

Conference Paper

The Impact of Competencies Toward Teacher's Performance Moderated By the Certification in Indonesia

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Abstract

This research's objectives are to discover the factors that affect teacher's performance. The development of teacher's performance is determined by many factors, and one of them is competence, which is one of the factors that will improve performance. Certification is an important variable toward teacher's performance; accordingly, previous researches stated that certification had an impact on teacher's performance. This research was conducted to 120 respondents at Yadika 5 High School and it adopted the method of average cell to test the hypotheses. This research observed the background framework, specifically the influence of teacher's performance toward competencies moderated by certification. The results of this study proved that competence had an impact toward teacher's performance and certification was found as a moderating variable.

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1. Introduction

Teachers have the functions and strategic roles in the development of education. Moreover, teachers need to be developed as honorable profession. As one of private education institutions, Yadika High School Jakarta had decreasing student achievement. This problem would be transformed into a bad image for society. The decrease in the school's achievement was not preceded by good method of teaching and learning, which meant teachers' performance in that school was not sufficient. The school's management had designed various strategies to ensure the quality of school learning, but there were still many problems. Based on the problems indicated by the school's management, it was important to do the research that would observe other factors which improved teacher's performance. At present, the problems that occurred were low student scores, high number of student mutations, and teachers' lack of discipline awareness. The school had implemented some strategies to improve the quality of

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education as well as to improve standards of infrastructure, but the problem still could not be resolved properly.

2. Literature Review

2.1. Competence

Moqvist (2003) suggested that competency shall be defined based on actual situation with regards to individuals and their job. Competency means what is accomplished by someone in a job, in form of demonstrated activities, behaviors, and results. Someone has to have ability in form of knowledge, attitudes and skills that correspond to the field of his work. In this case, teacher's competence means the competence of teachers which can be interpreted as a picture of what a teacher can do in carrying out his work; either in the form of activities, behaviors or outcomes that can be demonstrated. According to Danim (2011), competence is a set of knowledge, skills, and basic values reflected in the habits of thinking and acting of a professional. Competence can be defined as a specification of a person's knowledge, skills and attitudes and his application to work, in accordance with performance standards.

2.2. Certification

Certification means recognition of an individual's competence to hold professional position. The term certification can be interpreted as a certificate from the authorized institution granted to the profession and as a statement (license) to prove the professional feasibility to carry out certain task [17]. Muslih (2007) defined certification as the process of providing education certificates to teachers who have met certain requirements, have academic qualifications, competence, physical and spiritual health, and have the ability to realize the goals of national education and the improvement of decent welfare. On the other hand, according to Ma'arif (2011) teacher's certification determines professional teachers, improves learning processes and outcomes, improves teachers' welfare, and teachers' dignity in order to realize a quality national education.

2.3. Performance

Human resources is the most dominant element to achieve good performance. Although the planning has been well and neatly arranged, but if the performing personnel is not qualified, with no high morale, then the already-prepared plan will be in vain. Performance is the work that can be achieved by a person or group of people within an organization, in accordance with their respective powers and responsibilities to achieve organizational objectives, legally and in accordance with moral standards and ethics.

2.4. The relationship between teacher's competence and performance

Competence becomes the basis for a person in running an activity. Without competence, it will be difficult to produce good performance in an activity. Hefferman & Flood (2000) classified competency into some factors that affect the behavior of individuals which will ultimately affect their performance. Potluri & Zeleke (2009) also stated that the competence or ability of a person will affect the way of handling customers which certainly will improve the performance of the part of handling customers. Mawoli & Babanyako (2011) stated that competence becomes a factor that affects individual behavior, and will affect performance in the end. Sulaiman, Almsafir, and Ahmad (2013) stated that performance is determined by many factors but competence is one of the strongest factors in improving performance.

Lotunani et al. (2014) concluded that competence is the ability of individuals to perform tasks. The concept of competence is also interpreted as knowledge, skills, and professional identity that are certainly going to affect performance. From the aforementioned explanation, we propose the following hypothesis:

H1: Teacher's competency will improve teacher's performance level.

2.5. The relationship between teacher's certification, competence, and performance

Teacher's certification is a step and effort from Government in order to increase the quality of educators. It also means a competence test in accordance with technical

mechanisms that have been set up by Government through local Department of Education and culture in cooperation with the competent institutions from higher education, it ends with the award of certificates to the educators who have been declared in accordance with professional standards. Therefore, teachers are Educators, means teachers are already recognized as professionals in creating the system and practice of quality education, the teachers who have Educator’s certificates are expected to bring about change from bad education into quality education by considering both process and output.

Mueller (2012) stated the method to achieve certification is the most significant factor in influencing teacher performance. Improved performance of certified teachers can be realized if the teachers who have been certified as professional educators are increasingly aware of the importance of the certification that they assume that they must continue to develop the professional attitude of improving the performance of certified teachers. It should be supported by the implementation of supervision of principal and continuous academic program [16]. Kanto et al. (2014) stated that certification programs have a positive effect on teacher performance. This study shows that certified teachers have better stability in school learning, quality improvement, standard procedures and improved service to customers [13].

From the aforementioned description, we propose those hypotheses:

H2a: Especially for the group of teachers with low competence level, the group of teachers with certifications has higher performance level than teachers without certification.

H2b: Especially for the group of teachers without certification, the group of teachers with high competence level has higher performance than teachers with low competence level.

Based on the aforementioned hypotheses then we describe those hypotheses in the conceptual framework as follows:

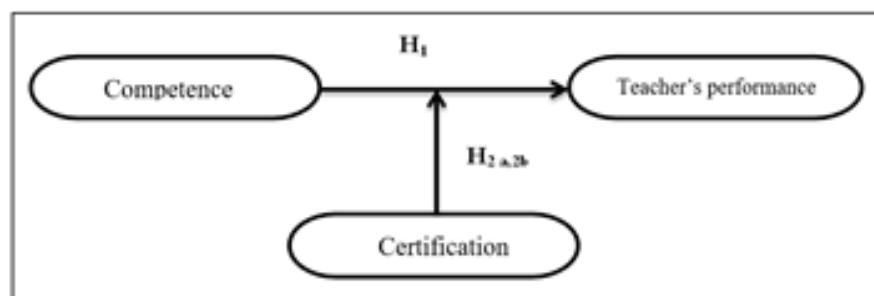


Figure 1: Conceptual framework.

3. Research Methods

3.1. Population and sampling techniques

The population in this research was teachers at Yadika High School. This research used non-hierarchical method or cell mean method used by 2x2 subjects. This study used a semantic scale between the numbers 1 to 7, the number 1 indicates the lowest value and the number 7 indicates the highest value. A sample size problem can be set forth in a theorem about single or univariate variables, the central limit theorem, states that the average statistic has a normal distribution for near-infinite sample sizes. In practice, however, the central limit theorem was applied to a sample size at least 30. Even stated for sample sizes were greater than 20, normal distribution could use binominal distribution approach (Agung, 2006). This study used four cells with $4 \times 30 = 120$ respondents as a minimum sample. This study involved 120 respondents divided into two groups: 60 respondents for each certified and non-certified group. Respondent's criteria in this study were teachers who have or have not certified at Yadika High School and have been teaching more than one year at Yadika High School. The research method was nonhierarchical method or cell mean method used between 2x2 subjects.

A sample size problem solved forward with a theorem about a single or univariates variable, the central limit theorem, stating that the average statistic has a normal distribution for near-infinite sample sizes. In practice, however, the central limit theorem applies to a sample size at least 30. It has been indicated that normal distribution used for sample sizes was greater than 20, or approaching binominal distribution (Agung, 2006). This study used four cells, $4 \times 30 = 120$ respondents as sample. In the measurement method, this research used measurement through Likert method. The Likert scale is the scale used to measure the attitudes, opinions, and perceptions of a person or group of people about a phenomenon or phenomena. Measurement scale used Likert scale with multilevel answers in seven categories. It was ranging from assessment with strongly disagree and agree answers.

It was considered that all respondents understand well about the products they had. Seven items verbally indicated two poles of extreme judgment. In accordance with the abstract phenomenon in the research model, the scale type used was the interval scale in seven points, which was the scale that distinguished categories by intervals or a certain distance with the same distance between categories. There were three reasons to use Likert scale of seven points. The first reason was, from a scale of three

to eleven, seven was the most commonly used scale [1]. Second reason was to provide more choices and increase point differentiation for respondents. The third reason, using the Likert scale of seven points will make the categories selection in questionnaire will be more specific. This will give respondents an opportunity to choose more specifically.

3.2. Measurement

In our study, there are two specific independent variables (i.e., exogenous) that are competence and certification and one dependent variable (endogen) that is performance. For performance, we measure variables by using nine indicators from Gary (2007) and for certification variables, it was clustered between teachers with certification and teachers without certification. Furthermore, from the measurement dimensions obtainable in the questionnaires form, we tested the validity and reliability test. Validity test uses Confirmatory Factor Analysis by looking at the value of Kaiser-Meyer-Olkin Measure of Sampling (KMO) and Measures of Sampling Adequacy (MSA).

4. Result and Discussion

We focused this research on the effect of competence on organizational performance moderated by certification. In Table 1, the test indicates that the variables have influences in determining teacher performance levels. Hypothesis tested using *F*-test on the teacher's line, competence and performance where $F_0 = 12.371$ (Sig.001), with the free degree of 1/116. The better the competencies are, the higher the performance of teachers at Yadika High School. Table 3 confirmed hypotheses analyses 2a and 2b that were shown with β coefficient, statistical hypothesis procedure was tested through General Linier Model (GLM) Univariate.

The test was performed to observe the difference of teacher performance difference deviation (Y) which was formed by high COM (1) level, and low competence level (COM = 2). Both of teacher groups, that is, with certification (CER = 1) and without certification (CER = 2) are counted for the influence of competence (X) on the same teacher performance (Y) in all cells. The result was hypothesis 2a for group of teachers with low competence level; group of teachers with certification has higher performance level than teachers without certification. The result correspondingly indicated that certification became moderating variable between the relationship of competence and teacher's performance.

TABLE 1: Between-subjects effect tests.

Dependent Variable: PER			
Source	Df	F	Sig.
Corrected Model	3	22.590	0.000
Intercept	1	7067.281	0.000
CER	1	1.697	0.195
CMEDIAN	1	12.371	0.001
CER * CMEDIAN	1	27.607	0.000
Error	116		
Total	120		
Corrected Total	119		

Source: Test results on data analysis tool.

TABLE 2: Parameter estimates.

Dependent Variable: PER				
Parameter	B	B	t	Sig.
Intercept	β_0	6.889	35.102	0.000
[CER = 1.00]	β_1	-0.595	-2.794	0.006
[CMEDIAN = 1.00]	β_2	-1.320	-6.202	0.000
[CER = 1.00] * [CMEDIAN = 1.00]	β_3	1.582	5.254	0.000

Source: Test results on data analysis tool.

TABLE 3: Intercept Parameter β_i design A (AB) competence.

	COM = 1	COM = 2	Difference	Hypothesis
CER = 1	$\beta_0 - \beta_1 - \beta_2 + \beta_3$	$\beta_0 - \beta_1$	$\beta_2 + \beta_3$	
CER = 2	$\beta_0 - \beta_2$	β_0	B₂	H_{2b}
Difference	$\beta_1 - \beta_3$	B₁	β_3	
Hypothesis		H_{2a}		

Source: Test results on data analysis tool.

4.1. Discussion

These findings increasingly strengthened that teacher’s competence is important because it will affect the formation of teacher performance in an educational institution. The teacher’s performance is fundamentally determined by teacher’s expertise and ability. This achievement factor is very strong and has very critical relation with teacher’s professional work, competence, motivation, satisfaction, and the attention of government on the other side of work conditions that are not in accordance with expectations which can be an obstacle in improving teacher performance. Mawoli and Babanyako (2011) stated that competence will affect a person’s performance level depending on the person’s level of competence and other factors that strengthen it.

TABLE 4: Hypothesis testing model research.

Hypothesis	Hypothesis Statement	Sig. Value	Explanation
H ₁	Teacher competence will have positive effect on teacher performance.	0.000	The data support the hypothesis
H _{2a}	Especially for the group of teachers with low competence level, the group of teachers with certification has higher performance level than teachers without certification.	0.006	The data support the hypothesis
H _{2b}	Especially for the group of teachers without certification, the group of teachers with high competence levels has higher performance than teachers with low competence level.	0.000	The data support the hypothesis

Source: Test results on data analysis tool.

The concept of competence can also be understood as knowledge, skills, and professional identity that will certainly affect performance. To improve the performance sufficient competence from employees is required because the employee’s work is the determinant of his performance (Yuliandi, 2012).

Based on the results of those studies it can be said that the competence of teachers has an influence on the level of performance so that the level of competence of teachers become something that is very important to be improved and implemented in teaching and learning activities so that the resulting performance can be improved by the teachers. The results of this study indicate that for the achievement of performance, competence becomes an integral part as one of the supporting factors to give a positive influence at Yadika High School. The result of H2a hypothesis test shows that the result of H2a hypothesis analysis is special for teacher group with low competence level; group of teachers with certification has higher performance level compared to teacher without certification with sig value. 0.006 (> 0.05). The results of this study are in accordance with Kanto et al. (2014) who were also stated that certification programs have positive effect on teacher performance. This study confirmed that certified teachers have better stability in school learning and certification is an improvement in quality, standard of procedure and enhancement of services to customers that is the effect of performance improvements [13].

Certification will also assist teachers in creating effective and efficient learning activities that will have an effect on the improvement to their performance. However, the effect of certification has not been effective; consequently, it needs to be increased again by government with the aim that the existing certification can be one of the requirements in establishing performance [17]. At Yadika High School, teachers with low competence and no certification do not have higher performance level. The results

support previous studies which stated that certification affects performance level. The result of test on H2b hypothesis, found that the result of analysis supported H2b hypothesis that was special for the group of teacher without certification, the group of teacher with high level of competence has higher performance than teachers with low competence level with sig value. 0.000 (< 0.05). The results of this study further reinforce previous research by Kanto et al. (2014) who also stated that certification programs have a positive effect on teacher performance. This study correspondingly indicates that certified teachers have better learning stability and improvement in quality, standard of procedure as well as customers services enhancement that affect performance improvements [13]. Certification will also assist teachers in creating effective and efficient learning activities that will have an effect on the improvement of their performance. However, the effect of this certification has not been effective, so it needs to be re-increase by government. Improved performance of certified teachers can be realized if teachers who have been certified as professional educators are increasingly aware on the importance of the certification. They must continue to develop their professional attitudes to improve the performance of certified teachers.

It should be supported by the implementation of supervision of principal and continuous academic programs [16]. In this study, certification becomes a moderating variable in the relationship between competence and performance. It is used to examine whether certification becomes a variable that strengthens or weakens the relationship between the two variables and based on the results of this study it was found that the group of teachers with certification has a higher level of performance compared with the group of non-certified teachers. Based on the results, it can be concluded that certification becomes a moderating variable that strengthens the relationship between teacher competence and performance variables.

4.2. Managerial implications

The world of education is always evolving in line with technological developments. It, of course, requires the involvement of the application of technological development. Educators should always increase their knowledge in order to provide the most updated knowledge and real examples that occur in accordance with current circumstances. Doing those tasks is certainly not an easy thing and educators should always update themselves through trainings provided by both organization and government. Competence becomes one of the things that must be improved because competence or ability is the basis for every individual in carrying out all activities.

Competence also becomes a demand required by many organizations for each individual to be able to join the organization and the assessment forth is done in various stages in order to be able to prove the adequacy of competence and ability that an organization has. Performance are either a goal or end result, to be achieved by each or joint organizations where such organizations' performance is deemed as an integration performance among their members. This study discussed about the influence of competence on organizational performance that is moderated by certification. The results of this study indicate that competence affects the performance of the organization and certification acts as a variable that moderates the relationship between competence and organizational performance. In other words, the performance of teachers at Yadika High School is influenced by the competence of the teachers. Yadika High School also needs to improve the competence and certification to improve its performance. The implications of this research are to comprehend the influence of competence on teacher performance; hence, the implication can be accomplished in order to improve teacher's competence and this can be applied in teaching activity in school. In conducting teaching activities, teachers should apply certain systems that combine both theory and practice. For instance; when a teacher conveys a particular subject, it should be followed by practice and should be completed in a balance way.

5. Conclusion

The results of this study are firstly, competence affects teacher performance; good competence improves the performance of teachers as a result it is necessary to improve the competence. Teacher performance should become a standard. Secondly, for low-competency teacher group, teacher-certified group has higher performance level than teachers without certification so that certification becomes a moderating variable in the relationship between competence and performance. Thirdly, for teachers with certification and high level of competence, this group has higher performance compared to the previous group. This research states that competence moderates the relationship between teacher competence and performance. The result of this research again shows that teachers with certification have high level of competence and can produce better performance and this applies vice versa because teachers with certification also have high competence. Based on the results, Yadika High School should continue to improve various trainings for teachers, starting from competence improvement, advanced certification, and various other trainings in order to assist teachers in maximizing their potentials in running a good education with the purposes

of the educational process to be maximally improved and assisting school in producing students who are excelled in advancing the nation.

5.1. Limitations of the research

Limitations of this study should be taken into consideration for further research. This study uses questionnaires as a measuring tool for saving time and energy; nevertheless, questionnaires have limitations such as bias in questions. There is a possibility that the respondents did not answer the questionnaire based on real condition or just filled out the questionnaire answers based on the expected ideal conditions and did not in accordance with the actual conditions that are happening. This may affect the measurements, and do not represent the variables significantly. Moreover, the limited number of samples affects the analytical ground so the researchers cannot discover more findings.

5.2. Research suggestion

This study has some limitations, because it only examines the extent to which competence affects teacher performance moderated by certification. Therefore, for further research development, it is suggested that future research adds other variables that may influence teacher performance, for instance: job satisfaction, work discipline, compensation, motivation, and others. The future research is expected to develop its research object, for instance: public schools, private schools, and others. The suggestion determination is to obtain more objectives and more representative results within a wider scope.

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