PERFORMANCE STRATEGIC FACTOR IN ELEMENTARY SCHOOL TEACHERS’ DEVELOPMENT CONTEXTUAL LEARNING MATH

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ABSTRACT

The purposes of the study are to analyze, and to examine professional competency motivation, and discipline contributions, toward teachers of elementary school’s performance in contextual math learning. The type of research is quantitative correlation. The research subject is teachers of elementary school in Selo, Boyolali, Central Java. Data collecting methods are interview, observation, and questionnaire. The data analysis technique is using double regression analysis. The result of the study is that the professional competency, motivation, and discipline of teachers are shared equally give contributions toward teachers’ performance 64.30%. Professional competency partially gives significant contribution toward teachers’ performance 24.1%. Motivation competency partially gives significant contribution toward teachers’ performance 21.9%. And discipline partially gives contribution toward teachers’ performance 35.6%.

Keywords: discipline, motivation, performance, professional

Introduction

Teacher as the teaching staff is education leader who is very determining in learning. His leadership is reflected on how teacher conducting his role and duty is. It means that teacher’s performance is a determinant factor of learning quality which implicates toward the quality of education output. Teacher’s performance is the teacher’s execution in conducting his prime duty and function (Rusyan, 2013: 139).

Teacher’s quality is very important in determining education output quality because teacher is as the driving motor of students in learning. How is the realization in the field? There is a common impression, the performance of elementary school teacher in learning process is still predicated as the executor of curriculum and even their activities are merely a routine matter. Teacher is not ready yet to face numerous changes, access for advanced material is limited, and knowledge and skill of learning is also limited. The math teaching they perform often to be dry and meaningless. Material for math is delivered to the students merely a collection of boring numbers and formulas, there is no value investment that is very useful to create a complete attitude and behavior. Attitude of discipline, careful, crisis, patient, care, brave and fair is yet to be developed.

There are numerous factors that affect the variation of teachers’ performance. The result of research conducted by Susanto (2012) shows that teachers’ performance is influenced by teachers’ competency, headmaster’s leadership and work motivation of teacher. Research conducted by
Aritonang (2005) shows that teachers’ performance is influenced by work compensation and work discipline of teacher. The research result conducted by Wulan (2013) shows that teacher performance is in relation with teachers’ work discipline. From the research of Enni, Djasmi, and Sowiyah (2013) it shows that, teachers’ performance is affected by headmaster’s leadership and work discipline. Based on Rusyan (2013: 141) teachers’ performance is affected by three factors, which are (1) individual variable, (2) organizational variable, and (3) psychological variable.

Based on previous study results and experts’ opinions above, the factors that affect teachers’ performance in this research are limited on the profession competency, motivation, and teachers’ discipline. Professional competency is an individual competency that gives contribution for teachers’ performance in the matter of knowledge mastery, learning material development, and utilization of information and communication technology. Motivation is a psychological variable that can improve effort and energy, initiation, persistence, and teachers’ performance. Discipline is organizational variable which is obeying the rules and on time behavior in carrying out his main duty and function, so that his performance is optimal.

Based on those explanations, hypothesis purposed in this research is “there is a contribution of profession competency, motivation, and teachers’ discipline toward teachers’ performance in contextual math learning, whether simultaneously or partially”. The purpose of this study is to analyze and to examine contribution of profession competency, motivation, and teachers’ discipline toward elementary school teachers’ performance in contextual math learning, whether simultaneously or partially.

Research Method

The type of this research is based on its quantitative approach with correlation design (Sutama, 2012: 168). The research field is in Selo Boyolali Central Java elementary schools. Research population in this study is all the teachers of elementary school in Selo Boyolali Central Java with amount of 132 teachers. Research sample is all teachers of IV, V, and VI grade of elementary school in Selo Boyolali Central Java with number 66 teachers.

Data collection method is using observation, interview, and questionnaire (Denzin and Lincoln, 2009: 495). Data analysis technique is conducted by doubled linear regression, with normality assumption test, multicolinearity, heteroskedastisity, and autocorrelation (Gall, Gall, and Borg, 2003: 402).

Research Result and Discussion

The questionnaire validity test is conducted toward 4 research variables which are teachers’ performance, profession competency, motivation, and teachers’ discipline. Those variables are described to be 80 item questions. Question item is defined as valid if the question item has r value positive and bigger than r value table (0.30) significant level product moment 5%. The result of validity test shows that all r count value is bigger than r table. It means that all question items can be used to explain research variables which are teachers’ performance (Y) profession competency (X1), motivation (X2), and teachers’ discipline (X3).

Questionnaire reliability test is using Spearman-Brown analysis. A questionnaire can be stated as reliable if has bigger R Cronbach Alpha than r table. Based on data analysis, it is required R Cronbach Alpha for Y variable 0.885 for X1 variable 0.918, for X2 variable 0.912, and for X3 variable 0.962. It means that all four research variables can be reliable. The value of for variables r count of the research is beyond the 0.6 threshold.

In this research, before that data analyzed, it is conducted normality assumption test, multicolinearity heteroskedastisity, and autocorrelation. Data normality test is using One Sample Kolmogorov-Smirnov Test with 5% significance. The examination is conducted toward residual
value from the regression model because if there is normality, then the residual value will be distributed normally and independent (Ghozali, 2005: 27). Based on data analysis, it is required value of asymptotic significance 0.698 for Y variable, 0.729 for X1 variable, 0.227 for X2 variable, and 0.994 for X3 variable. It means that asymptotic significance values of all variables are bigger than 0.05. it is in accordance to the examination principles, then it can be concluded that the data has normal distribution.

Essentially, the model of regression equation with two independent variables or more, there will always be doubled collinear. Multicolinearity is marked by high R value (doubled correlation). Multicolinearity test is intended to understand the existence of relation between independent variable and regression model, if multicolinear occurs then collinear independent variable can be removed. In order to understand the presence of multicolinear based on calculation conducted using SPSS program 19 it can be known with guidance that VIF value < 10 and tolerance > 0.1. Based on data analysis result, it is required VIF value 2.366 and Tolerance 0.433 for variable X1, VIF value 1.831 and Tolerance 0.546 for variable X2, and VIF value 1.671 and Tolerance 0.559 for variable X3. It means that the variable of profession competency, motivation, and teachers’ discipline in regression model there is no perfect relation among independent variables (multicolinear) because VIF < 10 and Tolerance > 0.1.

Heteroskedastisity means that the variant variable in the model is different (constant). Consequence of the existence of heteroskedastisity in regression model is the obtained estimator becomes inefficient, both in small sample and big sample although the acquired estimator describes the population and the addition of sample used will approaching the real value (consistent). It is because variant that is not minimum of in other word inefficient. Heteroskedastisity test can be performed by using Box Ljung test, White test, Park test and Glejser test. Box Ljung test, White test, and Park test is considered to be more appropriate to be used for data with time series in nature while the Glenjser test is more appropriate for both type of data which are time series and cross sectional.

In this research the heterokesdastisity is conducted using Glenjser test. This Glenjser test is performed by making the independent variables regression in regression equation with residual value as the dependent variable. If the result is significant then it can be said that heteroskedastisity is occurred (Sumodiningrat, 2001: 271). Based on the result of data analysis, it is acquired t-statistic value 1.205 and Sig 0.235 for variable X1, t-statistic value 1.355 and Sig 0.183 for variable X2, and t-statistic value -0.375 and Sig 0.710 for variable X3. This result of Glejser means that all independent variables used are not significantly affecting the dependent variable. This absolute residual can be seen from the level of significance of each meticulous independent variable. The level of significance of each independent variable is bigger than 5% so that it can be concluded that there is no heteroskedastisity in regression equation.

The consequence of the presence of autocorrelation is the estimated parameter become refraction and its variant is not minimal, therefore, it becomes inefficient. To understand the presence of autocorrelation is conducted using Durbin Watson statistic. Hypothesis used is: 0 < d, dl (there is a positive autocorrelation, the decision is denied), du < d < 4-du (there is no positive or negative autocorrelation, decision is accepted) (Ghozali, 2005: 96). Based on regression analysis result it is obtained that the statistic value of Durbin-Watson: 1.790, with degree of trust 5% and explanatory variable 3, then it is obtained dl value = 1.37; and du = 1.66. The quantity of coefficient value of DW from the examination result is 0.709 located in between du < d < 4-du (1.66 < 1.709 < 2.34), so it can be concluded that there is no indication of positive or negative autocorrelation, decision is accepted.
The doubled regression analysis is used to analyze and examine the quantity of independent variables’ contribution toward dependent variable. The data analysis measurement in this research is using the help of SPSS 19. The result is served in the table below:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Standardized coefficient</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constanta</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X1 (profession competency)</td>
<td>0.241</td>
<td>2.195</td>
<td>0.034</td>
</tr>
<tr>
<td>X2 (motivation)</td>
<td>0.219</td>
<td>2.138</td>
<td>0.039</td>
</tr>
<tr>
<td>X3 (teachers’ discipline)</td>
<td>0.356</td>
<td>2.836</td>
<td>0.007</td>
</tr>
</tbody>
</table>

adjusted R square = 0.643
F count = 23, 693
Sig. F = 0.000

The form of doubled linear regression equation can be figured:

\[ Y = 11.817 + 0.241X_1 + 0.219X_2 + 0.356X_3. \]

This doubled linear regression equation has meaning that based on Constanta and coefficient from its three independent variables, Constanta value is 11.817, it means that variable of teachers’ performance (Y) is 11.817 unit without any value from those three independent variables. The meaning of three independent variables is briefly explained below:

First, to variable of teachers’ professional competency (X1), its coefficient regression is positive, it means that if teacher’s competency is improves, then the teachers’ performance is also improves. The statistic measurement of teachers’ professional competency obtained t value = 2.195 with level of significance 0.034. it means that teachers’ professional competency has a significant effect toward teachers’ performance. This result is in accordance to the statement of Yudani, Natajaya, and Dantesa (2013); Barinto (2012); Liakopoulou (2011); and Wahyudi (2010) stating that professional competency has role in the development of teachers’ performance. The research result of Kusdi (2013), Maslamah (2012); Ayu, Susilawati, and Patonah (2011); Udiyono (2011); and Apriyani (2009) also concluded that there is significant role and has direction to the positive correlation between professional ability and teachers’ performance.

Based on this research result it can be understood that in order to develop teachers’ performance, one of the way is to optimize teachers’ professional competency. This optimization may include learning material mastery widely and deeply and also professional development trough reflective action. In this term, development strategy of education and improvement of teachers’ performance is needed. The education and training with the basic of Lesson Study seems to be needs more concern in developing and improving teachers’ performance. As one of school members, teacher has a very important role for learning and education in building students in order to achieve competency predetermined.

Based on Martino and Zan (2009) building of math learning attitude must be conducted by teacher to student in the learning process. Li and Yu (2009) states, that an a math teacher who using pedagogical knowledge to teach math can be used to build learning attitude. Hansson (2010) give direction so that the learning will be effective, which are a) teacher provides the appropriate condition to learn, b) student builds his own knowledge, c) the existence of relevant material. Based on these experts’ opinions, it can be understood that math learning will be more meaningful and fun if student is given opportunity to develop his potential with professional teacher facilitator.

Second, for variable of teachers’ motivation (X2) its regression coefficient is positive, it means that if teacher’s motivation is better, then teacher’s performance is also getting better.
Statistical measurement result of teachers’ motivation variable the t value = 2.138 with significance level 0.039. It means that teachers’ motivation has a significant influence toward teachers’ performance. This research result is in accordance to the research result of Suwedana (2013); Rahmawati, Graha, and Hermawan (2013); Bestiana (2012); Liana (2012); Aniswati (2012); Suwardi and Utomo (2011); Mustafa and Othman (2010); Levavic (2009); and Purnama (2008) that conclude there is a strong relation between motivation and teacher’s performance.

Based on this research result it can be understood that in order to optimize teachers’ performance is attempted through cultivate motivation. Teacher must be able to motivate himself maximally so that it will force the ability development in performing his duty and function.Ormord (2008: 58) states that motivation is something that energizes, directional, and maintains behavior. Educational organization and decision makers should pay more attention and follow up the aspects that affect teachers’ motivation. Those aspects are to act fairly and wisely, facilitation distribution, carrier support, and a conducive working environment.

In order to invest motivation and so that math will be easy to understand by the students, inductive reasoning process can be performed in beginning of the learning, then it is continued by deductive reasoning process to strengthen the understanding that already obtained by the student (Lidinillah, 2006: 1). In this term, teacher must understand the character of math in school. Mathematical characteristic can be understood from essence of school math. Ebbut and Straker (Marsigit, 2008: 1) mentions that the essence of school math are; (1) math is an activity of pattern and relationship seeking; (2) math is a creative activity that needs imagination, intuition, and founding; (3) math is an activity of Problem Solving; (4) math is communication tool. The characteristic of math based on Pratama (2009:1) are; (1) have a mental object review within mind includes (a) fact, (b) concept, (c) definition, (d) operation, (e) principle; (2) focus upon agreement; (3) have a deductive mindset; (4) have symbol with empty meaning; (5) pay attention on the universe of the discourse; and (6) consistent in its system.

Third, for the variable of teacher discipline (X3), its regression coefficient is negative. It means that if teacher’s discipline is better, then teacher’s performance is also getting better. The result of statistical measurement for the variable of teachers’ discipline is obtained t value = 2.836 with level of significance 0.007. It means that teachers’ discipline has a significant influence toward teachers’ performance. This founding is consistent with research result from Kusdi (2013); Rofi (2012); Aniswati (2012); and Maharani and Rahmawati (2010); which show that teachers’ discipline has significant positive affect toward teachers’ performance. The higher of teachers’ discipline is the higher also quality of teacher’s performance is.

Based on this research result it can be understood that in order to optimize teachers’ performance, it can be attempted to improve teachers’ discipline. Standard performance is the benchmark in attempting comparison between what have been done and what is expected. In order to achieve this standard, then every applicable rule must be obeyed with full of responsibility. If it is associated with timeliness, then good performance must be encouraged with full of adherence of time. This is the kind of teachers’ discipline that will support development and improvement performance.

Effort to develop and improve teachers’ performance essentially is an endless need of school. This is because that development and improvement of performance is not only performed when there is a discrepancy between actual performance and expected performance, but also when those development and improvement must be maintained although there is no discrepancy. It is because the extremely quick of school external environmental changes will encourage the improvement of higher demand for school.

64.30% contribution of teachers’ performance is affected by profession competency, motivation, and teachers’ discipline, while the other 35.70% is affected by other variables that are
not examined in this research. The result of research by Iskandar (2013); Tidarini (2011); Nuchiyah (2007); dan FirmanSyah (2006) stated that teachers’ performance is strongly affected by the leadership of headmaster. The result of research from Bahri (2011) stated that teachers’ performance is affected by work environment. Brotoserdjati (2012) also explained that teachers’ performance that already passes the certification is affected by commitment and culture of school. Besides those factors, there are other factors like family background, metal, physical, social level, demographical experience, resources, reward, work design structure, perception, attitude, and personality. This indicates that teachers’ performance is still needs deeper researches seen from the other variables that haven’t being examined yet. Considering that teachers’ performance is very dominant in defining the learning quality in particular and education quality in general.

Conclusion

Profession competency, motivation, and teachers’ discipline together give contribution toward teachers’ performance 64.30%. It means that in integrated, the optimization of profession competency, motivation, and teachers’ discipline can force the development of teachers’ performance

Professional competency partially has a significant contribution toward teachers’ performance 24.1%. It means that if teachers’ professional competency is better, then the teachers’ performance is also getting better. In order to develop teachers’ performance, one of alternative ways is by the optimization of teachers’ professional competency. This optimization includes learning material mastery widely and deeply also develops professionalism trough reflective action.

Motivation partially has a significant contribution toward teachers’ performance 21.9%. It means that if teacher’s motivation is better, then teacher’s performance is also getting better. In order to optimize teachers’ performance is attempted through cultivate motivation. Teacher must be able to motivate himself maximally so that it will force the ability development in performing his duty and function.

Discipline partially has a significant contribution toward teachers’ performance 35.6%. It means that if teacher’s discipline is better, then teacher’s performance is also getting better. To optimize teacher’s performance is can be enforced to teacher’s discipline development. This discipline will support the development and improvement of teachers’ performance.

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Bibliography


