

## **Management Of State High School Teachers In Improving The Quality Of Online Learning During The Covid-19 Pandemic**

### ***Manajemen Guru Sma Negeri Dalam Meningkatkan Mutu Pembelajaran Daring Di Masa Pandemic Covid-19***

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#### **ABSTRACT**

The Covid-19 pandemic has caused new paradigms and changes in lifestyle in various aspects of life, including education. The Covid-19 pandemic changed the learning system that was previously carried out face-to-face, after the Covid-19 outbreak, learning had to be done online (online). This condition is undoubtedly a challenge for each school to continue the learning process. As a teacher, you must have a professional attitude and continue to innovate learning in various conditions. This study aims to analyze the effect of professionalism and mastery of technology for public high school teachers on the quality of online learning during the Covid-19 pandemic with a case study at a public high school in Lumajang Subdistrict, Lumajang Subdistrict. The methods used to analyze this research include descriptive analysis, test the validity and reliability of the instrument and analysis of Structural Equation Modeling-Partial Least Square (SEM-PLS). The results of this study indicate that professionalism, mastery of learning technology, and teacher performance have a positive and significant influence on the quality of online learning at SMA Negeri in Lumajang Subdistrict, Lumajang District.

Keywords: professionalism, mastery of learning technology, teacher performance, quality of online learning

#### **INTRODUCTION**

At the end of 2019, the world experienced a health problem that had a very wide impact, namely the existence of a pandemic due to the covid 19 virus that started in China and spread to all countries in the world, including Indonesia. The Covid-19 pandemic has caused changes in lifestyle in various aspects of life, including the education aspect. The emergence of this virus changed the learning system which of course became a challenge for every school to continue the learning process (Samuel *et al.*, 2020). The face-to-face learning system that has been carried out so far has turned into an online learning system (Astini, 2020).

This condition also changes the paradigm of teacher performance. The measure of the success of teachers in providing learning to students and printing students into children who have good knowledge, skills, and morals is one form of teacher performance assessment (Samuel *et al.*, 2020; Jelvita, Marsidin and Sabandi, 2022). Good teacher performance will describe the success of the educational institution itself. Teacher performance in learning includes the performance of planning lessons, implementing learning, and evaluating learning (Irawati, 2021). Partono (2021) explained that the performance of teachers during the COVID-19 pandemic has also changed. Busyra and Sani (2020) shows that the average teacher performance in teaching using the work from the home system or working from home is only 50%, and overall, the performance results are not more than 70%. Meanwhile, Yuangga and Sunarsi (2020) shows that teacher performance is still not good. Furthermore, based on the aspect of teacher performance measurement, only 2 of the 5 aspects have a fairly good score, namely the initiative and ability aspects. Meanwhile,

aspects of work quality, timeliness, and communication are still considered lacking.

In addition to changes in the online learning system that requires a transformation of teacher performance, the government and related parties organize learning using social media and digital technology. Many teachers or schools are required to create learning materials using online media such as WhatsApp, Facebook, and youtube to provide a summary of learning materials for students. Kusumawardani and Dimiyati (2021) mentions online learning as part of E-Learning or electronic learning. Learning media is also referred to as a tool or learning resource that can assist a teacher in conveying messages to students (Astini, 2020). In the period before the pandemic, 100% of learning was done face-to-face, and technology and learning media were only used as complementary means (Yuangga and Sunarsi, 2020). However, during the Covid-19 pandemic, technology, and learning media play an important role. This is because technology and learning media are absolute means for the implementation of online learning (Haryadi and Selviani, 2021; Mariana, Wardany and Novita, 2021). So that every teacher is required to have the ability and skill to master technology and learning media. However, it turns out that not all teachers have the ability and mastery of learning technology, the lack of ability to adapt quickly to environmental changes and the lack of learning facilities cause learning activities carried out by the teachers concerned to also experience obstacles. Permana *et al.* (2021) states that the quality of learning is influenced by the mastery of teacher technology during the Covid-19 period. This finding is also supported by the findings of Dwijayanti and Sari (2021) which explains the influence of mastery of technology on the quality of learning. Meanwhile, different results are shown in Yopa, Farisma and Zananti (2020) that mastery of technology does not affect the quality of learning.

As teachers are required to have a professional attitude in various conditions, besides that, teachers are also required to be able to innovate in online learning. Kasmur, Riyanto and Sutanto (2021) stated that teachers should be able to seek online learning media that can be reached easily, quickly, and practically so that it does not make it difficult for students to carry out online learning tasks. This professional attitude shows the ability of the nature and behavior of someone who is competent, educated, dedicated, responsible, honest, and loyal to his work (Tarigan, 2020; Lian and Amiruddin, 2021). A professional person is one who has the expertise, responsibility, and a sense of camaraderie supported by strong professional ethics (Alma, 2012). Teachers must have capital mastery of the material and the ability to convey it to students, have various skills, and special abilities, love their work, and maintain the teacher's code of ethics.

Several previous studies which also examined professionalism and mastery of learning technology to improve the quality of online learning and teacher performance. Dwijayanti and Sari (2021) state that there is a positive and significant influence of the professionalism and digital literacy skills of teachers on the quality of online learning. The same result is shown by Haryadi and Selviani (2021) who shows that professionalism has an effect on the quality of online learning. However, in the research of Kurniawati, Sarifudin and Widawati (2021) professionalism does not have a positive role in the quality of online learning. The difference in the results of this study creates a gap for further research on the professionalism and quality of online learning. Therefore, to fill this gap, this study aims to further analyze the effect of professionalism and mastery of technology for state high school teachers on the quality of online learning during the Covid-19 pandemic. The case study in this study was conducted at a public high school in Lumajang Subdistrict, Lumajang District.

## **RESEARCH METHOD**

### **Data Types and Sources**

The approach in this research uses a quantitative explanatory research approach. A quantitative approach can be used to test hypotheses and to determine the influence between variables built in the research model. To get the results of the calculations as contained in the research model, the assessment is carried out based on the numbers (scores) obtained from the results of calculations for analysis. This value was obtained based on the results of the research survey. This survey method can be used on large or small populations using sample data from

that population, so that information and all possibilities that occur in the object of research can be obtained (Kerlinger and Lee, 2000).

The type of data in this study is primary data where this data is data taken directly from the resource person in this case the answer from a public high school teacher in Lumajang sub-Subdistrict, Lumajang District. This research was conducted from April to May 2022. Primary data is data obtained by researchers directly (from the first party). The technique used in collecting primary data is in the form of a questionnaire, a data collection technique with a list of questions posed in writing to the object of research in order to obtain information.

### **Population**

The data source used in this research is the source of the data. This research is the primary data source. Primary data was obtained from the answers to questionnaires from respondents directly which would be sent to teachers in 3 public high schools in the Lumajang sub-Subdistrict, namely SMA Negeri 1 Lumajang, SMA Negeri 2 Lumajang, and SMA Negeri 3 Lumajang. Because the total number of public high school teachers in Lumajang Subdistrict, Lumajang District is 155 people.

### **Sample**

The number of research samples is also as much as the total population or research object. So that the sample in this study is a saturated sample and the data collection technique in this study is the census method.

### **Data analysis method**

The data analysis technique in research is an activity of collecting data and analyzing data based on the research variables used. Data analysis was carried out by grouping variables, presenting data, performing calculations, and testing research hypotheses. Meanwhile, the variables used in this study include the online learning quality variable (Y) as the dependent variable. Professionalism (X1) and mastery of technology (X2) in high school teachers are independent variables. Meanwhile, teacher performance (Z) is an intervening variable.

The data analysis that the writer uses in this study includes descriptive analysis, instrument validity and reliability tests, and Structural Equation Modeling-Partial Least Square (SEM-PLS) analysis. Descriptive statistics are data analysis by describing or describing existing data as they are without intending to make conclusions that apply to the public or generalizations (Sugiyono, 2013). Descriptive analysis is used by compiling a distribution frequency table to find out whether the level of value (score) of the research variables is in the good, quite good, less good, and not good categories (Novialumi, Affandy and Narimawati, 2020). The instrument validity test is a good measuring instrument that must meet the validity and reliability requirements, in order to obtain accurate information about the subject's condition and the extent to which the accuracy and accuracy of a measuring instrument (Azwar, 2012). The item validity test based on the Corrected Item Total Correlation can be said to be valid if the  $r$  table limit  $> 0.30$ . A validity test is used to determine the degree of accuracy between the data that occurs in the object of research and the power that can be reported by researchers (Sugiyono, 2013). Meanwhile, the instrument reliability test was used to measure time consistency.

The last analysis is SEM-PLS. SEM is a set of statistical techniques that allow the simultaneous testing of a series of relationships (Hair *et al.*, 2014). PLS was developed as an alternative to structural equation modeling with a weak theoretical basis. Indicators of latent variables not only fulfill reflexive models but are formative. SEM-PLS testing is done by testing the inner model and outer model. The inner model focuses on the latent variable structure model which is assumed to have a linear and causal relationship. While the outer model refers to the measurement of the model that can be done with reflective relationships, formative relationships, and multi-effect indicators for multiple causes.

## RESULTS AND DISCUSSION

### Estimated Results

The Covid-19 pandemic has caused changes in lifestyle in various aspects of life from which were initially prioritized face-to-face and involved many people, now replaced with activities carried out online or online using technological devices and digital communication facilities and internet tools. This transformation also occurs in the world of education. Everyone involved in non-face-to-face learning (online) must use technology and internet media in the learning process. Some of the learning media used by teachers in online learning include WhatsApp, google meet, zoom, youtube, TikTok, and Instagram. Teachers who have low mastery of technology generally carry out online learning activities only by using WhatsApp media to deliver learning materials, give assignments and collect assignments from students. Likewise, the conditions that occur in several learning systems at public high schools in Lumajang Subdistrict, Lumajang District, have experienced changes in learning methods since the Covid-19 pandemic.

Table 1. Teacher Performance in 3 Public Senior High Schools in Lumajang SubSubdistrict in 2020-2021

Performance Items	2020			2021		
	T	R	%	T	R	%
Online Learning Syllabus	60	55	92	60	60	100
RPP Online Learning	60	55	92	60	60	100
PBM Achievement	75	60	80	75	75	100
Learning Outcome Value	80	70	88	80	75	94
Discipline	85	70	82	85	80	94
Report Generation	60	60	100	60	60	100
Presence Presence	85	80	94	85	80	94

Description: T = Target, R = Realization

The unpreparedness of teachers and students to carry out distance learning is between the ability to master media and learning technology. Some teachers who do not master technology will carry out monotonous online learning activities and are less familiar with online learning applications. The following is a table of teacher performance based on the ability and mastery of technology and learning media. Based on Table 1, it shows the realization of the implementation of online learning which shows the achievement of targets and the reality of teacher performance in 3 schools, namely SMA Negeri 1 Lumajang, SMA Negeri 2 Lumajang, SMA Negeri 3 Lumajang.

The next test is the evaluation of the relationship between the construct and its indicators. This validity test is divided into two, namely convergent validity and discriminant validity. The convergent validity test was carried out in three stages, namely: indicator validity, construct reliability, and the average value of VIF (AVVIF). While discriminant validity can be passed to see the value of cross-loading. Based on the output results in Table 2, it can be concluded that the correlation that occurs has a cross-loading value above 0.5 and a p-value <0.001. So that discriminant validity meets the criteria. To assess the convergent validity of the latent variable indicator, the normalized combined loading value must be greater than 0.5 (Sholihin and Dwi, 2013). So, it can be concluded that all construct indicators of latent variables of professionalism, mastery of technology, teacher performance, and the quality of online learning meet the convergent validity criteria.

Table 2. Results of Combined Loadings and Cross-Loadings

Variable	Indicator	Value
Professionalism	X11	0,933
	X12	0,627
	X13	0,863
	X14	0,943
Mastery of Learning Technology	X21	0,840
	X22	0,870
Teacher Performance	Z1	0,609
	Z2	0,718
	Z3	0,886
Quality of Online Learning	Y1	0,702
	Y2	0,898
	Y3	0,849
	Y4	0,857

Based on the results of the reliability test as shown in Table 3 that the composite reliability value of each variable, namely professionalism is 0.856, mastery of learning technology is 0.848, teacher performance (0.837), and online learning quality (0.930). This value indicates that the results obtained are good. The results of Cronbach's alpha also showed good results, namely professionalism (0.741), mastery of learning technology (0.730), teacher performance (0.737), and online learning quality (0.904). Therefore, it can be seen that each construct has high reliability.

Table 3. Reliability Test

Variable	Composite reliability coefficients	Cronbach's alpha coefficients
Professionalism	0,856	0,741
Mastery of Learning Technology	0,848	0,730
Teacher Performance	0,837	0,737
Quality of Online Learning	0,930	0,904

Next is a structural evaluation test (inner model) which includes a model fit test (model fit), path coefficient, and R<sup>2</sup>. The model fit test (model fit) is used to determine the suitability of the model with the data used. In the model fit test (model fit), there are 3 test indices, namely average path coefficient (APC), average R - squared (ARS), and average variances factor (AVIF) with APC and ARS criteria accepted on the condition that p-value < 0,1 and AVIF is less than 5. Based on Table 4 shows that this research model is considered feasible and statistically acceptable because the p-value < 0,001 in APC, ARS, AARS, and AVIF is smaller than 0,05 and the R-squared contribution value ratio (RSCR) = 1.000. This shows that the statistically ideal regression value.

Table 4. Test Model Fit

Model fit and quality indices
Average path coefficient (APC)=0.383, P<0.001
Average R-squared (ARS)=0.749, P<0.001
Average adjusted R-squared (AARS)=0.739, P<0.001
Average block VIF (AVIF)=2.306, acceptable if ≤ 5, ideally ≤ 3.3
Average full collinearity VIF (AFVIF)=3.282, acceptable if ≤ 5, ideally ≤ 3.3
R-squared contribution ratio (RSCR)=1.000, acceptable if ≥ 0.9, ideally = 1

Uji analisis jalur digunakan untuk menguji pengaruh tidak langsung variabel independen terhadap variabel dependen melalui variabel intervening dengan melihat koefisien jalur, total effect dan p-values. Berikut ini adalah hasil uji analisis jalur dan perhitungan total effect.

Table 5. Results of Path Analysis Test and Total Effect Calculation

<b>Path Analysis</b>						
<b>Variable</b>	<b>Path Coefficients</b>			<b>P-value</b>		
	Proff	Mastery of LT	Perform	Proff.	Mastery of LT	Perform
Teacher Performance	0,361	0,460		0,001	<0,001	
Quality of Online Learning	0,360	0,238	0,497	0,001	0,025	<0,001

  

<b>Total Effect Calculation</b>						
<b>Variable</b>	<b>Total Effects</b>			<b>P-value</b>		
	Proff	Mastery of LT	Perform	Proff.	Mastery of LT	Perform
Teacher Performance	0,361	0,460		0,001	<0,001	
Quality of Online Learning	0,539	0,466	0,497	<0,001	<0,001	<0,001

Based on Table 5, it is known that the path coefficient value of the influence of professionalism on the quality of online learning through teacher performance is 0,360 with a p-value <0,01. While the coefficient of the influence of mastery of learning technology on the quality of online learning through teacher performance is 0,497 with a p-value <0,01 so this result is significant because the p-value is smaller than 0,05. The total effect of the non-professionalism variable on the quality of online learning through teacher performance is 0,466 with a p-value <0,001 and the total effect of the variable mastery of learning technology on the quality of online learning through teacher performance is 0,497 with a p-value <0,01.

### Discussion

Teacher professionalism is the condition, direction, value, purpose, and quality of expertise and authority in the field of education and teaching related to the work of a person who makes a living. Professionalism is needed to improve the quality of online learning during the Covid-19 pandemic. The results showed that the coefficient of the influence of the professionalism variable on the quality of online learning was 0.36 with a p-value of 0.01. This means that the better the professionalism carried out by public high school teachers in Lumajang Subdistrict, Lumajang District, the better the quality of online learning. These results support the results of previous research, Partono (2021) and Kasmur, Riyanto and Sutanto (2021) stating that the majority of teachers can implement a professional attitude and improve the quality of online learning. On the other hand, the results of this study support the research of Haryadi and Selviani (2021); Partono (2021) states that teacher professionalism has a positive impact on improving teacher performance. This shows that the more professional the teacher is, the more he can improve the learning process, and the quality of achieving learning objectives will increase.

Meanwhile, the role of technology in the teaching and learning process is as an effective and efficient medium in the teaching and learning process. The results showed that the coefficient of the influence of the variable mastery of learning technology on the quality of online learning was 0.24 with a p-value of 0.03. This means that state high school teachers in Lumajang Subdistrict, Lumajang District who have the ability and mastery of learning technology, will further improve the quality of online learning during the Covid-19 pandemic. The results of this study support previous research, Jelvita, Marsidin and Sabandi (2022) stating that there is a positive influence of mastery of learning technology on the quality of online learning and research by Budi, Hasibuan and Mesiono (2021) stating that mastery of learning technology has a significant impact on the quality of online learning.

The quality of learning is an instructional system that refers to a set of components that depend

on each other to achieve goals. The results showed that the coefficient of the influence of the teacher performance variable on the quality of online learning was 0.50 with a p-value of  $< 0.01$ . This means that the performance of public high school teachers in Lumajang Subdistrict, Lumajang District has a positive and significant influence on the quality of online learning. The results of this study support the results of Zulnika (2017); Kasmur, Riyanto and Sutanto (2021) stated that teacher performance can improve the quality of online learning during the Covid-19 pandemic.

### CONCLUSION

Research on the effect of professionalism and mastery of technology for state high school teachers on the quality of online learning during the Covid-19 pandemic. This research was conducted on state high school teachers who teach at SMA Negeri 1 Lumajang, SMA Negeri 2 Lumajang, and SMA Negeri 3 Lumajang located in Lumajang SubSubdistrict, Lumajang Subdistrict. The methods used to analyze this research include descriptive analysis, testing the validity and reliability of the instrument, and analysis of Structural Equation Modeling-Partial Least Square (SEM-PLS). The results of this study indicate that there is a positive and significant influence of professionalism, mastery of learning technology, and teacher performance on the quality of online learning at SMA in Lumajang Subdistrict, Lumajang District. This means that the better the level of professionalism in mastering learning technology, and the performance of state high school teachers in Lumajang Subdistrict, Lumajang District, the higher the quality of online learning during the Covid-19 pandemic.

Based on the results of the study, it is recommended for public high schools throughout Lumajang District to develop a system and method of implementing a teaching system based on information and communication technology that is supported by mastery of digital technology by utilizing internet facilities so that learning can be more effective and efficient, especially during the pandemic. Covid-19. Schools must also be able to provide supporting facilities and provide training to teachers so that they can have the ability to master internet-based information and communication technology so as to facilitate the transformation of digital learning. Meanwhile, future research should use a case study approach in a particular school in order to obtain exploratory research information and data in order to dig up more information and respondents' answers that reflect the actual condition of the research object.

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