The Influence of Training Education and Teacher Competence on VHS Teacher's Performance

Amirono
Automotive Department, PPPPTK BOE Malang, Indonesia
Corresponding Author: Amirono

Abstract: *The aims of this research is to identify the influence of training education and teacher's competence on teacher's performance of light vehicles engineering. The subject involved from 83 teachers from 10 VHS. The data obtained analyzed with multiple regression technique. The result show that training education and teacher's competence affecting an improvement of teacher's performance.*
Keywords: *Training education, teacher's competence, teacher's performance*

I. Introduction

The teacher's role is toimprovea quality of education. Teacher has a responsibility to conduct and organize a suitable learning process[1], [2]. Therefore, teachers should improve their quality in order to fulfill the requirements[3], [4]. To improve the teacher performance is necessary to give a training education for teachers[5]. Training education is an effort to improve the teacher's quality in conceptual, contextual, and behavioral. Therefore, teachers can improve their skills, knowledge, and how they manage the learning process.

Besides the training education, another factor that affecting the teacher's performance is a teacher competence. The competence including the skills, knowledge, teaching behavior, and professional values. Teachers is compulsory to meet the minimum standard competencies. The standard competence is necessary to measure the teacher quality in order to find a teacher who suitable with requirements.

II. Teacher's Performance

Teacher performance is an output both quality and quantity that obtained from teacher action. The action of teacher is a responsibility to teach and organize learning process. In educational area, assessment of teacher performance necessary to measure the teacher quality. The assessment including work quality, accuracy, initiative, ability, and communication. There are several factors that affecting the teacher performance. These factors including skills, teacher competence, motivation, support, and organizational culture[4], [6].To increase the teacher's performance, it is important to focus on these affecting factors. For example (1) to improve skills, is necessary to involve the teacher in training education, (2) teacher competence need to evaluate in order to find a proper teacher to teach in learning process, (3) teacher need a motivation from every stakeholder in school environment, (4) a good infrastructure is a necessary in order to support teacher do the learning process, (5) a good organizational structure, good relationship between teacher, headmaster, and employees in school also important to make a good and professional work environment.This article discussing about how training education and competence affecting on teacher's performance. Components of teacher's performance that measured in this research including (1) teaching preparation, (2) program implementation, (3) evaluation, (4) and self-improvement.

A. Training Education

Training education is an effort to develop human resources, especially on intellectual skills and human personality. It also used for improve skills, knowledge, and specific job for employee[7], [8].Furthermore, employee expected meet the requirements to reach a higher position properly with the institution needs. It is important to involve employee on training education in order to develop institutions quality.

In an educational institution, especially school,training education is a compulsory for teacher. Learning objectives is depending on teacher quality as a main role in learning process. Furthermore, as a teacher is not only understand about subject which they teaching, but also how they can manage and teach effectively and efficiently.

B. Teacher's competence

Competence is a characteristic that stand out by people and become a ways to act and thinking in any situation and lasts for a long period. From that statement, it can be said that competence pointed to human performance on a specific work which can be seen from mind, attitude, and behavior[3]. Competence is also a combination of knowledge, skills, values, and attitude are reflected in the habit of thinking and acting. Furthermore, Spencer and Spencer divided competence into five characteristics; (1) motive, is a people thought and wanted which causing something, (2) character, is a physical response about something, (3) self-concept, is an attitude, value, and image of people, (4) knowledge, is an information which understand by people in a specific subject, (5) skills, is a skills to doing something related to physical and mentality[9].

Teacher who has an important role in learning process should have a competence in skills, knowledge, and organize the learning. According to the Indonesia national law number 14 (2005) about teacher and lecturer, competence is a set of knowledge, skills, and attitude should be owned and understand by teacher or lecturer in professionalism duty. Teacher competence standard is developed from 4 main competences: (1) pedagogical, (2) personality, (3) social, and (4) professionalism.

III. Method

This study is an explanatory research to discover an influence between training education and teacher's competence on teacher's performance. This research aims to identify the extent and nature of cause and effect relationship[10]. The variables measured in this study are training education, teacher's competence, and teacher's performance. To measure relationship about those three factors is necessary to determine a research instrument. It used to measure a variable which contains indicators. The research instrument can be seen in Table 1.

Table-1 operational matrix of research variables

No.	Variable	Indicator	Items
1	Training Education	1. Explained subject	1. The subject material can support the job 2. Training education can improve knowledge
		2. Method used	3. Can easily understood 4. Suitable with explained subject
		3. Supported infrastructure	5. Availability of proper tools to support practical work 6. Condition of classroom
		4. Instructor ability	7. Explaining ability can easily understood 8. Instructor know the objective of the training education
2	Teacher's competence	1. Pedagogical competence	1. Suitability of explained subject with determined competence 2. Clarity of learning objective, subject material, and answered question
		2. Personality competence	3. Self-confidence on teaching ability 4. Become a role model on student's behave
		3. Social competence	5. Admit a criticism, suggestion, and opinion from others 6. Willingness to spend a time for consultation with students outside the class time
		4. Professionalism competence	7. Understanding about subject material 8. Ability to explain subject material systematically
3	Teacher's performance	1. Teaching preparation	1. Preparing a teaching and learning before a lesson 2. Analyze a student characteristics before develop a lesson plan
		2. Program implementation	3. Explain about learning objective 4. Explain a subject material more interesting with demonstrate an subject example
		3. Evaluation	5. Give an assignment to deepen the subject material 6. Checking and assessing students assignments
		4. Profession development	7. Analyze a student understanding and lesson completeness every exam finished 8. Analyze a targets of curriculum achievements every exam finished

Analysis method that used to examine the relationship between independent and dependent variable is multiple regression. This model used to predicting the unidentified value of variable from two or more identified variables which can called predictors[11].The equation used in this research are:

$$Y = b_1 X_1 + b_2 X_2 \tag{1}$$

Following to the equation, Y is stands for teacher's performance, b is standardized coefficient beta, X_1 is a training education, and X_2 is a teacher's competence. Furthermore, to measure the signification of

independently relationship between independent and dependent variables uses t value analysis which generated from multiple regression model. With the significance level a=5% and degree of freedom (k) and (n-k) with n is a total of observation and k is an independent variable. The t_{count} formulated as follows:

$$t_{count} = \frac{\beta i}{Se\beta i} \qquad (2)$$

Information:
β = regression coefficient
Se βi = standard error of regression coefficient

With the significance level a=5%, if $t_{count} > t_{table}$ then H_o is rejected and H_a accepted. In other hands, if significance level t < 5% then H_o rejected and H_a accepted. To investigate relationship of whole independent and dependent variable uses F_{test} which generated from multiple regression model. With the significance level a=5% and the degree of freedom (k) where n is an observation amount and k is an independent variable. The value of F_{count} formulated as follows:

$$F_{count} = \frac{R2/k}{(1-R2)/(n-k)} \qquad (3)$$

Information:
R^2 = R Square
n = total data
k = total of independent variable

IV. Results and Discussion

Multiple regression analysis used to examine the influence of training education and teacher's competence on teacher's performance. The results can be seen in table 2.

Table-2 result of multiple regression analysis

Research Variable	Standardized Coefficients Beta	t	Probability	Information
Constanta	-0.286			
Training Education	0.407	4.783	0.000	Significance
Teacher's Competence	0.310	3.606	0.001	Significance
R	: 0.647			
R Square	: 0.419			
Fcount	: 28.791			
Probability. F	: 0.000			

From the result in Table 2, it transformed into regression formula model (1). Regression model from the test completely can be seen following this result.

$$Y = -0.286 + 0.407 \, X_1 + 0.310 \, X_2 \qquad (4)$$

The Constanta value is -0.286, which means if teachers are not involved to training education and they not met the requirements competence then the teacher's performance is decrease about 28.6%. The coefficient variable is 0.407 and has a positive coefficient value. It means that more often the teachers involved to training education then the teacher's performance is increase about 40.7%. The coefficient variable of teacher's competence is 0.310 and has a positive coefficient value. It means that the higher of teacher's competence in line with improvement of teacher's performance about 31%. The value of multiple correlation coefficient (R) is 0.647, which means that the relationship between training education and teacher's competence on teacher's performance is 64.7%. The value of determination (R^2) is 0.419, which means that the influence of training education and teacher's competence on teacher's performance is 41.9%.

Based on the Table 2, the F_{count} is 28.791 with the significance level is 0.000 lower than 5%. This result means that training education and teacher's competence simultaneously affecting teacher's performance. The analysis result shows that influence of training education on teacher's performance has a t_{count} 4.783 with the significance level is 0.000 lower than 5%. This result means that training education significantly affecting teacher's performance. The analysis result shows that influence of teacher's competence on teacher's performance has a t_{count} 3.606 with the significance level is 0.001 lower than 5%. This result means that teacher's competence significantly affecting teacher's performance.

Based on the results and hypotheses test shows that training education is affecting teacher's performance. It can be said that improvement of teacher's performance can be reached through training education. The subject material that taught on training education can support the job and can improve the knowledge. In addition, the method and explanatory of instructor can easily understood and suitable with subject material. Also, the infrastructures can support the practical works with the conducive class condition.

Based on multiple regression result, found that competence also affecting the teacher's performance. The result interpreted that improvement of competence also improve the teacher's performance. The improvement of teacher's performance can be shown on;(1) suitability when explain the learning objective, material, and answering a question in class,(2) The confidence when teaching and become a role model for student behave, (3) Admit a criticism, suggestion, and opinion from others, (4) Willingness to spend a time for consultation with students outside the class time, and (5) The ability to explain the material systematically.

The result of several previous study also supported this research.Teacher needs an extent education program in order to preparing education with integrating technology to make an innovative learning process[12]. In other hand, teacher with training education has a good teaching skills and learning approach better than the teacher without training[13]. The competence proves has positive and significant impact on teacher's performance and job satisfaction[6]. Teacher's competence that affecting performance also has a huge impact in increasing student achievement[3].

V. Conclusion

Based on the result, training education and teacher's performance proven has an impact on teacher performance. It means that teacher has a good skill and knowledge on teaching and organizing a learning process if they involved on training education. Moreover, teacher's performance also determined from how good they applied their competence on learning process.

To improve the quality of teacher education institution should take a concern on training education. They should involve teacher on a compulsory training education in order to increase their skills and knowledge. Moreover, teacher should improve their competence including pedagogic, personality, and professionalism. Furthermore, is necessary to conduct a research about relationship between headmaster leadership on teacher motivation to extent the better results.

References

[1]. A. Lieberman and D. H. P. Mace, "Teacher learning: The key to educational reform," J. Teach. Educ., vol. 59, no. 3, pp. 226–234, 2008.
[2]. G. Chen and J. Zhang, "A case study of factors influencing the learning of engineering students," World Trans. Eng. Technol. Educ., vol. 12, no. 2, pp. 176–180, 2014.
[3]. W. Wahyuddin, "Headmaster Leadership and Teacher Competence in Increasing Student Achievement in School," Int. Educ. Stud., vol. 10, no. 3, pp. 215–226, 2017.
[4]. H. Suswanto, K. Asfani, and A. P. Wibawa, "Contribution of teaching performance, learning satisfaction and achievement motivation to students' competence achievement," Glob. J. Eng. Educ., vol. 19, no. 1, pp. 66–71, 2017.
[5]. P. Trowler and R. Bamber, "Compulsory Higher Education Teacher Training: Joined-up Policies, Institutional Architectures and Enhancement Cultures," Int. J. Acad. Dev., vol. 10, no. 2, pp. 79–93, 2005.
[6]. H. M. Arifin, "The influence of competence, motivation, and organisational culture to high school teacher job satisfaction and performance," Int. Educ. Stud., vol. 8, no. 1, pp. 38–45, 2015.
[7]. L. Postareff, S. Lindblom-Ylänne, and A. Nevgi, "The effect of pedagogical training on teaching in higher education," Teach. Teach. Educ., vol. 23, no. 5, pp. 557–571, 2007.
[8]. J. Meiklejohn et al., "Integrating mindfulness training into K-12 education: Fostering the resilience of teachers and students," Mindfulness (N. Y.), vol. 3, no. 4, pp. 291–307, 2012.
[9]. L. M. Spencer and S. M. Spencer, Competence at Work: Models for Superior Performance. John Wiley & Sons, 2008.
[10]. J. Maxwell and K. Mittapalli, "Explanatory Research," in The SAGE encyclopedia of qualitative research methods, L. M. Given, Ed. SAGE Publications, Inc., 2008.
[11]. R. M. Stolzenberg, "Multiple Regression Analysis," in The Handbook of Data Analysis, M. Hardy and A. Bryman, Eds. Chennai, India: SAGE Publications, 2004.
[12]. D. C. Duhaney, "Teacher Education: Preparing Teachers to Integrate Technology," Int. J. Instr. Media, vol. 28, no. 1, pp. 23–30, 2001.
[13]. G. Gibbs and M. Coffey, "The impact of training of university teachers on their teaching skills, their approach to teaching and the approach to learning of their students," Act. Learn. High. eduation, vol. 5, no. 1, pp. 87–100, 2004.