



## THE INFLUENCE OF TEACHER SKILLS UTILIZING ICT AND TEACHER TEACHING STYLE ON LEARNING OUTCOMES USING BLENDED LEARNING

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### Abstract

This study aims to determine the effect of teacher skills in using ICT and teacher teaching styles on student learning outcomes at SMKN 46 Jakarta. The results of this study are: (1) There is a significant positive effect between teachers' skills in using ICT on learning outcomes indicated by the value of  $t_{count} 2,165 > t_{table} 1,98397$ ; (2) There is a significant positive effect between the teacher's teaching style on learning outcomes as indicated by the value of  $t_{count} 3,827 > t_{table} 1,98397$ ; (3) There is a significant positive effect between the skills of teachers in using ICT and the teaching style of teachers on learning outcomes as indicated by the value of  $nilai f_{count} 39,4 > f_{table} 3,09$ . The multiple correlation coefficient is 0.677 and the coefficient of determination is 0.430 or 43%, the variable of the teacher's skills in using ICT and the teacher's teaching style affect the learning outcomes of students together and the rest is influenced by other factors not examined in this study. Then from this research, it can contribute to the development of the field of education, especially for teachers. Teachers are required to be better and explore more deeply, especially in ICT skills and teaching styles, so that student learning outcomes can experience significant development.

**Keywords:** Teacher Skills Utilizing ICT, Teacher Teaching Style, Learning Outcomes, Blended Learning.

### INTRODUCTION

National education is a vehicle for the advancement of human existence in Indonesia as the successor of the nation in terms of understanding the beliefs upheld by the Indonesian state as stated in Pancasila and the 1945 Constitution. Through education, humans themselves can develop their own abilities, build character, and build personalities to be good for the future, so that they can be useful for life in society and socializing with each other. School is a formal instructive foundation that is used as a place for teaching and learning activities and gaining knowledge that will be useful for life. Schools can also be used to achieve educational goals.

For the purposes of educators, it is said to be successful if the KBM (Teaching and Learning Activities) process carried out by teachers and students can be carried out efficiently and affectively, so that students get benefits and provide good changes. Schools as instructive organizations use learning outcomes as a proportion of outcomes in the educational experience. The success of learning outcomes is influenced by the integrative functioning of each supporting factor. The factors that affect learning outcomes include (1) Professional teachers who have pedagogical competence, personality competence, social competence, and professional competence; (2) Participatory and interactive KBM atmosphere implemented by the existence of multiple communication, both actively, creatively, effectively, innovatively, and excitingly, such as communication between teachers and students, communication between students and students, contextual and integrative communication between teachers, students and their environment (Suhana, 2014).

With the development of Information and Communication Technology (ICT) in the industrial revolution 4.0 and the covid-19 pandemic. So that there are drastic changes in various aspects of life,

especially in the world of education, teachers must make improvements and adjustments to the implementation of educational services so that student learning outcomes increase. These adjustments are made by adapting the development of ICT advances, educational technology, and the latest technological adaptation to become a challenge for 21st century learning problems that are very urgent (Kaharudin, 2021). The unpreparedness of teachers and learners in technology adaptation can be a problem in distance or online learning, and affects the learning outcomes of the learners themselves. Therefore, people are urged to make changes to each of their activities. The development of ICT can also make a significant influence on the shifting of teaching and learning paradigms in schools (Rivalina, 2015). Seeing the high or low skills in utilizing ICT, teachers have an important role in determining student learning outcomes. Teachers act as *agents of change* in the fields of information, knowledge and knowledge for all their students, teachers have an extraordinary role to encourage their students to become virtuous, intelligent, and outstanding people.

The Covid-19 pandemic also forces teachers and students to be very dependent on the internet and other devices and forces all educational elements in Indonesia to understand and understand about ICT. Then the Ministry of Education, Culture, Research and Technology made Data on the Implementation of Education during the Covid-19 Pandemic which stated that it has been one year since the Covid-19 Pandemic occurred and then had the potential to cause prolonged negative social impacts, one of which was a decrease in the achievement of learning outcomes. Differences in access and quality during PJJ can result in gaps in learning outcomes, especially children from different socio-economies. this research also says the occurrence of "Learning Loss", namely learning in the classroom produces better academic achievement compared to PJJ (Kementrian Pendidikan, Kebudayaan, 2021).

For this reason, the DKI Jakarta Provincial Education Office has implemented a limited trial of opening schools with a *blended learning* system. *Blended learning* is a learning method that can be applied as an alternative to distance learning by combining face-to-face learning with online learning (Abroto et al., 2021). Then this phenomenon encourages researchers to dissect and study how the influence of teacher skills utilizing ICT teachers of SMKN 46 Jakarta on student learning outcomes during the *blended learning* period. Learning activities require interaction between teachers or educators and students. Teachers are the dominant factor in the learning process in schools. The teaching style of the teacher in the classroom is also the main characteristic of the teacher called the educator. Students will pay attention to the teacher's teaching style, even imitating the teacher, this will be an agitation for the student whether the learner is interested in the teacher and the subjects taught by the teacher. Learning is not just collecting knowledge, learning is a mental process in a person so that it causes changes in both one's behavior and disposition.

Learning outcomes are still used as a reference or measure to find out the extent to which a person masters the material or material that has been taught by educators. The process of obtaining student learning outcomes is also influenced by many factors, one of which is the teaching style of the teacher used. The teacher's teaching style is a way or technique of a teacher in conveying the content of their teaching. The teacher's teaching style is related to the delivery, interaction and personality traits of the teacher (Astutie, 2013). The teacher is a human figure who is said to be a second parent with a position that plays a very important role in the world of education, the teacher must also be able to attract the sympathy of his students so that they become idols. With this, teachers are human resources who really determine whether or not the achievement of educational goals is successful.

There are several problems regarding the world of education, especially regarding teachers who are essentially not teaching according to their field of study, unable to manage learning neatly, unable to adjust to a situation where teachers are required to be able to master learning in the classroom, are unable to socialize with students, resulting in less interesting learning and low student learning outcomes. All of these things are related to the teacher's teaching style during *blended learning*. In fact, there are also some teachers who still use the old method, namely the lecture method, monotonous teaching style, teaching by transferring knowledge only. Although many teachers use learning media such as PowerPoint, the method still ends with a lecture, so students become sleepy. From this, the teacher's teaching style can affect the grasping and learning outcomes of students. Based on the background above, the researcher is interested in

conducting a research with the title “The Influence of Teacher Skills Utilizing Ict and Teacher Teaching Style on Learning Outcomes Using Blended Learning”

## **LITERATURE REVIEW**

Learning has undergone evolutionary development in line with the development of the viewpoints and experiences of scientists. Understanding learning can be defined in accordance with the philosophical values adopted by the experience of the experts themselves or scientists in teaching their students (Suhana, 2014). According to Suhana (2014) although there are some differences in the definition of learning, all of them are historical journeys that continue to accumulate as a manifestation of a paradigm shift in the sense of learning. According to Siregar & Nara (2019) learning is a complex process that happens to everyone and lasts a lifetime, from infancy (even in the womb) to the grave. One sign that someone has learned something is a change in behavior in him. Changes in behavior consist of changes that are knowledge (cognitive), skills (psychomotor), as well as concerning values and attitudes (affective). Learning is a complex process which includes aspects of increasing the amount of knowledge, the ability to remember and reproduce, the application of knowledge, and inferring meaning.

From some of the opinions of the experts above regarding the notion of learning as explained, it can be concluded that learning is the development of the intellect and the brain from a traditional point of view, while from a modern perspective it tends to be oriented towards holistic and integral behavior change. Learning is a complex process that occurs in everyone and the process lasts a lifetime, from infancy, even from in the womb to the grave, a sign that someone has learned is by changing his behavior. Then the changes in behavior involve changes that are knowledge (cognitive), skills (psychomotor), and involve values and attitudes (affective).

### **Learning Outcomes**

Learning outcomes are behavioral adjustments in individuals that can be considered and estimated as information, perspectives and abilities. This development can be interpreted as improvement and progress that is better than anyone expected and individuals who do not know become aware (Hamalik, 2013). Learning outcomes are certain abilities or capacities, both mental, feeling, and psychomotor that are achieved or mastered by students after taking part in teaching and educational experiences (Kunandar, 2013). Student learning outcomes are basically changes in behavior because they learn from a wider perspective covering the mental, emotional, and psychomotor fields (Sudjana, 2017). According to Benjamin S Bloom's theory in (Sudjana, 2017) learning outcomes are divided into three domains, including cognitive, affective, and psychomotor domains. In this study, the cognitive domain was measured, because it was related to the ability of students to master the subject matter in class.

### **Teacher Skills Utilizing ICT**

Each individual has different skill levels, mastery of these skills depends on the abilities they have. Skills can show the specific action shown or the circumstances in which the skill is performed. According to Sumiati & Takidah (2019), skills are the result of learning from the psychomotor realm. According to Matutina in Tsauri (2014) said that skill is the ability and operational technical mastery in a certain field that a person has. According to Tsauri (2014) skill is the ability to do certain physical or mental tasks. According to Sudjana (2017) skills are patterns of purposeful activities, which require manipulation and coordination of learned information.

According to Munir (2009), the paradigms that underlie the integration of ICT in education are: 1) ICT as technological tools that can be used as actors in education; 2) ICT as part of the material; 3) ICT as a tool to collect, manage, store, investigate, prove and disseminate important information effectively and efficiently.

The skills of teachers in using ICT can be seen from the views or perspectives of students, this is supported by the opinions of experts, according to Restiyani (2015) explaining that the literacy skills of teachers in the form of the ability to read, speak, see, listen and have good opinions have the potential to

use ICT. This opinion is the same as the opinion of Peralta & Costa (2007) who say that teachers with more experience with computers have greater confidence in their ability to use ICT effectively. Then, Andrew (2017) also said the same thing, that self-confidence is successful in initiating and implementing educational technology in schools, which is in the teacher's role, both in teacher attitudes, teacher skills, and teacher knowledge.

### **Teacher Teaching Style**

According to Wati (2019), teaching style is the style or behavior of the teacher as a statement of his personality in conveying his lesson material to students. According to Putri et al. (2019) the teacher's teaching style is a way or form of teacher appearance in instilling knowledge, changing or developing abilities, guiding, behavior and personality of students in the classroom in achieving learning goals. According to Astutie (2013) teaching style is a way to carry out the teaching and learning process so that the goals can be achieved. Based on the opinions of experts, it can be concluded that teaching style is a method, technique, form of teacher appearance, and teacher behavior as a personality statement used by teachers to impart knowledge, change or develop abilities, guide students' behavior and personality, convey teaching content, organizing, guiding learning experiences, as well as carrying out the teaching and learning process so that the objectives can be achieved. The teaching style also reflects on how to carry out teaching, gives the impression, views, and perspectives of students on understanding the material presented by the teacher, the curriculum implemented also colors the teacher's teaching style. The purposes of various teaching styles that can be used as indicators according to Djamarah & Zain (2006) are:

1. Can improve and maintain students' attention to the suitability of the teaching and learning process.
2. Provide opportunities for the possible functioning of learning motivation.
3. Can form a positive attitude towards the teacher itself and the school.
4. Can provide individual learning options and facilities.
5. Encourage students to learn.

### **Blended Learning**

In this study, the researcher conducted his research during the implementation of blended learning, blended learning is a term derived from English, which consists of two words, blended which means a good mixture or combination. Basically, this is a combination of the advantages of learning that is carried out face-to-face and virtually. According to Garrison and Vaughan in Heriyanto (2014) blended learning is a learning method that combines face-to-face learning processes with online learning processes that are optimally integrated. Whittaker in Wahyunita & Subroto (2021) said that blended learning is a learning method that can be applied as an alternative to distance learning by combining face-to-face learning with online learning. According to Driscool & Carliner in Istiningsih & Hasbullah (2015) said blended learning integrates or blends-learning programs in different formats to achieve a common goal. According to Husamah (2014) blended learning is a harmonious blend of conventional teaching or training where teachers and students meet face-to-face and also through online media that can be accessed anytime, anywhere, 24 hours a day, and seven days a week.

From the opinion of experts, it can be concluded that blended learning is a learning method that is applied as an alternative to distance learning, namely by a harmonious blend of the learning process, both face-to-face and with an online learning process that is optimally integrated and can be accessed anytime and anywhere. According to Chaeruman & Mudiarti (2018), the blended learning model has four learning spaces:

1. Direct synchronous, namely face-to-face learning in the same place and time.
2. Synchronous virtual, namely learning that is carried out face-to-face through virtual media such as video conferencing so that it is carried out at the same time but in different places.
3. Independent asynchronous learning is independent learning that can be done anytime and anywhere according to the goals and desires of students.
4. Collaborative asynchronous is learning that can be done anywhere and anytime but in groups.

## METHOD

This research method uses a descriptive quantitative method, the data used is variable Y is secondary data, namely the average daily test score and the odd End of Semester Assessment of students of SMKN 46 Jakarta class X AKL 1-2 subjects of Number Processing Application/*Spreadsheet* and class XI AKL 1-2 computer accounting subjects for the 2021/2022 academic year, this data was obtained from data from the administrative section of SMKN 46 Jakarta using documentation techniques. Based on the variables  $X_1$  and  $X_2$  using primary data using a survey conducted by distributing questionnaires *online* to students of Class X – XI AKL 1 & 2 SMKN 46 Jakarta as many as 141 students. This research was conducted from April to June 2022, researchers chose this time based on the most effective time considerations, namely after learning using *blended learning* more precisely in the period after the division of learning outcomes in the odd semester of the 2021/2022 academic year, so that this time can make it easier for researchers to carry out research. The research site was carried out at SMKN 46 Jakarta. By drafting instruments using conceptual, operational, instrumental lattices, validity and reliability tests. The data analysis technique uses multiple linear regression equation analysis with analysis requirements test and hypothesis test.

## RESULTS AND DISCUSSION

Based on the *output coefficients table* below the values  $t_{count}$  of the teacher's skill variables utilizing ICT ( $X_1$ ) of  $2,165 > 1,98397 t_{table}$  so it is stated that the variables of teacher skills utilizing ICT partially have a significant influence on the variables of learner learning outcomes. The next free variable i.e. the teacher's teaching style has  $t_{count} 3,827 > 1,98397 t_{tabel}$  meaning that it is stated that the variables of the teacher's teaching style partially have a significant influence on the bound variables, namely the learning outcomes of learners.

**Table 1 T Test SPSS v.26**

Coefficients <sup>a</sup>						
Model		Unstandardized		Standardized	t	Sig.
		Coefficients		Coefficients		
		B	Std. Error	Beta		
1	(Constant)	59,922	3,189		18,788	,000
	Teacher Skills Utilizing ICT	,238	,110	,254	2,165	,033
	Teacher Teaching Style	,334	,087	,449	3,827	,000

a. Dependent Variable: Hasil Belajar Peserta Didik

Source: *Output IBM SPSS v.26*

Based on the *output* of the ANOVA *table* below the values in the *output coefficients table* below the value  $f_{hitung} 39,420 > 3,09 f_{tabel}$ , then it can be concluded that there is a significant influence between the variables of skills utilizing ICT, the teaching style of teachers, and the learning outcomes of learners.

**Table 2 F Test SPSS v.26**

ANOVA <sup>b</sup>					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	4497,241	2	2248,620	39,420	,000 <sup>a</sup>
Residual	5704,255	100	57,043		
Total	10201,495	102			

a. Predictors: (Constant), Teacher Skills Utilizing ICT, Teacher Teaching Style

b. Dependent Variable: Learning Outcomes

Source: *Output IBM SPSS v.26*

Then from the table below, the *adjusted R Square* ( $R^2$ ) value is an adjusted coefficient of determination of 0.430. From the existence of *adjusted R Square* ( $R^2$ ) of 0.430 so that it can be concluded that the percentage of teacher skills utilizing ICT ( $X_1$ ) and teacher teaching style ( $X_2$ ) to explain the variables of student learning outcomes simultaneously is 43% then the rest can be influenced by other factors that are not studied.

**Tabel 3 Hasil Uji Koefisien Determinasi SPSS v.26**

Model Summary <sup>b</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,664 <sup>a</sup>	,441	,430	7,553

a. Predictors: (Constant), Teacher Skills Utilizing ICT, Teacher Teaching Style

b. Dependent Variable: Learning Outcomes

Source: *Output IBM SPSS v.26*

### 1. The Influence of Teacher Skills in Using ICT on Learning Outcomes

The result in this study is in line with the results of previous research conducted by Delila Sari Batubara (2017) which said that teachers in utilizing ICT can affect the learning outcomes of their students. Where there are several factors that can affect a teacher's ICT skills, namely repellents for better changes so that teachers' mastery of ICT devices becomes low. Then the next factor is teachers who have very teaching hours every day at school so that to practice ICT skills is limited. This is also in line with research conducted by Rahmi Rivalina (2015) who said that teachers who implement and who integrate ICT in a learning activity in schools will make learning activities more interesting and students become more optimal in understanding the learning material so that in the end it results in improving the quality of student learning outcomes. This is also in line with ucup who said in his research that teachers positively have competence in utilizing ICT in developing *online* learning media so that learning objectives can be achieved and in accordance with curriculum targets and positively affect student learning outcomes. Then this is also in line with research conducted by andika who said that more than 73% of ICT utilization is carried out by teachers as a planning, process, and evaluation tool in learning, so that it affects the learning outcomes of students quite well.

Based on the description above, there is a novelty of the research that researchers conducted, namely from the object of the study, a significant positive influence was obtained and the teacher's skill in utilizing ICT in *blended learning* provided a large number of factors that influenced student learning outcomes. The most important research that is revelan is also a support for conducting this research, with the existence of this from the results of the hypothesis which previously also proved that there was a significant positive influence between teachers' skills in utilizing ICT on learning outcomes.

### 2. The Influence of Teacher's Teaching Style on Learning Outcomes

The test results in this study are also in line with the research conducted by Cintya Septiana Andri Astutie (2013) who in his research revealed that the results of this study for teaching style variables have t test results with  $t_{\text{count}} 3,167992 > t_{\text{table}} 1,997$  then it can be concluded that the hypothesis of being accepted with the teacher's teaching style significantly affects the learning outcomes of learners. This is in line with research conducted by Nurita Hidayati (2015) which revealed that the partial regression

coefficient test or t test of teacher teaching style variables on student learning outcomes is by  $t_{\text{count}} 3,605 > t_{\text{table}} 1,98$ , so the conclusion is that there is partially a significant influence between the teacher's teaching style on the learning outcomes of students.

Based on the presentation of the discussion above, there is a novelty of the research that the researcher conducted, namely from the object of the study, a significant positive influence was obtained, then the learning outcomes of students at the time of learning using blended learning provided a large number of factors that influenced student learning outcomes. The most important research that is relevant is also a support for conducting this research, then with the results of the hypothesis which previously also proved that there is a significant positive influence between teachers' teaching styles on learning outcomes.

### **3. The Influence of Teacher Skills in Using ICT and Teacher Teaching Styles on Learning Outcomes**

The results in the discussion above are in line with the results of previous research conducted by Cintya Septiana Andri Astutie (2013) which revealed hypothesis testing with an f test indicating that the value of  $f_{\text{count}} 11,61 > f_{\text{table}} 3,99$  can be interpreted to mean that the free variables consisting of the teacher's teaching style and the learner's learning style together affect the learning outcomes of students. This is also in line with the results of research obtained by Ani Lestari Sugeng (2019) with a significant value of 0.000 which means that there is a significant influence on variables of learning discipline, social environment, and variations in teacher teaching styles on student learning outcomes. This is also in line with the results of research conducted by Raekha Azka (2019) revealing that the value of  $f_{\text{count}} 23,5 > f_{\text{table}} 3,3$  so that it means that the better the motivation to learn and the better the teacher's teaching style together, the higher the learning outcomes of the students. This is also in line with research conducted by Andika Prajana and Yuni Astuti (2020) said that if teachers improve their skills in utilizing ICT as a tool in learning planning, then as a process in learning and as an evaluation of learning, student learning outcomes will also increase.

Based on the discussion above, the novelty of the research carried out by the researcher is in different research objects and the presence of other variables used. Then with the results of the hypothesis which previously also proved that there is a significant positive influence between the teacher's skill of utilizing ICT and the teacher's teaching style together on the learning outcomes of students using blended learning.

## **CONCLUSION**

1. There is a significant positive influence between teachers' skills in utilizing ICT on the learning outcomes of students of SMKN 46 Jakarta using blended learning. This can be interpreted to mean that the higher the teacher's skills in utilizing ICT, the higher the learning outcomes of students. On the other hand, if the teacher's skills in utilizing ICT are low, the learning outcomes obtained by students will decrease.
2. There is a significant positive influence between the teacher's teaching style on the learning outcomes of students of SMKN 46 Jakarta using blended learning. This means that if the teacher's teaching style is getting better, the learning outcomes of students will also increase. Vice versa, if the lower the teacher's teaching style, the lower the learning outcomes of students
3. There is a significant positive influence between the teacher's skills in utilizing ICT and the teacher's teaching style on the learning outcomes of students of SMKN 46 Jakarta using blended learning. This means that the better the teacher's skills in utilizing ICT and the teacher's teaching style, the higher the student's learning outcomes. On the other hand, if the teacher's skills of utilizing ICT and the teacher's teaching style decrease, the learning outcomes of students will also decrease.

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