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The Influence of Learning Motivation on Learning Outcomes with Family Environment as a Moderating Variable

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Abstract. This study aims to analyze the influence of learning motivation on learning outcomes with family environment as a moderating variable. The population in this study were eighth-grade students of SMP Negeri 31 Samarinda in the academic year 2023/2024 in Samarinda City, East Kalimantan Province, Indonesia. The sampling technique used was *Proportional Random Sampling*, which resulted in 118 students. The analysis used in this study was Structural Equation Modeling (SEM) with SmartPLS 4.0. The results of this study indicate that learning motivation has a positive and significant effect on learning outcomes. However, the interaction between family environment and learning motivation does not have a significant effect on learning outcomes. Therefore, support and an active role of the family in creating a conducive learning environment at home are very important to maximize the positive influence of learning motivation on student learning outcomes.

Keywords. Learning Motivation, Learning Outcomes, Family Environment

1. Introduction

In the rapid development of science and technology and the increasingly intense flow of globalization, competition in the field of education has emerged. Education is the hope for a good life, and plays an important role for humans, therefore it must be given good attention [1]. The future of the nation lies in the hands of the younger generation. The quality of the nation in the future depends on the education received by children today.

Education is very important in our lives as human beings and of course cannot be separated from the family environment, society and country. Education is a deliberate and planned action to create a learning environment and learning process, so that students can activate their full potential, the goal is for students to have strength in terms of spiritual aspects, self-control, personality, intelligence, good morality, and skills that are useful for themselves, society, nation, and country [2].

Education is not only about absorbing information, but also about the ability of students to use it in real-world situations. Therefore, students are expected to be able to apply the knowledge and skills they learn in various contexts, whether in problem solving, decision making, or even in contributing to society. Learning as part of education is a process carried out by students if they want to develop more intelligence and abilities than before. One of the benchmarks commonly used in assessing the level of success in the learning process is student

learning outcomes. Talking about learning outcomes is no longer a foreign thing in the world of education. As one of the benchmarks in assessing achievement in the learning process, learning outcomes reflect the product of the learning process which indicates the extent to which students, teachers, learning processes, and educational institutions have achieved the predetermined educational goals [3]

Learning outcomes can be defined as something that students can do that they could not do before [4]. This means that students do not only memorize facts, but also truly understand the basic concepts taught in a particular subject. This is an important indicator that the learning process is effective in providing meaningful understanding to students.

Based on the results of the daily tests obtained by the author from SMP Negeri 31 Samarinda for the Social Sciences (IPS) Subject for grade 8, there are still students who get scores below the Minimum Completion Criteria (KKM) which is 39%. For KKM at SMP Negeri 31 Samarinda, it is determined: 80. The achievement of learning outcomes by students cannot be separated from the factors that influence the learning outcomes themselves. Based on the influencing factors, it is necessary to know and research them. Factors that determine student learning outcomes are influenced by learning motivation and family environment.

In the context of learning, motivation plays a very important role because without motivation, a person tends not to be active in learning activities. This opinion is supported by the results of research conducted by Rismawati & Kadarisma (2017), which states that motivation increases the level of effort, perseverance, concentration, and enthusiasm for learning of students [5]. This was expressed by Nasution et al. (2023) that learning motivation has a significant impact on the student's learning process [6]. So, students who have high learning motivation tend to be more enthusiastic, diligent, and dedicated in facing learning challenges. Learning motivation is an internal and external drive for students to make behavioral changes, usually with the support of several indicators or elements [7]. Lack of learning motivation can be seen from the level of student participation during the learning process. Students who have high learning motivation are actively involved in discussions and easily ask questions when they do not understand. According to Handoko, indicators of learning motivation can be seen from the intensity of the desire to act, the duration of time allocated for learning, the willingness to ignore other tasks, and tenacity in completing tasks [8].

On the other hand, students who have low motivation tend to be less interactive and hesitate to ask questions during the lesson. This difference occurs because of the different levels of motivation that students have in different learning situations. This is emphasized by Ekiz & Kulmetov that without adequate motivation, even people with special skills cannot achieve long-term targets, and there is no optimal curriculum design to support effective education to achieve satisfactory learning outcomes for students [9]. This is in line with the results of research conducted by Samir Abou El-Seoud et al. (2014) showing that motivated students tend to be involved in challenging, active, and enjoyable activities [10].

Family is the first place where someone learns about norms, values, and social interactions. The role of the family environment can be a determining factor that changes the dynamics of motivation and learning activities. A supportive family environment that provides positive encouragement can strengthen students' motivation and learning activities. On the other hand, a family environment that does not support or experiences tension can hinder a child's learning process. A child's learning success is held by a family, especially parents. The family environment has a significant role in shaping students' behavior, attitudes, and learning outcomes [11]. The learning process, which ultimately results in an increase in their learning outcomes, perseverance, and creativity.

Research conducted by Hartini Putri & Putu Cahayani found that there is a significant influence between the family environment and learning outcomes [12]. This is different from the results of research conducted by Rahayu & Trisnawati that there is no significant influence between the family environment and learning outcomes [13].

Based on the background above, the author is interested in conducting research with the title "The Influence of Learning Motivation on Learning Outcomes with the Family Environment as a Moderating Variable".

2. Literature Review

2.1 Motivation Theory

One theory that is very closely related to motivation is the Hierarchy of Needs Theory developed by Abraham Maslow [14]. Maslow introduced five levels of needs in the hierarchy, namely:

1. Physiological Needs: Basic needs for survival, such as eating, drinking, sleeping, and sex.
2. Safety Needs: The need for security, protection, stability, and order.
3. Social Needs: The need for affection, belonging, acceptance, and friendship.
4. Esteem Needs: The need for self-esteem (eg, self-confidence, competence) and appreciation from others (eg, status, recognition).
5. Self-actualization needs: This need is the highest peak of human achievement after the above needs are met. The achievement of self-actualization has an impact on psychological conditions that are also elevated, such as changes in perception, and motivation to always grow and develop.

2.2 Cognitive Theory

Cognitive Theory was developed by Piaget [15]. According to Cognitive Theory, learning is a change in perception and understanding, and does not always take the form of observable changes in behavior. The basic assumption of this theory is that everyone has experience and knowledge within themselves. This experience and knowledge are arranged in the form of cognitive structures. In cognitive theory, it is stated that the learning process will run well if the new learning material adapts to the cognitive structure that students already have.

2.3 Learning Motivation

Motivation and learning are two things that influence each other. Basically, motivation is a drive that causes behavior or actions. This was stated by Islamuddin that motivation is a change in energy within a person which is marked by the emergence of affective and reactions to achieve goals [16].

Learning motivation according to Petri in Cetin (2015) is that learning motivation is a factor that influences and guides student behavior and is their innate strength [17]. As a concept, learning motivation is defined as an internal factor consisting of four components, namely opportunities for success, concerns about failure, interest, and challenges [18].

Meanwhile, McCoach & Siegle said that learning motivation is one of the factors that can differentiate between students who optimize their learning potential and students who are less successful academically [19].

2.4 Family Environment

The family environment is the environment responsible for behavior, personality formation, aspects of affection, level of attention, guidance, welfare, and atmosphere in the home [20]. According to Djaali, the family environment is the beginning of a person's life journey and has a significant impact on student success [21].

The family environment is a primary grouping referring to a small number of individuals who have blood relations, the family can consist of a nuclear family, consisting of a father, mother, and children, or an extended family with additional members such as grandparents, siblings-in-law, or maids [22]. According to Hasbullah, the family environment is learning experienced by a child that occurs in the family environment, because this is where the child first gets guidance and education [23]. Therefore, the family is the oldest educational institution, which is informal and natural [24].

2.5 Learning outcomes

Learning outcomes refer to all abilities obtained in various aspects through learning experiences at school, measurement of learning outcomes is generally done using tests expressed in the form of numbers [25]. In line with this opinion, learning outcomes are abilities that can be measured directly with tests [26]. So, learning outcomes are the abilities and skills that students have after undergoing the learning process [27].

3. Research Method

This study uses a quantitative approach to examine the effect of learning motivation on student learning outcomes, as well as the role of the family environment as a moderating variable. Data were collected using a questionnaire measured using a Likert scale and distributed to students of SMP Negeri 31 Samarinda. The analysis technique used is SEM-PLS.

The sampling technique used in this study was Proportional Random Sampling. The Proportional Random Sampling technique was chosen as an effort to obtain a representative sample by looking at the population of 8th grade students of SMP Negeri 31 Samarinda as many as 171 students divided into 5 classes. In order for all classes to be represented, samples were taken from each class randomly with proportions. The number of samples in this study was 118 students. Furthermore, 118 students were selected randomly using a lottery system. The research time was January-April 2024.

4. Result and Discussion

The testing of the research model begins with analyzing the feasibility of the inner model and outer model. Table 1 shows the results of the outer model testing indicating that the indicators used have met the convergent validity criteria. This is indicated by the loading factor value of each indicator which is greater than 0.7.

Table 1
Loading Factor

Outer loadings - Matrix			
	Family Environment	Learning Motivation	Learning Outcomes
FE14	0.882		
FE15	0.905		
LM6		0.782	
LM7		0.872	
LM8		0.755	
LO			1.000

After meeting the convergent validity criteria, the next stage is to test the construct validity through the Average Variance Extracted (AVE) value. The research model is considered good if the AVE value of each construct is more than 0.5. Based on Table 2, the AVE value, all constructs show an AVE value above 0.5. In accordance with the criteria put forward by Hair et al. that all constructs in the model must meet the criteria, namely the Cronbach's Alpha value of 0.6 and Composite Reliability of 0.7 [28]. This indicates that the construct validity in this research model has been met.

Table 2
Discriminant Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Family Environment	0.748	0.753	0.888	0.798
Learning Motivation	0.730	0.762	0.846	0.648

SEM-PLS data analysis, the inner model acts as a map of the relationships between concepts that are not directly measured (latent constructs). This model helps us understand how one concept affects another concept by analyzing the cause-and-effect relationships between them. These relationships are depicted in the form of paths and coefficients, which provide information about the direction and strength of the relationship. The accuracy and significance of the relationships between these concepts are then evaluated using statistical methods and model fit indices. When evaluating an SEM model, we need to make sure that the model fits the data we have. This process is called the goodness of fit test. In this test, we want to see how well the structural model (the relationship between constructs) and the measurement model (the relationship between constructs and indicators) reflect the actual data.

Table 3
R-Square

	R-Square	R- Square adjusted
Learning Outcomes	0.076	0.051

One way to measure goodness of fit is to look at the R-squared (R^2) value. The R^2 value indicates the proportion of data variation that is successfully explained by the model. The higher the R^2 value, the better the model is at explaining the existing data. To facilitate interpretation, the R^2 value is generally grouped into three categories, namely the Good Category ($R^2 = 0.75$), Moderate Category ($R^2 = 0.50$), Weak Category ($R^2 = 0.25$). The results of the SEM analysis in this study are shown in table 3.

Table 4
Hypothesis Testing

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Learning Motivation - > Learning Outcomes	0.223	0.244	0.099	2.261	0.024
Family Environment x Learning Motivation - > Learning Outcomes	0.094	0.081	0.103	0.915	0.360

The results of the hypothesis testing contained in Table 4 provide important information about how strong and significant the relationships between constructs in this research model are. The following is a further explanation of the results:

1. The Influence of Learning Motivation on Learning Outcomes

Based on the results of research conducted by the author at SMP Negeri 31 Samarinda, learning motivation has a positive and significant effect on learning outcomes, because the coefficient value is positive at 0.223 and the resulting p-value is less than 0.05. Thus, the hypothesis that learning motivation has a positive and significant effect on learning outcomes is proven true. This is in accordance with previous research which states that learning motivation has a positive and significant effect on learning outcomes [28]. Students who have high learning motivation will have good learning outcomes.

2. The Influence of Family Environment as a moderator of the relationship between Learning Motivation and Learning Outcomes.

Based on the results of research conducted by the author at SMP Negeri 31 Samarinda, the family environment with learning motivation has a positive and insignificant effect on

learning outcomes, because the coefficient value is positive at 0.094 and the resulting p-value is more than 0.05. Thus, the hypothesis that there is an effect of learning motivation on learning outcomes moderated by the family learning environment of students at SMP Negeri 31 Samarinda is accepted. This is in accordance with previous research which states that the family environment has a moderating effect on independent variables in learning outcome research [29].

5. Conclusion

Based on the results of data analysis and discussion that have been carried out, it can be concluded that:

1. Learning motivation has a positive and significant effect on learning outcomes. This means that the higher the student's learning motivation, the higher the learning outcomes achieved. Conversely, the lower the student's learning motivation, the lower the learning outcomes.

2. The family environment has a moderating role in the relationship between learning motivation and learning outcomes. This means that the influence of learning motivation on learning outcomes is not uniform for each student, but is influenced by the conditions of the family environment.

Therefore, learning motivation is an important factor that needs to be improved to achieve optimal learning outcomes. However, improving learning outcomes does not only depend on students' learning motivation, but is also influenced by family environmental factors. The support and active role of the family in creating a conducive learning environment at home is very important to maximize the positive influence of learning motivation on student learning outcomes.

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