

TEACHERS' EDUCATIONAL QUALIFICATION, RANK LEVEL, WORKING DURATION, AGE, WORK MOTIVATION AND WORK EFFECTIVENESS

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Abstract: Teachers' Educational Qualification, Rank Level, Working Duration, Age, Working Motivation, and Working Effectiveness The study investigated the effects of educational qualification, rank level, working duration and age on the elementary school teachers' working motivation and working effectiveness. The sample of the study consisted of 438 elementary school teachers in Malang which were selected through cluster sampling technique. The study was conducted using explanatory design in the form of causal model. The data were collected using questionnaire and documentation, and were analyzed descriptively employing structural equation technique. The study revealed that that the effect of the educational qualification, rank level, working duration and age on teachers' working motivation and working effectiveness, both directly and indirectly, was not significant.

Keywords: educational level, rank level, working duration, age, work motivation, team work effectiveness, elementary school teachers.

Teachers have primary roles in the advancement and improvement of educational quality. The levels of students' achievements are highly correlated with teachers' capability. If the teachers have good capability, they will give improvement toward teaching learning condition. Hence, this will increase the students' learning achievements.

In the field, it has been found that the teachers' capability to fulfil their duties, especially in basic level of education, are relatively low. Joni (1991) and Kummerer (1990) have pointed out that most of the teachers had not fulfilled the qualifications required. On the other hand, the demand to increase the teachers' professionalism is high. Educational autonomy system has had implications for school. The school autonomy through school based management (MBS) gives wide chances to the teachers to engage in educational management in school. Indeed, these require the teachers implementing their roles professionally.

As found in the field, the efforts to increase teachers in elementary schools have been done by the government. One of the government implemented policies is raising the educational qualification of teachers in elementary schools. The minimum of formal educational qualification required for teachers has been elevated. It is now deemed inadequate for teach-

ers to only hold a teaching certificate obtained from Senior High Vocational School Preparing Teachers of Elementary Schools (SPG). This certainly means an effort to increase the quality of teachers in basic educational level.

Furthermore, in order to stimulate the teachers' performance, the government has set a policy that enables the teachers to reach a maximum career. Based on Acts No 26 1989 issued by MENPAN, verified by Acts No 86 1993, the teachers profession has been stated as functional profession, with the levels of function from beginner teacher (IIa level) to advanced teacher (IVc level). The promotion is based on credit points achieved by the teachers. This system is hoped to stimulate the teachers to work harder, and in turn, increase the education quality

It might be emphasized that, from the activity mentioned, there are attempts by the government to augment the teachers' capability, yet no significant result can be found so far. The movements to increase the teachers' professionalism through supervision have been done. So far, however, there has been no significant result of the teachers' professionalism. Since the issuance of 9-year basic education, the activities to improve the teachers' professionalism have been done through workshop, training, or other de-

velopment programs. Yet, it has not yielded a significant result. As Suryadi and Tilaar (1993) have indicated, the activities to train teachers have not reached the improvement of the teachers' professionalism. Hence, it is suggested to find other ways to improve teachers' professionalism in performing their works.

One way taken by the government to improve the teachers' professionalism is the teachers' certification program, as stated in the Act No 14 2005. This act is implemented to warrant teachers' careers, welfare and protection. This act also sets the qualifications required from the teachers. The implementation of this act is, as suggested, to motivate teachers in developing their knowledge and capability, which in turn, arrive at professional teachers in performing their works.

There are several qualifications that should be met by the teachers in the Certification program. Every teacher should have the minimum qualification of undergraduate degree (S1) or Teachers Diploma. There are some components that should be taken into consideration in joining Certification program such as working time, age, and rank level (Depdiknas 2007). These factors should be primary foundation in deciding the Certification nominees. Higher educational level is assumed to have higher professionalism level compared to that of low level education. It is also related to times of working, teachers with higher rank or older age are, supposed to have higher professionalism in performing their jobs rather than teachers with times, rank, and age relatively lower. But it is not quite clear, if level of education, working duration, rank level, and teachers age are significant factors which significantly influence the teachers' performances in teaching learning activities. Therefore, this study is carried out to find answers to the question.

This study tries to investigate the effects of teachers educational level, rank level, working duration, and age on their work motivation and team work effectiveness, directly or indirectly. Work motivation and work effectiveness are the primary elements to indicate teachers' professionalism in performing their duties. Related to this objectives, this study was carried out in elementary schools in Malang County. The study was to find useful and accurate information which is necessary in making policy to increase quality education in elementary schools.

METODE

This study was conducted to find out the effects of the teachers educational level, rank level, working

duration, and age on the teachers' work motivation and team work effectiveness in performing their duties. This study did not give any treatment, but was set out to disclose the existing data. Hence, this is an explanatory study in the form of causal modelling. The data collection, data analysis and conclusion all referred to the explanatory research procedures.

Based on the research problems, the population of the study was elementary school teachers in Malang County. By considering the characteristics of the population, we took samples by using cluster random sampling. Among the subdistricts of Malang County, five subdistricts were selected as research samples. In every subdistrict, 70% of elementary schools were taken as research sample. From the schools, 70% of teachers were taken as research sample. This was done randomly. Through these processes, the number of samples were approximately 438 teachers. This number was representative.

To obtain the research data, two data collection techniques were used. They were (1) questionnaires, which were used to collect data on educational level, rank level, working duration, teachers' age, teachers work motivation, and the effectiveness of elementary school works, and (2) documentation, which was used to complete the data collected through the questionnaires, especially documentative data, such as educational level, rank level, working duration and the teachers' age.

The instruments of the study were developed based on the research variables. The measurement of the teachers' work motivation was developed based on the construct of work motivation related to the functions of elementary school teachers. The measurement instrument of the teachers' team work effectiveness was developed based on the construct of team work effectiveness related to the functions of elementary school teachers. The instrument model was summated rating type or Likert scale, with five alternatives, SA (strongly agree), A (Agree), U (Undecided), DA (Disagree), and SDA (strongly disagree). Through the deeper examination of the variables, the research was expected to have a good content validity

Before proceeding, a try-out was conducted to see the validity and reliability levels of the research instruments. A try out was done to the population, out of the research samples. The validity of the instrument was tested using construct validity, through factor analysis. Whereas the instrument reliability was estimated by using Alpha Cronbach reliability analysis and linear combination. Furthermore, I examined the reliability construct of structural equation modeling. The Alpha reliability coefficient was higher than 0.7,

and the factor loadings were higher than 0.3. Therefore, it was concluded that the instruments used were valid and reliable.

Relating to the objectives of the study, and by considering the existing data, used two data analysis techniques were used: (1) descriptive analysis technique, which was used to describe the educational level, rank level, working duration, age, work motivation, and team work effectiveness of the elementary school teachers in performing their duties; and (2) structural equation modeling (SEM), which was used to identify the effects of the teachers educational level, rank level, working duration, ages on the teachers' work motivation, and team work effectiveness in performing their jobs. I used the Statistical Package for Social Sciences (SPSS) and the Linear Structural Relation (LISREL) software program to analyse the data.

RESULT AND DISCUSSION

Result

The primary objectives of the study were to disclose the effects of the teachers' educational level, rank level, working duration, and age on their work motivation and team work effectiveness in elementary schools. Hence, the major hypothesis tested in this study was 'There are effects of the teachers educational level, rank level, working duration, and age on the teachers' work motivation and team work effectiveness in performing their jobs, directly or indirectly.

In line with the research design used to test the hypothesis, then covariant structural analysis technique or Structural Equation Modeling (SEM) or might be known as Linear Structural Relation (LISREL) was used. In determining latent variable scale used reference variable, which determined the value of 1 on highest manifest variable to show the latent variable (Joreskog & Sorbom 1993). The data input was taken from correlation matrix. For the ordinal scaled variable teachers rank level variable, was processed through prelist data to get polychoric correlation coefficients (Joreskog & Sorbom 1993).

Based on the analysis, it was found that the value of likelihood ratio chisquare statistic (X^2) is approximately 91.59, with p around 0.00419. As seen, the p value is under the significance rate of 0.05. The Normed Fit Index (NFI) value is 0.960, Non-Formed Fit Index (NNFI) is approximately 0.977, Goodness of Fit Index (GFI) value is around 0.971, and Adjusted Goodness of Fit Index (AGFI) value is approximately 0.948. All the values are above 0.9, or close to 1. This

indicates that fit criteria may be fulfilled (Schumacker & Lomax 1996; Mueller 1996). Therefore, it might be concluded that the hypothetical model proposed in this study is fit with the empirical data in the field. This is supported with Root Mean Square Error of Approximation (RMSEA) value which is relatively low, around 0.0356 (<0.8).

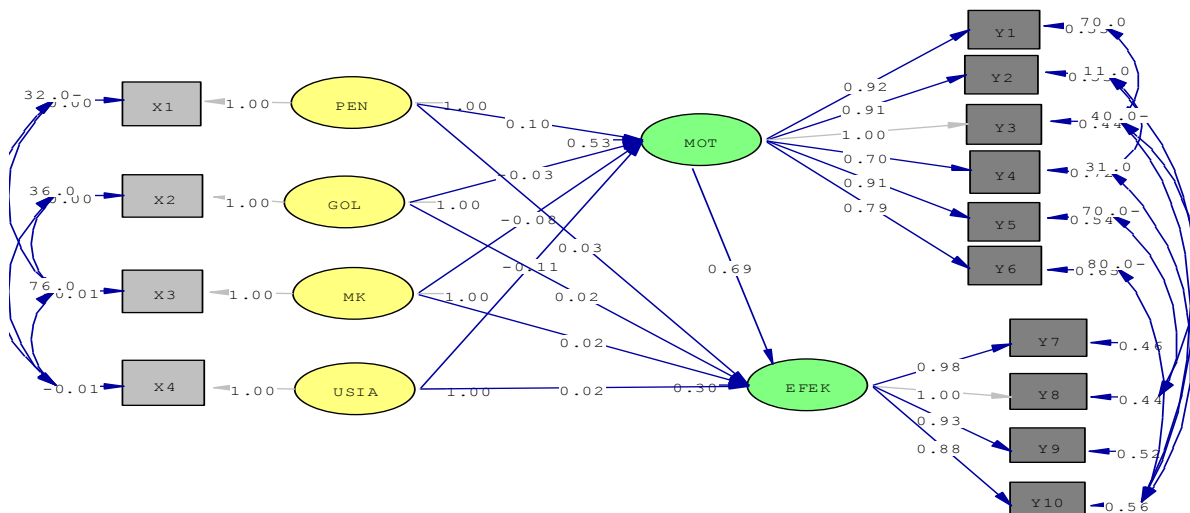
Based on this, it might be concluded that the null hypothesis (statistical hypothesis) is rejected, and research hypothesis is accepted. There are effects of educational level, rank level, working duration, and age on work motivation and team work effectiveness of elementary school teachers in performing their duties, whether directly or indirectly.

To test the details of the hypotheses stated, then we should notice the other parameters in the structural equation model analysis results. There are several parameters that should be examined, such as *gamma* parameter (γ), that is the coefficient of exogenous variable which may influence the endogenous variable, and *beta* (β), a coefficient of endogenous variable which may influence the endogenous variable, which in the completely standardized solution showed with direct and indirect effect values toward any variables. The analysis result of the structural model equation, in general, is shown in Figure 1.

Table 1. Direct Effect, Indirect Effect, and Total Effect Coefficients of the Teachers' Education Level, Rank Level, Working Duration, Age Variables on the Teachers' Work Motivation and Team Work Effectiveness Variables

Source Variables	Objective Variables	Direct Effect	Indirect Effect	Total Effect
PEN	MOT	0,097* (t > 1,96)	-	0,097* (t > 1,96)
	EFEK	0,026 (t < 1,96)	0,067* (t > 1,96)	0,093* (t > 1,96)
GOL	MOT	-0,025 (t < 1,96)	-	-0,025 (t < 1,96)
	EFEK	0,021 (t < 1,96)	-0,017 (t < 1,96)	0,003 (t < 1,96)
MK	MOT	-0,080* (t > 1,96)	-	-0,080* (t > 1,96)
	EFEK	0,020 (t < 1,96)	-0,055* (t > 1,96)	-0,025 (t < 1,96)
USIA	MOT	-0,115* (t > 1,96)	-	-0,115* (t > 1,96)
	EFEK	0,024 (t < 1,96)	-0,079* (t > 1,96)	-0,055 (t < 1,96)
MOT	EFEK	0,691* (t > 1,96)	-	0,691* (t > 1,96)

* = Significant



Chi-Square=91.59, df=59, P-value=0.00419, RMSEA=0.036

PEN = The Latent Variable of Teachers' Education Level
*X*₁ = The Observed Variable of Teachers' Education Level
 GOL = The Latent Variable of Teachers' Rank Level
*X*₂ = The Observed Variable of Teachers' Rank Level
 MK = The Latent Variable of Teachers' Working Duration
*X*₃ = The Observed Variable of Teachers' Working Duration
 USIA = The Latent Variable of Teachers' Age
*X*₄ = The Observed Variable of Teachers' Age
 MOT = The Latent Variable of Teachers' Work Motivation
*Y*₁, *Y*₂, *Y*₃, *Y*₄, *Y*₅, *Y*₆ = The Observed Variables of Teachers' Work Motivation
 EFEK = The Latent Variable of Teachers' Team Work Effectiveness
*Y*₇, *Y*₈, *Y*₉, *Y*₁₀ = The Observed Variables of Teachers' Team Work Effectiveness

Figure 1. Path Diagram Model of Structural Effect of the Teachers' Educational Level, Rank Level, Working Duration, and Age on Their Work Motivation and Team Work Effectiveness

Based on Figure 1, we can see the effects of exogenous variables of structural equation model on endogenous variables, that are the effects of the teachers educational level variable (PEN), rank level (GOL), working duration (MK), and age (USIA) on their work motivation (MOT) and team work effectiveness (EFEK). To find out the extent of any direct or indirect effects among variables, it is suggested to examine the analysis results of direct effects, indirect effects, and total effects, that, in general, are listed on Table 1.

Based on Table 1, it is found that the direct effect of educational level on the teachers work motivation is around 0.097, with t value > 1.96. Then, it might be concluded that the null hypothesis is rejected, and the research hypothesis is accepted. There is effect of educational level on the teachers' work motivation in performing their jobs. The higher the teachers education, the higher work motivation in performing their jobs is, which is indicated with coefficient value of 0.097.

If we examine further, the direct effect of educational level on the teachers' team work effectiveness is around 0.020, with t < 1.96, and indirect effect is

0.067, with t > 1.96. Then, it might be concluded that the null hypothesis is not rejected. On the teachers' team work effectiveness, the educational level does not have any direct effect, yet there is an indirect effect, with the coefficient value of 0.067.

As seen in Table 1, it was found that the direct effect of rank level on teachers' work motivation is -0.025, with t value < 1.96. Then, it might be concluded that null hypothesis is not rejected, and the research hypothesis is rejected. There is no direct effect of rank level on the teachers' work motivation in performing their jobs.

Analyzed further, the direct effect of rank level on the teachers' team work effectiveness is 0.021, with t value < 1.96, and indirect effect approximately -0.017, with t value < 1.96. Therefore, it might be concluded that the null hypothesis is not rejected, and the research hypothesis is rejected. There is no direct or indirect effect of the teachers' rank level on the teachers' team work effectiveness in performing their works.

Also based on Table 1, it was found that the direct effect of work motivation on the teachers team

work effectiveness is 0.691, with t value < 1.96 . Therefore, it can be concluded that the null hypothesis is rejected, and the research hypothesis is accepted. There is a direct effect of the teachers' work motivation on the teachers' team work effectiveness in performing their tasks with very high coefficient index. The higher the teachers' work motivation is, the higher the teachers' team work effectiveness in performing their duties.

Discussion

As the research results indicate, in terms of educational level, most of the elementary school teachers have graduated from university. Some others graduated from Teachers Training Program (PGSD) or diploma degree. This indicates that elementary school teachers in Malang County have fulfilled the minimum prerequisite as elementary school teachers. Few, however, have only SPG's Certificate (Senior High Vocational Schools for Elementary School Teachers).

Most of the samples indicate working duration for about 20-25 years. This shows that most of the elementary school teachers in Malang County can be classified as senior teachers. Their working duration is relatively extensive. Therefore, it might be concluded that elementary school teachers in Malang County have long teaching experience.

As seen from its rank level, most of the teachers can be classified in III and IV level. In relation to ages or working duration, the teachers' rank level is relatively high. The most are III and IV levels, whereas those in the II level are small in number. Those on IV or higher are the least in number. This indicates that there is relatively a small number of teachers who fulfil the prerequisites of IV level. One indicator is that most of the teachers have no adequate capability to make good scientific writing, a prerequisite to achieve IV level.

Most of the teachers are between 40-50 years old. This points out that the rate of the teachers' ages in Malang County is fairly stable. Most of the teachers have reached maturity, and some of them have even reached, above 50 years old.

The teachers' work motivation in performing their primary jobs is good enough. Elementary school teachers in Malang County in the average have the will to perform their jobs as teachers, whether in learning, counseling, administration, guiding, education, scientific writing, or learning assistance.

The primary research result shows that there is a direct effect of the teachers' educational level on the teachers' work motivation in performing their

jobs. The higher the teachers educational level is, the higher work motivation in performing their duties is. Hence, there is an indirect effect of the teachers educational level on their team work effectiveness in performing their jobs. This demonstrates that educational level influences the teachers' performance in doing their jobs. From theoretical perspectives, this research finding is suitable. The higher the educational level they have, the higher their insights toward teachers duties are. The higher their insights and knowledge toward teachers profession are, the higher their motivation and work effectiveness in performing their duties are. This research is in line with Aruwono's research finding (1994) which indicates that there is a significantly positive relationship between educational level and teachers' teaching quality. The higher educational level is, the higher its teaching quality is.

The second research finding is that there is no significant effect of the teachers' rank level and working duration on their work motivation in performing their duties. Hence, there is no effect of the teachers' rank level and working period on their team work effectiveness in performing their jobs. A teacher who has rank level higher or longer working period is not automatically higher in its work motivation or work effectiveness in performing their jobs. This is understandable from theoretical and practical perspectives. In reality, most of district elementary school teachers perform their jobs as routines. There is no direct impact of rank level or working duration as the driving factor in performing their jobs. Though most of the teachers can be classified in higher rank (III and IV), the nominal incentive received is not significantly different regarding the two different ranks. It seems that over time the work motivation is declining. Therefore, working duration and rank level is not a driving factor of work motivation or team work effectiveness of the teachers in performing their jobs. This is in line with the work of Timan et al. (2003) which stated that there was no direct relationship between rank level and the teachers' working period with the teachers' motivation to perform their jobs.

The third research finding shows that there is a negative effect of the teachers' age on their work motivation in performing their jobs. Furthermore, there is an indirect effect of the teachers' age on their team work effectiveness in performing their duties. The older the ages are, the lower the work motivation in performing their jobs is, and indirectly influences their team work effectiveness in performing their duties. This is appropriate, from theoretical point of view. Humans have levels of productive ages. Around the age of 20 or 30, their spirit and productivity tends to increase. In the age of 50 or above, their

motivation tends to decrease. From the age aspect, teachers who become samples of the study are of 45 years or old or above. Some are even reaching the retirement age (60 years old). Therefore, the older the age of the teachers is, the less their work motivation to work is.

This research finding is in line with the previous research. Age is not the driving factor toward teachers' work motivation. Several research findings indicate that the driving factors of the work motivation in performing the jobs are factors which are directly felt by the teachers. The research results of Conley, Bacharach dan Bauer (Cited in Gorton, 1991) indicate that one of the factors which motivate teachers in performing their jobs was school climate. As shown by Sylvia and Hutkinson research (Cited in Gorton, 1991), the factors which influence teachers' work motivation were colleagues, relationship with the leader, rewards achieved, dan working environment. McLaughlin (in Gorton, 1991) also indicates that the primary factors which influence teachers' work motivation were leadership, growth opportunity, and relationship among colleagues.

The fourth research finding indicates that there is a strong effect of the teachers' work motivation on their team work motivation in performing their jobs. This is related to theoretical background and the previous findings. The result of Hackmen and Steiner (in Thompson, 2003) indicate that motivation is the main factor of the team work effectiveness. The effectiveness of team work is determined by the effectiveness of individual works. The most dominant factor in determining individual work efficiency is the work motivation. The higher the individual work motivation is the higher the work effectiveness. The higher the individual work effectiveness is the higher the team work effectiveness is.

CONCLUSION AND SUGGESTION

Conclusion

Based on the current findings, several primary research findings can be stated. First, there are effects of the teachers educational level, rank level, working duration, and age on the teachers' work motivation and team work effectiveness in performing their jobs, whether directly or indirectly. Second, there is a direct positive effect of the teachers' educational level on their work motivation in performing their jobs, and there is an indirect effect of the teachers' educational level on their work effectiveness in performing their duties. The higher the teachers' educational level is, the higher the teachers' work

motivation and team work effectiveness in performing their jobs are.

The third and fourth findings indicate different results. The third finding indicate that there is no effect of the teachers rank level on their work motivation and team work effectiveness in performing their jobs, whether directly or indirectly. The fourth result shows no effect of the teachers' working duration on their team work effectiveness in performing their jobs, directly or indirectly.

The fifth finding indicates a direct negative effect of the teachers' age on teachers' work motivation in performing their jobs, and there is indirect negative effect of the teachers' age on their team work effectiveness in performing their jobs. The older the teachers age is, the lower its work motivation and the teachers' team work effectiveness in performing their duties are. Whereas the sixth finding shows a strong direct positive effect of the teachers' work motivation on teachers team work effectiveness in performing their jobs. The higher the teachers' work motivation is, the higher the teachers' team work effectiveness in performing their jobs is.

Suggestion

Based on the research results, several suggestions can be made. First, in order to increase the teachers' work motivation and team work effectiveness, educational level aspect in the human resource management system in the school should be considered. School administrator, or officials in the education department should consider education factor in the selection process, career development, or the development of human resources in school setting in general.

Second, since there is no effect of the teachers' rank level and working duration the work motivation and team work effectiveness in performing their jobs, it would be better to improve the education management system, especially in the reward system and the promotion of teachers functional level. It should be accurate and credible in promoting the teachers rank level, related to the teachers' minimum standard qualifications. The reward on the teachers' rank level should be given sufficiently, according to their achievements. Hence, this may be the driving factor to stimulate the teachers' work motivation in performing their jobs. It is suggested that school administrators, especially the headmaster, consider that working duration and the teachers' rank level do not strongly influence work motivation and team work effectiveness, should emphasize on attempts to create conducive working environments, and manage resources more professionally, in order to increase the teachers' work

motivation and team work effectiveness in performing their jobs.

Third, it is found that there is negative effect of the teachers' ages on the teachers' work motivation and team work effectiveness in performing their jobs. Therefore, in managing human resources, school administrator or officials in education department should consider the teachers' age, whether in selection process, career development, or teachers' development.

Fourth, it is found that there is a strong effect of the teachers' work motivation on their team work ef-

fectiveness. Therefore, in order to increase the teachers' team work effectiveness, the initial step that should be done by the headmaster or official in education department is increasing their work motivation. Fifth, this is not a final research project. It would be better to continue with a wider field of research area. A research variable which should be examined further is the effect of exogenous variables, whether in educational level, rank level, working duration, and teachers' age on the teachers' capability and competency, and their effects on the teachers' work effectiveness.

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