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The Influence of Learning Motivation and Student Perceptions of Teacher Teaching Methods on Biology Learning Outcomes Students on Class X Special Sports (KKO) SMA Negeri 1 Sewon

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ARTICLE INFO	ABSTRACT
<p>Article history</p> <p>Submission April 01, 2023</p> <p>Revision May 15, 2023</p> <p>Accepted June 10, 2023</p> <p>Keyword:</p> <p>Learning Motivation, Student Perception of Teacher Teaching Methods, Biology Learning Outcomes</p>	<p>KKO is a special class for talented students in the field of sports. Biology scores of KKO students at SMA Negeri 1 Sewon are usually low due to fatigue and many sports activities outside of school. This study aims to determine: (1) The effect of learning motivation on the biology learning outcomes of students in class X KKO SMA Negeri 1 Sewon. (2) The effect of student perceptions of teacher teaching methods on the learning outcomes of students in class X KKO SMA Negeri 1 Sewon. This study uses a quantitative approach with a population of X class students. Data were collected through documentation and questionnaires, and analyzed by simple regression. The results showed: (1) Learning motivation has a positive influence on biology learning outcomes with r_{xy} 0.745 and r^2_{xy} 0.555. (2) Students' perceptions of teachers' teaching methods also have a positive effect on biology learning outcomes with r_{xy} 0.908 and r^2_{xy} 0.824.</p> <div style="display: flex; align-items: center;">  <p>This is an open-access article under the CC-BY-SA license</p> </div> <div style="text-align: right;">  </div>

Introduction

In general, PPDB regulations must follow central government policies, one of which is the zoning system that aims to equalize the quality of education and remove the stigma of favorite schools (Tio *et al.*, 2019). In addition to the regular pathway that considers National Exam scores, schools also provide Special Sports Classes (KKO) that accept students through sports talent selection plus UN scores.

Special Sports Class (KKO) consists of talented students in the field of sports who must undergo academic learning while

improving sports skills. They also participate in various competitions, so they are required to be able to divide their time between learning and sports activities in a balanced manner.

Learning outcomes are an assessment of students' knowledge, attitudes, and skills after the learning process, which is shown through changes in behavior and final grades (Nurrita, 2018). Teachers play an important role in evaluating learning outcomes to measure learning success (Sembiring, 2013).

In biology learning, learning outcomes are assessed through numbers or symbols, and are influenced by students'

interest, motivation to learn, and reading habits.

Teaching methods are the way teachers deliver material to students to create an active and conducive learning atmosphere. The use of appropriate methods according to class conditions is important so that learning can be well received by students. Teaching methods also affect students' perceptions, where good methods tend to lead to positive perceptions, while methods that are not good tend to lead to positive perceptions inappropriate can lead to negative perceptions of learning.

Based on the results of the interviews, it shows that the learning outcomes of KKO students are lower than regular students, because many do not do the assignments or do not take the final assessment. Teaching KKO students is a challenge for teachers, especially in keeping them engaged. Teachers use the lecture method for theoretical material such as ecosystems, and case studies for material such as kingdom plantae, as well as applying *pretests* and *posttests* in every lesson.

Interactions between students and teachers shape students' perceptions of teaching methods. Positive perceptions encourage enthusiasm for learning and have a good impact on biology learning outcomes, while negative perceptions reduce interest in learning. Therefore, teachers need to use appropriate teaching methods, especially in dealing with KKO students.

Apart from perception, biology learning outcomes are also influenced by learning motivation (Astuti et al., 2021). Motivation is a non-intellectual psychological factor that plays a role in fostering the spirit of learning (Harefa et al., 2022). Students with high motivation tend to be more active in learning. Motivation is divided into two, namely internal (from) and external (from outside factors) (Alawiyah et al., 2019).

Based on the background of the problem above, a research title was raised

regarding the effect of learning motivation and student perceptions of teacher teaching methods on the learning outcomes of biology students in class X special sports (KKO) SMA Negeri 1 Sewon.

Method

Type of Research

This research is an *ex post facto* research, which is conducted after an event occurs to find the cause of changes in behavior or phenomena. The study entitled "The Effect of Learning Motivation and Student Perceptions of Teacher Teaching

Methods on Biology Learning Outcomes of Class X Special Sports Students (KKO) SMA Negeri 1 Sewon" aims to examine the effect of learning motivation and student perceptions of teacher teaching methods on biology learning outcomes. The approach used is quantitative, with data analysis in the form of numbers and statistics.

Population and Sample

The population in this study were all X KKO class students of SMA Negeri 1 Sewon, totaling 72 students. Sampling using saturated sample technique, namely by using the entire existing population, especially students. Class X.9 and X.10 as research sample.

Data Collection Technique

Data collection techniques in this study involved two methods, namely tests and questionnaires. Tests were used to measure student learning outcomes by providing End of Year Assessment questions that were done individually. Meanwhile, questionnaires were given to obtain data related to learning motivation and students' perceptions of teachers' teaching methods, using a set of written questions that must be answered by respondents. The data collection instruments consisted of test questions and questionnaires. The test questions used were End of Year Assessment questions for biology subjects, which consisted of 45 multiple choice questions and 1 essay question to determine student learning

outcomes. While the questionnaire used is a closed questionnaire, which contains answer choices that have been provided to measure students' learning motivation and their perceptions of the teaching methods applied by the teacher.

Results and Discussion

Results Prerequisite Test

a. Normality Test

Table 1. Summary of Normality Test Results

No.	Variables		Significance Value	Conclusion
	Free	Bound		
1	x ₁	Y	0,853	Normal
2	x ₂	Y	0,980	Normal

Based on the results of the normality test, the residual values on both research variables are normally distributed. This is indicated by the significance value for the variable of learning motivation on biology learning outcomes of 0.853 and for the variable of student perceptions of teacher teaching methods on biology learning outcomes 0.980, both of which are greater than 0.05. Thus, it can be concluded that the residual data on both variables fulfill the assumption of normality.

b. Homogeneity Test

The homogeneity test is used to determine the similarity of data variation between distributions and is a requirement in analyses such as the T test and ANOVA. The results of the homogeneity test on the biology learning outcomes variable of class X KKO students of SMA Negeri 1 Sewon show a significance value of 0.794 (> 0.05), so it can be concluded that the data is homogeneous.

Hypothesis Test

a. First hypothesis test

Table 2. Summary of Simple Regression Analysis Results (X1-Y)

Price r		Coefficient x ₁	Constant	Description
r _{xy}	r ² _{xy}			
0,745	0,555	1.183	17.086	Positive

Source: primary data processed

Based on the table above, the results

of regression analysis show that learning motivation has a positive effect on the biology learning outcomes of class X KKO students of SMA Negeri 1 Sewon, with the regression equation $Y = 1,183X_1 + 17,086$. The regression coefficient of 1.183 indicates that every increase of 1 unit of motivation will increase learning outcomes by 1.183 points. The correlation coefficient of 0.745 shows a strong and positive relationship, and the coefficient of determination of 0.555 shows that 55.5% of learning outcomes are influenced by learning motivation, while the rest is influenced by other factors. Thus, the hypothesis that learning motivation has a positive effect on learning outcomes is accepted.

b. Second Hypothesis Test

Table 3. Summary of Simple Regression Analysis Results (X2-Y)

Price r		x ₂ Coefficient	Constant	Description
r _{xy}	r ² _{xy}			
0,908	0,824	1,380	17,130	Positive

Source: processed primary data

Based on regression analysis, it is known that students' perceptions of teachers' teaching methods have a positive effect on the biology learning outcomes of class X KKO students of SMA Negeri 1 Sewon, with the regression equation $Y = 1,380X_2 + 17,130$. That is, every 1 point increase in student perceptions will increase learning outcomes by 1.380 points. A positive correlation coefficient indicates a strong relationship and the coefficient of determination of 0.824 shows that 82.4% of the variation in learning outcomes is influenced by student perceptions of teacher teaching methods. The remaining 17.6% is influenced by other factors. Thus, the second hypothesis is accepted.

Discussion

1. The Effect of Learning Motivation on Student Biology Learning Outcomes

The results of this study indicate that there is a positive influence between learning motivation and biology learning outcomes of students in the second grade X KKO SMA Negeri 1 Sewon. Based on regression

analysis, a regression equation is obtained which shows a positive value, with a significance value of 0.000 which is smaller than 0.05, which indicates a significant influence between learning motivation and learning outcomes. The coefficient of determination of 0.555 indicates that 55.5% of learning outcomes are influenced by learning motivation, while the rest is influenced by other factors. Learning motivation, both intrinsic and extrinsic, plays an important role in achieving good learning outcomes. Intrinsic motivation, which arises from within the student, proves difficult to create but is very influential on learning success.

Research has also found that factors such as aspirations, abilities, students' physical and psychological conditions, as well as teachers' efforts in learning, affect KKO students' learning motivation (Dinia & Nurmawati, 2023). In this case, the indicator that shows the highest motivation is students' perseverance in facing tasks, while the indicator with the lowest score is interest in learning biology. KKO students tend to be less interested in biology material, caused by high absenteeism due to training or competition, as well as other problems such as absenteeism, tardiness, and fatigue (Tumuruna, 2022). Therefore, teachers need to apply interesting learning models, using multimedia, to increase student interest and motivation.

Biology learning outcomes are measured based on the results of the final semester exam, with a minimum completeness criteria (KKM) of 75. Students who score >75 are considered complete, while those who score <75 are considered incomplete.

2. The Effect of Student Perceptions of Teacher Teaching Methods on Student Biology Learning Outcomes

The results of this study indicate a positive influence between student perceptions of teacher teaching methods on the biology learning outcomes of class X KKO students of SMA Negeri 1 Sewon. Based on the analysis of regression, obtained equation regression with a significance value of 0.000, which indicates a significant effect. The coefficient of determination of 0.824 indicates that 82.4% of learning outcomes are

influenced by student perceptions of teacher teaching methods, while the rest is influenced by other factors.

Students' perceptions of teachers' teaching methods have a major impact on learning outcomes. This perception is a student's reaction to the way the teacher teaches, and if the student's perception is negative, the learning outcomes will also be poor (Sholikhah & Wahidah, 2021). The learning methods used by biology teachers in class X KKO SMA Negeri 1 Sewon include lectures, discussions, and questions and answers. The lecture method is still dominant because it is considered effective in delivering material directly. Discussion and question and answer methods are also applied to encourage interaction and problem solving (Fuad et al., 2019).

The questionnaire results show that the highest score is 3.5 on the aspect of teachers' ability to teach, while the lowest score is 3.3 on the aspect of methods that are in accordance with learning objectives. Teacher work effectiveness, which includes the teacher's ability to achieve learning objectives, also affects learning outcomes. Effective teachers can overcome learning problems and achieve set educational goals (Kusumawati, 2023).

Conclusion

Based on the results of research and discussion that has been described above, the following conclusions are obtained:

1. There is an influence of student biology learning motivation on the biology learning outcomes of students in class X KKO SMA Negeri 1 Sewon as evidenced by the results of a positive correlation coefficient of 0.745 and the coefficient of determination shows a value of 0.555.
2. There is an influence of student perceptions of teacher teaching methods on the biology learning outcomes of X KKO class students of SMA Negeri 1 Sewon as evidenced by the results of a positive correlation coefficient of 0.908 and a coefficient of determination of 0.824.

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