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THE INFLUENCE OF TEACHER TEACHING SKILLS AND THE USE OF MEDIA ON LEARNING MOTIVATION AND PHYSICS LEARNING OUTCOMES FOR STUDENTS AT SMAN 2 GOWA

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Abstract. This study is an ex-post facto research with causality. The outbreak of this virus has had an extraordinary impact on various sectors including the education sector, so learning is carried out online with alternative methods utilizing cyberspace, but teachers must provide digital teaching materials to fulfill learning outcomes. The purpose of this study was to describe the description of teachers' teaching skills, media utilization, learning motivation and physics learning outcomes. In addition, this research was also conducted to analyze the direct effect of teacher teaching skills on learning motivation and learning outcomes in physics, to analyze the direct effect of using media on learning motivation and learning outcomes in physics, to analyze the direct effect of using media on learning motivation and learning outcomes in physics. physics learning outcomes and analyze the direct influence of learning motivation on physics learning outcomes. The research sample consisted of 180 students consisting of nine classes. The data collection process was carried out using 3 questionnaires and a physics learning achievement test totaling 21 tests that had been tested empirically. Research data were analyzed using the path analysis method with the Analysis of Moment Structures (AMOS) version 22 technique. The results of the descriptive analysis: teacher teaching skills in the skilled category, media utilization in the very high category, learning motivation in the very high category, and physics learning outcomes in the category tall.

Keywords: *Ex-Post Facto, Teachers' Teaching Skills, Media Utilization, Learning Motivation, Physics Learning Outcomes*

INTRODUCTION

In accordance with Permendikbud Number 22 of 2016, the high school physics learning process is held interactively, inspiring, fun, challenging, motivating students to participate actively, creativity, and independence according to their talents, interests, and physical and psychological development of students Kemendikbud, (2016) Therefore, the use of information technology media in communication is very important in increasing efficiency and learning outcomes. According to Law No. 14 of 2005 concerning Teachers and Lecturers explained that competence is a set of knowledge, skills and behaviors that must be possessed, internalized, mastered, and realized by teachers in carrying out their professional duties. One of the elements related to the competence of teachers in carrying out their professional duties is teaching skills.

With regard to teacher teaching skills, every teacher is required to be skilled. According to Djamarah, (2018) teaching skills are absolute skills that must be possessed by educators in carrying out their duties. The same thing was also expressed by Sardiman, (2018) that teaching skills are skills needed in various implementations of the role of educators in the learning room, therefore, it is very important for the skills of a teacher to carry out their roles as demonstrators, classroom managers, mediators, and facilitators in learning (Ratih, 2021). Teachers who master teaching skills will always create effective learning conditions, meaning that the better the way the teacher manages the class by applying teaching skills effectively, the students will become more focused on receiving the material provided.

Learning shows a state of the extent to which results are obtained after the implementation of the teaching and learning process. Learning outcomes generally involve one or the location of the expectations to be achieved in an activity. The intended target can be shown through a number of indicators, such as student mastery and other academic results after the learning process is complete (Novitasari, 2017). However, in order to help improve student learning success, there are several factors that

influence first, internal factors that influence the success of a learning process, namely learning motivation, while external factors consist of learning resources, namely educators and instrumental factors in the form of learning facilities (Reski, 2018).

Teaching facilities (facilities and infrastructure) owned by educators in order to make students feel motivated in learning. According to Jannah & Sontani, (2018) facilities and infrastructure have a strong influence on learning motivation, so the need for facilities and infrastructure as equipment to further enliven the atmosphere of the learning process. The types of procurement of facilities used for learning in schools in general are books, office stationery (ATK), blackboards, stationery, and so on. However, the use of facilities and infrastructure in learning is currently undergoing changes in the form of: (1) media and learning resources using gadgets, laptops and several application portals so that in utilizing virtual face-to-face media it is ensured that there is direct interaction between teachers and students. (Ministry of Education and Culture, 2020).

The use of media is a part that must get the teacher's attention in every learning activity, therefore, teachers learn how to choose and utilize learning media in order to effectively achieve learning objectives in the teaching and learning process. The attraction of material exposure with the media presented can motivate and provide satisfaction to students, this is because media can be created, presenting information through a combination of text, images, audio, animation and video. Binus University (2019) states that about 90% of the information that students receive from the outside world to survive and develop is in the visual world so that the delivery of material in utilizing the media will have a good impact on learning physics.

Physics is one of the lessons that contains many abstract concepts for that, physics teachers are required to master other than the subject matter, but also master learning strategies according to the characteristics of students. The fact is that most physics teachers still dominate the lecture method learning. Students receive physics lessons passively and even just memorize formulas without understanding the meaning and benefits of what they learn. As a result, physics learning outcomes in schools are still relatively low and have not increased significantly because they have not reached the minimum criteria determined by the school.

The results of the research according to Novitasari, (2018) there is an influence between teacher teaching skills and students' learning motivation where the teacher's teaching skills and student learning motivation are in the sufficient category. Then from the results of Syam's, (2019) research, it is stated that most of the students' learning motivation is influenced by learning media. This shows that the teaching skills of teachers must always be considered and improved because they have a good impact on students' learning motivation. In line with Novitasari, (2017) states that there is an influence of teacher skills in teaching on learning outcomes. This is possible because the teacher uses a variety of methods so that it affects the assessment of students in terms of the influence of teacher skills in teaching.

Based on this, it is concluded that teacher teaching skills are a set of teacher teaching behaviors or actions that are used in the learning process in the classroom to achieve effective learning objectives. According to Cooper quoted by Alma (Arafah, 2014) classifies teaching skills such as skills: preparing teaching plans, making teaching objectives, presenting lessons, asking questions, drafting concepts or teaching preparation, conducting interpersonal communication, managing classes, conducting observations and conducting evaluations.

Sudjana and Rivai (2019) said that learning media can enhance the learning process of students in learning which in turn is expected to enhance the physics learning outcomes achieved. According to Seels & Richey in (Azhar, 2019) divide learning media into four groups, namely: print media, audio-visual media, computer-based media, combined media.

The term motivation comes from the word motive which can be interpreted as a force contained within the individual, which causes the individual to act or do. Motivation is an impulse contained in a person to try to make changes in behavior for the better in meeting their needs (Uno, 2017). The motivation indicators in question include: The existence of a desire and desire to succeed, The existence of a drive and need to learn, The existence of hopes and aspirations for the future, The existence of appreciation, The existence of interesting activities, A conducive learning environment.

Sudijono (2012) revealed that learning outcomes are an evaluation action that can reveal aspects of the thinking process can also reveal other psychological aspects, namely aspects of values or attitudes and aspects of skills inherent in each individual student. Based on some previous opinions, it can be concluded that learning outcomes are changes in behavior or achievements obtained by students after going through the physics learning process as outlined in the form of numbers and in the form of their application in everyday life. There are three aspects assessed in learning outcomes, namely, psychomotor, cognitive, and affective. So in this study, researchers only focused on assessing the cognitive aspects. The cognitive aspects that are used as indicators in this study include: remembering, understanding, applying and analyzing according to the basic competencies taken.

METHODS

This type of research is quantitative research with ex-post facto methods that are causal in nature. This research only examines an incident without any prior treatment of the object under study. This study was designed to analyze and explain the causal relationship between teachers' teaching skills, media utilization, learning motivation and students' physics learning outcomes. In this study there were four variables, namely the independent variable (free) namely the teacher's teaching skills (X1) and media utilization (X2), the intervening variable namely learning motivation (X3) and the dependent variable (not free) namely the results of learning physics (Y). It can be seen in the paradigm of the relationship between variables in Figure 1 below.

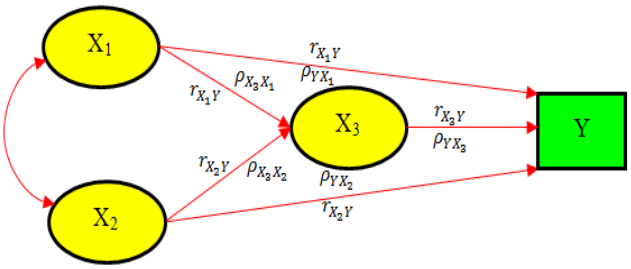

Figure 1. Paradigm of Relationship between Variables

The data needed in the study, researchers used data collection techniques in the form of a teacher teaching skills questionnaire, media utilization, learning motivation and physics learning outcomes tests. The population in the study were all students of class X science at SMAN 2 Gowa, totaling 340 people. The sampling technique used proportional random sampling so that the researchers took a sample of 180 students, which means above the minimum sample limit based on the Slovin formula. Held in the Even Semester of the 2021/2022 Academic Year and located at SMAN 2 Gowa located on Jalan Pendidikan, Limbung, Kec. Bajeng, Gowa Regency.

The data analysis technique uses Analysis of Moment Structures (AMOS) version 22. In the learning outcomes variable using multiple choice tests if the answer chosen is correct then it is given a score of 1, if the answer is wrong then it is given a score of 0. Then Instruments for teacher teaching skills, media utilization, motivation learn to use a questionnaire sheet containing a statement accompanied by a choice of answers. Questionnaire statements consist of positive and negative statements. Each item has provided various alternative answers. Answers from the questionnaire are arranged based on a Likert scale, with choices and weights as shown in Table 1 below.

Table 1. Score Statement Questionnaire Teacher Teaching Skills, Media Utilization, and Learning Motivation

***Favorable* (F)**		***Unfavorable* (UF)**	
Stongly agree	5	Stongly disagree	1
Agree	4	Agree	2
Undecided	3	Undecided	3
Disagree	2	Disagree	4
Stongly disagree	1	Strongly disagree	5

Source: Azwar (2014)

RESULTS AND DISCUSSION

Descriptive analysis was carried out as a support in reviewing the results of the path analysis given later. The statistical summary of teacher teaching skills, media utilization, learning motivation and physics learning outcomes of students in class X IPA SMA Negeri 2 Gowa for the academic year 2021-2022 can be presented in Table 2.

Table 2. Descriptive Statistical Analysis Results

Statistics	**Teacher Teaching Skills**	**Media Utilization**	**Motivation to Learn**	**Physics Learning Outcomes**
Number of respondents	180	180	180	180
Number of items	35	24	29	21
Empirical maximum score	173	120	145	21
Empirical minimum score	59	40	49	9
Ideal maximum score	175	120	145	21
Ideal minimum score	35	24	29	0
Mean	146,56	97,12	119,12	15,64
Standard deviation	17,97	13,88	17,16	3,132

Teacher Teaching Skills

Visually, the frequency distribution of teachers' teaching skills is displayed in the form of a histogram as shown in Figure 2 below.

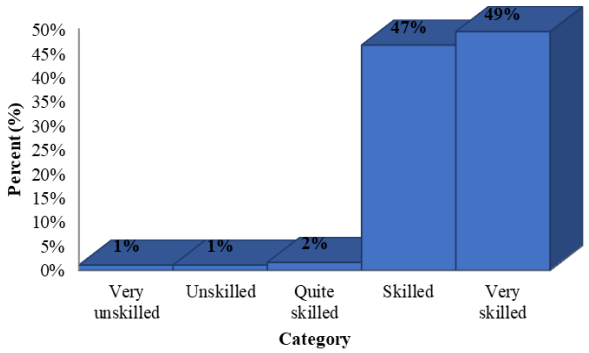

Figure 2. Histogram of Frequency Distribution of Teacher Teaching Skills According to Students

Based on the teacher's teaching skills variable, it was measured using an instrument consisting of 35 statement items. The lowest score for each statement is 1 and the highest score is 5, the theoretical score is between 35 to 175. The average score of the teacher's teaching skills is 146.56. This indicates that the perception of students in class X IPA SMAN 2 Gowa on the teaching skills of teachers is in the skilled category.

Media Utilization

Visually, the frequency distribution of media utilization is displayed in the form of a histogram as shown in Figure 3 below.

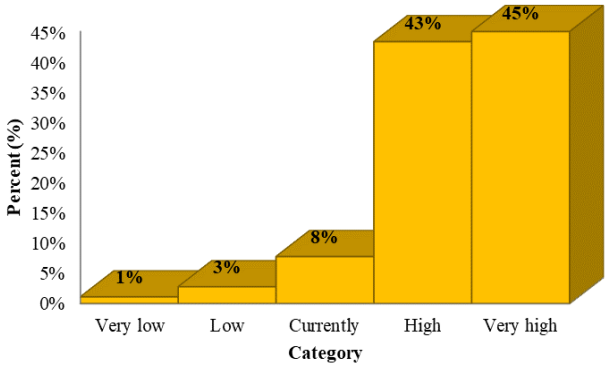

Figure 3. Histogram of Frequency Distribution of Media Utilization by Students

Media utilization was measured using an instrument consisting of 24 statement items. The lowest score for each statement is 1 and the highest score is 5, so the theoretical score is between 24 and 120, the average score of media utilization is 97.12. This indicates that the acquisition of students' perceptions of the use of media is in the high category.

Leraning Motivation

Visually, the frequency distribution of learning motivation is displayed in the form of a histogram as shown in Figure 4 below.

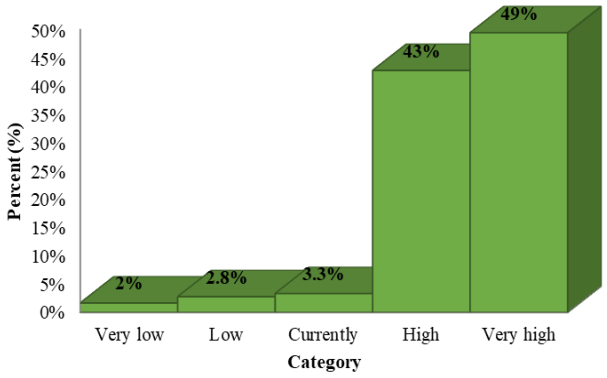

Figure 4. Histogram of Frequency Distribution of Media Utilization by Students

Then the learning motivation is measured by the instrument of 29 statement items. The lowest score for each statement is 1 and the highest score is 5, so the theoretical score is between 29 and 145. The average score for learning motivation is 119.12, which means that students' perceptions of learning motivation are in the high category.

Physics Learning Outcomes

Visually, the frequency distribution of teachers' teaching skills is displayed in the form of a histogram as shown in Figure 5 below.

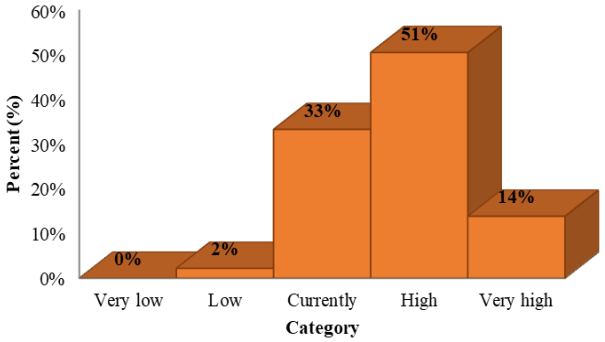

Figure 5. Histogram of Frequency Distribution of Physics Learning Outcomes

According to the physics learning outcomes of students through multiple choice tests, it was obtained that the average score was 74.47. This indicates that the physics learning outcomes of students in class X IPA SMAN 2 Gowa are also in the high category.

Discussions

1. The Direct Effect of Teacher Teaching Skills on Learning Motivation

Based on the research results, it is known that physics teachers at SMAN 2 Gowa have good teaching skills. This is the average score of students' perceptions which states that the teaching skills of physics teachers are in the skilled category. These results also provide an overview of teacher teaching activities which contain indicators of teacher teaching skills, namely skills in opening physics lessons, skills in explaining physics material, skills in teaching variations in physics, skills in asking questions in teaching physics, skills in providing reinforcement in teaching physics, and closing skills Physics learning is able to influence the learning motivation of SMAN 2 Gowa students.

The results of this study are in line with the results of research by Purba, Sitepu & Silaban (2020) and Pasaribu, Tanjung, & Anzelina (2020) showing that there is a positive relationship between teacher teaching skills and students' learning motivation. The same opinion was expressed by Slameto in Aziz (2020) that one of the factors that influence learning motivation is the skills that must be possessed by a teacher. The quality of the teacher's teaching skills is still not good, making students feel bored, bored and consider physics lessons to be weak, resulting in low student learning motivation. Vice versa, the higher the learning motivation of students in the physics learning process will certainly affect the achievement of the learning objectives themselves. As revealed by Sardiaman (2018) that an educator as a motivator is very important in teaching and learning interactions, because it involves the essence of educational work that requires social skills, regarding performance in the sense of personalization and self-socialization. teaching Therefore, to realize this a teacher must have teaching skills in teaching and learning activities.

2. The Direct Effect of Media Utilization on Learning Motivation

The use of media has a direct positive effect on learning motivation significantly in class X IPA students at SMAN 2 Gowa. This means that if the use of media is high, then the learning motivation of students in class X IPA SMAN 2 Gowa is also high.

Seeing these two results, it can be said that due to the high use of media, the motivation to learn is also very high. If a student is motivated to use the media used by the teacher, in the form of interesting media, the material will be easier to understand if the material is modified with the learning media. In other words, in this study the use of the media used by the teacher on learning motivation according to the perceptions of class X IPA students at SMAN 2 Gowa was very influential. Even so, the teacher as a motivator never stops updating learning media according to the needs of students. Learning media that make students more effective, efficient, interesting, interactive, conducive, and time-saving so that students' learning motivation always increases.

The results of this study are in line with the results of research by Hikmawan & Sarino (2018) and Fitri (2021) showing that there is a positive relationship between media use and students' learning motivation. The same opinion was expressed by Fitri (2021) that the learning media used by the teacher during the learning process helps educative interactions between teachers and students, so that students understand the material conveyed by the teacher more quickly and are motivated to learn. Binus University (2019) states that around 90% of the information that students receive from the outside world to survive and develop is in the visual world so that the delivery of material using the media will have a good impact on learning physics.

3. The Direct Effect of Teacher Teaching Skills on Physics Learning Outcomes

The teacher's teaching skills have a direct positive influence on physics learning outcomes significantly in class X IPA students at SMAN 2 Gowa. This means that if the teacher's teaching skills are high, then the physics learning outcomes of class X IPA SMAN 2 Gowa are the same.

From the results of the path analysis, it was found that the teacher's teaching skills apart from having a positive and significant direct influence on physics learning outcomes, also had an indirect effect on physics learning outcomes through students' learning motivation of 0.010. So it can be concluded that in its contribution the teacher's teaching skills are more likely to influence physics learning outcomes indirectly through learning motivation.

The results of this study are in line with the results of research by Zuhemi et al., (2020) and Novitasari (2017) indicating that there is a positive relationship between teacher teaching skills and students' physics learning outcomes. The same opinion was expressed by Mas'ud (2018) that the influence between teacher teaching skills and student learning outcomes is very closely related. The more expert a teacher is in carrying out his duties, the better the teacher is in managing classroom learning. With these skills, good learning outcomes as expected will be achieved. In accordance with the theory presented by Tafsir (2018) that as professionals, teachers are required to have various skills related to teaching and learning activities. The creation of a pleasant atmosphere when teaching and learning activities take place is the dream of all parties, both teachers and students, with a pleasant atmosphere, of course, it can provide encouragement for learning outcomes, so it can be ascertained that the teaching and learning process will run well and optimally.

4. The Direct Effect of Media Utilization on Physics Learning Outcomes

The use of media has a direct positive effect on physics learning outcomes significantly in class X IPA students at SMAN 2 Gowa. This means that if the use of media is high, then the physics learning outcomes of class X IPA SMAN 2 Gowa also tend to be the same.

In the results of the path analysis, there is the use of the media in addition to providing a positive and significant direct influence on physics learning outcomes, it turns out that it also has an indirect effect on physics learning outcomes through students' learning motivation of 0.011. So it can be concluded that in its contribution the use of media tends to influence physics learning outcomes indirectly through learning motivation.

The results of this study are in line with the results of research by Yuli, Ika, Nuriman & Agustiningsih (2013) and Hernawati (2018) indicating that there is a positive relationship between teacher teaching skills and students' physics learning outcomes. The opinion expressed by Falahudin (2014) that by utilizing the media can improve the quality of student learning outcomes. According to him, the use of media not only makes the learning process more efficient, but also helps students absorb the subject matter more deeply and completely. Utilizing media by seeing, touching, feeling, the learning outcomes of students will definitely be better.

5. The Direct Effect of Learning Motivation on Physics Learning Outcomes

Learning motivation has a direct positive effect on physics learning outcomes significantly in class X IPA students at SMAN 2 Gowa. This means that if students' learning motivation is high, then the physics learning outcomes of class X IPA students at SMA Negeri 2 Gowa are also the same.

The results of this study are in line with the results of research by Syam (2019) showing that there is a positive relationship between learning motivation and physics learning outcomes for students of SMAN 2 Bulukumba. Similar research by (Khoiri et al., 2017) shows that there is a significant relationship between learning motivation and physics learning achievement.

Referring to the results above, in an effort so that students have high physics learning outcomes can be done by increasing their learning motivation. Based on the results of the descriptive analysis, learning motivation shows that 49% of students' perceptions are in the very high category as shown in Table 4.4. Slightly different results are shown in the descriptive analysis of physics learning outcomes showing that 43% of students' scores are in the high category. It can be seen that there are still some students who have physics learning outcomes in the medium and

very high categories. By cultivating high learning motivation, according to the results of this study, it is hoped that their physics learning outcomes can be even better.

Motivation to learn is an encouragement to excel, achieve achievement with all things that can support to get success. Individuals who have high motivation are always task oriented and like challenges. Motivation can determine whether or not it is good to achieve goals so that the greater the motivation, the greater the success of learning.

CONCLUSION

Based on the results of the study, it was found that the teacher's teaching skills variable had a direct positive effect on the learning motivation of students in class X IPA SMAN 2 Gowa, the use of the media had a positive direct effect on the learning motivation of students in class X IPA SMAN 2 Gowa, the teacher's teaching skills had a positive direct effect on the physics learning outcomes of students in class X IPA SMAN 2 Gowa, the use of the media has a positive direct influence on the physics learning outcomes of students in class X IPA SMAN 2 Gowa, learning motivation has a positive direct influence on the physics learning outcomes of students in class X IPA SMAN 2 Gowa. This research is expected to be input to teachers to improve teaching skills, so as to be able to stimulate students' learning motivation and be able to improve physics learning outcomes. It is also hoped that it can be input to schools to always update regarding the use of media according to the needs of students, as well as to support the learning process so that it can stimulate learning motivation and improve students' physics learning outcomes.

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