

The Effect of Teacher Professionalism and Student Learning Motivation Through Blended Learning Model On Improving Student Learning Outcomes Of Class XI Vocational High School 1 Medan in The 2023/2024 Academic Year

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Abstract: With the use of the blended learning model, this study attempts to assess the influence of student learning motivation and teacher professionalism on the learning outcomes of Grade 11 students at SMK Negeri 1 Medan in the academic year 2024–2025. This research, which was carried out at SMK Negeri 1 Medan, was motivated by the issues with employing less varied learning models and the lack of interest among students in studying. An Ex-Post Facto design was employed in the quantitative research methodology. 140 pupils from class XI OTKP SMK Negeri 1 Medan made up the sample, and 58 additional individuals were selected at random using the proportional random sampling technique. Questionnaires, documentation, and observation were used to gather data. Coefficient of determination, multiple linear regression, moderated regression analysis (MRA), simultaneous hypothesis testing (F-test), and partial hypothesis testing (T-test) are all used in data analysis. 1. The following conclusions were drawn from the research's findings: The blended learning strategy results in a significant and favorable improvement of 24.2% in learning outcomes. 2. Students that are motivated to learn achieve better learning outcomes by 15.7%. It has a significant and advantageous impact. 3. The professional development of teachers significantly mitigates the 2.3 percent effect of the blended learning learning paradigm on student learning outcomes. 4. At 2.4%, instructors' professionalism has a significant impact on students' enthusiasm to learn in respect to learning objectives. Overall, this study demonstrates that instructor professionalism dramatically modifies the 2.4% learning outcomes that students are motivated to learn.

Keywords: Teacher Professionalism, Learning Motivation, Blended Learning Model, Learning Outcomes

Introduction

Education has a crucial role in national development efforts with the aim of improving knowledge and quality of life of the community. As a tool, education has a significant role in developing and improving the quality of Human Resources (HR). High-quality HR cannot be obtained quickly, but requires various stages of the education or training process. Schools are formal educational institutions that accept students and develop students to ensure that they have the necessary abilities, intelligence, and skills. The learning process can be positively changed by the knowledge, skills, standards, and values that students must acquire during the process. It is also expected that students can achieve good learning outcomes. Students' abilities in learning activities are reflected through the achievement of learning outcomes. Learning outcomes are not only the main goal in the school environment, but also reflect the extent of the effectiveness of the learning process. Thus, teachers need to understand and master various teaching methods, and be able to apply them practically during the teaching process. The results of the Final School Exam (UAS) on Automation of Facilities and Infrastructure in class XI can be used to determine the achievement of learning outcomes. This shows that there are several students who do not achieve the final score (KKM).

Table 1. Presentation of Learning Outcomes of Class XI OTKP Students of SMK Negeri 1 Medan in the Subject of Automation of Facilities and Infrastructure in the Academic Year 2024/2025

Class	KKM	Information				Amount	%
		Completed (Student)	Percentage (%)	Not Completed (Student)	Percentage (%)		
XI – OTKP 1	75	23	63,89 %	13	36,11 %	36	100%
XI – OTKP 2		28	80 %	7	20 %	35	100%
XI – OTKP 3		28	77,78 %	8	22,22 %	36	100%
XI – OTKP 4		23	69,70 %	10	30,30 %	33	100%
Amount		102	72,86 %	38	27,14 %	140	100%

Source: State Vocational School 1 Medan

Through this output, it can be interpreted that there are students who are not optimal in achieving values above the Minimum Completion Criteria (KKM). Here it can be seen that the learning outcomes are still low and not optimal in achieving the success of learning objectives. The level of success of student learning outcomes can be influenced by various aspects, such as the level of teacher professionalism, learning motivation, and learning methods applied during the teaching process. The existence of human civilization on earth is thought to be highly dependent on education, which is a long-term investment in human resources. As a result, education is seen as an important component in national and national development in almost all countries. One of the most important elements in the education system is the teacher, who plays an important role. In the learning process, teachers have a crucial role, making them an important part of formal and informal education. Therefore,

we cannot ignore a number of factors related to the existence of teachers themselves in our efforts to improve teaching standards in Indonesia.

The role of teachers is very important in inspiring students' learning creativity, ensuring that they are well involved in learning activities, and ultimately improving their learning outcomes. Teachers' intrinsic motivation, such as professionalism and professional attitude, is a driving force for self-development as professionals, which in turn can create an extraordinary work ethic. Conditions, goals, authority, and skills in the field of teaching in relation to one's personal and professional life are all part of the professional growth of teachers. Education is a national priority and teachers play an important role in the formation of human resources (HR). The quality of quality education is highly dependent on the level of teacher professionalism, which is considered an absolute requirement for organizing an effective education process. Only teachers who have a high level of professionalism can meet these demands. Expert educators have the power to optimize learning outcomes and make a good effect on student education. Teachers with higher professional qualifications can create individual learning plans that meet the requirements and circumstances of their students. When utilizing the latest and diverse resources, media, and teaching techniques, teachers who have a thorough understanding of the subject matter will be better able to communicate with students. This can increase students' motivation to actively explore the knowledge taught. The role of teachers is very significant in improving student learning achievement, because teachers' expertise in managing classes, understanding students' conditions, and establishing good communication with them can create positive responses, which in turn have a positive influence on improving student learning outcomes.

From the observation output, it can be seen that there are still teachers who do not meet professional competency standards. Teachers with professional competency should be able to create teaching materials in an interesting, innovative, and creative way, which can later motivate students to learn with enthusiasm. In addition to the professionalism shown by educators, motivation is also an important thing to shape learning outcomes. Learning motivation arises because of the drive from the individual himself to achieve achievement. The drive or desire for achievement in students is very important because it can create enthusiasm to achieve the desired target or standard. Motivation refers to various activities to create certain conditions so that someone is willing and has the desire to do an activity. When someone doesn't like something, they tend to try to avoid or reduce feelings of dislike for it. Everyone has a different level of motivation in the context of learning; some pay serious attention to the material presented by the teacher, while some are less focused. Lack of motivation can lead to a lack of enthusiasm, which can then result in low learning outcomes. Conversely, when students have a strong drive to learn, they become more involved and enthusiastic in learning activities, which will later improve learning outcomes.

The lack of student learning motivation can be seen by looking at observations made in class XI OTKP. Lack of encouragement and accountability of students in completing assignments given by instructors is an indication of this. As well as lack of attention to the correctness of the answers they provide. Many students do assignments by directly copying

and pasting answers from Google or other sources and then submitting the assignment without first understanding it. What students experience while learning also has an impact on their learning outcomes. Learning must be done correctly and using appropriate learning models to transfer the necessary skills. Teachers are required to be increasingly proficient in representing the learning process in such a way that it can meet learning objectives in line with advances in science and technology, especially in the field of education. In the world of education, we cannot avoid the impact of the rapid developments in information technology that are currently occurring. This is reflected in the shift from traditional face-to-face learning models to online learning. It seems that information networks that facilitate communication and collaboration will have a greater impact on education in the future, not only on the construction of actual schools. An important first step in improving educational standards and encouraging student independence and desire to learn is the use of information technology in the classroom. One real example is the use of a combined learning model between face-to-face and online, which is often referred to as Blended Learning. In implementing the blended learning method in the current learning process, this approach utilizes e-learning. This blended learning model combines two learning systems, namely through direct and online interaction. The use of direct learning activities is used so that face-to-face interaction is direct, while online learning activities are used as a platform for delivering assignments, such as using Google Classroom, and also as a tool for delivering additional materials, for example via Zoom or Google Meet. Because it combines face-to-face teaching with online teaching through the use of an e-learning platform, this learning model is very easy to apply. (Misdalina, 2017:156). Currently, blended learning has been widely used in Indonesia, including at SMK Negeri 1 Medan. In blended learning, there are certain learning systems that can be used for face-to-face or online training, and these systems can also be used to teach subjects that are not suitable for direct classroom teaching. Google Classroom is an example of a tool used to facilitate blended learning activities. Google Classroom is a free web-based platform created to simplify interactions between educators and students in learning activities. The use of Google Classroom is a step to support various teacher and student activities in the context of learning, including providing materials, quizzes or daily tests, and implementing assessments. The use of Google Classroom began at SMK Negeri 1 Medan in the even semester of the 2024 academic year. Based on the results of the observation, it can be concluded that the blended learning approach is not yet optimal in its application. In its implementation, blended learning, especially during online learning, still has obstacles in the form of lack of interaction between students and teachers, according to (Husamah, 2014: 13) Online learning faces obstacles in direct interaction between students and teachers. However, it is still important for teachers to obtain output from students, and vice versa, students also need feedback from teachers.

Methodology

This study uses quantitative methodology. A specific population or sample is studied using quantitative methods, which are sometimes described as research tools based on positivism. To evaluate the hypotheses developed, data analysis is quantitative or statistical and uses research tools for data collection (Sugiyono, 2013: 8). However, this study uses a post-hoc methodology, which is to see what happened and then conduct a retrospective analysis to find possible causes. However, this study uses a post-hoc methodology, which is to see what happened and then conduct a retrospective analysis to find possible causes (Danuri and Siti Maisaroh, (2019: 246). The research population came from class XI OTKP Academic Year 2023/2024 with a total of 140 and a sample of 58 students. Data was taken using the proportional random sampling method. This process involves selecting students randomly from each class proportionally. This approach was chosen because the population consists of children with different class sizes. The method of data collection is observation, where data is collected directly through observation in class XI OTKP SMK Negeri 1 Medan. The researcher collects information about student learning motivation. Furthermore, there is documentation, from the data that has been collected, the researcher conducted documentation, the researcher obtained data on the learning outcomes of class XI OTKP students through the TU Staff of SMK Negeri 1 Medan. The questionnaire is the researcher's last tool for collecting data. Written data will be collected using this questionnaire and then distributed to class XI OTKP students at SMK Negeri 1 Medan. Before starting the study, the researcher first conducted a questionnaire trial by distributing it to 30 respondents. The purpose of this step was to evaluate the validity and reliability of the research questionnaire instrument. The trial was conducted outside the research sample group, namely in Class XI OTKP at SMK Negeri 1 Medan.

Result and Discussion

The research was conducted at SMK Negeri 1 Medan located in the Medan City District, North Sumatra on Jalan Sindoro No. 1 Pasar Medan. The activity, which is scheduled for August 2023, will be attended by 140 OTKP class XI students of SMK Negeri 1 Medan. The research sample consisted of 85 students and was selected using a proportional random sampling approach. Before starting the research, the researcher first tested the questionnaire by distributing it to 30 respondents. Evaluating the level of validity and reliability of the research questionnaire instrument is the goal. Although this experiment was not carried out on the research sample, it was still carried out on Class XI OTKP students of SMK Negeri 1 Medan who had the same characteristics as the research sample. In this study, the questionnaire instrument consisted of 66 statements divided into three parts, namely Blended Learning with 22 statements (21 were said to be valid and 1 was invalid), Learning Motivation with 22 statements (21 were said to be valid and 1 was invalid), and Teacher Professionalism with 22 statements all of which were said to be valid. After calculating the reliability test of the questionnaire with the following results: First, the Blended Learning questionnaire had a Cronbach's Alpha value of $0.948 > 0.361$ so that the questions were declared reliable. Second, the Learning Motivation questionnaire had a Cronbach's Alpha value of $0.941 > 0.361$ so that the questions were declared reliable. Third, the Teacher

Professionalism questionnaire had a Cronbach's Alpha value of $0.953 > 0.361$ so that it was declared reliable

The Influence of the Blended Learning Model (X1) on Learning Outcomes (Y)

The first hypothesis explains that there is a positive influence of Blended Learning (X1) on Learning Outcomes (Y). Through the output of multiple linear regression analysis, it is known that Blended Learning has an influence of 0.242 or 24.2% on Learning Outcomes. Thus, if Blended Learning makes an improvement, then Learning Outcomes will also increase, and vice versa. This factor is caused by the positive coefficient of Blended Learning on Learning Outcomes. The t value at a significance level of $0.015 < 0.05$ is determined through the output of the partial hypothesis test (t test). H_a is approved but H_0 is rejected. So that it shows that Learning Outcomes (Y) and Blended Learning (X1) have a fairly large and beneficial relationship. Thus, the first hypothesis stating that blended learning has an effect on the learning outcomes of class XI students of SMK Negeri 1 Medan can be accepted. This opinion is consistent with the research of Rudiansyah and colleagues (2019), compared to traditional learning, the blended learning paradigm is claimed to have a significant effect on learning outcomes. The research results and expert views confirm that the Blended Learning model (X1) has a positive and significant influence on improving the Learning Outcomes (Y) of class XI students at SMK Negeri 1 Medan.

The Influence of Learning Motivation (X2) on Learning Outcomes (Y)

The second hypothesis in this study states that Learning Motivation (X2) has a positive influence on Learning Outcomes (Y). Through multiple linear regression analysis, it was found that the influence of Learning Motivation on Learning Outcomes was 0.157 or 15.7%. This means that an increase in the Learning Motivation variable has an effect on increasing Learning Outcomes, and vice versa. A decrease in Learning Motivation also has an effect on decreasing Learning Outcomes, because the Learning Motivation coefficient has a positive value on Learning Outcomes.

The t value, with a significance threshold of $0.014 < 0.05$, was determined based on the findings of the partial hypothesis test (t test). H_a was approved but H_0 was rejected, indicating a strong and beneficial relationship between learning outcomes (Y) and learning motivation (X2). Therefore, it can be accepted if it supports the second hypothesis which states that learning motivation affects class XI students of SMK Negeri 1 Medan in terms of their learning outcomes.

This opinion is in line with the research of Teni et al. (2021), which shows that learning motivation has a positive influence on student learning outcomes. So the conclusion is that there is a positive and significant influence of Learning Motivation (X2) on improving Learning Outcomes (Y) of class XI students at State Vocational School 1 Medan.

The Influence of Teacher Professionalism (X3) Moderating the Blended Learning Model (X1) on Learning Outcomes (Y)

The third hypothesis states that the interaction between Blended Learning (X1) and Teacher Professionalism (X3) will improve Learning Outcomes (Y). From the results of multiple linear regression analysis, the regression equation $Y = 247.101 + 2.024 X1 + 2.001 X2 + 3.892 X3 + 0.023 X1X3 + 0.024 X2X3 + e$ was found. This shows that there is an effect of interaction between Blended Learning and Teacher Professionalism on Learning Outcomes of 0.023 or 2.3%. This means that increasing the interaction between Blended Learning and Teacher Professionalism will have an impact on improving Learning Outcomes, and vice versa. Decreasing the interaction between Blended Learning and Teacher Professionalism will also have an impact on decreasing Learning Outcomes, because the interaction coefficient has a positive value on Learning Outcomes. The partial hypothesis test output (t-test) shows a t-count of 2.672 with a sign level of $0.010 < 0.05$. This means that H_0 is rejected and H_a is accepted. This shows that there is a significant and positive influence between the interaction of Blended Learning and Teacher Professionalism. So it means that the third hypothesis, stating that there is an influence of the interaction between Blended Learning and Teacher Professionalism on the Learning Outcomes of class XI students at SMK Negeri 1 Medan, can be accepted. This opinion is in line with research from Muhammad Ramdani Nur and colleagues (2020), which shows that teacher professionalism has a significant positive influence on student learning outcomes. In conclusion, if the positive and significant interaction between Blended Learning and Teacher Professionalism (X1X3) has an effect on improving the Learning Outcomes (Y) of class XI students at SMK Negeri 1 Medan.

The Influence of Teacher Professionalism (X3) Moderating Learning Motivation (X2) on Learning Outcomes (Y)

The fourth hypothesis confirms that the interaction between Learning Motivation (X2) and Teacher Professionalism (X3) will have a positive impact on Learning Outcomes (Y). From the output of multiple linear regression analysis, the regression equation is $Y = 247.101 + 2.024 X1 + 2.001 X2 + 3.892 X3 + 0.023 X1X3 + 0.024 X2X3 + e$. This result indicates that there is an influence of the interaction between Learning Motivation and Teacher Professionalism on Learning Outcomes of 0.024 or 2.4%. This means that increasing the interaction between Learning Motivation and Teacher Professionalism will contribute to increasing Learning Outcomes, and vice versa. In line with that, decreasing the interaction between Learning Motivation and Teacher Professionalism will also have an impact on decreasing Learning Outcomes, because the interaction coefficient has a positive value on Learning Outcomes. Through the partial hypothesis test output (t-test), it was found that the t-count value was 2.317, meaning it was significant at $0.024 < 0.05$. So H_0 is rejected and H_a is accepted. So that it shows a significant and positive influence between the interaction between Learning Motivation and Teacher Professionalism on Learning Outcomes. This means that if the fourth hypothesis, stating that there is an influence of the interaction between Learning

Motivation and Teacher Professionalism on the Learning Outcomes of class XI students at SMK Negeri 1 Medan, can be accepted.

In line with the views of Zul Andi Kurniadi and colleagues (2020), which state that teacher professional competence has a positive and significant impact on student learning motivation.

The results of the study and the views of experts further strengthen the conclusion that the positive and significant interaction between Learning Motivation and Teacher Professionalism (X2X3) contributes to improving the Learning Outcomes (Y) of class XI students at SMK Negeri 1 Medan.

Conclusion

It was found that the implementation of Blended Learning has a positive and significant influence on improving the Learning Outcomes of class XI students of the Computer and Network Technology Expertise Program (OTKP) at SMK Negeri 1 Medan. These results indicate that the more effective the implementation of the Blended Learning model, the higher the level of student Learning Outcomes, and vice versa.

The findings show a positive and significant influence of Learning Motivation on improving the Learning Outcomes of class XI students at SMK Negeri 1 Medan. These results show that the higher the level of Learning Motivation, the higher the level of student Learning Outcomes, and vice versa.

It can be seen that the interaction between Blended Learning and Teacher Professionalism has a positive and significant influence on improving the Learning Outcomes of class XI students at SMK Negeri 1 Medan. This finding shows that if the application of the Blended Learning model increases and the level of Teacher Professionalism increases, the level of student Learning Outcomes will also increase, and vice versa.

Other findings show a positive and significant influence of the interaction between Learning Motivation and Teacher Professionalism on improving the Learning Outcomes of class XI students at SMK Negeri 1 Medan. This indicates that the higher the level of Learning Motivation and Teacher Professionalism, the higher the level of student Learning Outcomes, and vice versa.

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