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DISTRIBUTED LEADERSHIP, CONTEXTUAL FACTOR AND TEACHERS' SELF-EFFICACY IN 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 Schools (NSS) in Malaysia. A total of 831 teachers from 17 schools participated in the study. The findings show a moderately high, positive correlation and significant relationship ($r = .50$) between distributed leadership with teachers' self-efficacy. The findings show that teachers' self-efficacy is slightly higher in Residential Schools (mean = 4.35) compared to National Secondary Schools (mean = 4.33) although this difference was not significant. A large and significant difference, however, is found in distributed leadership between Residential School (mean = 4.20) and National Secondary School (mean = 3.94). The Structural Equation Modelling analysis of the research model shows the coefficient of determination value or R^2 is 0.36. The statistic indicates that distributed leadership variable and contextual factors explained 36% of the variance in teacher self-efficacy. The remaining 64% may be attributed to other influences outside the scope of this study. The theoretical implications and recommendations for enhancing distributed leadership and teacher self-efficacy in Malaysian secondary schools are discussed.

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

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INTRODUCTION

Education is a dynamic discipline and it requires educators to keep abreast with its constant changes. Educators not only have to ensure student achievement but they also need to prepare students for the 21st century learning skills as required in most education reforms (Elmore, 2000; Malaysia 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 responsibility will be borne by the school leader (Danielson, 2007). This is reinforced by findings from many studies on educational leadership that indicate school leaders play an important role in school excellence (Harris, 2004; Hussein Ahmad, 2012; Hussein Mahmud, 1993; Leithwood & Jantzi, 1999; MEB, 2013; Ofsted, 2000; Sergiovanni, 2000) and that a school's success depends on its leadership (Abdul Ghaffar, 2010; Amin, Rosnarizah & Rohaya, 2007).

Reports and publications involving research on distributed leadership have been published since 2000 and have become more common lately. According to Bolden (2011), previous studies are mostly focused on the 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 their existing talent 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 & Md Fuad, 2013; Leithwood, Mascall, & Strauss, 2009; Mayrowetz, 2008; Rabindarang, Khuan, & 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 developing school leadership capabilities (Harris, 2002).

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



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An exploratory study by Rosnarizah and Zulkifli (2009) found that distributed leadership also prevailed in high schools in Malaysia. The findings show that 74 percent of teachers indicate that distributed leadership is being practiced in their school. The finding was supported by other researchers in different school types such as technical and vocational schools (Rabindarang 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).

PROBLEM STATEMENT

School leaders have an important role in motivating teachers to perform to their utmost potential, hence to increase their commitment in teaching and learning (Leithwood et al., 2006). According to Hulpia, Devos, and Rosseel (2009), teacher's commitment increases when there is collaboration among the leadership team members, strong support by the school head and informal distributed leadership practices. A study by Day et al. (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' behavior and their learning outcomes. 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) also found that teacher efficacy is positively related with teacher behavior and student learning outcome.

Given this premise, this study sought to investigate 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 no studies have been conducted to examine this organizational strategy in these two major school types in Malaysia.

OBJECTIVES AND SIGNIFICANCE OF THE STUDY

The objectives of the study are:

- a. To analyze the relationship between distributed leadership with teachers' self-efficacy.
- b. To recognize the differences of distributed leadership based on teachers' perception in Residential and National Secondary Schools.
- c. To analyze the relationship of distributed leadership and teachers' self-efficacy with contextual factor as the mediator variable.
- d. To analyze the contribution of distributed leadership and contextual factor to teachers' self-efficacy in Malaysia and to determine the variables contributing to the variance in teachers' self-efficacy.



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The study is in alignment with the Malaysia Education Blueprint (2013) or MEB, whereby in the second wave of the MEB, beginning in 2016 through 2020, the Ministry of Education will implement 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.

METHODOLOGY

Research Design and Instrumentation

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

The reliability indices of Cronbach's alpha are high with the statistic ranging from .90 to .98 for each of the dimensions studied. The data were analyzed using the Statistical Packages for the Social Sciences (SPSS) version 20.0 and Structural Equation Modelling (SEM) using AMOS 21.0 software. Descriptive analysis was used to analyze frequency and percentage distribution of participants while SEM was conducted to examine the 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 the exogenous variable and teachers' self-efficacy as the endogenous variable while the contextual factor is the mediating variable.

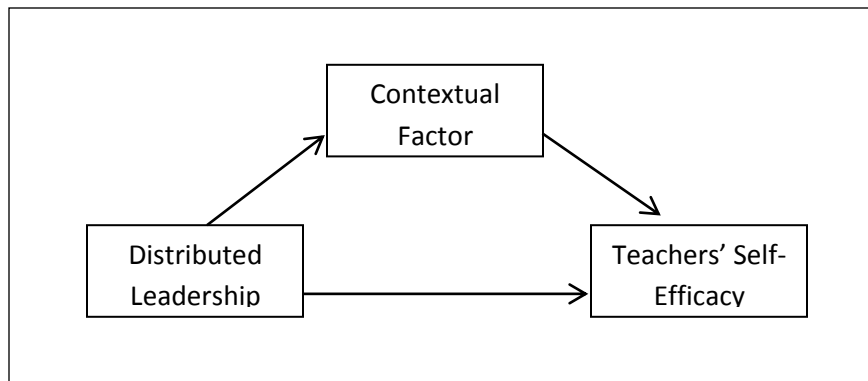


Figure 1: The Structural Equation Model of the Study



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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 teacher selection is based on purposive sampling. According to Hair, Black, Babin, and Anderson (2010), the minimum sample required for five or less latent variables with each variable consisting of more than three items is 100. Therefore the sample size for the study is more than adequate for performing SEM analysis.

FINDINGS

Respondent Profile

Some 235 (28.3%) male respondents and 596 (71.7%) female respondents participated in the study. The summary result of the study showing frequencies and percentage of gender and academic achievement is shown in Table 1 while the type of schools is shown in Table 2.

Table 1

Respondent Demography based on Gender and Academic Achievement

Demography	Respondent	Frequency	Percentage
Gender	Male	235	28.3
	Female	596	71.7
Academic	SPM	11	1.3
	STPM	2	0.2
	Diploma	12	1.4
	Bachelor	721	86.8
	Master	66	7.9
	PhD	1	0.1
	No Information	18	2.2



Table 2
Respondent Demography Based on School Type

		Frequency	Percentage
School Type (n = 831)	Premier Residential School	241	29.0
	Science Residential School	109	13.1
	Federal Islamic Residential School	88	10.6
	Integration Residential School	87	10.5
	National Secondary School	306	36.8

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

The result for the first objective of the study (Table 3) 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 3
Correlation Analysis Based on Measurement Model

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

*** $p < .001$

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

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

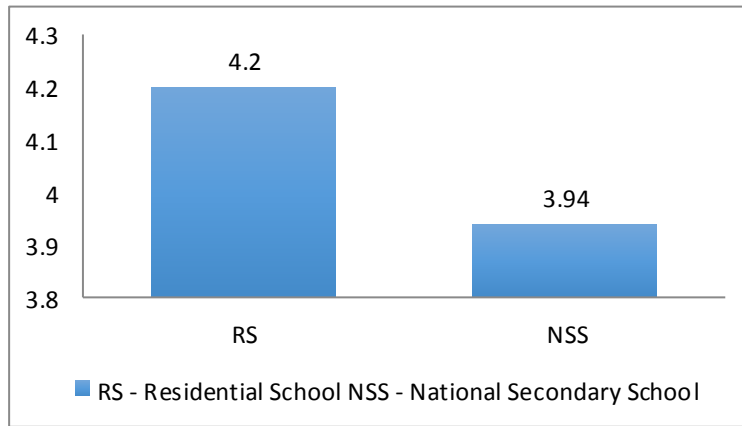


Figure 2: Distributed Leadership in Residential and National Secondary Schools

The researcher has also made a comparison on distributed leadership according to school category. The findings indicate that there is a large and significant difference in the influence of distributed leadership in Premier Residential School (mean = 4.43, *SD* = 0.49) compared to National Secondary School (mean = 3.94, *SD* = 0.65) 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 students to excel in academic and non-academic as well as grooming them to be future leaders.

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

The result shows a positive, direct and significant relationship between distributed leadership with teachers' self-efficacy ($\beta = 0.51$). However, the direct correlation is significantly reduced to $\beta = 0.28$ which indicates the role of contextual factor as partial mediator.

Table 4

The Regression Weights and Their Significant Values

Path			<i>Std Estimate</i> (β)	S.E	C.R	<i>p</i> value
Teachers' Self-Efficacy	< ---	Distributed Leadership	0.28	0.03	8.86	***
Contextual Factor	< ---	Distributed Leadership	0.54	0.03	13.75	***
Teachers' Self-Efficacy	< ---	Contextual Factor	0.40	0.04	9.07	***

*** $p < .001$



Objective 4: To analyze 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 was confirmed through the Structural Equation Modelling (SEM) and Analysis of Moment Structures (AMOS), showing that both the 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 $\beta = 0.54$ while distributed leadership contributes $\beta = 0.40$.

Table 5

The SEM Path Analysis and Findings

Path			Standardized Beta Estimate (β)
Teachers' Self-Efficacy	< ---	Distributed Leadership	0.28
Contextual Factor	< ---	Distributed Leadership	0.54
Teachers Self-Efficacy	< ---	Contextual Factor	0.40
Endogenous Variable			Estimate (R^2)
Teachers' Self-Efficacy			0.36

DISCUSSION

The overall descriptive analysis of the study shows that 83% of respondents agree that distributed leadership is being implemented 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, institutionalized practices, coordinated distribution and progressive distribution. The study found that shared responsibility is the most visible distributed leadership approach in Malaysian schools (mean = 4.28).



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Teachers are able to relate with school leaders who encourage their leadership teams and teachers to work collaboratively and to commit themselves to student achievement.

This study also found that intuitive working relation is a prominent distributed leadership practice in school (mean = 4.37). This finding indicates that teachers are able to maximize their time to work collaboratively to improve the teaching and learning environment in schools. Teachers are encouraged to discuss during school hours without waiting for instructions from the principal. This finding is consistent with the analysis by Gronn (2000) that explained how intuitive working relation occurs when two or more people interact in teams over a long period.

Teachers' self-efficacy is relatively high in Residential Schools (mean = 4.35) and in National Secondary Schools (mean = 4.33). This finding shows that there are no significant differences in teachers' self-efficacy with regard to the school type. 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 in teachers' self-efficacy. The remaining 64 percent may be attributed to other influences outside the scope of this study.

CONCLUSION

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

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