Evidently $x_t^2 \leq x^2$ or $x_t^2 = 1{,}962$ smaller than x^2 table = 11,070. The reading ability of grade 5 SD in Padang is normally distributed.

3.4 Data analysis and hypothesis testing

a. Simple regression.

1) There is an effect of student motivation on math story questions.

   In this analysis obtained $F_{count} = 68.27$. With a significance level of 5%, $F_{table} = 4.15$. Then $F_{count} > F_{table}$ or $F_{count} = 68.27$ which is greater than $F_{table} = 4.15$, then reject$_{Ho}$ means significant. Conclusion: Because F_{count} is greater than F_{table}, then reject$_{Ho}$ and accept H_a. Thus there is a significant influence between student learning motivation on theme 6 sub-theme 1 learning 4 grade V SD in Padang City.

2) There is an effect of reading ability on math story problems.

   Obtained data $F_{count} = 23.68$. With a significance level of 5%, $F_{table} = 4.15$. Then Fcount> or $F_{table} = 23.68$ greater than = 4.15, then reject H_o significant meaning. Conclusion: Because it is bigger than F_{table}, then reject H_o and accept H_a. Thus there is a significant influence between reading ability on theme 6 sub-theme 1 learning 4 for grade V SD in Padang City.

3) There is an influence between reading ability and student motivation on math story questions. Obtained data as follows: F_{count} = $\frac{R^2(n - m - 1)}{m.(1 - R^2)}$ = 62.78 F_{table} = 4.16 (can be seen the F distribution table). Conclusion: F_{count} > F_{table} or F_{count} = 62.78 greater than F_{table} = 4.16, then reject H_o and accept H_a, meaning that there is a significant influence between reading ability and student learning motivation on theme 6 sub-theme 1 learning 4.

Based on the description of the results of data analysis, all Hypotheses (H_a) are accepted so that It can be concluded that: "There is an effect of reading ability on math storey questions", "There is an influence on students' motivation to learn math storey questions", and "There is an influence between reading ability and student learning motivation on math storey questions".

3.5   Discussion of the results of data analysis

In the mathematics learning process that takes place in the classroom, students' reading ability and learning motivation are factors that influence learning outcomes. With the mastery of adequate reading skills and very strong learning motivation, the mathematics teaching and learning process will run smoothly and the learning objectives can be achieved. The ability to read is said to be adequate if students can digest every reading and understand the essence of sentences and readings well. Meanwhile, learning motivation is said to be high if students have a strong will to always understand, repeat, and explore every existing mathematical problem. If each student has these two things, the learning objectives will be achieved.

Learning outcomes or test results are a tool that can be used to determine or measure the success of learning and the achievement of learning objectives. In this study, the researcher conducted a study on the effect of reading ability and student learning motivation on math story questions. Based on the results of data analysis, the average student already could read quite well with an average value on the reading ability test of 68.85. however, there is still a gap between the lowest score of 43 and the highest score of 90. With the average result Above obtained the analysis results, i.e the value of $F_{counted}$ 23.86 which is greater than F_{table} 4.15 so it can be concluded that there is a significant effect of reading ability on math story problems. Meanwhile, for data analysis of student learning motivation by value an average of 65.57 that has met the standards, i.e getting results that are at least 50% of the total value of the questionnaire. With the above achievements, the analysis results obtained, i.e F_{count} 68.27 which is

greater than F_{table} 4.15, so it can be concluded that there is a significant effect of learning motivation on math story problems. For the results of the analysis of the effect of reading ability and student learning motivation on math storey questions, the result is a double correlation contribution of 81%, which means that the two data (independent variables) have a good correlation with the dependent variable. Thus, it can be concluded that the reading ability and learning motivation of students affect the math story questions of grade V SD in Padang City. This is supported by the results of data analysis using F_{test} is F_{count} 62.78 which is bigger than F_{table} 4.16.

CONCLUSION

Based on the results of quantitative research with questionnaire techniques and tests carried out at elementary schools in Padang City regarding the effect of reading ability and student motivation on math storey questions for the 2019/2020 academic year, the following conclusions can be drawn: 1) By the data obtained by researchers, it can be concluded that there is an effect of reading ability and student motivation on the ability to solve math story problems; 2) The high and low scores obtained by students in solving math story problems are directly proportional to the students' reading ability and learning motivation scores; 3) This means that the higher the value of students 'reading skills and their learning motivation, the higher the students' scores in solving math story problems and vice versa. The lower the students 'reading scores and learning motivation, the worse the students' scores in solving math story problems; and 4) Reading ability and learning motivation influence or are directly proportional to each other. This can be seen in the table of results of reading ability and learning motivation that almost all students who get good scores on the reading ability test also have high motivation to learn.

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