

## The Influence of Transformational Leadership and School Culture on Organizational Health of Secondary School Teachers in Malaysia: An Empirical Study

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**Abstract:** This study aimed to determine the level of transformational leadership practices by school principals in the national secondary schools in the state of Perak, Malaysia. The four dimensions of transformational leadership studied were vision identification, modeling, goal acceptance and individual support. The study also looks at the level of organizational health as well as the relationship with the practice of transformational leadership by the national secondary school principals'. The respondents consisted of 445 teachers employed in 28 national secondary schools in the state of Perak, Malaysia. The data obtained was analyzed using SPSS version 20.0. Descriptive analysis and inferential analysis were used to analyze the influence of the relationship. The study found that school culture functions as a moderator in the relationship between the transformational leadership style of school principals' and the organizational health of the secondary school teachers' in the state of Perak, Malaysia. In addition, school culture as a moderator in the relationship between transformational leadership and organizational health is a new discovery in the field of leadership. This is because the organizational health of secondary schools has never been investigated by local researchers. Most previous studies have highlighted transformational leadership and school culture has a direct influence on school improvement.

**Keywords:** transformational leadership style, school culture, organizational health, job satisfaction, school principals

### INTRODUCTION

According to Ishak Sin and Nor Asikin Salleh [2], it is the responsibility of school principals to develop a form of professional organization in which all members are able to learn new skills and knowledge continuously, so that they are capable of dealing with change and realizing the goals of the country's education system. In line with the needs of education reform in Malaysia, schools should become more effective learning organizations that ultimately increase the leadership capacity and support the personal development of every individual at the institution including teachers. Principals are often the main focus in school administration because school performance is dependent on the level of effective school leaders [1]. Principals should show a very strong commitment to teachers' continuous learning by giving them opportunities to develop personally and professionally, building a collaborative learning culture, embracing a collective vision and forming a committed team dedicated to achieving school objectives [3]. According to Sukor [3], most education literature suggests that transformational leadership is the most relevant type of leadership in dealing with change.

Schools with good turnover of students are more effective than others in their level of academic achievements [4]. It has been observed that the school principal plays a key role in how effective the school is [32]. In an effective school the "principal" acts as a transformational leader and effectively and persistently communicates the school's mission to the staff, parents and students. The principal understands and applies effective leadership skills to enable both students and staff to achieve the desired school and student achievements. Studies on effective school have linked leadership to be the key factor both at primary and secondary school [5]. Reviews by Othman [4] concluded that leadership is necessary to initiate and maintain school improvement. Leadership is not simply about the quality of individual leader although this is, of course, important. It is also about the role that leaders play, their style of management, their relationship to the vision, values and goals of the school and their approach to change.

Organizational health of a school refers to the interpersonal relations of students, teachers and administrators in a school [6] and was used to examine the climate of schools. Organizational health term has been used in the management literature, mainly as an

abstract idea of what constitutes a “good organization structure” [7]. Miles [8] asserted that a healthy environment was not only an organization surviving its environment but also a structure constantly using its abilities to cope with difficulties and surviving in the long run. Hoy, Tarter and Kottkamp [6] refined the concept of organizational health as the ability of the organization to successfully adapt to its environment, create solidarity among its members and reach its objectives.

For this study, transformational leadership will mean the manner in which the school principal guide and encourage fellow staff to work, communicate the schools’ goal and empower them to achieve the schools’ vision.

- The transformational leadership in this study measures three dimensions as follows:

**Vision identification:** this factor relates to principal behaviors that are aimed at identifying new opportunities for staff members and developing, articulating and inspiring others with his or her vision for the future [9].

**Attribution:** this factor was designed to help understand work consensus, encouragement toward school goals, success and accomplishment, positive attitude towards work and leading by example. All the items here refer to understanding an event or behavior as being caused by the situation that the individual is facing [10].

**Intellectual Stimulation:** principal behaviors that challenge staff members to reexamine some of their assumptions about their work and to reconceive ways to do it are representative of this factor [9].

- The moderating variable, school culture in this study measures three dimensions as follows:

**Collaborative leadership:** describes the degree to which school leaders establish and maintain collaborative relationships with school staff. The leaders’ value teacher’s ideas, seek their input, engage them in decision-making and trust their professional judgments. Leaders support and reward risk-taking, innovation and sharing of ideas and practices [11].

**Teacher Collaboration:** describes the degree to which teachers engage in constructive dialogue that furthers the educational vision of the school. Teachers across the school plan together, observe and discuss teaching practices, evaluate programs and develop an awareness of the practices and programs of other teachers [11].

- The dependent variable, organizational health in this study measures two dimension as follows:

**Career Adaptability:** this factor was designed to help understand trust, commitment, friendly attitude,

adequate teaching resources, moral values, performance standards and promotion [10].

**Institutional integrity:** As an institutional-level health indicator, institutional integrity was described by Hoy and Woolfolk [12] as the school’s level of ability to protect faculty members from any outside forces. Institutional integrity was one of the two out of the seven health dimensions to actually predict general personal efficacy of teachers. Institutional integrity represented a major predictor of the faculty members’ trust in the school principal. Hoy also discovered teachers to be more committed to schools with a high institutional integrity.

Although this model served the educational field for the past two decades, the current demands for educational reform have forced many school leaders to reevaluate and adapt their leadership style to meet current demands. Many educational leaders are beginning to embrace and put into practice a school model of transformational leadership. This leadership model is espoused by school leaders because it “aspires, more generally, to increase members’ efforts on behalf of the organization, as well as to develop more skilled practice” [13]. There is compelling evidence that transformational leadership behaviors, significantly affect teachers’ psychological states, such as, teaching efficacy, job satisfaction, and organizational commitment [14, 9]. Furthermore, a review of school leadership research reveals that school leaders who demonstrate transformational leadership behaviors have staffs who report higher levels of job satisfaction [15-17] which is consistent with Bass and Riggo’s [14] claim.

### Problem Statement

According to Zaidatol Akmaliah [18], the success of the school’s organization and leadership style is correlated. Transformational leadership of school principals affects student achievement and teacher willingness to drive for quality education [19]. Abdul Shukor Abdullah [20] argued that the leadership style of school principals have a significant impact on teachers’ job satisfaction and effectiveness of the school. Changes to the leadership style of school principals should not only focus on the technical aspects of the schools administration but emphasize on professional leadership and guidance rendered to the teachers and students at the school. Hence, principals are solely responsible for the professional improvement of teachers to a higher level and to ensure students excel academically [19]. Are the secondary school principals in Malaysia practicing transformational leadership in their management of school affairs? Also not much is known about the impact of transformational leadership style on the current situation at secondary schools in Malaysia. Creating conducive environment at schools for students to excel and teachers to perform professionally has placed more emphasis on the role of

a principal. It is difficult to evaluate the attributes of principals at secondary schools who are committed to the mission and vision of cultivating a positive school environment.

At this point, no study has been done on transformational leadership behaviors' of the school principals in Malaysia although many studies have been conducted on other types of leadership. In order to assess the extent to which Malaysian secondary school principals provide transformational leadership, a survey of teachers' perceptions on their principals' transformational leadership behavior's will be carried out in the secondary schools in the state of Perak, Malaysia. This study hence was conducted to test the significant influence between principal's leadership styles and organizational health of secondary school teachers in Malaysia and the effects of school culture as a moderating variable.

### **Purpose of the Study**

A healthy organization is characterized as one that adapts to its environment and has the presence of a strong leadership. In contrast, an unhealthy organization is one that is characterized as incapable of adapting to its environment and has no clear or lack of central leadership. The main purpose of this study will be to investigate the transformational leadership, school culture and organizational health that are being practiced at secondary schools in Malaysia and also the moderating influence of school culture on the relationship between transformational leadership and organizational health of secondary schools in Malaysia as perceived by teachers.

### **OBJECTIVES OF THE STUDY**

The study aimed to investigate the influence of transformational leadership and its relationship to organizational and school culture. In particular, the objectives of the study are:

1. To investigate the influence of transformational leadership on school culture of secondary schools in the state of Perak, Malaysia.
2. To investigate the influence of transformational leadership on organizational health of secondary schools in the state of Perak, Malaysia.
3. To investigate the influence of school culture on organizational health of secondary schools in the state of Perak, Malaysia.
4. To investigate the moderating influence of school culture on the relationship between transformational leadership and organizational health of secondary schools in the state of Perak, Malaysia.

### **Research Hypotheses of the Study**

Based on the research objectives, the research hypothesis was formed to test the validity. Research

findings were tested at the level of  $p < 0.05$ . The following are the research hypotheses:

- HA1: There is a significant influence of transformational leadership on school culture of secondary schools in the state of Perak, Malaysia.*
- HA2: There is a significant influence of transformational leadership on organizational health of secondary schools in the state of Perak, Malaysia.*
- HA3: There is a significant influence of school culture on organizational health of secondary schools in the state of Perak, Malaysia.*
- HA4: There is a significant moderating influence of school culture on the relationship between transformational leadership and organizational health of secondary schools in the state of Perak, Malaysia.*

### **Significance of the Study**

This study aims to benefit the school principals to identify approaches towards schools improvement and to create an atmosphere of well-being at work among teachers. It can motivate teachers to improve the teaching quality, especially in the classrooms. By doing so they will be able to produce students who will excel physically, emotionally, spiritually and intellectually in line with the national educational philosophy. This study will benefit the following parties:

- *Ministry of Education:* In recent years, the Malaysian education system has come under increased public scrutiny and debate, as parents' expectations rise and employers voice their concern regarding the system's ability to adequately prepare young Malaysians for the challenges of the 21<sup>st</sup> century [21].
- *Institut Aminuddin Baki:* This study will also be significant to IAB to focus on management and leadership development training for school principals. The main institution in the country responsible for the training of school principals is IAB or in English, the National Institute of Educational Management and Leadership (NIEML) [22].
- *School Principals:* The data to be collected from this research will enable school principals to examine more closely the impact of their leadership style on the organizational health of their school. Based on the results of the questionnaire and data analysis, principals will be able to utilize the results to change and cultivate a healthier school culture.
- *Complement Existing Knowledge:* It is hoped that this study will complement existing literature regarding the influence of transformational leadership and organizational health of secondary schools in Malaysia. With increased literature and knowledge on school leadership behavior, prospective principals and

all those involved in education may find the findings useful for identifying behaviors, beliefs and values that could advance the development of a school.

**Research Framework**

The research framework in this study is built upon the literature review. It is therefore theorized that each variable in transformational leadership style has an influence on organizational health of teachers. Figure 1 below depicts the research framework of this study:

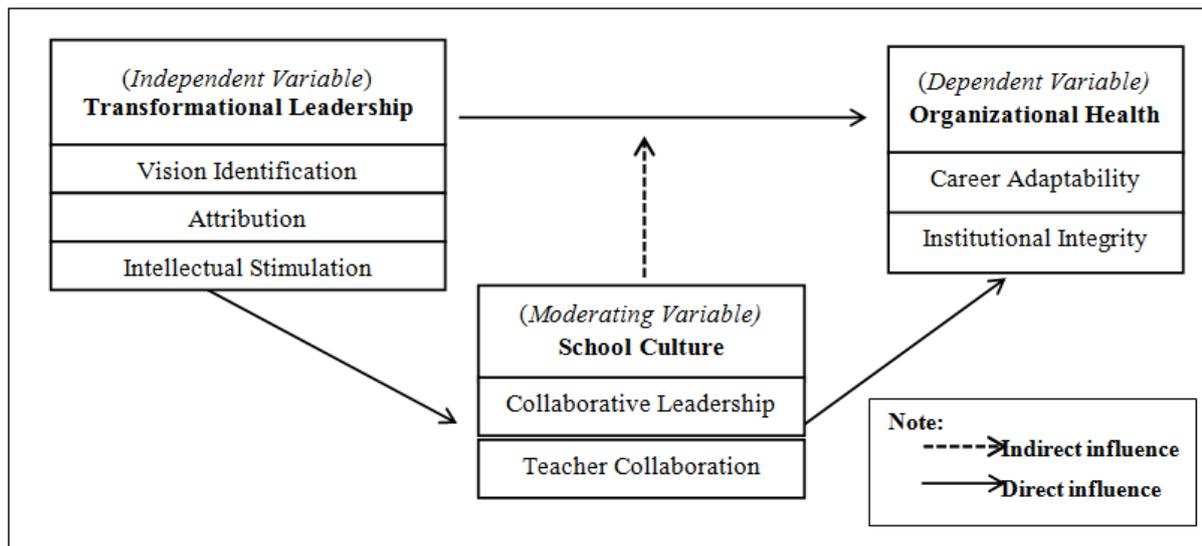
**RESEARCH METHODOLOGY**

**Research Design and Population Sampling**

According to Uma Sekaran [23], descriptive study is undertaken when the characteristics or the phenomena to be tapped in a situation are known to exist and one wants to be able to describe them better by offering a profile of factors. It is suggested by Spunt [24] that surveys with diverse type of questioning are a more convenient way of gathering information. Hence, this study chose this type of survey method as opposed to in -depth interviews or focus groups. Self-administered surveys are more convenient and less expensive to administer, eliminates interviewer bias, gives respondents privacy and results can be analyzed

more quickly. In this study a self-administered questionnaire consisting of four sections were used: Section A contains Teacher Demographic Information, Section B contains Principal Leadership Questionnaire (PLQ), Section C contains the School Culture Survey Questionnaire (SCS) and finally Section D consists of the Organizational Health Index for Secondary School Questionnaire (OHI-S).

In this study, the targeted population was teachers from national secondary schools from the state of Perak, Malaysia. A cover letter informed the participants that the aim of this research was to examine attitudes about work and leadership style and that they were to return the completed questionnaires in sealed envelopes within three to five days. Participants were encouraged to respond as accurately and honestly as possible, and they were assured that their participation would be kept confidential, anonymous and used strictly for academic research purposes only. A total of 495 structured questionnaires were distributed to teachers from 28 schools around Perak. The respondents were randomly selected by means of systematic random sampling, whereby 100 percent of the respondents were secondary school teachers.



**Fig-1: The Research Framework**

A total of 470 questionnaires were received and out of this, 25 sets of the questionnaires were considered unusable because over 25 percent of the question in Part 1 Section A of the questionnaire were not answered [23]. It was assumed that the respondents were either unwilling to cooperate or not serious with the survey. Therefore, only 445 usable sets of received questionnaires were used for the data analysis indicating a response rate of 89 percent.

Data were analyzed using SPSS v. 20 for Windows PC and is reported in percentage, frequency, mean and standard deviation. Descriptive statistics were

used to obtain the frequency, percentage, mean and standard deviation. The inferential statistics of Multiple Regression Analysis and Moderated Multiple Regression Analysis is used to identify if there is an influence between schools principals’ transformational leadership with secondary school teacher’s organizational health and the influence of the moderating variable.

**CONCLUSION ON RESULT OF FACTOR ANALYSIS**

The results of factor analysis for Transformational Leadership identified inclusion of all

24 items of the independent variables and no item were deleted from this analysis. The dimension goal acceptance and modeling have been combined and named as Attribution. As for the School Culture variables; no items were deleted and all 35 items of the moderating variables were retained for further analysis in this study. The results of factor analysis for Organizational Health identified exclusion of 16 items of the dependent variables and the remaining 28 items were retained for further analysis. The dimension resource support, morale and academic emphasis have been named as Career Adaptability. Whereas, the dimension Initiating Structures were deleted because it did not meet the requirement by Hair *et al.* [25].

**Findings**  
**Testing the Influence of Transformational Leadership on School Culture**

The first hypothesis (HA1) about the influence of transformational leadership on school culture is tested using multiple regression analysis. The more detailed picture of the relationship between transformational leadership and school culture at construct and factor levels were revealed by the findings of regression analyses. Table 1 summarizes the regression results of the regression analysis at the construct level.

**Table-1: The Influence of Transformational Leadership on School Culture**

Dependent Variable (School Culture)			
Variable	1 (β)	2 (β)	3 (β)
<b>Independent Variable (Transformational Leadership)</b>			
Vision Identification	.136*	.439*	-.185
Attribution	.669*	.370*	.492*
Intellectual Stimulation	-.014	.084	.500*
<b>R</b>	<b>.790</b>	<b>.725</b>	<b>.808</b>
<b>R<sup>2</sup></b>	<b>.624</b>	<b>.526</b>	<b>.653</b>
<b>Adjusted R<sup>2</sup></b>	<b>.621</b>	<b>.552</b>	<b>.651</b>
<b>F-statistics</b>	<b>226.89</b>	<b>151.31</b>	<b>257.15</b>
<b>Durbin-Watson</b>	<b>1.44</b>	<b>1.53</b>	<b>1.35</b>

\*Significant at  $p < .05$  1= Collaborative Leadership, 2= Teacher Collaboration, 3= Professional Development.

The data indicate that the transformational leadership style accounts for 62 percent of the variance in collaborative leadership (adjusted  $R^2$  0.621). The  $F$  test statistics for the adjusted  $R^2$  is 226.89 and the associated  $p$ -value is .000. It indicates that  $p < .05$ ; therefore, a statistically significant relationship exists between collaborative leadership and the transformational leadership style at the 95.0 percent confidence level. The vision identification variable has positive effect on the collaborative leadership ( $\beta = 0.136$ ) variable and this is statistically significant at the 95.0 percent confidence level because the  $t$  test statistics for the Beta is 18.43 and the associated  $p$ -value (.000) is less than .05. The attribution variable has the strongest positive effect on the collaborative leadership ( $\beta = 0.669$ ) variable and this is statistically significant at the 95.0 percent confidence level because the  $t$  test statistics for the Beta is 18.43 and the associated  $p$ -value (.000) is less than .05. The results indicated that 2 variables of transformational leadership were the positive predictors to collaborative leadership variable whereas intellectual stimulation contributed to negative effect to collaborative leadership ( $\beta = -.014$ ) variable. The Durbin-Watson test ( $1.44 < 2.00$ ) points out that the extracted parameters are not the only possible explanations for the development of the item collaborative leadership. This indicated that vision

attribution and attribution were the predictors of collaborative leadership variable.

The regression results depicted from Table 1 indicates that the transformational leadership style accounts for 52 percent of the variance in teacher collaboration (adjusted  $R^2$  0.552). The  $F$  test statistics for the adjusted  $R^2$  is 151.31 and the associated  $p$ -value is .000. It indicates that  $p < .05$ ; therefore, a statistically significant relationship exists between teacher collaboration and the transformational leadership style at the 95.0 percent confidence level. The Beta ( $\beta$ ) weighting are calculated between the predictor variables and criterion variables. Vision identification variable has the strongest positive effect on the unity of purpose ( $\beta = 0.439$ ) variable and this is statistically significant at the 95.0 percent confidence level because the  $t$  test statistics for the Beta is 10.81 and the associated  $p$ -value (.000) is less than .05. The variable attribution has a positive effect on teacher collaboration ( $\beta = 0.370$ ) variable and this is statistically significant at the 95.0 percent confidence level because the  $t$  test statistics for the Beta is 9.1 and the associated  $p$ -value (.000) is less than .05. According to Durban-Watson statistic test ( $1.53 < 2.00$ ) disposes of significantly correlated residuals. Further input parameters would be needed that have not been assessed empirically. This indicated

that vision identification and attribution were the predictors of teacher collaboration variable. The results indicated that 2 variables of transformational leadership were the positive predictors to teacher collaboration whereas intellectual stimulation contributed to low effect to teacher collaboration ( $\beta = 0.084$ ) variable.

The regression results depicted from Table 1 indicates that the transformational leadership style accounts for 65 percent of the variance in professional development (adjusted  $R^2$  0.651). The  $F$  test statistics for the adjusted  $R^2$  is 257.15 and the associated p-value is .000. It indicates that  $p < .05$ ; therefore, a statistically significant relationship exists between professional development and the transformational leadership style at the 95.0 percent confidence level. The intellectual stimulation variable has the strongest positive effect on the professional development ( $\beta = 0.500$ ) variable and this is statistically significant at the 95.0% confidence level because the  $t$  test statistics for the Beta is 13.85 and the associated p-value (.000) is less than .05. The variable attribution has a positive effect on professional development ( $\beta = 0.492$ ) variable and this is statistically significant at the 95.0 percent confidence level because the  $t$  test statistics for the Beta is 14.11 and the associated p-value (.000) is less than .05. The Durban-Watson statistic test ( $1.35 < 2.00$ ) points out that the

extracted parameters are not the only possible explanations for the item professional development hence there is positive autocorrelation. This indicated that intellectual stimulation and attribution were the predictors of professional development variable. The results indicated that 2 variables of transformational leadership were the positive predictors to professional development whereas vision identification contributed to negative effect to professional development ( $\beta = -.185$ ) variable.

The result confirms the alternative hypothesis of transformational leadership as having a positive influence on school culture and is accepted. Thus, the hypothesis HA1 is supported. All the 3 independent variables of transformational leadership; vision identification, attribution and intellectual stimulation has positive and significant influence on school culture.

**Testing the Influence of Transformational Leadership on Organizational Health**

The second hypothesis (HA2) about the influence of transformational leadership on organizational health is tested using multiple regression analysis. Table 2 summarizes the regression results of the regression analysis at the construct level.

**Table-2: The Influence of Transformational Leadership on Organizational Health**

Variable	Dependent Variable (Organizational Health)	
	1 ( $\beta$ )	2 ( $\beta$ )
<b>Independent Variable (Transformational Leadership)</b>		
<b>Vision Identification</b>	<b>.157*</b>	<b>.315*</b>
<b>Attribution</b>	<b>.256*</b>	<b>.191*</b>
<b>Intellectual Stimulation</b>	<b>-.182</b>	<b>.063</b>
<b>R</b>	<b>.616</b>	<b>.575</b>
<b>R2</b>	<b>.379</b>	<b>.330</b>
<b>Adjusted R2</b>	<b>.375</b>	<b>.325</b>
<b>F-statistics</b>	<b>83.53</b>	<b>67.35</b>
<b>Durbin-Watson</b>	<b>1.72</b>	<b>1.22</b>

\*Significant at  $p < .05$  1= Career Adaptability, 2= Institutional Integrity

The regression results depicted from Table 2 indicates that the transformational leadership style accounts for 37 percent of the variance in career adaptability (adjusted  $R^2$  0.375). The  $F$  test statistics for the adjusted  $R^2$  is 83.53 and the associated p-value is .000. It indicates that  $p < .05$ ; therefore, a statistically significant relationship exists between career adaptability and the transformational leadership style at the 95.0 percent confidence level.

The Beta ( $\beta$ ) weighting for the independent variables (vision identification, attribution and intellectual stimulation) and dependent variable (career adaptability and institutional integrity). The Beta ( $\beta$ )

weighting are calculated between the predictor variables and criterion variables. The attribution variable has the strongest positive effect on the career adaptability ( $\beta = 0.256$ ) variable and this is statistically significant at the 95.0 percent confidence level because the  $t$  test statistics for the Beta is 5.50 and the associated p-value (.000) is less than .05. The vision identification also has a positive effect on career adaptability ( $\beta = 0.157$ ) variable and this is statistically significant at the 95.0 percent confidence level because the  $t$  test statistics for the Beta is 3.4 and the associated p-value (.001) is less than .05. According to Durban-Watson statistic test ( $1.72 < 2.00$ ) disposes of significantly correlated residuals. Further input parameters would be needed

that have not been assessed empirically. This indicated that vision identification and attribution were the predictors of career adaptability variable.

The regression results depicted from Table 2 indicates that the transformational leadership style accounts for 33 percent of the variance in institutional integrity (adjusted  $R^2$  0.325). The  $F$  test statistics for the adjusted  $R^2$  is 67.35 and the associated p-value is .000. It indicates that  $p < .05$ ; therefore, a statistically significant relationship exists between institutional integrity and the transformational leadership style at the 95.0 percent confidence level. The Beta ( $\beta$ ) weighting are calculated between the predictor variables and criterion variables. The vision identification variable has the strongest positive effect on the institutional integrity ( $\beta = 0.315$ ) variable and this is statistically significant at the 95.0 percent confidence level because the  $t$  test statistics for the Beta is 6.52 and the associated p-value (.000) is less than .05. The variable attribution has a positive effect on institutional integrity ( $\beta = 0.191$ ) variable and this is statistically significant at the 95.0 percent confidence level because the  $t$  test statistics for the Beta is 3.95 and the associated p-value (.000) is less than .05. According to Durban-Watson statistic test ( $1.22 < 2.00$ ) disposes of significantly correlated residuals. It implies that independence of residual is accepted in this model and there is no autocorrelation problem in the data. This indicated that vision identification and attribution were the predictors of institutional integrity variable. The result confirms the alternative hypothesis of transformational leadership as having a positive influence on organizational health and is accepted. Thus, the hypothesis HA2 is supported. Two out of three independent variables of transformational leadership; vision identification and attribution has positive and significant influence on organizational health.

**Testing the Influence of School Culture on Organizational Health**

The third hypothesis (HA3) about the influence of school culture on organizational health is tested using multiple regression analysis. Table 3 summarizes the regression results of the regression analysis at the construct level.

The regression results depicted from Table 3 indicates that the school culture accounts for 31 percent of the variance in career adaptability (adjusted  $R^2$  0.309). The  $F$  test statistics for the adjusted  $R^2$  is 52.34 and the associated p-value is .000. It indicates that  $p < .05$ ; therefore, a statistically significant relationship exists between career adaptability and school culture at the 95.0 percent confidence level. The Beta ( $\beta$ ) weighting are calculated between the predictor variables and criterion variables. The collaborative leadership variable has the strongest positive effect on the consideration ( $\beta = 0.212$ ) variable and this is statistically significant at the 95.0 percent confidence level because the  $t$  test statistics for the Beta is 11.48 and the associated p-value (.000) is less than .05. The variable teacher collaboration has a positive effect on career adaptability ( $\beta = 0.198$ ) variable and this is statistically significant at the 95.0 percent confidence level because the  $t$  test statistics for the Beta is 3.95 and the associated p-value (.000) is less than .05. The variable professional development contributed low effect to principal influence variable ( $\beta = 0.90$ ) and this is not statistically significant at the 95.0 percent confidence level because the  $t$  test statistics for the Beta is 1.88 and the associated p-value (.060) is more than .05. When we look at the results with regard to Durbin-Watson statistic test, the value is determined as 1.85 in this study. Durbin-Watson value indicates that there is no autocorrelation in the model if it is in the range of 1.5 to 2.5 (Durbin & Watson, 1951). This indicated that collaborative leadership, teacher collaboration and professional development were the predictors of career adaptability variable.

**Table-3: The Influence of School Culture on Organizational Health**

Dependent Variable (Organizational Health)		
Variable	1 ( $\beta$ )	2 ( $\beta$ )
<b>Independent Variable (School Culture)</b>		
<b>Collaborative Leadership</b>	<b>.212*</b>	<b>.072*</b>
<b>Teacher Collaboration</b>	<b>.198*</b>	<b>.462*</b>
<b>Professional Development</b>	<b>-.090</b>	<b>.109*</b>
<b>R</b>	<b>.561</b>	<b>.711</b>
<b>R2</b>	<b>.315</b>	<b>.505</b>
<b>Adjusted R2</b>	<b>.309</b>	<b>.501</b>
<b>F-statistics</b>	<b>52.34</b>	<b>116.07</b>
<b>Durbin-Watson</b>	<b>1.85</b>	<b>1.75</b>

\*Significant at  $p < .05$  1= Career Adaptability, 2= Institutional Integrity

The regression results depicted from Table 3 indicates that the school culture accounts for 50 percent of the variance in institutional integrity (adjusted  $R^2$  0.501). The F test statistics for the adjusted  $R^2$  is 116.07 and the associated p-value is .000. It indicates that  $p < .05$ ; therefore, a statistically significant relationship exists between institutional integrity and school culture at the 95.0 percent confidence level. The teacher collaboration variable has the strongest positive effect on the institutional integrity ( $\beta = 0.462$ ) variable and this is statistically significant at the 95.0 percent confidence level because the  $t$  test statistics for the Beta is 11.70 and the associated p-value (.000) is less than .05. Whereas, the variable professional development also has a positive effect on institutional integrity ( $\beta = 0.109$ ) variable and this is statistically significant at the 95.0 percent confidence level because the  $t$  test statistics for the Beta is 2.73 and the associated p-value (.000) is less than .05. The collaborative leadership variable has a positive effect on institutional integrity ( $\beta = 0.072$ ) variable and this is statistically significant at the 95.0 percent confidence level because the  $t$  test statistics for the Beta is 2.33 and the associated p-value (.020) is less than .05. For the purpose of making an assessment and validation of the independence of error assumptions, the Durbin-Watson statistic test was utilized. Table 4.19 shows that the value of 1.75 is a positive serial correlation. This indicated that collaborative leadership, teacher collaboration and professional development were the predictors of institutional integrity variable. The results indicated that all 3 variables of school culture were the positive predictors to institutional integrity.

The result confirms the alternative hypothesis of school culture as having a positive influence on organizational health and is accepted. Thus, the hypothesis HA3 is supported. All the 3 independent variables of school culture; collaborative leadership, teacher collaboration and professional development has positive and significant influence on organizational health.

#### **Testing the Moderating Influence of School Culture on the Relationship between Transformational Leadership and Organizational Health**

Hypothesis HA4 addressed the moderating influence of school culture on the relationship between transformational leadership and organizational health. The role of school culture variables as a moderator variable will be identified from the significance of the interaction coefficient between the interaction terms (transformational leadership x school culture). A positive and significant coefficient indicates that school culture moderates the relationship between transformational leadership and organizational health

outcomes. Higher relative scores on school culture will increase the magnitude of the effect between transformational leadership and organizational health outcomes. Results of the MMR analysis for the interaction effect between transformational leadership and school culture are shown in Table 4.

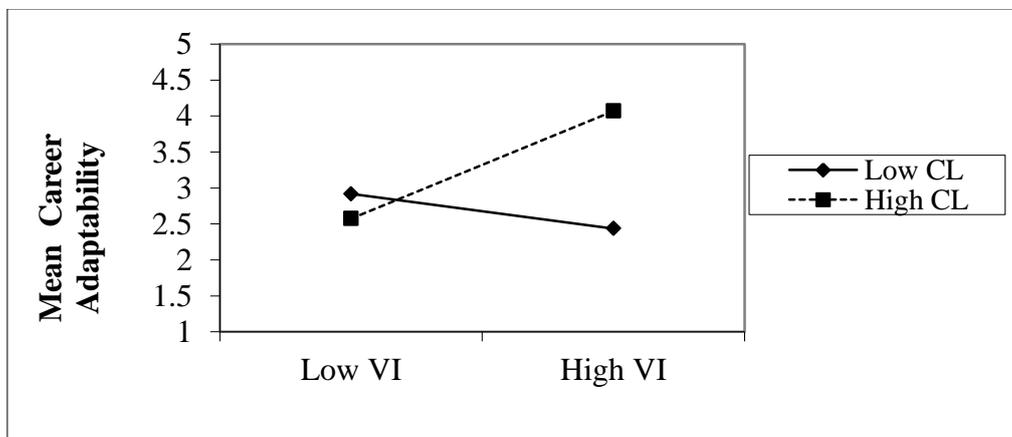
The MMR analysis shown in Table 4 revealed that the full model (Step 1, 2 & 3) includes the control variable, the independent variables, the moderator variable and the interaction terms of the moderator variable and independent variables. Step 1 shows that three variables (vision identification, attribution and intellectual stimulation) have a positive and significant relationship with organizational health variable (career adaptability). The vision identification variable ( $\beta = .092$ ,  $p = .003$ ); attribution ( $\beta = .185$ ,  $p = .000$ ) and intellectual stimulation ( $\beta = .266$ ,  $p = .000$ ). Transformational leadership variables and collaborative leadership variable as main effect variables were entered in Step 2 and the result shows two variables has positive and significant relationship with career adaptability. The intellectual stimulation variable ( $\beta = .206$ ,  $p = .000$ ) and collaborative leadership ( $\beta = .131$ ,  $p = .000$ ). The interaction terms of transformational leadership variables and collaborative leadership variable were entered in Step 3. Interaction term shows two variables have significant relationship with career adaptability. The vision identification variable ( $\beta = -.245$ ,  $p = .000$ ) and intellectual stimulation ( $\beta = .278$ ,  $p = .000$ ). The results of the MMR analysis for the interaction effect between transformational leadership and school culture suggests that the exploratory power of the model increases because of the inclusion of the interaction term. As shown in Table 4, an additional 15 percent of variance ( $\Delta R^2 = 0.150$ ,  $p < .05$ ) in career adaptability was explained by the inclusion of the interaction term. Thus, the results indicate the evidence that collaborative leadership moderates the relationship between transformational leadership and career adaptability.

The simple regression equations, detailed in Figure 2 indicated a significant ( $p < 0.05$ ) positive regression of career adaptability on attribution at the level of collaborative leadership interaction. Examination of the interaction plot (Figure 2) showed an enhancing effect that if attribution is high, collaborative leadership and career adaptability will also be high. When the principal demonstrates collaborative leadership by appreciating teacher's ideas, seek input, engage teachers in decision-making and trust the professional judgments of the teachers, the attribution of teachers will be high and they will be susceptible to positive career transition.

**Table 4: Test Statistics for Moderated Relationship (Transformational Leadership, School Culture and Organizational Health)**

Variable	Dependent Variable					
	(Career Adaptability)			(Institutional Integrity)		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
(β)	(β)	(β)	(β)	(β)	(β)	(β)
<b>Independent Variable (Transformational Leadership)</b>						
Vision Identification	.092*	.075	-.245*	.323*	.291*	.206*
Attribution	.185*	.099	.210*	.211*	-.055	.090
Intellectual Stimulation	.266*	.206*	.239*	.118*	.073	.097
<b>Moderating Variable (School Culture)</b>						
Collaborative Leadership (CL)		.131*	.120*		.131*	.478*
<b>Interaction Terms</b>						
Vision Identification*CL				-.245*		
Attribution*CL						.227*
Intellectual Stimulation*CL						-.042
R <sup>2</sup>	.366	.373	.523	.309	.310	.491
Adjusted R <sup>2</sup>	.363	.368	.517	.307	.307	.487
R <sup>2</sup> Change	.366	.006	.150	.309	.001	.181
Sig. F Change	.000	.008	.000	.000	.000	.000
<b>Moderating Variable (School Culture)</b>						
Teacher Collaboration (TC)		.224*	.204*		.136*	.416*
<b>Interaction Terms</b>						
Vision Identification*TC				.036		
Attribution*TC						.116
Intellectual Stimulation*TC						.101
R <sup>2</sup>	.189	.210	.262	.366	.367	.550
Adjusted R <sup>2</sup>	.187	.207	.256	.363	.362	.544
R <sup>2</sup> Change	.189	.021	.052	.366	.000	.183
Sig. F Change	.000	.000	.000	.000	.551	.000

\* Significant at  $p < .05$



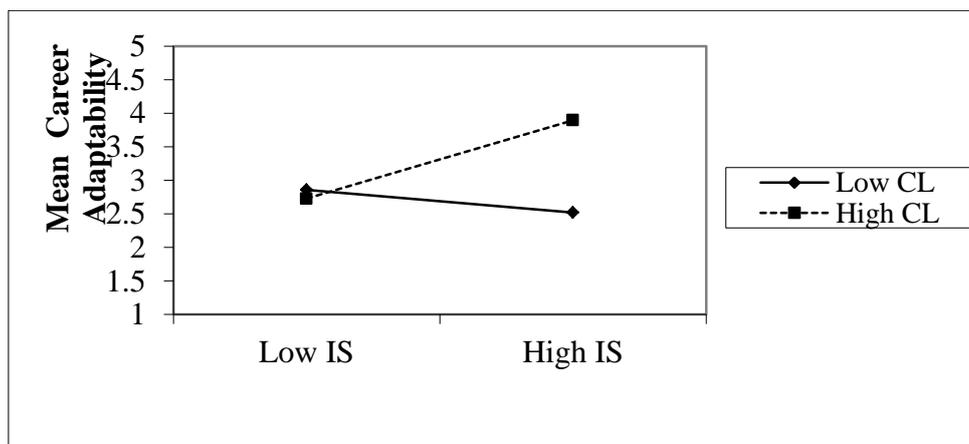
**Fig-2: Results of Moderator Analysis: Influence of Collaborative Leadership**

The MMR analysis shown in Table 4 revealed that the full model (Step 1, 2 & 3) includes the control variable, the independent variables, the moderator variable and the interaction terms of the moderator variable and independent variables. Step 1 shows that three variables (vision identification, attribution and intellectual stimulation) have a positive and significant relationship with organizational health variable (career adaptability). The vision identification variable ( $\beta=.092, p=.003$ ); attribution ( $\beta=.185, p=.000$ ) and intellectual stimulation ( $\beta =.266, p=.000$ ). Transformational leadership variables and teacher collaboration variable as main effect variables were entered in Step 2 and the result shows two variables; intellectual stimulation variable ( $\beta=.206, p=.000$ ) and teacher collaboration variable ( $\beta=.224, p=.000$ ) has positive and significant relationship with career adaptability.

The interaction terms of transformational leadership variables and teacher collaboration variable were entered in Step 3. Interaction term shows two variables have significant relationship with career adaptability. The vision identification variable ( $\beta = -.245, p=.000$ ) and intellectual stimulation ( $\beta =.278, p=.000$ ). The results of the MMR analysis for the interaction effect between transformational leadership

and school culture suggests that the exploratory power of the model increases because of the inclusion of the interaction term. As shown in Table 4, an additional 15 percent of variance ( $\Delta R^2 =0.150, p<.05$ ) in career adaptability was explained by the inclusion of the interaction term. Thus, the results indicate the evidence that teacher collaboration moderates the relationship between transformational leadership and career adaptability.

The simple regression equations, detailed in Figure 3 indicated a significant ( $p<0.05$ ) positive regression of career adaptability on intellectual stimulation and collaborative leadership interaction. Examination of the interaction plot (Figure 3) showed an enhancing effect that if career adaptability is high, intellectual stimulation and collaborative leadership will increase. In other words, career adaptability will increase if intellectual stimulation and collaborative leadership is high. When the principal demonstrates high career adaptability by upholding its educational program, supporting the teachers by inspiring them to achieve work-related goals, protecting from unreasonable community and parental demands and also coping successfully with destructive outside forces.



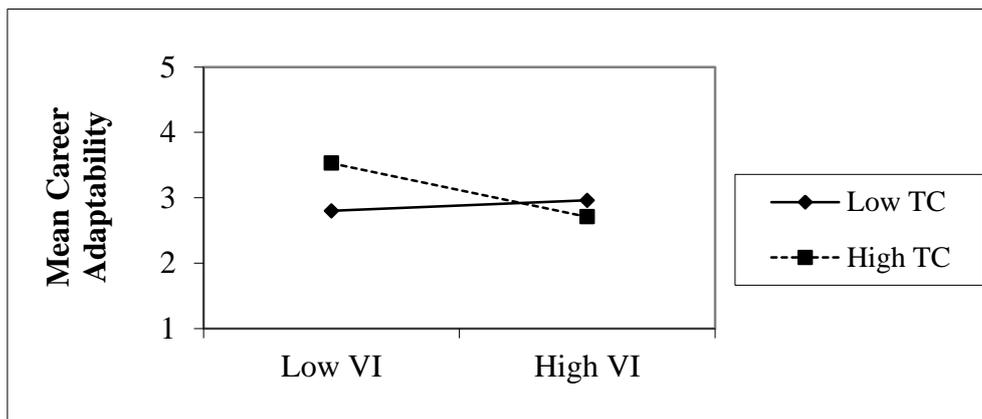
**Fig-3: Results of Moderator Analysis: Influence of Collaborative Leadership**

The MMR analysis shown in Table 4 revealed that the full model (Step 1, 2 & 3) includes the control variable, the independent variables, the moderator variable and the interaction terms of the moderator variable and independent variables. Step 1 shows that three variables (vision identification, attribution and intellectual stimulation) have a positive and significant relationship with organizational health variable (career adaptability). The vision identification variable ( $\beta=.092, p=.003$ ); attribution ( $\beta=.185, p=.000$ ) and intellectual stimulation ( $\beta =.266, p=.000$ ). Transformational leadership variables and teacher collaboration variable as main effect variables were entered in Step 2 and the result shows no variables has positive and significant relationship with career adaptability. The interaction terms of transformational leadership variables and

professional development variable were entered in Step 3. Interaction term shows two variables have significant relationship with career adaptability. The attribution variable ( $\beta = .219, p=.000$ ) and intellectual stimulation ( $\beta =.178, p=.000$ ). The results of the MMR analysis for the interaction effect between transformational leadership and school culture suggests that the exploratory power of the model increases because of the inclusion of the interaction term. As shown in Table 4, an additional 5 percent of variance ( $\Delta R^2 =0.052, p<.05$ ) in career adaptability was explained by the inclusion of the interaction term. Thus, the results indicate the evidence that teacher collaboration moderates the relationship between transformational leadership and career adaptability.

To interpret the effect of the interaction term of teacher collaboration (TC), simple regression equations were produced where the influence of teacher collaboration on the relationship between vision identification (VI) and career adaptability was revealed. The statistical significance of the slope of these simple regression equations were also analyzed and established. The simple regression equations, detailed in Figure 4 indicated a significant ( $p < 0.05$ ) positive regression of career adaptability on attribution at the

level of teacher collaboration interaction. Examination of the interaction plot (Figure 4) showed an enhancing effect that if attribution increased, teacher collaboration decreased. In other words, career adaptability lowers the effects of attribution on teacher collaboration. If the degree to which the principal's behavior is aimed at identifying new opportunities for his/her teachers and inspiring them to work towards school mission, the teachers engage less in constructive dialogue that furthers the vision of the school.

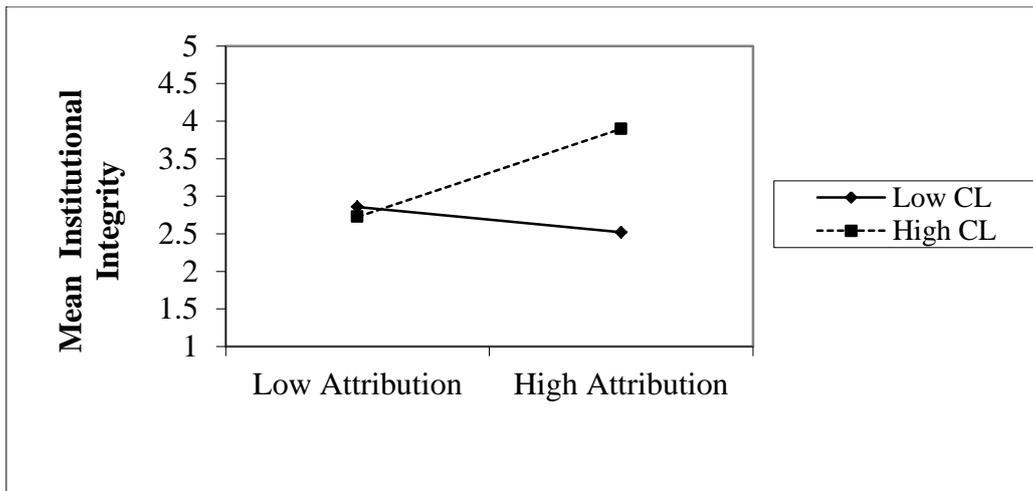


**Fig-4: Results of Moderator Analysis: Influence of Teacher Collaboration**

The MMR analysis shown in Table 4 revealed that the full model (Step 1, 2 & 3) includes the control variable, the independent variables, the moderator variable and the interaction terms of the moderator variable and independent variables. Step 1 shows that three variables (vision identification, attribution and intellectual stimulation) have a positive and significant relationship with organizational health variable (institutional integrity). The vision identification variable ( $\beta = .323, p = .003$ ); attribution ( $\beta = .211, p = .000$ ) and intellectual stimulation ( $\beta = .118, p = .000$ ). Transformational leadership variables and collaborative leadership variable as main effect variables were entered in Step 2 and the result shows two variables has positive and significant relationship with institutional integrity. The vision identification variable ( $\beta = .291, p = .000$ ) and collaborative leadership ( $\beta = .131, p = .000$ ). The interaction terms of transformational leadership variables and collaborative leadership variable were entered in Step 3. Interaction term shows one variable has significant relationship with institutional integrity. The attribution ( $\beta = .227, p = .000$ ). The results of the MMR analysis for the interaction effect between transformational leadership and school culture suggests that the exploratory power of the model increases

because of the inclusion of the interaction term. As shown in Table 4, an additional 18.1 percent of variance ( $\Delta R^2 = 0.181, p < .05$ ) in institutional integrity was explained by the inclusion of the interaction term. Thus, the results indicate the evidence that collaborative leadership moderates the relationship between transformational leadership and institutional integrity.

The simple regression equations, detailed in Figure 5 indicated a significant ( $p < 0.05$ ) positive regression of institutional integrity on attribution and collaborative leadership interaction. Examination of the interaction plot (Figure 5) showed an enhancing effect that if institutional integrity is high, attribution and collaborative leadership will increase. In other words, institutional integrity will increase if attribution and collaborative leadership is high. When the principal demonstrates high institutional influence by upholding its educational program, supporting the teachers by inspiring them to achieve work-related goals, protecting from unreasonable community and parental demands and also coping successfully with destructive outside forces.

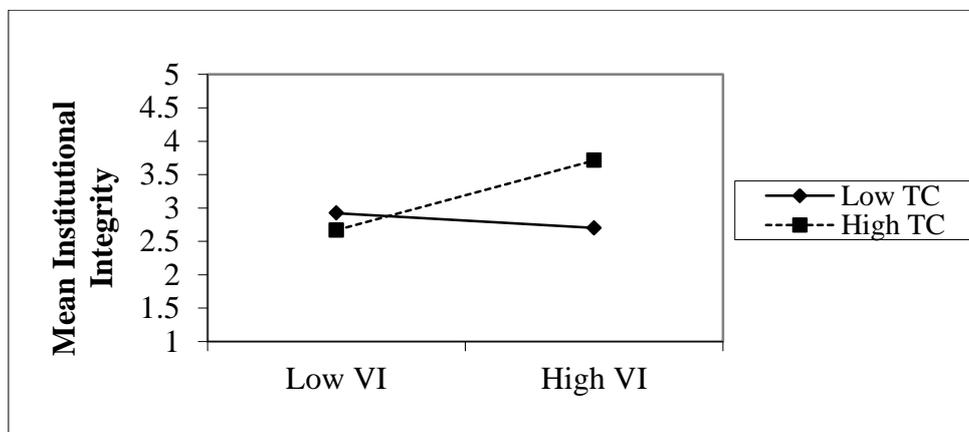


**Fig-5: Results of Moderator Analysis: Influence of Collaborative Leadership**

The MMR analysis shown in Table 4 revealed that the full model (Step 1, 2 & 3) includes the control variable, the independent variables, the moderator variable and the interaction terms of the moderator variable and independent variables. Step 1 shows that three variables (vision identification, attribution and intellectual stimulation) have a positive and significant relationship with organizational health variable (institutional integrity). The vision identification variable ( $\beta=.323, p=.003$ ); attribution ( $\beta=.211, p=.000$ ) and intellectual stimulation ( $\beta =.118, p=.000$ ). Transformational leadership variables and teacher collaboration variable as main effect variables were entered in Step 2 and the result shows one variable vision identification variable ( $\beta=.291, p=.000$ ) has positive and significant relationship with institutional integrity. The interaction terms of transformational leadership variables and teacher collaboration variable were entered in Step 3. Interaction term shows one variable has significant relationship with institutional integrity. The vision identification variable ( $\beta = -.176, p=.000$ ). The results of the MMR analysis for the interaction effect between transformational leadership and school culture suggests that the exploratory power of the model increases because of the inclusion of the

interaction term. As shown in Table 4, an additional 18.3 percent of variance ( $\Delta R^2 =0.183, p<.05$ ) in institutional integrity was explained by the inclusion of the interaction term. Thus, the results indicate the evidence that teacher collaboration moderates the relationship between transformational leadership and institutional integrity.

The statistical significance of the slope of these simple regression equations were also analyzed and established. The simple regression equations, detailed in Figure 6 indicated a significant ( $p<0.05$ ) positive regression of institutional integrity on vision identification at the level of teacher collaboration interaction. Examination of the interaction plot (Figure 6) showed an enhancing effect that if vision identification increased, teacher collaboration also increased. In other words, institutional integrity will increase if vision identification and teacher collaboration is high. Thus, the results indicate the evidence that teacher collaboration moderates the relationship between transformational leadership and institutional integrity. Thus, the hypothesis HA4 is supported.



**Fig-6: Results of Moderator Analysis: Influence of Teacher Collaboration**

## CONCLUSION

The results indicate that collaborative leadership, teacher collaboration and professional development moderate the relationship between transformational leadership and organizational health. According to Gruenert [11], “collaborative leadership refers to the ways in which leaders within the school create and foster collaborative relationships with faculty and staff” (p.131). School leaders completely value ideas of the teachers, seek input, engage staff in decision-making and trust the professional judgement of the staff. In addition, collaborative leaders empower teachers to make their own decisions and encourage them to be innovators as well as risk-takers [11]. The current body of literature [26, 27, 28, 13, 29, 30] suggested that vision identification is an action taken by school leaders to improve academic success. In this study, the findings reveal a negative significant influence of vision identification which indicates the principal failed to identify new opportunities for the teachers. The principal is perceived as someone who have not created a vision for the school that will move the school in a positive direction; failed to articulate the school’s vision to the staff and also been lacking in inspiration to achieve school goals. The findings of this study is not congruent with the study by Leithwood *et al.* [31] whereby the teachers and principals work together to make school decisions, ensuring student success.

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