



THE LEARNING MANAGEMENT SYSTEM (LMS) ACCEPTANCE LEVEL IN LEARNING TEACHER PERFORMANCE (TAM APPROACH)

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Abstract: The purpose of the study was to determine the Acceptance Level of the Learning Management System (LMS) in Learning on Teacher Performance (TAM Approach). Teacher performance that is still low in mastering LMS can result in low student learning outcomes. The research method used is quantitative with the type of survey. The research instrument used a questionnaire. Data analysis used the t test and F test. The results showed that teacher readiness had a positive and significant effect on teacher performance during the Covid-19 pandemic (t count 8.950 greater than t table 1.971 in sample 221 and = 0.05. Perception of using the Technology Acceptance Model (TAM) has a positive and significant effect on teacher performance during the Covid-19 pandemic (t count 9.673 greater than t table 1.971). Teacher readiness and perceptions of using the Technology Acceptance Model (TAM) have a positive and significant impact on teacher performance during the Covid-19 pandemic (F count 65.538 greater than F table (2:218) of 3.04 at = 0.05. The conclusion of the study is that if you want to improve the performance of teachers during the Covid-19 pandemic at SMA Negeri Depok City, then factors such as teacher readiness and perceptions of use Technology Acceptance Model (TAM) needs to be improved simultaneously The implications of the study show the variable perception of the use of the Technology Acceptance Model (TAM) need to be implemented by the teacher.

Keywords: Learning Management System (LMS), Teacher Readiness, Perception, Teacher Performance, Technology Acceptance Model (TAM)

INTRODUCTION

Corona virus-19 (Covid-19) continues to be a frightening pandemic and has changed almost all aspects of life in various parts of the world, including in the field of education services. Online learning has been chosen as the best alternative for schools to provide educational services for all students, even though teachers and students can no longer meet face-to-face. This is done in an effort to prevent the spread of Covid-19 which is still massive in Indonesia.

Online learning or commonly known as e-learning plays an important role as one of the other innovations in the current learning process, especially during the pandemic.

Unfortunately, the rapid change in learning patterns due to this emergency situation was not immediately followed by the readiness of all education stakeholders, both schools (principals and teachers), students and parents and even the government as the organizer of the availability of infrastructure that supports the BDR implementation program.

Not all students at home have devices (cellular phones, laptops or personal computers) that are connected to the internet network. Economic conditions greatly affect the readiness of students to take part in online learning from home. In fact, in the implementation of BDR, the availability of devices connected to the internet is a must. There are still many situations that occur where in a family with more than one child implementing BDR must share devices, so that students are increasingly unable to learn optimally. The lack of devices and internet access has finally become one of the obstacles in online learning.

The application of online learning requires careful preparation and planning from all parties involved, starting from the school or institution, teaching staff, and from students so that learning objectives can be achieved (Ruktiari et al., 2021). Another problem that arises is that many students who take online learning feel that teachers have a heavier workload during online learning compared to face-to-face learning. As a preliminary study, it was found that the use of learning application technology in several high schools in the city of Depok using WhatsApp and Google Classroom became the most commonly used platforms, while for online learning activities via video conferencing, Google Meet or Zoom meetings were used.

Important factors that influence the success of online learning are facilities and infrastructure, as well as the ability of teachers to innovate in managing online learning to create interesting and meaningful learning. There are three important elements in an information system related to the application of ICT, namely hardware, software and brainware (Yulianto, 2011). The three elements interact with each other and are connected to an input-output device, which is in accordance with their respective functions. Hardware is the medium used to process information. Software, namely systems and applications that are used to process input to become information, while users are hardware and software developers as well as input implementers as well as output recipients as system users.

User behavior (brainware) of ICT devices will greatly affect the interaction process in the use of technology that will be used in this online learning. The attitude factor is one aspect that influences individual behavior. A person's attitude consists of components of cognitive, affective and behavioral components (Ruktiari et al., 2021). The user's attitude towards the device (computer or cellphone) can also be shown by the user's optimistic attitude that the computer or cellphone will be very helpful and useful to solve problems or work. One of the uses of technology used in online learning is the Technology Acceptance Model (TAM).

Technology Acceptance Model (TAM) is a model that is widely used in various studies regarding the process of adopting information technology. This model explains the main factors of user behavior towards the acceptance of the use of technology, and also explains the acceptance of information technology with certain dimensions that can affect the acceptance of technology by users. This model places the attitude factor of each user's behavior into two variables, namely: ease of use and usefulness.

Acceptance and use of ICT in learning is expected to help learning to be more effective and efficient. The success of a teacher in carrying out the task will be seen when the teacher is able to prepare learning carefully and attractively so that the message in learning is conveyed in its entirety and students can have a pleasant learning experience. Limitations during the pandemic can be overcome through the use of technology that can penetrate time and space so that anyone can learn anytime and anywhere.

This study will test the readiness of teachers to teach using ICT-based media and teacher acceptance of new technologies will affect teacher performance, so the authors are

interested in taking the title: "Level of Acceptance of Learning Management System (LMS) in Learning on Teacher Performance (TAM Approach)".

LITERATURE REVIEW

Teacher Readiness

Readiness is the condition of a person as a whole that can make him ready to be able to respond or answer in a certain way to a situation he faces. Readiness is the ability that a person has both physically, mentally and learning equipment. (Slameto, 2013).

Meanwhile Sarah K. Howard, stated, "readiness is examined in relation to perceptions of how well they felt they were prepared for this change and how well they felt their institutions were prepared" (Howard & Tondelur, 2020). This approach provides a clearer picture of what support may be needed, whether in terms of training or setting school agendas, to support the transition to online teaching.

Technology Acceptance Model (TAM)

The technology acceptance model is an approach used in the adoption of information technology. TAM is a model that consistently accounts for most of the variation in use of goals and behaviors. The TAM model was first introduced by Davis (1989) based on the TRA (Theory of Reasoned Action) model which aims to cover the gap that explains the factors that influence or encourage technology users (Napitupulu, 2017).

Based on the TAM theory developed by Davis that the level of acceptance of information technology users is influenced by six constructs, namely: external variables (external variables), user perceptions of ease (perceived ease of use), user perceptions of benefits (perceived usefulness), attitudes in using (attitude toward using), behavior to use (behavioral intention to use), and real usage (actual system usage) (Sensuse & Widiatmika, 2012).

Teacher Performance

Priansa (2018) says that teachers have the main task of educating, teaching, directing, guiding, assessing, training and evaluating students so that they can be said to be professional educators. A professional teacher is planning lessons, running a quality learning process, and assessing and evaluating learning outcomes. The main task of a teacher is to plan lessons, implement lessons, assess learning outcomes, guide and train students.

RESEARCH METHODS

This study uses a quantitative method with the type of survey. The research location is a State Senior High School in Depok City. The study was conducted from December 2021 to April 2022. The primary data collection used was a questionnaire. Secondary data is data that is collected or obtained through documentation/archives on the website of the Education Office to support primary data. The primary data adopted in the research is literature study. Literature study is a data collection technique using various literatures such as books, magazines, journals, research reports, and others.

The research sample is teachers of Public High School in Depok City, totaling 221 teachers. The sampling technique is non-probability sampling with the type of incidental sampling technique. This research instrument uses a questionnaire, which is a data collection technique carried out by giving a set of questions or written statements to respondents to answer. The research instrument consisted of teacher readiness, the use of the Technology Acceptance Model (TAM), and teacher performance. The questionnaire uses a Likert Scale with 5 levels.

Data analysis for research questionnaire trials using validity and reliability tests. The classical assumption test uses normality, linearity, heteroscedasticity, and multicollinearity tests. Test the research hypothesis using multiple and partial linear regression analysis, F test, t test, and correlation coefficient and determination.

FINDINGS AND DISCUSSION

Findings

The effect of teacher readiness on teacher performance

The effect of teacher readiness on teacher performance was carried out by partial regression analysis. The summary of the results of the partial regression analysis is in Table 1 below.

Table 1. Teacher Readiness Regression Model Test Results on Teacher Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
	1 (Constant)	50.419	5.573		
Teacher Readiness	.471	.053	.518	8.950	.000

a. Dependent Variable: Teacher Performance

Based on Table 1 shows that the results of the partial (simple) regression analysis of teacher readiness on teacher performance get the regression equation = $50.419 + 0.471X_1$. It is interpreted that for every change in the score of the teacher readiness variable by one point, it can be estimated that the teacher's performance score will change by 0.471 in the same direction with a constant of 50.419.

The results of the partial effect of teacher readiness on teacher performance resulted in a t-test for t count of 8.950, which was greater than t-table of 1.971 in sample 221 and = 0.05. The significance value (sig.) of 0.000 is smaller than = 0.05. Thus, there is a positive and significant influence partially on teacher readiness on teacher performance. This means that the higher the teacher's readiness, the higher the teacher's performance.

The correlation coefficient and the determination of the partial effect of teacher readiness on teacher performance are in Table 2.

Table 2. Results of the Correlation Coefficient and Determination of Teacher Readiness on Teacher Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.518	.268	.264	12.548

a. Predictors: (Constant), Teacher Readiness

Based on Table 2 shows that the results of the analysis of the correlation coefficient of teacher readiness on teacher performance (r_{y1}) is 0.518. The coefficient of determination or the contribution of the influence of teacher readiness on teacher performance is obtained from the R square price of 0.268. So 26.8% of the variance in teacher performance can be explained by the teacher readiness variable, the remaining 73.2% is influenced by other variables outside the variables studied.

The Effect of Using the Technology Acceptance Model (TAM) on Teacher Performance

The effect of using the Technology Acceptance Model (TAM) on teacher performance was carried out by partial regression analysis. The summary of the results of the partial regression analysis is in Table 3 below.

Table 3. Test Results of the Regression Model Using the Technology Acceptance Model (TAM) on Teacher Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	44.738	5.744		7.789	.000
Use of Technology Acceptance Model (TAM)	.561	.058	.547	9.673	.000

a. Dependent Variable: Teacher Performance

Based on Table 3, it shows that the results of the partial regression analysis using the Technology Acceptance Model (TAM) on teacher performance get the regression equation = $44.738 + 0.561X_2$. It is interpreted that for every change in the variable score using the Technology Acceptance Model (TAM) of one point, it can be estimated that the teacher's performance score will change by 0.561 in the same direction with a constant of 44.738.

The results of the partial effect test of the use of the Technology Acceptance Model (TAM) on teacher performance resulted in a t-test for t count of 9.673 which was greater than t table of 1.971 in sample 221 and $= 0.05$. The significance value (sig.) of 0.000 is smaller than $= 0.05$. Thus, there is a positive and significant influence partially the use of the Technology Acceptance Model (TAM) on teacher performance. This means that the more the use of the Technology Acceptance Model (TAM) increases, the teacher's performance will also increase.

The correlation coefficient and determination of the partial effect of using the Technology Acceptance Model (TAM) on teacher performance are in Table 4.

Table 4. Correlation Coefficient Test Results and Determination of the Use of Technology Acceptance Model (TAM) on Teacher Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.547	.299	.296	12.275

a. Predictors: (Constant), Use of TAM

Based on Table 4 shows that the results of the analysis of the correlation coefficient of the use of the Technology Acceptance Model (TAM) on teacher performance (r_{y2}) is 0.547. The coefficient of determination or contribution of the influence of the use of the Technology Acceptance Model (TAM) on teacher performance is obtained from the R square value of 0.299. So 29.9% of the variance in teacher performance can be explained by the variable using the Technology Acceptance Model (TAM), the remaining 70.1% is influenced by other variables outside the variables studied.

3.1.3 The Simultaneous Effect of Teacher Readiness and the Use of Technology Acceptance Model (TAM) on Teacher Performance

The effect of teacher readiness and the use of the Technology Acceptance Model (TAM) on teacher performance was carried out by simultaneous regression analysis. The results of the simultaneous regression analysis are in Table 5 below.

Table 5. Test Results of the Simultaneous Regression Model of Teacher Readiness and the Use of Technology Acceptance Model (TAM) on Teacher Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	30.685	6.080		5.047	.000

Teacher Readiness	.293	.057	.321	5.155	.000
Use of Technology Acceptance Model (TAM)	.392	.064	.382	6.131	.000

a. Dependent Variable: Teacher Performance

The results of the simultaneous (multiple) regression analysis get the regression equation = $30.685 + 0.293X_1 + 0.392X_2$. It is interpreted that every change in the score of the teacher readiness variable and the use of the Technology Acceptance Model (TAM) of one point, it can be estimated that the teacher's performance score will change by 0.293 and 0.392 in the same direction with a constant of 30.685.

The test results of the simultaneous influence of teacher readiness and the use of the Technology Acceptance Model (TAM) on teacher performance resulted in the F test (ANOVA / analysis of variance).

Table 6. F Test Results (ANOVA) Teacher Readiness and Use of Technology Acceptance Model (TAM) on Teacher Performance

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	17684.446	2	8842.223	65.538	.000
Residual	29412.160	218	134.918		
Total	47096.606	220			

a. Dependent Variable: Teacher Performance

b. Predictors: (Constant), Use of TAM, Teacher Readiness

Based on Table 6, the results of the test of the simultaneous effect of teacher readiness and the use of the Technology Acceptance Model (TAM) on teacher performance resulted in an F count of 65.538 which was greater than F table (2:218) of 3.04 at $\alpha = 0.05$. The significance value (sig.) of 0.000 is smaller than $\alpha = 0.05$. Thus, there is a simultaneous positive and significant effect of teacher readiness and the use of the Technology Acceptance Model (TAM) on teacher performance. This means, the higher the readiness of teachers and the use of the Technology Acceptance Model (TAM), the higher the performance of teachers at SMA Negeri Depok City will also increase.

The correlation coefficient and determination of the simultaneous effect of teacher readiness and the use of the Technology Acceptance Model (TAM) on teacher performance are shown in Table 7.

Table 7. Correlation Coefficient Test Results and Determination of Teacher Readiness and the Use of Technology Acceptance Model (TAM) on Teacher Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.613	.375	.370	11.615

a. Predictors: (Constant), Use of Technology Acceptance Model (TAM), Teacher Readiness

Based on Table 7 shows that the results of the analysis of the correlation coefficient of teacher readiness and the use of the Technology Acceptance Model (TAM) on teacher performance (r_{y12}) is 0.613. The coefficient of determination or contribution of the influence of teacher readiness and the use of the Technology Acceptance Model (TAM) on teacher performance is obtained from the R square value of 0.375. So 37.5% of the variance in teacher performance can be explained by the teacher readiness variable and the use of the Technology Acceptance Model (TAM), the remaining 62.5% is influenced by other variables outside the variables studied such as teacher personality, involvement, self-efficacy, motivation, etc.

Discussion

The results of testing the first hypothesis show that teacher readiness has a positive and significant effect on teacher performance. This means that the higher the teacher's readiness, the higher the teacher's performance. Improving teacher performance in Depok City Public High School is determined by increasing teacher readiness.

Teacher readiness has an influence on teacher performance at Depok City Public High School with the highest indicators on: Communication competency. The highest statement points are: I send a message to remind the online learning schedule through the whatsapp group. While the lowest statement items are: I create and moderate a discussion forum. The conclusion of the study shows that there is a positive and significant influence partially on teacher readiness on teacher performance at Depok City Public High School.

The results of testing the second hypothesis indicate that the use of the Technology Acceptance Model (TAM) has a positive and significant effect on teacher performance. That is, the more the use of the Technology Acceptance Model (TAM) increases, the teacher's performance will also increase. The increase in teacher performance at the Depok City Public High School is determined by the increased use of the Technology Acceptance Model (TAM).

The use of the Technology Acceptance Model (TAM) has an influence on teacher performance at the Depok City Public High School with the highest indicator being: Perceived Usefulness (PU). The highest statement item is: Using information technology improves my teaching performance. While the lowest statement items are: Using information technology increases my effectiveness in teaching. The conclusion of the study shows that there is a positive and significant influence partially the use of the Technology Acceptance Model (TAM) on teacher performance at Depok City Public High School.

The results of testing the third hypothesis indicate that teacher readiness and the use of the Technology Acceptance Model (TAM) have a positive and significant effect on teacher performance. That is, the more the readiness of teachers and the use of the Technology Acceptance Model (TAM) increases, the performance of teachers will also increase. The increase in teacher performance at the Depok City Public High School is determined by the increase in teacher readiness and the use of the Technology Acceptance Model (TAM).

Teacher readiness has an influence on teacher performance at Depok City Public High School with the highest indicators on: Communication competency. The highest statement points are: I send a message to remind the online learning schedule through the whatsapp group. While the lowest statement items are: I create and moderate discussion forums.

The use of the Technology Acceptance Model (TAM) has an influence on the performance of mass teachers at the Depok City Public High School with the highest indicator: Perceived Usefulness (PU). The highest statement item is: Using information technology improves my teaching performance. While the lowest statement items are: Using information technology increases my effectiveness in teaching.

Thus, there is a simultaneous positive and significant effect of teacher readiness and the use of the Technology Acceptance Model (TAM) on teacher performance at Depok City Public High School. The highest variable that affects both partially and simultaneously on the performance of teachers in Depok City Senior High School is the variable using the Technology Acceptance Model (TAM).

This is in accordance with the results of research conducted by Humaera and Rusdinal (2021) showing that the performance of teachers is quite good but some obstacles are found in online learning both from the teacher and students side. To overcome obstacles in online learning, teachers provide guidance in small groups of students in the classroom.

Research by Dewantara, Martha, Tantri, & Bayu (2021) showed an increase in teacher readiness after attending training, namely those who stated that they were ready from the

previous 35.50% to 70.59%. From the group who stated that they were very ready from 0% to 5.88%. The results of the evaluation of the learning design showed the percentage of readiness was 82.35%. This result is in line with the teacher's statement in the questionnaire that 76% stated that they were ready to carry out character education in online learning.

Mishra, Gupta, & Shree (2020) research results describe a holistic picture of online teaching and learning activities that take place to build a link between the change management process and the online teaching and learning process in the education system in the midst of the COVID-19 outbreak so that it can overcome ongoing academic disruptions, continues and consequently ensures the resumption of educational activities and discourses as a normal procedure in the education system.

The research of Niqotaini and Budiman (2021) shows that the Technology Acceptance Model (TAM) and EUCS can explain the factors that influence the acceptance of google classroom at Unibi where Perceived Usefulness (PU) is influenced by 52.2% Perceived Ease of Use (PEOU). Attitude Toward Using (AT) is influenced by Perceived Usefulness (PU) 34.4%, Content (CT) 25.4%, Accuracy (AC) 11.9%, and Format (FT) 18.4%.

Howard, Tondelur, Siddiq & Scherer (2021) research informs how educational institutions can personalize and support the transition to online teaching. Buana & Linarti (2021) contributed greatly to the influence of instructor characteristic and habit factors on perceived usefulness simultaneously by 45.8%, computer self-efficacy and system quality to perceived ease of use by 41.3% and for perceived ease of use factors on perceived usefulness is 33.2% and the rest is influenced by other variables.

Sidqi & Auliya's research (2020) shows that teachers' understanding of PJJ and the implementation of learning have been carried out well by teachers. Although there are many obstacles in the use of technology and learning media. This condition requires teachers to increase confidence and work ethic in all circumstances. In scientific disciplines, this research provides information about the existence of various obstacles in the implementation of PJJ. One of them is looking at the readiness of educators.

Research by Fajriana & Safriana (2021) shows that the readiness of mathematics teachers and physics teachers in North Aceh Regency in implementing online learning is ready, but requires a slight increase in the ability of teachers to carry out online learning. Aspects of teacher readiness in implementing online learning require capacity building on a medium scale, including the ability of teachers to implement online learning that can improve the teaching and learning process, teacher awareness in implementing online learning in schools and the ability to integrate online learning with classroom learning.

CONCLUSION AND RECOMMENDATION

Conclusion

Based on these findings, it can be concluded, if you want to improve the performance of teachers at the Depok City Public High School, then factors such as teacher readiness and the simultaneous use of the Technology Acceptance Model (TAM). The highest variable that affects both partially and simultaneously on the performance of teachers in Depok City Senior High School is the variable using the Technology Acceptance Model (TAM).

Recomendation

Based on the research findings and conclusions, suggestions for further research improvements are as follows:

1) For the Department of Education in Depok City.

Efforts to improve teacher performance need to be provided with facilities and convenience, as well as motivation from the Depok City Education Office in improving

the quality of teacher readiness and the use of the Technology Acceptance Model (TAM), especially the procurement of computers, laptops, and fast internet connections.

- 2) For State Senior High School teachers in Depok City.
Improving teacher performance, public high school teachers in Depok City need to take part in training activities, seminars, workshops, coffee breaks.
- 3) For further research.
Teacher performance at SMA Negeri Depok City is not only influenced by teacher readiness and the use of the Technology Acceptance Model (TAM), but there are many other variables such as teacher personality, involvement, self-efficacy, motivation, and so on. In addition, research development can be done by expanding the range of population, methods, and samples of research locations.

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