The Effect of Teacher Professional and Pedagogical Competency on Teacher Performance at SMA Negeri 3 Slawi Kabupaten Tegal

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Abstract. This study investigated the effect of pedagogical and professional competency on teacher performance at SMA Negeri 3 Slawi. This is qualitative research by using linear regression of professional competence (X1), pedagogical competence (X2), and performance (Y) of the teacher at SMA Negeri 3 Slawi. Exactly 48 sample is used on this study. The result are (1) there is a significant effect of professional competency to teacher performance, (2) there is a significant effect of pedagogical competency to teacher performance, and (3) there is a significant effect of both professional and pedagogical competence to teacher performance.

Keyword: Teacher Professional, Pedagogical Competency, Teacher Performance

1. Introduction

Teacher competence is a description of how professional the teacher is. In UU No. 14 of 2005 concerning Teachers and Lecturers article 1 verse 10 it is stated explicitly that "competence is a set of knowledge, skills and behaviours that must be possessed, internalized and mastered by a teacher or lecturer in carrying out professional duties". The professional form or not of teaching staff is manifested by an educator certificate. In article 1 verse 12 on same UU it is emphasized that "an educator certificate is a formal proof as recognition given to teachers and lecturers as professionals". Article 1 of the Public Proclamation No. 19 of 2017 amending Government Regulation No. 74 of 2008 concerning Teachers also states that teachers are professional educators whose main responsibility is to educate, teach, guide, direct, train, assess, and evaluate students in early childhood education, formal education, basic education, and secondary education.. As professionals, teachers are given professional allowances. Article 15 in PP No. 19 of 2017 mandates that professional allowances be given to: (a) teachers; (b) teachers assigned as heads of education units; or (c) teachers who receive additional assignments[1].

In its development, efforts to improve teacher competence are carried out continuously. Because the increase in competence has a clear legal umbrella as the embodiment of the demands of professionalism. The juridical umbrella of teacher competence associated with the teacher certification program starts from Law number 20 of 2003 which explains that educators (teachers) are obliged to create an educational atmosphere that is meaningful, fun,

creative, dynamic, dialogical, has a professional commitment to improving the quality of education, and set an example and maintain the good name of the institution, profession and position in accordance with the trust and given to him [1]

Schools need teachers who have good performance management. So that teachers will be able to contribute to schools efficiently and productively. In the learning process the teacher plays a very important role. The success of education largely depends on the qualifications and quality of teachers so that they are able to create learning effectiveness, which can be seen from changes in the learning process carried out by the teacher as a result of his participation in the program.

The teaching profession can be seen from the hard effort, lightweight the work that is owned is reasonable if it gets fair compensation in the form of: adequate salary, benefits and facilities. Likewise, teacher must be given the opportunity to develop themselves from their positions such as taking courses, training, upgrading, continuing higher education. Then given the opportunity to occupy positions in accordance with the expertise they have. Given the very strategic position of teachers in education, any efforts made to improve the quality of education in the education system are meaningless if they are not accompanied by efforts to improve the quality of teacher performance.

Teachers who serve as captains must possess sufficient managerial skills. A good management of teachers will be able to promote the development of performance in line with the expected professional competence. Teachers with professional competence where they work will constantly seek to update models, strategies, or working methods in line with the demands of the times based on a high awareness that the task of educating is the task of preparing the next generation who will live in their era in the future. In fact, the general people is becoming more and more aware that there are no teachers and no formal schooling. Without a sufficient number of qualified teachers, there can be no high-quality education. The teacher's role in converting educational inputs is so crucial that many experts claim that without adjustments and improvements in teacher quality, there won't be any quality changes or improvements in schools. [2]

According to [3] factors that can support the effectiveness of teacher learning, namely the climate and working conditions in schools, as well as teacher perceptions and behavior towards the implementation of professionalism development programs. These two factors simultaneously have a very significant role in the pattern of teacher performance. Teacher performance is performance in carrying out their duties as educators which can be seen in the activities of planning, implementing, and assessing the teaching and learning process whose intensity is based on the teacher's professional discipline.

Thus increasing teacher performance is expected because it is influenced by teacher competence. Competence as referred to in Law No. 14 of 2005 concerning Teachers and Lecturers. Teacher competence as referred to in paragraph (1) includes professional competence, pedagogical competence, social competence, and personal competence obtained through professional education, training, and professional experience. In practice, these competencies shape the teacher's personality which greatly determines the quality of learning and mentoring students, as well as encourages the implementation of tasks in a professional manner. When it comes to raising the standard of education and developing quality human resources, one of the defining variables is the demands of competence that instructors must ultimately possess. Professional educators with all of their competencies can deliver high-quality education.

According to the LTMPT *website,* the results of the announcement issued by LTMPT in the top 1000 schools in 2021 based on the UTBK scores found that SMA Negeri 3 Slawi ranks

716th and is far in the position of a school that is still in one region, namely SMA Negeri 1 Slawi which is in position 171. Meanwhile in 2022 the ranking of 1,000 Schools Based on the 2022 UTBK Values was launched on August 26, 2022, at 15.00 WIB stating that SMA Negeri 3 is in position 728 down 12 points from the position in 2021. This is interesting to look for solutions and problems that occur. Looking at the input for 5 Years this is the use of zoning with provisions of 20 percent achievement, 50 percent zoning, 20 percent affirmation, and 10 percent parent transfer path, which faces students in every school almost having the same obstacles.

[4] argues that knowledge, also known as competency, is the primary necessity for a teacher. The teaching of science is a given given the teaching profession. Thus, competency plays a crucial role in the delivery of high-quality, humanist, and religious instruction by teachers. research carried out by [5] also asserts that teaching effectiveness is significantly influenced by teacher competency. Additionally, this conclusion implies that transforming students into admirable human beings is one of the complicated components of teacher effectiveness measurements (faithful and knowledgeable). To be a competent teacher, one must be more than merely capable; one must also be more skillful and even wise.

As required by the Functional Positions of Teachers and Their Credit Scores: Minister of State for Empowerment of State Apparatuses and Bureaucratic Reform Regulation No. 16 of 2009, PKB is recognized as one of the main elements apart from learning/guidance activities and other additional assignments relevant to the functions of schools/madrasas which are given points credit for teacher career development, especially in promotion/functional position of teacher. It is hoped that through PKB activities there will be professional teachers who not only have strong, complete, and thorough knowledge, but no less importantly also have a mature, strong and balanced personality.

It is intended that teachers will be adept at piqueing students' interest in science and technology through the delivery of high-quality educational services because they possess strong, thorough, and thorough knowledge of science and technology as well as an amazing personality. They can support and direct students as they grow and negotiate the fast evolving scientific and technological landscape. The basis for teacher professional growth and development can be found in the relationship between teacher performance appraisal (PK), PKB, and the advancement of the teaching profession. PKB for teachers' main goal is to raise the standard of instruction provided in classrooms and madrasahs in order to raise the standard of instruction.

The benefits of a structured, systematic, and fulfilling PKB The need for teacher professionalism improvement is as follows. First, for students, namely obtaining assurance for certainty get effective service and learning experience for optimally increase self-potential through the mastery of knowledge and technology in accordance with the development of society 21st century and have an identity as a noble person according to the values of the whole nation. Second, for teachers. PKB provides guarantees teachers to master science and technology as well a strong personality in accordance with a dignified profession, protected, prosperous, and professional in order to be able to face the new civilization.

Likewise with research conducted by [6] the direction of the relationship that occurs between pedagogic competency activities and teacher performance is positive. That is, if pedagogical competence is increased, then teacher performance will also increase. The direction of the relationship that occurs between pedagogical competence and professional competence on teacher performance is positive. In other words, a teacher's ability to instruct will improve if both professional and pedagogical competence are increased. At SMAN 3 Slawi, the teacher's primary responsibility is demonstrated through teaching and learning

activities, which are a type of teacher performance. The quality of the output or output will grow in relation to improved performance.. So, to improve teacher performance needs to be supported by various parties. Many factors influence the performance of teachers at SMAN 3 Slawi, including coming from within the teacher himself. Several teachers at SMA N 3 Slawi have had a very long time in career advancement or promotion as stipulated in the PKB as a form of teacher professionalism.

2. Method

Researchers employ quantitative research as their method of inquiry. With the aid of SPSS 25, multiple linear regression analysis is the data analysis method performed. Using the associative causal survey approach, researchers look at how teacher professional competency and pedagogical competence affect student achievement. Using the results of the Teacher Competency Test (UKG) measurement from the Ministry of Education and Culture, as well as teacher performance using an assessment tool used by the school principal on instructors, one can determine the pedagogical competence and professional competence of teachers..

Given that there are several independent variables in this study, multiple linear regression analysis is the strategy used. The dependent variable is referred to as the dependent variable whereas the independent variable is known as the independent variable (dependent variable). Based on the research idea model, this study analyzes and explains the impact of the teacher's professional competence (X1) and teacher pedagogical competency (X2) factors on teacher performance (Y). How to ascertain the impact of the independent factors on the dependent variable is shown in Figure 1.
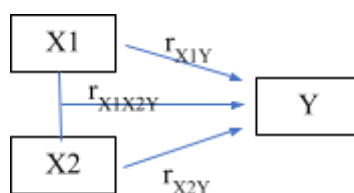

Figure 1. Research Model

Note:
X1 = Teacher Professional Competence
X2 = Teacher Pedagogic Competence
Y = Teacher Performance
r_{X1Y} = the effect of X1 on Y
r_{X2Y} = the effect of X2 on Y
r_{X1X2Y} = the effect of both X1 and X2 on Y

The population targeted in this study consisted of 54 teachers who taught at SMA Negeri 3 Slawi and had taken the Teacher Competency Test (UKG). The study used a random sampling method, and the sample size was determined using the Slavin formula.

$$n = \frac{N}{1 + N\alpha^2}$$

The researcher utilized a 5% margin of error and a 95% confidence level when using the Slavin formula, resulting in a minimum sample size of 48 individuals. Quantitative data on Teacher Professional Competency and Teacher Pedagogic Competence were collected through questionnaires, while Teacher Performance scores were obtained from the Teacher Competency Test (UKG) scores. The collected data was processed using statistical formulas and analyzed with the assistance of Statistical Product and Service Solution (SPSS). The data analysis activities focused on determining regression significance.

3. Result and Discussion

The purpose of this study was to ascertain how different levels of pedagogical and professional competence affected teacher effectiveness. In addition to attempting to substantiate the claims made in the previous description, it is also believed that the professional and pedagogical components that make up teachers' competence are collectively responsible for the teacher performance and, taken as a whole, are thought to have contributed positively and significantly to it. SPSS was used to execute multiple regression analysis in order to partially or concurrently determine the hypothesis's outcome.

The hypotheses are given below.

First Hypothesis (Ha)
a. Ha: There is a significant influence between professional competence on teacher performance at SMA Negeri 3 Slawi.
b. H0: There is no significant effect between professional competence on teacher performance at SMA Negeri 3 Slawi.

Second Hypothesis (Ha)
a. Ha: There is a significant influence between pedagogical competence on teacher performance at SMA Negeri 3 Slawi.
b. H0: There is no significant effect between pedagogical competence on teacher performance at SMA Negeri 3 Slawi.

Third Hypothesis (Ha)
a. Ha: There is a significant influence between Professional Competency and pedagogical competence together on the performance of teachers at SMA Negeri 3 Slawi.
b. H0: There is no significant influence between Professional Competence and pedagogic competence together on the performance of teachers at SMA Negeri 3 Slawi.

To test the third hypothesis, the first step is to perform a regression analysis, which will yield a multiple correlation value (R). This value indicates whether there is a relationship between the two independent variables and the dependent variable. The strength of the relationship is determined by how close the R value is to 1. According to [7] correlation values are classified into five levels of relationship, as demonstrated in Table 1.

Table 1. Correlation Score Criteria

Scale	Category
0,000-0,199	Very Weak
0,200-0,399	Weak
0,400-0,599	Medium

0,600-0,799	Strong
0,800-1,000	Very Strong

The first hypothesis (H1) uses a simple regression analysis to test the effect of professional competence (X1) on teacher performance (Y). The model summary table shows a highly positive relationship between professional competence and teacher performance, with an R value of 0.904. A positive relationship means that the variables X1 and Y move in the same direction. Professional competence (X1) contributes 81.7% to teacher performance (Y), which means that it has a significant effect. The remaining 18.3% is influenced by other factors. The Coefficients table shows that the regression equation model for estimating the level of teacher performance influenced by professional competence is $\hat{Y}= 16.233 + 0.890X1$. Based on the results, Ho was rejected for a significance value of less than 0.05. Therefore, there is an influence of professional competence on teacher performance at SMA Negeri 3 Slawi.

Table 2. Result of First Hypothesis Analysis

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
					Change Statistics					
1	,904[a]	,817	,813	4,05403	,817	205,366	1	46	,000	2,436

a. Predictors: (Constant), x1

b. Dependent Variable: y

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3375,231	1	3375,231	205,366	,000[b]
	Residual	756,019	46	16,435		
	Total	4131,250	47			

a. Dependent Variable: y

b. Predictors: (Constant), x1

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	95,0% Confidence Interval for B Lower Bound	Upper Bound	Correlations Zero-order	Partial	Part
1	(Constant)	16,223	4,722		3,435	,001	6,718	25,729			

x1	,890	,062		,904	14,331	,000	,765	1,015	,904	,904 ,904

a. Dependent Variable: y

The second hypothesis (H1) uses a simple regression analysis to test the effect of pedagogical competence (X2) on teacher performance (Y). The model summary table shows a highly positive relationship between pedagogical competence and teacher performance, with an R value of 0.886. A positive relationship means that the variables X2 and Y move in the same direction. Pedagogical competence (X2) contributes 78.5% to teacher performance (Y), which means that it has a significant effect. The remaining 11.5% is influenced by other factors. The Coefficients table shows that the regression equation model for estimating the level of teacher performance influenced by pedagogical competence is Ŷ= 27.366 + 0.784X2. Based on the results, Ho was rejected for a significance value of less than 0.05. Therefore, there is an influence of pedagogical competence on teacher performance at SMA Negeri 3 Slawi.

Table 3. Result of Second Hypothesis Analysis

Model Summary^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,886ᵃ	,785	,781	4,39112	,785	168,255	1	46	,000	2,270
a. Predictors: (Constant), x2										
b. Dependent Variable: y										

ANOVAᵃ					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	3244,279	1	3244,279	168,255	,000ᵇ
Residual	886,971	46	19,282		
Total	4131,250	47			
a. Dependent Variable: y					
b. Predictors: (Constant), x2					

Coefficientsᵃ										
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Correlations		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
1 (Constant)	27,366	4,364		6,271	,000	18,581	36,151			
x2	,784	,060	,886	12,971	,000	,662	,905	,886	,886	,886
a. Dependent Variable: y										

The second hypothesis (H1) uses a simple regression analysis to test the effect of professional competence (X1) together with pedagogical competence (X2) on teacher performance (Y). The model summary table shows a highly positive relationship between professional competence and pedagogical competence and teacher performance, with an R value of 0.906. A positive relationship means that the variables X1, X2 and Y move in the same direction. Professional competence (X1) and pedagogical competence (X2) contributes 82.1% to teacher performance (Y), which means that it has a significant effect. The remaining 17.9% is influenced by other factors. The Coefficients table shows that the regression equation model for estimating the level of teacher performance influenced by professional competence and pedagogical competence is $\hat{Y}= 11.209 + 1.361X1 - 0.427X2$. Based on the results, Ho was rejected for a significance value on ANOVA of less than 0.05. Therefore, there is an influence of professional competence and pedagogical competence on teacher performance at SMA Negeri 3 Slawi simultaneously.

Table 4. Result of Third Hypothesis Analysis

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
					Change Statistics					
1	,906[a]	,821	,813	4,04917	,821	103,485	2	45	,000	2,487

a. Predictors: (Constant), x1, x2
b. Dependent Variable: y

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3393,439	2	1696,720	103,485	,000[b]
	Residual	737,811	45	16,396		
	Total	4131,250	47			

a. Dependent Variable: y
b. Predictors: (Constant), x1, x2

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	95,0% Confidence Interval for B Lower Bound	Upper Bound	Correlations Zero-order	Partial	Part
1	(Constant)	11,209	6,700		1,673	,101	-2,286	24,703			
	x2	-,427	,405	-,483	-1,054	,298	-1,243	,389	,886	-,155	-,066
	x1	1,361	,451	1,382	3,016	,004	,452	2,270	,904	,410	,190

a. Dependent Variable: y

The study's results indicate a significant influence of professional competence on teacher performance at SMAN 3 Slawi. The competency standards required of teachers are

regulated in UU Number 14, 2005 concerning National Education Standards, which specifies four competencies that teachers must possess, including professional competence. Professional competence is essential because it relates to the performance that teachers display in completing their tasks. Therefore, a teacher can be considered professional if they meet the standard requirements in terms of academics, competence, profession, and performance. The higher a teacher's professional competence, the higher their performance will be. In light of the study's findings, it is crucial to enhance the professional competence of teachers to enable them to make a greater contribution to teacher performance. According to [1] "professional competence is the ability, expertise, and basic skills that teaching staff must master to perform their duties as teachers." Meanwhile, according to [8] "professional competence is the mastery of broad and in-depth learning material that teachers must master, including the mastery of subject curriculum material in schools and the scientific substance that covers it."

The study's findings reveal a significant influence of pedagogical competence on teacher performance at SMA Negeri 3 Slawi. Pedagogical competence is crucial since it determines the success of the learning process, which directly affects learning abilities such as student management, lesson planning, learning implementation, evaluating student learning outcomes, and developing student characteristics for their potential. This aligns with [9]statement that "pedagogical competence is essentially the teacher's ability to manage student learning." By enhancing a teacher's pedagogical competence, it will ultimately improve the teacher's own learning performance. Therefore, this research supports previous studies and expert opinions in highlighting the significance of pedagogical competence in improving teacher performance.

The study's results indicate that professional and pedagogical competence have a significant effect on teacher performance at SMA Negeri 3 Slawi. Teacher performance is measured by how well a teacher fulfills their duties and responsibilities to achieve certain goals. As [10] stated, "Performance appraisals must convey to employees how well they have performed on established goals." In addition, as noted by [11] "teacher performance is the ability of a teacher to carry out learning tasks at school and be responsible for students under their guidance by increasing student learning achievement." However, every teacher's performance level is different, and there are many factors that affect it, including teacher competence. In the perspective of national education policy, Regulation of the Minister of National Education Number 16 of 2007 concerning Academic Qualification Standards and Teacher Competency states that teacher competency standards are fully developed from four main competencies: pedagogical, personality, social, and professional. As [12] notes, these four competencies are integrated into teacher performance, and they are the minimum competencies that an educator must have. Therefore, teachers are required to develop their competencies. The better the professional and pedagogical competence possessed by teachers in carrying out their duties, the higher their performance will be. As a result, high-performing teachers at SMA Negeri 3 Slawi are expected to help improve the quality of education. This research aligns with previous studies and supports the conclusion that an increase in professional and pedagogical competence among SMA Negeri 3 Slawi teachers will lead to improved teacher performance.

4. Conclusions

Based the results of statistical analysis with multiple regression on the data analysis, hypothesis testing, and results presented by the researcher program can be concluded the results as follow. Based, the following conclusions can be drawn:

1. There is a significant and very strong positive relationship between pedagogical competence and teacher performance at SMA Negeri 3 Slawi. The correlation coefficient of 0.904 indicates that if pedagogical competence is improved, teacher performance will also increase.
2. There is a significant and very strong positive relationship between professional competence and teacher performance at SMA Negeri 3 Slawi. The correlation coefficient of 0.886 suggests that if professional competence is improved, teacher performance will also increase.
3. There is a significant and very strong positive relationship between pedagogical and professional competence on teacher performance at SMA Negeri 3 Slawi. The correlation coefficient of 0.906 indicates that if both pedagogical and professional competence are improved together.

In summary, the results indicate that both pedagogical and professional competence are important factors that significantly influence teacher performance, and improving these competencies together can lead to a significant increase in teaching performance.

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