

## **THE EFFECT OF SMART CIRCUIT GAME MEDIA AND LEARNING MOTIVATION ON MATHEMATICAL LEARNING OUTCOMES STUDENTS IN CLASS IV ELEMENTARY SCHOOL**

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### **ABSTRACT**

This study aims to reveal the influence of smart circuit play media and learning motivation on the mathematical results of fourth grade students in elementary school. The type of research used is a quantitative approach in the form of Quasi Expansion Design. The population in this study were all fourth grade students of SDN Gugus I Payung Sekaki Sub district with a sample of SDN 06 as the experimental class and SDN 05 as the control class. Sampling is done by simple random sampling technique. The technique of analyzing data through learning outcomes of mathematics with learning motivation. The hypothesis is proposed using the t test formula. The results showed that there were influences of smart circuit playing media and learning motivation on the mathematics results of fourth grade students of elementary school with the average student learning outcomes in the experimental class with pretest 54.83 and posttest 83.17 and the average learning outcomes for students the control class was 48.43 and posttest 76.05.

**Keywords : Smart Circuit Media, Learning Motivation, Learning Outcomes**

### **INTRODUCTION**

Education is one of the main instruments of human resource development, educators in this case the teacher as one of the elements that play an important role in it, has the responsibility to develop tasks and overcome any problems that arise. The teacher is a very decisive component in the implementation of the learning process in the classroom as a micro element of a successful education. Law of the Republic of

Indonesia Number 14 of 2005 concerning Teachers and Lecturers, suggests that: teachers are professional educators with the main task of educating, teaching, guiding, directing, training, evaluating, and evaluating students in early childhood education in formal education (Hermon and Dalim, 2005), basic education and secondary education.

Mathematics is one of the fields of study that exists at all levels of education, ranging from elementary school to college level. Even mathematics is taught in kindergarten informally. The purpose of mathematics learning according to the 2013 curriculum emphasizes the modern pedagogical dimension of learning, which is using the scientific (scientific) approach. In mathematics learning activities are carried out so that meaningful learning is observing, asking, trying, reasoning, presenting, and creating (Fuadi, 2016). Syarifuddin (2018) states that mathematics can be used to present information in various ways, improve the ability of logical thinking, accuracy and spatial awareness and provide satisfaction with solving challenging problems.

Based on observations conducted by researchers at SDN 06 Sirukam, mathematics learning is a boring thing for students. This can be seen from the lack of student motivation in learning. In addition, students also lack concentration in learning, this can be seen from some students who do not pay attention to the teacher who is teaching such as playing, chatting or joking with their peers, engrossed in themselves, and so on. The media used are only blackboards and presentations in the form of power points which are assisted by LCD Projector. According to Baiquni (2016), based on a technological perspective, learning using media in the form of LCD Projector is indeed an innovation. But students can only watch and pay attention to the way the teacher delivers the material without being able to practice it. Learning activities in elementary school students still need more concrete media. The lack of creative media use in the classroom has an impact on students' low mathematics learning outcomes. Therefore we need a more interesting and innovative learning media. Based on the results of discussions with fourth grade teachers in the first cluster in Payung Sekaki sub-district, the above problems were also experienced by other schools in cluster I, where students' mathematics learning outcomes were still low and had not yet reached the KKM set by school in group I this is 75.

## METHOD

The type of research used is a quantitative approach in the form of Quasi Expansion Design. The population in this study were all fourth grade students of SDN Gugus I Payung Sekaki Sub district with a sample of SDN 06 as the experimental class and SDN 05 as the control class. Sampling is done by simple random sampling technique. Research data was collected through pretest and posttest student learning outcomes.

## RESULTS AND DISCUSSION

The results of this study will describe the description of the data the effect of smart circuit playing media and learning motivation on the mathematics results of fourth grade students in elementary school. Learning outcomes data from two sample classes were obtained before and after learning using smart circuit playing media with learning motivation and conventional learning models. In the experimental class, there were 18 students taking the learning outcomes test, and in the control class there were 21 students. The experimental class student learning outcomes test was higher than the average control class student learning outcomes test. The average test results of the experimental class students the pretest was 54.83 and the posttest was 83.17 while the average learning outcomes for the control class students were 48.43 and posttest 76.05 pretest. The maximum score of the student learning outcomes test in the experimental class was with the pretest 80 and posttest 98 while the score the maximum test of student learning outcomes in the control class is pretest 64 and posttest 86. Score mi The minimum test for learning outcomes in the experimental class is pretest 30 and posttest 60 while the minimum score for student learning outcomes in the control class is pretest 32 and posttest 68.

The requirements analysis test was conducted to see conclusions about the data obtained from the test of learning outcomes of class IV students in both sample classes. Before conducting a hypothesis test, the data normality test is done manually first. Testing the first hypothesis in this study uses the t-test. From the distribution list t with a significance level of 0.05. Seen in table t with dk  $(n_1 - 1) + (n_2 - 1) = (18 + 21 - 2) = 37$ . So what is followed in the table with a real level of 0.05 is the price of t table

2.01954. Thus  $t_{count} > t_{table}$ , which is  $22.99 > 2.01954$ , then  $H_0$  is rejected and  $H_1$  is accepted. there is the influence of mathematical smart circuits on student learning outcomes. Based on the above calculations it can be concluded that there is the influence of smart circuit media and student motivation in the experimental group compared to students in the control group using conventional learning models.

This research has revealed that smart circuit media and learning motivation have a large positive effect on student learning outcomes. The application of smart circuit media and learning motivation in learning in real terms researchers see student learning motivation in learning can be generated and student learning outcomes look good. The fact that the application of smart circuit media is more successful in helping students memorize formulas or material. In addition, smart circuits are a media game that is educational, productive, fun, and can provide more benefits in learning.

## CONCLUSION

There is the influence of smart circuit game media and learning motivation on the mathematical results of fourth grade students in elementary school. Based on the conclusions above, some suggestions can be made to improve learning outcomes, including: (1) for teachers to be able to use smart circuit playing media and learning motivation in the fourth grade mathematics learning process in elementary schools, due to the application of smart circuit playing media and learning motivation can improve student learning outcomes, (2) for principals as information in fostering teacher personnel in making a positive contribution to improving the learning process and (3) for other interested researchers who are expected to be able to conduct further research by being able to anticipate the obstacles that occur.

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