

Interaction Effect Of School Principals' And The Use Of Information And Communication Technology (Ict) In Learning Upon The Teachers' Performance Of Junior High Schools In Samarinda, East Kalimantan, Indonesia

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Abstract

The Indonesian government applies the Law of Minister of Education Numbered 13/2007 concerning five competencies of school principals and Law of Minister of Education Numbered 16/2007 concerning academic qualification standards and teacher competencies in the use of information and communication technology in learning. The goal of this research is to find out the effect of the interaction between school principals' competencies and the use of information and communication technology (ICT) upon the teachers performance at Junior High schools, Samarinda, East Kalimantan. The number of the sample was 99 teachers. The research was quantitative using a correlational method. The data were collected with questionnaires and analyzed with multiple regression. The research finding revealed that there was significant interaction effect of school principals' competency and the teachers' use of ICT upon the teachers' performance. Ultimately, the teachers' performance was significantly influenced by the school principals and the teachers' use of ICT.

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Introduction

To improve the quality of education in Indonesia, The Indonesian government applies the Law of Minister of Education Number 13 of 2007 concerning five competencies of school principals and the Law of Minister of Education Numbered 16 of 2007 concerning academic qualification standards and teacher competencies in the use of information and communication technology in learning. The implementation of the two laws is intended to increase the responsibility of the school principals to assist teachers in solving their teaching problems and improve their competencies and skills in the use of ICT in teaching and learning process. (Alias, 2014)

This research is about the competences of the school principals and the competences of the teachers in the use of ICT in learning for the purpose of improving their performance. There are five competences that have to be possessed by the school principals, namely personal, managerial, entrepreneurship, supervision and social. Unfortunately, the responsibility is frequently forgotten. The school principals' leadership and their working environment may contribute an effect upon the teachers'

While the Law of Minister of Education Numbered 16 of 2007 explains academic qualification standards and teacher competences in the use of ICT in teaching and learning processes. In line of the use of ICT, Che Kop CG et al (2019) says that students taught by using instructional media have better performance. It is also true for the effectiveness of using ICT in the teaching and learning processes in Turkey (Costley, KC. 2014: 8). Franciska M (2019) It was also found that students are more interested, motivated, and excited in learning (Ermatita, et al. 2019).

According to Glikman, someone will work professionally if he has the ability and motivation (Mulyasa, 2013). Teacher' performance is the teacher's ability in carrying out learning tasks at school and his responsibility for his students through helping them increase their learning achievement. Therefore, teacher performance can be interpreted as an ability of carrying out his school duties (Azizie M and Gusrianty: 2019: 47). Muralidharan, K & Sundararaman, V (2009: 2) said that the performance of the teachers was effective when they could improve their student learning indicated through the students test scores.

Research problems

A study by Maemanah (2017) indicated that some teachers showed positive and better performance. It was partially found that 5.4% of the teacher performance was influenced by the school principals, 44.2% by work culture. Simultaneously, 48.2% of the teacher performance was significantly influenced by the principal's leadership style and work culture. While Christina I (2011) states that the teachers' use of ICT in learning process will improve the quality of learning, both the learning process and the results.

LITERATURE REVIEW

School principal competence

School principal's competence is defined as the ability of using and elaborating ideas so that new approaches are found in running departments or companies (Benton in Wahyudi, 2009). Then, Daryanto (2011) defines competence as the ability of doing something whose dimensions include knowledge, attitudes, and skills.

A study by Isdiana (2013) indicated that teacher performance was significantly influenced by school principal leadership and teacher professionalism. In short, that the school principal's leadership has strongly contributed significant effect on the teacher performance.

In other words, it can be formulated that the school principal competence is the ability to influence, encourage, guide, direct and mobilize the teachers, staff, students, and other related parties to work, play their own roles to achieve school goals

Use of ICT in learning

The Law of Minister of Education Number 16 of 2007 concerning academic qualification standards and teacher competences confirms that teachers have to meet the competence of using information and communication technology in teaching and learning. The purpose of using ICT is to help the students easily catch and understand the teaching materials presented by the teachers. So, *the students learning can be successfully improved.*

In addition, according to Libbele (2004), ICT can also be defined as a medium or aids to obtain and provide information that can be used as either one-way or two-way communication tool. It is a technology needed to process information, by using electronic computers such as processing, storing, protecting, transmitting, and seeking information anywhere and anytime. Other than that, The teachers have also to meet other competences such as professional, pedagogical, personal and social competences.

RESEARCH METHODOLOGY

The research was conducted at State Junior High School in Samarinda Seberang, East Kalimantan Province, Indonesia. This research was conducted using a quantitative approach with a correlational method. The sample 99 teachers. The data were collected using questionnaire and analyzed by simple and multiple regression. Before hypothesis testing, a descriptive analysis was carried out to see the means of each variable. The data normality test used the Kolmogorov-Smirnov test, linearity test, multicollinearity test, autocorrelation test and heteroscedasticity test. And then, the inferential analysis was conducted to see the hypothesis by using simple and multiple regression tests to see the magnitude of the influence between the competence of the principal and the use of ICT in learning upon the teacher performance.

FINDINGS AND DISCUSSION

All variables were normally distributed after testing the normality and linearity requirements. The results of the analysis will determine whether this study will reject or accept the null hypothesis.

H₁(The first hypothesis). There is no influence of the principal's competency upon the teacher performance.

Table 1
RESULTS OF VARIABLE REGRESSION ANALYSIS OF PRINCIPAL COMPETENCE ON
TEACHER PERFORMANCE
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
1. (Constant)	126,280	16,556		7,627	.000
Principal Competencies	.365	.087	.393	4,203	.000

a. Dependent variable: Teacher Performance

From table 1 the equation regression $Y = 126,280 + 0,365X_1$. Teacher performance 126,280, regression coefficient of 0.365 means that every change in X_1 of the principal's competence will increase the teacher performance by 0.365. The sig value of $0.000 < 0.05$, then H_0 is rejected. H_1 is accepted. It means that there is a significant effect of the school principal's competence upon the teacher performance.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1.	.393a	.154	.145	17,431

Based on table 2 the correlation coefficient (r_{count}) is $0.393 > r_{table} 0.1956$, indicating that the competence of school principals has a strong relationship with teacher performance. Meanwhile, the coefficient of determination (R^2) of 0.154 means that the contribution of the principal's competency variable (X_1) is 15.4% to the teacher performance variable (Y) and the remaining 84.6% is the contribution of other variables.

H_2 (Second hypothesis). There is no effect on the use of ICT in learning on the teachers' performance.

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
1. (Constant)	80,809	12,598		6,415	.000
Use of ICT	.612	.067	.681	9,158	.000

a. Dependent Variable: Teacher Performance

From table 3 the regression equation $Y = 80.809 + 0.612 X_2$. constant 80,809. The regression coefficient of 0.612 states that each addition of the X_2 variable (the use of ICT as a learning aid) will increase the teacher performance by 0.612. A significant value of $0.000 < 0.05$, then H_0 is rejected H_1 is accepted. It means that there is a significant effect of the use of ICT upon the teachers' performance.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1.	.681a	.464	.458	13,878

Based on table 4 the correlation coefficient (r_{hit}) is $0.681 > r_{tab} (0.1956)$, indicating that the use of ICT as a learning aid has a strong relationship with teacher performance. Meanwhile, the coefficient of determination (R^2) of 0.464 means that the variable contribution of the use of ICT as a learning aid (X_2) to the teacher performance variable (Y) is 46.4% and the remaining 53.6% is the contribution of other variables.

H_3 (The third hypothesis). There is no influence of the competence of the principal and the use of ICT simultaneously upon the teachers' performance .

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
1. (Constant)	75,169	14,869		5,056	.000
Principal school competence / X_1	.058	.080	.062	.719	.000

Use of ICT / X2	.584	.078	.649	7,500	.000
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a. Dependent Variable: Teacher Performance

Hypothesis testing which states a significant value of $0.000 > 0.05$ then H_0 is rejected H_1 is accepted, It means that there is a simultaneous influence of the school principals' competence and the use of ICT upon the teachers' performance. It is concluded that there is a significant (significant) effect.

Table 6.					
TEST OF THE CORRELATION COEFFICIENT AND THE COEFFICIENT OF DETERMINATION BETWEEN THE COMPETENCE OF THE PRINCIPAL (X1) AND THE USE OF ICT IN LEARNING(X2) TEACHER PERFORMANCE (Y)					
Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1.	.683a	.467		.455	13.91307

Based on table 6 the correlation coefficient (r_{hit}) $0.683 > r_{tab}$ (0.1956). While the coefficient of determination (R^2) of 0.467 means that it has a strong relationship It can be concluded that the contribution of the principal's competency variable (X1) and the use of ICT (X2) to the teacher performance variable (Y) is 46.7% , the rest $53,3\%$ is the contribution of other variables.

The results of this study indicate that teacher performance is influenced by the competence of the principal and the use of ICT in learning. Management success is determined by the effectiveness of competences as the core of management. Therefore, school principals have to implement their leadership properly for the success of their duties. It is too important to forget that the use of ICT in teaching and learning process can improve the teacher performance and student learning.

The findings of this study study supports a research by Sunardi (2014) about school principals' leadership which has a significant effect upon the teacher performance. Wahjosumidjo (2005) also states that good school principal's competence will influence good teacher performance.

Furthermore, Christina I (2011), revealed the importance of using ICT in learning. The use of ICT in learning will improve the quality of learning, both the process and outcome. Similarly, this finding also supports the study of Alias (2014) concerning the significant effect of the use of ICT upon the teacher performance.

CONCLUSION

The results of this study indicate that teacher performance is strongly influenced by the competence of the school principal and the teachers' use of ICT in learning. This study found that and the effect of the teachers' use of ICT in teaching and learning was higher than the principals' competence upon the teacher performance. Therefore, to improve the teacher competence in any school, these two kinds of competences should be possessed by both school principals and teachers.

This finding also implies that the school principals should provide ICT in the school and motivate and encourage their teachers to utilize and use ICT in teaching and learning process. The use of ICT is not only for the purpose of improving the teacher performance but also for the students learning improvement.

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