Educational Leader (Pemimpin Pendidikan) 2016, Volume 4, page 31 to 38

Distributed Leadership, Contextual Factor and Teachers' Self-Efficacy in Malaysia

Kepimpinan Distributif, Faktor Kontesktual Dan Efikasi Kendiri Guru Di Malaysia

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Abstract

The study investigates the relationship of distributed leadership with teachers' self-efficacy and the role of contextual factor as mediator in Residential Schools (RS) and National Secondary School (NSS) in Malaysia. The total of 831 teachers representing 17 schools have participated in the study. The findings show a high positive correlation and significant relationship (r=.50) between distributed leadership with teachers' self-efficacy. The finding shows there is a large and significant difference of distributed leadership between RS and NSS. Further analysis shows the direct effect of distributed leadership to teachers' self-efficacy is significant (β =.51). However, the direct effect was significantly reduced to β = .28 which indicates the role of contextual factor as partial mediator. The Structural Equation Modeling analysis of the research model shows the coefficient of determination value or R^2 is .36. The statistic indicates that distributed leadership variable and contextual factor explained 36% of the variance of teacher self-efficacy. The remaining 64% may occur due to other influences that are not within the range of this study. The findings suggest some theoretical implications and recommendations on the role and effect of distributed leadership on teachers' self-efficacy in Malaysian secondary school.

Keywords: Distributed Leadership, Teachers' Self-efficacy, Contextual factor, Education, Malaysia

Introduction

The discipline of education is dynamic and it requires educators to keep abreast with its constant changes. Educators not only have to ensure their students' achievement but they also need to prepare them for the 21st century learning skills as required in most education reforms (Elmore, 2000; Malaysian Education Blueprint - MEB, 2013). Sergiovanni (2001) in his study stated that the school leader is the strongest determinant of a school's effectiveness. As education reforms involve classroom change, hence this becomes the responsibility of the school leader (Danielson, 2007). This is further reinforced by findings from many studies on educational leadership that indicate school leaders play an important role in school excellence (Harris, 2004; Hussein Mahmood, 1993; Hussein Ahmad, 2012, Leithwood & Jantzi, 1999; Ofsted, 2000; MEB, 2013; Sergiovanni, 2000) and a school's success depends on its leadership (Abdul Ghaffar, 2010; Amin, Rosnarizah & Rohaya, 2007).

Problem statements

School leaders have an important role in motivating teachers to perform their utmost potential, hence to increase their commitment in teaching and learning (Leithwood et al., 2006). According to Hulphia, Devos and Roseel (2009), teacher's commitment increases when there is collaboration among members of the leadership team, strong support by school head and informal distributed leadership practices. A study by Day, Sammons, Hopkins, Harris, Leithwood, Qing, Brown, Ahtaridou & Kington (2009) shows a positive correlation between distributed leadership with school organization environment, which promote activities that influence teacher's morale. Thus teachers with positive self-esteem tend to influence students' behaviour and their learning outcome. Tschannen-Moran and Hoy, (2001) also reported that school leaders have to monitor and support their teachers in order to enhance their self-efficacy. They stressed that various learning activities in school can influence teachers' self-efficacy. Zaidatol, Teng, Foo, Zakaria, and Jegak, (2011), in their study, also found that teacher efficacy is positively related with teacher behavior and student learning outcome.

Given this premise, this study sought to investigates the relationship of distributed leadership with teachers' self-efficacy and the role of contextual factor as mediator in Residential Schools and National Secondary School in Malaysia. It is noted that there are no studies that have been conducted to examine this organizational strategy in these two major school types in Malaysia.

Objectives of the study

The objectives of the study are to:

a. analyse the relationship between distributed leadership with teachers' self-efficacy.
b. recognize the differences of distributed leadership based on teacher's perception in Residential and National Secondary School.
c. analyse the relationship of distributed leadership and teachers' self-efficacy with a contextual factor as the mediator variable.
d. analyse the contribution of distributed leadership and contextual factor to teachers' self-efficacy and to determine the variables that contribute to the variance in teachers' self-efficacy.

The study is in alignment with the Malaysia Educational Blueprint (MEB) 2013 – 2025, whereby in the second wave of the MEB, beginning the year 2016 through 2020, the Ministry of Education will move towards the distributed leadership model with an emphasis on school based management system. It is also anticipated that the study would positively contribute to the empirical evidence with respect to distributed leadership studies in Malaysia.

Literature review

Reports and publications about research on distributed leadership have begun since 2000 and become more intense lately. According to Bolden (2011), previous studies are mostly focused on school context in England and the United States and its development in the Asian region is relatively recent. An independent study on school leadership in Wales and England by PricewaterhouseCoopers LLP (2007) demonstrates the need for school leaders to develop leadership among their staff, nurture existing talent on their staff and subsequently spread leadership throughout the organization. Their study showed that 95 percent of secondary school leaders and 85 percent of primary school leaders feel they have distributed their leadership responsibilities within their organizations.

Studies on distributed leadership are rich in theory and need to be supported by empirical evidence (Harris, 2009; Jamalulail, Aida Hanim, Suriati and Md Fuad, 2013; Leithwood, Mascall and Strauss, 2009; Mayrowetz, 2008; Ravindarang, Khuan and Khoo, 2014; Rosnarizah & Zulkifli, 2009). Trends in educational leadership now no longer see the principal shoulder all responsibilities as principal. It is more focused on how to create a culture of accountability and learning as well as developing school leadership capabilities (Harris, 2002).

This study was developed from the distributed leadership model developed by four proponent of the field. Elmore (2002) related the concept of distributed leadership with teacher improvement and school performance. He proposed five dimension of distributed leadership namely shared mission and purpose, school culture, shared responsibility, professional development and leadership practices. Gronn (2000) relates distributed leadership as concerted action involving spontaneous collaboration, intuitive working relation and institutionalised practices. According to Harris (2014) the distributed leadership theory refers to multiple source of influence primarily concern with organizing leadership expertise at all level in school in order to create capacity for improvement. She also adds that distributed leadership is 'carefully planned and deliberately orchestrated. Spillane (2006) defined distributed leadership as practice distributed over leaders, follower and situation. The leadership stretch over the work of a number of individual through interaction of multiple leaders.

An exploratory study by Rosnarizah et al., (2009) found that distributed leadership also prevailed in high schools in Malaysia. The findings shows 74 percent teachers indicates that distributed leadership is being practice in their school. The finding was supported by other researchers in different type of

school such as technical and vocational schools (Ravindarang et al., 2014) and national primary school in Klang, Selangor (Jamalulail et al, 2013). The findings seem to be consistent with that of the distributed leadership practices in England (Harris, 2008).

Methodology

Research design and instrumentation

This is a quantitative study using the survey research methodology. The Distributed Leadership and Teachers' Self-Efficacy Instrument (KDEG), was constructed by the researcher and is consists of 74 items. The KDEG instrument consists of five parts. Part A focuses on respondent background and Part B consists of items that are related to the approach and practices of distributed leadership. The researcher has also adapted the questionnaire items developed from her previous study (Rosnarizah et al., 2009) and has developed a distributed leadership practice matrix based on past literature. Part C measures the contextual factor derived from the literature review on factors influencing teachers' self-efficacy. Part D measures the teachers' self-efficacy adapted from Tschannen-Moran & Woolfolk Hoy, (2001) Teachers' Self-Efficacy Scale.

The reliability indexes of Cronbach's Alpha are high with the statistic ranging from .84 to .96 for each of the dimensions studied. Generally the presence of high correlation of .90 and higher indicates multi-collinearity (Hair, Black, Babin and Anderson, 2010). Hence, the researcher acknowledges as limitation of this study The data is analysed using Statistical Package for Social Science (SPSS) IBM 2.0 and Structural Equation Modelling (SEM) using AMOS 21.0 software. The descriptive analysis is used to analyse frequency and percentage distribution of participants while SEM is conducted to examine influence of distributed leadership on teachers' self-efficacy. The Structural Equation Model of the study is shown in Figure 1. It depicts distributed leadership factor as exogenous variable and teachers' self-efficacy as the endogenous variable while the contextual factor as mediating variable.

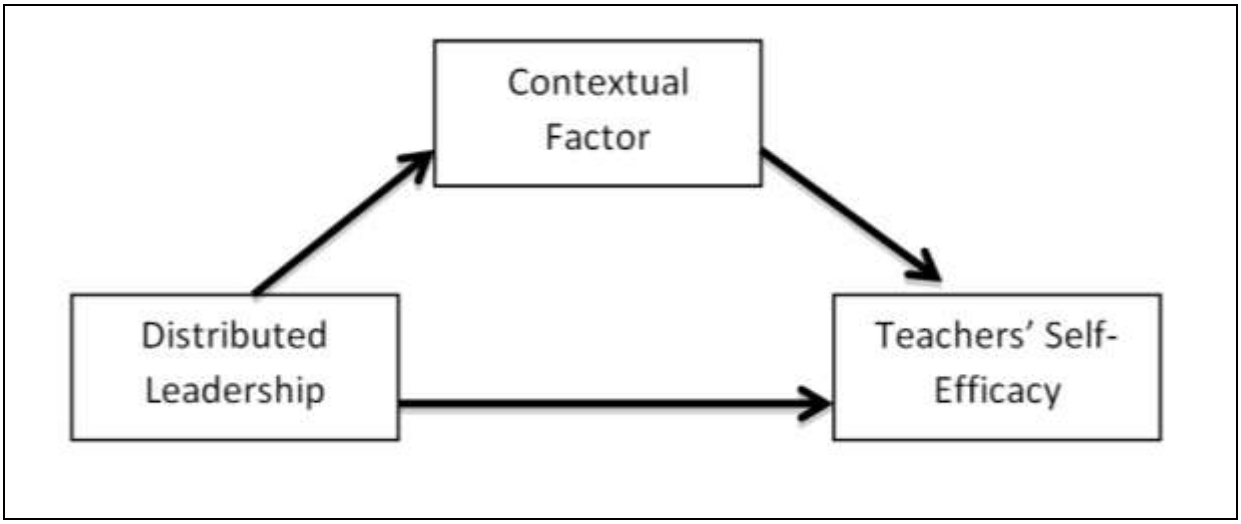

Figure 1: The Structural Equation Model of the Study

Sampling

A total of 831 teachers from 17 secondary schools are involved in the study. Altogether there are four (4) National Secondary Schools, four (4) Premier Residential Schools, four (4) Science Residential Schools, three (3) Integration Residential Schools and two (2) Federal Islamic Residential Schools selected for the study. The selection procedure is based on stratified random sampling from schools in the central zone of the research setting while the selection of teachers is based on purposive sampling. The sampling is based on the Sample Size Table by Krejcie and Morgan (1970) therefore for a

population of 410,000 teachers the suggested sample size is 384 (Chua, 2013). The researcher had distributed 1,190 survey instruments to the designated schools, 848 or 71% returned and only 831 are duly completed. Hair, et al., (2010) and Zainuddin Awang (2012), suggests the minimum sample size required in Structural Equation Modeling for five or less latent variables with each variable consisting of more than three items is 100. This study has three latent variables, hence the sample size of 831 is more than adequate to perform SEM analysis.

Findings

Respondent profile

There are 235 (28.3%) male respondents and 596 (71.7%) female respondents who participated in the study.

Objective 1: To analyse the relationship between distributed leadership with teachers' self-efficacy.

The result of the first objective of the study (Table 1) shows a high, positive correlation and significant relationship (r=.50) between distributed leadership with teachers' self-efficacy. According to Cohen (1988) the correlation value of r=.50 to r=1.0 are considered high thus indicates that distributed leadership have positive relationship towards teachers' self efficacy.

Table 1: Correlation Analysis Based on Measurement Model

Correlational Path			r	P	Correlation
Teachers' Self -Efficacy	< - >	Distributed Leadership	.50	***	high
Contextual Factor	< - >	Distributed Leadership	.54	***	high
Teachers' Self- Efficacy	< - >	Contextual Factor	.55	***	high

Note: *** p<.001

Objective 2: To recognize the differences of distributed leadership based on teacher's perception in Residential and National Secondary School.

The graph in Figure 2 shows there is a large and significant difference of distributed leadership between Residential School (min = 4.20) and National Secondary School (min= 3.94).

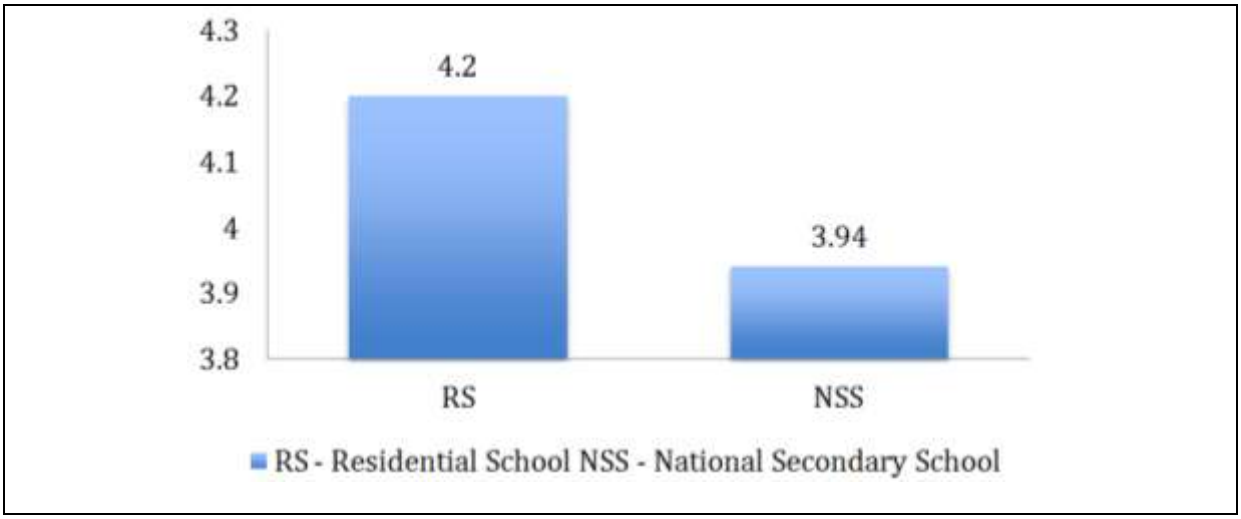

Figure 2: Distributed Leadership in Residential and National Secondary School

The researcher has also made a comparison on distributed leadership according to category of schools involved. The finding indicates that there is a large and significant difference in the influence of distributed leadership in Premier Residential School (min=4.43, SD=.49) compared to National Secondary School (min=3.94, SD=.65) with t(545)=9.78 p=.00<.005. The differences may occur due to the differences in the school culture as the residential school system is established to nurture outstanding student with to excel in academic and non academic as well as grooming them to be future leaders.

Objective 3: To analyse the relationship of distributed leadership and teachers' self-efficacy with a contextual factor as the mediator variable.

The modeling of direct effect result as in Schematic Diagram of Distributed Leadership on Teachers' Self Efficacy in Figure 3 and the analysis on Table 2, shows distributed leadership has a significant and direct effect on teachers' self-efficacy (β =.51). However, the direct effect of Distributed leadership on teachers' self-efficacy is significantly reduced to β =.28 which indicates the role of contextual factor as partial mediator (Figure 4 and Table 3).

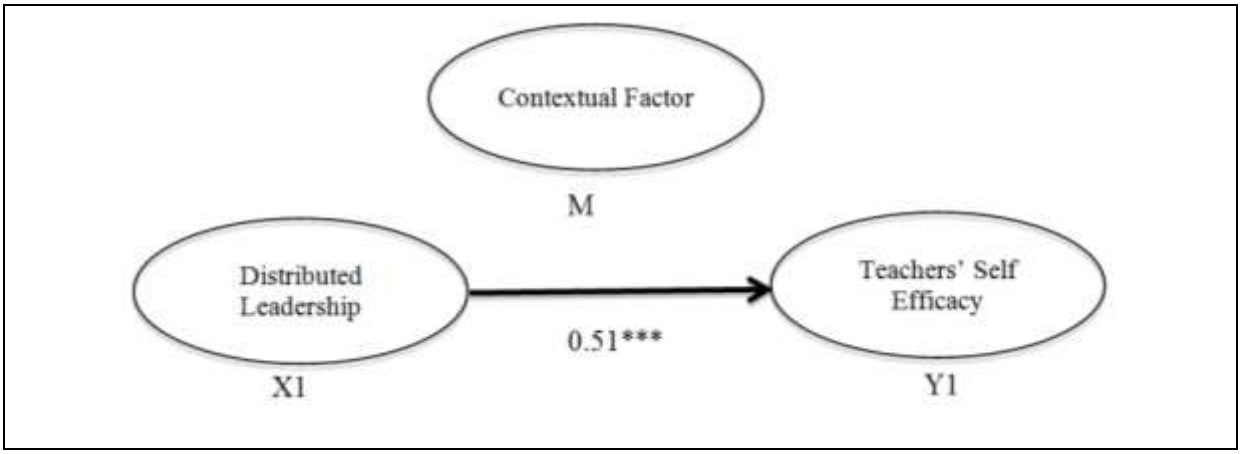

Figure 3: Schematic Diagram of Distributed Leadership on Teachers' Self Efficacy in

Table 2: The Analysis of the Direct Effect of Distributed Leadership on Teachers' Self Efficacy

Path			*Std Estimate* (β)	S.E	C.R	P value
Teachers' Self-Efficacy	< ---	Distributed Leadership	.51	.03	8.86	***

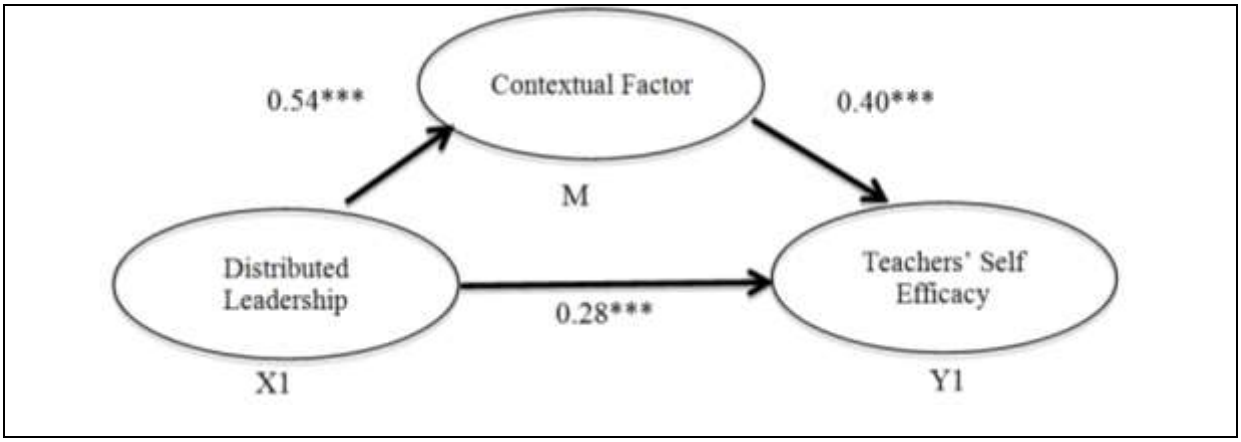

Figure 4: Modelling the mediator for latent construct (Contextual Factor) in AMOS Graphic

Table 3: The Regression Weights and its Significant Value

Path			*Std Estimate* (β)	S.E	C.R	P value
Teachers' Self-Efficacy	< ---	Distributed Leadership	.28	.03	8.86	***
Contextual Factor	< --	Distributed Leadership	.54	.03	13.75	***
Teachers' Self-Efficacy	< ---	Contextual Factor	.40	.04	9.07	***

Note: *** p<.001

Objective 4: To analyse the contribution of distributed leadership and contextual factor to teachers' self-efficacy in Malaysia and to determine the variables that contribute to the variance in teachers' self-efficacy.

The research model confirmed through the Structural Equation Modeling (SEM) and Analysis of Moments Structures (AMOS), shows that the direct effect of Distributed Leadership on Teachers' Self-Efficacy is significant β=.28. The indirect effect of both Distributed Leadership to Contextual Factors and Contextual Factor to Teachers' Self-Efficacy is .219 (.54 x .40). The total effect size of distributed leadership and contextual Factor on Teachers' Self-Efficacy is .36. Hence, the findings explained that distributed leadership as the exogenous variable and contextual factor as mediator explained 36 percent of the variance of Teachers' Self –Efficacy which is the endogenous variable. Between the two factors, the contribution of the contextual factor is significantly unique in the distributed leadership model. The research shows the contribution of the contextual factor is β=.54 while distributed leadership contributes β =.4.

Table 4: The SEM Path Analysis and Findings

Path			Standardized Beta Estimate (β)
Teachers' Self-Efficacy	< ---	Distributed Leadership	.28
Contextual Factor	< ---	Distributed Leadership	.54
Teachers Self-Efficacy	< ---	Contextual Factor	.40
Endogenous Variable			Estimate (R^2)
Teachers' Self-Efficacy			.36

Discussion

The overall descriptive analysis of the study shows that 83% respondents agree that distributed leadership is being practiced in their school. This finding is consistent with the findings of Jamalulail et al. (2013) and Rabindarang et al. (2014). It is reasonable to conclude that teachers in Malaysia have a positive view on the distributed leadership strategy as an enabling factor to pool expertise among middle-level managers and teachers, either as individuals or teams. This strategy is realized through various distributed leadership approaches, namely: shared mission and vision, shared responsibility, shared decision making and distributed leadership practices, such as spontaneous collaboration, intuitive working relation, institutionalised practices, coordinated distribution and progressive distribution. The study found that shared responsibility is the most visible distributed leadership approach in Malaysian school (min=4.28). Teachers are able to relate with school leaders who

encourage their leadership teams and teachers to work collaboratively and to commit themselves towards student achievement.

This study also found that intuitive working relation is a prominent distributed leadership practice in school (min=4.37). This finding indicates that teachers are able to maximize their time to work collaboratively to improve the teaching and learning environment in school. Teachers are encouraged to discuss during school hours without waiting for instructions from the principal. This finding is consistent with the analysis by Gronn (2002) that explained intuitive working relation occurs when two or more people work or interact in teams over a long period.

Teachers' self-efficacy is relatively high in Residential School (min=4.35) and in National Secondary School (min=3.94). Finally the SEM analysis of the research model shows the coefficient of determination value or R^2 is .36 indicating that distributed leadership variable and contextual factor explained 36 percent of the variance of teachers' self-efficacy. The contextual factors consist of five element namely past experience, vicarious experience, verbal persuasion, group-level emotional arousal and school structure. The remaining 64 percent may occur due to other influences that are not within the range of this study.

Conclusion

The findings of the research provided several theoretical implications and recommendations particularly concerning on the role and effect of distributed leadership on teachers' self-efficacy in Malaysian secondary school. It is suggested here that there should be a culture of shared responsibility among school leaders and teachers with flexibility in shared decision-making role between the principals and middle-level managers. There should also be flexibility in working relationship among teachers and that schools should promote spontaneous collaboration among teachers. Finally, the concept of distributed leadership in Malaysia is still in its early stage of acceptability and that further research is needed to explore its role in the schoolwork culture.

References

Abdul Ghaffar, M. (2010). Excellence through outstanding leadership, Paper presented at the 17th National Seminar on Management and Leadership in Education, Aminuddin Baki Institute.

Amin, S., Rosnarizah Abdul Halim & Rohaya Hassan. (2007). The aspiring head teacher performance in leadership and management assessment. Paper presented at the 14th National Seminar on Management and Leadership in Education, Aminuddin Baki Institute.

Bolden, R. (2011). Distributed Leadership in Organisations: A Review of Theory and Research. *International Journal of Management Reviews, 13*, 251 - 269. doi: 1.1111/j.1468-237.2011.00306.x

Chua, Y. P. (2009). *Statistik Penyelidikan Lanjutan (Buku 5)*. Shah Alam, Malaysia: McGraw-Hill (Malaysia) Sdn. Bhd.

Chua, Y. P. (2013). *Mastering research statistics*. Shah Alam: McGraw Hill Education.

Cohen, J, (1988). *Statistical Power Analysis for the Behavioral Sciences*, Hillsdale, NJ.: Lawrence Erlbaum Associates.

Danielson, C. (2007). Enhancing professional practice: A framework for teaching. ASCD.

Day, C., Sammons, P., Hopkins, D., Harris, A., Leithwood, K., Qing, G., Brown, E., Ahtaridou, E., & Kington, A. (2009). *The impact of school leadership on pupil outcomes: Final Report. Nottingham*: Department for Children, Schools and Families.

Elmore. (2000). *Building a new structure for school leadership*. Washington D. C. : The Albert Shanker Institute.

Elmore. (2002). Hard questions about practice. *Educational Leadership*, 59(8), 22-25.

Gronn, P. (2000). Distributed properties: A new architecture for leadership. *Educational Management and Administration 28*(3), 317 - 338.

Hair, J. F., Black, W.C. Rabin, B.J. & Anderson, R.E. (2010). *Multivariate Data Analisys* (7th Ed ed.). Englewood Cliffs, NJ: Prentice Hall.

Harris. (2002). Building the capacity for school improvement. Paper presented at the The American Research Association Conference, New Orleans.

Harris. (2004). Distributed leadership and school improvement: Leading or misleading *Educational Management Administration & Leadership*, 32(1), 11-24.

Harris. (2008). *Distributed School Leadership. Developing tomorrow's leader*. London: Routledge.

Harris. (2009). *Distributed leadership: what we know*. Dordrecht: Springer.

Harris, A. (2014). *Distributed Leadership Matters: Perspective, Practicalities, and Potential*. Thousand Oaks, CA: Corwin.

Hulpia, H., Devos, G., & Rosseel, Y. (2009). The relationship between the perception of distributed leadership in secondary school and teachers' and teacher leaders' job satisfaction and organizational commitment. *School Effectiveness and School Improvement, 20*(3), 291-317. doi: 1.1080/09243450902909840

Hussein, M. (1993). *The effectiveness of school leadership*, Kuala Lumpur: DBP.

Hussein, A. (2012). *Mission of public education in Malaysia: the challenge of transformation.* Kuala Lumpur: University of Malaya Press.

Jamalulail, A.W., Aida Hanim, A.H., Suriati, Z & Md Fuad, M.R. (2013). The relationship between headteacher's distributed leaership practices and teachers' motivation in national primary schools. *Asian Social Science Journal* (9,16). doi:1.5539/ass.v9n16p161

Leithwood, & Jantzi, D. (1999). Transformational school leadership effects: A reproduction. *School Effectiveness and School Improvement*, *10*(4), 451 - 479.

Leithwood, Day, C., Sammons, P., & Harris, A. (2006). *Successful school leadership: What it is and how it influences pupil learning*. Nottingham: DfES Publications.

Leithwood, Mascall, B., & Strauss, T. (2009). *Distributed leadership according to the evidence*. Abingdon: Routledge.

Mayrowetz, D. (2008). Making sense of distributed leader- ship: exploring the multiple usages of the concept in the field. *Educational Administration Quarterly, 44*, 424 - 435.

Malaysian Education Blueprint - MEB, (2013). Ministry of Education, Malaysia

Ofsted. (2000). *Improving City Schools*. London: Office for Standard in Education.

PricewaterhouseCoopers LLP. (2007). Independent study into school leadership. Nottingham: DfES Publications.

Ravindarang, S., Khuan, W. B. & Khoo, Y. Y. (2014). The influence of distributed leadership on job stress in technical and vocational education. *International Journal of Academic Research in Business and Social Sciences*, *4*(1), 490 -499.

Rosnarizah, A. H. & Zulkifli A. M. (2009). The prevalence of distributed leadership in selected secondary schools in Malaysia, Paper presented at the 16th National Seminar on Management and Leadership in Education, Aminuddin Baki Institute.

Sergiovanni. (2000). *The Lifeworld of Leadership: Creating culture, community, And personal meaning in our schools*. San Francisco, CA: Josey-Bass Publishers.

Sergiovanni. (2001). *Principalship*. Boston: Ally Bacon.

Spillane. (2006). *Distributed Leadership*. San Francisco: John Wiley & Sons.

Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*, 783-805.

Zaidatol, A., Teng, L. K., Foo, S. F., Zakaria, K., & Jegak, U. (2011). Transformational leadership principal's relationship with self-efficacy of teachers. Pembentangan kertas kerja.

Zainuddin, A. (2012). *Structural Equation Modeling Using AMOS Graphic*. Shah Alam: Universiti Teknologi MARA Press.