Analysis Students' Learning Motivation on the Implementation of Direct Instruction Learning Model

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Abstract: This study aims to analyze students' learning motivation on the implementation of Direct Instruction learning model in Muhammadiyah Pakem Senior High School. The research design used in this research is pre-experimental with a one-shot case study. The study sample consisted of all class X students with a total of 11 students. Sampling technique using is purposive sampling. Data collection techniques were carried out by questionnaires to measure students' learning motivation. The data analysis used is a descriptive analysis by calculating the percentage of the overall score on the learning motivation questionnaire. The results of the study were the level of students' learning motivation in Muhammadiyah Pakem Senior High School in the high-very high category. The present of the teachers in the Direct Instruction learning model have a big role to develop students' learning motivation.

Keywords: Direct instruction; Learning model; Learning motivation; Student

Introduction

Learning motivation is one of the learning models that can achieve learning objectives. Each student has a different learning motivation and learning motivation can affect student learning outcomes, so students who have low learning motivation need to increase their learning motivation so that their learning outcomes also increase (Pratiwi, 2022).

Observations were carried out in March 2022 at SMA Muhammadiyah Pakem using a SWOT analysis (Strengths, Weakness, Opportunities, Threads). Muhammadiyah Pakem Senior High School is located on the slopes of Mount Merapi, has large classes, a small number of students, qualified teachers, internet access that is not easily accessible by students so that the teacher's role in learning is more dominant than students. The learning model used in learning should focus on the teacher rather than focusing on students so that students better understand the chemistry material (Sunandar et al., 2016).

Many students assume that chemistry is a difficult subject, this is because chemistry is abstract. Students can appreciate and enjoy learning if they have learning motivation, but students' learning motivation can decrease because they think chemistry lessons are difficult and the quality of chemistry learning is needed, so there needs to be an increase in learning motivation (Salim et al., 2018). The learning model used by the teacher plays a role in increasing student learning motivation, so teachers need to be creative in teaching chemistry (Pratiwi, 2022). The declining student learning motivation can cause the declining student learning outcomes (Jusniar et al., 2020). One of the learning models that can increase learning motivation is Direct Instruction (DI) learning model (Carrabba et al., 2018), (Watanabe et al., 2013).

The DI learning model includes teacher-focused learning by involving the teacher's explanation of new concepts and skills, so that students become more familiar with the material presented (Sunandar et al., 2016), (Watanabe et al., 2013). The DI learning model focuses on students and facilitates students in improving student learning abilities, can improve student learning outcomes, and be more effective in learning (Buchori et al., 2017), (Noah Ekeyi, 2013), (Ridho et al., 2015), (Salim et al., 2018), (Wenno, 2014). The improvement in learning outcomes with the DI model is higher than the

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Problem-Based Learning (PBL) model which is student-centered learning (Winarsih et al., 2019).

There are 5 phases in the DI model including delivery of goals and motivation to students, demonstration of knowledge and skills, coaching exercises, controlling student mastery and feedback, implementing training results (Zahriani, 2014). The purpose of this study is to analyze students' learning motivation on the implementation of Direct Instruction learning model.

Method

The research design uses pre-experimental, especially with a one-shot case study by providing treatment (independent variable) in the form of a direct instruction learning model and is observed by paying attention to the dependent variable in the form of student learning motivation (Sugiyono, 2015). The research design is in Figure 1.
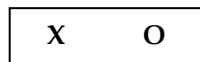
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Figure 1. One-shot case study

The research was carried out for 2 weeks in June in the 11th grade of SMA Muhammadiyah Pakem with a total of 11 students. The research instrument used was a questionnaire to measure students' learning motivation with a total of 23 items. The data analysis used is a descriptive analysis by calculating the percentage of the overall score on the learning motivation questionnaire that has been filled out by students and categorized. The overall score percentage formula is as follows:

$$\% = \frac{N}{T} x \ 100\% \tag{1}$$

N = Sum of scores from students
T = Total maximum score = 115

The categories of student learning motivation are listed in Table 1.

Table 1: Student Learning Motivation Categories

Categories	Percentage (%)
Very high	$x > 80$
High	$60 < x \leq 80$
Medium	$40 < x \leq 60$
Low	$20 < x \leq 40$
Very low	$x \leq 20$

Result and Discussion

SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) is used in this study to analyze internal factors such as Strengths and Weaknesses and external factors such as Opportunities and Threats to achieve the goals of the school in the future (Kotler, 2013), (Rangkuti, 2009). The SWOT analysis in this study was carried out at the school where it was implemented, namely Muhammadiyah Pakem senior high school. Strengths analysis aims to determine the strengths of Muhammadiyah Pakem senior high school, the strengths possessed when carrying out observations include large classrooms, teachers focus more on students because the number of students tends to be small, teachers have master qualifications, the location of the school is close to nature because it is located in the slopes of Merapi mountains, has facilities tend to be complete, teachers use a variety of learning models so that students do not get bored quickly.

Weaknesses analysis aims to find out the components that are not yet in the school and what they want to achieve, some of the weaknesses that Muhammadiyah Pakem senior high school has are in laboratory facilities such as the absence of a sink, the table for carrying out the experiment is not made of ceramic, only has 1 door, no the presence of first aid kits, no special waste disposal, poorly maintained laboratory tools and materials found in 1 cupboard, unclear material identity labels, and internet access tends to be difficult to reach in class. Opportunity analysis aims to develop the strengths of schools and analysis of threats to prevent possible threats experienced by schools (Rangkuti, 2009).

There is a relationship between the components in the SWOT analysis such as the relationship between strengths and opportunities (S-O) which can be used as a strategy to take advantage of the opportunities that the school has, the relationship between Weaknesses and Opportunities (W-O) to overcome the weaknesses of the school by taking advantage of existing opportunities, relationships between Weaknesses and Threats (W-T) can be used as a strategy to prevent possible threats that exist, and the relationship between strengths and threats (S-T) can be used as a strategy to reduce threats using the strengths possessed by the school (Satria et al., 2020), (Aisyi et al., 2020). SWOT analysis has benefits such as making the mind more flexible, having good ethics and relationships, developing discussions to resolve existing issues, providing tolerance and the social side, helping schools become better (Amri et al., 2020; Gurl, 2017).

The dependent variable in this study is students' learning motivation by giving treatment using a direct instruction learning model. The effect of direct instruction learning shows higher cognitive learning outcomes than self-directed learning (Barth et al., 2019). The direct instruction model is also more desirable than the Problem-Based Learning (PBL) model because

students can gain knowledge about problems that cannot be explained well as in PBL (Wijnia et al., 2014). The direct instruction model can be improved by students determining their own cases (self-regulated) so that students' understanding of cases is deeper (Glogger-Frey et al., 2017). Direct instruction learning can also be carried out independently where parents act as private tutors, this is better implemented than learning with direct instruction in class (Flynn et al., 2012). The direct instruction learning model has 5 syntax (Zahriani, 2014). The first syntax is delivery of goals and motivation, the teacher explains the purpose, background and importance of studying the material in this syntax. Demonstration of knowledge and skills, the teacher demonstrates skills and materials by paying attention to the stages and structure of the material. The documentation in this syntax in Figure 2.

Figure 2. Demonstration of knowledge and skills

The next step is the teacher helps students during practice while students do assignments in the next syntax which is training guidance. Students are expected to have different perspectives and the teacher guides students on this syntax (Ekpe et al., 2017). The documentation of this syntax in Figure 3.

Figure 3. Training guidance

The next syntax is mastery control and feedback while the teacher checks the results of student exercises and provides feedback on the results of student work. The last syntax is application of the results of the exercise, the teacher gives practice to students using more complex problems.

Student motivation is measured after students learn colloidal material using a direct instruction model using a learning motivation questionnaire and is given at the end of learning (posttest) with direct instruction model. The learning motivation questionnaire has 23 items that represent indicators of learning motivation such as showing activeness, being diligent in doing assignments, often answering questions (Salim et al., 2018). Student motivation can affect learning outcomes because students are trained to be active and creative to build knowledge and skills by solving problems given by the teacher (Buchori et al., 2017). The result of students' learning motivation are shown in Table 2.

Table 2: 11th Grade Students' Learning Motivation

Student	Score	Category
1	82.61	Very High
2	78.26	High
3	78.26	High
4	74.78	High
5	74.78	High
6	72.17	High
7	78.26	High
8	76.52	High
9	70.43	High
10	75.65	High
11	80.87	Very High

Students' learning motivation after studying colloids with the direct instruction model is in the high-very high category. Two students from total 11 students in the class X categorize to have very high learning motivation meanwhile the rest of students categorize to have high learning motivation. Learning motivation is one of the important things to achieve good student learning outcomes, with a strong learning motivation will make students study diligently which ultimately manifests in student learning outcomes (Nurwahid, 2021). There are several factors that can affect student learning motivation including the role of parents who support their children in learning, teacher creativity in presenting subject matter, and student learning interest itself (Kusumaningrini et al., 2021). Students who have high motivation are usually shown by their positive attitudes towards learning such as repeating lessons at home, looking for other learning resources, asking teachers and discussing with friends for better understanding (Vivin, 2019). When students have obtained high learning motivation, students will be more active and active in learning and students will be able to carry out learning activities with full confidence and responsibility so that learning outcomes are also expected to increase (Budiariawan, 2019). One of the key

points that can affect student motivation is method/process (Kaylene et al., 2011). Method/process is the way content presented to students. The teaching process in this study using attractive media and the delivery process using a good storytelling that can engage student student to the learning content.

Students will get better understanding in the subject matter In Direct Instruction models because the learning process are structured and procedural stages centered on the teacher (Fakhrah et al., 2017), (Suhartono et al., 2019),(Winarsih et al., 2019). The increased of concept understanding due to the application of this Direct Instruction model can also have an impact on increasing student learning outcomes (Amintoko, 2020), (Windu, 2021). According to Nuraeni *et al.* (2022) Direct Instruction is effective to use in the teaching process by combining strategies or media. Direct Instruction is a teacher centered learning where the teacher is the center of the teaching process. In Direct Instruction, the teacher should prepare attractive lesson that can gain students attention and also prepare media that will be use in the teaching process. Implementation of Direct Instruction learning model in Muhammadiyah Pakem senior high school is using interesting PowerPoint presentation as a media. PowerPoint media is suitable for use in the learning process, because it can ignite students' interest in learning (Marpaung et al., 2020), (Wijayanti et al., 2019).

Wardani *et al.*, (2020) categorize motivation as intrinsic motivation and extrinsic motivation. Intrinsic motivation is come from internal driving factor while extrinsic motivation caused by external stimulation. Extrinsic motivation can conduct by the teacher by organize the class conditions and situations. During the implementation of Direct instruction learning teacher can give encouragement to students to be motivated to learn. Students' learning motivation influenced by several factors but the teachers also have a big role as a motivator for his students. The success to achieve students' learning motivation depends on the teacher's efforts to motivate students to learn through the learning process.

Conclusion

Our findings provided a general description to the students' learning motivation after studying colloids with the direct instruction model. The students' learning motivation on the implementation of Direct Instruction learning model were in the high-very high category. Students' learning motivation influenced by several factors but the teachers in the Direct Instruction learning model have a big role to develop it. Researchers recommend to conduct further studies to compare students' learning motivation in Direct Instruction

learning model with another learning model as another variables.

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