

The Influence of Napier Stem Use Tools on Student Counting Ability in Fourth Grade on Muhammadiyah Private Elementary School

(The Napier Rods Against of Student Counting Ability)

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Abstract— The napier rod props were discovered by a nobleman from Scotlandian John Napier in 1550-1617. This calculation tool is designed to simplify the heavy duty in multiplication of multiplication by using a napier rod with multiplication transformation into a matter of addition. As for the formulation of the problem in this research is How to use Napier rod props to the students' numeracy ability, whether there is influence the use of Napier rod props to the ability of counting students, how much influence the use of props napier stem against the ability to count students. This study aims to determine the use of napier rod props against the ability to count students, to determine whether there is influence of the use of props stem napier on the ability to count students. to find out how much influence the use of props napier stem against the ability to count students. From the results of the research, the use of napier rod props averaged 69.67 and standard deviation 6.75, students' numeracy ability 73.83 and standard deviation 7.93. From the analysis of the use of napier rod props to the ability of counting students in having a significant relationship. It is indicated in the regression equation $= 31,708 + 0,514x$, the influence of variable use of napier bar tool to student counting ability is 36,5%. The result of hypothesis test is known significant number 0.000 or $0.000 < 0,005$. By that reason, H_0 is rejected and H_a is accepted. This means that there is a significant influence between the use of napier rod props against the ability to count students.

Key word: use of napier roads, student countig ability

I. INTRODUCTION

Education holds importance in the life of a nation because education is a process of delivering culture from one generation to the next, which includes skills, knowledge, attitudes and values, as well as certain patterns of behavior. In a broad sense, education includes every process that shapes the mind, character and capacity of one's thinking. The advancement of science and technology also color our education world today. The challenge of improving the

quality, relevance and effectiveness of education as a national demand, is in line with the development and advancement of communities with real implications on educational programs and curricula in schools School is one of the means in formal education for the formation of student personality, whether that is cognitive, effective, or psikomotorik. Learning to teach is a core activity in the process of education in schools and the purpose of this learning process is the change in behavior in students and can achieve the best learning outcomes. But not all students can achieve good learning outcomes, especially math.

Learning also plays an important role in maintaining the life of a group of mankind (the nation) in the midst of increasingly fierce competition among other nations who advance first by learning. Based on the observations made by researchers at Muhammadiyah 11 Private Elementary School, one of the causes of less well-off students in math subjects is because the mathematics is abstract and students do not understand the concept and do not feel the usefulness of mathematics in life, students have not been able to think systematically in planning everything that can support the learning process. For example, in completing multiplication, students often complain each time given a task by the teacher, causing the student to become unskilled in doing multiplication problems.

The ability of teachers to adjust the material with the methods used can lead to student motivation to learn, the lack of variation of teachers in teaching makes students feel saturated let alone math lessons, in addition to the lack of variation in learning mathematics, low ability of students in learning mathematics because mathematics is abstract and this results students feel bored until finally do not want to follow the lesson being conveyed. In accordance with the level of intellectual development of elementary school children who

are still concrete steps then elementary students can accept abstract mathematical concepts through concrete objects, if where logical workmanship can be done with the help of concrete objects. To help such things are done maemanipulasi object used to learn mathematics commonly called props.

The props will embody the abstract concepts that exist in the mind of the students into concrete objects which will of course be more easily understood. In this regard, it is necessary to discuss about the learning method of using props in the form of napier rods that will be able to increase students' numeracy skills in learning operations. The teaching aids is a tool used to convey knowledge and lessons, which of course this tool can be absorbed by the eyes and ears so that the process of teaching and learning can work effectively and more efficiently, teaching aids play an important role as a tool to create learning process which is effective and efficient, as a math teacher we need to know the various props, especially in math. We need to find, multiply if we need to make our own props. Based on the above explanation, teachers are required to be able to use visual aids as effectively as possible in order to explain the mathematical abilities to the students. This is reinforced by the opinion of Ruseffendi (1982: 139) which states that: "As a math teacher we need to know all sorts props are important, especially in math.

One of the main subjects in elementary level that still need props is multiplication. Based on the description above, for the researcher is to be something very interesting to investigate and find out how the students ability if given learning by using props, purpose in this research is to know the use of napier rod props against the students' numeracy ability, to find out whether there is influence of the use of napier rod props to the students' numeracy ability, to find out how much influence the use of napier rod props against the student's numeracy ability.

II. METHOD

The research was conducted at SD Private Muhammadiyah 11, Jln. Mosque Marhamah Komplek KP. Terendam Aceh Tenggara. The population in the study is the fourth grader of Muhammadiyah 11 Southeast Aceh Private Elementary School which consists of 60 people consisting of 2 classes. Researcher choose class IV Southeast Aceh because researchers want to know how much influence the use of props stem napier to the ability of counting students, the sample of this study that is all the fourth graders of private elementary Muhammadiyah 11 Aceh Tenggara which amounts to 60 people consisting of 2 classes .

Variable in this study there are two independent variables that is the use of props stem napier, dependent variable is the ability to count students To obtain data about the use of props stem napier used structured questionnaire to be disseminated to the sample of students. Step preparation of instruments based on concepts and theories that have been described earlier. Then described in the form of operational definition which is then described in accordance with its components. To obtain data about the ability to count students

used test essay consisting of 10 tes. Teknik data analysis is a way to process data in order to be presented information from research that has been implemented. After the data obtained is processed statistically and analyzed by calculating mean, normality test, linearity test, determining variance analysis, hypothesis test.

III. RESULTS

Based on data analysis and hypothesis testing, the authors propose discussion of the findings of this study as follows there is an influence of the use of props stem napier on the ability to count the students of Elementary School Muhammadiyah 11 Southeast Aceh where the effect is 36.5% Meaning the use of props stem napier to the ability of counting students in the category quite influential on the ability to count students. Furthermore, for linear regression equation = $31,708 + 0,514x$. From the above explanations and explanations above, a thing that can be emphasized in this study relates to decision making in choosing which elements should be considered in improving students' numeracy skills. Although the results of the research found that the use of props stem napier has an influence on the ability to count and when translated from the regression regression obtained in this study can be known, if you want to get better student numeracy skills needed improvements in the use of props sticks napier.

IV. CONCLUSIONS

From the results of research conducted, it can be concluded the use of napier rod props students in class iv sd private muhammdiyah 11 aceh southeast in the average gain 69.67 and standard deviation of 6.75, the level of numeracy ability of students in class iv sd private muhammdiyah 11 aceh southeast of the average 73.83 and the standard deviation of 7.93, the influence of the use of props stem napier sd private muhammdiyah 11 aceh southeast has a significant and significant relationship with the ability to count students, meaning the higher the use of props stem napier higher also the ability to count students. hali is shown in the linear regression equation = $31.708 + 0.514x$, the use of props napier rod effect on students counting ability of 36.5%.

As a follow-up of the conclusion of the study the authors want to suggest suggestions to the related in the process of learning to teach mathematics, among others, that the process of learning mathematics is expected to motivate students in improving students' numeracy skills with one way using napier rod props, the results of research should be presented a handling in taking steps that are used in an effort to improve students' numeracy skills by using a napier rod tracer tool.

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