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# STUDY OF THE RELATIONSHIP BETWEEN LEARNING MOTIVATION AND STUDENT ACHIEVEMENT

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#### **Abstrak**

Pembelajaran merupakan kegiatan yang melibatkan guru dan siswa. Keberhasilan mengajar dan proses belajar dipengaruhi oleh motivasi belajar siswa. Keberadaan mahasiswa motivasi belajar akan memberikan semangat dan pembelajaran menjadi lebih terarah bagi siswa. Membangun motivasi intrinsik pada siswa akan lebih baik daripada motivasi ekstrinsik. Oleh motivasi intrinsik siswa untuk belajar karena ketulusan hati mereka, yang positif hasil usaha pembelajaran yang akan ditampilkan. Namun, motivasi ekstrinsik juga menentukan minat siswa dalam belajar. Ketika siswa memiliki keinginan untuk belajar tetapi ekstrinsik faktor tidak mendukung, siswa akan kehilangan semangatnya. Baik faktor intrinsik maupun ekstrinsik dapat menentukan keberhasilan siswa dalam proses pembelajaran. Motivasi adalah energi perubahan dalam diri seseorang yang ditandai dengan gairah yang efektif dan reaksi tujuan yang antisipatif. Motivasi akan mendorong, menggerakkan dan mengarahkan siswa untuk belajar. Siswa yang memiliki tinggi motivasi belajar akan melakukan kegiatan dalam memperoleh pengetahuan. Motivasi akan membangkitkan minat siswa untuk belajar.

Kata Kunci: Motivasi belajar, prestasi belajar, siswa

#### **Abstract**

Learning is an activity that involves teachers and students. Teaching behavior and learning process are influenced by students' learning motivation. The existence of student learning motivation will provide enthusiasm and learning becomes more focused for students. Building intrinsic motivation in students will be better than extrinsic motivation. By intrinsically motivating students to learn because of their sincerity, positive results of learning efforts are shown. However, extrinsic motivation also determines students' interest in learning. When students have a desire to learn but extrinsic factors are not supportive, students will lose their enthusiasm. Both intrinsic and extrinsic factors can determine student success in the learning process. Motivation is the energy of change within a person characterized by effective arousal and anticipatory goal reactions. Motivation will encourage, move and direct students to learn. Students who have high learning motivation will carry out activities in acquiring knowledge. Motivation will arouse students' interest in learning.

**Keywords:** Learning motivation, academic achievement, students

### 1. INTRODUCTION

Motivation is the drive, desire, need of a person to perform certain activities (Mappeasse, 2009; Prasetyo & Wahyuddin, 2003; Sutikno, 2007). So motivation can also be defined as a force that drives direction and action towards a goal. Individual action starts from a self-motivated drive (Krech, Crutchfield, & Ballachey, 1962). Consequently, various approaches to motivation may focus on cognitive behaviors (such as the use of monitoring and strategies), and non-cognitive aspects (such as perceptions, beliefs, and attitudes).

Learning motivation occurs because there is a student's willingness, need, desire and drive to participate, and succeed in the learning process. This is what keeps students involved in academic activities, makes them try when things get tough, and determines how much they have to learn (Bomia et al 1997). According to Feng, Fan, & Yang (2013), high learning motivation and confident learners will usually result in good learning achievement.

Learning achievement has a varied definition. According to Bossaert, Doumen, Buysedan Verschueren (2011), academic achievement is the success of students in meeting short or long term goals in education. Lassiter (1995) sees student academic achievement as strong student performance in specific academic areas. Meanwhile, Good (2009) and Chien (1987) argue that learning achievement is the acquisition of knowledge or skills developed by learning materials, usually indicated by test scores or numeric grades assigned by the teacher.

Learning is a process where there is positive interaction between teachers and students in an effort to achieve learning goals. Achieving learning objectives is one of the factors that determine the success of teaching and learning. Learning is the main activity in the whole process of education at school. The success of achieving educational goals is highly dependent on the effectiveness of the learning process. Meanwhile, learning can be interpreted as a relatively permanent change in individual behavior caused by experience and involves cognitive skills and attitudes in an effort to achieve educational goals. Learning is effective when the interaction between educators and students takes place actively and the expected goals can be achieved within a predetermined time frame.

This study aims to analyze the results of research in Indonesia on the relationship between motivation and learning achievement. The results of this study are expected to conclude the relationship of motivation in encouraging student achievement in Indonesia. As a result, it is expected that a curriculum can be developed that is in accordance with the characteristics of Indonesian students, in order to improve the quality of education in Indonesia.

The most important factor that can improve student learning outcomes is the student's own learning motivation (Pranomo, 2014). The role of motivation in learning activities serves to foster passion and enthusiasm for learning so that it can foster student interest in the lessons learned. If there is strong motivation, a person will be serious in devoting all his attention to achieving his learning goals (Wahyuni, 2010: 3). Learning goals can be supported by the existence of learning motivation in students.

This study aims to conduct a meta-analysis of research results in Indonesia on the relationship between motivation and learning achievement with bare bones meta-analysis data analysis. The results of this study are expected to conclude the relationship between motivation in encouraging student achievement in Indonesia. The impact is expected to be able to develop a curriculum that is in accordance with the characteristics of Indonesian students, in order to improve the quality of education in Indonesia.

#### 2. METHOD

Hunter and Schmidt's (2004) psychometric approach was used in this meta-analysis. This approach estimates population correlations by correcting for observed correlations from research results. For example, sampling error, measurement error or range restriction. The type of effect size used is correlation (r). If another effect size is found, it will first be transformed into an r score. In this study, the correction was carried out up to the measurement error stage. This study did not set a year limit in searching the journals, hoping that the study would be broader if it came from a wider range of years. The journals found were then selected based on the research criteria. The criteria in this study are first, the research journal must use

motivation as an independent variable and learning achievement as an independent variable. Secondly, using the equivalent words in the variables of motivation and learning achievement. Third, choosing journals that present the statistical information needed to conduct the analysis, including: number of samples, r value, or r determination. Researchers used the meta-analysis method with the Bare bones meta-analysis data analysis method. Hunter and Schmidt (2004) outlined the steps in Bare bones meta-analysis as follows: a) calculate the mean population correlation, b) calculate the variance, c) calculate the variance of sampling error, d) calculate the variance of population correlation, e) calculate the impact of sampling, and f) calculate the confidence interval.

#### 3. RESULT AND DISCUSSION

#### **Definition of Motivations**

The success of student learning can be determined by their motivation. Students who have high learning motivation tend to have high achievement as well, otherwise their learning motivation is low, their learning achievement will also be low. High and low motivation can determine the high and low effort or enthusiasm of a person for activity, and of course the high and low enthusiasm will determine the results obtained. Motivation can be interpreted as a person's strength (energy) that can cause the level of persistence and enthusiasm in carrying out an activity, both from within the individual himself (intrinsic motivation) and from outside the individual (extrinsic motivation). How strong the motivation an individual has will determine a lot about the quality of the behavior he displays, both in the context of learning, working and in other lives. The study of motivation has long had its own appeal for educators, managers, and researchers, especially in relation to the interests of efforts to achieve one's performance (achievement).

In the context of psychological studies, Abin Syamsuddin Makmun (2003) suggests that understanding individual motivation can be seen from several indicators, including: duration of activities, frequency of activities, persistence in activities, fortitude, tenacity and ability to face obstacles and difficulties, devotion and sacrifice to achieve goals. Then the level of aspiration to be achieved with the activities carried out, and the level of qualification of the achievement or product (out put) achieved from the activities carried out, as well as the direction of attitude towards the target of the activity.

## **Principles of Learning Motivation**

Motivation has a strategic role in a person's learning activities. No one learns without motivation. No motivation means no learning activities. In order for the role of motivation to be more optimal, the principles of motivation in learning are not only known, but must be explained in teaching and learning activities. There are several principles of motivation in learning as in the following description:

## Motivation as the Basic Driver that Encourages Learning Activities

Someone does learning activities because something pushes him. Motivation is the basic driving force that encourages someone to learn. Interest is a psychological tendency to like an object, not yet to carry out activities. But interest is motivation in learning. Interest is a psychological potential that can be utilized to explore motivation. If someone is motivated to learn, then he will carry out learning activities within a certain time span. Therefore,

motivation is recognized as the basic driving force that encourages a person's learning activities.

## Intrinsic Motivation Outweighs Extrinsic Motivation in Learning

Of all the teaching policies, teachers mostly decide to provide extrinsic motivation to each student. Students who are lazy to learn are very likely to be given extrinsic motivation by the teacher so that they study hard. The unintended effect of providing extrinsic motivation is the tendency of students to depend on everything outside themselves. Besides lacking self-confidence, students also have a hopeful and impressionable mentality. Therefore, intrinsic motivation is more important in learning.

## Motivation In The Form Of Praise Is Better Than Punishment

Although punishment is still applied in triggering students' enthusiasm for learning, praise is still better. Everyone likes to be appreciated and does not like to be punished in any form. Praising others means giving appreciation for other people's work achievements. This will encourage someone to further improve their work performance. But the praise that is said is not just said, it must be in place.

## Motivation Is Closely Related To Learning Needs

In the lives of students, needing appreciation, attention, fame, status, dignity, and so on are natural needs for students. All of them can provide motivation for students in learning. Experienced teachers must be able to take advantage of students' needs, so that they can provoke students' enthusiasm for learning so that they become children who like to learn. Students are eager to learn to fulfill their needs to satisfy their curiosity about something.

## Motivation can Foster Optimism in Learning

Students who have motivation in learning are always confident that they can complete every job. He believes that learning is not a futile activity. The results will be useful not only now, but also in the future (Rahmah, 2002: 239).

#### **Forms of Learning Motivation**

In teaching and learning activities, the role of motivation, both intrinsic and extrinsic, is very necessary. With motivation, students can develop activity and initiative, can direct and maintain perseverance in carrying out learning activities. There are several forms and ways to foster motivation in learning activities at school. First, giving numbers. Numbers in this case are a symbol of the value of learning activities. Many students learn, the main thing is precisely to achieve good numbers / grades. So that students are usually pursued is the test scores or the values on the report card are good numbers. Secondly, rewards can also be said to be motivation, but this is not always the case. Because a reward for a job, may not be interesting for someone who is not happy and not talented for something that job. Three, rivalry/competition. Rivalry or competition can be used as a motivational tool to encourage student learning. Competition, both individual competition and group competition can improve student achievement.

Four, ego-involvement. Raising awareness to students so that they feel the importance of the task and accept it as a challenge so that they work hard with pride, is one form of motivation that is quite important. Five, giving repetitions. Students will become active in learning if they know there will be a test. Therefore, giving tests is also a means of motivation. Five, Knowing Results. Knowing the results of the work, especially if there is progress, will

encourage students to study harder. Six, Praise. If there are successful students who have successfully completed the task well, praise needs to be given. This praise is a form of positive reinforcement and at the same time a good motivation.

Seven, motivation in the form of punishment. Punishment as a negative reinforcement but if given regularly and wisely can be a motivational tool. Therefore, teachers must understand the principles of giving punishment. Eight, desire to learn. The desire to learn, means there is an element of intentionality, there is an element of interest. Motivation arises because there is a need, so is interest so it is appropriate that interest is a means of intent to learn. This will be better, when compared to all activities without intention. The eighth, or last is Interest. It has been explained earlier that the question of motivation is closely related to the main motivation.

## **Efforts to Increase Learning Motivation**

According to De Decce and Grawford quoted by Syaiful Djamarah, there are four efforts of the teacher as a teacher related to how to increase learning motivation, namely as follows: Excite students. In routine daily class activities, the teacher must try to avoid menoton and boring things. Provide realistic expectations. Teachers must maintain realistic students and modify expectations that are less realistic or unrealistic. For this, teachers need to have sufficient knowledge of students' past successes or failures. Provide incentives. When students experience success, teachers are expected to reward students (in the form of good numbers, etc.) for their success so that students are encouraged to make further efforts. Directing students' behavior. Teachers are required to respond to students who are not directly involved in learning activities in the classroom. How to direct the behavior of students is by giving assignments, moving closer, giving educational punishments, reprimanding with a gentle attitude (Wahab, 2008).

According to Elliot (1996), the time when a teacher can generate learning motivation in students: At the beginning of learning, during learning, and at the end of learning (Wahab, 2008). As cited by Gage and Beerliner, French and Raven suggest several ways to increase students' motivation without having to do a large-scale reorganization of the class, namely: Use verbal praise, use tests and grades wisely, arouse curiosity and desire for exploration, stimulate students' desires, utilize students' apperception, use simulations and games, Minimize unpleasant consequences to students from their involvement in learning.

## The Role of Motivation in the Learning Process

The learning process is an activity that involves an individual (physically and mentally), learning activities are never carried out without a strong drive or motivation from within the individual or from outside the individual who participates in learning activities. The role of motivation in learning is as follows (Wasty, 2006: 12-15). The role of motivation as a motor or driver of learning activities. Motivation in this case acts as a driving force, especially as a student to learn, both from within himself (internal) and from outside himself (external) to carry out the learning process. The role of motivation clarifies learning objectives. Motivation is related to a goal, without a goal, there will be no one's motivation. Therefore, motivation plays a very important role in achieving optimal student learning outcomes. Thus, motivation can provide direction and activities for students (learners) that must be done in accordance with

these goals. The role of motivation selects the direction of making. Here motivation can play a role in selecting the direction of making for students what to do to achieve goals. The role of internal and external motivation in learning. In learning activities, internal motivation usually arises from within students, while students' external motivation in general learning is obtained from teachers (educators). The role of motivation in producing achievement. Motivation plays a very important role in student learning in achieving learning achievements. The high and low achievement of a student (learner) is always related to the high and low learning motivation of that student.

## **Learning Achievement**

Learning achievement is the result of measuring students which includes cognitive, affective, and psychomotor factors after following the learning process as measured using test instruments or relevant instruments (Rosyid, 2019: 8). Learning achievement is shown from an interaction of learning actions and is usually shown by the test scores given by the teacher. Learning achievement is said to be perfect if it fulfills three aspects, namely cognitive, affective, and psychomotor, otherwise it is said to be an unsatisfactory achievement if someone has not met the target in these criteria. Whether or not someone succeeds in learning is due to several factors that influence the achievement of learning outcomes, namely factors that come from within the person who learns and some from outside him. Factors that come from within (internal) include health, intelligence and talent, motivation, interest and learning methods, and there are also from outside themselves (external) including the family environment, school, community, and the surrounding environment.

The achievements achieved by students vary. There are students who have high, medium, and low achievements. This is of course influenced by various factors. These factors can come from within the student himself (internal factors) and some come from outside the student (external factors). One of the factors that comes from outside the student (external factors) that affects student learning achievement is the utilization of school learning facilities, with the proper utilization of learning facilities that can provide optimal results for students in absorbing the material presented and will affect student learning achievement. Learning facilities at school as a support for the learning process consist of learning spaces that support learning activities. The learning achievement achieved by students in the learning process will be seen in the form of grades obtained through tests (tests) related to the subject matter they have obtained or learned.

## **Learning Achievement Indicators**

Learning achievement indicators are divided into three things, namely academic grades, skill achievement, projects and presentations, and active participation. Academic Grades: The results of exams, tests, and other assessments are common indicators of learning achievement. Skill Achievement: Proficiency in practical skills, such as speaking a foreign language, drawing, or playing a musical instrument. Projects and Presentations: Achievements in group projects, individual assignments, and presentations also reflect learning achievement. Active Participation: Active involvement in class discussions, extracurricular activities, and other class projects can also be considered achievements.

## **Learning Outcomes**

Learning outcomes consist of two words, namely results and learning, the two words have different meanings, so to understand the meaning of learning outcomes, the author will describe the meaning of the two words. Learning is the most basic activity in the entire educational process at school. The success or failure of achieving educational goals depends on how learning activities are experienced by students as learners. Learning is "a change that occurs in a person after doing certain activities", (Pupuh Fathurrohman and M. Sobry Sutikno, 2010). According to another opinion, learning is "a process of changing individual behavior through interaction with the environment". (Oemar Hamalik, 2013). Another opinion states that, learning is "a process or interaction carried out by a person in obtaining something new in the form of changes in behavior as a result of the experiences themselves" (Hamzah B. Uno, 2011).

Based on the above understanding of learning, learning is the acquisition of new experiences by a person in the form of behavioral changes because of a process in the form of learning interactions with an object in the learning environment. Learning as a process activity is a very fundamental element in organizing every type and level of education. This means that the success or failure of achieving educational goals is highly dependent on the learning process experienced by students, both when they are at school and at home. Therefore, learning is very important, because only through learning can knowledge be achieved. Based on the above opinions, what is meant by learning outcomes is the results that have been achieved by students after they have participated in learning activities. The results achieved by these students can be in the form of abilities, both about aspects of knowledge, attitudes, and skills possessed by students after they receive learning experiences.

## **Purpose of Assessment of Learning Outcomes**

Assessment is making a decision about something with a qualitative measure of good and bad." Assessment of learning outcomes is a control tool for the implementation of education or is a tool that provides or provides information for efforts and achievement of the desired educational goals. The objectives of assessing student learning outcomes include the following, (Muhibbinsyah, 2010):

- a. Knowing the level of progress that has been achieved by students within a certain period of the learning process.
- b. Knowing the position or position of a student in his class group.
- c. Knowing the level of effort made by students in learning.
- d. Knowing all student efforts in utilizing their cognitive capacity for learning purposes.
- e. Knowing the level of usability and the results of the teaching methods that the teacher has used in the teaching-learning process.

#### **Analysis Meta**

The analyzed research sample has the characteristics as listed in the following table:

**Table 1. Characteristics of the Research Sample** 

No.	Year	Researcher	Characteristics	N	r2	r
1.	2006	Ketut Sudarma, Fitria Nugrahen	SMA	38		0,112
1.	2000	Ketut Sudarma, Piura Nugranen	SMA	36		0,112
2.	2007	Baso Intang Sappaile	SMA	164		0,60
3.	2008	I Wayan Dwija	SMA	173		0,415
4.	2008 Ni Kadek Sukiati Arini, M. Fakhrurrozi		SMA	180		0,256
5.	2009	Muh. Yusuf Mappeasse	SMK	44		0,440
6.	2009	Helmy Firmansyah	SD	120		0,280
7	2009	Alimuddin S Miru	SMK	32		0,353
7. 8.	2009	Ghullam Hamdu, Lisa Agustina	SD	26		0,693
9.	2011	Nur Fadlilah	SMK	74	0,607	
10.	2012	Firdaus Daud	SMA	72		0,584
11.	2012	Nina Isnawati, Dhyah Setyorini	SMK	61		0,604
12.	2012	Astuti, Wiwin Wiji, FX. Sukardi, Partono	SMP	116		0,695
13.	3. 2013 Elis Aminah, Soetarno J & Samsi H		SMP	60		0,274
14.	2013	Siska E.M., Susilaningsih, Nurhasan H	SMA	139	0,271	
15.	2013	Ridaul Inayah	SMA	96	0,393	
16.	2013	Joenita Darmawati	SMA	195	0,160	
17.	2014 Didik Kurniawan, Dhoriva Urwatul W		SMP	364	0,298	
18.	2015	Avif Roy Rahman	SMK	34		0,797
19.	2016	Oktavianti	SMK	334	0,029	0,777
20.	2017	Tri Ervina Kristi Wiyani	SMA	269	0,332	

The next step was to correct for sampling error. The researcher estimated the weighted mean for each correlation, then divided by the number of samples in the study in order to produce the best correlation estimate that represents the correlation of several studies collected. The following results of the calculation of the average correlation can be seen in table 1.

**Table 2. Average Population Correlation** 

No.	Year Researcher		N	rX1Y1	(NrX1Y1)	
1.	2006	Ketut Sudarma, Fitria Nugraheni	Fitria Nugraheni 38 0,		4.256	
2.	2007	Baso Intang Sappaile 164 0,6		0,60	98.4	
3.	2008	I Wayan Dwija	173	0,415	71.795	
4.	2008	N.K Sukiati Arini, M.	180	0,256	46.08	
		Fakhrurrozi,				
5.	2009	Muh. Yusuf Mappeasse	Muh. Yusuf Mappeasse 44 0,440		19.36	
6.	2009	Helmy Firmansyah	Helmy Firmansyah 120 0,2		33.6	
7.	2009	Alimuddin S Miru	32	0,353	11.018	
8.	2011	Ghullam Hamdu, Lisa Agustina	26	0,693	18.018	
9.	2011	Nur Fadlilah	74	0,779	57.646	
10.	2012	Firdaus Daud	72	0,584	42.048	
11.	2012	Nina Isnawati, Dhyah Setyorini	61	0,604	36.844	
12.	2012	Astuti W.W., FX.Sukardi,	116	0,695	80.62	
		Partono				
13.	2013	Elis A., Soetarno J., & Samsi H.	60	0,274	16.44	
14.	2013	Siska E.M., Susilaningsih,	139	0,521	72.419	
		Nurhasan				
15.	2013	Ridaul Inayah	96	0,626	60.096	
16.	2013	Joenita Darmawat	195	0,400	78	
17.	2014	Didik Kurniawan, Dhoriva U.W.	364	0,545	198.38	
18.	2015	Avif Roy Rahman	34	0,797	27.098	
19.	2016	Oktavianti	334	0,170	56.78	
20.	201	Tri Ervina Kristi Wiyani	269	0,576	154.944	
Total		•	2591	9.72	1184.12	
(Mean)			129.5	0.486	0.457	

The mean population correlation corrected by the sample size was found to be 0.457. The average population correlation value explains the status of the relationship between the two variables correlated in each research sample, taking into account the number of samples used by each study. The average population correlation value is 0.457, proving that there is a correlation between motivation and learning achievement.

The next stage, the researcher calculates the variance, calculates the variance, sampling error, calculates the population correlation variance, calculates the confidence interval, analyzes the impact of sampling error and analyzes the population correlation. The results of the variance calculation can be seen in table 2.

**Tabel 3. Variance** 

Year	Researchers	N	rX1Y1	(r-rX1Y1)	(r-rX1Y1) <sup>2</sup>	N(r-rX1Y1) <sup>2</sup>
2006	Ketut Sudarma,	38	0,112	0.374	0.139	5.315
	Fitria					
2007	Baso Intang Sappaile	164	0,600	0.600	0.360	59.040
2008	I Wayan Dwija	173	0,415	0.415	0.172	29.794
2008	Arini, Fakhrurrozi,	180	0,256	0.256	0.065	11.796
2009	M. Yusuf Mappeasse	44	0,440	0.440	0.193	8.518
2009	Helmy Firmansyah	120	0,280	0.280	0.078	9.408
2009	Alimuddin S Miru	32	0,353	0.353	0.124	3.987
2011	Ghullam Hamdu,	26	0,693	0.693	0.480	12.486
	Lisa					
2011	Nur Fadlilah	74	0,779	0.779	0.606	44.906
2012	Firdaus Daud	72	0,584	0.584	0.341	24.556
2012	Nina Isnawati,	61	0,604	0.604	0.364	22.253
	Dhyah					
2012	Astuti, Partono	116	0,695	0.695	0.483	56.030
2013	Elis A., Soetarno.	60	0,274	0.274	0.075	4.504
2013	Siska, Susilaningsih	139	0,521	0.521	0.271	37.730
2013	Ridaul Inayah	96	0,626	0.626	0.391	37.620
2013	Joenita Darmawati	195	0,400	0.400	0.160	31.200
2014	Didik, Dhoriva	364	0,545	0.545	0.297	108.117
2015	Avif Roy Rahman	34	0,797	0.797	0.635	21.597
2016	Oktavianti	334	0,170	0.170	0.028	9.652
2017	Tri Ervina Kristi	269	0,576	0.576	0.331	89.247
Total		2591	9.720			627.763
(Mean)			0.486			0.242

From the results of the equation analysis, the variance of the correlation between motivation and learning achievement is 0.0242. Furthermore, researchers calculate the variance of sampling error ( $\sigma^2 e$ ):  $\sigma^2 e = (1 - r2)2$  N -  $1 = (1-0.457^2)^2 / (129.5-1) = (1-0.208)2 / 128.5 = 0.627 / 128.5 = 0.00488$ 

The variance in a meta-analysis study represents the bias or error of the correlation results in each research sample, taking into account the number of research subjects used in each study). The calculated variance value of 0.00488 indicates that the error is not large. Then calculate the variance of the population correlation. The corrected variance was calculated using the equation  $\sigma^2 \rho = \sigma^2 r - \sigma^2 e$ . The corrected variance for the correlation study of motivation to learning achievement is 0.242 - 0.00488 = 0.23712. Then calculate the impact of sampling error. To calculate the impact of sampling error, this equation can be used: %  $\sigma^2 e = \sigma^2 e / \sigma^2 \rho \times 100\%$ . The impact of sampling error on the correlation of motivation and learning achievement is 0.00488 / 0.23712 x 100% = 0.0205 x 100% = 2.05%.

The researcher calculates the sampling error variance after finding the variance value. The sampling error variance of 2.05% indicates a small bias. The variance of sampling error is one of the biases in each study that will be considered to make a decision on the correlation between the two variables under study. In the next stage, researchers calculated the population correlation variance. The population correlation variance indicates the deviation of the correlation results of each study from the average correlation of the entire study. A large variance score indicates the more varied correlation values of each research sample studied. Variance score The correlation variance score of 0.00488 indicates that the correlation score of each study in the sample studied is not too diverse.

Confidence intervals are calculated with a degree of acceptance of 95% in the equation:

```
\begin{split} M\rho &= \rho \pm 1.96 \text{ (SD)} \\ &= 0.457 \pm 1.96 \text{ ($\sqrt{2}$.42)} \\ &= 0.457 \pm 1.96 (1.55) \\ &= 0.457 \pm 3.038 \\ &- 2.581 < \rho < 3.495 \end{split}
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The population correlation after correcting for sampling error is estimated to be 0.457, the population variance is 2.42 with a standard deviation of 1.55. By referring to the 95% confidence interval with acceptance limits between 2.581  $< \rho < 3.495$  and a value of  $\rho$ 0.457, this value shows that it is included in the interval limit area to be accepted. Based on this, it can be concluded that there is an influence between motivation on student learning achievement. The results of the study have in common with several studies that show a relatively consistent relationship between motivation and learning achievement in reading and mathematics (Broussard & Garrison, 2004; Gottfried, 1990; Lange & Adler, 1997). In addition, research results from Fan and Feng (2012) show that learning experience will affect learning motivation.

Motivation encourages students to be able to perform a behavior, including in learning. Students move to get good learning results if they have a strong motive, so motivation has an important role in making students get good learning results. Maslow (1976) explains that wants and needs are the basic concepts of motivation. Individual needs

give birth to motives, individual needs consist of several levels. Basic needs are physiological needs such as hunger, thirst, sex and so on, while the highest needs are self-actualization.

## **Factors Affecting Learning Achievement**

The success or failure of a person's learning process is influenced by many factors, both factors that come from within (internal factors) individuals, as well as factors that come from outside themselves (external factors) individuals. Recognition of the factors that influence learning success is very important in order to help students achieve the best possible learning outcomes. To achieve student learning achievement as expected, it is necessary to pay attention to several factors that affect learning achievement, among others:

- 1. Internal factors, namely factors that arise from within the student himself, are:
  - a. Psychology, such as: intelligence, willpower, talent, interest, attitude and attention.
  - b. External factors, such as: tiredness, disability, lack of hearing, impaired vision, and others.
- 2. External factors, namely factors that arise from outside the student, including:
  - a. The school environment, which includes: teacher and student interactions, the way the subject matter is presented, the curriculum, the state of the building, school time, the implementation of discipline teaching methods and main tasks.
  - b. Family environment, which includes: how to educate children, family atmosphere, understanding of family, socio-economic conditions, cultural background and others.
  - c. Community environment, which includes: mass media, friends hanging out, other activities, way of life in the environment and others.

Apart from motivation, there are many factors that influence student learning achievement, including environmental factors which include educational funding (Kpolovie and Ololube, 2013), students, home and school situations (Ololube and Kpolovie, 2012), teachers, culture and educational policies (Kpolovie, 2012) and nutrition factors and academic administration also determine the results of learning achievement (Kpolovie, Joe, & Okoto, 2014). The financial aspect also determines because it involves infrastructure facilities and basic facilities in the school environment. In addition, the intellectual ability factor also determines the success of obtaining achievement (Adiputra: 2015).

Based on some of the above opinions, it can be seen that the factors that influence student learning outcomes are generally influenced by two factors, namely factors that come from within (internal) students and factors that come from outside (external) students. One of the factors that come from within students (internal) that influence learning outcomes is learning motivation. This shows that learning motivation plays an important role in student learning actions.

## Relationship between Learning Motivation and Learning Outcomes

With motivation, students will be encouraged to learn to achieve goals and objectives because they are sure and aware of the goodness of the importance and benefits of learning. For students, motivation is very important because it can move student behavior towards a positive direction so that they are able to face all demands, difficulties and are able to bear the risks in their studies. According to M.Dalyono (1997: 235) motivation can determine whether or not it is good in achieving goals so that the greater the motivation, the greater the learning success.

Learning motivation is everything that is intended to encourage or encourage students who carry out learning activities. Meanwhile, learning outcomes are the results that have been achieved by students after they have participated in learning activities. Talking about the relationship between learning motivation and learning outcomes, basically "motivation functions as a driver of effort and achievement. The existence of good motivation in learning, will show good results ", (Kompri, 2016). Thus, if students have good motivation in learning, the learning outcomes will also be good.

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Motivation as the main factor in learning, which functions to cause, underlie, and drive learning actions. According to the results of research through direct observation, that most students who are highly motivated will try hard, look brave, do not want to give up, and read hard to improve learning outcomes and solve the problems they face. Conversely, those who have low motivation, appear indifferent, easily discouraged, their attention is not focused on learning, which as a result students will experience learning difficulties. Motivation moves individuals, directs actions and chooses learning goals that are considered the most useful for individual life. Studying motivation will be found why individuals do something because individual motivation cannot be observed directly, while what can be observed is the manifestation of that motivation in the form of behavior that appears to the individual will at least approach the truth of what motivates the individual concerned.

The school also provides adequate facilities, for example, computer facilities, learning media, laboratory equipment and also adequate library facilities. From these facilities, students are motivated to study harder to always improve their learning outcomes. However, these facilities are limited in number. It is the improvement of learning outcomes from students that is the main goal of the learning process, because the success of learning objectives is the goal of education. Syahril Yusuf (2019) which determines the relationship between motivation and learning outcomes. There are two types of motivation used in this study, namely intrinsic motivation (health factors, psychological factors, interests, talents, intelligence, and readiness) and extrinsic motivation (family factors, school factors, and also community factors). The results showed that these two motivations have a relationship with student learning outcomes. The relationship between intrinsic motivation is in the moderate category, while the relationship between extrinsic motivation is in the strong category.

#### 4. CONCLUSION

Someone does something because of motivation. Better motivation in learning will show good results, in other words, that with diligent efforts based on motivation, it will be able to produce good achievements. Motivation gives strength to individuals to start activities. The emergence of motivation is preceded by needs and encouragement that make a person able to carry out an activity based on motives. In this study, the authors examined motivation and learning achievement in a meta-analysis approach-based study, concluding that there is a relationship between student motivation and student achievement. However, the results of this study still have limitations regarding the samples taken have not been able to represent the entire student population in Indonesia, and the motivation and learning achievement variables used do not have the same variable indicators. So it is necessary to conduct a more in-depth study related to the indicators in the research.

Learning motivation has a strong influence on student achievement. There is a close relationship between the level of motivation of students and the academic achievement they achieve. Students who have intrinsic motivation, which is motivation that comes from within themselves and is driven by interest and desire to learn, tend to achieve better. This motivation encourages them to learn more diligently, creatively and deeply, so that their learning outcomes are more satisfying. When students have clear and relevant learning goals, such as achievement goals or mastery goals, their learning motivation is enhanced. Achievement goals encourage students to achieve measurable end results, while mastery goals encourage them to understand the material in depth. Both can lead to improved learning achievement.

Other factors, such as self-efficacy, teacher support, a positive learning environment,

and attitudes and perceptions towards the subject, also contribute to how learning motivation affects student achievement. A supportive environment, feelings of competence and a strong interest in learning all play an important role in forming a positive relationship between motivation and learning achievement.

So students' learning motivation has a significant impact on their learning achievement. Intrinsically motivated students tend to achieve better, while extrinsic motivation and environmental factors also play an important role. Therefore, supporting positive learning motivation and creating a stimulating learning environment can help improve students' learning achievement.

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