The Relationship of Students Learning Motivation with Biology Learning Outcomes for Class XI

Wini Mulya Apridani[1*], Siska Nerita[1], Liza Yulia Sari[1]
[1*]Program Studi Pendidikan Biologi STKIP PGRI Sumatra Barat
Padang, Gunung Pangilun 25137. Indonesia

Email: winimulya64@gmail.com

Abstract

Learning motivation is a condition that exists in a person where there is an urge to do something so as to achieve the desired goal. The purpose of study is to determine the relationship between learning motivation and learning outcomes of class XI biology at SMAN 2 Solok Selatan. This research is a correlation study with the student population of class XI SMAN 2 Solok Selatan. The instrument used in this research is a questionnaire with a Likert scale. The research data were analyzed using Pearson's Product Moment and then a t-test was perfomed to determine the correlation. The results showed that there was a significant relationship between learning motivation and the learning outcomes of class XI students during learning at SMAN 2 Solok Selatan. The conclusion of this study is that learning motivation affects learning outcomes.

Keywords: Correlation; learning outcomes; motivation

INTRODUCTION

Learning is a core activity in the educational process that is carried out consciously to achieve learning objectives (Emda, 2017). The success of students in achieving learning objectives involves several factors, one of which is learning motivation (Budiariawan, 2019). Learning motivation is a condition that exists in a person where there is an urge to do something so as to achieve the desired goal (Damapoli, 2017). Learning motivation has an important role in providing stimulation, enthusiasm, and curiosity in learning (Iskandar, 2012). Student motivation can be divided into internal motivation (intrinsic) and external motivation (extrinsic). Intrinsic motivation is motivation that is generated within the individual, for example, students learn because they are driven by their own desires. Extrinsic motivation is motivation from outside oneself. Both intrinsic and extrinsic motivation are very influential on the way, style and learning outcomes.

The motivation of students in learning will affect the learning outcomes, students who have high motivation will have high learning energy so that they get high learning outcomes, and vice versa (Palittin 2019). Learning outcomes are something that a person achieves during the learning process, both in terms of knowledge and skills (Ulfah, 2016). Students who get good learning outcomes will feel proud and will maintain and improve the learning outcomes that have been obtained (Awe, 2017). However, maintaining good learning outcomes is not easy, it takes several supporting factors, one of which is the teacher (Sari, 2014).

The learning process involves an interrelated relationship between teachers and students to provide stimulation and increase understanding in the learning process. In the teaching and learning process, the teacher must be able to encourage, guide, and provide direction to students in the learning process so that they can arouse students' motivation in learning. Therefore, it is very important for teachers to know the learning motivation of students (Awe, 2017). According to Sardiman (2016), there are some ways to increase motivation to learn at school, such as awarding points, rewards, competition/competition, self-participation, testing, understanding results, praise, punishment, desire to learn, recognized interests and goals.

Based on the results of distributing questionnaires and interviews, there was still a lack of motivation of students in the learning process, it could be seen from the number of students who did not do the assignments given by the teacher, and there were still students who did not collect assignments on time, many students still did not read or repeating the subject matter because when the teacher asked many students who could not answer, there were still students who came not on time, there were still students who did not pay attention when the teacher explained in front of the class and if there were important points explained by the teacher not all students who wrote it.

Based on the description above, this article aims to determine the relationship between learning motivation and learning outcomes in high school biology class XI.

METHOD

This research was conducted in March – September of the 2021/2022 academic year at SMAN 2 Solok Selatan. This research is a correlation study with the research population, namely all students of class XI SMAN 2 Solok Selatan, amounting to 56 people who are distributed into 2 classes. The sampling technique in this study used a *total sampling technique.*

This research has several stages including: (1) Determining the population and research sample, (2) Establishing research variables that are used as the basis for preparing research instruments, (3) Developing research instruments. The instrument used by the researcher is a questionnaire about learning motivation using a Likert scale instrument in the form of positive questions. In the question of intrinsic motivation there are 4 indicators, namely, self-desire, satisfaction, good habits and awareness and on the question of extrinsic motivation there are 6 indicators, namely praise, advice, enthusiasm, reward, punishment and imitating something. To find out the percentage of each indicator, a calculation is carried out using the *Product Moment Pearson* According to Arikunto (2013),

$$r_{xy=x=} \frac{N(\sum XY)-(\sum X)(\sum Y)}{\sqrt{[N\sum X^2-(\sum X)^2][N\sum Y^2-(\sum Y)^2]}}$$

Description :
$R\ xy$ = correlation coefficient sought
X = variable value X
Y = variable value Y
N = many subjects possessing value

According to Sudjana (2011) to see the percentage of the influence of independent variables on the dependent variable, the determinant coefficient (KP) can be expressed by the following formula:

$$KP = r^2 x 100\%$$

Then a significant test is carried out which applies if the researcher wants to know the relationship between the variables (X) and (Y), then the correlation results are tested through the Significant Test using the formula:

$$T_{count} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

$$T_{count} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

Description:
t = value count
r = correlation coefficient value
n = number of samples

RESULTS AND DISCUSSION

Based on the results of the research that has been done, the results of the learning motivation of class XI students are obtained. The data can be seen in Table 1.

Table 1. Learning Outcomes

No	Variables	Indicator	Percentage(%)	Criteria
1.	Intrinsic Learning Motivation Self	Desire	67%	Enough
		Satisfaction	79%	Good
		Habit	78%	Good
		Awareness	78%	Good
	Average		75	Enough
2.	Extrinsic Learning Motivation	Praise	78%	Good
		Advice	80%	Good
		Enthusiasm	82%	Good
		Reward	79%	Good
		Punishment	79%	Good
		Imitation	84%	Good
	Average		80%	Good

Based on Table 1, it was found that the average percentage of intrinsic motivation for students was 75% with sufficient criteria, while extrinsic motivation obtained an average percentage of 80% with good criteria.

Results of the Correlation Analysis of learning motivation with learning outcomes during learning obtained an r value of 0.24 which means that there is a relationship between learning motivation and learning outcomes of biology class XI students during learning at SMAN 2 Solok Selatan. The following is to find out whether the relationship is meaningful or not, it is followed by a t-test, the results of the t-$_{count}$ are 1.81, which is greater than the t$_{table}$, which is 1.67356, meaning that there is a significant relationship between learning motivation and learning outcomes for class XI students during learning at SMAN 2 Solok Selatan. The results of the correlation analysis and t test can be seen in Figure 1.
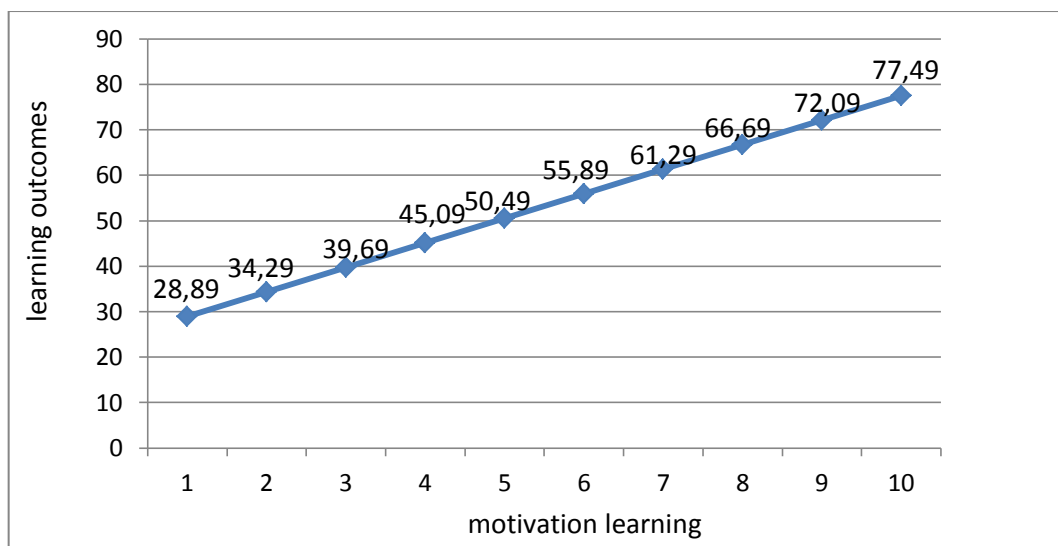
Figure 1. Relationship between extrinsic and intrinsic learning motivation.

From Figure 1 above, there is a positive relationship between learning motivation and the biology learning outcomes of class XI students during learning at SMAN 2 Solok Selatan.

Based on the interpretation criteria, the percentage of intrinsic motivation has four indicators. The first indicator is self-desire of 67% with sufficient criteria. Self desire in learning is needed, students who study hard in doing the tasks given by the teacher, always try to read / understand the subject matter and try to get learning achievement. this is supported by Nurmala, (2014) in learning activities students are required to be active in following the learning process, it can be seen from the desire to pay attention to the teacher and do the tasks given by the teacher and According to Sardiman (2016) states "a person will succeed in learning, if there is desire to learn".

The second indicator is satisfaction in learning with a percentage of 79% with good criteria. Satisfaction in learning can be seen from students who feel satisfied if the grades of their assignments are good, feel satisfied that the final grades are good and feel satisfied doing the assignments as much as possible so that students learn to seriously do the tasks given by the teacher, this is in line with Awe's opinion (2017).) that satisfaction is a positive attitude of students towards the teaching and learning process.

The third indicator is good habits in learning with a percentage of 78% with good criteria. This can be seen from students who always do the assignments given by the teacher, always pay attention and take notes on important things when the teacher delivers the material. This is in line with the opinion of Sudjana (2011), which states that during the learning process there are 5 factors that need to be considered, namely how to follow lessons well, how to study in groups well, study textbooks, and how to deal with exams. Study habits are one of the factors that influence learning outcomes, besides that there is learning motivation which is also a factor that affects learning outcomes.

The fourth indicator is the awareness of students in learning with a percentage of 78% with good criteria. The awareness of students can be seen from students who do assignments, note important things while lessons are in progress and without being asked by their parents to always do assignments at home. According to Sardiman (2016) in raising awareness for students to feel the importance of the task and accept it as a challenge so that working hard by risking self-esteem is one form of motivation that is quite important.

Based on Extrinsic Motivation there are six indicators. The first indicator is praise for students with a percentage of 78% with good criteria. This can be seen from the teacher praising students if their assignment scores are good and not skipping class during class hours and parents who always give praise to students if they study hard and get good achievements.

The second indicator is advice for students with a percentage of 80% with good criteria. This can be seen from friends, teachers and parents who always advise students to be active and diligent in learning. This is in line with the opinion of Prayitno (2011), that advice is a guide that contains the most interesting and good students from speakers who can be used as reference material.

The third indicator is the enthusiasm of students with a percentage of 82% with good criteria. this can be seen from friends, teachers and parents of students who always encourage students to be active and diligent in learning and not easily give up in studying. This is in line with the opinion of Afifudin (2008), that the spirit of learning is a driving force in students that creates enthusiasm or excitement in learning.

The fourth indicator is prizes with a percentage of 79% with good criteria. This can be seen from students who are active and enthusiastic in learning to get additional points so that they excel and get student scholarships. This is in line with the opinion of Sardiman (2016), that giving something to others as an award or memento. This simple gift giving needs to be encouraged because it is relatively cheap and is considered effective enough to motivate students in learning competencies.

The fifth indicator is punishment with a percentage of 79% with good criteria. This can be seen from the teacher who always gives punishment to students who do not do assignments, come late to school, skip class during class hours and students who fight in class during class hours. This is in line with Sardiman's (2016) opinion that punishment is a motivational tool when an educational approach is taken, not out of revenge. The educational approach is meant here as a punishment that educates and aims to improve the attitudes and actions of students who are considered wrong.

The sixth indicator is imitating something with a percentage of 84% with good criteria. This can be seen from the students who appear eager to learn and get good grades when they see the theme is engrossed in learning and get good grades. This is in line with the opinion of Albert Bandura (2018) that imitating something is learning something by imitating the behavior of others.

Overall, based on the data analysis that has been carried out by the researchers, the results show that the learning motivation of class XI students during learning at SMAN 2 Solok Selatan in Biology is included in the good category. this is evidenced by the average score of the student learning motivation questionnaire is 78%.

Student learning outcomes are taken from the value of the Middle Semester Examination (UTS) for class XI students for the 2021/2022 academic year. The students' learning outcomes showed the highest score of 100 and the lowest score of 20. According to the average cognitive value of learning Biology, 66.78% was in the sufficient category, due to the lack of self-will and student motivation in learning. According to Purwanto (2011) learning outcomes "level of mastery achieved by students in following the teaching and learning process in accordance with the educational goals set. the results show that there is a significant relationship between the two variables.result of the t_{count} is 1.81, which is greater than the t_{table} , which is 1.67356, meaning that there is a significant relationship between learning motivation and the learning outcomes of class XI students during learning at SMAN 2 Solok Selatan. This is in line with Sari's research (2013) in his research "States that learning motivation has a significant relationship between learning motivation and learning outcomes".

CONCLUSION

Based on the results of the research that has been done, it can be concluded that there is a significant relationship between extrinsic and intrinsic motivation and the learning outcomes of students' biology in class XI at SMAN 2 Solok Selatan.

REFERENCES

Arikunto. (2013). *Manajemen Pendidikan.* Jakarta: Rhineka Cipta.

Afifuddin. (2008). *Perbedaan Pengaruh Penggunaan Model Pembelajaran Kooperatif Tipe Jigsaw dan Group Investigation terhadap Prestasi Belajar Biologi ditinjau dari Motivasi Berprestasi Peserta didik* (Tesis). Surakarta: Universitas Sebelas Maret..

Awe, Ermelinda Yosefa dan Kristina Benge. (2017). Hubungan Antara Minta dan Motivasi Belajar dengan Hasil Belajar IPA pada Siswa SD. *Journal of Education Technology*. 1(4). 231-238.

Budiariawan, I Putu. (2019). Hubungan Motivasi Belajar dengan Hasil Belajar pada Mata Pelajaran Kimia. *Jurnal Pendidikan Kimia Indonesia*. 3(2). 103-111.

Damopolii, Insar, Paskalna Th. Lefaan, & Melda Manga. (2017). Hubungan Motivasi Belajar dengan Hasil Belajar Biologi Siswa Di SMP 21 Rendani Manokwari. Seminar Nasional dan Kongres Himpunan Pendidik dan Peneliti Biologi Indonesia. Mataram, Indonesia : Universitas Papuam Mankwari.

Emda, Amna. (2017). Kedudukan Motivasi Belajar Siswa dalam Pembelajaran. *Lantanida Journal*. 5(2). 93-196.

Fitriyani, Y., Fauzi, I., & Sari, M. Z. (2014). Motivasi Belajar Mahapeserta didik Pada Pembelajaran Daring Selama Pandemik Covid-19. *Jurnal Kependidikan*, 7(1), 121–132.

Iskandar. (2012). *Psikologi Pendidikan Sebuah Orientasi Baru*. Jakarta : Referensi.

Purwanto. (2007). *Psikologi Pendidikan* Jakarta : Remaja Rosdakarya.

Nurmala. (2014). *Pengaruh Motivasi Belajar dan Aktivitas Belajar terhadap Hasil Belajar Akutansi*. Singraja. Akutansi Jurusan Ekonomi: Universitas Pendidikan Ganasha.

Palittin, Ivylentine Datu, Wihelmus Wolo, & Ratna Purwanty. (2019). Hubungan Motivasi Belajar dengan Hasil Belajar Siswa. *Magistra : Jurnal Keguruan dan Ilmu Pendidikan*. 6(2). 101-109.

Sardiman. (2016). *Interaksi dan Motivasi Belajar Mengajar*. Jakarta: Raja Grafindo Persada.

Sari, Rachmawati Indah Permata. (2014). Hubungan Motivasi Belajar dengan Hasil Belajar Siswa Pada Mata Pelajaran IPS Kelas IV di SDN 11 Petang Jakarta Timur. *PEDAGOGIK*. 2(1).

Sari, W.(2013). Hubungan Motivasi Belajar Dengan Hasil belajar Pkn Pada Peserta didik Kelas VII SMP Negeri 1 Kranggan Tsmanggung. *Jurnal Pendidikan dan Pengajaran*. 15 (2), 85-101.

Sudjana. (2011). *Media Pengajaran*. Bandung: Sinar Baru Algesindo.

Ulfah, Khalida Rozana, Anang Santoso, & Sugeng Utaya (2016). Hubungan Motivasi dengan Hasil Belajar IPS. *Jurnal Pendidikan*. 1 (8). 1607-1611.