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THE EFFECT OF THE SCHOOL ENVIRONMENT ON MATHEMATICAL LEARNING OUTCOMES IN JUNIOR HIGHT SCHOOL GORONTALO CITY STATE

La Yusran La Kalamu, M.Pd

Fakultas Ilmu Pendidikan Universitas Bumi Hijrah
llayusran@gmail.com

Abstract: This study aims to find out the school environment has a direct effect on the results of mathematics learning in SMP Negeri students in Gorontalo city. This research was carried out on class VII students of the State Middle School in Gorontalo City in the odd semester of the academic year 2018/2019. The research data was obtained through tests in the form of MCQs and questionnaires. The research data was analyzed in two parts, namely descriptive analysis and inferential analysis for testing the research statistical hypothesis. The method used in this study is a survey causal path analysis model*(pathanalysis).*This method can be used to test the direct effect of school environment variables on the mathematics learning outcomes of Gorontalo City Public Middle School students. The population in this study were all seventh grade students of State Middle School in Gorontalo City as many as 1729 students and a total sample of 95 students. The results showed that: there was a positive direct influence of the school environment on the learning outcomes of mathematics, this showed that the more conducive the school environment would directly improve students' mathematics learning outcomes.

Keywords: Mathematics Learning Outcomes, School Environment

INTRODUCTION

Mathematical learning outcomes are changes in behavior acquired by someone after going through the learning process of mathematics subjects that cover the cognitive, effective and psychomotor fields. To find out the achievement of mathematics learning outcomes, it is necessary to make certain assessments that show the extent to which the assessment criteria have been reached. This assessment is done by giving a test. The aim is to measure the learning outcomes of mathematics to describe student learning achievement so that the advantages and disadvantages of a student can be known after participating in the mathematics learning process for a certain period of time. Learning outcomes are very useful for teachers, in terms of knowing the extent of students' completeness in understanding the material taught so that enrichment and remedial can be done to improve learning. Then the learning outcomes are also beneficial for students, to determine the extent of their abilities after following the learning process for a certain time. If it is connected with learning mathematics in schools, it is hoped that students are expected to be able to understand mathematical concepts, explain the interrelationships between concepts and apply concepts or algorithms, flexibly, accurately, efficiently, and precisely, in solving problems; Using reasoning on patterns and traits, making mathematical manipulations in making generalizations, compiling evidence, or explaining mathematical ideas and statements; Express mathematical symbols both verbally and in writing, able to apply mathematics in everyday life and be able to solve mathematical problems (Curriculum 2013).

To achieve the above functions and objectives the government has sought various ways and reform efforts including renewal of the curriculum, learning process, improving the quality of teachers through upgrading both regionally and nationally, forming MGMP (Subject Teacher Consultation), procurement of facilities learning infrastructure, organizational arrangement and education management, and other businesses related to improving the quality of education.

Based on the results of observations made by researchers towards students of class VII in learning mathematics in Gorontalo City Public Middle School there are several problems in learning, among others, the results of students' National Mathematics Examinations are still low. Then, during the implementation of learning students are not actively involved in mathematics learning activities in the classroom. Most students do not care about the ongoing mathematics learning activities. Lack of good cooperation between fellow students and lack of caring among them. Such conditions will affect the ability of students to solve problems in learning mathematics which results in low student learning outcomes.

To overcome the above problems, efforts need to be made to overcome them early by examining the causes. One that influences student learning outcomes is external factors, namely the school environment, namely the school environment. Relevant with the opinion of Slameto (2013: 54) that external factors that influence learning outcomes are schools (teaching methods, curriculum, teacher relations with students, student relations with students, school rules and regulations, learning tools, school time, standard lessons above size, building conditions, learning methods and homework). Thus it can be concluded that the school environment is related to the relationship between students and their teachers, the relationship between students and their school friends, the condition of the building, learning facilities, order and others.

Problem Formulation

Based on the background of the problem that has been described, the researcher formulates the problem as follows: "Is there a direct influence of the school environment with the results of mathematics learning in class VII students of State Middle Schools throughout Gorontalo City"?

THEORY BASIS

Mathematics Learning Results

According to Dimyati and Mudjiono, (2013: 23) that learning outcomes are things that can be viewed from two sides, namely the student side and the teacher's side. When viewed from the side of students learning outcomes are a level of mental development that is better when compared to when they have not studied, while from the teacher's side the results of learning are when the material is finished. This understanding gives meaning that learning outcomes provide different perceptions from two different points of view, where the viewpoint of students, learning outcomes can be interpreted as development and mental changes that are more advanced than before learning, whereas from the teacher's perspective, learning outcomes can interpreted as completeness of the teacher teaches teaching materials after carrying out learning at a certain time. Similar opinions, namely Hamalik (2013: 23), that learning outcomes are if someone has learned there will be a change in behavior in that person, for example from not knowing to knowing, from not understanding to understanding. Based on this understanding learning outcomes means changes in behavior that occur in a person after doing learning.

James and James (in Subekti, 2011: 6) say that "mathematics is the science of logic, about forms, structures, quantities and concepts that relate to one another (with a large number, which is divided into three fields, namely algebra) , analysis and geometry) ". This

understanding implies that mathematics as a science of logic, which has a form, quantity and arrangement symbolized in the form of numbers. According to Fathani (2009: 22) mentions the understanding of mathematics as follows:

> Mathematics in general is affirmed as a research pattern of structure, change, and space; no more official, one might say that mathematics is a research of numbers and numbers. In the formalist view, mathematics is the examination of axioms which confirm abstract structures using symbolic logic and mathematical notation; other views are reflected in the philosophy of mathematics.

Based on a number of opinions that have been put forward about mathematics, it can be synthesized that mathematics is a science of expression that is organized systematically, which deals with facts, logical processes, rules, axioms, numbers and others that involve the process of reasoning in their operations. In the field of study, mathematics is divided into the fields of algebra, analysis and geometry.

According to Bloom (2010: 206-207), explained that learning outcomes are clarified into 3 domains, namely: a) cognitive domain, with regard to intellectual learning outcomes in the cognitive domain consisting of 6 aspects, namely: 1) *knowedge* is the level of ability to recognize responses, facts, or terms, 2) Understanding that is the ability to understand concepts, facts, data, symbols and images, 3) Applications that are the use of ideas, theories or technical instructions in real situations, 4) Analysis is the ability to describe certain situations to solve problems, 5) Synthesis is the ability to deduce from various elements, and others into a new form, 6) evaluation is the ability to assess, distinguish and others; b) affective domain, with regard to attitudes and values as learning outcomes, the affective domain consists of: receiving, responding, judging, organizing and characterizing; c) psychomotor domains, psychomotor domains related to motor skills, manipulation of objects or activities that require neural coordination and coordination of the body include: body movements, non-verbal communication devices, speaking skills.

Based on various opinions and descriptions above, it can be synthesized that mathematical learning outcomes are changes in behavior experienced by someone after the process of learning mathematics with a marked increase in a number of cognitive abilities, skills, and attitudes. The learning outcomes were randomized to three domains: cognitive, affective and psychomotor. The cognitive domain includes: knowledge, understanding, application, analysis, synthesis and evaluation. Affective domains include: receiving, responding, assessing, organizing and characterizing. And psychomotor domains include: body movements, non-verbal communication devices, speaking skills.

School Environment

Sukmadinata, (2009: 164) argues that the school environment is an environment that plays an important role for the development of students' learning. It can be understood that school as a place of learning for students in receiving teaching in the form of formal education which also influences the development of learning. Sabdulloh (2010: 196) argues that, school is an educational environment that is deliberately designed and implemented with strict regulations such as must be tiered and continuous. In other words schools as formal education and special institutions, which can be used as a place to organize education, in which there is a learning process to achieve certain educational goals. According to Sumitro, et al (2012: 81) argue that the school environment is an educational environment that develops and continues the education of children to be smart, skilled and well-behaved citizens. This opinion can be understood that the school environment as a place for someone to gain knowledge with the aim of forming good character. Tu'u (2014: 1) the school environment is understood as a formal education institution, where this is where teaching and learning activities take place, science is

taught and developed to students. This opinion can be interpreted as a school environment where individuals conduct learning activities in educational units (formal education) in receiving knowledge taught by educators.

Based on the above review, it can be synthesized that the school environment is an environment in which a person carries out formal learning activities to learn science which also influences the development of his learning. The indicators of the school environment, namely a) the state of facilities or equipment in the school, b) the relationship between students and teachers, c) the relationship between students and students, d) order in school, e) the condition of the building, f) class environment and g) teaching method.

RESEARCH METHODOLOGY

Location and Time of Research: This research was conducted in State Middle Schools in Gorontalo City. The time of research is completed within 3 months, namely from July to September 2018.

Type and Design of Research: This study uses a type of path analysis research with a quantitative research approach. In this study there are two variables studied, namely the school environment **(X),** and mathematics learning outcomes **(Y)**. The research design specified in this study is as in figure 1.1:

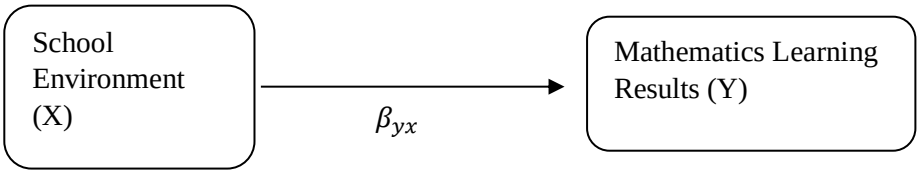

Figure 1.1 Research Design

Population and Sample Research: The population in this study were all Class VII students in the Public Middle School in Gorontalo City totaling 1729 students. The samples taken in this study were 95 students.

Data Collection Techniques: Data collection techniques in this study used questionnaires, observations, and documentation.

Data Analysis Techniques: Data analysis techniques used are descriptive and inferential analysis. Descriptive analysis techniques are used to obtain a description of the characteristics of the distribution of scores for each variable score studied. The description of the score data from the research results is based on the*mean*, median and group data modes. In addition, the data variance is also calculated. Data distribution based on group data frequency distribution tables is visualized in the form of histograms.

Inferential analysis is used to test the research hypothesis. Because this study aims to get an idea of the influence between the variables studied, the related statistical test is path analysis. Testing hypotheses for testing data path analysis taken from the population must (1) be normally distributed, and (2) linear data.

RESEARCH RESULTS

Discussion of Research Results The

results of the research hypothesis testing stated that: "There is a positive and significant influence between the school environment and the results of students' mathematics learning in Gorontalo City Public Middle School". Based on structural equation 1, the school environment path coefficient (X_3) on mathematics learning outcomes (Y) obtained t_{count} = 2.39 and $t_{table\ (\alpha =}$

$_{0.05;\ dk\ =\ 91)}$ = 1.98. Thus $t_{count} > t_{table,}$ which means that $H_{o\ is}$ rejected or the path coefficient between the school environment and mathematics learning outcomes is significant. This means that there is a positive direct influence on the school environment on the learning outcomes of mathematics. That is, that the school environment has an influence on the achievement of mathematics learning outcomes obtained by a student, which can be interpreted as more conducive to the school environment the higher the mathematics learning outcomes achieved by students on mathematics subjects and vice versa if the student school environment is less supportive then the mathematics learning outcomes achieved students will also be lower.

The results of this study are supported by Patty's theory (in Baharuddin, 2015: 68), revealing that "the environment is something that surrounds individuals in their lives, both in the form of physical environment such as parents, homes, friends playing, and surrounding communities, schools and in the form of the psychological environment such as feelings experienced, ideals, problems encountered etc. The student learning environment that supports it certainly will arouse children's learning spirit. Thus, if the student's school environment supports it, it will have a positive effect on student learning outcomes in the mathematics subjects they achieve.

The learning environment is any situation or situation inside and outside the individual both physical and non-physical which plays a role in shaping changes in individual behavior in terms of cognitive, affective and psychomotor abilities. Mariyana, et al (2015: 17) that the learning environment is a means by which students can devote themselves to activities, including creating a variety of manipulations so that they get a number of new behaviors from their activities. The school environment as a 'laboratory' or place for children to explore, experiment, and express themselves to get new concepts and information as a manifestation of learning outcomes ".

One form of learning environment is the school environment. The school environment is an environment where a person carries out formal learning activities to learn science which also influences the development of his learning. Sumitro, et al (2012: 81) argue that the school environment is an educational environment that develops and continues the education of children to be intelligent, skilled and well-behaved citizens. It can be understood that the school environment as a place for someone to gain knowledge with the aim of forming good character. The indicators of the school environment, among others: the state of facilities or equipment in the school, the relationship between students and teachers, the relationship between students and students, discipline in school, building conditions, classroom environment and teaching methods.

These findings indicate that the school environment has a positive effect on students' mathematics learning outcomes. Student learning outcomes are benchmarks that describe the success of the learning process carried out by schools, teachers and students. The level of success in achieving the objectives of an activity depends on how the learning process has taken place. Thus to achieve the mathematics learning outcomes of students who are in accordance with the stated goals need to pay attention to the school environment

Creating a conducive school environment is very important in implementing the learning process of mathematics subjects. This conducive school environment is needed to stimulate and maintain student involvement in the mathematics learning process. For this reason, parents, teachers and observers of education need to create a conducive school environment for students so that their learning independence in learning mathematics is higher. Given that the school environment that supports all student learning activities will provide a comfortable atmosphere and encouragement for students to continue to spur their learning achievement. Relevant to the findings of Ly and Malone (2010: 367) conducting a school study in the western Sydney state secondary schools found that there was a relationship between the school environment and learning achievement. There are indications of positive relations

between school environments that are conducive to learning achievement achieved. Thus it can be concluded that the student's school environment has a direct effect on the learning outcomes, especially on mathematics subjects. The findings are also relevant to Hopland (2016) that the school environment in the form of teacher guidance, materials and social environment and homework plays an important role in stimulating students' business in the classroom, which implies that school managers must focus on improving not only teacher quality and materials teaching, but also the social environment in the school to stimulate more student effort.

CONCLUSION AND SUGGESTIONS

CONCLUSION

Based on the results of data analysis and discussion of the results of the study it can be concluded that there is a positive and significant direct effect of the school environment on the results of mathematics learning in class VII students of Gorontalo City Middle School. This shows that a conducive school environment has resulted in an increase in the mathematics learning outcomes of Grade VII students of Gorontalo City Middle School.

SUGGESTION

First, it is suggested that the teacher must really think about and formulate in a program the objectives and actions to be taken in the activities in learning in the school in terms of planning learning and in its implementation. One of them, conditions the learning environment. **Second**, the principal is able to direct and influence all human resources to carry out essential tasks, and control the running school to achieve goals. If there is an error between the parts in the school, the principal must provide guidance in straightening so that the teacher can be motivated to carry out the task. **Third**, for students, in order to be able to develop potential, knowledge, understanding and abilities as well as insights related to mathematical concepts. In various ways to achieve these competencies, namely active learning, re-learning the material that has been taught by the teacher, getting used to doing practice assignments in front of the class or at home, instilling self-confidence that success achieved on one's own efforts increases self-confidence in its ability , and instilling learning goals that must be achieved.

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