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Factors Contributing to Distributed Leadership towards the Excellence Rating of District Education Offices in Kelantan

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Abstract
Main objective: The main issue of this study is the level of achievement in the verification of excellence rating in the District Education Office. **Methods:** This study was conducted with a quantitative mixed method and supported by a qualitative method that is 'explanatory mixed method design'. A total of 278 respondents from the District Education Office in the state of Kelantan were selected by simple random sampling method to answer the questionnaire. Data were analysed by descriptive statistics and inferential statistics. **Results:** The results showed that the dimension of distributed leadership, namely the dimension of supervision, the dimension of collaboration and the dimension of empowerment are contributing factors to the excellence rating of the District Education Office in Kelantan, while the dimension of support is not a contributing factor. There is a significant relationship between distributed leadership and the excellence rating of the District Education Office. This study also found that there is a significant relationship between the Excellence Rating of the District Education Office with the dimensions of organizational empowerment-commitment. The findings of the study with quantitative methods also show that distributed leadership practices using Multiple Linear Regression is used to find which one of the distributed leadership factors: support dimension, supervisory dimension, collaboration dimension, empowerment dimension is a predictor or contributor to the District Education Office Excellence Rating in Kelantan. **Conclusion:** Therefore, distributed leadership practices need to be applied effectively to lead and achieve rating excellence in the organization of the District Education Office through the evaluation and verification of the District Education Office Excellence Rating.
Keywords: Distributed Leadership, District Education Office Excellence Rating

Intoduction

To answer the above research question, Multiple Linear Regression is used to find which one of the distributed leadership factors: support dimension, supervisory dimension, cooperation dimension, empowerment dimension is a predictor or contributor to the District Education Office Excellence Rating in Kelantan. Several independent variables were used to predict one dependent variable. Multiple regression is used in a study to make a prediction or find contributing factors, 2 or more study variables are used to predict the criteria individually to

get a more accurate prediction. The first variable is called the dependent variable/Dependent Variable (DV) - District Education Office Excellence Rating in Kelantan and then called the independent variable/Independent Variable (IV) - distributed leadership factors: support dimension, supervisory dimension, cooperation dimension, empowerment dimension. The four main conditions are as follows:

i. The Variables must be Clear

The first variable is called the dependent variable/Dependent Variable (DV) - District Education Office Excellence Rating in Kelantan and then called the independent variable/Independent Variable (IV) - distributive leadership factors: support dimension, supervisory dimension, cooperation dimension, empowerment dimension . The data must be normally distributed, through the Normality test it is found that the Distributive Leadership Inventory skewness value = .411, kurtosis = -.675 which shows the data is normally distributed. Regression tests can only be analyzed using normal data only (random sampling). Whereas abnormal data are data from a non -representative sample (sample selection is not random) and cannot be generalized against a population. Therefore, in order to obtain the normality of the data, sampling must be done randomly. To test normality use Skewness and Kurtosis. Skewness to test whether the data are in the normal range. Make sure the value of skewness is in the range of ± 1. While kurtosis is flatness. Flat data means abnormal. Make sure the kurtosis value is also in the range of ± 1. Can also use Normal P-P Plot of Standardized Residual Regression. Apart from that, the researcher should also refer to the normality of the data through the normal P-P Plot of Standardized Residual Regression and Scatterplot. P-P The plot must show all points are within or near the diagonal line in a straight and reasonable manner from left to right and no deviation from the normal line. as shown in the following figure 1.1.

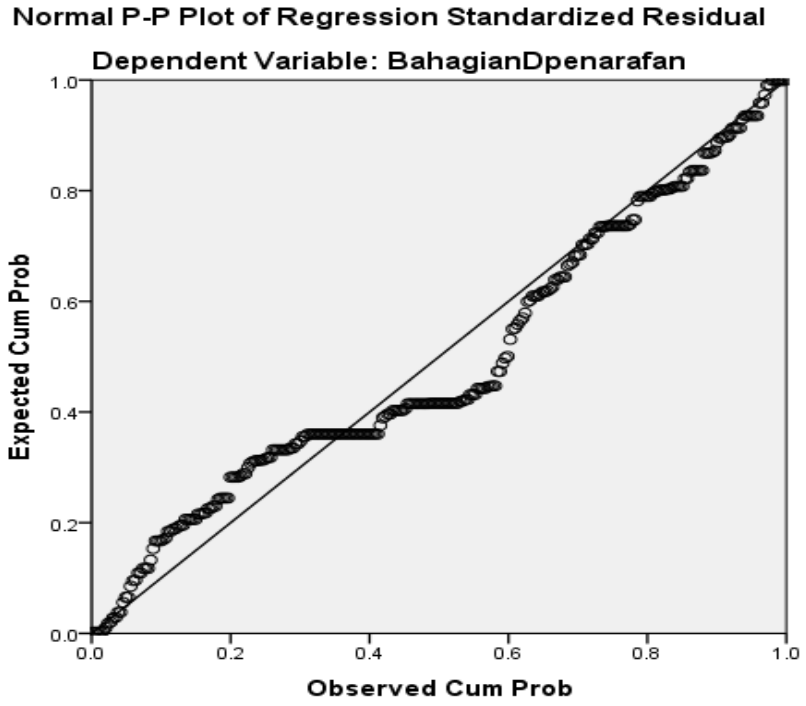

Figure 1.1 : Normal P-P of Regression standardized Residual

ii. Linearity

Must be linear, otherwise it is difficult to measure the contribution. Nonlinear causes are likely to be from:

a. the likert items that are built are not great

b. wrong sample selection (sample lacks information/ information)

c. items are not computed from negative (if any) to positive.

To check linearility use graph> scatter plots, usually the contribution is between 20 - 40 percent. If the correlation is high, then it is said to be multicollinearity. Linear Correlation measures the strength of a linear relationship between two variables. (Correlation coefficient for population = rho (Greek symbol) and for sample = *r*).

The following Figure 1.2 shows the scaltterplot.

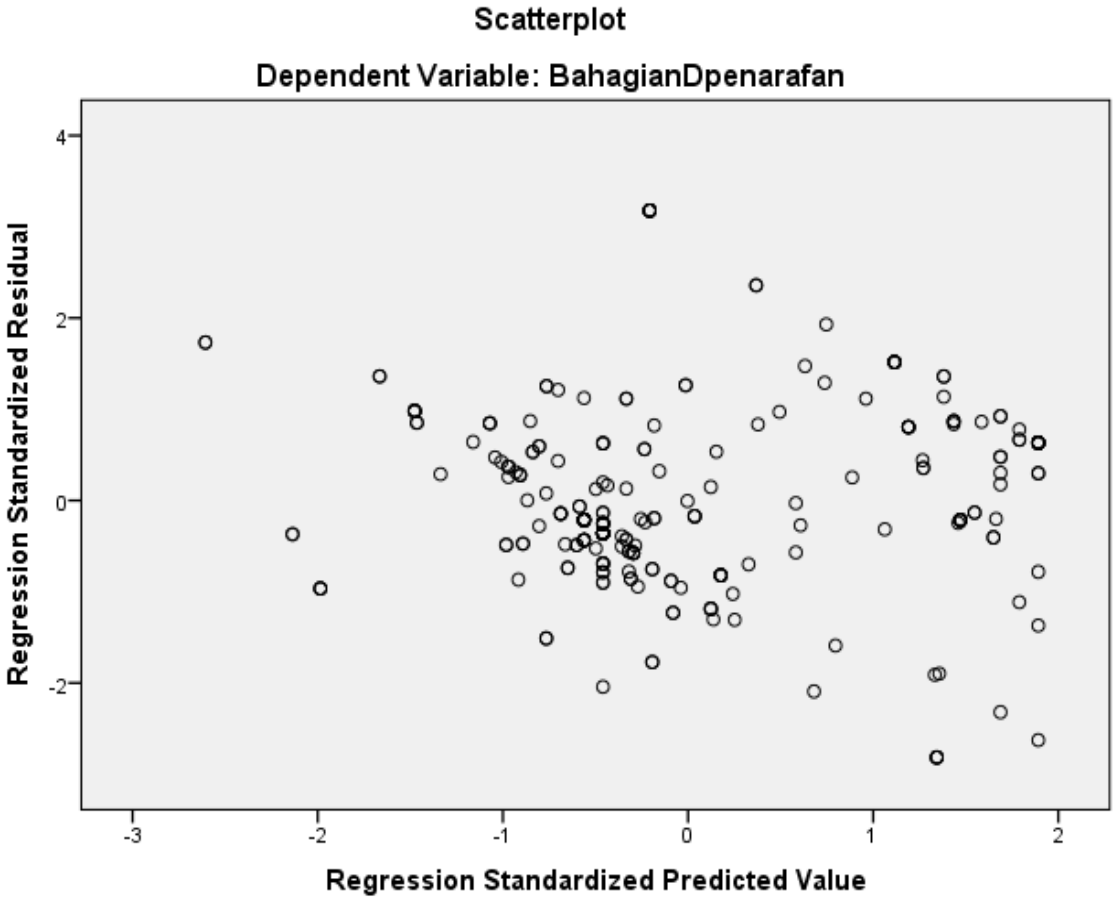

Figure 1.2: The following Figure 1.2 shows the scaltterplot

Researchers need to determine whether there is multicollinearity in the data displayed, this can be detected by referring to the correlation relationship between independent variables and dependent variables should preferably have a correlation value less than r = <0.7 (Pallant, 2013). Based on the Excluded Variables[a] table (see partial correlation) it is found that all variables have a value of r = <0.7 (model 1 support dimension r = <0.134, cooperation dimension r = <0.320, empowerment dimension r = <.274, as well as model 2 support dimension r = <.274, r = <0.158, empowerment dimension r = <.262, and 3 support dimension model r = <.056). Thus it can be assumed that the results of this study have no

multicollinearity problems in the displayed data. In addition this multiculinearity problem can also be referred to the Tolerance and VIF values, if the Tolerance value is very small or less than <0.10 indicating a partial correlation between the variables is high (there is multicollinearity). Apart from that, if the value of VIF (Variance Inflation Factor) is more than VIF> 10 indicates that there is multicollinearity between the variables.

iii. Make a review of the Coefficientsª table

Tolerance value => 0.10 and VIF value = <10.0 indicating no multicollinearity problem between the variables. (In the SPSS multiple regression output study showing the Tolerance value (Coefficientsª table): the findings of the analysis through the following Coefficientsª table show no multicollinearity problem between the variables:

support dimension = Tolerence (none because this dimension is not a contributing factor)
supervisory dimension = Tolerence> .207 (> 0.10), VIF value = 4.838 (<10.0)
cooperation dimension = Tolerence> .253 (> 0.10), VIF value = 3.95 (<10.0)
empowerment dimension = Tolerence> .450 (> 0.10), VIF value = 2.22 (<10.0).

Table 1.1
The following shows the Descriptive Statistics

Descriptive Statistics

	Mean	Std. Deviation	N
Excellence Rating	4.2333	.40031	278
Support Dimension	4.2353	.43308	278
Supervision Dimension	4.2602	.46481	278
Collaboration Dimension	4.1927	.46073	278
Empowerment Dimension	4.1199	.46066	278

Table 1.2
The following shows the Entered/Removed Variables

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Supervision Dimension		Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	Collaboration Dimension		Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	Empowerment Dimension		Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: ExcellenceRating

Table 1.3
The following shows the Model Summary[d]
Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	**.780[a]**	.608	.607	.25106	**.608**	**428.246**	**1**	**276**	**.000**
2	**.805[b]**	.648	.646	.23826	**.040**	**31.444**	**1**	**275**	**.000**
3	**.820[c]**	.672	.669	.23038	**.024**	**20.142**	**1**	**274**	**.000**

a. Predictors: (Constant), dimensi2penyeliaan
b. Predictors: (Constant), dimensi2penyeliaan, dimensi3kerjasama
c. Predictors: (Constant), dimensi2penyeliaan, dimensi3kerjasama, dimensi4empowermen
d. Dependent Variable: BahagianDpenarafan

Table 1.4
The following shows the ANOVA
ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.993	**1**	26.993	**428.246**	**.000[b]**
	Residual	17.397	**276**	.063		
	Total	44.389	**277**			
2	Regression	28.778	**2**	14.389	**253.463**	**.000[c]**
	Residual	15.611	**275**	.057		
	Total	44.389	**277**			
3	Regression	29.847	**3**	9.949	**187.451**	**.000[d]**
	Residual	14.542	**274**	.053		
	Total	44.389	**277**			

a. Dependent Variable: ExcellenceRating
b. Predictors: (Constant), Supervision2Dimension
c. Predictors: (Constant), Supervision2Dimension, Collaboration3Dimension
d. Predictors: (Constant), Supervision2Dimension, Collaboration3Dimension Empowerment4Dimension

Table 1.5
The following shows the Coefficients[a]
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.372	.139		9.867	.000		
	Supervision2Dimension	.672	.032	**.780**	**20.694**	**.000**	1.000	1.000
2	(Constant)	1.183	.136		8.686	.000		
	Supervision2Dimension	.376	.061	.437	6.169	.000	.255	3.923
	Collaboration3Dimension	.345	.062	**.397**	**5.607**	**.000**	.255	3.923
3	(Constant)	**.995**	.138		7.198	.000		
	Supervision2Dimension	**.248**	.065	.289	3.794	.000	**.207**	**4.838**
	Collaboration3Dimension	**.322**	.060	.371	5.397	.000	**.253**	**3.951**
	Empowerment4Dimension	**.201**	.045	**.231**	**4.488**	**.000**	**.450**	**2.222**

a. Dependent Variable: ExcellenceRating
b. Predictors: (Constant), Supervision2Dimension
c. Predictors: (Constant), Supervision2Dimension, Collaboration3Dimension
d. Predictors: (Constant), Supervision2Dimension, Collaboration3Dimension Empowerment4Dimension

Table 1.6
The following shows the Excluded Variables[a]
Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
						Tolerance	VIF	Minimum Tolerance
1	Support1Dimension	.157[b]	2.243	.026	**.134**	.284	3.521	.284
	Collaboration3Dimension	.397[b]	5.607	.000	**.320**	.255	3.923	.255
	Empowerment4Dimension	.255[b]	4.728	.000	**.274**	.453	2.206	.453
2	Support1Dimension	.176[c]	2.648	.009	**.158**	.283	3.529	.149
	Empowerment4Dimension	.231[c]	4.488	.000	**.262**	.450	2.222	.207
3	Support1Dimension	.066[d]	.928	.354	**.056**	.234	4.265	.147

a. Dependent Variable: ExcellenceRating
b. Predictors: (Constant), Supervision2Dimension

c. Predictors: (Constant), Supervision2Dimension, Collaboration3Dimension
d. Predictors: (Constant), Supervision2Dimension, Collaboration3Dimension Empowerment4Dimension

Table 1.7
The following shows the ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.993	**1**	26.993	**428.246**	**.000[b]**
	Residual	17.397	**276**	.063		
	Total	44.389	277			
2	Regression	28.778	2	14.389	253.463	.000[c]
	Residual	15.611	275	.057		
	Total	44.389	277			
3	Regression	29.847	3	9.949	187.451	.000[d]
	Residual	14.542	274	.053		
	Total	44.389	277			

a. Dependent Variable: ExcellenceRating
b. Predictors: (Constant), Supervision2Dimension
c. Predictors: (Constant), Supervision2Dimension, Collaboration3Dimension
d. Predictors: (Constant), Supervision2Dimension, Collaboration3Dimension Empowerment4Dimension

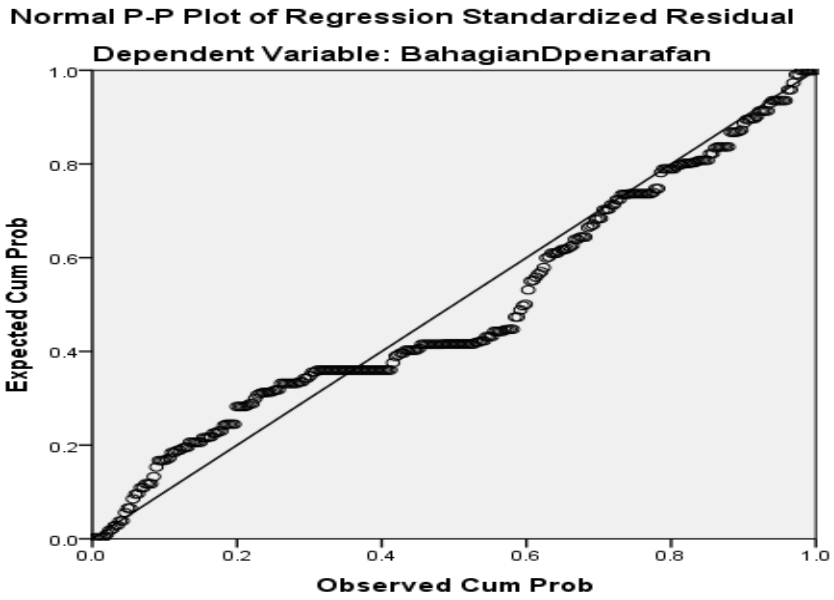

Figure 1.3: The following shows the Normal P-P *Plot of Regression Standardized Residual Dependent Variable*

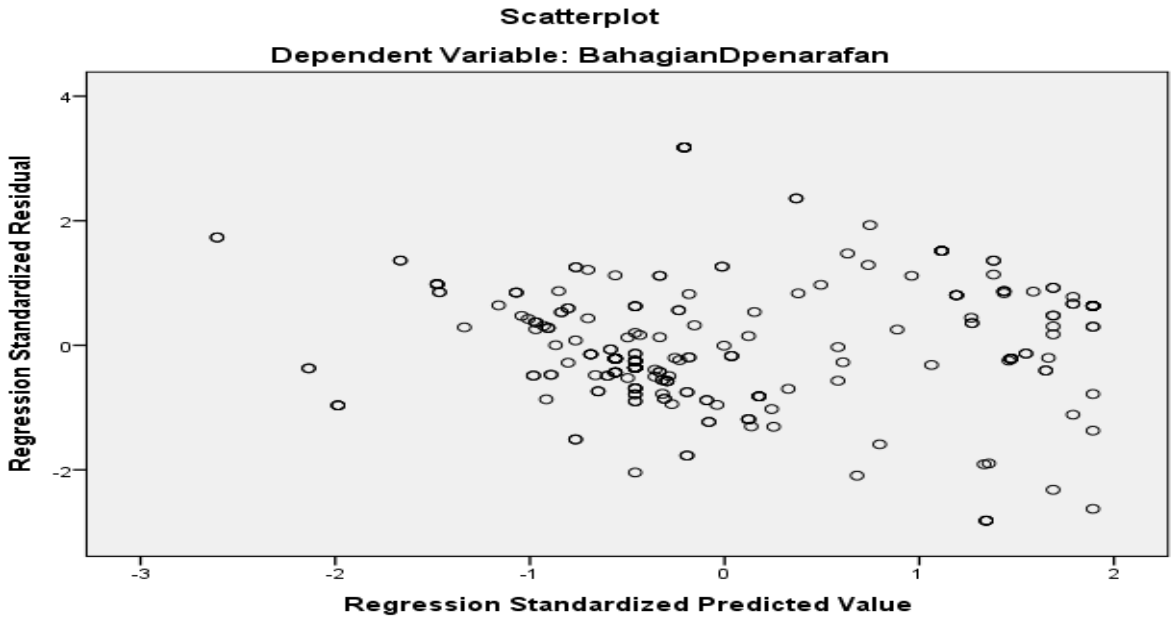

Figure 1.4: The following shows the *scaltterplot*

Table 1.8
The contributing factors of distributive leadership to the Excellence Rating of District Education Offices in Kelantan

Variables	*B*	Beta	Value t	Sig	R Square Change	Contributions .608 x 100
Support Dimension	-	-	-	-	-	-
Supervision Dimension	0.248	0.780	20.694	.000	.608	60.8
Collaboration Dimension	0.322	0.397	5.607	.000	.040	4.0
Empowerment Dimension	0.201	0.231	4.488	.000	.024	2.4

Stepwise = indicates the number of predictor/contributing factor models. Stepwise only enters significant variables.
Thus: only independent variables: supervisory dimension, cooperation dimension and empowerment dimension alone are contributors to the dependent variables (District Education Office Excellence Rating in Kelantan).
R Square = R^2: the sum of all the independent variables to the dependent variable
R Square Change = each of the independent variables that contribute to the dependent variable.
Contribution Level = <.02 is very small and meaningless
.02 to .15 small
.16 to .30 moderate
> .30 large.

Table 1.8 above shows the contributing factors of distributive leadership to the Excellence Rating of the District Education Office in Kelantan. The results show that the correlation of all independent variables (supervision dimension, cooperation dimension and empowerment dimension) with the dependent variable (District Education Office Excellence Rating in Kelantan). is high (see table Model summaryd value of R) model 1 (supervision dimension) r = .780a, model 2 (cooperation dimension) r = .805b and model 3 (empowerment dimension)

r = .820c model 1 is a fit model (fit) - the value of R square Change as the highest contributing factor. It was also found that all the independent variables could explain that (see Model summaryd table of Adjusted R Square values) model 1 (supervisory dimension) (from the independent variables) = .608 (.608 x 100) = 60.8 percent of the highest contributing factors to the Excellence Rating District Education Office in Kelantan (from dependent variables) - large contribution level (> .30). Also model 2 (cooperation dimension) (from the independent variable) = .040 (.040 x 100) = 4.0 percent of the second lowest contributing factor to the District Education Office Excellence Rating in Kelantan (from the dependent variable) - small contribution level (.02). While model 3 (empowerment dimension) (from the independent variable) = .024 (.024 x 100) = 2.4 percent of the lowest contributing factor to the District Education Office Excellence Rating in Kelantan (from the dependent variable) - small contribution level (.02) to the District Education Office Excellence Rating.

This regression is significant (see ANOVA table) Model 1 is a fit (fit) model) F (1, 276) = 428,246, p <.000 (p <.005). Also indicates the independent variable is positive (see table Coefficients[a]). Beta (research dimension) = .780, (collaboration dimension) .397 and (empowerment dimension) .231. The highest regression coefficient of the dependent variable was model 1 (supervisory dimension) = .608. This indicates that the regression coefficient in the population from which the sample was obtained was positive, t = 20,694, p <.000 (p <.005).

The regression coefficients for the supervision dimension, cooperation dimension and empowerment dimension with the excellence rating of the District Education Office in Kelantan were positive and the range for the 95 percent confidence count was also positive. This indicates that the regression coefficient on the population for each of its variables is positive as well. The Beta value shows that the correlation coefficient (B value) for the supervisory dimension with the excellence rating of the District Education Office in Kelantan = 0.780 is the highest (positive indicator here means the higher the supervisory dimension also brings the higher the excellence rating of the District Education Office in Kelantan.

Conclusion

The findings of this study also show significant regression equations for each model. Model 1 (supervisory dimension) is an independent variable as a predictor that can explain the dependent variable (District Education Office excellence rating in Kelantan) R Square Change = .608 (60.8) the highest percentage, F (1, 276) = 428.246, p. <000, (p <.005) followed by model 2 predictor of cooperation dimension R Square Change = .040 (4.0) second highest percent, F (1, 275) = 31.444, p. <000, (p < .005) and the lowest 3 predictor model of empowerment dimension F (1, 274) = 20.143, p. <000, (p <.005). On the other hand, the predictor of the support dimension is not a contributing factor to the excellence rating of the District Education Office in Kelantan.

Thus it can be stated that the findings of this study show three predictors or contributors: supervisory dimension, cooperation dimension and empowerment dimension are contributing factors to the excellence rating of District Education Office in Kelantan, while support dimension is not a contributing factor. The implications for the management and administration system in District Education Offices throughout the state of Kelantan need to focus on these three contributing factors.

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