

The Influence of Management Knowledge on Principal Performance and School Performance Quality in Senior High Schools West Sumatra

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ABSTRACT

This research is a quantitative study, describing how much management knowledge has influenced the performance of school principals and the quality of school performance in SMA Negeri Sumatra Barat. The research method was a survey with a quantitative approach. The data were analysed by using path analysis. The variables of this research are management knowledge (X1), principal performance (Y) and school performance quality (Z). The description of knowledge management knowledge (X1) is measured through 35 tests; the lowest score is 15, and the highest score is 35. The results of the data analysis shows that an average score was 27.47; a standard deviation was 3.62; a median was 27.0, and mode was 27. Achievement of respondents about management knowledge is 38.46%. It is in the cumulative frequency class of 70.51. The results showed that the sig. 0.94 was higher than 0.05, so that the hypothesis is accepted. Thus, it can be concluded that there is a significant linear relationship between the management knowledge variable and the school performance quality variable. Therefore, the form of regression used for the management knowledge variable (X1) on the quality of school performance (Z) is categorized as linear.

Keywords: *Management Knowledge, Principal Performance, School Performance Quality.*

1. INTRODUCTION

School as an educational institution faces two demands, namely demands from the community and demands from the business world / industrial world [1,2,3]. The things that become demands are about the problem of low quality, relevance and competitiveness of education to development [12,16], the needs of society in the era of industrialization and globalization [17,20]. The principal must create a school climate where a person feels free but responsible [13,19], because the problem that is often faced is the difficulty of creating a conducive work climate situation [18] in schools, due to the diversity of individuals that exist in each school [14]. [21] School performance is an achievement [5] that has been achieved by the school concerned. [22] Internal factors can include attitudes towards work, talents, interests, satisfaction, [7] abilities and experiences, while factors outside the individual include supervision, salary, work environment, and leadership [4]. [9] The process of improving the quality of school performance requires a principal who has [8] work motivation.

Judging from the scope above, the formulation of the problem in this study is.

1. What is the description of management knowledge on the performance of school principals and the quality of school performance in SMA Negeri West Sumatra Province?
2. How much does the compensation for the implementation of management knowledge influence on the performance of school principals and the quality of school performance in SMA Negeri West Sumatra Province?
3. How is the direct and indirect effect of management knowledge compensation on the performance of school principals and the quality of school performance in SMA Negeri West Sumatra Province?

Meanwhile, specifically the purpose of this study is to study and analyze:

1. Description of management knowledge on the performance of school principals and the quality of school performance in SMA Negeri West Sumatra Province.

2. The effect of compensation for the implementation of management knowledge on the performance of school principals and the quality of school performance in SMA Negeri West Sumatra Province.
3. Direct and indirect effects of management knowledge compensation on the performance of school principals and the quality of school performance in SMA Negeri West Sumatra Province.

2. METHOD

The method used in this research was a survey method with a quantitative approach. [11] The survey method focused on disclosing the causal relationship [15] between variables. This research process was deductive, in which to answer the problem formulation,

a concept or theory is used so that a hypothesis can be formulated. [10] Population is a generalization area consisting of objects / subjects that have a certain quantity and characteristics determined by the researcher. In this study, the population was Public Senior High Schools (SMA) in West Sumatra. Based on the data obtained, there were 139 schools, spread across 19 districts / cities in West Sumatra. [16] The sample is part or representative of the population studied. The sample size of teacher respondents was calculated using the following formulation:

$$n = \frac{N}{Nd^2 + 1} XN$$

Based on the above formulation, the number of samples for each school was obtained as shown in the following table:

Table 1. Research Sample

No	District / City	Number of Schools	Proportion of Sample	Units	%
1	Bukittinggi	5	$\frac{5}{139} \times 78 = 2,8$	3	3
2	Padang	16	$\frac{16}{139} \times 78 = 8,97$	9	11
3	Padang Panjang	4	$\frac{4}{139} \times 78 = 2,2$	2	2
4	Pariaman	4	$\frac{4}{139} \times 78 = 2,2$	2	2
5	Payakumbuh	5	$\frac{5}{139} \times 78 = 2,8$	3	3
6	Sawahlunto	3	$\frac{3}{139} \times 78 = 1,6$	2	2
7	Solok	4	$\frac{4}{139} \times 78 = 2,2$	2	2
8	Agam	19	$\frac{19}{139} \times 78 = 10,66$	11	14
9	Darmasraya	6	$\frac{6}{139} \times 78 = 3,36$	3	3
10	Solok Selatan	8	$\frac{8}{139} \times 78 = 4,48$	4	4
11	Padang Pariaman	5	$\frac{5}{139} \times 78 = 2,8$	3	3
12	Pesisir Selaan	13	$\frac{13}{139} \times 78 = 7,29$	7	9
13	Sijunjung	7	$\frac{7}{139} \times 78 = 3,9$	4	4
14	Pasaman	3	$\frac{3}{139} \times 78 = 1,6$	2	3
15	Limah Puluh kota	15	$\frac{15}{139} \times 78 = 8,4$	8	13
16	Kabupaten Solok	18	$\frac{18}{139} \times 78 = 10,1$	10	8
Jumlah		139		78	100

[10] It is defined as how carefully a test instrument performs its measuring function. School management knowledge consisted of 35 items; all of them were valid. Work motivation consisted of 50 items; 5 were fai while 1 45 were valid. [16] A factor is said to be reliable if it has a Cronbach alpha value above 0.6. Based on the results of reliability processing using SPSS 20, it was

found that the reliability value of management knowledge was 0.925 which means the instrument was reliable. The level of trust with the sig. $0.00 < \alpha = 0.05$. The ICC value obtained was 0. 595, the number of validation confidence in the instrument was at a sufficient value for the management knowledge variable. The value of 0.821 is very high for the quality

variable of school performance. The variable for the performance of the principal was 0.831.

3. RESULTS AND DISCUSSION

The linearity of the data was analysed by using statistical formulas, namely through SPSS. Based on the ANOVA results on SPSS, the following information was obtained:

- a. Significance and Linearity Forms of regression between knowledge management (X1) and the quality of school performance (Z).

Based on the results of the analysis, it can be described that the sig. 0.94 was higher than 0.05; thus, the hypothesis is accepted and it can be concluded that there is a significant linear relationship between the management knowledge variable and the school performance quality variable. That is, the form of regression used for the management knowledge variable (X1), on the quality of school performance (Z), is categorized as linear

Table 2. Analysis of Variance (ANOVA) Linearity Forms of Regression between knowledge management (X1) and school performance (Y)

Sumber variansi	Jumlah kuadrat (JK)	dk	rata-rata Jumlah kuadrat (RJK)	F	Sig.
Linearitas	2852,807	1	2852,807	16,651	0.000
Penyimpangan linearitas	1016,626	13	78,202	,456	,940
Antar Kelompok	10793,900	63	171,332		
Total	14663,333	77			

In line with the above data, it is evidenced by the ANOVA table obtained by Ftable (13.63) of 1.90. So, when compared to the value of Fcount and Ftable, it is obtained 0.456 was smaller than 1.9. It means that there is a significant linear relationship between the management knowledge variable (X1) and the quality of school performance (Z).

- b. Significance and Linearity Forms of regression between principal performance (Y) and school performance quality (Z).

Based on the results of the analysis, it can be described that sig. 0.298 is greater than 0.05; thus, the hypothesis is accepted, and it can be concluded that there is a significant linear relationship between the principal's performance variable and the school performance quality variable. Therefore, the form of regression used for the principal's performance variable (Y), on the quality of school performance (Z), is categorized as linear.

Table 3. Analysis of Variance (ANOVA) Linearity Forms of Regression between Principal Performance (Y) and School Performance (Z)

ANOVA Table							
Sumber Variansi			Jumlah kuadrat (JK)	dk	Rata-Rata Jumlah Kuadrat (RJK)	F	Sig.
Z*Y ₁	Antar Kelompok	Linearitas	2390.224	1	2696,809	16,250	,000
		Penyimpangan linearitas	6830.659	39	151,697	1,191	,298
	Dalam Kelompok		5442.450	37	164,566		
	Total		14663,333	77			

In line with the above, evidenced by the Anava table, it is obtained that Ftable (39.37) was 1.77. So, when compared to the value of Fcount and Ftable, it is obtained 0.922 was smaller than 1.78; it means that there is a significant linear relationship between the

principal's performance variable (Y) and the quality of school performance (Z).

Based on the ANOVA test described above, the SPSS results is obtained as follows: summary of the variance (F) test of linearity of the

Table 4.Summary of Linearity Test Analysis (n = 78)

No	Variabel	Nilai F _{hitung}	Nilai	Kesimpulan
1	Pengetahuan manajemen * mutu kinerja sekolah	.456	F _{Tabel} (13,63) = 1.90	Linear
2	Kinerja kepala sekolah * mutu kinerja sekolah	1.191	F _{Tabel} (39,77) = 1.78	Linear

If the results of the Fcount analysis are smaller than Ftable at the 0.05 significance level, then the research data is stated to follow a linear regression model. Conversely, if Fcount is greater than Ftable at the 0.05 significance level, then the data is declared not to follow a linear regression model. Based on the results of the above analysis, it is found that the value of Fcount is smaller than Ftable, meaning that there is a significant linear relationship between the variables of management knowledge, the principal's performance on the quality of school performance.

Based on the analysis above, the path analysis model operation will be described through regression analysis which is determined by each path coefficient as follows:

Based on t:

- Regresi stage 1 Beta $X_{1z} = 0,441$ ($t = 4,285$) = ρ_{z1}
- Regresi stage 2 Beta $X_{1y} = 0,302$ ($t = 2,757$) = ρ_y
- Regresi stage 8 Beta $Y_{2z} = 0,231$ ($t = 3,857$) = ρ_{y2z}

By using the formula $\sqrt{(1 - R^2)}$ the path coefficient for the residuals of each variable can be calculated as follows:

1. The path coefficient for the residual knowledge of management (X1) through the principal's performance (Y) on the quality of school performance (Z).

$$\begin{aligned}
 e_1 &= \sqrt{(1 - R^2)} \\
 &= \sqrt{(1 - 0,275)} \\
 &= \sqrt{0,725} \\
 &= \mathbf{0,851}
 \end{aligned}$$

Based on the results of the analysis of hypothesis testing of each exogenous variable against endogenous variables and the path analysis model used by the researcher, the path coefficient can be presented as illustrated below:

Structural analysis 1

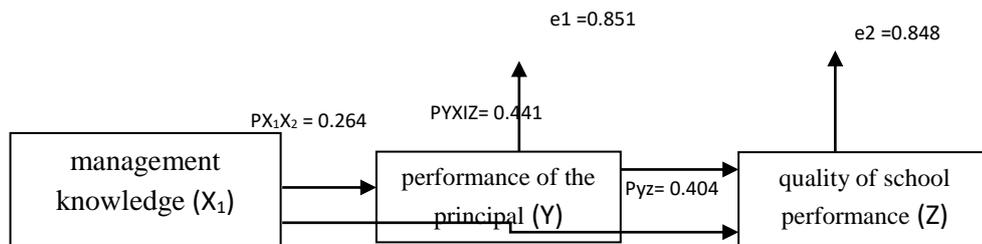


Figure 1: Analysis model of the influence of management knowledge variables (X1), work motivation (X2), facilities and infrastructure (X3), school climate (X4) on the performance of school principals (Y) and school performance (Z).

Structural Analysis One

□ Sub structure 1

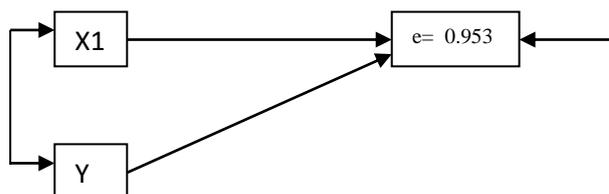


Figure 2. Path coefficient for residual knowledge management (X1) principal performance (Y)

2. Direct Influence Model and Indirect Effect Model

The first path analysis model analyzed the direct effect of variables, namely knowing the direct effect of management knowledge variables (X1) on the quality of school performance (Z), the influence of management knowledge (X1) on the principal's performance (Y), and the effect on the performance of the principal (Y) affect the quality of school performance (Z) in SMA Negeri West Sumatra. The indirect effect of management knowledge (X1) affects the quality of school performance (Z) through school performance (Y).

Based on the recapitulation of the direct and indirect effects of exogenous variables on endogenous variables, the results are described below.

- 1) The direct effect of management knowledge (X1) on the quality of school performance (Z).

$$\begin{aligned} & \text{X1 with respect to} \\ Z &= \rho_{z1} \times \rho_{z1} \\ &= 0,441 \times 0,441 \\ &= 0.1974 \text{ atau } 19.7\% \end{aligned}$$

Based on the above calculations, it can be concluded that there is a direct influence of the management knowledge variable on the school performance variable, namely 19.4%.

- 2) The direct effect of management knowledge (X1) on the principal's performance (y).

$$\begin{aligned} & \text{X1 with respect to } Y = \rho_{y1} \times \rho_{y1} \\ &= 0,302 \times 0,302 \\ &= 0.091 \text{ atau } 9.12\% \end{aligned}$$

Based on the above calculations, it can be concluded that there is a direct influence of the management knowledge variable on the principal's performance variable, namely 9.12%.

- 3.1 The direct effect of the principal's performance (Y) on the quality of school performance (Z).

$$\begin{aligned} & \text{Y1 with respect to} \\ (Z) &= \rho_{y21} \times \rho_{y21} \\ &= 0,404 \times 0,404 \\ &= 0.163 \text{ atau } 16.3\% \end{aligned}$$

Based on the above calculations, it can be concluded that there is a direct influence of the principal's performance variable (Y) on the quality of school performance (Z), which is 16.3%.

- 3.2 The indirect effect of management knowledge through the principal's performance on school performance (Z).

$$\begin{aligned} & \text{X1, Y with respect to} \\ Z \text{ } \Omega \text{ } Y &= \rho_{y1} \times \rho_{y1z} \\ &= 0,352 \times 0,297 \\ &= 0,104 \text{ atau } 10.45\% \end{aligned}$$

Based on the above calculations, it is known that the management knowledge variable has an indirect effect on school performance through the principal's performance, namely 10.45%.

Table 5. Summary of Analysis of Direct and Indirect Effects of Exogenous Variables on Endogenous Variables

No	Information	% Direct	% Indirect	% Total
1	Direct influence of management knowledge (X1) on the quality of school performance (Z)	19.7		19.7
2	Indirect influence between knowledge management through principal performance (Y) on school performance (Z)		10,45	10.45
3	Direct influence of knowledge management (X1) on the principal's performance (y.	9.12		9.12
4	Direct influence of the principal's performance (Y) school performance (Z)	16.3		16.3

4. CONCLUSION

- a. The description of management knowledge on the performance of school principals and the quality of school performance in SMA Negeri West Sumatra Province obtained an average of 27.47, standard deviation 3.62, median 27.0 mode 27. Respondents' achievement of management knowledge was 38.46%, in the cumulative frequency class 70.51 .
- b. There is an effect of compensation for the implementation of management knowledge on the

performance of school principals and the quality of school performance in SMA Negeri West Sumatra Province seen from the sig value. $0.94 > 0.05$ means that the form of regression used for the knowledge management variable (X1), on the quality of school performance (Z), is categorized as linear.

- c. There is a direct and indirect effect of management knowledge compensation on the performance of school principals and the quality of school performance in SMA Negeri West Sumatra Province.

AUTHOR CONTRIBUTION

The author's contribution in this study is to see the direct and indirect effect of management knowledge compensation on the performance of school principals and the quality of school performance in SMA Negeri West Sumatra Province.

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