



Analysis of Students' Learning Motivation Using Guided Inquiry Learning Model

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Abstract: The implementation of this study aims to analyze students' learning motivation toward the application of the Guided Inquiry learning model at SMA Colombo Yogyakarta. The research design used in this research is experimental. The sample used in this study was class XI students with a total of 9 students, but learning activities were carried out in one class but focused on 9 students. The sampling technique used was purposive sampling. The data collection technique was carried out by filling in the student's learning motivation questionnaire. The data analysis used is a descriptive analysis by calculating the percentage of the overall score on the learning motivation questionnaire. The results of this study are the level of learning motivation of students at SMA Colombo Yogyakarta in the high category by filling out a questionnaire by 5 students and very high by filling out a questionnaire by 4 students. The role of the teacher in learning activities using the Guided Inquiry model has a very large role in developing students' learning motivation.

Keywords: Learning process; learning model; learning motivation; students; teachers

Introduction

Motivation is an encouragement in students to make better behavior changes to achieve goals or meet their needs. Learning motivation is a learning model that can achieve learning objectives (Ayu et al., 2019). Learning motivation can affect critical thinking skills, and learning outcomes, so students who have low learning motivation need to increase learning motivation (Ammy, 2020).

Motivation to learn several factors influence students factors that come from the students themselves such as having goals to achieve, the abilities of students, and the physical and spiritual health of students besides that there are external factors such as the classroom environment and teachers (Nasrah & Muafiah, 2020). With that it is necessary to make efforts to increase learning motivation such as arousing students' interest, creating a pleasant atmosphere in the learning process, giving comments and praise for each student's success

and work results, and creating competition and collaboration with friends (Aina et al., 2021).

Learning motivation is the responsibility of a teacher. Where motivation plays an important role in learning. The success of one lesson is often due to strong motivation. The task of a teacher is to create a learning atmosphere that can encourage students' learning motivation to continue studying with enthusiasm and enthusiasm (Nuryasana & Desiningrum, 2020). Teachers can innovate to be able to increase students' understanding of concepts and learning motivation by making interesting teaching materials and using learning models that can build learning motivation according to students' learning styles (Lince, 2022).

With that, the researcher determines several indicators of learning motivation that will be used when the research takes place the interest and attention of students towards biology subjects, the enthusiasm of students in doing assignments, the responsibilities of students in doing assignments, having a sense of

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pleasure in carrying out assignments (Lusidawaty et al., 2020).

One of the learning approaches that requires students to be active in the learning process is the inquiry approach. Inquiry is one way to help students to increase learning motivation (Lestari & Irawati, 2020). Because the learning process with an inquiry approach is not only mastering biological concepts, it is also training to be able to solve problems and examine a problem or question. In connection with the explanation above it is necessary to use the guided inquiry learning model to achieve learning objectives and achieve learning objectives (Putra, 2022).

The inquiry learning process provides opportunities for students to have real learning experiences so that students are trained in solving problems as well as making decisions. Learning science with inquiry influences students' learning motivation. Inquiry learning is more effective in helping students to be motivated because students are directly involved such as asking questions, investigating problems, and carrying out investigations (practicum or assignments) (Siahaan et al., 2020).

The use of the guided inquiry model can increase students' learning motivation. The guided inquiry learning model is a learning process that is guided by the teacher to define problems by students in the form of questions. The guided inquiry develops learning motivation with the stages of making decisions identifying problems, formulating problems, formulating research questions, planning investigations, carrying out investigations, analyzing data, and drawing conclusions (Sukini, 2019).

The purpose of this study was to analyze the learning motivation questionnaire based on the guided inquiry model. the guided inquiry model is used to prove that the questionnaire has a high level of validity and reliability. This is because the use of the guided inquiry model is a solution to the validity problem where the guided inquiry model is a solution to the validity problem and the guided inquiry model provides useful statistics and offers convenience for investigating validity and reliability to see students' learning motivation.

Method

This research uses pre-experimental, especially with one shot case study by providing treatment (independent variable) in the form of a guided inquiry learning model also observed by paying attention to (dependent variable) students' learning motivation (Sugiyono, 2018). The research design is shown in Figure 1.

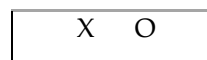


Figure 1. Single-use case study

This research was conducted at SMA Colombo Yogyakarta for 3 weeks in May in class XI with a total of 9 students. The instrument used was a student learning motivation questionnaire with a total of 25 items. Data analysis used descriptive analysis by calculating the percentage of the overall score on the student's learning motivation questionnaire which was administered by the students and categorized by the formula for the percentage of the overall score as follows:

$$P = \frac{s}{n} \times 100\% \tag{1}$$

Information:

P = Eligibility Percentage

S = Number of Respondents' Answers in 1 Item

N=Total Ideal Value in 1 Item

The value of students' learning motivation categories is listed in Table 1.

Table 1 Categories of Student Learning Motivation

Category	Percentage (%)
Very High	P > 80
High	60 < P ≤ 80
Currently	40 < P ≤ 60
Low	20 < P ≤ 40
Very Low	P ≤ 20

Result and Discussion

SWOT analysis stands for Strengths, Weakness, Opportunity, Threats, used to analyze internal factors such as Strengths, Weakness and external factors Opportunity, Threats (Daniela, 2017). SWOT analysis was conducted at Ngemplak 1 Public High School.

This Strengths analysis aims to look at the strengths of the learning system at SMA Colombo Yogyakarta, including learning using varied teaching materials, teachers giving interesting and fun assignments, teachers using varied learning models so students don't get bored during the learning process in large classrooms, location school in the center of the city of Yogyakarta has quite complete facilities (Satria & Shahbana, 2020).

This Weaknesses Analysis aims to find out the components that are not yet in school, the weaknesses that exist in SMA Colombo Yogyakarta in the existing facilities in the laboratory such as old materials so that teachers do not use these materials and there is no special waste disposal, no sink, no first aid, tools and

materials that are not treated, there is no special place for storage of tools and materials bahan (Keban et al., 2019).

Opportunity analysis aims to develop school strengths and threat analysis to prevent possible threats to schools. Where there is a relationship between strengths and opportunities that can be used as a strategy to take advantage of the opportunities that schools have (Fahriana & Huda, 2019). The relationship between weaknesses and threats can be used as a strategy to prevent possible threats in schools.

The dependent variable in this study is the motivation to learn by giving treatment using the Guided Inquiry learning model. The effect of learning the Guided Inquiry model shows higher learning outcomes compared to using Discovery Learning (Novalino & Savitri, 2021). According to The Guided Inquiry model can be raised by students determining their problems so that students' understanding is deeper. The Guided Inquiry learning model has seven syntaxes.

The teacher creates an interesting learning atmosphere by inviting students to carry out learning activities identifying problems, formulating problems, and formulating research questions by reading a discourse on student worksheets (Nenti et al., 2021). Documentation in this syntax can be seen in Figure 2.



Figure 2. Problem identification, problem formulation, problem formulation

The next step is for the teacher to help practicum students while students work on assignments in the next syntax. students work on the next syntax planning investigations and carry out investigations (Furqon & Novita, 2021). Documentation in this syntax can be seen in Figure 3.



Figure 3. Formulation and carrying out an investigation

The next syntax is data analysis and concluding learning activities. While the teacher checks the results of students' practice (Gunawan et al., 2019). Documentation in this syntax can be seen in Figure 4.



Figure 4. Data analysis and formulation conclusions

After the learning activities, the researcher asked students to be able to fill out a motivational questionnaire. Documentation in this syntax can be seen in Figure 5.



Figure 5. Filling out the learning motivation questionnaire

Student learning motivation is measured after students learn the respiratory system material using the Guided Inquiry model using a learning motivation questionnaire given at the end of learning with the Guided Inquiry model Inquiry (Wibowo et al., 2023). The learning motivation questionnaire has 25 items representing Attention, Relevance, Confidence, and Satisfaction indicators. Learning motivation can affect learning outcomes because students are trained to be active and creative in building knowledge and skills by solving problems given by the teacher. The learning outcomes of students are shown in Table 2.

Table 2. Student Learning Motivation Questionnaire Results

Student	Score	Category
1	89.6	Very high
2	85.6	Very high
3	73.6	High
4	82.4	High
5	76.8	High
6	87.2	Very high
7	71.2	High
8	72.8	High
9	75.2	Very high

Students learning motivation after studying the breathing system with the Guided Inquiry model is very

high. There were 4 students out of a total of 9 students who had very high learning motivation while 5 of the students had high learning motivation. Learning motivation determines good learning outcomes. With high learning motivation, students will study diligently and enthusiastically participate in learning so that it is manifested in student learning outcomes (Margiastuti et al., 2023).

Motivation in the learning process is divided into two, namely intrinsic motivation and extrinsic motivation. Intrinsic motivation exists within students such as the desire to acquire knowledge, the desire to achieve learning goals, and the drive to meet learning needs. Meanwhile, extrinsic motivation comes from outside the students, such as the learning environment, parents' requests, and interesting learning activities (Tampubolon et al., 2021). There are several internal factors and external factors that can influence students' learning motivation including nutritional needs, health conditions, physical functioning especially the five senses, as well as psychological factors, and students' learning interests itself are internal factors that can influence students' learning motivation. While social factors relate to the relationship between students and teachers (teacher creativity in presenting subject matter), peers, parents (the role of parents who support their children in learning), neighbors, and non-social factors such as air conditions (hot and cold weather), time (morning, afternoon, evening), place (quality of learning places at school), facilities, and infrastructure at school are included in external factors that can affect students' learning motivation (Andri et al., 2021).

Students who have high learning motivation can be seen with a positive attitude during the learning process such as studying at home or studying the night before learning in class tomorrow, looking for other sources such as other online teaching materials, asking the teacher, and discussing with friends for a deeper understanding (Faizzah & Budiarmo, 2022). Good. When students have obtained high learning motivation, they are more active in learning and have a level of responsibility so they are expected to get good learning outcomes. An important point in the learning process that can affect students' learning motivation is the method/process that will be presented to students during learning activities (Prasetyawati et al., 2019).

The use of the Guided Inquiry learning model influences students' learning motivation because the whole learning becomes directed. The guided inquiry learning model provides opportunities for students to work in groups and exchange understandings and thoughts with peers (Wulandari, 2022). The Guided Inquiry learning model must meet four criteria, namely clarity, suitability, accuracy, and complexity. Students

are used as learning subjects because the concepts taught are related to phenomena that are by the student's prior knowledge (Wartini, 2021).

Students will better understand the learning material in the Guided Inquiry model because the learning process is structured and has a teacher-centered learning syntax. The Guided Inquiry learning model is effectively used in the learning process by combining strategies and teaching materials (Manuel & Londa, 2023). Guided Inquiry is teacher-centered learning, this learning model aims to teach students to think and help relate knowledge. Teachers must prepare innovative learning so that it can attract the attention of students and prepare teaching materials that will be used during the learning process. The implementation of the Guided Inquiry model at SMA Colombo Yogyakarta uses learning tools in the form of interesting student worksheets. This learning device is suitable for use in the learning process because it can build interest in learning.

Conclusion

The results of this study provide an overview of students' learning motivation after studying the respiratory system material with the Guided Inquiry learning model. The learning motivation of students in the application of the Guided Inquiry learning model is in the high and very high categories of 9 students. Students learning motivation is influenced by several factors, but the teacher and the Guided Inquiry learning model have an important role to play in developing it. Researchers recommend conducting further research to compare student learning motivation in the Guided Inquiry learning model

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Author Contributions

The first author conceptualized the idea of the research and designed the experimental methodology, as well as collecting and analyzing data, performing statistical analysis, and

interpreting the results. while the second author oversaw the entire research process and contributed to the literature review and provided critical feedback throughout the research process. the two authors jointly contributed to writing, reviewing, and editing the manuscript for intellectual content.

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Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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