



The Influence of Use of the Platform Merdeka Mengajar On The Capability of Developing Teaching Tools for Public Primary School Teachers

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Abstract

The aim of this research is to determine whether or not there is an influence of the use of the Merdeka Mengajar Platform on the ability to develop teaching tools for teachers in state elementary schools. The type of research is quantitative with regression analysis. The locations used were public elementary schools in Lawang District which had 79 teachers from 9 clusters with a total of 374 teachers. This research uses a cluster random sampling technique. The data collection for this research uses Likert scale numbers. The research results showed that the use of the Merdeka Mengajar Platform was at a moderate level, with the results of a simple linear regression test obtaining a significance of $0.026 < 0.05$ and a determinant coefficient figure of 0.062 which indicated that there was an influence between the use of the Merdeka Mengajar Platform and the ability to develop teaching tools for state elementary school teachers.

Keywords: Use of the Independent Teaching Platform; Ability to Develop Teaching Tools

1. Introduction

One of the applications that teachers can use in learning is the Merdeka Mengajar Platform. This application was developed by the Ministry of Education and Culture, which means this application can provide widespread access to education and can facilitate independent learning through the implementation of independent learning (Muadz, 2023). The Merdeka Mengajar platform provides various features that can make it easier for teachers to increase knowledge and ideas in enriching learning content that can be used in the classroom. This platform also provides various conveniences for teachers in the teaching process according to students' abilities. There are also services in the form of training to improve teacher competence which includes pedagogical competence, personality competence, social competence, and professional competence as well as competence in mastering technology. There is also a feature for sharing good practices through teacher work to inspire fellow teachers (Asmoro et al., 2021). Competency is a teacher's ability to carry out their profession as a teacher or educator. According to Sulfemi (2015), competency refers to rational implementation so that it meets certain verification or criteria in carrying out tasks in the world of education. One of the competencies that can differentiate between educators and other professions is pedagogical competency. Pedagogical competence is the teacher's ability to manage learning, including: a). student understanding, b). designing and implementing learning, c). learning evaluation, and d). student development (Sulfemi, 2015).

Learning tools are the main weapon for a teacher in teaching. In general, teachers are certainly able to develop teaching tools according to student characteristics. This capability includes various things such as teachers preparing learning tools: syllabus, teaching modules, media, learning resources, and assessment tools. This is reinforced by Minister of Education and Culture Regulation Number 65 (2013) concerning process standards in basic education and secondary education which states that the preparation and development of

teaching tools is included as part of a learning plan. With teaching tools, it becomes easier for a teacher to manage his time, energy and resources in the learning process as well as possible. It was confirmed in research conducted by Putra, et al (2023) that elementary school teachers as professional teachers are required to be creative in developing learning tools so that they can improve the learning process. Teaching tools contain learning materials that can be used by teachers to achieve learning outcomes.

From previous research conducted by Kartikasari, et al (2022) regarding the influence of using the Merdeka Teaching Platform on teacher readiness in implementing the Merdeka Curriculum. This research obtained a correlation calculation result of 2.389 with a significance level of 0.05, indicating that the research carried out had no significant influence. Previous research was also conducted by Susilo (2023) entitled intentions to use the Merdeka Mengajar application based on teacher beliefs and attitudes. This research produces a significance value of 0.000 for the regression model which is smaller than 0.05, which means that it is probable that belief and attitude simultaneously have a significant influence on the intention to use the Merdeka Mengajar application.

Based on theory and previous research, researchers conducted this research with the title "The Effect of Using the Merdeka Mengajar Platform on the Ability to Develop Teaching Tools". Researchers are interested in conducting this research in more depth with the aim of finding out whether or not there is an influence of the use of the Merdeka Mengajar Platform on the ability to develop teaching tools for teachers in State Elementary Schools in Lawang sub-district.

2. Method

2.1 Research design

This research method is included in quantitative research, because the data analysis is statistical in nature or uses numbers. The aim of this research is to examine the influence of the Merdeka Mengajar Platform on the ability to develop teaching tools for elementary school teachers in Lawang District. The time and location of the research will be carried out at the Regional Coordinator Office of the Lawang District Education Service, Malang Regency by requesting permission to distribute questionnaires via online Google Form to all state elementary school teachers in Lawang District.

2.2 Research Data

2.2.1 Research Variables

The variables contained in this research are as follows:

2.2.1.1 Independent variable

Independent variables or commonly called independent variables are variables that cause or influence changes or the emergence of dependent (dependent) variables. So the independent variable in this research is the use of the independent teaching platform.

2.2.1.2 Dependent variable

A dependent variable or what is called a dependent variable is a variable that is a result or is influenced by the existence of an independent variable. The dependent variable of this research is the ability to develop teaching tools.

2.2.2 Research Subjects

State Elementary Schools in Lawang District are elementary schools that have taken part in training on the use of the Merdeka Mengajar Platform provided by the Ministry of

Education and Culture as well as training conducted by the Teacher Working Group (KKG), therefore the researchers chose class teachers as respondents.

2.2.3 Population, Sample, and Sampling

2.2.3.1 Research Population

The population in this study were all elementary school class teachers in Lawang District. The total population of class teachers from each cluster, namely Cluster 1, was 47 teachers, Cluster 2 was 38 teachers, Cluster 3 was 42 teachers, Cluster 4 was 40 teachers, Cluster 5 was totaling 61 teachers, Cluster 6 totaling 47 teachers, Cluster 7 totaling 38 teachers, Cluster 8 totaling 44 teachers, Cluster 9 totaling 17 teachers.

2.2.3.2 Research Sample

Determining the number of samples used by researchers in this research was by using cluster random sampling, namely sampling by taking several groups randomly from the population and then taking all or part of each group selected to be used as samples. This was done by researchers so that all State Elementary Schools in Lawang District could be represented.

Arikunto said that the number of respondents was <100, all samples were taken. While respondents are >100, then sampling is 10%-25% or more. Based on this opinion, the sample to be taken in this research is 20% of the existing population.

2.2.3.3 Research Sampling Techniques

In this research, researchers used Cluster Random Sampling, namely randomizing groups or clusters, not individual subjects. Based on the initial random results who will be used as subjects are teachers consisting of 9 clusters with a total of 374 teachers. In clusters, the ones with the same chance of being sampled are not individuals, but teachers as a group. The researcher finally took 20% from each cluster without distinguishing between one cluster and another, or one school and another. The results of calculating the samples taken are Cluster 1 with a total of 10 samples, Cluster 2 with a total of 8 samples, Cluster 3 with a total of 9 samples, Cluster 4 with a total of 8 samples, Cluster 5 with a total of 13 samples, Cluster 6 with a total of 10 samples, Cluster 7 with a total of 8 samples, Cluster 8 with a total of 9 samples, Cluster 9 with a total of 4 samples. So the number of samples in this study was 79 samples.

2.2.4 Data collection techniques

Data collection techniques are steps used by researchers to obtain the data needed to answer research problems. The data collection technique in this research is in the form of a questionnaire. The questionnaire or questionnaire used in this research is in the form of a questionnaire. The questionnaire was used to reveal data on the use of the independent teaching platform by elementary school class teacher respondents in Lawang District using a Likert scale measurement with a level of agreement of 1-4 choices, with choices from Very Suitable to Not Suitable, here are the levels.

1. Perfect fit
2. Appropriate
3. Not suitable
4. Not Appropriate

2.2.5 Research instruments

Research instruments are facilities or tools used by researchers to make it easier to collect the necessary data. The instruments in this research include questionnaire data, the resulting data is interval data. . The questionnaire instrument consists of 15 statement items related to the use of the Merdeka Mengajar Platform which was developed based on 8

indicators, namely account activation, use of learning accounts, socialization, use of inspirational videos, independent training, proof of work, student assessment, and teaching tools. There are also 22 statement items regarding the ability to develop elementary school teachers' teaching tools which were developed based on 6 indicators, namely understanding learning outcomes, formulating goals, developing a flow of goals, planning learning and assessment, planning assessments in teaching modules, and determining the achievement of learning goals.

2.3 Analysis of research instruments

Respondents in the selected sample are expected to fill out the instrument using Google Form. Instrument analysis in this research was carried out using content validity tests and reliability tests which are stated as follows:

2.3.1 Validity Test

This research uses construct validity testing of research instruments by consulting experts in the field. The results of instrument testing in the form of a questionnaire have been approved by expert lecturers for collecting the data needed in the research. Validity test values will be processed via SPSS 25 using the product moment correlation test. Decision making is based on the calculated r value with the r table value. Meanwhile, decision making is based on the calculated r value with the r table value.

2.3.2 Reliability Test

Reliability is carried out to test the consistency of respondents' answers. So, a questionnaire is said to be reliable if a person's answers to questions are consistent or stable over time. The formula used is Alpha Cronbach via SPSS.

2.4 Research Data Analysis

This research uses quantitative research, namely research used to determine the influence of the independent teaching platform on the ability to develop teaching tools for elementary school teachers in Lawang District. The data obtained by the instrument is analyzed to test hypotheses or answer research questions. In this research, researchers used parametric statistical tests.

2.4.1 Descriptive Statistical Analysis

Data analysis uses descriptive statistics, namely analysis of research data carried out by describing without making conclusions. In this research, descriptive statistical analysis is used to describe the data obtained through obtaining questionnaire scores from respondents.

2.4.2 Prerequisite Test

2.4.2.1 Normality Test

The Normality Test is used to test whether the research data is normally distributed or not. To find out whether the data is normally distributed or not, the data normality test in this study uses the help of the SPSS program with a significance level of 5%.

2.4.2.2 Linearity Test

The linearity test was carried out to see whether the independent variable (X) and the dependent variable (Y) in this study had a linear relationship or not. The linearity test in this research was carried out with the help of SPSS. The basis for decision making in the linearity test is that if the significance value is more than 0.05 then there is a linear relationship between the independent variable and the dependent variable. Conversely, if the significance value is less than 0.05 then there is no linear relationship between the independent variable and the dependent variable.

2.4.2.3 Hypothesis Testing

Hypothesis testing is carried out to determine whether or not there is an influence exerted by the independent variable (X) on the dependent variable (Y). Hypothesis testing in this research was carried out using a simple linear regression test. Testing this hypothesis using regression analysis was carried out with the help of SPSS 25.

3. Results and Discussion

3.1 Results

Before being used as a research instrument, the questionnaire was validated by experts, then revised and continued with distributing the questionnaire via Google Form. There are two types of filling in one questionnaire used by researchers, namely the use of the Merdeka Mengajar Platform and the ability to develop teacher teaching tools. Each consists of 15 and 22 statements with four answer choices that respondents can choose according to existing facts. This research uses a construct validity test. So that the results of the validity test of 15 statement items related to the PMM use questionnaire instrument were obtained with a score of r calculated $> r$ table (0.220). Based on this, points 1 to 15 in the instrument for using the Merdeka Mengajar Platform are valid. The results of the validity test on the instrument for the ability to develop teachers' teaching tools which were carried out on 22 statement items related to the ability to develop teaching tools obtained a score of r calculated $> r$ table (0.220). So the validity test can be concluded that items 1 to 22 on the instrument for the ability to develop teacher teaching tools are valid.

From the valid statement items, a reliability test was then carried out using the Cornbach's alpha formula using SPSS 25. The instrument is reliable if the Cornbach's alpha value is > 0.6 (Syofian, 2014). From the SPSS 25 output in tables 4.3 and 4.4 regarding the reliability of the instrument, it is categorized as reliable because the Cornbach's alpha value is > 0.6 , namely 0.971 for the use of the Merdeka Mengajar Platform and 0.966 for the ability to develop teacher teaching tools. Based on the reliability category table, the results show that the PMM usage variable and the teacher's ability to develop teaching tools are in a very high category so that the instrument is reliable and can be used for research.

This research contains variables for the use of PMM and the ability to develop teacher teaching tools. Data collection used a PMM usage questionnaire and a questionnaire on the ability to develop teacher teaching tools which were distributed to elementary school teachers throughout Lawang District. After that, the results of the questionnaire will be analyzed in descriptive statistics using SPSS 25 to determine the minimum value, maximum value and mean value, as well as the standard deviation of each questionnaire result.

Table 1 Description of Variables for Using the Independent Teaching Platform & Ability to Develop Teacher Teaching Tools

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Use of PMM	79	15	39	1622	20,53	6,691
Ability to develop teacher teaching tools	79	22	50	3075	38,92	7,828

Based on the descriptive statistical analysis above, with a sample size of 79 teachers, a descriptive use of PMM was obtained with an average (mean) of 20.53, a minimum score of 15, a maximum score of 39, and a deviation (std. deviation) of 6.691. Meanwhile, the ability

to develop teaching tools received a minimum total score of 22, while the maximum score was 60. The average (mean) in this study was 38.92, and the deviation (std. deviation) was 7.828. The results of the PMM usage questionnaire score categories are in Table 2.

Table 2 Variable Categories Use of PMM

Nilai		Frequency	Percent	Valid Percent	Cumulative Percent
< 13,839	Low	0	0	0	0
13,839-27,221	Currently	61	77,2	77,2	77,2
> 27,221	Tall	18	22,8	22,8	100,0
	Total	79	100,0	100,0	

From Table 2, the highest percentage results obtained, namely 77.2%, are in the score range 13,839 – 27,221 with a frequency of 61 teachers in the medium category. The lowest percentage is 0% found in the score range < 13.839 with a frequency of 0 teachers indicating they have a low category. Therefore, it is concluded that the use of PMM among elementary school teachers in Lawang District is in the medium category. Furthermore, the results of the questionnaire score categories for the ability to develop teaching tools are shown in Table 3.

Table 3 Variable categories of ability to develop teaching tools

Nilai		Frequency	Percent	Valid Percent	Cumulative Percent
< 31,092	Low	18	22,8	22,8	22,8
31,092 - 46,748	Currently	57	72,2	72,2	94,9
> 46,748	Tall	4	5,1	5,1	100,0
	Total	79	100,0	100,0	

Table 3 shows the highest percentage results, namely 72.2%, in the score range 31,092 – 46,748 with a frequency of 57 teachers in the medium category. The lowest percentage was 5.1% found in the score range > 46.748 with a frequency of 4 teachers indicating the high category. So it is concluded that the ability to develop teaching tools for elementary school teachers in Lawang District is in the medium category.

The prerequisite test uses parametric statistics with the help of the SPSS 25 application. The normality test in the research was carried out with the aim of knowing whether the data was normally distributed or not, the normality test used a significance level of 0.05 from the Kolmogorov-Smirnov test. The results of the normality test show that the data is not normally distributed, the significance value obtained is $0.000 < 0.05$. So the data in this study is assumed to be based on the Central Limit Theory by Dielman (in Ghozali, 2009) in taking a large sample, namely a sample that exceeds 30, then the data in that sample is considered to be normally distributed. So this research is declared to have a normal distribution because it has more than 30 samples, namely 79 samples. The linearity test was carried out with the help of SPSS 25. The results of the data linearity test obtained a linearity value of $0.162 > 0.05$, so it was stated that the data variables in both variables were linear.

Hypothesis testing aims to determine whether H_a is accepted or not at a significance level of 0.05. This research has a H_a hypothesis, namely that there is an influence of the use of the Merdeka Mengajar Platform on the ability to develop teachers' teaching tools. This hypothesis test uses a simple linear regression test and the coefficient of determination test. Simple linear regression is used with the aim of knowing the influence of one variable on other variables.

According to Siregar in (Anisafitri, 2018), the application of simple linear regression aims to estimate the value of the dependent variable which can be influenced by the independent variable. This simple linear regression test is based on the significance value, namely if the value is <0.05 then the independent variable has an effect on the dependent variable, and vice versa if the value is >0.05 then the independent variable has no effect on the dependent variable.

Table 4 Simple Linear Regression Test Results

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	298,077	1	298,077	5,122	,026b
	Residual	4481,467	77	58,201		
	Total	4779,544	78			

a. Dependent Variable: CAPABILITY TO DEVELOP TEACHING TOOLS

b. Predictors: (Constant), Use of PMM

In Table 4 it is known that the calculated F value = 5.122 with a sig value of 0.026 $<$ 0.05. So this research concludes that there is an influence of the variable use of PMM on the variable ability to develop teacher teaching tools. Next, test the coefficient of determination (R^2) which aims to see how much influence the variable Using the Merdeka Mengajar Platform has on the variable Ability to develop teacher teaching tools. This test was calculated with the help of SPSS 25.

Table 5 Determination Coefficient Test Results (R^2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,250 ^a	,062	,050	7,629

a. Predictors: (Constant), Use of PMM

In Table 5 it is known that the determination value (R-Square) is 0.062, so this value shows that the independent variable has an influence with a percentage of 6.2% on the dependent variable. The remaining 93.8% was influenced by other variables not tested in this study.

3.2 Discussion

The results of hypothesis testing in this research have obtained a significance value of $0.026 < 0.05$, meaning that there is an influence between the use of the Merdeka Mengajar Platform on the ability to develop teachers' teaching tools. The coefficient value for determination is 0.062, meaning the independent variable has an influence of 6.2% on the dependent variable. So it is concluded that the use of the Merdeka Mengajar Platform has an effect on teachers' ability to develop teaching tools, but the significance is not too high. The independent teaching platform is an initiative of the Ministry of Education and Culture to improve education through various features in it. Even though it has a good aim of improving teachers' abilities in developing teaching tools, the influence on these abilities is not always significant.

There are several reasons that can influence this, such as teachers who are less than optimal in their ability to develop teaching tools. In accordance with the opinion of Wildan (2017), teachers have an obligation to develop their own teaching tools, not just have them. If the teacher is able to develop his own teaching tools then it is certain that the teacher

will have maximum ability in developing teaching tools independently, but if the teacher is only required to have teaching tools then it is not certain that the teacher will have the ability to develop teaching tools.

As for other causes, there are teachers who still have difficulty using the Merdeka Mengajar Platform, so its use is not utilized optimally. This is supported by research by Elvina (2023) which states that there are still teachers who find it difficult to access the Merdeka Mengajar Platform. The research also explains that the Merdeka Mengajar Platform actually has a display that is easy for a teacher to learn. In line with research conducted by Susilawati (2021) which states various shortcomings in the Merdeka Mengajar platform, one of which is that some teachers have difficulty in exploring the content that is available on the Merdeka Mengajar Platform because there are differences in the technological competence of each teacher. So, it can be concluded that this research has proven that there is an influence, although the significant value is not too high. The Merdeka Mengajar platform influences teachers' ability to develop teaching tools because it provides various learning features and content that are in accordance with the independent curriculum.



Figure 1. Initial view of the independent teaching platform

4. Conclusions

From the results of the data analysis that has been obtained, it can be concluded that the use of the Merdeka Mengajar Platform has an influence of 6.2%, there is an influence on the ability to develop teaching tools by teachers. The Merdeka Mengajar platform is the right place to improve the abilities of elementary school teachers, especially the ability to develop teaching tools. Because the Merdeka Mengajar Platform provides various features to get various references or inspiration about teaching tools. If teachers are able to utilize the Merdeka Mengajar Platform, they will gain knowledge and be able to hone their abilities. Thus, the quality of teachers in state elementary schools has increased by maximizing teachers' abilities in using the Merdeka Mengajar Platform.

It is hoped that there will be maximum provision and assistance for state elementary school teachers from elements of the education unit which will be useful for teachers in using the Merdeka Mengajar Platform for the teacher's teaching process. It is also necessary to evaluate the success of the program in improving the quality of education, especially in the use of the Merdeka Mengajar Platform in educational units

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