



**Effect of Learning Environment and Learning Motivation on Students'
Science Learning Outcomes**
St catholic junior high school Fransiscus Xaverius Kema

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Abstract: This study aims to determine the effect of the learning environment and learning motivation on the results of class IX students of St. Catholic Middle School. Fransiscus Xavier Kema in Science Subjects. This research was conducted at St. Catholic Middle School. Fransiscus Xaverius Kema in October - December 2022. The sample in this study was 35 people. The results of this study can be concluded that partially the learning environment variable (independent variable or X_1) on student learning outcomes (the dependent variable or Y) in science subjects has a significant positive effect with a significance value that $t_{count} (7.682) > t_{table} (1.693)$ then the hypothesis zero (H_0) is rejected and the alternative hypothesis (H_a) is accepted, resulting in the influence of variable X_1 on Y . Furthermore, the significance value of $t (0.001) < (0.05)$, then the null hypothesis is rejected and the alternative hypothesis is accepted. Learning motivation variable (independent variable or X_2) on student learning outcomes (dependent variable or Y) in science subjects has a significant positive effect $t_{count} (6.530) > t_{table} (1.693)$ and significance $t (0.001) < (0.05)$. then the null hypothesis is rejected and the alternative hypothesis is accepted. Simultaneously the learning environment variable (X_1) and student learning motivation (X_2) on student learning outcomes (Y) in class IX Science class IX St. Catholic Middle School. Fransiscus Xaverius Kema has a significant positive effect $F_{count} (80.256) > F_{table} (3.29)$ and a significance value of $F (0.001) < (0.05)$. Learning motivation variable (independent variable or X_2) on student learning outcomes (dependent variable or Y) in science subjects has a significant positive effect $t_{count} (6.530) > t_{table} (1.693)$ and significance $t (0.001) < (0.05)$. then the null hypothesis is rejected and the alternative hypothesis is accepted. Simultaneously the learning environment variable (X_1) and student learning motivation (X_2) on student learning outcomes (Y) in class IX Science class IX St. Catholic Middle School. Fransiscus Xaverius Kema has a significant positive effect $F_{count} (80.256) > F_{table} (3.29)$ and a significance value of $F (0.001) < (0.05)$. Learning motivation variable (independent variable or X_2) on student learning outcomes (dependent variable or Y) in science subjects has a significant positive effect $t_{count} (6.530) > t_{table} (1.693)$ and significance $t (0.001) < (0.05)$. then the null hypothesis is rejected and the alternative hypothesis is accepted. Simultaneously the learning environment variable (X_1) and student learning motivation (X_2) on student learning outcomes (Y) in class IX Science class IX St. Catholic Middle School. Fransiscus Xaverius Kema has a significant positive effect $F_{count} (80.256) > F_{table} (3.29)$ and a significance value of $F (0.001) < (0.05)$. Simultaneously the learning environment variable (X_1) and student learning motivation (X_2) on student learning outcomes (Y) in class IX Science class IX St. Catholic Middle School. Fransiscus Xaverius Kema has a significant positive effect $F_{count} (80.256) > F_{table} (3.29)$ and a significance value of $F (0.001) < (0.05)$. Simultaneously the learning environment variable (X_1) and student learning motivation (X_2) on student learning outcomes (Y) in class IX Science class IX St. Catholic

Middle School. Fransiscus Xaverius Kema has a significant positive effect $F_{count} (80.256) > F_{table} (3.29)$ and a significance value of $F (0.001) < (0.05)$.

Keywords: *Learning Environment, Learning Motivation, Learning Outcomes.*

INTRODUCTION

A. Background of the problem

Education plays an important role in realizing competitive and quality human resources. Ki Hajar Dewantara, through his philosophy on education, stated that education is guiding all the natural forces that exist in children so that they as human beings and as members of society can achieve the highest possible safety and happiness. From the understanding explained in Ki Hajar Dewantara's philosophy of education, it can be interpreted that education is a guide in the life of the growth of children, where the life of the child's growth lies beyond the skills or will of the educators. Each child lives and grows according to his own nature. The natural power that exists in children is all the power that exists in the inner life and outer life of the children because of natural power,

One way that can be done in guiding children is through the learning process. Learning is a deliberate effort, directed, and aims so that other people can gain meaningful experiences (BSNP, 2007). Wulandari and Surjono (2013), argued that learning is a process of interaction between teachers and students and the elements in it. Thus learning is an attempt to direct and develop students' abilities through the learning process in order to achieve the learning objectives as expected. Hamalik (2010), argues that it is very important for every teacher to understand as well as possible about the student learning process so that they can provide guidance and provide an appropriate and harmonious learning environment for students.

Hamzah (2007) in his book states that learning is a person's activity in order to have competence in the form of skills and knowledge needed. Learning is seen as an elaboration process in an effort to find meaning by individuals. The learning process is basically carried out to improve personal abilities or competencies. Dwi and Djoko (2020) explain that the learning environment greatly influences the process of learning and learning outcomes. The student learning environment is divided into 3, the following is an explanation and examples of issues that often occur, namely: first, the family environment, for example, the disharmony of the relationship between father and mother, and the low economic life of the family. Second, the community environment, and thirdly the school environment, for example the condition and location of the bad school building, condition of teachers and learning tools are of low quality. In this case, one of the components of the learning environment in schools that also influences students is the teacher. Another view from the results of research conducted by Pomuri, Dame and Sumual (2020) states that teachers who adopt the right learning style will certainly be able to attract students' attention so that it has an impact on increasing student interest in learning. A teacher is needed to always consider that the style used in teaching is an ideal and potential teaching and learning process demand in forming a logical framework for students. Then in another study by Sumual and Ombuh (2018) argued that learning outcomes can be influenced by several factors such as interest and motivation,

The student learning environment that influences learning outcomes consists of the family environment, school environment, and community environment. The first environment is the family environment. The family environment is very influential on students because it is the main environment for the development of a child. In the family, a child experiences the process of socialization for the first time. The second environment is the school environment. The school environment that influences learning includes teaching methods, curriculum, teacher-student relations, school discipline, lessons and school time, lesson standards, building conditions, learning methods and homework.

Slameto (2020) explains that the learning environment is part of the learning process which plays an

important role in fostering learning motivation. Learning is essentially an interaction between individuals and the environment. The environment provides stimulation to the individual and vice versa the individual responds to the environment which produces changes in the individual, both positive and negative. The learning environment is a place where students carry out learning activities and socialize with other people in that environment.

The learning process cannot be achieved properly if it is only seen from the learning environment factors. The second factor, namely learning motivation, also determines the student's learning outcomes. In the process of teaching and learning, education means everything related to learning activities and all the factors that influence it. In addition, learning motivation needs special attention from parents and teachers to make it easier to guide and direct children in learning. Motivation to learn does not arise directly, but arises due to participation, experience, habits, at the time of learning, in other words, motivation to learn is the cause of participation or participation in learning activities.

Schools always strive for the best through the provision of infrastructure in supporting learning to students, while teachers strive for conducive learning conditions during the teaching and learning process. A good learning environment and high learning motivation are expected to improve student learning outcomes in science subjects, thus encouraging students to apply the concept of natural science values in everyday life. Despite the facts that occur in the field, the authors find that the average score of class IX students in science subjects at St. Catholic Middle School. Based on the results of the midterm test for the 2022/2023 school year, Fransiscus Xaverius Kema scored 59. This means that most students get scores below the average (KKM). From the results of preliminary observations made by the author, there are still parents and teachers who pay less attention to the learning environment. While there are still many students who are less motivated to learn. This causes the level of student learning outcomes to be low, so that they experience difficulties in achieving the stated educational goals.

From this description, the writer is interested in conducting research based on the background of the problems that occurred at St. Catholic Middle School. Fransiscus Xaverius Kema and raised it in the form of scientific writing with the title:

The effect of the learning environment and learning motivation on science learning outcomes of St. Catholic Middle School students. Francis Xavier Kema.

RESEARCH METHODS

A. Place and time of research

Along with the results of observations made by previous researchers, an overview of the location of the research was obtained. This research was carried out at St. Catholic Middle School. Fransiscus Xaverius Kema, located in Kema 1 Village, Kema District. The choice of place for this research originated from field observations that had been carried out, in this place the researcher was aware that there were problems related to student learning outcomes that were not optimal. The research lasted for 3 months, from October to December 2022.

B. Approach and type of Research

1. Research approach

This research approach is a quantitative research. The research objectives are more directed to show the relationship between variables, verify theories, make predictions, and generalize. The theories put forward serve as a standard for stating whether a phenomenon is appropriate or not, and this is where the term ethical truth appears, a truth based on the theory put forward by the researcher. According to Tanzeh (2011) in his book, the quantitative approach aims to test theories and build facts, show combinations between variables, provide statistical descriptions, estimate and predict results.

2. Types of research

While this type of research uses associative research. Associative research is research that aims to determine the relationship between two or more variables. In the title of this research, the research explains whether there is an effect of the Learning Environment and Learning Motivation on Learning Outcomes.

C. Research variable

Research variables are basically anything in any form that has been determined by researchers to be studied so that they will obtain information about it. A research variable is an attribute or trait or value of a person, object or activity that has a certain variance determined by the researcher to be studied and then conclusions drawn.

This study uses two independent variables (X) and one dependent variable (Y).

1. Independent variable (X) or also called independent variable

This variable is a variable that influences or becomes the cause of the change or the emergence of the dependent variable. The independent variables in this study are the learning environment (X1) and student learning motivation (X2).

2. Dependent variable (Y) or dependent variable

According to Sugiyono, this variable is a variable that is affected or becomes a result because of the independent variables. The dependent variable in this study is student learning outcomes (Y).

DISCUSSION

In order to be clearer from the various results of testing the hypothesis about the influence of the work-learning environment and learning motivation on students' science learning outcomes at St. Catholic Middle School. Fransiscus Xaverius Kema, then in the following table the results of hypothesis testing are summarized.

Table 4.19 Statistical Test Results

Regression	Results	Conclusion
X1 Y	t _{tun} = 7.682 t _{table} = 1.693 t _{tun} > t _{table}	Hypothesis Ha is accepted, rejecting H ₀ means that there is a significant influence of the learning environment on student learning outcomes
X2 Y	t _{count} = 6.530 t _{table} = 1.693 t _{tun} > t _{table}	Hypothesis Ha is accepted, rejecting H ₀ means that there is a significant influence of learning motivation on student learning outcomes
X1 X2 Y	F _{count} = 80.256 F _{table} = 3.29 f _{hitun} > f _{table}	Hypothesis Ha is accepted, rejecting H ₀ means that there is a significant influence of the learning environment and learning motivation together on student learning outcomes

1. The Effect of the Learning Environment on Learning Outcomes

Based on the results of the questionnaire that was distributed by the researcher to all class IX students, it can be seen that the value of the learning environment at St. Catholic Middle School. Francis Xavier Kema. Seeing from the results of the regression calculation using SPSS which was carried out on the learning environment variables on learning outcomes, several values were obtained. In the calculation table it is known that t_{count} (7.682) > t_{table} (1.693) and the significance of t (0.001) < (0.05), so the null hypothesis (H₀) is rejected and the alternative hypothesis (H_a) is accepted. Thus, the learning environment variables affect the learning outcomes of class IX students of St. Catholic Middle School. Francis Xavier Kema.

Sutari Imam Barnadib (1989) states that what is called the natural surroundings or the environment is something that is around the learning environment, namely a place or atmosphere (state) that influences the process of changing human behavior. Meanwhile, according to Muhammad Saroni

(2006) the learning environment is "everything related to where the learning process is carried out. This environment includes two main things, namely the physical environment and the social environment, these two environmental aspects in the learning process must support each other, so that students feel at home in school and want to participate in the learning process consciously and not because of pressure or coercion.

According to An-Nahlawi (2005) the role of the learning environment, namely the school as a second place of education, must be able to build students both cognitively, psychomotorically and affectively through a learning process that has been prepared with a curriculum that leads to child growth. Furthermore, learning outcomes were obtained by looking at the odd semester test scores of class IX St. Catholic Middle School. Francis Xavier Kema.

This is in accordance with previous research conducted by Dewi Utami and Tias Ernawati (2010) with the title of the relationship between learning facilities and the learning environment with science learning outcomes. It was found that there was a very significant positive relationship between the learning environment and science learning outcomes. This is evidenced by the r count value = 0.817 and the r table value = 0.279, based on these data the r count value of 0.817 is greater than the r table value of 0.279. Based on the results of the research that has been done, it can be suggested that learning environmental factors must also be considered, a good and conducive learning environment will make students feel at home and comfortable in learning.

According to Ahmad Susanto (2016) states that a calm learning atmosphere, the occurrence of critical dialogue between students and teachers, and fostering an active atmosphere among students will certainly give more value to the learning process. So that the success of students in learning can increase optimally. The data that has been presented can give an idea of how important the learning environment is in supporting good learning outcomes. The learning environment in the school at St. Catholic Middle School. Fransiscus Xaverius Kema has an unsupportive atmosphere with the existence of being in the same area as the SD and SMA, besides that the school complex is next to a market so the atmosphere in the area is bustling. The explanation given by the teacher cannot be maximally conveyed to students.

Science subjects are dominant with theoretical explanations so that they require a comfortable learning atmosphere both at school and at home. With a comfortable, calm and safe learning atmosphere, the theory conveyed can be heard and conveyed to students. From the results of the questionnaire, there are many students who have the opinion that school learning is not conducive. This is due to the location of the school. This triggers a lively atmosphere outside the school to be heard in the school so that the learning atmosphere is less calm. In this case the learning environment is very important not only at school but the environment after school, namely the environment of parents and a supportive community can have a positive impact and a comfortable atmosphere, so students can achieve maximum learning outcomes.

2. Effect of Learning Motivation on learning outcomes

Based on the results of the questionnaire that has been distributed by the researcher to all class IX students, it can be seen that the value of learning motivation at St. Catholic Middle School. Francis Xavier Kema. Seeing from the results of the regression calculation using SPSS which was carried out on the learning motivation variable on learning outcomes, several values were obtained. In the calculation table it can be seen that t count (6.530) > t table (1.693) and the significance of t (0.001) < 0.05, so the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. Thus, the learning motivation variable influences student learning outcomes.

Exposure to the data that has been presented can give an idea of how important student motivation is in learning to get maximum learning outcomes. In the opinion of Djaali (2013) in his book entitled educational psychology states that students who are interested in a lesson will be interested and like it, if something attracts attention it will definitely generate interest and this can have an impact on learning outcomes commensurate with their hard work. This opinion states that students in obtaining good learning outcomes need motivation that will encourage an interest in studying seriously so that

maximum results are achieved.

This is in line with previous research by H Sumual and DM Ombuh (2018) entitled How to improve Interest, IQ, and Motivation of Vocational Student? In the results and discussion regarding the effect of motivation on learning outcomes, it was found that the tcount value of the learning motivation variable on learning outcomes was greater than ttable where $t_{count} = 1.763 > t_{table} = 1.296$ at $\alpha = 0.05$ this stated that motivation in learning had a positive and significant effect on learning outcomes. This is in accordance with the theory of interest in learning which encourages students to get good learning outcomes. Appropriate research was also researched by Afni Mokodompit, Shely Sumual,

Motivation can also arise from within them or from outside. Motivation in a student also varies, but most students want to get good grades. A student who has high learning motivation in science subjects will have high awareness. This creates a sense of curiosity and will make learning more active so that they are able to do science questions easily. When it comes to science lessons that have been done and they are able to get good or good grades, this is one of them influenced by the motivation of the students themselves.

3. The Effect of Learning Environment and Learning Motivation on Learning Outcomes

The results of the research conducted by the researchers stated that simultaneously the learning environment and student learning motivation in Class IX Science subjects at St. Catholic Middle School. Fransiscus Xavier Kema jointly influences learning outcomes. Based on the calculations, it is proven by $F_{count} (80.256) > F_{table} (3.29)$ and a significance value of $F (0.001) < 0.05$, this shows that H_0 is rejected and H_a is accepted.

In this data, it can be seen that the learning environment variables and learning motivation can affect learning outcomes. If you want students to get good grades, students must have one of them is motivation in learning. Therefore, it is important that students have high motivation so that the scores obtained will be maximized. Hence Pantouw, Maxi Tendean, Paulus Robert Tuerah (2021) in a study entitled the study of the factors that influence motivation to study geography in high school explains that the results of the research show that the factors that influence student motivation in geography subjects are factors of interest, parental attention, learning facilities, learning geography. The interest factor contributes to the motivation of 0.511. Parents' attention factor contributed to motivation of 0.694. Learning facility factors contribute to motivation. This is in line with research conducted by Agrival Matandatu, Shely Sumual, and Jerry Wuisang (2021) with the title of the relationship between learning discipline and learning motivation with student learning outcomes which states that the higher the learning motivation, the higher the student learning outcomes.

Besides learning motivation is important for students in improving learning outcomes there are also other factors, namely the learning environment. A learning environment with a calm atmosphere will make learning fun and able to make students catch learning easily. When the student has the motivation to learn, he will feel happy and excited to take part in learning. Besides motivation can affect learning outcomes, the learning environment can also affect learning outcomes. The learning environment has now become a very important role in arousing students' enthusiasm for learning. When the student's enthusiasm and student enthusiasm decrease, at that time a comfortable and calm atmosphere can arouse their enthusiasm for learning. Previous research conducted by Siwi Utamingtyas (2021) explains that the better the learning motivation and learning environment of students, the higher the learning outcomes of students, and vice versa. Learning with high motivation and a supportive learning environment can foster a thirst for learning and increase willingness to learn.

The learning environment can affect the quality of each learner's learning, a comfortable learning environment and place helps children to concentrate more. A learning environment that has been prepared appropriately, students enjoy the learning process more which has an impact on learning outcomes. The learning environment is equated with the educational environment. The three educational environments (school, family, and community) influence and have a role in student learning outcomes. Motivation has a very important meaning and role in learning activities, with

motivation encouraging students to learn, a lack of motivation will certainly weaken the enthusiasm for learning.

CONCLUSION

Research on the influence of the learning environment and learning motivation on science learning outcomes has been carried out in class IX students with a total of 35 students. Based on data analysis, hypothesis testing and the results of the discussion that have been put forward by researchers, it can be concluded as follows.

1. There is a significant effect of the learning environment on science learning outcomes for Class IX at St. Catholic Middle School. Francis Xavier Kema Years.
2. There is a significant effect of learning motivation on science learning outcomes in Class IX at St. Catholic Middle School. Francis Xavier Kema.
3. There is a significant effect of the learning environment and learning motivation on learning outcomes in Class IX Science at St. Catholic Middle School. Francis Xavier Kema.

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