MEDIATING EFFECT OF TEACHERS' JOB SATISFACTION ON PRINCIPALS' DISTRIBUTED LEADERSHIP AND TEACHERS' ORGANIZATIONAL COMMITMENT AT

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THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF
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ABSTRACT

The concept of distributed leadership has gained more interest in the educational sector and promoted positive development of school leadership in international schools. Thus, this study investigated the role of principals' distributed leadership in international schools in Kuala Lumpur, Malaysia in enhancing teachers' organizational commitment through the mediation of teachers' job satisfaction. Based on a descriptive and quantitative research design, this study has employed survey method with the distribution of questionnaire from three adapted measurement scales: The Distributed Leadership Inventory, the Teacher Job Satisfaction Scale and the Organizational Commitment Questionnaire. Rasch measurement was used to ensure that the scales had acceptable measures of reliability and validity. Cronbach's alpha values exceeded 0.70, person reliability and item reliability were above 0.80, item separation and person separation exceeded 2.0 for each of the scales. Using stratified random sampling, 200 respondents among teachers were selected from ten international schools. The structural equation modeling based on a partial least square was utilized in this study to examine the direct and indirect relationships among the variables. Data were statistically analyzed using IBM SPSS Ver. 23.0 and SmartPLS Ver. 3.2.8. Findings showed that the principals' distributed leadership has a positive and significant relationships with teachers' job satisfaction and teachers' organizational commitment. The teachers' job satisfaction and teachers' organizational commitment relationship was also positive and significant. The dimensions of principals' distributed leadership, namely: leadership function quality and distribution, cooperation within the leadership team and teacher decision-making participation were positively and significantly related to teachers' organizational commitment but not the dimension of supervision quality and distribution. It was

found that teachers' job satisfaction plays the role of a mediator in the relationships of principals' distributed leadership and teachers' organizational commitment. Findings showed that the relationships of two dimensions of distributed leadership (cooperation within the leadership team and teacher decision-making participation) with teachers' organizational commitment were mediated but for another two dimensions (leadership function quality and distribution and supervision quality and distribution) were not mediated by teachers' job satisfaction. Overall, the predictive accuracy and relevancy of the research model could explain the principals' distributed leadership's effect on job satisfaction of the teachers ($R^2 = 0.417$, $Q^2 = 0.234$, $f^2 = 0.694$) and on teachers' organizational commitment ($R^2 = 0.786$, $Q^2 = 0.481$; $f^2 = 1.583$). These findings contributed significantly mainly to provide evidence empirically on the importance of principals' distributed leadership to improve teachers' satisfaction and commitment. This study provides a good foundation to conduct more studies on principals' distributed leadership and its outcome in terms of job satisfaction and organizational commitment of the teachers with a broader population coverage. The findings call for an enriching of the research model with the inclusion of other educational outcomes such as student and school performance. Conclusively, this study advocates the effective and efficient practices of principals' distributed leadership to ensure high job satisfaction and organizational commitment level among teachers so as to ensure high quality education services in international schools in Malaysia.

KESAN PENGANTARA KEPUASAN KERJA GURU TERHADAP KEPIMPINAN DISTRIBUTIF PENGETUA DAN KOMITMEN ORGANISASI GURU DI SEKOLAH ANTARABANGSA DI KUALA LUMPUR

ABSTRAK

Konsep kepimpinan distributif telah menarik lebih banyak minat dalam sektor pendidikan dan mendorong perkembangan positif kepimpinan sekolah di sekolah antarabangsa. Justeru itu, kajian ini menyelidik tentang peranan kepimpinan distributif pengetua di sekolah antarabangsa di Kuala Lumpur dalam meningkatkan komitmen keorganisasian guru melalui pengantaraan oleh kepuasan bekerja guru. Berdasarkan reka bentuk kajian deskriptif dan kuantitatif, kajian ini telah menggunakan kaedah tinjauan dengan edaran soal selidik yang mengandungi tiga skala pengukuran yang diubahsuai: Inventory Kepimpinan Distributif, Skala Kepuasan Bekerja Guru dan Soal Selidik Komitmen Keorganisasian. Pengukuran Rasch telah digunakan untuk memastikan skala mempunyai ukuran kebolehpercayaan dan kesahan yang diterima. Nilai Alfa Cronbach melebihi 0.70, kebolehpercayaan orang dan kebolehpercayaan item lebih dari 0.80, pengasingan item dan pengasingan orang melebihi 2.0 untuk setiap skala telah diperolehi. Persampelan rawak berstrata telah digunakan di mana 200 orang responden dalam kalangan guru telah dipilih dari sepuluh buah sekolah antarabangsa. Pemodelan persamaan struktural berasaskan partial least square telah digunakan dalam kajian ini untuk mengkaji hubungan langsung dan tidak langsung antara pembolehubah. Data dianalisa secara statistik menggunakan IBM SPSS Ver. 23.0 dan SmartPlS Ver. 3.2.8. Dapatan menunjukkan bahawa kepimpinan distributif pengetua mempunyai hubungan positif dan signifikan dengan kepuasan bekerja dan komitmen keorganisasian guru. Hubungan kepuasan bekerja guru dan komitmen keorganisasian guru juga didapati positif dan signifikan. Dimensi kepimpinan distributif pengetua iaitu kualiti dan pengagihan fungsi kepimpinan, koperasi dalam

pasukan kepimpinan dan penglibatan guru dalam membuat keputusan berhubung dengan komitmen keorganisasian guru secara positif dan signifikan tetapi tidak sedemikian untuk dimensi kualiti dan pengagihan penyeliaan. Kajian juga mendapati bahawa kepuasan bekerja guru memainkan peranan sebagai pengantara dalam hubungan antara kepimpinan distributif pengetua dan komitmen keorgansiasian guru. Kajian juga menunjukkan hubungan dua dimensi kepimpinan distributif pengetua (koperasi dalam pasukan kepimpinan dan penglibatan guru dalam membuat keputusan) dengan komitmen keorganisasian dipengantarakan tetapi dua dimensi lain (kualiti dan pengagihan fungsi kepimpinan dan kualiti dan pengagihan penyeliaan) tidak dipengantarakan oleh kepuasan bekerja guru. Secara keseluruhan, ketepatan dan kerelevanan peramalan model kajian dapat menerangkan kesan kepimpinan distributif pengetua terhadap kepuasan bekerja guru ($R^2 = 0.417$, $Q^2 = 0.234$, $f^2 = 0.694$) dan terhadap komitmen keorganisasian guru ($R^2 = 0.786$, $Q^2 = 0.481$; $f^2 = 1.583$). Dapatan kajian ini menyumbang secara signifikan khususnya untuk memberi bukti empirikal tentang kepentingan kepimpinan distributif pengetua untuk meningkatkan kepuasan bekerja dan komitmen guru. Kajian ini menyediakan asas yang baik untuk melaksana lebih banyak kajian tentang kepimpinan distributif pengetua dan kesannya dari segi kepuasan bekerja dan komitmen keorganisasi guru dengan liputan populasi yang lebih besar. Dapatan kajian mendorong kepada pengkayaan model kajian dengan penambahan hasil pendidikan yang lain seperti pencapaian pelajar dan sekolah. Kesimpulannya, kajian ini mengesyorkan amalan kepimpinan distributif pengetua yang efektif dan efisien untuk memastikan tahap kepuasan bekerja dan komitmen keorganisasi dalam kalangan guru yang tinggi supaya dapat memastikan perkhidmatan pendidikan berkualiti tinggi di sekolah antarabangsa di Malaysia.

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LIST OF SYMBOLS

AVE	:	Average Variance Extracted
CMB	:	Common Method Bias
CO_LT	:	Cooperation in the Leadership Team
DLI	:	Distributed Leadership Inventory
d_G	:	Geodesic Discrepancy
d_ULS	:	Unweighted Least Square
ETP	:	Economic Transformation Programme
GCSE	:	General Certificate of Secondary Education
HTMT	:	Hetero-Trait-Mono-Trait
IB PYP	:	International Baccalaureate Primary Year Programme
IB MYP	:	International Baccalaureate Middle Year Programme
IGCSE	:	International General Certificate of Secondary Education
MEB	:	Malaysia Education Blueprint
MOE	:	Ministry of Education
NFI	:	Normal Fit Index
PCA	:	Principal Component Analysis
PLS-SEM	:	Partial Least Square – Structural Equation Modeling
PDL	:	Principals' Distributed Leadership

QD_LF	:	Leadership Function Quality and Distribution
QD_SP	:	Supervision Quality and Distribution
SPSS	:	Statistical Package for Social Science
SRMR	:	Standardized Root Mean Square Residual
TJS	:	Teachers' Job Satisfaction
TJSS	:	Teacher Job Satisfaction Scale
TOC	:	Teachers' Organizational Commitment
TP_DM	:	Teacher Participation in Decision-Making
Ver.	:	Version
VIF	:	Variance Inflated Factor

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CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter provides a background of the study whereby the education landscape in the 21st century and in the Malaysian context are highlighted to drive the emphasis on quality education as a means of sustainable growth and development. Additionally, the importance of school leadership is also presented particularly the changing paradigm from solo leadership to distributed leadership. In addition to that, the focus on international school and its growing importance as an education delivery system globally and in Malaysia is also presented to provide a strong justification to explore the school leadership in international schools in Malaysia.

Further to that, this chapter presents the aims and scope of this study by presenting the research objectives, research questions and research hypotheses. The significance of this study is also discussed and followed by the identification of limitations in carrying out this study. Lastly, this chapter is ended with a definition of the terms used in this study and a summary of the overall chapter.

1.2 Background of the Study

Education serves as a strategy in the knowledge-based economy of the 21st century has become a buzz phrase in many education policies of countries worldwide (Sreenivasulu, 2013). Countries around the world are seeking strategies to ensure that their education system is capable of improving their competitiveness in a growing dynamic global economy. Malaysia as a developing country also emphasized on making education as a strategic tool for national development. As a country which has

evolved from a production-based economy to one that rely on knowledge, it becomes crucial that Malaysia employ a strategic tool to stay relevant and remain competitive in the global marketplace (Grapragasem, Krishnan and Mansor, 2014).

1.2.1 Education Development in Malaysia

The education reform and development in Malaysia is guided by the Malaysian Education Blueprint 2013-2025 with an explicit focus on improving student performance to be at par or exceeding international standards (Ministry of Education, 2012). The formulation of strategies and plans under this Blueprint is based on the National Education philosophy which aims to produce individuals who are balanced in terms of intellectual, spiritual, emotional, physical and social in an integrated manner and holistic so that these individuals can make their contribution to building a harmonious and better life for their family, society and the nation at large (Ministry of Education, 2008).

The Malaysia Education Blueprint 2013-2025 (Ministry of Education, 2012) provides explicit strategies that will be implemented nationwide with the intention of developing a high standard and quality education system in the country. Imbedded in this blueprint are the strategies in education as Malaysia had envisioned an ambitious goal to enhance student performance and gained a prestigious performance in assessment internationally such as the Programme for International Student Assessment (PISA). According to the statement in the Malaysia Education Blueprint (2013-2025):

> "All children will have the opportunity to attain an excellent education that is uniquely Malaysian and comparable to the best international systems. The aspiration is for Malaysia to be in the top third of countries in terms of performance in international assessments, as measured by outcomes in […] PISA, within 15 years. "(Ministry of Education, 2012: E-14)

Therefore, this statement implies the aim of the Malaysian Education Blueprint 2013-2025 is to ensure a high-quality education system that is capable of producing Malaysians who are at par with the global standards in terms of educational measurement like PISA. In order to achieve such an aim, the Malaysian Education Blueprint has also acknowledged the important contribution of international school in the provision of quality education to the scoeity in this country.

1.2.2   The Growing Importance of International School in Malaysia

International schools are defined by the Ministry of Education as private schools offering education at preschool and primary as well as secondary level based on an international curriculum with English as its medium of instruction (Ingersoll, 2010; Malaysia Education, 2019). These schools cater mainly for the needs of the international community such as children of employees in international organizations, foreign businesses, foreign embassies and mission but in recent years, it has also been a popular choice of primary and secondary education for the local students (Howling, 2017). It is differentiated from the private schools which offer educational program for preschool, primary and secondary education using the Malaysian curriculum. It is also distinguished from public schools which are government-funded offering preschool, primary and secondary education based on the Malaysian curriculum.

Hayden and Thompson (2008) explained in their book entitled "International Schools: Growth and Influence" that the history of international school movement is not something new. The enrolment of local nationals into international schools in Malaysian has been increasing over the past decades (Nasa and Pilay, 2017). Previously, most of the students attending international schools are not local Malaysians. The quota system regulated the enrolment of local students into these

schools. Malaysian international schools were legally bound to abide a 40 percent limit on local students (Javadi, Bush and Ng, 2017). This means that 69 percent of the students attending international schools then, are foreign students whose parents are working in Malaysia. However, since the invocation of the quota system, the growth of international schools has been quite significant (Nasa, Pilay and Vijain-Dren, 2014) with more enrolment of local students. According to Bailey (2015), international schools in Malaysian may have up to 70 percent local students comprising mainly Chinese, Malay and Indian Malaysians. Nasa and Pilay (2017) reported in the local newspaper, the New Strait Times that there has been an increase of international schools from 66 in 2010 to 126 in 2017. The total number of students in 2017 was 61,156, with 39,161 Malaysians and 21,995 foreign students. This means that most international schools now are catering for Malaysian students rather than foreign students.

The relaxing of the initial 40 percent cap on local students' enrolment in these international schools were due to several reasons. The main reason was due to the initiative taken by the government of Malaysia under the Economic Transformation Programme (ETP) to drive Malaysia as a high-income nation with global competitiveness (Nasa and Pillay, 2017). In addition to that, Nasa and Pillay (2017) quoted a statement by Ahmad Sabirin Abd Ghani, then the Education Ministry's Private Education Unit Director that the rising enrolment by local students is "due to the dynamics of the education world". He stated that parents are sending their students to international schools not only because of a sign of prestige for those with economic means but also as an early exposure for the children to the international environment before they pursue their tertiary education abroad.

Further to that, Disney (2013) added that there are many reasons to support the increase of enrolment of local students in international schools. In a focus group interview with middle to high-income group of Malaysian parents in national school, the Malaysia Ministry of Education (2013) voiced out concern from these parents about the learning process that their children go through, in particular the employment of the national language, *Bahasa Malaysia* as the language of instruction to teach mathematics and science in public schools. These parents felt that the use of English as the medium of instruction would propel the education quality of their students better, and therefore, pushed more enrolment in private and international schools which use English as the medium of instruction.

According to Wickins (2013), a meta-analysis of literature showed five main features of international schools. Firstly, these schools are committed to international mindedness as shown in their acceptance and tolerance values. Secondly, the international schools are based on an international curriculum and thirdly, they are independent of the national systems. Thus, international schools are relatively free to develop at their own accord. Fourthly, the community of the school has cultural diversity in both the students and the teaching staff. Lastly, there is a high expectation from international schools for academic performance and guaranteed access to elite universities worldwide. These features serve to attract more students to enrol international school as an alternative to either public or private schools in Malaysia.

The development and growth of international schools in Malaysia merit a more critical outlook into the administrative and management strategies of these schools, particularly in ensuring high performance of its students. The international school market is experiencing an exponential growth and is expected to continue in the next decade with more than three million children attending this school now (Tan, 2012).

Initially, international school caters for the expatriate workers' children who followed their mobile geographical careers but currently, international schools worldwide are also popular among local students as well (Tan, 2015; Bailey, 2015). As more Malaysians and foreign students are becoming more attracted to enroll in international schools in Malaysia, it is imperative to know the leadership of the school and how it impacts on teachers and students in these schools. Therefore, this study is interested to know more regarding the school leadership practices in international schools.

1.2.3 The Emphasis on School Leadership

There were eleven shifts identified as the strategies for improving the current standard of Malaysia's education system in the Malaysian Education Blueprint 2013-2025. Shift Five addresses the need to develop high-performing leaders in Malaysian schools. In the blueprint, it was explained that school leaders' quality is considered as the second largest school-based factor besides teacher quality that determines student outcomes. Therefore, Shift Five is focused on ensuring that every school will have high performing principal. Under Shift Five, three significant leadership policy changes were identified. Firstly, it is made compulsory for new principals to complete the National Professional Qualification for Educational Leaders (NPQEL) as a means of professionalizing school leadership. Secondly, the new principals will be receiving induction and support from experienced principal who are designated as School Improvement Partner (SIP). Thirdly, principals who are not performing at the required standard may have to be reassigned to a teaching position in a different school (Ministry of Education, 2012: E27-28). According to the Blueprint, it has overtly stated that "the aspiration is to create a peer-led culture of professional excellence wherein school leaders will mentor and train one another, develop and disseminate

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best practices and hold their peers accountable for meeting professional standards" (Ministry of Education, 2012: E28). This implies that there is a paradigm shift in terms of school leadership at the primary and secondary education level.

Aside from that, this leadership will be strengthened by other school leaders such as the assistant principals, department heads and subject heads in the school. It is no longer solely assigned to the principal as the school leader, but a more participative leadership practice is implied. This is to ensure that high potential individuals are readily identified in the succession planning process to create a pool of leaders to lead the schools (Ministry of Education, 2012). School leadership is therefore important to ensure improvement of the schools (Harris, Jones, Cheah, Devadason and Adams, 2017). It creates a succession of leaders for the future and at the same time, provides assurance that those key people at school are empowered to lead to school in a performance-oriented manner.

The importance of leadership in the school setting has been made prominent and emphasized in literature (Harris and Jones, 2015; Harris, Jones, Adams and Cheah, 2018; Walker, 2015). Bush (2010) highlighted that the knowledge and skills for students in the 21st century has become more complex. The 21st century skills are quite different from the previous century and there is a need for the students to be able to acquire the knowledge and skills and use them to be innovative and creative in various fields of study. In addition to that, schools are also facing greater challenges due to globalization and technological and demographic changes (Barber, Whelan and Clark, 2010). Globalization has led to a borderless society where national boundaries are blurred while technological changes have rendered learning as both physically and virtually available. The demographic changes in most countries like Malaysia are seeing greater complexity in terms of cultural and values blending. Therefore, leaders

in the school setting need to be competent to manage the ever-increasing and changing landscape (Howling, 2017).

In fact, educational leadership and its relationship with change are also widely covered in literature (DuFour and Mattos, 2013; Fullan, 2011; Wells and Feun, 2013; Jones et al., 2015). The capability of school leaders to adapt to the dynamic environment in education was encapsulated even in the late 980s as evident in Beare, Caldwell and Millikan's (1989: p. 99) comment which stated that:

> "Outstanding leadership has invariably emerged as a key characteristic of outstanding schools. There can no longer be any doubt that those seeking quality in education must ensure its presence and that the development of potential leaders must be given high priority."

This statement implies that outstanding schools marked by high performance level is the outcome of having strong leadership in these schools. It leads to the critical need of developing and ensuring a sustainable line of leaders in the school to maintain and sustain its performance. Literature summarizes four main practices for successful school leadership which are: (a) development of vision and values and determining the direction; (b) understanding and developing the people; (c) ensuring development of the organization; and (d) teaching and learning programs' management (Barber, Whelan and Clark, 2010; Howling, 2017; Leithwood and Day, 2007; Leithwood and Riehl, 2003).

Howling (2017) stated that developing and formulating the vision values and determining the direction is the most impactful school leadership practice on student learning as it provides the foundation of future growth and development through the coordination of teachers' work. Purposes and directions which are clear, understood, supported and shared widely, and used on decision making at each level of development can ensure school success and improvement (Day et al., 2010). The

development of collaborative relationship between the principal and teachers and among the teachers also improve teaching and learning (Harris, Caldwell and Longmuir, 2013). Thus, it is imperative that positive relationships among principal and teachers in the school is nurtured and developed to make the employees involved and felt that they are valued (Day et al., 2010). Through a culture based on trust and solid professional relationships with the teacher, the principal who adheres to learning-centered leadership can develop the teachers' capabilities (Dimmock, 2012). Successful leaders are those who provide rich professional development and collaborative opportunities to the teachers (Day et al., 2010; Howling, 2017).

1.2.4   Changing Paradigm in School Leadership

School leadership in the past few decades have entertained the idea of transactional leadership, transformational leadership and instructional leadership. in general, these leadership models have been concerned with the principal as the most important leader in the school. Efforts were taken to sharpen and equip principals with a high level of leadership quality so that they can lead the school towards the attainment of the established goals. As the importance of leadership in school has been constantly established, on another perspective, there has been a paradigm shift of leadership itself deviates from the "singular leadership style" to one that is "distributed" or "collaborative" in nature (Morrison, 2013). The argument holds that an "individual" leader may have the capability to initiate change but will not be able to sustain it as it requires the "collective" effort of others. The dependence on a single leader might be too taxing as the principal has a broad job scope and responsibilities. Therefore, he or she might be capable of initiating change but on his or her own, unable to sustain these changes. Therefore, a more participative kind of leadership is required

to ensure that change is holistic, systemic and dynamic (Hallinger and Heck, 2010; Mendels and Mitgang, 2013).

Contemporary views on leadership espouses the adoption of a more interconnected model of engagement and decision making (Morrison, 2013). Distributed leadership is defined as a form of leadership that involved all the different kinds of collaboration among the principals, teachers and other members of the school improvement team in leading the school towards performance and sustainable development (Heck and Hallinger, 2009). In fact, distributed leadership was included as a preferred school leadership in the Malaysia Education Blueprint 2013-2025 as it is considered as an international best practice (Bush and Ng, 2019). Literature provides ample support to the use of a multi-frame actions among school leaders in the national school system (Abdul Shukor, 2007; Asyikin and Suhaida, 2013; Fullan, 2011; Izani, 2014; Harris, 2013; Yaakob et al., 2015). Through shared and distributed practices of leadership, this promotes the active participation of teachers to implement changes in the classroom (Fullan, 2006; Heck and Hallinger, 2009; Firas, Jinan and Paiman, 2011). Goleman (2002) stated that distributed leadership promotes the practice of being a leader by every person at entry level. Bennett, Harvey, Wise, and Woods (2003) added that distributed leadership is not about something 'done' by a person to 'others', but it shows emergent property of a network of individuals who pool their expertise together to achieve mutual goals. However, as with other leadership theories, distributed leadership is also a concept derived from a Western context where the concept of autonomy in education is more widespread. In Malaysia, despite efforts on school-based management in the past decades, the education systems in Malaysia are still highly centralized in nature (Walker and Hallinger, 2015). As a bureaucratic institution, schools may embrace a culture of hierarchical management structure which

present some challenges in defining the boundaries of roles and responsibilities of the principal, assistant principals, teacher leaders and other teachers (William, 2011). A hierarchical structure is also too familiar with the unwritten code that shapes the interaction between peers, superiors and subordinates and distinguishing the leader from the followers (Teh, 2011). Further to that, the attitude of the those higher in the leadership ladder to share their power and the readiness of the other teachers to assume leadership and administrative tasks are also challenges of implementing distributed leadership successfully in schools (Rhodes and Brundrett, 2012; Lokman et al., 2016). Its suitability of practice and acceptance in Malaysia may be somewhat influenced by cultural differences. Hence, this study is focused on understanding more on the practice of principal's distributed leadership in schools, particularly where leadership is strongly regarded as a key to ensuring success and high performance. The international school setting was chosen because it may have a greater influence of western culture which is more opened to the concept of distributed leadership, but at the same time, immersion with local culture might provide a different scenario of how distributed leadership practices are implemented in the school.

Further to that, leadership has been known to play a vital role in determining the effectiveness of the organization and therefore, regarded as a critical concept in the educational setting. Furthermore, the presence of ineffective schools or low performing schools imply that there is a need to review school leadership practices (Nieman and Kotze, 2006). Moreover, school leadership has gained even more prominence over the past few decades due to the rapid transformation in the education system and the growth of school-based management in numerous countries (Muijs, 2011) and the adoption of professional learning communities (Howling, 2017).

Leaders in the school setting were identified as the key person to lead and ensure that the school produces high performance and excellence outcomes.

Hence, the principal as the main school leader became the focus of attention and hailed as the "heroic" leader. Nevertheless, recently, there has been a challenge to this notion that the responsibility to run an organizational successfully lies in the hand of a single leader (Oduro, 2004; Ross, Rix and Gold, 2005; Bailey, 2013). It is believed that a single leader would not be able to sustain the leadership responsibilities for a certain period. Further to that, effectiveness in teaching and learning cannot be handled by subject teachers and head teachers only (Spillane, 2006; Harris, 2008). These teachers need the inclusion and participation from the principal and assistant principals to assist them in classroom managememt issues. This encounter was more apparent in a school context such as international school where there is greater demand for quality education, high expectations from parents, requirements from government policies, and turnover of principals (Howling, 2017).

The importance of leadership is an undeniable fact (Leithwood, Louis, Anderson and Wahlstron, 2004). Pont, Nusche and Moormen (2008) added that leadership contributes to the student's improvement by ensuring that the school climate is conducive for effective teaching and learning. Leadership is regarded as an interaction of the members in the organization with the intention of sharing purpose or common goals to be pursued and accomplished in order to achieve the objectives of the organization (Harris, Day, Hopkins, Hadfield, Hargreaves and Chapman, 2005). In other words, leadership is related to the achievement of goals and organization which in turn, results in organizational success (Robinson, 2008; Bailey, 2013). However, research on school leadership has focused more on leadership structures, roles, routines and arrangement but lesser emphasis on leadership practices (Naicker and

Maestry, 2013; Wilkey, 2013; Hairuddin and Salisu, 2015). Distributed leadership captures the essences of transactional leadership, transformational leadership and instructional leadership but instead on focusing on the principal, other leaders in the schools are identified.

Recent paradigm prompts the argument that students' performance is more likely the result of distributed leadership in school and the teachers' collective decisions (Silins and Mulford, 2002). There has been more disagreement and dissatisfaction with the notion of a single or heroic leader and calls for a revise in leadership literature that supports the concept of distributed leadership (Grant and Singh, 2009; Harris and Muijs, 2005; Spillane, 2009; Gronn, 2008; Iles and Feng, 2011).

A study conducted by Hairuddin and Salisu (2015) in junior secondary schools in Katsina State, Nigeria showed that the practice of distributed leadership leads to effectiveness of the school. This new paradigm views leadership of the school as "a practice where responsibilities, functions, and actions are shared by principals and teachers" (Sergiovanni, 2005, p. 42). Harris (2015) concluded from evidence gathered empirically from two recent studies on successful school leadership and their improvement. These studies include a research done by the National College for School Leadership (NCSL) in 2001 (Harris and Chapman, 2002) and an earlier one in 1999 by the National Association of Headteachers (NAHT) (Day, Harris, Hadfield, Tolley, and Beresford, 2000). It was highlighted that there is a limitation of the singular leadership approach and the potentials of a distributed method of leadership to ensure school improvement.

Wilkey (2013) who conducted a qualitative study on the characteristics of effective high school principals concluded that these principals establish relationships

built on trust and effectively collaborate with all stakeholders to develop a school vision, maintaining a high expectations for all, sustain and shape a warm school culture, develop the people within the organization, and reach out to all those involved to ensure availability of resources to ensure academic excellence among students. In addition, his study also found that effective high school principals are more open to change and willing to develop and share leadership with others. Similarly, a qualitative study on leadership practices among middle school principals by Sanzo, Sherman and Clayton (2011) also found that shared leadership is one of the key practices leading to the effectiveness of these schools.

As stated by Fullan (2006: p. 7),

> "…school-wide success, especially with respect to establishing the conditions for continuous improvement, depends on the leadership of the principal – leadership that focuses on the improvement of teaching…and also leadership that fosters the development of leadership in others who form part of the critical mass of leaders who can carry on improvement into the future."

Hence, the statement stresses that the principal leadership is still considered as an important factor of school success, but it is also pertinent to consider the impact of leadership of others in the school context (McCarty, Wallin and Boggan, 2014). A multidimensional leadership team as posited in distributed leadership combine effective skills and abilities that can fulfil the goals and ensure academic success of the students through collaboration and alliance (Siccone, 2012). Furthermore, Lazandou and Iordanides (2011: p. 5) stated that,

> "Leadership involves the art and the process of influencing individuals so that they collaborate willingly to achieve common objectives. It entails four basic abilities: to respond to how individuals are motivated in different situations by different factors, to inspire and guide the members

of the organization, to create a suitable climate, and to articulate and support clear objectives."

This statement implies that the stakeholders in the school are more than willing to collaborate if they are influenced to do so by the leaders in the school. Therefore, this advocates that leadership is not confined to the role of principal alone but an investigation of leadership practices by assistant principal, subject heads, department heads and the teachers should also be done to identify whether leadership is effectively distributed and working towards the achievement of intended goals.

1.3   Statement of the Problem

The statement of the problem explores current literature and practices to identify the gaps in practice and research which will be given emphasis in this study. The concept of leadership is a popular research paradigm in the school context. However, many studies focused on a single leadership, often considered as a heroic act of the principal as the school leader who is expected to become the main or sole person in charge of leading the school (Eyal and Roth, 2011; Lai, 2015; Singh, 2017; Provost, Boscardin and Wells, 2017). In recent years, there has been greater shift in leadership paradigm, calling for a more distributed leadership form of practice, rather than the solo heroic leadership practices of a principal (Gronn, 2008; Hairuddin and Salisu, 2015; Iles and Feng, 2011; Naicker and Maestry, 2013).The growing acceptance of alternative views on leadership which is more distributive and shared in nature is contributed by the demand for a more agile organizational form with flatter structure and lesser use of top-down models (Thorpe, Gold, and Lawler, 2011). Spillane, Healey, Parise, and Kenney (2011) stated that distributed leadership promotes greater interaction among school leaders. Therefore, this study positions distributed leadership practices of the

principals as the main focus in this study mainly due to the current debate on the need to realign and review the leadership paradigm in education (Naicker and Maestry, 2013).

The digital era of the 21st century has brought numerous challenges leading to the continues reform and transformation in the educational landscape of many countries including Malaysia (Mazlini and Nor Shaheera, 2018). A common notion states that the education organizational structure has become more complex over the years that it seems quite impossible to put all the responsibilities of a solo leader to lead others in handling the complexity of the current situation (Naicker and Maestry, 2013). Hence, the idea of distributed leadership where there are shared duties and responsibilities in the organization has led to greater popularity and prominence (Harris, 2013; Spillane and Healey, 2010; Yilmaz and Beycioglu, 2017). Spillane, Halverson and Diamond (2001) defined distributed leadership as the distribution of leadership in an educational organization and not leadership done by just one individual who takes the responsibility as a leader. Jacobs (2010) explained that this requires cooperation by accessing the skills and ability of others including the principals, assistant principals, teachers and other personnel. This means that tasks and responsibilities are shared, and collaborative decision making is practiced (Akdemir and Ayik, 2017). It focuses on the existence of a leadership team that work collaboratively in the school to bring about positive and desired changes.

In previous studies, the focus was on leadership being the responsibility of a valiant, heroic and single leader who leads, directs, and influences the future direction of the school. However, recent paradigm change has shifted from transactional, transformational and traditional practices of leadership to distributed leadership (Hartley, 2010). Instead of focusing on the individual leadership of the principal, the

influence of leadership on school success and students' high performance has been related to distributed and collective leadership practice (Mascall, Leithwood, Straus and Sacks, 2008). Therefore, shifting the focus to distributed leadership practice can provide more understanding of its mechanism and influence in the school context (Hulpia and Devos, 2010).

In the past few years, there has been more studies on distributed leadership. Its significant contribution to various aspects of school context has been noted such as promotion of democracy in the school context (Harris, Hargreaves, and Fink, 2008; Woods and Gronn, 2009), successful performance of the students (Chang, 2011; Chen, 2007; Cochran, 2007; Heck and Hallinger, 2009; Leithwood and Mascall, 2008), teacher education (Muijs, Chapman and Armstrong, 2013), organizational change (Harris, Leithwood, Day, Sammons, and Hopkins, 2007; Sloan, 2013), and participation in the process of decision making (Mayrowetz, 2008). However, the approaches in these studies have constrictions in terms of research and implementation. Some of these researches lack an in-depth study regarding the role, effect and outcome of distributed leadership, while some are limited by the employed research methods. Most earlier studies on distributed leadership practices use qualitative approach which cannot be generalized to the larger population (Akdemir and Ayik, 2017). Although these qualitative researches provide insights to understand the phenomenon of distributed leadership in the school setting, the findings were limited to explain the characteristics of leadership in the targeted schools only.

In recent years, distributed leadership has caught the attention of many scholars worldwide and studies on distributed leadership were conducted in Istanbul (Cansoy and Parlar, 2017), China (Chang, 2011), The Kingdom of Saudi Arabia (Aburizaizah, Kim, and Fuller, 2016), Mexico (DeMatthews, Edwards, and Rincones, 2016), Greece

(Vlachadi and Ferla, 2013), and Ethiopia (Mitchell, 2017). However, these studies were unable to provide a consistent conceptualization of distributed leadership via the principals' viewpoint (Aburizaizah et al., 2016) and the teachers' view about shared responsibilities and leadership practices (Vlachadi and Ferla, 2013). Hence, this study intends to overcome some of the insufficiencies noted in past studies and provide a wider range of information regarding distributed leadership practices.

Further to that, there are studies on distributed leadership that pay attention to international schools setting (Keller, 2015; Wickins, 2013) but these studies are carried out in other countries. Keller examined the leaderships of international schools in Turkey while Wickins (2013) investigated the principals' perspectives of distributed leadership in the international schools of Hong Kong. Some studies on distributed leadership were done in Malaysia but these studies were not entirely on international schools (Yaakob et al., 2015; Marlia and Yahya, 2016; Jones et al., 2015; Bush, Suriani, Ng, and Kaparou, 2018). Yaakob et al. (2015) for example, investigated distributive leadership of secondary school leaders in the Northern zone of Malaysia while Marlia and Yahya (2016) investigated distributed leadership of secondary teachers in Kedah, Malaysia. Bush et al. (2018) and Jones et al. (2015) presented a comprehensive examination on the leadership practices in Malaysia. Therefore, a lacking in focus on distributed leadership in the international school perspective in Malaysia also adds to the need of carrying out this study.

The choice to select international school in this study was based on the findings presented in Lee, Hallinger and Walker (2012) who stated that international schools provides a unique and rich context for studying about distribution of leadership relation to instructional practices. The success of international school as a research setting was also supported by findings from Riesbeck's (2008) study of the success factors in 30

IB schools in the United States. According to this study, principals who lead the top ten successful international schools in the USA showed four leadership qualities: (i) portrayal of professional behaviors; (ii) promotion of IB program to the public; (iii) showing enthusiasm about their IB programmes; and (iv) showing excellent public relation skills. Concurrently, the teachers were mostly subject experts and had not much need for instructional leadership. However, Hallinger et al. (2010) argued that some international schools are based on a formal organizational structure with school staff operating in different organizational layers. There are identified leaders at every level of these layers like the assistant principal, subject leaders and program leaders but due to the structural limitation, distributed leadership might not have been fully implemented. Thus, it is imperative that the international school becomes the research setting for this study and determines whether distributed leadership was indeed practiced or otherwise.

Besides that, the rising popularity of international schools due to global demand for quality education has led the need for these school to acquire competitive advantage in terms of human capital. Organizational commitment concept is a popular research focus in education setting as it refers to the employees, in this case, the teachers' attitude of being loyal and committed to the school which determines their participation in organizational decisions to ensure the welfare and success of the school (Javadi and Yavarian, 2011). Hulpia, Devos and Van Keer (2010) stated that organizational commitment among teachers is very much influenced by their participation in the process of making decision and the distribution of supportive leadership function. Researches on teachers' organizational commitment have always been related to attributes of organizational commitment such as leadership of the school (Meyer and Allen 1997; Nguni, Sleegers, and Denessen, 2006; Ross and Gray,

2006). The transformational leadership and organizational commitment relationship for instance, was extensively researched in various organizational setting (Malik, Javed, and Hassan, 2017; Yang, 2012; Olcer, 2015; Top, Akdere and Tarcan, 2014; Jamalullail, Che Fauzlina, Hazita and Samsidah, 2014; Veeriah, 2017). These studies have shown that school principals who are supportive have a positive effect on the organizational commitment of the teachers. Despite a rich literature of studies investigating the relationships of school leadership, principal leadership, principal instructional leadership, transformational leadership and transaction leadership with organizational commitment, a lack of studies relating to the distributed leadership practices of the principal with organizational commitment among teachers however, is still observed.

There are more studies that relate transformational leadership of the principal with the organizational commitment of teachers. Although the studies showed positive effect of transformational leadership on organizational commitment, but arguably, there could be some differences on the impact of distributed leadership on organizational commitment. Cooper (2012) compared transformational leadership with distributed leadership and noted some similarities and differences. One of the fundamental differences between these two leadership perspectives is on those who are responsible for initiating, establishing and determining the individual(s) in leadership positions. He cited Kirby, Paradise and King (1992) who explained that in transformational leadership, the focus and goal is on the individual development of teachers so that their performance is enhanced, and consequently leading to improvement and growth of the school. On the other hand, the leadership role, act, duty and routine in distributed leadership are governed by educational situation (Cooper, 2012). Therefore, the extent to which distributed leadership may impact on

teachers' commitment might show some deviation in comparison to transformational leadership.

Besides organizational commitment, job satisfaction is also a critical issue in the organization because it reflects a positive evaluation of the job (Sharma and Azmi, 2012). The aims and goals of an organization are attained through the jobs that are performed by individuals in the organization. Therefore, the concept of job satisfaction or the attitude that an individual worker has towards his or her job is important (Chen, 2006).

Turnover among teachers is becoming a major issue in education that it becomes necessary to not only stress on loyalty among teachers but to ensure that they are happy and satisfied with their job. Based on the push and pull factors, teacher attrition in international school could be due to push factors like school climate, administrative support, student demographics and interpersonal relationships among staff, and pull factors like salary and renumeration, personal conditions and career advancement prospects (Desroches, 2013; Wu, 2012; Tkachyk, 2017).

High teacher turnover is a problem that affects international school globally (Pitsoe, 2013; Wu, 2012; Tkachyk, 2017) and it can be related to issues of job dissatisfaction among the teachers (Fong, 2015). There are no exact data regarding teacher turnover in Malaysia but Tkachyk (2017) stated that the annual turnover rates could be between 20 to 50 %. This could assure a less likelihood of teacher attrition from international schools. Ritter (2016) explained that there is a 17 percent of teaching population loss from international schools annually. One-third of these teachers leave the teaching profession within three years while about half of the teacher leave the career within five year, and two-thirds within seven years. According to Guarino, Santibanez and Daley (2006), teacher loss is mainly due to migration of

teachers from one school to the other. Therefore, the threat of teacher attrition can be minimized by understanding how distributed leadership can transform the commitment of the teachers.

The outcome and success of a school are determined by many factors, but the job satisfaction and organizational commitment of the teachers are considered as the being most important (Dou, Devos and Valcke, 2017; Leithwood and Menzies, 1998). It seems insufficient to study organizational commitment without examining job satisfaction as these two constructs are highly correlated to explain the effectiveness and performance of a school. Nonetheless, studies on job satisfaction among teachers in international schools are still numbered and existing studies have focused on different aspects of job satisfaction (Hans, Mubeen and Al Ghabshi, 2014; Heng, Basri and Asimiran, 2018; Hoi, 2015). Hans et al. (2014) and Hoi (2015) employed the Job Satisfaction Survey (Spector, 1985) which identified nine aspects of job satisfaction, which include: pay, fringe benefits, promotion, contingent rewards, supervision, coworkers, operating conditions, nature of work and communication. Heng et al. (2018) measured job satisfaction based on intrinsic and extrinsic factors.

Being a popular variable in the research field, job satisfaction has been measured using various scales. There are single-item scales (Wanous, Reichers and Hudy, 1997; Scarpello and Campbell, 1983) to measure job satisfaction. Nakata, Irie and Takahashi (2013) stated that one of the advantages of a single-item scale is that, it overcomes the issue of job-specific measures as it provides a generic assessment of job satisfaction. However, given the complex and dynamic school environment, the adoption of a generic job satisfaction on a single-item measure is rarely adopted (Pepe et al., 2017). Most assessment of job satisfaction are multi-item scales and multi-dimensional (van Saane, Sluiter, Verbeek and Frings-Dresen, 2003). There are many

scales to choose from such as the Job Descriptive Index (JDI) with 18 items (Leong and Vaux, 1992), the Job Satisfaction Survey (JSS) measuring nine dimensions through 36 items (Spector, 1985) and the Minnesota Satisfaction Questionnaire assessing 20 aspects of job satisfaction using 100 items (Hirschfeld, 2000).

Pepe et al. (2017) informed that the multifaceted scales of measuring job satisfaction have provided an array of job satisfaction factors, but they argued that measuring satisfaction level at the higher order needs to focus on social relationship with the students, co-workers and parents might be more meaningful to understand satisfaction of the teachers with their work. Although literature consistently showed a positive and significant relationship between job satisfaction and organizational commitment, but the assessment of the relationship of these variables might take a different tune when the aspects of job satisfaction is based on higher order needs. Furthermore, higher order needs reflect the necessity of good relationships or the social needs of the teacher. However, lacking in such an investigation also necessitated the inclusion of job satisfaction measured as higher order needs to explain the effect that distributed leadership has on organizational commitment.

Past studies had conducted various investigations on the effect of leadership styles, transformational leadership on job satisfaction (Hanasya, Khalid, Nik Mat, Sarassina, Ab. Rahman and Zakaria, 2012; Wan Omar and Fauzi Hussin, 2013) and often in tandem with organizational commitment with job satisfaction as a mediator in the leadership and organizational commitment relationship (Khan, Rao, Usman and Afzal, 2017; Olcer, 2015; Yang, 2012). There are very few studies that investigated the relationship between distributed leadership of the principal and job satisfaction or the mediation of job satisfaction of the teachers on the relationship between principals' distributed leadership and the organizational commitment of the teachers.

Therefore, this study would investigate teachers' job satisfaction as a mediator between principals' distributed leadership and teacher's organizational commitment. In this study, the focus is on international schools whereby there appears to be limited research to determine the practice of principals' distributed leadership in these schools and their relation to teachers' job satisfaction and organizational commitment. In summation of the statement of the research problems, Table 1.1 presents the research gap and the intended course of action or scope of research that this study is focused on.

Table 1.1

Summary of the Research Gap and Research Focus

Research Gap	Research Focus	Justification
A shifting paradigm of school leadership in favor of shared or distributed leadership instead of single leadership concept.	Focusing on distributed leadership, particularly the principals' practices of distributing leadership in school relating to quality and distribution of leadership function, quality and distribution of supervision, cooperation in the leadership team and teacher participation in decision making.	School leadership is considered as one of the main factors determining school performance and success. Therefore, focusing on the right type of school leadership in the form of distributed leadership is considered as apt and timely for the 21st century education context.
The capability of international school in Malaysia to maintain its quality education due to the growing popularity of international school among local Malaysians.	This study aims at investigating school leadership in international schools in Kuala Lumpur to obtain in-depth information on this matter.	The high enrolment from local Malaysians implies that international schools are also responsible to produce high quality human capital for the Malaysian and global employment market.

'Table 1.1 Continued'

Research Gap	Research Focus	Justification
Teacher turnover and attrition from international school are rising.	This study aims to determine the level of teachers' organizational commitment and how principals' distributed leadership can ensure committed teachers stay with their present international school.	Human capital in the form of qualified and experienced teachers are an asset to the international school. Reducing turnover and attrition by knowing the teachers' level of organizational commitment and the role of principals' distributed leadership to enhance teachers' commitment is necessary.
Teachers' commitment is determined by their satisfaction with their job.	Job satisfaction is examined in its mediation role on the relationship between principals' distributed leadership and teachers' organizational commitment using higher-order need for self-satisfaction	Teachers' job satisfaction is not measured by low-order need but focusing on self-satisfaction that is based on relationship with the student, parents and co-workers.

Source: Compiled by the Researcher

1.4   Research Objectives

The main purpose of this study is to examine and asses the practice of distributed leadership among principals in the international school setting in Malaysia. Based on the research background and statement of the research problem, the following objectives guide the course of this study:

1.   To analyze the distributed leadership practices in international schools in Kuala Lumpur based on practices in international schools in Kuala Lumpur as perceived by teachers based on:

    a.   Leadership function quality and distribution;

b. Supervision quality and distribution;

c. Cooperation in the leadership team; and

d. Teacher decision making participation;

2. To analyze the organizational commitment of teachers in international schools in Kuala Lumpur based on:

a. Affective commitment;

b. Normative commitment; and

c. Continuance commitment;

3. To analyze the job satisfaction of teachers in international schools in Kuala Lumpur based on:

a. Satisfaction with students;

b. Satisfaction with co-workers; and

c. Satisfaction with parents;

4. To examine the relationship between distributed leadership and job satisfaction of teachers in international schools in Kuala Lumpur;

5. To examine the relationship between job satisfaction and organizational commitment of teachers in international schools in Kuala Lumpur;

6. To examine the relationship between distributed leadership and organizational commitment of teachers in international schools in Kuala Lumpur;

7. To analyze which of the distributed leadership dimensions are the significant predictors of organizational commitment of teachers in international schools in Kuala Lumpur; and

8. To assess the mediating effect of job satisfaction of teachers on the relationship between distributed leadership and organizational commitment of teachers in international schools in Kuala Lumpur.

1.5   Research Questions

The following research questions were developed and answered in the course of this:

1.   What are the distributed leadership practices in international schools in Kuala Lumpur as perceived by teachers based on:

    a.   Leadership function quality and distribution;

    b.   Supervision quality and distribution; Cooperation within the leadership team: and

    c.   Teacher decision making participation?

2.   What are the levels of organizational commitment in international schools in Kuala Lumpur among teachers based on:

    a.   Affective commitment;

    b.   Normative commitment; and

    c.   Continuance commitment?

3.   What are the levels of job satisfaction in international schools in Kuala Lumpur among teachers based on:

    a.   Satisfaction with students;

    b.   Satisfaction with co-workers; and

    c.   Satisfaction with parents?

4.   Is there a significant relationship between distributed leadership and job satisfaction of teachers in international schools in Kuala Lumpur?

5.   Is there a significant relationship between job satisfaction and organizational commitment of teachers in international schools in Kuala Lumpur?

6.   Is there any significant relationship between distributed leadership and organizational commitment of teachers in international schools in Kuala Lumpur?

7. Which of the distributed leadership dimensions are the significant predictors of organizational commitment of teachers in international schools in Kuala Lumpur?

8. Is job satisfaction a mediator for the relationship between distributed leadership and organizational commitment among teachers in international schools in Kuala Lumpur?

1.6 Research Hypotheses

The research hypotheses of this study are as follows:

H1: Principals' distributed leadership is significantly and positively related to teachers' job satisfaction

H2: Principals' distributed leadership is significantly and positively related to teachers' organizational commitment

H2a: Leadership function quality and distribution is significantly and positively related to teachers' organizational commitment

H2b: Supervision quality and distribution is significantly and positively related to teachers' organizational commitment

H2c: Cooperation in the leadership team is significantly and positively related to teachers' organizational commitment

H2d: Teacher decision making participation is significantly and positively related to teachers' organizational commitment

H3: Job satisfaction is significantly and positively related to teachers' organizational commitment

H4: Teachers' job satisfaction mediates the relationship between principals' distributed leadership and teachers' organizational commitment

H4a: Teachers' job satisfaction mediates the relationship between quality and distribution of leadership function and teachers' organizational commitment

H4b: Teachers' job satisfaction mediates the relationship between quality and distribution of supervision and teachers' organizational commitment

H4c: Teachers' job satisfaction mediates the relationship between cooperation within the leadership team and teachers' organizational commitment

H4d: Teachers' job satisfaction mediates the relationship between teacher participation in decision making and teachers' organizational commitment

1.7   Significance of the Study

The current study investigates the levels and interrelationships of distributed leadership and job satisfaction and organizational commitment among teachers in ten international schools in Kuala Lumpur. Hence, this study provided more in-depth knowledge regarding the inter-relationships of distributed leadership, job satisfaction and organizational commitment of the teachers in international school setting. These three variables are important factors in the school setting to ensure student performance and school success. Principals are instructional leaders who are also responsible to ensure the practices of professional learning communities in the school. Balyer, Karatas and Alci (2015) stated that in professional learning communities, there is a redistribution of power whereby teachers are involved in the design and implementation of critical decisions and school policies. Among others, through professional learning communities, the principal is expected to provide more prospects for the teachers to increase their participation in the development of school policies, providing input in all important decisions and using leadership team in the decision-making process. Teachers gain numerous benefits from the collaborative professional

learning communities through the inputs from their co-workers to enhance their professional capacity (Balyer et al., 2015).

Distributed leadership is an emerging theory of leadership which focuses on individual capabilities, skills and talents (Mayrowetz, 2008) but based on joint responsibility (Bennett, 2010). Thus, distributed leadership is a nascent property arising from a system of interacting individuals who are open to boundaries and expertise (Triegaardt, 2014). It is the process of leadership involving the collaborative relationships to implement collective actions based on the shared values of the individuals working together to ensure positive changes are achieved (House and Aditya, 2012). Gronn (2008) explained that in a collaborative leadership, there is a real participation of leadership and decision making at all levels and numerous decision processes. Thus, it is anticipated that the practice of distributed leadership enhances the organizational commitment through job satisfaction of the teachers.

Empirical evidence gathered from this study would support this notion and strengthen the effort to encourage greater practices of distributed leadership to drive teachers' job satisfaction and organizational commitment. These findings are usable in the practical context whereby such information is useful in the strategic management planning of international school in the future. As the international school market goes through a rapid pace with more schools being set up in Malaysia, there will be greater competition to maintain high quality of education through committed teachers. Teacher attrition is one of the critical issues faced by private and international schools. Therefore, findings of this study may stress on the importance of principals' distributed leadership practices to ensure job satisfaction and organizational commitment of their teachers in these schools, and thus encouraging its practices to mitigate teachers' turnover and assuring school success. The international school management can use

the findings of this study to strengthen and enhance their efforts of distributing leadership more effectively to the members of the leadership team.

From a research perspective, this current study was able to close the identified research gaps particularly in the relationship between the principals' distributed leadership, teachers' job satisfaction and organizational commitment. Most prominently, empirical evidence is provided from this study on the use of contemporary measurement scales to measure distributed leadership using the Distributed Leadership Inventory (Hulpia at al., 2009; 2012) and teacher job satisfaction using Teacher Job Satisfaction Scale (Pepe et al., 2017). The study contributes to the validation of these scales and provide reciprocity and reproducibility in future studies. Therefore, this study can become a source of information for future studies of principals' distributed leadership, and the job satisfaction and organizational commitment of teachers.

1.8   Limitations of the Study

Several limitations in this study have been identified. Firstly, this study focuses on the interrelationships of three main variables: principals' distributed leadership, teachers' job satisfaction and organizational commitment. The effect of principals' distributed leadership on teachers' organizational commitment was assessed at the construct and dimensional levels of the independent variable, principals' distributed leadership. These included four dimensions of principals' distributed leadership which are: leadership function quality and distribution, supervision quality and distribution, cooperation within the leadership team and teacher decision making participation (Hulpia et al., 2009, 2012). Teacher job satisfaction and teacher organizational commitment were assessed as multi-item variables but not differentiated by its

dimensions in this study. Hence, this study would be able to provide information on how distributed leadership of the principal at its dimensional level affect job satisfaction and organizational commitment.

Secondly, this study also collected demographic information of the respondents, but it was used only to describe the research samples and was not used to differentiate the effect of principal distributed leadership on teacher organizational commitment through job satisfaction. Hence, demographic was not considered as moderators in this study.

Thirdly, the target population and sample of study are limited to teachers who are currently teaching in the identified international schools in Kuala Lumpur only. International schools in other parts of Malaysia were not included in this study. Further to that, only ten international schools were included in this study as the inclusion of this school requires the permission and consent from the international school's management board. Only ten international schools gave their cooperation and willingness to participate in the study. In addition to that, these schools are using similar curriculum and attended by secondary level students. Therefore, the findings of this study cannot be generalized to other international schools in Malaysia but limited to the teacher population in the international schools that participated in this study.

Fourthly, data was collected using questionnaire and responded to by the teachers participated in this study based on their own volition and consent. The accuracy of the responses provided by the teachers are subject to their honesty to answer the questions. Briefing and information have been provided to the international schools' contact persons to ensure that they understood the purpose and the confidentiality of the research. Further explanation was also provided in the

questionnaire to inform the respondents of their rights to participate at their own free will and withdraw from the survey without any prejudice. It is hoped that the information provided was enough to ensure that the respondents answered truthfully in the questionnaire. Further to that, the questionnaire has been validated through content and face validity processes to ensure minimal occurrence of common method bias (Podsakoff, Mackenzie, and Podsakoff, 2012).

In addition to that, the questionnaire used responses with five-point Likert scale for each of the research variable to measure the attitude or perception of the respondent about the principal's distributed leadership, teacher job satisfaction and teacher organizational commitment. According to Albaum (1997), Likert scale normally measures two aspects of attitude: direction (agree/disagree) and strength (strongly or not). When Likert scale was first introduced and applied in research, it was intended as a summated scale with its interval scale properties (Likert, 1932). However, often this is misinterpreted based on the perception of the respondents (Bishop and Herron, 2015). At a glance, Likert scales seem to have a rank order given by the numbering from 1 to 5 for instance to show the direction and strength of perception, but the interval values cannot be presumed equal, thus the mean and standard deviation are in fact, not suitable for ordinal data (McLeod, 2019). In this study, mean and standard deviation were derived as a way of describing the distribution of responses. To address this limitation, other descriptive measures like median and mode are used to provide greater interpretation. These additional statistical measures can describe the distribution of data with more clarity. Additionally, Lucian (2016) stated that data using Likert scale enables the ordering of individuals through the favorability of their attitude towards a specific matter but does not really indicate how much an individual is more in favor of a certain matter or situation than another. It is also likely that

respondents may be inclined to answer in a favorable manner due to social desirability. Paulhus (1981) defined social desirability as the attempts made by test takers to agree with the statement or answer the questions in the test in such a manner that they obtain more desirable scores rather than responding honestly to these items. Therefore, the tendency for the individual respondent to agree to a statement might be due to social desirability and not because of what they truly feel. Thus, this could lead to responses inclined towards agreeing to the stated item and giving a high mean value.

Next, this study used a stratified simple random sampling method which is a probability sampling technique (Sekaran and Bougie, 2013). It is not a true random sampling method which might affect the normality of data as there might be some variance based on school environment and culture (Devos et al., 2014). It also lessens the generalizability of the findings to the population because it has less degree of randomization compared to simple random sampling. Due to the use of this sampling technique, it is necessary that the researcher obtains a full sampling framework of the population of the study and from the framework, draw out the list of respondents randomly from each participating school. Additionally, the method of sample selection has resulted in the use of partial least square – structural equation modeling (PLS-SEM) to ensure analyzed data are able to answer the research questions with good reliability and validity.

1.9   Definition of Terms

The definition of terms used in this study is given as follows to provide a deeper understanding of its meaning within the context of this study.

1.9.1 Distributed Leadership

The term, 'distributed leadership' is defined by Hulpia, Devos and Rosseel (2009a) as the formal distribution of leadership functions, the cooperation within the leadership team and the teachers' participation in the decision-making process. Leadership function quality and distribution refers to the school leadership function that relate to the responsibility of the leader to foster and set a mutual school vision and clarity in goals, while at the same time, they motivate and assist teachers, as well as stimulate their professional learning (Hulpia et al., 2012; Leithwoord and Jantzi, 1999). Supervisory quality and distribution are operationally defined as the supervisory roles of the principal on the instructional practices of the teachers while cooperation in the leadership team is about the group cohesion, the role clarity of the team members and the goal orientedness of the team. Teacher participation in the decision-making is decribed as the inclusion of teachers in the decision-making process relating to issues of teaching, learning and assessment ((Spillane, 2006; Spillane and Diamond, 2007; Clutter-Shields, 2011).

1.9.2 Job Satisfaction

In the context of this study, job satisfaction is regarded as "the employees' attitude of overall acceptance, contentment, and enjoyment in their work" (Mirkamali, Thani and Alami, 2011, p.131). In the context of this study, job satisfaction refers to the perception of the teachers who work in the targeted international schools. Pepe et al. (2017) stated that the job satisfaction covers the aspects of satisfaction with students, co-workers and parents.

1.9.3 Organizational Commitment

Organizational commitment is defined by Mowday, Steers and Porter (1970) as "the relative strength of an individual's identification with and involvement in a particular organization" (p. 226) It is a multidimensional construct of three types of commitment which are affective, normative and continuance. Allen and Meyer (1996) defined affective commitment as "the emotions of being attached to the organization, whereby staff stays with the organization because they want to" (p. 253). Normative commitment is considered "a sense of being obliged to the organization while continuance commitment is the awareness that staffs have to remain with the organization due to the costs incurred if they leave the organization" (Allen and Meyer, 1996, p. 253). For this study, organizational commitment refers to the teachers in international schools.

1.9.4 International Schools

According to the definition of international school by the Ministry of Education (2012), it is considered as a private school that offer education at preschool, primary and secondary level based on an international curriculum and using English as the medium of instruction. Therefore, these schools follow may be guided by the British curriculum, American curriculum, Australian curriculum or the Canadian curriculum. In the context of this study, the focus on international schools are those located in Kuala Lumpur and offering education at secondary level only.

1.10 Chapter Summary

This chapter has introduced the study. The background of the study identifies the rising demand of international school in Malaysia. The statement of the problem highlights

the gap in research and practice which led to the decision to investigate the relationship of principals' distributed leadership, and teachers' job satisfaction and organizational commitment. The research objectives and research questions guide the scope of this study. The significance of this study has also been presented from a practical and research perspectives. In addition, the terms used in this study were also operationally defined. Thus, there is a general understanding about the definitions used for the research variables in this study.

The next chapter reviews the extant of the literature to explain more about the growth and development of international school in Malaysia and globally. The ensuing chapter will also provide more elaboration from theoretical and conceptual perspectives to explain about distributed leadership, job satisfaction and organizational commitment. The extensive literature review provides greater understanding about each research variables and how they are related to each other based on theories and empirical evidences from past studies.

In the third chapter, the research methodology explains the research philosophy, research paradigms and research design, population and sampling, research instruments, pilot study, data collection procedures, data analysis procedures and ethical considerations of this study. The methodology chosen for this study is aligned to the research questions and research objectives that were presented in the first chapter.

This will then be followed by the presentation of findings in the fourth chapter and the discussion of the findings in the subsequent chapter. The fourth chapter presents the findings which are able to answer the research questions using analyzed data through reliable statistical means.

The fifth chapter discusses the research findings in a more elaborate manner and describes the implications of the research findings, recommendations of future studies and an overall conclusion about the study.

CHAPTER 2

LITERATURE REVIEW

2.1   Introduction

This chapter discusses and presents a review of the literature that provides more explanation and insights about the growth and development of international school in Malaysia, as well as a global perspective on international school. This section provides some understanding about the historical development of international school at the global level and the development and changes that affected international schools in the Malaysian context. This is then followed by the second section which explains the theories of school leadership. In this section, four theories were initially explored that focused on the individual leader and then progressing to explain distributed leadership as a post-heroic concept of leadership. In its own sections, the three research variables: distributed leadership, job satisfaction and organizational commitment are defined with explanations based on existing literature and supported by theories. Then, the theoretical framework is discussed and followed by the conceptual framework that shows the research model and the development of its respective research hypotheses.

2.2   International School – A Global Perspective

The context of the international schools is considered as "hopelessly vague and contestable" (Bunnell, 2016, p. 545) as the concept lacks clarity. According to Hayden and Thompson (2016), the term "international school" has been given some collective terms such as a 'network', 'system', 'sector' and even 'market' or 'industry'. Howling (2017) preferred the term 'sector' as it identifies an area that can be distinguishable from others.

The origin of international schools according to Hayden and Thompson (2008), began in 1890 with the establishment of the Maseru English Medium Preparatory School (MEMPS) in Lesotho. The school has one teacher and catering for the children of English-speaking missionaries as well as children of the traders and officials of the British administration of the then Basutoland. However, as reported by Sylvester (2002), the International College at Spring Grove in London might be the foremost international school as it existed in the years of 1866 to 1889. Typically, the origin of today's international schools was said to have begun with the establishment of International School of Geneva which is a bilingual French-English and run by three teachers and catering for eight students of expatriate workers of the International Labour Office and League of Nations in 1924 (Hayden and Thompson, 2008). In the same year, the Yokohama International School was founded with six children under the tutelage of a teacher whereby these children belong to the foreign community in the city. In Malaysia, the Alice Smith School was established in Kuala Lumpur in 1946 whereby the owner, Alice Smith taught two expatriate children, whereby one of them was her own daughter. Although the historical beginning of the international school could not be pinpointed accurately but these early educational setting featured the same characteristics of a school that provided educational program to foreign students who did not originated from the host country.

The growth of international school in general, is basically attributed to the impact of the process of globalization whereby there has been more people travelling across borders and working in other countries for a longer period. In the region of Middle East and Southeast Asia mainly, the increase in workforce mobility had contributed to more expatriate population in these regions, that led to an increase in the demand for international schools (Bunnell, 2016). The expatriates working in other

countries do not come alone as their work assignment could be a long duration of time and thus, they often bring their family together to the host countries. Due to movement of people all over the world, international schools are provided as an alternative of national and other private schools, mainly catering for foreign students initially (Bailey, 2015). According to Hayden and Thompson (2008), the international schools were established for the purpose of providing education to the families of expatriates serving as diplomats, armies and entrepreneurs in host countries. Additionally, as the year progresses, the international school was not only providing educational services to the expatriate children but the demand for international schools mainly stems from the need to improve the system of education in general (Keung and Rockinson-Szapkiw, 2013; Lee, Hallinger and Walker, 2012; Velarde, 2017).

Since its earlier conception during the industrial revolution period to contemporary digitalized and globalized society, the international schools have paved significant inroads in the education sector and can be differentiated from national, public and private academic institutions (Velarde, 2017). Hill (2015) stated that an international school can be distinguished from national school due to the flexible international curriculum that they used which is accepted globally by any school or university at the international level. The multi-cultural environment in these schools which resulted from having host administrators, teachers and students from many different countries made them uniquely different from either private or public schools (Keller, 2015; Mancuso, Roberts and White, 2010), and thus giving greater challenges to its administration and management. In addition, international school has greater autonomy whereby it is not obligated to follow the government-enforced standardized tests that its growth is inevitable (Bates, 2012). Nevertheless, these institutions still operate under the jurisdiction of the ministry of education in the host country (Hill,

2015; Keller, 2015). For example, in Malaysia, the international school despite having its own curriculum, is still obliged to teach certain subjects to the students as compulsory subjects to take. The *Bahasa Malaysia* subject is considered as compulsory for Malaysian students in international schools.

Currently, Hayden and Thompson (2008) explained that the admission into international schools are not limited to expatriate workers' children only but they are open to anyone with eligibility, resources and access to enroll in these schools. This serves as a great selling point of international schools as they are basically open to any eligible students regardless where they come from (Velarde, 2017). In the 21st century, international schools partake a more significant role in the social and economic scope of education as evidenced by a turnover of revenue from operating international schools to multi-billions (MacDonald, 2006; Javadi, Bush and Ng, 2017). Hence, there have been substantial growth of international school in many countries around the world. Malaysia is one of the countries in the world with a quite prominent growth and development of international schools (Javadi et al., 2017).

2.3   International School in Malaysia

The education landscape in Malaysia shows four school systems: the government system, private schools, vernacular schools and international schools (Ministry of Education, 2017). The government or national schools follow a Malaysian curriculum using Malay as the main instructional language. Secondary school ends with a national examination called the Malaysian Certificate of Education (*Sijil Pelajaran Malaysia*, *SPM*). Since early 2000s, English was considered as the language of teaching and learning for mathematics and science subjects up to 2012 and then changed back to Malay medium. The change led to the decision of many wealthy Malaysian families

opting to provide their children with alternative education in international schools (Gaskell, 2016). Apart from international schools, the private school system is available to students residing in Malaysia, but these schools abide the Malaysian curriculum. These private schools are also furnished with better facilities such as smaller size of classes and using English as instructional medium. In addition, the Malaysian school system also has vernacular school which portrays the cultural diversity in Malaysia. These vernacular schools are considered as non-Malay but could be using medium of instruction in either Chinese or Tamil.

Lastly, international schools operate on an international curriculum such as following Australian, British, Japanese, France and US curriculum such as the International General Certificate of Secondary Education (IGCSE), the International Baccalaureate Diploma Programme (IB Diploma), British National Curriculums, (GCSE), the International Baccalaureate Middle Year Programme (IB MYP) and the International Baccalaureate Primary Year Programme (IB PYP) (Velarde, 2017). Due to the historical ties between Malaysia and the United Kingdom, it is not surprising that the dominant curriculum is based on UK. The dominant regional associations include the Federation of British International Schools in Asia (FOBISIA) and the East Asian Regional Council of Schools (EARCOS). In Malaysia, the international schools are affiliated to the Association of International Malaysian Schools (AIMS) (Howlings, 2017). Therefore, the international schools in Malaysia are quite renowned worldwide and accepted as a good starting point for students to enter into prestigious universities in other parts of the world.

The launching of the Economic Transformation Programme (ETP) in 2010 by the Malaysian government aims to enhance the status of the country as a developed nation by 2020 (Howling, 2017). This is in line with the aspiration of Malaysia to attain

the status as a high-income developed nation by 2020, and thus, international schools were also regarded critically as much needed facilities to encourage multinational companies to operate in Malaysia (Prime Minister Office, 2017). The provision of adequate international school becomes a critical criterion to support the influx of more multinational companies into Malaysia and contribute to the foreign direct exchange for the country.

The Malaysian government targeted to have 87 international schools by 2020 but even in 2012, the number of international schools in the country was more than the targeted number (Johnstone, 2014). Malaysia serves as a host country to more than 120 international schools (Velarde, 2017) and the demand is on the rise in recent years (Bailey, 2015; Nasa and Pilay, 2017). The growth of international schools can be gleaned from the number of international schools in Malaysia which totaled 66 in 2010 and doubled to 126 in 2017 (Nasa and Pillay, 2017). The number of enrolled students also increased from 30,000 in 2013 and doubled to 60,000 in 2017 (Velarde, 2017). The drastic change in these numbers are due to several reasons.

Prior to 2006, enrollment of Malaysian students in international schools was not easy although they are eligible as the government legislation has imposed a law to control the enrolment of these students into international schools (Johnstone, 2014). However, in 2006, a new legislation was introduced that allowed international schools to increase the enrolment limit of Malaysians up to 40% of total enrolment (Howling, 2017). By 2012, the limitation on enrolment was lifted, thus enabling international schools in Malaysia to accept Malaysian nationalities at any numbers or percentage possible (Ministry of Education, 2012). Hence, international schools in Malaysia now provide greater access not only to expatriate children but among local students as well,

particularly those from ambitious and high-income families in their quest to get the best possible education for their children (Howling, 2017).

Table 2.1 shows a recent count of students enrolled in international schools in Malaysia. The number of local students enrolled in international schools has shown a steady increase over the past nine year. In 2010, there were only 8,077 local students enrolled compared to 11,852 foreign students but by 2019, the number of local students had jumped to 44,575 compared to 25,220 foreign students. It shows that since 2018, the number of local students is more than half the number of foreign students in the international schools in Malaysia. The highest number of increases was in 2016 with an addition of 9,163 local students. The average increase per year is 4,055 students. Since 2010 to 2019, the statistics shows an increasing trend of total student numbers and local student enrolment.

Table 2.1

Distribution of Students in International Schools in Malaysia

Year	Local Students	Foreign Students	Total Number of Students	Increase in Local Students per year
2010	8,077	11,852	19,929	-
2011	9,956	13,203	23,159	1,879
2012	15,625	16,381	32,006	5,669
2013	19,749	18,727	38,476	4,124
2014	22,229	19,525	41,754	2,480
2015	26,238	20,088	46,326	4,009
2016	35,401	22,301	57,702	9,163
2017	37,218	17,436	54,654	1,817
2018	41,815	22,862	64,677	4,597
2019	44,575	25,220	69,795	2,760

Source: Berita Harian (2019)

It is a necessity for the international schools in Malaysia to be registered with the Ministry of Education and are apply for a license to operate in this country. They

are governed by the Private Education Division and not the 1996 Education Act with regular inspection at least once every two or three years (Ministry of Education, 2017). Besides that, additional external bodies also inspect or accredit these schools such as the Western Association of Schools, the Council of International Schools (CIS), and Colleges (WASC) and British Schools Overseas (BSO) (Howling, 2017). Besides having the relevant academic qualification, the teachers in international school must apply for a teaching permit obtained from the Ministry of Education. Although these schools follow different curriculum (such as IGCSE, GCSE, IB Diploma, IB PYP and IB MYP) and not the Malaysian curriculum, there are mandatory subjects for all students like Moral Studies (*Pendidikan Moral*), while for all Malaysia students, Malay language (*Bahasa Malaysia*) and History (*Sejarah*) are compulsory. For Muslim students, they must take Religious Studies (*Agama*) (Ministry of Education, 2012).

The international schools in Malaysia offer an alternative educational program which appeals to a growing number of Malaysians as indicated by the increasing rate of enrolment from local students. The implementation of educational program in these international schools is governed not only by Malaysian government but also by international bodies. Thus, it provides an assurance of high-quality education that responses to the demands from the students, regardless whether they are local or international. Due to that, these schools must ensure that school leadership is excellent and able to sustain the performance of the teachers, students and the school in overall.

2.4   Evolution and Development of School Leadership

In education, leadership that is effective creates a difference by assuring improvement in learning. There are evidences to support the notion that leadership quality enhances

instructional practices of the teacher and students' learning behaviours in the school context (Harris, 2004). In fact, Nandamuri and Rao (2011) stated that there is not a sole documented report of school that was able to produce successful students in the absence of talented leadership. Leadership as defined by Bush and Glover (2003: 5) is as follows:

> "A process of influence leading to the achievement of desired purposes. Successful leaders develop a vision for their schools based on their personal and professional values. They articulate this vision at every opportunity and influence their staff and other stakeholders to share the vision. The philosophy, structures and activities of the school are geared towards the achievement of this shared vision."

2.4.1 Models of Leadership

In general, leadership can be explained using five groupings of leadership models. The first group refers to the traitist theories also known as the 'great man' theory (Kanodia and Sacher, 2016). These theories are focused on the identification of leaders' personal characteristics. A general notion of leaders' characteristics under this theory is that leaders are born and not made. The traits of leaders are somewhat inherent in a person. Besides that, within these theories, the organization is seen as relatively enduring, unchanging and predictable (Roberts, Hill and Davis, 2017). However, the reality is that, organization is dynamic and always subjected to changes, becoming more complex every day and less predictable.

Another group of theories is the behavioral theories which emphasized on how leaders should act (Derue, Nahrgang, Wellman and Humphrey, 2011). Leadership is perceived as an interaction between the leader and followers. Although these theories contributed significantly to the leadership models, yet behaviorist are finding it hard

to predict the association between leadership behavior and outcomes. In other words, similar leadership behaviors do not consistently lead to the same outcomes.

The next group, situational theories stress on behavioral flexibility and situational adaptabilities (McCleskey, 2014). Situational theories were developed to understand the need for different leadership skills in different situations, thus negating the assumption that leadership is a consistent concept (Dantzer, 2000). Max Weber proposed the transactional theory of leadership in 1947 and this theory was improved by Bass in 1981 (Nikezic, Puric and Puric, 2012). This theory believes that a leader must motivate followers and direct their efforts towards the specified goals by assuring clarity of roles and task requirements (Lamb, 2013). On the other hand, transformational leadership theories refer leaders as charismatic leaders who is an inspiration to their followers to focus their intention and efforts on the organization rather than their own self-interests (Charry, 2012).

2.4.2   Principal as Main School Leader

Leadership is an important concept in the management of schools. Based on literature, Leithwood et al. (2006) concluded that principal leadership is the second most important school-related factors after classroom instruction which contribute to what students are learning in school. The principal is the formal leader in the school. However, there are other leaders at different levels in the school organizational structure such as the assistant principal, administrative leader, master teachers, subject experts, class teachers, senior teacher and so forth with varying degree of autonomy. Leadership studies in the context of the school have mostly centered on the principal as the formal and assigned leader.

2.4.3 Theories Supporting Principal's Solo Leadership

The four theories: the 'Great Man' theory, situational leadership theory, transactional leadership and transformational theory are mainly operated on the notion of a single leader influencing many followers (Uzohue, Yaya and Akintayo, 2016). The newest addition to the leadership in the school is the concept of distributed leadership which is often considered as in the same league with shared leadership (Goksoy, 2016). The description of distributed leadership is given as a topic of its own in this chapter, as it serves as an independent research variable of this study.

The evolution and development as well as the presentation of various leadership theories of individual leader indicated that leadership has been well-researched and documented. More detailed information about these theories are provided as follows.

2.4.3.1 'Great Man' Theory

The Great Man theory is based on the assumption that great leaders are born and not made. Leadership is considered as an inherent trait. This theory was accepted in the 19th and the 20th centuries. According to this theory, the leader is genetically able and equipped with higher qualities in terms of intelligence, energy level and superiority which are distinguishable from the followers. Leaders are not only perceived as heroic and mythical but also expected to destine to rise to leadership when required. The term, 'great man' signifies that leadership is primarily thought to be a male quality, particularly relating to leadership in the military (Ololube, 2013). The 'great man' theory was popular in the 1920s as a means of distinguishing leaders' specific individual traits representing their abilities to become a leader of others (Malasa, 2007). Great leaders like Alexander the Great, Julius Caesar, Mahatma

Gandhi and Abraham Lincoln fueled the mythology of leadership as being inherent rather than made (Cherry, 2019). Thus, this theory implies that not all people can become leaders and leadership is something that cannot be learned.

The Trait theories stemmed from the Great Man theory as an attempt to identify the diverse behavior traits of leaders. Stogdill (1974) mentioned six categories of personal traits that are linked to leadership: status, capacity, responsibility, achievement, participation, and situation. In addition, other traits like the ability to take risk, intelligence, initiative, assertiveness, and self-assurance were also commonly observed in most leaders, in particular, among men (Malasa, 2007). Others believe that these traits include self-confidence, intelligence, energy, knowledge, appearance, optimism, honesty, tolerance towards stress, result-oriented and a determination to face problems are traits of an effective leader (Northouse, 2015; Yukl, 2011). Spector (2015) stated that these great leaders are gifted with celestial inspiration and the right traits.

The Trait theories identify certain behaviours or personality that are shared by leaders (Amanchukwu, Stanley and Ololube, 2015). However, according to Malasa (2007), although this theory was adopted during the colonial period by the British administrators, but it was not applicable for selecting school leaders. The theory was arguable as there are people with the particular behaviours and personality but are not leaders. Furthermore, Inkson and Kolb (2002) found in their studies that traits of the leaders cannot be distinguished from their followers. Thus, this represented a limited explanation to what makes a great leader and paved the way for leadership theories to relate with behavioral aspects (Malasa, 2007). The inconsistencies of the link between traits of leadership and effectiveness of leadership led to more inquiry and a search of better explanations about effective leadership (Amanchukwu et al.,

2015). It is assumed that the leaders in power, the characteristics of the group, and the situation where these factors interact among them define the leadership required and its effectiveness (Yukl, 2012). The theory is not applicable in the contemporary world of today as leadership skills are not inherent to the person but can be learned and improved. Nevertheless, this theory also implies that some people are inherently a leader without the need to acquire them, but the existence of these people is scarce.

2.4.3.2 Situational Leadership Theory

The situational leadership theory was a reaction to the trait-based leadership which explains that any person can become a leader when time is invested into the person. This theory does not believe that there is an optimal profile of a leader and every leader has his or her own characteristics. It is the situation that should be handled using different leadership styles. Situational leadership focuses on specific features pertaining to the environment that directs the style of leadership regarded as appropriate and suitable for a particular job situation (McClesky, 2014). According to this theory, single leadership style does not exist to suit all situations, but the style of the leadership is adapted to the need of the situation. Charry (2012) explained that success is determined by many factors such as leadership styles and qualities of the followers as well as situational characteristics. Effective leadership is then defined as the extent of fit between the qualities of the leader and the style of leadership with the demands caused by a certain situation (Lamb, 2013). Therefore, leadership style must match and suited to the needs of decision making in various situations. Leadership styles such as authoritarian, democratic and Laissez-faire are applied to a particular situation (Charry, 2012; Amanchukwu et al., 2015). Hence, it brings to the importance of understanding the situation and then applying the right leadership styles to deal with

the issues within the situation. Situational leadership considers three components: task behavior, employee commitment and relation behavior. To enable the success of situational leadership, there needs to be an openness between the leader and his members. In addition to that, the leader must ensure that there is independence and competence in the decisions of the followers. The leader should also be able to determine the characteristics of his follower so that it can be ascertained as to which leadership style suits the situation (Ghazzawi, El Shoughari and El Osta, 2017).

The interpretations of the context where situational theory was applied to the school situation were gleaned from past studies (such as Crow, 2005; Hargreaves, 2005; Mulford and Silins, 2005; Spillane, Diamond, Sherer and Coldren, 2005; Stoll and Bolam, 2005) that identifies the context refers to the school settings, while in other studies (such as Stott and Sing Kong, 2005; Dimmock and Walker, 2005), the school culture is regarded as the context. Malasa (2007) highlighted the explanation by Southworth (2005) on the different interpretations of the school context whereby the different contexts have brought on different needs and requirement of leaders. Malasa (2007) explained that schools are subjected to variables such as technology and human factors, organizational structure and climate that he argued had made differentiated leadership becoming necessarily applied in the school. Robertson (1995) presented a contingency theory by Fielder to relate to the leadership of the principal. According to him, when the principal is fully-supported, a task-oriented approach is deemed suitable and when there is less support, a relationship-oriented approach is necessary to bring about school effectiveness. Malasa (2007) concluded from this research that the situational leadership theory had highlighted the complexity of leadership, but it did not explain fully which leadership skills are more effective in certain situations. This was due to findings by Robertson (1995) that the theory does

not allow for different personalities of leaders as what might work for one leader might fail for another leader in a similar context. Hence, this has created the need to search or develop the leadership theories by taking into consideration, the traits, personality and situational factors to explain effective leadership (Malasa, 2007). The combination of these three factors is hoped to shed more insights to what leadership styles should be nurtured and applied in a particular situation, as well as the need to embody all these styles as habitual behaviours which eventually becomes the personality of the leader.

2.4.3.3 Transactional Leadership

Transactional leadership theory is also popularly identified as management theories whereby the emphasis is on the supervisory roles, performance of the group and the organization, and the exchange that take place between the leader and followers. The primary aim of transactional leadership is to achieve the objectives of the organization. Charry (2012) explained that these theories are based on the system of rewards and punishments. Transactional leaders give rewards or punishments as a means of motivating employees' performance and to promote relationships with them (Bass, 1985). Lee, Lee and Park (2014) explained that a transactional leader works with the team member and promises a reward them for attainment of goals. The rewards and promises are exchange with work effort. It implies that the leaders' role is to create structures that gives clarity to the expectations demanded of the followers and consequences for meeting or not meeting these expectations (Lamb, 2013). Transactional leadership is also about management-by-exception. This can happen either actively or passively. In an active manner, the leader would correct the mistakes made by his followers as a means of monitoring their performance and in a passive way, the leader waits until the follower makes a mistake

then will only make correction (Smith, 2016). Hence, transactional leadership happens when a leader approaches his or her followers with a transaction in mind; that is, to ensure compliance with effort, productivity and loyalty in exchange for rewards which can be political, psychological or economic in nature (Thakur, 2014).

In the school context, the use of transactional leadership explained how principals or school management utilizes the reward mechanism to ensure that teachers perform in adherence with established goals (Winkler, 2010). Avci (2015) explained that as transactional leaders, the principal does not interfere with the functioning system of organization that has been in existence but continue to ensure that the activities keep going the way they were within the frame of fundamental mission and vision of the school. These leaders are also not very interested in individual characteristics, entrepreneurial and innovative aspects of the teachers (Deluga, 1990). Hence, transactional principal leaders are good at managing the school, and in providing guidance to manage the system within the framework of mission, vision and values of the organization (Bass, 1997). In other words, such leadership is strong in maintaining the current situation but might not be effective to address changes. This implies that with the various changes happening in the school setting, the reliance on transactional leadership alone will not be able to deal with leadership issues within the organization.

2.4.3.4 Transformational Leadership

Burns (1978) has propagated the idea of transformation leadership initially. In his original ideas, transformational leadership is based on interpersonal relationship, motive and value. Hence, he believes that leadership is not about influencing people only but more importantly, it is about developing moral values in

influencing others. It led to subordinates who can think about their contributions to the organization. Burns (2003) regards transformational leaders as "a person who takes care of his followers, mobilizes their forces to meet the needs and potential" (p. 230). Bennis and Nanus (1985) explained transformational leadership as leading the changes in the organizational strategies and leadership so that there is a better fit with the surrounding environment.

Bass (1985) reviewed the original ideas of transformational leadership from Burns (1978) by adding the four components of transformation leadership, of which he believed was important to address the changes in the organization. Northouse (2007) stated that there are four components that make up transformational leadership: idealized influence, inspirational motivation, intellectual stimulation and individualized consideration.

(a) Idealized Influence

The strong and clear vision as well as the determination of the mission of the leader are indicated by the concept of idealized influence. This means that the followers regard the leader as a role model, who is respected and admired as well as whose behaviors are idealized by these followers. The transformational leader is able to set the goals that are to be achieved, explain these goals clearly to the followers, and guide them toward successfully attaining the goals aspired by exemplary actions. The transformational leader is also someone with high expectations about the ability of his or her followers and assures them with support and guidance in order to achieve the desired goals (Tengi, Mansor and Hashim, 2017).

(b)   Inspirational Motivation

The second component of transformational leadership is the inspirational motivation. This reflects a situation where the leader identified high goals, create team spirit, enthusiasm and constantly motivate his followers. The transformational leader comes up with original ideas and encourage entrepreneurship and initiate change in the organization. In the school context, the principal as the leader is responsible to give moral support to the teachers and provides the needed facilities and resources so that the teachers maintain their motivation towards achieving the targeted school goals (Tengi et al., 2017).

(c)   Intellectual Stimulation

Intellectual stimulation relates a transformational leader that motivates his followers to innovate more and become analytical and creative. The transformational leader encourages his followers to discover new ideas and pursue creative solutions to problematic issues. In addition to that, the transformational leader ensures that the followers are able to meet the challenges and figure out the best solutions to the problems that they are facing. In the school context, the transformational leader of the principal is the one who encourages teachers to use innovation and creativity to solve problems in the classroom and within the scope of their job (Aydin, Sarier and Uysal, 2011).

(d)   Individualized Consideration

Individualized consideration identifies a leader who acts as the coach of the team, being considerate about the desire and needs of the followers and giving assistance to them to become successful and thriving. The transformational

leader takes into account individual differences among his followers. This means that the transformational leader regard each of his followers as individuals that are to be respected. The leader encourages and supports the followers as well as builds a conducive working environment for them (Aydin et al., 2011; Tengi et al., 2017). In the school context, the principal knows every teacher personally and attend to their individual needs.

Slocum and Hellriegel (2007) reviewed Bass' ideas of transformational leadership and decided on four similar components or dimensions of transformational leadership. These four components namely: fostering an ideal influence (idealized influence), inspired motivation (inspirational motivation), provision of intellectual stimulation (intellectual stimulation) and consideration of individual (individualized consideration) of transformational leadership must be understood by leaders who aim to transform their followers to become leaders too (Northouse, 2007). Leithwood (1994) had also presented his own ideas about the components of transformational leadership where it was divided into six dimensions: (i) identification and articulation of a vision; (ii) fostering the acceptance of group goals; (iii) conveying high-performance expectation; (iv) provision of appropriate models; (v) provision of intellectual stimulation; and (vi) provision of individualized support.

Transformational leadership is said to be a much better option than transactional leadership in the school context as the latter uses instrumental factors to achieve its targets while the former takes it even further with the creation of trust, admiration, loyalty and respect from employees which are claimed to promote positive organizational change and student learning (Robinson, Hohepa, and Lloyd 2009). This theory is well accepted in the school setting as it promotes a more

constructivist paradigm that focuses on leaders building more persistent social relationships (Lyso, Stensaker, Aamodt and Mjoen, 2011). This is because, transformational principal leaders support and guide the teachers to acquire problem-solving skills via mentoring and coaching (Oguz, 2010; Sheykhshabani and Shojaei, 2015). In comparison between transactional and transformational leadership, the latter is likely to facilitate societal and organizational change in the school (Stump, Zlatkin-Troitschanskaia and Mater, 2016). Nevertheless, since in the school setting, the need to maintain regular tasks and to address changes happen simultaneously, depending on both types of leadership might be needed. In summation, transactional leadership is suitable in leading the teachers to carry out regular tasks while transformational leadership is required when the school needs to adopt changes for the betterment of the entire school.

2.4.4 Changing Paradigm to Shared and Distributed Leadership

Cravens (2019) had presented a commentary review in the Peabody Journal of Education to provide some insights on the school leadership practices in international schools. Among the conclusions that Cravens (2019) has gathered from the various researches published in the journals are: (a) the concept of school leadership begins with earlier concepts of transactional, transformational and instructional leadership but the existence of multiple actors in school leadership is emerging to be known and accepted (Lee, Walker and Bryant, 2018); and (ii) there is an link between professional learning community and teacher leadership which are realized through their social network and collaboration (Lin, Lee and Riordan, 2018).

2.4.4.1 Paradigm Shift in Instructional Leadership

One of the most important aspects of school leadership is instructional leadership. It was initially introduced by Hallinger and Murphy (1985) un the United States. More studies (Mulford and Silins, 2009; Hallinger and Heck, 2010) began to propose that school leadership is a process of mutual influence. According to Mulford and Silins (2009), principalship is an interactive, reciprocal and evolving practice where there is involvement of other players to ensure the effectiveness of instructional leadership.

The earlier notion of instructional leadership was also focused on the role of the principal (Bridges, 1967; Edmonds, 1979; Hallinger, 2011; Hallinger & Heck, 1996; Hallinger & Murphy, 1985; Leithwood & Montgomery, 1982; Lipham, 1961; Murphy & Hallinger, 1992; Robinson et al., 2008). The emphasis on instructional role as a principal's responsibility was based on the notion that it was a functional role related to the formal hierarchy of the school (Lee et al., 2012). However, the complexity of the school environment rendered that a sole leadership is impractical. School is a knowledge-intensive organization where there are various practices of teaching and learning in and out of the classroom. Thus, it is quite impossible for a single leader to perform all the complex tasks and it is imperative that these tasks are distributed among the various leaders in the organization (Harris, 2004; Clutter-Shields, 2011). When the principal attempts to take up other challenges aside from the basic demands of the job, the toll of leadership becomes heavier to carry (Barth, 1990). Lambert (2002) commented on this situation by stating that:

> "The days of the lone instructional leader are over. We no longer believe that one administration can serve as the instructional leader for the entire school without the substantial participation of other educators" (p. 37).

The model of instructional leadership comprises of three dimensions and ten leadership functions to explain the responsibilities of the principal. These dimensions include: definition of the school's mission, management of the instructional program, and promotion of a positive school climate. The first dimension relates to the principal's role to determine the main purpose of the school while the second dimension is about coordinating and controlling the instruction and curriculum. Lastly, the third dimension is to ensure that the cultural climate of the school is focused on continuous improvement (Hallinger, 2011).

Lee, Hallinger and Walker (2012) had conducted a study on the instructional leadership responsibilities and how these are distributed in five International Baccalaureate schools located in four countries, namely, China, Thailand, Hong Kong and Vietnam. Using a qualitative research method, this study had included 68 teachers and administrators as well as 25 students who were interviewed to express their opinions about the distribution of instructional leadership responsibilities in their respective schools. Findings of the study showed the emergence of three important instructional leadership practices which are curriculum articulation, cross-program activities and strategic staffing. Another important finding that relates to this current study is that the role of the distributed instructional leadership to sustain the professional interactions among staff across the organizational units in the schools. However, this study had shown that instructional leadership is no longer focused on the principal as these instructional leadership functions were distributed to other formal and informal leaders in the school.

2.4.4.2 Expanding Roles of the Principal and Greater Teacher Participation in School Leadership

Dimmock (2012) stated that the principal's job has expanded as they are no longer expected to only lead the school, but they are also responsible to increase student learning and ensure that the staff are given opportunities to grow professionally. Due to that, the principal must be able to influence other leaders and entice them to carry some of the leadership responsibilities as well (Spillane, 2006). This has led to more attention on a distributed perspective of leadership to ensure that the principal can manage his or her workload and still ensure that student learning outcomes are excellent (Harris, 2008).

Recent leadership paradigm encourages greater interaction and participation of teachers in decision making (Morrison, 2013). This notion of leadership requires the collaboration of principals and teachers as well as other members in the school to improve and enhance the school towards higher performance and sustain its development (Heck and Hallinger, 2009). Bush and Ng (2019) added that such collaboration among teachers with the principal regarding leadership tasks is also advocated in the Malaysia Education Blueprint 2012-2025. In fact, literature also supported school leadership based on a multi-frame action in the national school system (Abdul Shukor, 2007; Asyikin and Suhaida, 2013; Fullan, 2011; Izani, 2014; Harris, 2013; Yaakob et al., 2015). It is thought that the participation of teachers in school leadership could lead to their actions to implement changes in their classroom instruction (Fullan, 2006; Heck and Hallinger, 2009; Firas, Jinan and Paiman, 2011). This means that the practice of leadership is by everyone at every level in the school organizational structure (Goleman, 2002). Further to that, such practice of leadership means that the teachers can pool their expertise together to achieve a certain goal or

goals (Bennett et al., 2003). However, the idea of distributing and sharing leadership functions is more accepted in the Western school setting as the concept of autonomy is more widespread there. In Malaysia, the concept of school-based management has only been introduced in the education systems in the last few decades and centralization is still practiced in Malaysia schools. This means that Malaysian schools have a hierarchical management structure with a definite boundary of leadership for principals, assistant principals, teacher leaders and teachers (Walker & Hallinger, 2015; William, 2011). In addition to that, a hierarchical structure also dictates the interaction of peers, superiors and subordinates as well as the difference between a leader and followers (Teh, 2011). Hence, changing the school leadership where the existing leaders sharing their leadership power with others, and the teachers being ready to take up more leadership responsibilities are challenges that need to be addressed (Lokman et al., 2016; Rhodes and Brundrett, 2012). In addition to that, cultural difference might influence its practice and acceptance in Malaysia.

2.4.4.3 Consideration for Distributed Leadership

The four theories of leadership that were explained much earlier in this chapter has emphasized on the qualities of a single leader and his or her influence on the followers. Another theory, which has recently gained popularity and consideration in explaining the mechanism of leadership within the school context is distributed leadership. Prior to distributed leadership, other models of leadership were introduced in the 1900s such as collegial and participative leadership (Crawford, 2012) but distributed leadership seems to gain more popularity among scholars and practitioners (Gronn, 2010; Harris, 2010). In fact, distributed leadership is often misconstrued to be same as the term 'collaborative leadership' (Rosenthal, 1998), 'shared leadership'

(Pearce and Conger, 2003), 'co-leadership' (Heenan and Bennis, 1999), 'collective leadership' (Denis, Lamothe, and Langley, 2001), and 'emergent leadership' (Beck, 1981). These terms agree on the same notion that leadership is not concerned as being the monopoly or responsibility of an individual person, but on the contrary, it is regarded as a social process (Barker, 2001; Bolden, 2011). It is also a theory that encompasses the gist of the previous theories such as the transactional and transformational theories and extended it to other leaders identified in the school.

Distributed leadership gained popularity as a 'post-heroic' concept shifting away from the emphasis on leadership on the attributes and behavior of the individual 'leaders' as propagated in transactional and transformational leadership and moving towards a more systemic perspective of leadership as a communal social process arising due to the interaction of more than one actor (Bolden, 2011; Uhl-Bien, 2006). Distributed leadership has become popular in the 21st century (Bush, 2019; Harris, 2010) to replace the solo leadership which is thought to not being able to deal with contemporary leadership which has become more complex. The empowerment of others to become leaders increases leadership density so that learning outcomes are enhanced to ensure the school community, especially the students are able to meet the challenges of the 21st century learning (Bush and Glover, 2014).

To alleviate the misconception about the relationship between transformation leadership and distributed leadership, it should be noted that these two leadership styles are focused on mobilizing people to perform tasks so that goals are achieved (Spillane et al., 2004). However, it should be noted that leadership in the school regardless whether they are transformational or not in nature, is mostly distributed (Leithwood and Jantzi, 2000; Spillane et al., 2004). Therefore, this spells out that transformational leadership itself is a subset of distributed leadership.

Harris (2008) reviewed the literature to gain more understanding about distributed leadership based on empirical evidence in relation to organizational change, school effectiveness and school improvement and leadership. His findings revealed that distributed leadership is related to organizational change. This was supported by Jackson and Temperly (2007) who stated that distributed leadership is critically needed to transform the school as change is indeed inevitable. Harris (2008) highlighted that distributed leadership plays an important role in building professional learning communities in the school context. This is because in distributed leadership, the leadership roles are extended beyond the principal himself or herself but shared with other teachers as well.

Gronn (2002) explained that distributed leadership in the school context might happen in three different forms. Firstly, spontaneous collaboration where there are grouping of individuals with differing skills, expertise and knowledge abilities from different levels of the organization who create a team so that they can pool their resources and expertise to achieve a particular goal and once attained, the team will then disband. Secondly, intuitive working relations which reflects the true nature of distributed leadership where members of the organization rely on each other and work together for a mutual cause. Leadership can be observed in the shared roles among members of the group bounded by their relationship. Thirdly, institutionalized practice refers to the committees and teams which are created as formalized structures in the school.

Therefore, the practice of distributed leadership in school is based on planned alignment or spontaneous alignment. However, when the grouping or teaming up is done, there could also be spontaneous misalignment and anarchic misalignment that renders the failure of distributed leadership (Leithwood et al., 2007). Planned

alignment reflects the institutionalized practice where prior thoughts were considered before forming the leadership team. In planned alignment, the goal of the team, how they work and who are in the leadership team were given consideration. On the other hand, spontaneous alignment implies the lack in planning and people in the organization make tacit and intuitive decisions to perform leadership functions. The spontaneous misalignment results in the spontaneous alignment of leadership distribution but the outcome from the formation of team was not fruitful. Anarchic misalignment on the other hand, refers to the active rejection on the organizational leaders and thus, does not lead to cooperation among the team members.

Dimmock (2012) presented the rationales why distributed leadership should be considered as a school leadership in current situation. The school or in particular, the principal has a high level of accountability to ensure that changes in teaching and learning lead to excellent achievement of the students. Thus, the principal solicits the assistance and support from teachers by empowering them to pay significant parts of enhancing the performance of the students. Through a professional learning community in the school, the leadership roles can be distributed to multiple individuals to lead change initiatives for the school. However, it is the principal that needs to set the tone to foster and promote collaboration for leadership among the community in the school (Gronn, 2003). Collaboration has opened the opportunity for all teachers to become leaders and create changes together to improve and enhance the quality of the school (Leithwood et al., 2006). Thus, leadership is no longer perceived as being solely reliant on the principal's skills and knowledge, but it is the combine skills and knowledge that come from the interaction between people and their situations (Spillane, 2006). In other words, distributed leadership is centered on the interaction among the people in the school context.

The execution of distributed leadership in school however, is not an easy task. Boundary management issues and competing leadership styles are some of the challenges that need to be addressed in the implementation of distributed leadership (Harris, 2008). The teacher leaders are not formally appointed as leaders and therefore, they might be vulnerable to issues of disrespect and disregard. Further to that, the selection of teacher leader could be biased and those with the potential expertise might not be selected to be in the leadership team because of selective criteria based on different perspectives (Timperly, 2005). Thus, this could lead to lesser cooperation in the leadership team and misalignment of goals.

The following section provides a more extended explanation about distributed leadership which is also the main independent variable of this study. The explanation entails the definition of the concept and the development of the concept through empirical and theoretical support, leading to an understanding of what distributed leadership is.

2.5   Distributed Leadership

This section provides an explanation and description of distributed leadership which includes several sub-sections like conceptualizing distributed leadership, challenges of distributed leaders, and components of distributed leadership.

2.5.1   Conceptualizing Distributed Leadership

Holloway (2017) explained that the concept of distributed leadership is actually not something new. It was first mentioned by and Australian psychologist, Gibb (1954) who highlighted the dynamics of the processes of influence of different work groups. Gibb (1954) had made his stance back then that leadership is not a monopoly position,

but it entails the sharing of roles and responsibilities by many people in the organization. Distributed leadership has gained more attention globally with studies implemented in Gree (Vlachadi and Ferla, 2013), Instanbul (Cansoy and Parlar, 2017), Saudi Arabia (Aburizaizah, Kim and Fuller, 2016), Ethiopia (Mitchell, 2017), China (Chang, 2011) and Mexico (DeMatthews, Edwards and Rincones, 2016).

The concept of distributed leadership emerges from the intertwined theories in sociology, cognitive, psychology and anthropology (Hermann, 2016). To be more exact, distributed leadership is reinforced by the theory of Distributed Cognition (Hutchins, 1995) and the Wenger's Community of Practice (Spillane, Halverson and Diamond, 2001).

Cognitive science is an interdisciplinary field of research that studies and provides understanding about what cognition is. Distributed cognition was proposed and developed by Hutchins and his colleagues in the 1980s. The theory posits that information processing is distributed over a unit of analysis which is considered to be larger than the individual cognitive agent (Rogers, 1997; Perry, 2003). Cognition requires the involvement of one or multiple agents in a physical, social and cultural environment. Its goals are the understand cognition at the system level and not at the agent level (Rybing, 2018). Likewise, distributed leadership is not concerned about a single agent in the principal, but also the other multiple actors in the school organizations like the assistant principals, senior teachers and other teacher leaders to bring about change in the school.

Wenger's community of practice on the other hand, is a construct grounded in the sociocultural theories of learning and development. It is based on the belief that all human development is supported by social interaction in cultural practices that is mediated by the use of cultural artifacts, tools and signs (Jimenez-Silva and Olson,

2012). Community of practice therefore, is about organizational learning that happens through the informal interactions of the people in a social context. These individuals have similar interests and work together in the same work environment (Wenger and Snyder, 2000). According to Wenger (2000), community of practice is "a group of people informally bound together by shared expertise and passion for a joint enterprise" (p. 139). Therefore, in the context of distributed leadership in school, the community reflects the leadership team comprising of the principal, assistant principal, and teacher leaders who jointly lead the school based on their shared expertise and passion so that the school goals are achieved.

The definition of the term 'distributed leadership' stems from the common themes in literature such as pooled expertise, collective leadership, shared responsibilities and development of different 'power relationships (Clutter-Shields, 2011). Liu and Werblow (2019) explained that based on the Practice-Centered Theory, distributed leadership can be defined as a process of collaborative interactions involving the leader and the followers whereby these interactions are situational in context. Harris (2004) defined distributed leadership as a kind of a collective leadership whereby the teachers gained expertise through their collaborative works. This implies that the leadership responsibilities in the community is shared in a collective manner due to the differing expertise of the members of the community. Spillane, Halverson and Diamond (2001) defined distributed leadership as a practice that is widely stretched over the aspects of the social and situation in the school. Harris (2004) explained that distributed leadership is not about delegation of the leadership tasks, but it is more of a social distribution of leadership whereby the leadership tasks are accomplished via interactions of the various leaders

Distributed leadership is the type of leadership that is concerned about the individual capabilities, skills and talents (Mayrowetz, 2008) but based on joint responsibility (Bennett, 2010). Thus, it is an emergent property arising from a network of individuals in interaction who are open to boundaries and expertise (Triegaardt, 2014). It is the process of leadership involving the collaborative relationships to implement collective actions based on the shared values of the individuals working together to ensure positive changes are achieved (House and Aditya, 2012).

The distribution of leadership in the organization is indeed necessary because if the principal is the only one having the authority to make decision and the teachers are merely to follow these decisions, then the teachers would feel being insignificant and irrelevant with no value to the school (Holloway, 2017). Therefore, by sharing responsibility and accounting the teachers for decisions that they made will encourage the 'valued' feeling among these teachers.

The increasing demands and the complexity of the school environment have rendered it to be quite challenging for the school principal to do the leadership role alone (Spillane, 2005). Coupled with a high-stake accountability, principals have insufficient time to complete the heroic activities alone (Gronn, 2003). The conceptualization of distributed leadership replaced the single 'heroic' leader, paving the acceptance of leadership activities being distributed across multiple people and situations (Copland, 2003; Spillane, 2006). Distributed leadership promotes the decentralization of a single leader (Harris, 2003) to include multiple individuals to lead change initiatives within the school system (Leithwood, Mascall, and Strauss, 2009; Spillane and Diamond, 2007). Organizational boundaries in the schools are changing and being redefined due to the promotion of networking, partnership, collaboration and sharing of leadership (Woods, Bennett, Harvey and Wise, 2004). Gronn (2008)

explained that in a collaborative leadership, there is a real participation of leadership and decision making at all levels and numerous decision processes. Coaching and mentoring are strongly associated with distributed leadership because they focused on problem solving and the continuous process of learning and reflection (Gronn, 2008; Botha, 2016).

According to Bennett et al. (2003), the concept of distributed leadership is regarded as "… a group activity that works through and within relationships rather than individual action" (p. 3). Bolden (2013) added that distributed leadership depends on the relationships and configurations that surround and enable various people to assume leadership capabilities and expertise in a variety of roles. Spillane and Diamond (2007) stated that distributed leadership puts its emphasis on the leadership systems and shared practice contextually. Hence, distributed leadership can be perceived as a system in which there are various actors, in different positions within and between organizations, participating in directing and coordinating works with varying degree of success (Bolden, 2011). This concept assumes that everyone in the organization has a leadership role to play so that the responsibility to lead is not burdened to a single leader as envisioned in previous leadership theories. When it is used in the context of a school, distributed leadership identifies the need for the principal to let go of the notion as a single heroic leader and share his leadership roles with other leaders in the school. These leaders may comprise of the assistant principals, senior teachers, subject teachers, class teachers and other teacher leaders who at their own level are making decisions and leading the school to a certain extent.

Holloway (2017) had summarized some of the thoughts and perception of previous researches about the theory of distributed leadership. Among them are Gibb (1954), Elmore (2000), Cambren (2003), Spillane (2005), Copeland and Boatwright

(2006), Salahuddin (2010) and Klar (2012). Their thoughts are captured in the following diagram in Figure 2.1.
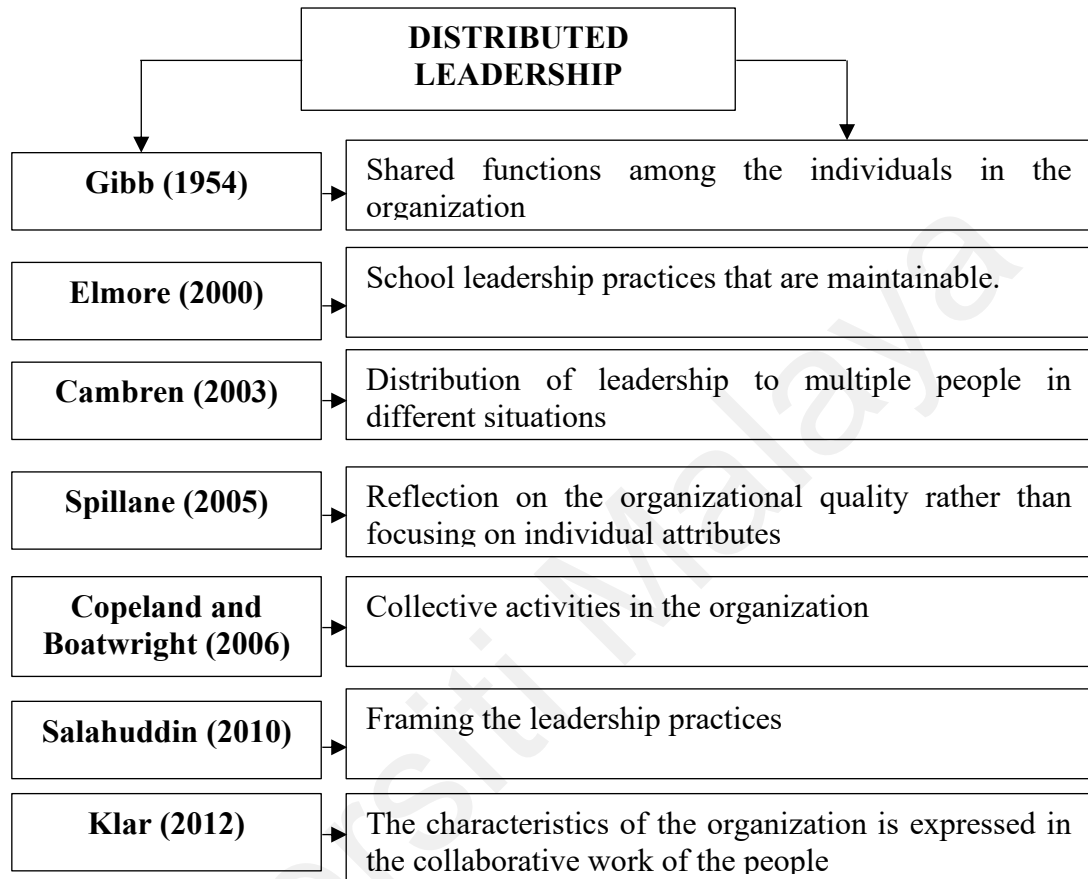
Figure 2.1. Thoughts on Distributed Leadership by Past Researchers

Source: Adapted from Holloway (2017)

The development of a school culture that embraces distributed leadership concept should be in adherence to some characteristics of the leadership itself. Holloway (2017) compiled some of these characteristics as features of distributed leadership in the school context in Table 2.2.

Table 2.2

Features of Distributed Leadership in the School Context

Features	Source
A wider and broader distribution of fundamental leadership within the school environment	Elmore (2000)
The interacting components of the leadership must be understood concurrently	Spillane (2005)
Dispersion and sharing of leadership extend beyond the distribution of leadership roles	Leithwood et al. (2006)
Distributed perspective varies from other leadership frameworks relating to school	Spillane (2005)
School principal is ready to let go of his or her various duties and being open to leaders with expertise in their own fields	Natsiopoulou and Giouroukakis (2010)
Distributed leadership has become a necessity for school, and it becomes a mean for the principal to act as an effective leader	Mitgang, Gill and Cummings (2013)

Source: Adapted from Holloway (2017)

In previous studies, the focus was on leadership where the heroic, valiant and single leader is responsible to lead, direct, and influence the future path of the school. However, recent paradigm has shifted from traditional and transformational practices to a more vibrant, dynamic and adaptive concept of distributed leadership (Hartley, 2010). Instead of focusing on the individual leadership of the school leader, namely the principal, the leadership's influences on school success and students' high performance has been related to the practices of collective and distributed leadership (Mascall, Leithwood, Straus and Sacks, 2008). In fact, a study conducted by Bush and Ng (2019) involving 14 schools in Selangor and Sarawak had shown that the Malaysian Education Blueprint prescribes distributed leadership as a strategic move of the principal and head teachers to replace traditional administrative styles of

leadership. This concept of distributed leadership is in alignment with the concept of leadership among teacher. Teachers are already regarded as assigned leaders in the classroom (Bush and Glover, 2014). Through distributed leadership, it is hoped that beside carrying their responsibilities on teaching and leading in the classroom, this could harness the teachers to become subject specialists with emphasis on the development of curriculum and assessment. Subject specialist teachers are referred to as specialist educators with acquired in-depth knowledge about a subject area and having a better understanding of the subject area (Coles, 1995). The combination of education, experience and professional development enable the teachers to be accredited as a subject specialist (Junqueira and Nolan, 2016). Hence, distributed leadership practice could be a means of professional development process that transform the already experienced teacher as a subject specialist.

Another concept of teacher leadership is master teachers whose roles are targeted to provision of pedagogical guidance to peer teachers (Bush, Glover, Ng, and Romero, 2016). Master teachers are teachers with the right personality, equipped with knowledge and skills and able to expand the learning outcomes of students. The master teacher also has excellent communication skills, visionary, proactive and able to contribute to the development of education in the country (Ibrahim, Abdul Aziz and Nambiar, 2013). The development of master teacher or master teaching was in fact, included as one of the educational goals in the Malaysian Education Blueprint 2013-2025 alongside with subject specialists under Shift Four. This was in line with the need to improve the quality of teachers and addressing the succession planning of teachers towards leadership, master teaching and subject specialist roles (Bush et al., 2016).

The development of subject specialists and master teachers is limited in an education system that is hierarchical as in the case of the traditional Malaysian

education system. The endorsement of distributed leadership in the MEB presented an opportunity to support teacher leadership and capacity building (Bush and Ng, 2019). Therefore, shifting the focus to distributed leadership practice can provide more understanding of its mechanism and influence on school context (Hulpia and Devos, 2010). It helps to identify whether the concept of heroic leadership is still being practiced or that, leadership roles are taken up by other members of the school organization aside from the principal. Although studies on distributed leadership in Malaysia are limited, Jones et al. (2015) provided evidence of transformational and distributed practices of principals in Malaysia. Their findings showed that principals in secondary school are progressively perceiving themselves as leaders who lead changes and empower others.

Additionally, the practice of distributed leadership ensures accountability (Akdemir and Ayik, 2017). Due to the distribution of responsibilities and authority, the accountability which was held once by the principal only, is now shared with all members of the organization. Therefore, accountability is ensured, and with it, democracy is practiced at school as teachers are also participating in decision making process and share the leadership in managing the school (Akdemir and Ayik, 2017; Harris, 2012; Mayrowetz, 2008). The active participation of teachers in making decision together in the school is a clear sign that there are distributions of leadership roles and responsibilities, making these teachers also accountable to ensure success and performance of both the students and school.

Furthermore, distributed leadership acknowledges that teachers are involved in the process of decision making. A study among teachers in a city in northern Malaysia was done by Asyikin and Suhaida (2013). They noted that the practice of distributed leadership among teachers was at a moderate level in terms of participative decision

making, cooperation within the leadership team and leadership supervision. Past studies have also provided evidence from schools all over the world that it is necessary to include teachers in decision making and managing the school so that it leads to positive outcomes of the schools (Bush and Glover, 2012; Spillane, 2012; Tian, Riksu and Colin, 2016). This suggests that when leadership is shared and distributed, the attitudes and perspectives of the teachers exhibit positive changes that lead to better outcomes among the students (Chang, 2011; Leithwood and Mascall, 2008). Therefore, the main target of distributing leadership from the principal to the teachers in the school is to ensure that the students gain the most benefit as exhibited in their improved performance.

A quantitative and cross-sectional survey was carried out by Yaakob et al. (2015) in the northern zone of Malaysia involving 341 secondary school leaders. Using the Kouzes and Posner's (1995) Leadership Practices Inventory (LPI), this study presented evidence that all dimensions of leadership practices such as inspiring a shared vision, modelling the way, enabling others to act, challenging the process, and encouraging the heart were distributed among school leaders.

In addition, the practice of distributed leadership also promotes greater interaction among the people, and this leads to the encouraging of greater commitment and effectiveness of the teachers (Leithwood and Mascall, 2008). Abdullah, Ahmad and Zuraidah (2012) carried out a study in a daily premier school in Selangor and found significant practices of distributing leadership among the leadership team such as having mutual and shared school's goals, mission and vision as well as school culture that emphasizes on cooperation, collaboration, and professional learning community. Besides that, teacher leadership practice promotes greater student engagement and achievement. Other studies pointed out the association of teachers'

involvement in decision making with the outcomes of the students such as their motivation, efficacy and academic achievement (Muijs, 2011).

Abdul Halim (2015) carried out a correlational study to assess the relationship of distributed leadership with teachers' self-efficacy. The sample size was 831 selected from 17 residential and national secondary schools in Malaysia. The study showed that distributed leadership and self-efficacy are significantly related with relatively higher correlation among residential school teachers compared to national secondary school teachers. Therefore, it signifies the importance of practicing distributed leadership by the teachers as much as ensuring transactional and transformational leaderships are practiced by the principal.

Spillane (2006) explained that distributed leadership is a practice of distributing leadership roles and functions over leaders and followers to address their situation and it encompasses the activities of multiple individuals in groups. Therefore, distributed leadership is done socially whereby the distribution of the leadership functions span over individuals and tasks are accomplished due to the interaction of many leaders in the groups. Gronn (2002) also added that distributed leadership is an embryonic property of a group of networks of individuals who interact with each other. However, in a study by Norwawi (2017) on distributed leadership in high performing school, it was found that the true concept of distributed leadership was not practiced. Rather, the distribution of leadership functions was more "allocative" rather than "emergent" in nature (Bennett et al., 2003; Bolden, Petrov, and Gosling, 2009). This was evident from the practice of delegation of tasks by the principals to the middle and senior leaders, and not empowerment to let these leaders act independently.

2.5.2   Challenges of Distributed Leadership

Dampson, Havor and Laryea (2018) stated that the implementation of distributed leadership in the school context may be subjected to a lot of challenges. First and foremost, distributed leadership itself is a changing paradigm on school leadership and this may take adjustment from the teachers to get use to the idea of being given the responsibility of shared leadership. Mayrowetz (2008) stated that teachers may stressed over the need to be part of the shared decision-making process and their participation in the leadership team might not necessarily lead to better teaching practice, especially if the teachers' goals are not aligned to the organizational goals. In addition to that, the organizational climate and the micro politics in the school might not be overly open to changes or innovative ideas of the younger teachers especially when it deviates from the traditional opinions. In fact, it could be treated as a threat to the status quo. Dampson et al. (2018) stated that teachers are more comfortable working with other teachers based on friendship and equal status but given a leadership role might lead to apprehension about the expectations of the principal and their colleagues regarding their role as a leader. One of the setbacks of distributed leadership is that there could be an abuse of power. This could happen if the principal is more familiar with top-down approaches and in the attempt to distribute leadership, he or she transfers some amount of control so that other leaders among the teachers can assume power (Copland, 2003; Hermann, 2016). Nonetheless, the teacher leaders might take it upon themselves to execute their decisions without getting feedback from other members of the team, thus opening the chances for abuse of power (Hermann, 2016). On the other side, principals might also be reluctant to relinquish their power as this implies lack of direct control and leaving them vulnerable to others. Hence,

these issues and challenges need to be addressed in order for distributed leadership practices being successfully implemented in schools.

Murphy, Smylie, Mayrowetz and Louis (2009) stated that the current structure of most schools these days are not conducive and poses a lot of barriers and challenges for the distribution of leadership. Hence, this brings to the role of the principal who is in the right position with the required influence that could help in building a school culture which is more facilitative to distributed leadership. The density of leadership in most schools is centered at the top administrative level and it is the principal duty to reshape the structure and enable a deeper pool of leadership across the organizational layers.

2.5.3 Dimensions of Distributed Leadership

It is accepted that distributed leadership is a multidimensional construct and some of the dimensions or components of distributed leadership include formal leaders' support (Angelle, 2010; Spillane and Healey, 2010), trust among the employees (Oduro, 2004), artifacts supporting the distribution of leadership (Timperley et al., 2009) and strategic employee policy (Lee and Hallinger, 2012). In other studies, dimensions of distributed leadership also included shared decision making, teacher empowerment and advancement in leadership (Hairon and Goh, 2015). Distributed leadership is also defined as being the quality and distribution of support and supervision, cooperation in the leadership team and participation in decision making (Hulpia et al., 2012; Rosseel, Devos and Hulpia, 2009). Heck and Hallinger (2009) conceptualized distributed leadership as a well-structured distribution of leadership that is in alignment with planning. Conclusively, distributed leadership is conceptualized as being represented by components like shared

accountability (Hulpia et al., 2012), collaborative decision making (Spillane et al., 2007), professional learning community (Marks and Printy, 2003) and staff empowerment (Bush and Glover, 2012). According to Liu and Werblow (2019), most of the leadership functions distributed by the leadership team was for developing people and managing classroom instruction. The teachers are less likely to be involved in the process of hiring and the governing board of the school would not be participating much in instructional management.

The operationalization of the concept of distributed leadership came from three different viewpoints. Firstly, Leithwood and Mascall (2008) stated that the probable sources of influence such as district level administrators, principals and teachers who are allotted roles of leadership. The focus of this studies was on those responsible for key leadership functions. Secondly, distributed leadership was also determined based on the collaborative decision making that involved the school administrators, the teachers, students and parents (Heck and Hallinger, 2009). Third, the focus was on the leadership team as a whole (Avolio and Bass, 1995; Pearce and Sims, 2002). Hulpia et al. (2009a) however, combined all three operationalization of distributed leadership to provide a more wide-ranging understanding about the concept of distributed leadership. Hence, in Hulpia, Devos, Rosseel and Vlerick (2012), distributed leadership comprises of four dimensions: (i) the participative school decision making of teachers; (ii) cooperation within the leadership team; (iii) the quality and distribution of leadership functions; and (iv) the quality and distribution of supervision. In other words, the functions of leadership are distributed among the people in the organization, which are then practiced collaboratively so that everyone has a say in making effective decisions for the students and the school.

2.5.3.1 Leadership Function Quality and Distribution

Leithwood and Seashore-Louis (2012) referred school leadership functions as the basic components of the leader's attributes in a school. These functions can be fulfilled by various stakeholders, irrespective whether they are in formal leadership function or otherwise (Harris and DeFlaminis, 2016). The leadership team in the school context normally include the principal, the assistant principals and teacher who are assigned leadership roles. Harris and Muijs (2005) explained that teacher leaders however, may have responsibilities but lacking formal authorities over other teachers. Carson et al. (2007) explained that the conceptualization of the term 'distributed leadership' is based on how strong the influence is on others and where the influence comes from. Therefore, by assessing the quality of leadership functions, this can provide information on the amount or strength of leadership that is performed by at least a member of the leadership team. Likewise, by assessing the distribution of leadership functions, this can glimpse on how disperse these leadership functions are among the members of the leadership team. In their study, Hulpia et al. (2012) limited the assessment on quality and distribution of core functions among leaders who are successful leaders only, which focuses on supportive leadership function. This function relates to the responsibility of the leader to foster and set a mutual school vision and clarity in goals, while at the same time, they motivate and assist teachers, as well as stimulate their professional learning (Hulpia et al., 2012; Leithwoord and Jantzi, 1999).

2.5.3.2 Supervision Quality and Distribution

Supervision is the observation of the performance of an individual or a group of individuals on a task or task or tasks. According to Purwanto (2017:390),

supervision is "seeing and reviewing from above or assessing from the top done by the superior to the activities, creativity and performance of the subordinates". Sullivan and Glanz (2000) defined supervision as a school-based practice of engaging teacher in a meaningful instructional dialogue and reflection that is non-judgmental and continuous with the purpose of improving teaching and learning in the classroom.

Supervision is a complex process as it entails the collegial and collaborative relationships of the teachers with other educators (Abebe, 2014). It is considered as part of the organizational function to promote teachers' growth by improving their teaching performance and enhancing student learning (Nolan and Hoover, 2004). Supervision, when it is executed effectively and efficiently do have an influence on the clients' organizational commitment (Boshoff and Mels, 1995). Supervising the teachers and the learning of the students in the in the classroom is important to evaluate the effectiveness of teaching in the school (Abebe, 2014). However, supervision is not always performed effectively as there are challenges and issues like inefficient supervisors and teachers' negative perception about supervision (Mardhiah and Rabiatul, 2016). Abdul Hads and Nurhayati (2010) explained that it is through supervision that the teachers are given assistance to grow personally and socially on the professional aspects.

One of the major roles of a traditional principal is supervising teachers in the classroom. With distributed leadership, the supervisory roles are also assumed by teacher leaders and other senior teachers in the school. The supervision needs to be carried out in a systematic and well-planned manner to ensure teachers are able to achieve educational goals effectively through better learning process (Sudarjat, Abdullah and Sunaryo, 2015). Inefficient supervision of the teacher is often based on the use of traditional system that has been outdated such as using checklist for

evaluating criteria, simplistic evaluation of comments, lacking in consistency of the evaluation process and getting no input or feedback from the teacher being observed (Danielson, 2011). Schools now are increasingly finding new ways of involving more leaders in decision making and solving problems. The school leader often takes the supervisory role and for that, he or she needs to have good communication skills, committed, and accountable for the results of the school staff (Samuel, 2006).

The supervisory leadership function relates to the transactional leadership model and the instructional leadership model (Hulpia et al., 2012). Supervising people is an art and a skill. It is viewed as an art because of the need for the supervisor to adopt and adapt his knowledge and use it uniquely. It is a skill because the supervisor needs to have the basic theories about communication, motivation, counseling, resolving conflicts and performance to perform effective and efficient supervision (Claude, 1992; Abebe, 2014). According to Anusuya (2013), the principals in their supervisory duties often added to their workload while the teachers felt that the process of supervision is merely an excuse for the principal to find their weaknesses and mistakes. Mardhiah and Rabiatul Adawiyah (2016) stated that a quality supervision can only be done by a principal who has excellent supervisory skills but there are some supervisions done by school administrators who showed lack of supervision competency that did not convince teachers.

Hamdan and Nurlia (2011) stated that in curriculum management, supervision by the school management is important to monitor the effectiveness of teaching in a school. Supervision assists teachers to coordinate teaching activities and encouraging teachers to achieve excellent work performance and improve their self-potential as well as overcoming any weaknesses if any. Therefore, this concept is not

alienating itself from the other theories of leadership but in fact, blends and integrate these leadership theories into a unified concept.

2.5.3.3 Cooperation in the Leadership Team

Distributed leadership is a concept that does not limit to the combined effect of the participating individuals (Gronn, 2002; Spillane, 2004). On the contrary, it is the rigorous action of a network of individuals interacting together so that effective decision making can be made (Hulpia et al., 2012). Fletcher and Kaufer (2003) stressed that this sharing of leadership roles is perceived as being a dynamic and collective activity that is multidirectional and used in a specific situation. Thus, Hulpia et al. (2012) proposed that cooperation in the leadership team should pose as another dimension of distributed leadership. This dimension focuses on the mechanism of interaction of the members as they work together towards a specific course. Three characteristics describe how cooperation in the leadership team is executed: (a) group cohesion reflects how the team members are open to each other as they cooperate, communicate and trust each other (Holtz, 2004); (b) role clarity or the assurance of how roles are divided among team members clearly and the management structures within the organization; and (c) goal orientedness where there are clear vision and missions mutually shared by all team members (Senior and Swailes, 2007). The cooperation within the team characterized by group cohesion, clarity of roles and an orientation towards pursuance of goals is critical to the success implementation of distributed leadership in the school. The leaders at all levels in the school should work together as a team to ensure that their mutual goals are attained.

2.5.3.4 Teacher Participation in Decision making

In distributed leadership, the principal who is at the top of the organizational structure is not the only one that perform leadership in school. The distribution of leadership functions implies that there are other leaders aside from the principal like the assistant principal, curriculum specialist, subject specialist, master teachers, classroom teachers and parents who could also perform leadership functions (Spillane, 2006; Spillane and Diamond, 2007; Clutter-Shields, 2011). Some of the responsibilities of a formal leader may include shaping the curriculum, hiring employees, developing school schedules, placement of teachers and students in classes, organizing and providing professional development programs for employees, evaluation of the staff performance, drafting and developing school improvement plans.

Leadership should be carried out by the entire educational community (Harris, 2008). Ho (2010) stated that participation in decision making is not an easy task as there are many different areas for making decision and these decisions are made based on different levels of desire and sources of power. There are various aspects in school that require decision making, ranging from general administration to instructional and curriculum coordination and also including staff development and allocation of resources (Sarafidou and Chatrziionnidis, 2013). Teachers' participation in decision making is related to job satisfaction. Pashiardis (1993) explained that schools with a culture of teachers participating in decision making normally have principals who are skillful in mobilizing groups through shared leadership. Hence, distributed leadership needs to include teachers' participative decision making as a dimension of distributed leadership (Hulpia et al., 2012). Distributed leadership believes that leadership practices should be shared and distributed among the people

in the organization (Malloy, 2012). It is not simply the assigning of tasks or assigning teachers to specific tasks (Penlington, Kington, and Day, 2008). On the other hand, it is about working for the same goals based on continuous communication and emphasizing on interaction rather than individual effort so that it is possible for the teachers to work collectively and learn together (Halverson, 2007). Botha and Triegaardt (2014) added that distributed leadership is about teachers who can and must lead and contribute to leadership. It takes the limelight off the principal who in transformational and transactional theories is regarded as the main and single leader yet, in distributed leadership, the leadership roles and functions of the teachers are also considered as paramount to ensure high performance of the school and sustained success.

The concept of distributed leadership is based on what Bolden, Hawkins, Gosling and Taylor (2011: p. 36) described as "dynamic, relational, inclusive, collaborative and contextually-situated." Therefore, empowered teachers make decisions pertaining to teaching and learning as well as assessment (Szeto and Cheng, 2017). Further to that, the participation of teachers in the process of making decision provides the opportunity for a diverse opinions and information that could lead to better decision making compared to decisions made solely by a single leader (Volante, 2012). Problem-solving can be enhanced when decision making engages not only the principal but the teachers as well, as there will be diverse knowledge and perspective (Northouse, 2016). Harris, Monypenny and Prideaux (2016) stated that the principals' strategies for decision-making influence the satisfaction of the teachers. However, when the decision-making is intuitive and based on avoidance, this could negatively influence job satisfaction.

Yangaya and Magaji (2015) investigated the effect of school leadership and teacher empowerment on job satisfaction of 370 secondary school teachers in Katsina State, Nigeria. This study confirms that school leadership has a positive relationship with teachers' job satisfaction, but it was insignificant. In this study school leadership was measured as transformational leadership. Teacher empowerment was shown to have positive and significant relationship with job satisfaction. Empowerment means providing the teacher with the opportunity to participate actively in making decision on specific matters which are related to the achievement of organizational goals and ensuring positive outcomes for the students and school (Yangaya and Magaji, 2015). Ripley and Ripley (1992) explained that giving power to the teachers in decision making does not mean that the principal is giving up control of the organization, but it means changing and modifying how the control is used in the organization.

Clutter-Shields (2011) investigated the contribution of distributed leadership to teacher's decision making in the classroom. Based on data collected from certified staff members of elementary, middle and high schools in Missouri, this study confirmed the correlation between distributed leadership and teachers' instructional decisions. Therefore, this implies that teachers as leaders are not taking the leadership roles and functions of the principal, but they are assigned to lead and proactively make decisions relating to issues of teaching, learning and assessment.

2.6   Job Satisfaction

This section provides the conceptualization of job satisfaction based on empirical and theoretical support and the division of job satisfaction into its dimensional aspects.

2.6.1 Conceptualizing Teacher Job Satisfaction

A very early definition of job satisfaction but still currently used in most research until now is the one given by Hoppock (1935) stating that it is the amalgamation of physiological, psychological and environmental situations that make a person to be truthfully satisfied with his job. Vroom (1964) also provided a traditional definition of job satisfaction whereby according to him, job satisfaction has affective orientations and pertaining the work roles that the individual is presently occupying. Mottaz (1988) defines job satisfaction as the response of an individual in an emotional manner regarding the workplace. Additionally, Robert (2000) views job satisfaction as the difference between gained incentive received by the individual and the perceived incentive that he or she believes to be obtained from their work in the organization. Locke (1969) added that job satisfaction relates to the pleasant emotional feeling as an outcome of the individual's assessment of the values of his or her job. Therefore, when people become dissatisfied with their job, this resulted in an unpleasant emotional condition which is blocking the accomplishment of the employees' job values (Awais, Malik and Qaisar, 2015). It is imperative to ensure that dissatisfaction is avoided at all cost and more efforts are made to increase job satisfaction as this generates a positive attitude.

Other definitions are given by Kaliski (2007) who explained job satisfaction as the main element pertaining to income, promotion, achievement of goals and recognition which can lead to a feeling of contentment. Armstrong (2006) defines the term 'job satisfaction' as the individual's feeling and attitude about his or her work. When attitude is positive and favorable, then this indicates satisfaction about the job whereas on the other hand, when the attitude is negative, this spells out dissatisfaction about the job. Thus, it can be concluded that satisfaction is an affective state which can

be seen as a positive or negative attitude regarding the person's job, and that this state of feeling or attitude is achieved from the cognition process about the factors within the job environment.

There are numerous theories on job satisfaction and one of the most cited one in literature is the Herzberg's two-factor theory (1959) which differentiates motivators and hygiene factors as mutually exclusive determinant of job satisfaction. Job-associated factors or "satisfier" such as responsibility, achievement and intrinsic challenges are distinguished from job context-related aspects or "dissatisfier" like policy, salary and physical working conditions (Akhtar, Hasmi and Naqvi, 2010). The presence of satisfiers or motivators contribute to job satisfaction but in its absence, job satisfaction is neutral and would not cause dissatisfaction because the factors that contribute to dissatisfaction are on a different scale (Herzberg et al., 1959). The dissatisfier or the hygiene factors also do not cause the individual to be satisfied with his or her job when it is absent but, in its presence, they become a source of dissatisfaction (Alfayad and Mohd Arif, 2017). Therefore, imperative to ensure that both hygiene factors and motivators are maintained within the organization to maintain a high level of satisfaction.

The Herzberg Two-Factor Theory had divided factors of job satisfaction into two main factors: the motivation factors which are mostly intrinsic and the hygiene factors which are mostly extrinsic. Figure 2.2 presents the factors in each category.

Motivation Factors		**Hygiene Factors**
• Achievement • Work Itself • Recognition • Responsibility • Possible Growth • Advancement in Career	**HERZBERG TWO-FACTOR THEORY**	• Salary • Job Security • Supervision • Company Policies • Physical Work Condition • Relationship with Colleagues • Relationship with Supervisors • Status
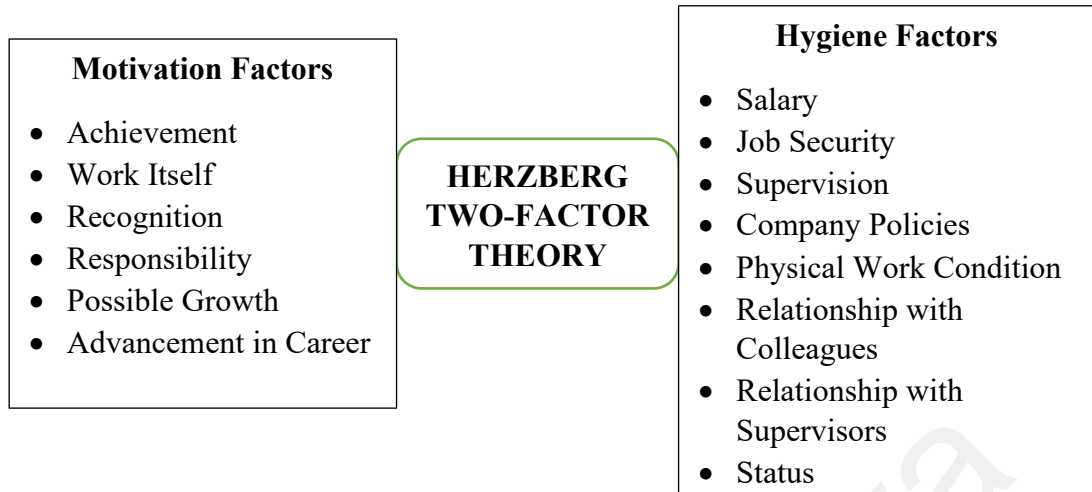
Figure 2.2. The Herzberg Two-Factor Theory

Source: Fong (2015)

Another theory that explains about job satisfaction is the Vroom's Valence Expectancy theory. This theory was popularized by Victor Vroom and it is generally identified as the expectancy theory. According to this theory, how strong an individual tends to act in a certain way depends on how strong he or she expects that the act will lead to a specified outcome and how attractive the outcome is to this person. The theory gives an emphasis on three aspects: the association between efforts and performance, the link between performance and reward, and the relationship between reward and personal goal (Thiagaraj and Thangaswamy, 2017). In simpler terms, when the efforts bring performance and this performance is rewarded, the individual will consider the effort as a personal goal to be attained and accomplished.

Shen, Basri and Asimiran (2018) had investigated the relationship between job stress and job satisfaction. Their study involved 249 teachers in private and international schools in Malaysia. Findings showed that job satisfaction was at a moderate level. There was a significant difference of intrinsic satisfaction but no significant different of extrinsic satisfaction between private and international school

teachers. Overall, there was a significant difference of job satisfaction between private and international school teachers. In general, the mean scores of satisfactions were higher among the international school teachers compared to the private school teachers. Shen et al. (2018) explained that one of the reasons why teachers in international school are more satisfied is due to the autonomy level in the international school. The class size in private schools is larger compared to those at the international school. With a smaller class size, the teachers at the international schools can exercise greater autonomy in classroom instruction.

Wongthaworn and Sucaromana (2012) investigated the job satisfaction in an international school setting. The sample size was small, comprising of only 54 respondents from among the staff members working in international school in Thailand. The determination of job satisfaction was based on the motivator factors and hygiene factors of the Herzberg Two-Factor Theory. Result shows that the mean scores for all the motivator factors (recognition, achievement, advancement, work itself, responsibility, possibility of growth) were high. The hygiene factors also yielded high scores for relationship with peers, relationships with supervisors, company policy and supervision but moderate for salary and work condition. However, the job satisfaction of the staff was not differentiated by gender and position of the staff members.

2.6.2   Dimensions of Teacher Job Satisfaction

Spector (1997) stated that the term 'job satisfaction' is about the extent to which an individual has a liking for the components of his job. The components may relate to pay, recognition, working conditions, supervision, colleagues, responsibility, advancement, security and work itself (Spector, 1987). In earlier period of time, ranging from 1960s to the 1980s, job satisfaction of teachers were mainly driven by

extrinsic factors like promotion, employee benefits, bonus incentive and wages (Pasalo, 2012) but in recent decades, there has been a shift of job satisfaction toward more intrinsic nature of the job like collegial relationships, collaboration and personal professional accomplishments (McCollum, 2014; Hofmans et al., 2013). Job satisfaction is very much about collegiality and positive working relation among the teachers (Shen et al., 2012). Schools that encouraged teachers to participate in decision making will be able to nurture greater satisfaction among the teachers (Sarafidou and Chatziioannidis, 2013). According to Fong (2015), the quality of relationship with colleagues and the interdependence and mutual respects among the employees are critical to determine job satisfaction. When the teachers work in a collaborative group, their satisfaction may be improved when the group members are made accountable to each other (Troen and Boles, 2010).

Van Maele and Van Houtte (2012) investigated the role of trust to ensure teacher job satisfaction. This study used multi-level analysis of 2091 teachers gathered from 80 secondary schools in Flanders, Belgium. Their study showed that teacher trust and job satisfaction are positively related. This means that the teachers feel more satisfied with their job when the people around them at work are trustworthy. Thus, this study showed that teacher relationship at the workplace is important. This trust includes trust in students, parents, colleagues and the school principals.

Ghanghesh (2013) investigated about job satisfaction and motivation of teachers in Egypt. This study was participated by 103 teachers. Based on the descriptive analysis of data in this study, it was found that the three most important factors of job satisfaction are: (i) students' interest in their lesson; (ii) the working environment; and (iii) recognition from the boss and others. However, in terms of

motivation, the teachers' relationship with their co-workers was the most important intrinsic factor.

Shen, Leslie, Spybrook and Ma (2012) examined job satisfaction of public schools' teachers and principals based on data from SASS 2003-04. This study showed that the satisfaction of teachers is due to the collegial relationships of the staff and the working conditions in the schools.

Based on the teaching context, the definition of job satisfaction implies on the gratification at a higher order of needs like positive social relationship, rather than on pay incentives or other lower order needs (Pepe, Addimando and Veronese, 2017), Recent studies highlight that interpersonal relationships may play a greater role to determine job satisfaction of teachers (Van Droogenbroeock, Spruyt and Vanroelen, 2014) and therefore, relationships with students, parents and co-workers might described teachers' satisfaction better (Gavish and Friedman, 2010; Skaalvik and Skaalvik, 2011). This brings a different perspective on job satisfaction as it focuses on the satisfaction and fulfillment that one feels when the relationships that they build with the people around them are good. These people are specifically identified in Pepe et al. (2017) as the students, the co-workers and the parents.

2.6.2.1 Satisfaction with the Students

The teacher's satisfaction with their students' behavior has been given some consideration as there is a mutual consent in past studies (e.g. Addimando, 2013; Pepe and Addimando, 2013; Split, Koomen and Thijs, 2011) that the teachers' interaction with students is one of work-related stress among them. Pepe and Addimando (2013) stated that the challenging behavior of students in the classroom added to the fearfulness and mistrust between the teacher and students which lead to

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disintegration of relationship. Teachers experiencing difficulty to manage the classroom (Wubbels, Brekelmans, den Brok and can Tartwijk, 2006) is a significant contributor of teachers' burnout later in their career (Veldman, van Tartwijk, Brekelmans andWubbels, 2013). When there are positive relationships with the students, the teacher is likely to stay in the profession, and this would likely be their source of enjoyment of, and motivation for, teaching (Claessens et al., Veldman, et al., 2013). Friedman (2006) stated that one of the common sources that contributed to teacher work stress is their relationships with individual students. In other words, teachers 'inability to deal with students' disruptive behavior in the classroom can lead to stress and affect their positive feeling about the job (Veldman et al., 2013; Claessens et al., 2017; Pepe and Addimando, 2013). Thus, by prolonging and extending more time that the teacher spends in a disruptive classroom without measures to control the disciplinary issues of the students can slowly ebbed away their feeling of enjoyment and motivation, leading to dissatisfaction.

2.6.2.2 Satisfaction with the Co-Workers

The employees' satisfaction with co-workers can improve their organizational commitment (Williams and Anderson, 1991). This is because co-worker's involvement contributes towards lessening the impact of stress and increase their satisfaction. The social atmosphere in the work organization relates to the teachers' interaction with co-workers and this has also been related to the teachers' satisfaction with their job (Pepe et al., 2017; Ghenghesh, 2013). Co-workers are peer employees of the teacher who have no formal authority over one another in the school (Gaire and Fatta Bahadur, 2016). Noraani (2013) mentioned that the social contact that enable the teachers to have a reasonable time to socialize with their co-workers such as during

breakfast, lunch or breaks can help the teachers to develop a sense of belonging among co-workers and teamwork. The teacher's relationship with co-workers is also related to the concept of collegial relationship which is linked to school improvement and success (Goddard, Goddard and Tschannen-Moran, 2007). Due to the busy schedule of the teacher, there might not be time for the teachers to talk or work together. Nevertheless, building relationship with co-workers can ensure that the teachers make their work more meaningful and capable of transforming the school so that it continues to be relevant and vibrant (Shah, 2012). This brings to attention that a school should not be regarded as merely a place of work with serious and tedious job responsibilities, but it should also be a place of lifelong learning experience to enhance the teachers' professionalism in a conducive environment characterized by healthy relationships with co-workers.

2.6.2.3 Satisfaction with the Parents

Another source of stress arises from the teachers' relationship with parents. There are many studies which support the inclusion of parents in students' achievement in schools (Houtenville and Conway, 2008; Jeynes, 2007, 2016; Castro et al., 2015; Song and Mustafa, 2015). According to the United Code of Law (USCS 7801(32)), parental involvement can be defined as parents' participation in regular two-way and meaningful communication pertaining to the students' learning and school activities (Jeynes, 2016). Epstein (2001) added that parental involvement in their children's learning include parenting, communicating, volunteering, learning at home, decision making, and collaborating with the community.

Houtenvill and Conway (2008) investigated the role of parental involvement in student achievement. Their study showed that the effect of parental effort is relatively large compared to school resources. Jeynes (2007) did a meta-

analysis of 52 studies that strengthened the notion that parental involvement is necessary in the school context, particularly to support student achievement. Another recent study by Jeynes (2016) using meta-analysis approach on 28 studies that focused on parental involvement and Latino student outcome also reinforced the previous meta-analysis study in 2007. Parental involvement was linked to students' academic achievement but surprisingly not for school behavior. Castro et al. (2015) also conducted a meta-analysis study of 37 studies in kindergarten, primary and secondary schools. Their study also showed that parental models which focused more on the children's learning activities are more likely related to high achievement. Hence, parental involvement in the school is considered as an important contributor to student achievement and leading to teachers' job satisfaction (Darmody and Smyth, 2010; El-Hilali and Al-Rashidi, 2015). Song and Mustafa (2015) encouraged the building of cooperative relationships among all teachers and parents to increase teachers' job satisfaction, particularly among novice teachers. Isaiah (2014) explained that parents' involvement in school provided them with the chance for collaboration with teachers so that the children's behavior particularly relating to completion of their tasks and homework is encouraged and promoted. Thus, teachers' satisfaction with parents are also an important indicator of their satisfaction with their job (Pepe et al. 2017). Teachers and parents need to build good rapport and relationship so that they can share the responsibilities of ensuring the students experience significant learning in their classroom.

2.7   Organizational Commitment

This section explains and describes about organizational commitment so that there is a clear understanding of the concept in the context of this study. This section is divided

into two sub-sections: one to conceptualize the term, organizational commitment, and second, to explain the dimensions of organizational commitment.

2.7.1 Conceptualizing Teacher Organizational Commitment

Literature in the management field regarded the concept of 'organizational commitment' as important and crucial. Organizational commitment is defined as the extent to which an individual identifies and is involved with the organization (Mowday, Steers and Porter, 1979). Organizational commitment is defined as a process whereby the employee has internalized the organizational values and maintained their employment with the organization because they want to see the result of their investment on the organization. The commitment is also driven by their perception that staying with the organization is a morally and ethically responsible thing to do (Koul, 2016). Accordingly, organizational commitment is represented by three elements which are: (i) identification or belief in the organization and the acceptance of the goals and values that are adhered to in the organization; (ii) involvement, which refers to the willingness of the individual to give more effort for the benefit of the organization; and (iii) loyalty, as the strong desire to continue being a member of the organization (Mowday, Porter and Steers, 1982). Hence, these dimensions of organizational commitment suggest that the employees in an organization have the intention to become exert efforts for the organization and actively contribute to the organization, make significant outcome in organizational activities, and are willing to contribute their effort surpassing the expectation of them (Bogler and Somech, 2004). It also suggests that an individual cannot become committed if he or she has no understanding of the organizational goals and values.

Additionally, commitment requires active participation of the individual and the willingness to have ownership of the organization.

Hence, in the school context, teachers' organizational commitment is important and critical for the attainment of its objectives and goals. According to Abd Razak, Darmawan and Keeves (2010), the absence of dedicated and committed teachers cannot lead to quality education. Additionally, Firestone and Martinez (2007) stated that at least six factors need to be addressed to ensure effective organizational commitment among teachers and these include: autonomy and efficacy of the teachers, collaboration, participation, resources, learning opportunities and feedback. Further to that, teachers need an environment that encourages them to work hard, accepts tasks that are challenging, risk taking and promotes growth (Ali and Yangaiya, 2015). The provision of such environment can be supported with school leadership. Khan and Zafar (2013) used a sample of 200 commercial bank employees in Lahore, Pakistan, and their study showed that although age has no significant relationship with affective commitment, but tenure does have a significant relationship with affective commitment. Findings of this study revealed that the more the tenure in years, the greater the affective commitment was. Having high level of organizational commitment is critical among teacher. This is because low level of organization commitment is the main reason for absenteeism and being late for work (Shapira-Lishchinsky and Rosenblatt, 2010; Nurharani, Norshidah and Afni Anida, 2013). Therefore, the right kind of school leadership should be practiced and ensure that teachers are truly giving their commitment to the school.

2.7.2   Dimensions of Teacher Organizational Commitment

Organizational commitment is identified by three main elements which are: affective, normative and continuance commitment (Meyer and Allen, 1997; Olcer, 2015). The first component of organizational commitment, affective commitment relates to the emotional attachment of the employee with the organization, while normative commitment is indicated by the sense of obligation that the employee has on the organization, and continuance commitment relates to the awareness about the consequences in terms of cost if the individual leave the organization (Allen and Meyer, 1996: p. 253). More elaboration on the three elements or dimensions of organizational commitment is provided below.

2.7.2.1 Affective Commitment

Affective commitment is the emotional attachment of the employee to his organization, the identification with the organization and involvement in its operation (Allen and Meyer, 1990). Mowday et al. (1982) explained that personal characteristics, organizational characteristics, the characteristics of the type of work performed and work experience shape one's affective commitment. The employee is likely to commit to the organization and continue working for it when their personal objectives match the organizational objectives (Shah, Rehman, Akhtar, Zafar, and Riaz, 2012). A high level of affective commitment might be contributed by the fact that their job roles were clearly defined (Meyer and Allen, 1991). Employees with high level of affective commitment are likely to stay and remain with the organization because they want to do so (Irfanullah, Allah, and Farhatullah, 2013).

According to Ibrahim and Iqbal (2015), there are three aspects of affective commitment, which are: (a) conviction and acknowledgement of the

organization's objectives and standards; (b) readiness to work towards attainment of the organization's goals; and (c) willingness to continue to work for the organization.

2.7.2.2 Normative Commitment

Normative commitment relates more specifically to the moral obligation that one feels to remain working in the organization. The employee made the decision to stay in the organization because they ought to. The sense of wanting to continue being employed in the organization is due to the internalization of normative pressure on the individual which could come from family or the organizational orientation. The invested resources made by the organization in training for the employee caused the person to feel responsible in putting greater efforts at work and remain in the organization to 'payback the liability' (Khan et al., 2014: 120). It is the organizational socialization as well as the socialization process that is happening in the families and society that causes an impact on the normative commitment of the employee (Allen and Meyer, 1990; Markovits, Boer and van Dick, 2014).

2.7.2.3 Continuance Commitment

Continuance commitment relates to the awareness of the costs relating to the intention of exiting the organization. Continuance commitment is reflected by the feeling of valuing the time and effort that the teacher has invested being in service with the school and that they might lose their seniority and good friends if they change and move to other schools (Nurharani et al., 2013). When the employee perceived that there is a high cost which may include financial losses and social expenditure associated with leaving the organization, continuance commitment will occur (Shah et al., 2012). Employees stay in the organization because they have to. They are aware

of the costs and benefits of becoming a continued member of the organization. It would cost too much to leave the organization especially if the employee had used a lot of time and resources to perform specific works in the organization. The employee shows willingness to remain being employed in the same organization because he or she has made non-transferable personal investments such as forming close operational relationships with their colleagues, investment in career and the job skills acquired during their time in the organization. Apart from that, their retirement investment and other benefits enjoyed due to the seniority of their position made it too costly for the employees to leave and look for employment elsewhere (Khan et al., 2014). Furthermore, at the time, there might be no similar or better employment available to replace the current position (Garcia-Gabrera and Garcia-Soto, 2012).

Peretomode and Bello (2018) summarized the three components of organizational commitment in Figure 2.3. Based on their description for each type of commitment, it is shown that continuance commitment reflects the intention of the employees to stay employed in the organization because they need to while for normative commitment, the employees decide to stay employed because they ought to. For affective commitment, the employees made the decision to stay employed in the organization because they want to. Hence, organizational commitment refers to the employees' decision to stay employed for different intention.

Continuance Commitment:

Decision to continue being in the organization is as the individual cannot afford to do otherwise

"Staying because you need

Normative Commitment:

Decision to remain in the organization is because of the pressure from others to do so

"Staying because you ought to"

Organizational Commitment

Affective Commitment:

Decision to remain in the organization is because the individual agree and want to remain there

"Staying because you want

Figure 2.3. Three Components of Organizational Commitment

Source: Peretomode and Bello (2018)

2.8   Theoretical Framework

Creswell (2003) explained that for quantitative research, the presentation of a theoretical framework is necessary for the study. A theoretical framework presents a specific theory and supported by evidences of empirical and conceptual work relating to the theory (Rocco and Plakhotnik, 2009). Merriam (2001: 45) states that the theoretical framework is "the structure, the scaffolding, the frame of the study". Grant and Osanloo (2014) stated that a theoretical framework serves as a blueprint to guide the research as it provides an existing theory in the field of inquiry, which in this case is on organizational commitment related to its antecedents, distributed leadership and job satisfaction. In the theoretical framework, a specific theory or theories are used to explain the studied phenomenon (Brondizio, Leemans, and Solecki, 2014). Based on

the theoretical framework, it provides justification to the definition of the research in a philosophically, epistemologically, methodologically and analytically (Adom, Hussein and Agyem, 2018). The theoretical framework also assists in determining the type of data collected for the study (Lester, 2005) as well as the research approach, analytical tools and procedures to be used (Adom et al., 2018). Hence, in this study, theoretical framework provides two prominent theories to explain organizational commitment among the teachers and the antecedent role of principals' distributed leadership while job satisfaction of the teachers acts to mediate this relationship.

From a theoretical standpoint, two theoretical models can be employed to explain the impact of distributed leadership and job satisfaction on organizational commitment which are: the exchange approach and investment approach. Amernic an Aranya (1983) had used both of these theories to explain organizational commitment.

2.8.1 Exchange Approach

The Exchange theory arises from the field of social psychology based on the early works of Homans (1961), Blau (1964) and Emerson (1976). The exchange approach states that the organizational commitment of a person is dependent on his or her perception on the equilibrium between reward and input utilities (Gouldner, 1960; Homans, 1957; March and Simon, 1958). The more favorable the exchange, the greater the commitment the individual has for his organization (Hrebiniak and Alutto, 1972). Blau (1964) stated that there are two types of exchange relationships: social and economic. The exchange based on social focuses on the people who interacts in order to make the exchange and the economic exchange emphasizes on the values or reward for the efforts expended by the individual. Homan (1961) defined social exchange as exchanging of tangible or intangible activities which might be rewarding or at a cost

between two persons or more. Cost was seen mainly as alternative activities by the actors involved. Homan explains the persistence of exchange relationship using the reinforcement principles based on the work of Skinner. Emerson (1976) presented the same reinforcement principles to explain the psychological basis for the exchange.

The social exchange theory describes unspecified obligations such that for something that is done to another party, an expectation of some future return is indicated. The exchange theory states that organizational commitment depends on how the reward utilities received by the individual are compared to the input utilities invested in the process (Amernic and Aranya, 1983). The more favorable the exchange, the commitment of the individual to the organization would be greater (Hrebiniak and Alutto, 1972). However, since it is unclear that the favor is returned, the social exchange relationship is based on trust. This differentiate the social exchange theory from the economic exchange theory as commitment, trust, obligations or interpersonal attachment are related to the latter theory (Emerson, 1981). In economic exchange theory, the relationship is short term or ongoing and indicated as a discrete, financially oriented interaction (Shore, Tetrick, Lynch and Barksdale, 2006). Thompson and Bunderson (2003) explained that in a social exchange perspective, it is the socio-emotional facets such as feelings of obligation and trust that are emphasized in the exchange while for the economic exchange viewpoint, this relies on more tangible aspects like financial and material like pay and other monetary rewards that are exchanged in the process. Therefore, this theory could explain why and how individual can become committed to the organization where he works. In this case, the social exchange theory is among the theories used as a theoretical support to explain leadership (Elstad, Christophersen and Turmo, 2011; Hansen, 2011; Qian, Wang, Han and Song, 2017; Zou, Yong and Jia, 2015) and organizational commitment

(Elstad et al., 2011; Nazir, Wang, Li and Shafi, 2018; Wickhamm and Hall, 2012). Distributed leadership is an organizational practice which foster trust that is a critical exchange resource to ensure commitment of the employee (Angelle, 2010; Beycioglu, Ozer and Ugurlu, 2012). The openness and trust of the leader to share leadership functions with others in the organization contributes to strengthen the loyalty of the employees to the organization (Ghazinejad, Hussein and Zidane, 2018).

2.8.2 Investment Approach

Another theory to explain organizational commitment is the investment model of commitment (Rusbult, 1983). This theory is a development of the social exchange theory with focus on the element of time. The duration of time that the individual works for the organization can be related to the person's decision to stay in the organization (Salancik, 1977). The term 'investment' refers to the participation of the employee in the organization and the lessening possibility of the person's participation in other organization (Sheldon, 1971). This investment is influenced by the accumulation of various benefits received by the employee such as tenure and pension received over time (Becker, 1960). Social involvement in the form of interaction and identification with other members of the organization also become investment that made the individual more committed to the organization (Sheldon, 1971). Therefore, the more investment is given to the individual, the more committed he is to the organization.

The tenets of the investment theory lie in the relationship that persists because of the positive qualities that attract partners to each other (their satisfaction) and the ties between these partners (their investment) (Rusbult, Agnew and Arriaga, 2011). In the context of the organization, partners relate to the managers as leaders in the

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organization the employed people working under these leaders. Hence, this theory stated that the three main factors to maintain commitment include satisfaction level, comparison with alternatives and investment size. Rusbult et al. (2011) explained that the satisfaction level relates to the satisfaction with relationships within the organization while comparison with alternatives is on the weighing of choices either to stay in the organization or leaving it. These principles of investment theory explain how job satisfaction can impact on the organizational commitment of an employee. The satisfaction of the employee relates to the rewards they gain from companionship, attention and emotional support (Rusbult, Coolsen, Kirchner, and Clarke, 2006).

Additionally, the third principle of this theory is investment which is the most important factor that maintains commitment. It refers to various resources, including tangible like money and possessions and intangible like happy memories (Rusbult et al., 2011).

2.8.3   Application of the Theories in Current Study

The social exchange theory and the investment theory have been used to explain commitment of individuals in various context including organizational commitment. These theories implied that there are antecedents that influence organizational commitment among the employees. There are very limited literature supporting the use of these theories in studies that relate distributed leadership and job satisfaction with organizational commitment, but the principles and concepts imbedded in these theories are able to explain the likelihood of such relationships.

The social exchange theory has been extended and developed as a model known as Leader-Member Exchange (LMX) Theory that explains the relationships of leaders with their subordinates (Lunenberg, 2010). Leader-member exchange focuses

on individual dyadic relationship of the leader with his or her followers (Dansereau, Graen and Haga, 1975). It is misunderstood that the LMX theory is applicable to explain the influence of employees by a single leader. Multiple leadership such as distributed leadership can be applied in the LMX context as well (Gronn, 2002). This theory suggests that the leaders form high-quality relationships with some employees. The LMX theory stated that the high-quality relationships of the leader with their subordinates have its consequences, which among them are job satisfaction and commitment (Bader, 2008; Erdogan and Bauer, 2015). Hence, the extended theory of social exchange that is embodied in the LMX theory presents a foundation to support the relationship between the research variables of this study which are: distributed leadership, job satisfaction and organizational commitment.

Likewise, the investment theory also shed some theoretical perspectives to explain job satisfaction in its association with organizational commitment. Concomitantly, the theory also explains the role of distributed leadership as a practice of investment in the formation of good working relationship between the leader and the employees to maintain commitment of the employees. Hence, from a theoretical perspective, both theories, the social exchange theory and the investment theory are able to support the notion that both distributed leadership and job satisfaction being the antecedents of organizational commitment.

Figure 2.4 summarizes use of social exchange theory and investment approach that explains the interrelationships of principals' distributed leadership, teachers' job satisfaction and teachers' organization commitment.
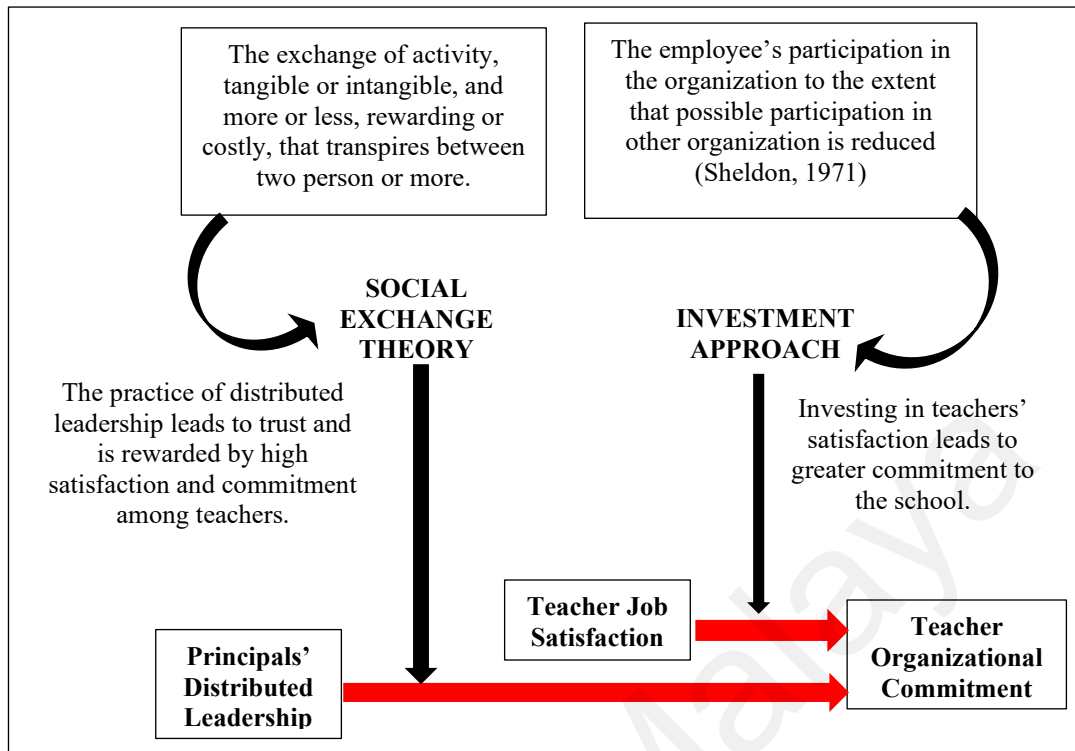
Figure 2.4. The Underlying Theories Explaining the Relationships of Principals' Distributed Leadership, Teachers' Job Satisfaction and Teachers' Organizational Commitment

Source: The Researcher

2.9 Conceptual Framework

The conceptual framework of this study was based on a review of the literature to see existing frameworks used in past studies. These frameworks were used to support the research framework of this study. Rocco and Plakhotnik (2009) explained that a conceptual framework grounds the study with applicable knowledge as foundation to the development of the problem statement and research questions. It comprises of empirical works relating to the focus of the study. Adom et al. (2018) stated that a conceptual framework relates the concepts, empirical research and important theories to promote and systemize the knowledge advocated in the study. From a statistical

perspective, the conceptual framework explores the relationships of the variables in the study (Grant and Osanloo, 2014). Hence, a conceptual framework can be graphical to illustrate the relationships of the research variables (Miles and Huberman, 1994).

2.9.1   Exploration of Previous Research Models

Adom et al. (2018) stated that the conceptual framework is normally designed by the researcher after considering the entire research process. In developing the conceptual framework for this study, other conceptual frameworks used in past studies were referred to as evidences to the potential relationships of the research variables. These frameworks include those that are used in the studies by Devos, Tuytens and Hulpia (2014), Hulpia, Devos and Van Keer (2011), Hulpia, Devos, Rosseel and Vlerick (2012), Werang and Agung (2017), Top, Akdere and Tarcan (2015), and Mosadeghrad and Ferdosi (2013). Table 2.3 summarizes these research models based on identification of the independent, dependent variables and other variables (mediators and moderators)

Table 2.3

Summary of the Research Models from Past Studies

Authors	Year	Independent Variables	Dependent Variables	Other Variables
Devos, Tuytens and Hulpia	2014	• Principal Leadership • Leadership Team Size • Teachers' gender and seniority • School type	• Teachers' Organizational Commitment	• Distributed Leadership (Assistant Principals' Leadership, Teacher Leaders' Leadership, Participative Decision making, Ciiperation within Leadership Team) as Mediator
Hulpia, Devos and Van Keer	2011	• Distributed leadership (Quality of leadership functions, sources of leadership functions, participative decision making) • Context (years of job experience, school size, size of leadership team, educational status)	• Organziational commitment of teacher	• None

'Table 2.3 Continued'

Authors	Year	Independent Variables	Dependent Variables	Other Variables
Hulpia, Devos, Rosseel and Vlerick	2012	• Distributed leadership (Quality and distribution of support and supervision, cooperation in the leadership team, participative school decision making) • Context (gender, seniority, school size, size of leadership team, school type and denomination)	• Organizational commitment	• None
Werang and Agung	2017	• Teachers' job satisfaction	• Teacher commitment • Teachers' job performance	• None
Top, Akdere and Tarcan	2015	• Transformational leadership with six dimensions • Job satisfaction with nine dimensions • Organizational trust	• Organizational commitment with three dimensions (affective, normative and continuance)	• None

'Table 2.3 Continued'

Authors	Year	Independent Variables	Dependent Variables	Other Variables
Mosadeghrad and Ferdosi	2013	• Job factors • Organizational factors • Interpersonal relations factors • Environmental	• Employee outcome (motivation, absenteeism, turnover)	• Job satisfaction and organizational commitment as mediator-mediator • Leadership behaviors of a manager as mediator • Individual factors and socio-cultural factors as moderators.

Source: Compiled by the researcher

Devos, Tuytens and Hulpia (2014) presented a conceptual framework in their investigation of teachers' organizational commitment with distributed leadership as a mediation variable. Their study was based on a survey of 1,495 teachers in 46 secondary schools. The research framework was analyzed using structural equation modeling to indicate how principal leadership's relationship with teachers' organizational commitment is mediated by the leadership of assistant principals and teacher leaders, cooperation within the leadership team and participative decision making of the teachers. Figure 2.5 presents their research model to depict the relationships of the variables. Their findings showed that principals' leadership contributes 44% of variance in teachers' organizational commitment through the mediation of distributed leadership among the assistant principals and the teacher leaders.
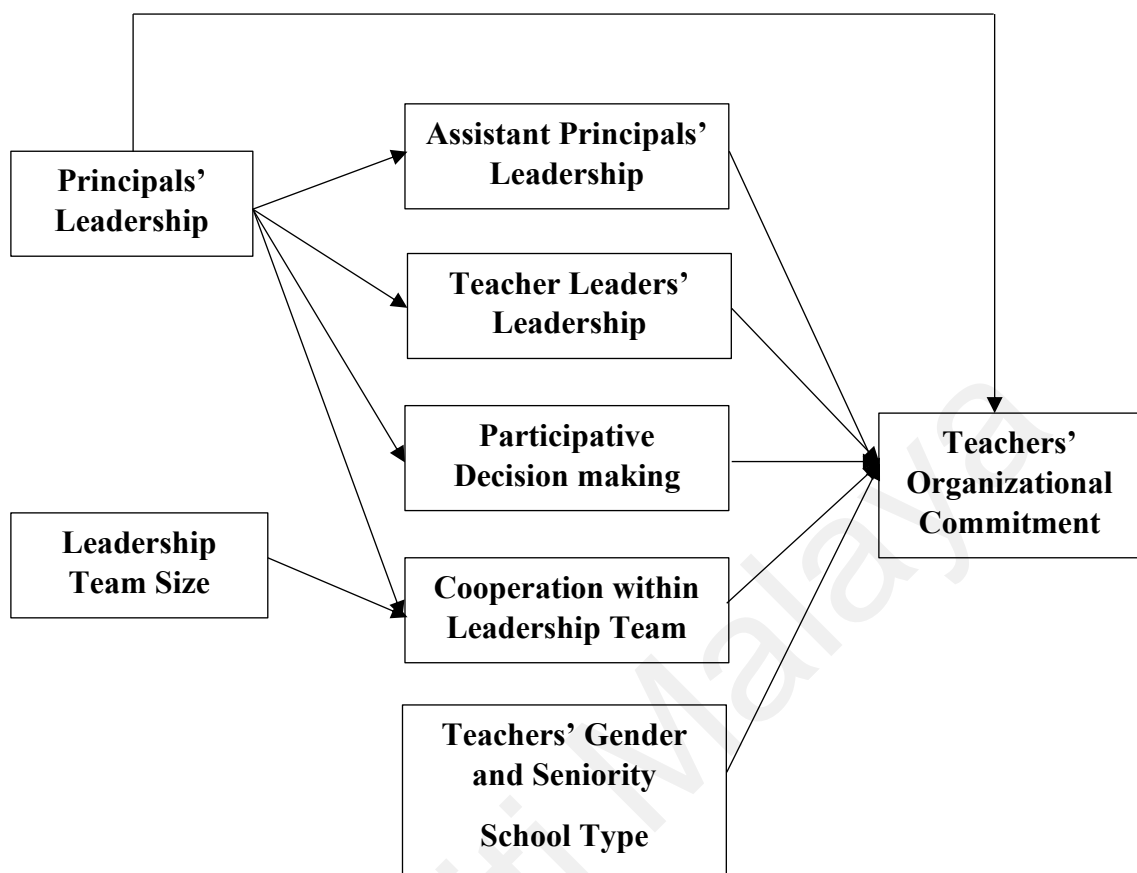
Figure 2.5. The Research Model in Devos et al. (2014)

Hulpia, Devos and Van Keer (2011) correlated distributed leadership with teacher's organizational commitment based on the research framework shown in Figure 2.6. This study shows that teachers' organizational commitment is mainly explained by quality of the supportive leadership, cooperation within the leadership team and participative decision making. However, the quality of supervisory leadership and the role of the leadership team members in this function were non-significant.

1. **Quality of Leadership Functions** • Quality of Support • Quality of Supervision 2. **Sources of Leadership functions** • Support of the principal • Support of the assistant principal • Support of the teacher leader • Supervision of the principal • Supervision of the assistant principal • Supervision of the teacher leader 3. **Participative decision making**	**Organizational commitment of teachers in schools**
Context • Years of job experience • School size • Size of leadership team • Educational stream	

Figure 2.6. The Research Model in Hulpia et al. (2011)

Hulpia, Devos, Rosseel and Vlerick (2012) presented their research model as indicated in Figure 2.7 below to determine the impacts of the dimensions of distributed leadership on teachers' organizational commitment. Distributed leadership was divided into three dimensions with quality and distribution divided into support and supervision, cooperation in the leadership team, and participative school decision making. This research model provides a clear path of relationship between distributed leadership dimensions with organizational commitment of the teachers.

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┌─────────────────────────────────┐
│ Distributed Leadership          │
│ Dimensions                      │
│ Quality and distribution of     │
│    • Support                    │
│    • Supervision                │
│ Cooperation in the leadership team │
│ Participative school decision making │
└─────────────────────────────────┘

┌─────────────────────────────────┐        ┌──────────────────┐
│ Context                         │        │ Organizational   │
│ Gender                          │        │ Commitment of    │
│ Seniority                       │        │ Teachers         │
│ School Size                     │        └──────────────────┘
│ Size of leadership team         │
│ School type                     │
│ Denomination                    │
└─────────────────────────────────┘
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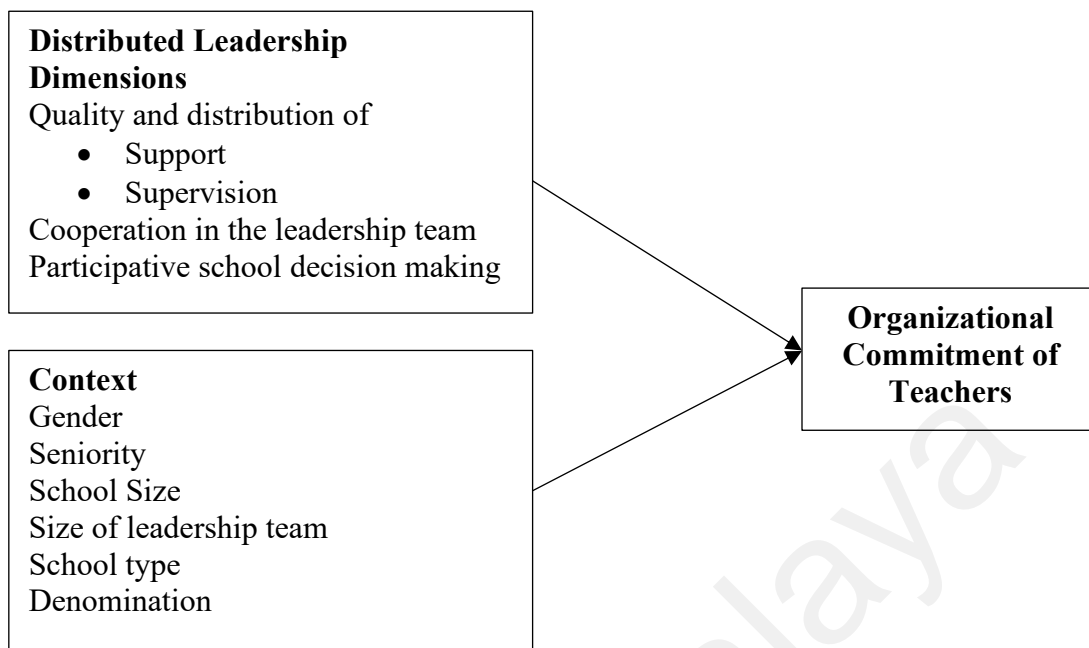
Figure 2.7. The Research Model in Hulpia et al. (2012)

Werang and Agung (2017) presented a simple research model showing the interrelationships of teachers' job satisfaction, organizational commitment and performance in their study in Merauke District in Papua, Indonesia. The same research framework was used in Akhtar, Durrani and Waseef-ul-Hassan (2015) study involving 133 respondents of selected commercial banks in Multan district of Pakistan. Figure 2.8 illustrates the relationship of the variables which showed that teachers' job satisfaction is an antecedent of both teachers' commitment and job performance. These studies showed significant contribution of teachers' job satisfaction to teachers' commitment and teachers' job performance.
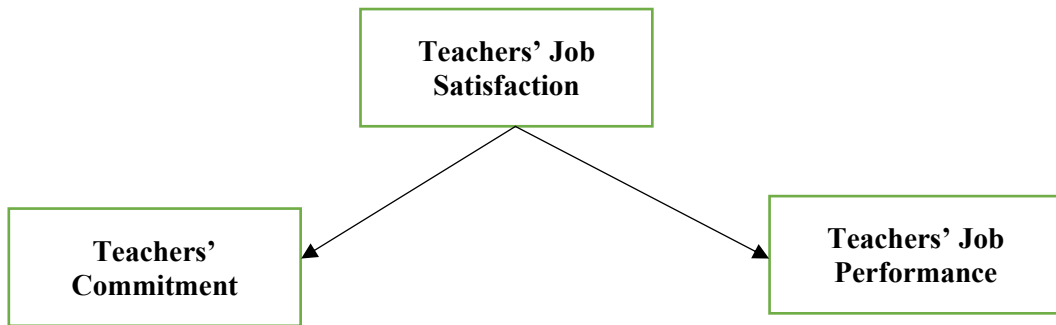
Figure 2.8. The Research Model in Werang and Agung (2017)

Top, Akdere and Tarcan (2015) investigated transformational leadership, job satisfaction, organizational commitment and organizational trust of public servants and private sector employees in Turkish hospitals. Their research model is shown in Figure 2.9. Although the leadership type in this study is transformation, but it provided evidences of the relationship between leadership and organizational commitment and between job satisfaction and organizational commitment.
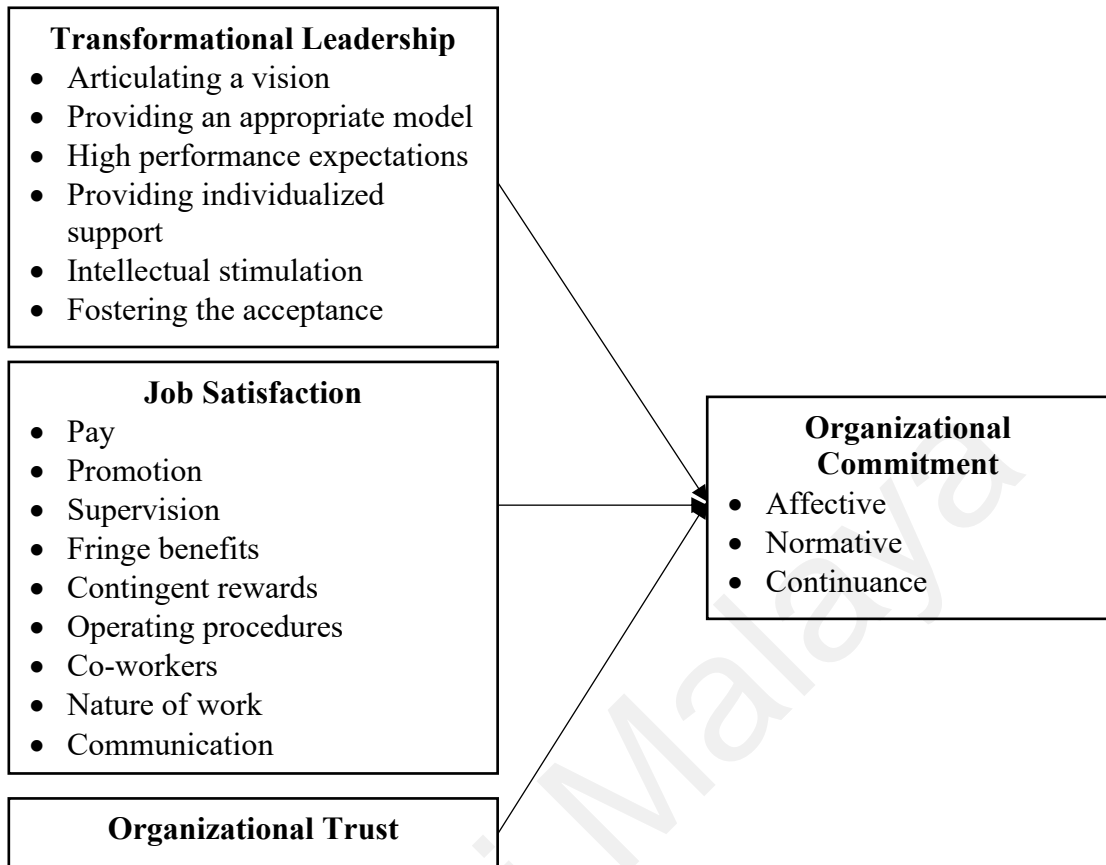
Figure 2.9. The Research Model in Top et al. (2015)

Figure 2.10 presents a more complex model linking leadership, job satisfaction and organizational commitment in healthcare sector in Iran (Mosadeghrad and Ferdosi, 2013). Various factors (job factors, organizational factors, interpersonal relationship factors and environmental factors), individual factors and socio-cultural factors were said to influence leadership behavior. Individual factors and socio-cultural factors also have their influence on employee impact which is represented by job satisfaction and organizational commitment. The framework showed that leadership behavior of the managers has an impact on job satisfaction which in turn, affected organizational commitment, which leads to three employee outcomes: motivation, absenteeism and turnover.

Job Factors:
- Job identity
- Work load
- Responsibility
- Role ambiguity
- Role

Organizational Factors:
- Organizational structure
- Policies and procedures
- Pay
- Recognition and promotion
- Job security
- Management and supervision
- Training programmes
- Shift work

Interpersonal Relations Factors:
- Co-worker support
- Management support
- Customer behaviour
- Communication

Environmental Factors:
- Working condition
- Health/cold, noise

Individual Factors:
- Gender
- Age
- Marital status
- Personality
- Attitudes
- Education
- Intelligence
- Financial

Socio-cultural Factors:
- Values and beliefs
- Family support

Leadership Behaviours of a Manager

Employee Impact

Job Satisfaction

Organizational Commitment

Employee Outcome

Motivation

Absenteeis

Turnover

Figure 2.10. The Research Model in Mosadeghrad and Ferdosi (2013)

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2.9.2   Conceptual Framework of the Study

The conceptual models in past studies showed that the relationship between distributed leadership at construct and dimensional levels with job satisfaction and organizational commitment in various research setting. Therefore, the conceptual framework is constructed in this research in the context of the present study. The main purpose of this study is to determine the impact of principal's distributed leadership practices on teachers' organizational commitment mediated by teachers' job satisfaction. The exogenous latent variable, principals' distributed leadership practices are divided into four dimensions: (a) leadership functions quality and distribution; (b) supervision quality and distribution; (c) cooperation in the leadership team; and (d) teacher participation in school decision making.

The first two dimensions of distributed leadership addressed the leadership functions among the members in the leadership team (Hulpia et al., 2012). Support relates to the roles played by the leaders to set and promote a shared school vision as well as motivating and encouraging members' participation in the school (Hulpia et al., 2009). On the other hand, supervision relates to instructional leadership that emphasizes on the leading, controlling and monitoring roles of the designated leaders (Spillane, 2009). The third dimension of distributed leadership describes the cooperation within the team. How team members work cooperatively is considered as an element that signifies the distribution of leadership within the team (Hulpia et al., 2012). This type of cooperation is measured by the cohesiveness of the team members, the clarity of their roles, and an orientation of efforts towards a specified goal (Hulpia et al., 2012; Senior and Swailes, 2007). Lastly, teacher participation in the school decision making process is seen as a characteristic of distributed leadership too. It

relates to the participation of the entire educational community to make necessary changes (Harris, 2008).

The endogenous latent variable, teachers' organizational commitment is often seen as a three-dimensional variable comprising of affective, normative and continuance commitment (Meyer and Allen, 1997; Olcer, 2015). The first dimension, affective commitment relates the emotional attachment that the teacher has for the school while the second one, normative commitment is the sense of being obligated to the school and lastly, continuance commitment is the realization about the cost of exiting employment from the school (Allen and Meyer, 1996).

Teachers' Job satisfaction serves to mediate the relationship between principals' distributed leadership practices and organizational commitment of the teachers with three dimensions comprising of satisfaction with co-workers, parents and teachers (Pepe et al., 2017).

Creswell (2003) explains that a conceptual framework aims to define the principle ideas and the web of relationship among the ideas. The conceptual framework of this study highlights the relationship between principals' distributed leadership with teachers' job satisfaction and organizational commitment, the relationship between teachers' job satisfaction with their organizational commitment and job satisfaction's mediation on the relationship between principals' distributed leadership and teachers' organizational commitment.

The research frameworks in the past studies included demographic characteristics like teacher seniority and gender, and school type in Devos et al. (2014), years of job experience, school size, size of leadership team and educational stream in Hulpia et al. (2011), gender, seniority, school size, size of leadership team, school type and denomination in Hulpia et al. (2012), gender, age, marital status, personality,

attitudes, education, intelligence and financial states in Mosadeghrad and Ferdosi (2013). However, in this study, these demographic characteristics were not included in the current research framework as the focus of the study is to determine the direct relationships of principal distributed leadership as a construct and based on its individual dimensions with teachers' organizational commitment and the indirect relationships of these variables through the mediation of teachers' job satisfaction. Grounded by the literature review from both theoretical and conceptual standpoints, this study presents the conceptual framework as follows:
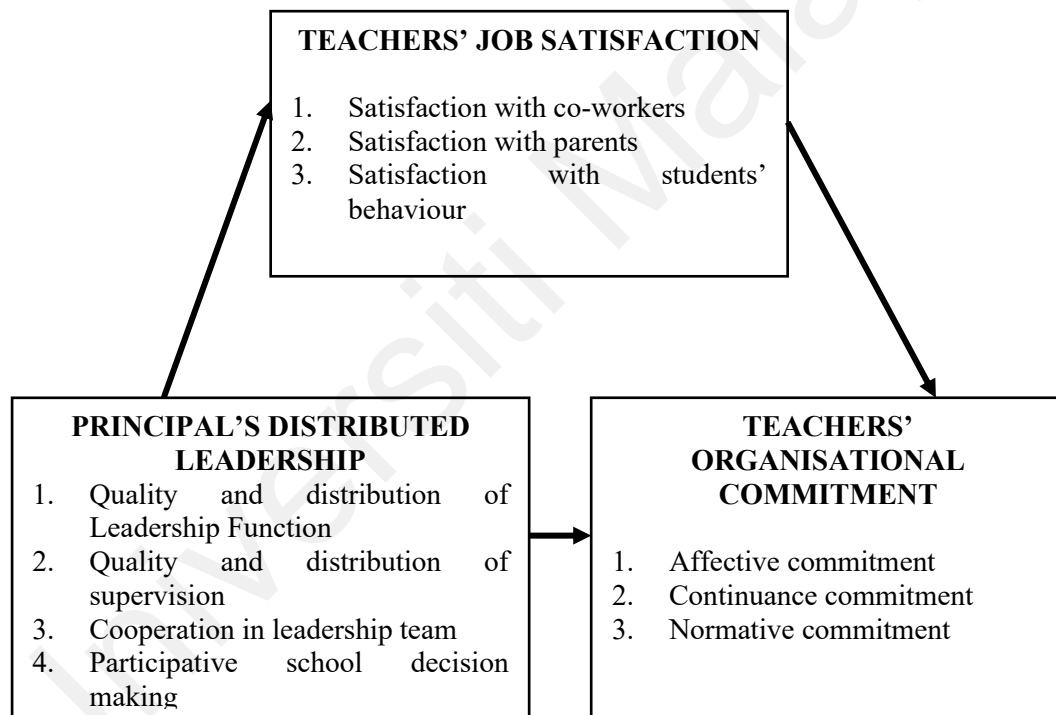
Figure 2.11: Conceptual Framework

2.9.3   Development of the Research Hypotheses

From the conceptual framework, the description of the relationships among the research variables is given below with supports of findings from past studies.

2.9.3.1 Relationship between Principals' Distributed Leadership and Teachers' Job Satisfaction

Numerous researches as evident from past studies had shown interest on school leadership and its relation to teachers' job satisfaction (Huang, et al, 2013; Koutouzis and Malliara, 2017; Nazim and Mahmood, 2016) and it is also likely that there are studies that has investigated the relationship between distributed leadership and job satisfaction. However, school leadership's concept was previously centered on single leadership of the principal, mainly on assessing the principals' leadership styles with specific interest on transactional and transformational leaderships (Koutouzis and Malliara, 2017; Cogaltay, Yalcin and Karadag, 2016; Machumu and Maitila, 2014).

Cansoy (2019) presented a systematic review on the relationship between principals' leadership behavior and teachers' job satisfaction. Principals' leadership was based on several leadership concepts such as transformational leadership (Nasra and Heilbrunn, 2016; Sayadi, 2016; Tesfaw, 2014; Tok and Bachak, 2013; Nyenyembe, Maslowski, Nimrod and Peter, 2016), interactional leadership (Kadi, 2015), servant leadership (Zhang, Lee and Wang, 2016; Al-Mahdy, Al-Harti and El-Din, 2016), ethical leadership (Gungor, 2016; Madenoglu, Uysal and Banoglu, 2014) and distributed leadership (Hulpia, Devos and Rosseel, 2009; Eres and Akyurek, 2016). All of these leadership styles have significant relationship with job satisfaction.

Mukhtar, Hapzi and Rusmini (2017) investigated teachers' job satisfaction in Jambi Province, Indonesia. Their study was interested to understand how principal leadership and school culture affect the job satisfaction of teachers. Based on a sample size of 260 from a population of 890 teachers, this study was able to show that the leadership of the principal and school culture have a significant impact on the job satisfaction of the teachers.

Koutouzis and Malliara (2017) conducted a study on leadership and decision-making style of the principal and its effect on job satisfaction of the teachers. Principal's leadership style was measured by the Multifactor Leadership Questionnaire (MLQ) which was introduced by Bass and Avolio (1990). It provides a measurement of four areas of the transformational leadership which are: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration, together with two aspects of transactional leadership comprising of contingent reward and management by exception. The assessment on job satisfaction was done using the General Index of Job Satisfaction developed by Brayfield and Rothe (1951). The General Decision-Making Style (GDMS) which was first used by Scott and Bruce (1995) measured the principals' decision-making style. Their study was participated by 240 teachers of primary schools in Magnesia. The outcome of the Pearson correlational analysis showed positive and significant correlation between transactional leadership ($r = 0.34$) and transformational leadership ($r = 0.32$). Hence, this study provided evidence that transformational leadership and transactional leadership were positively related to job satisfaction.

In another study by Cogaltay, Yalcin and Karadag (2016) who carried out a meta-analysis study on past studies to examine the relationship between educational leadership and job satisfaction in Turkey that were published between 2000 and 2016. Their study showed the effect of educational leadership on job satisfaction has a mean effect size of 0.53, indicating a strong impact. Leadership like visionary (-0.47), transformational ($r = 0.52$), cultural ($r = 0.59$) and educational ($r = 0.60$) had strong effect on job satisfaction. Thus, this study provided strong evidence that leadership of any style has an impact on job satisfaction.

A review of literature showed evidence of recent studies on distributed leadership and job satisfaction, but the numbers are quite limited (Hulpia, Davis and Rosseel, 2009; Hulpia and Devos, 2009; Morris, 2016; Torres, 2017; Tanriogen and Iscan, 2016). Table 2.4 presents the research contents of these studies.

Table 2.4

Past Research on the Relationship between Distributed Leadership and Teacher Job Satisfaction

No	Researchers	Year	Main Variables and Methodology	Main Findings
1	Hulpia, Devos, and Rosseel,	2009	• Variables include: distributed leadership based on three sub-dimensions (formal distribution of leadership functions, cohesive leadership team, and participation of teachers); organizational commitment; and job satisfaction; demographic variables (years of job experience, age and gender) and school variable (school size) Sample: 46 schools with 1522 teachers and 248 teacher leaders from Flanders district in Belgium selected via stratified random sampling method • Data analysis: covariance based structural equation modeling (CB-SEM) with AMOS was used.	• Cohesive leadership team and maximum amount of support that teachers received from the leadership team are most important variables that explain job satisfaction. • Supervision of leadership function plays a limited role to explain job satisfaction • Organizational commitment and job satisfaction are reciprocally related

'Table 2.4 Continued'

No	Researchers	Year	Main Variables and Methodology	Main Findings
2	Hulpia and Devos	2009	• Variables include: distributed leadership with sub-dimensions (cooperation of the leadership team, formal distribution of supportive and supervisory leadership function, participative decision making), job satisfaction and demographical and structural school variables. • Sample: 46 schools with 130 school leaders selected from Flanders (Belgium) using stratified random sampling • Data analysis: regression analysis using SPSS	• School leaders perceived that supportive leadership function is distributed highly but not supervisory leadership function. • Cooperation of the leadership team was the predicts school leaders' job satisfaction the most. • Teacher participation in decision making and formal distribution of leadership function had no effect on job satisfaction
3	Morris	2016	• Variables include distributed leadership and job satisfaction • Qualitative approach using semi-structured interview with school leaders and novice teachers, and document review. A total of 11 administrator and 11 novice teachers were interviewed from Massachusetts.	• Novice teachers' experience while participating in leadership activities positively influenced their job satisfaction • Novice teachers who were actively encouraged to involve in leadership activities were more likely to be satisfied.

'Table 2.4 Continued'

No	Researchers	Year	Main Variables and Methodology	Main Findings
4	Torres	2017	• Variables: distributed leadership and job satisfaction (comprising of two features which are: professional satisfaction and work satisfaction). • A total of 9044 teachers selected from 431 schools in Singapore. • Data analysis: hierarchical linear modeling technique	• Distributed leadership significantly influenced both professional and work satisfaction, but the stronger relationship was found relating to work satisfaction.
5	Tanriogen and İşcan	2016	• Variables: leadership practices inventory with five dimensions: inspiring the shared vision, modeling the way, encouraging the heart, challenging the process and enabling others to act; and job satisfaction • Sample comprised of 4210 instructors in 62 schools of foreign language in Turkey were selected using simple random sampling technique • Data analysis: linear regression was used.	• Principals' distributive leadership behaviours have an effect on instructors' job satisfaction. • Principals' distributive leadership behaviour significantly affect instructors' intrinsic and extrinsic job satisfaction.

Based on the information provided in Table 2.4, Hulpia and Devos (2009), Hulpia et al. (2009) and Torres (2017) had used the same operational definition and dimensional measurement of distributed leadership. In the study conducted by Hulpia et al. (2009), variables such as distributed leadership based on the leadership functions' formal distribution, cohesive leadership team, and teachers' participation; organizational commitment; and job satisfaction; demographic variables (job experience, age and gender) and school variable (size of the school) were used. Their

research was based on a sample of 248 teacher leaders and 1522 teachers selected through stratified random sampling method from 46 schools in Flanders, Belgium. Data analysis had used a CB-SEM approach. In Hulpia and Devos (2009), the variables were similar for distributed leadership (divided into three sub-dimensions of cooperation of the leadership team, the supportive and supervisory leadership function's formal distribution, participative decision making), job satisfaction and demographical and variables relating to school structure. However, in this study, only 130 school leaders selected through stratified random sampling from 46 schools in Flanders, Belgium were included. In this case, regression analysis was done using SPSS. Torres (2017) also focused on distributed leadership and job satisfaction which was divided into professional satisfaction and work satisfaction. Her study was participated by 9044 teachers from 431 schools in Singapore. Data was analyzed using hierarchical linear modeling technique. Although these studies (Hulpia et al., 2009; Hulpia and Devos, 2009; Torres, 2017) presented different sample group and analyzed data with different statistical method, but there were similarities of these studies. These studies cited teachers' participative school decision making, cooperation with the leadership team, quality of supervision, distribution of supervision, quality of support and distribution of support as the dimensions of distributed leadership. In Hulpia at al. (2009) cohesive leadership and support that the teacher obtained from the leadership team were the most central variables to explain job satisfaction of the teacher leaders as well as the teachers and. Hulpia and Devos (2009) found that cooperation of the leadership team was the main and most important predictor of school leaders' job satisfaction. Torres (2017) found that distributed leadership influenced both professional and work satisfaction significantly, but stronger relationship was found relating to work satisfaction. Hence, there are evidences of certain aspects of

distributed leadership to explain job satisfaction like cooperation and support in the leadership team but there are other aspects that did not explain job satisfaction well. For instance, Hulpia et al. (2009) found that supervision of leadership function played a lesser role in explaining job satisfaction. Similar findings from Hulpia and Devos (2009) supported findings from Hulpia et al. (2009). Furthermore, in Hulpia and Devos (2009), teacher participation in decision making and formal distribution of leadership function had no effect on job satisfaction. There are inconclusive evidences to show a consistent positive and significant impact of different aspects of distributed leadership on teachers' job satisfaction.

Morris (2016) used a qualitative approach assessed distributed leadership based on the emerging themes from the interview which included: (i) participation and experience in distributed leadership models; (b) participation in distributed leadership activities; and (c) non-participation in distributed leadership activities; (d) influence of veteran teacher-leaders; (e) leaders' role in enacting distributed leadership models; (f) leaders' active support of teachers' involvement in distributed leadership; and (g) leaders' role within distributed leadership models. His study included 11 administrators and 11 novice teachers from Massachusetts. The outcomes of the semi-structured interview showed that novice teachers who were actively involved in leadership activities were more probable to become satisfied. Hence, this study agreed with the notion that distributed leadership has a positive and significant impact on job satisfaction of the teachers, even among novice teachers.

Tanriogen and Iscan (2016) did not examine distributed leadership of the principals exactly but their study was more focused on the distributive leadership behaviours of the principals. Their study used a sample of 4210 instructors from 62 schools of foreign language in Turkey, selected via random sampling technique.

Regression analysis was used to analyze the data collected in this study. Findings showed that principals' distributive leadership behavior affected the instructors' intrinsic and extrinsic aspects of job satisfaction significantly.

In summation, this study also confirmed the effect of distributive behavior of leadership and the same time, indicated that there are different ways of measuring distributive leadership. In this study, they used different measures of distributive leadership behaviours which are: (a) inspiring the shared vision; (b) modeling the way; (c) enabling others to act; (d) challenging the process; and (e) encouraging the heart. Therefore, based on findings from these studies, distributed leadership has been accepted as a multidimensional concept similar to transformational leadership. However, the operational definition of distributed leadership as measured using the instrument called Distributed Leadership Inventory (DLI) in Hulpia and Devos (2009), Hulpia et al. (2009), and Torres ((2017) seems to be more preferred. This is because it provides a more expansive definition of distributed leadership within the school context.

The findings presented in Hulpia et al. (2009) affirmed that leadership function's distribution (support and supervision), leadership team cohesion and decision-making participation contributed positively towards job satisfaction of the teachers and teacher leaders. Comparatively, leadership team cohesion and decision-making participation were more contributive to job satisfaction of the teachers and teacher leaders rather than leadership function's distribution for support and supervision. In fact, this study showed that supervision distribution had a negative impact on job satisfaction. They implied that teachers and teacher leaders who are supervised by a single supervisor gained greater satisfaction compared to those being supervised by multiple school leaders. This could be contributed by the fact that when

the teachers are supervised by multiple leaders, this create confusion and there might be contradictory and inconsistent feedback from various leaders. In comparison, supervision by a single leader provides more clarity to the teacher.

However, in Hulpia and Devos (2009) their study showed that cooperative leadership provided school leaders' job satisfaction but participation of the teachers in the decision-making process at school did not affect the job satisfaction of the school leaders. The importance of cooperative leadership was also supported by a study by Morris (2016) who used a qualitative approach to determine school and district leadership association with job satisfaction of novice teachers. His study showed that collegial staff relationship irrespective of their direct participation in leadership activities were positively influential on the novice teachers' job satisfaction. When compared with findings from Tanriogen and Iscan (2016), the dimension of enabling others to act can relate to the dimension of cohesive leadership team. Thus, their study further confirms that collaboration among leaders in the school can lead to teachers' job satisfaction.

Further to that, the formal distribution of the support and supervision functions of leadership were insignificantly related to school leaders' job satisfaction (Hulpia and Devos, 2009). This finding suggests that distributed leadership may lead to teachers' job satisfaction as shown in Hulpia et al. (2009) but might impact school leaders differently. Nevertheless, both studies indicated the importance of cooperative leadership to provide satisfaction for both school leaders and teachers. These studies also implied that teachers appreciate the formal distribution of support and supervision functions of leadership, which may be related to the feeling of being acknowledged with active participation in leadership.

Additionally, the operational definition and measurement of job satisfaction also vary among these studies. Hulpia et al. (2009) used the Aelterman, Engels, Petegem and Verhaeghe's (2007) validated subscale general professional wellbeing to measure job satisfaction. The general professional wellbeing relates to the state of positive emotion arising due to the harmony between the total of specific context factors and the personal needs and expectations towards the school (Aelterman et al., 2007). Hulpia and Devos (2009) used the De Cuyper and De Witte's (2011) job enthusiasm scale that measures job satisfaction. Torres (2017) resorted to a different measure of job satisfaction based on data available from the Organization for Economic Cooperation and Development that had administered the 2013 Teaching and Learning International Survey (TALIS). From the TALIS data, job satisfaction was measured based on two aspects: professional satisfaction and work satisfaction. In Tanriogen and Iscan (2016), the Kouzes and Posner's (1995) Minnesota Job Satisfaction Questionnaire became the main choice of scale to measure job satisfaction. This scale measures the intrinsic and extrinsic aspects of job satisfaction. Alternately, Morris (2016) used a qualitative approach to assess job satisfaction. From these studies, it is shown that job satisfaction could also be measured with various scales, indicative of a multidimensional and a broad concept.

Nevertheless, these studies were able to show that distributed leadership of the principal significantly impacted on job satisfaction. It was found that there was a significant relationship between distributed leadership and job satisfaction for different sample groups comprising of teachers, teacher leaders, and novice teachers from different countries. Therefore, it implies that distributed leadership influence job satisfaction in various cultural setting.

Based on the supporting theories and evidences from past studies, the following research hypotheses are proposed:

H1:   Principals' distributed leadership is significantly and positively related to teachers' job satisfaction

2.9.3.2 Relationship between Principals' Distributed Leadership and Teachers' Organizational Commitment

The influence of school leadership on organizational commitment among teachers is also quite comprehensive in past studies (Meyer and Allen, 1997; Nguni et al., 2006; Ross and Gray, 2006). Nevertheless, similar to job satisfaction, school leadership was more centered on single principals' leadership, mainly targeting their leadership style, transactional and transformational leadership. The relationship of distributed leadership with organizational context relating to the school situation has only been investigated in recent time. A review of literature showed that there are more studies relating distributed leadership to organizational commitment compared to job satisfaction (Akdemir and Ayik, 2017; Devos et al., 2014; Hairuddin and Salisu, 2015; Hulpia, Devos, Roseel and Vlerick, 2012; Hulpia, Devos and van Keer, 2009). Table 2.5 summarizes the findings of these studies.

Table 2.5

Past Research on the Relationship between Distributed Leadership and Teacher Organizational Commitment

No	Researchers	Year	Main Variables and Methodology	Main Findings
1	Akdemir & Ayik	2017	The relationship between the dependent variable, distributed leadership with its three dimensions (support, supervision and team working) and the independent variable, organizational commitment of the teachers was examined using a correlational survey method involving 772 teachers from 40 state-run secondary schools of Erzurum. Data was analysis using SPSS 22.0 based on Pearson Moment Correlational Analysis and multivariate linear regression.	Each dimension of distributed leadership was positively and significantly related to teacher organizational commitment at moderate level. Team working has the highest correlation with organizational commitment. Supervision and teamworking had significant impact on organizational commitment but not support. Overall, distributed leadership predicted teacher organizational commitment
2	Devos et al.	2014	The dependent variables, leadership of principals was mediated by distributed leadership and linked to teachers' organizational commitment. The study used 1522 teachers from 46 secondary schools in Flanders, Belgium. Questionnaires were distributed and data gathered from the questionnaire were analyzed with AMOS 18 based on structuring equation modeling.	Findings show that the effect of principals' leadership on the organizational commitment of the teachers was mediated by dimensions of distributed leadership like leadership of the assistant principals and teacher leaders, cooperation in the leadership team, and teachers' participation in decision making.

'Continued Table 2.5'

No	Researchers	Year	Main Variables and Methodology	Main Findings
3	Hairuddin & Salisu	2015	Using a quantitative approach with survey method to investigate the relationship between distributed leadership and school effectiveness through the mediation of teacher commitment. A total of 450 junior secondary students from Katsina State in Nigeria participated in this study, but only 310 questionnaires were validly analysed with SEM AMOS.	Distributed leadership and school effectiveness, and teachers' commitment and school effectiveness were significantly related. Teacher commitment mediates the relationship of distributed leadership with school effectiveness. Thus, this also implies that distributed leadership has a positive relationship with teacher commitment.
4	Hulpia et al.	2012	Dimensions of distributed leadership (quality and distribution of support and supervision, cooperation in the leadership team, and participation in the decision making among school teachers) were related to organizational commitment of the teachers. The quantitative study involved 1522 teachers from 46 secondary schools in Flanders, Belgium. Data was analyzed using multilevel analysis with Mplus program.	Findings shows that 9% of variance in teachers' organizational commitment was contributed to the school differences. Cooperation in the leadership team and decision making among the teachers were significant contributors to teachers' organizational commitment but not the quality and distribution of support and supervision.

'Table 2.5 Continued'

No	Researchers	Year	Main Variables and Methodology	Main Findings
5	Hulpia et al.	2009	This study used multilevel analyses on data gathered from 1522 teachers. Analysis was done using MLwiN2.02.	The cooperation of the members in the leadership team and the amount of leadership support significantly affected teachers' organizational commitment. Similarly, teachers' participation in decision making and distribution of supportive leadership functions were also significant predictors of teachers' organizational commitment but distribution of supervisory leadership function however, not a significant predictor.

Although these studies investigated mainly the relationship of distributed leadership with organizational commitment of teachers, the contexts of distributed leadership explored in these studies are different. For instance, Hulpia et al. (2009) assessed distributed leadership based on the leadership functions' amount and formal distribution, leadership team cooperation and decision-making participation using Distributed Leadership Inventory that they had developed for this study. Organizational commitment was assessed using the Organizational Commitment Questionnaire (Mowday et al., 1979) in the form of a global construct rather than a multidimensional one. Findings reported that the teachers were more committed due to their perceptions regarding their cooperation in the leadership team

and the support that they had obtained from other members in the team. This was more important compared to the balanced distribution of leadership functions among the formal leaders of the school. This study provided a valid questionnaire to measure distributed leadership based on a three-dimensional approach: the distribution of leadership functions (support and supervision) among formal leaders, their cooperation in the leadership team, and participation in decision making process in the school. They reasoned that distributed leadership is a multifaceted concept and with such operational definition and a validated instrument, this has provided the present study to use it to measure distributed leadership practices in international schools in Malaysia. From these studies, it was shown that the use of this instrument can explain distributed leadership particularly on how leadership is distributed, the sharing practices of leadership within the team, and the extent of teachers' participation in decision making process.

Further to that, the qualitative study of Hulpia and Devos (2010) further enriched the knowledge and contributed to empirical evidence that distributed leadership affects teachers' organizational commitment. Their study included a total of 34 interviews with 59 principles, assistant principals, teacher leaders using individual and focus group interviews. Their study took a different route from Hulpia et al. (2009) whereby they compared the practice of distributed leadership in high potential schools with low potential schools where organizational commitment of the teachers is high in the former type of schools. Similarly, they used the same measurement scales to assess distributed leadership that was based on the four aspects of distributed leadership: the leadership functions; quality and distribution, leadership team cooperation, social interaction and participation in decision making. However, in Hulpia et al. (2009), they did not include the aspect of quality of leadership functions

to represent distributed leadership. Hulpia and Devos (2010) added this aspect in their study following earlier empirical evidence supporting the notion that the commitment of teachers was greater when principals took the effort to provide feedback, encourage and acknowledge the teachers' efforts (Nguni et al., 2006; Tsui and Cheng, 1999). Harris (2008) cited studies such as Crowther, Kaagan, Ferguson and Hann (2002 and Macbeath (1998) which provided evidences to indicate the effect of distributed leadership on the self-efficacy and morale levels of the teachers. Therefore, Hulpia and Devos (2010) reasoned that by distributing the functions of leadership, this might have a positive implication on the commitment of the teacher towards the organization. Their comparison of each dimensions of distributed leadership indicated a greater level in high potential schools compared to the low potential ones. Apart from validating the significant importance of distributed leadership to boost teachers' organizational commitment, the rich data arising from the qualitative design has also supported the dimensionality of distributed leadership. Therefore, this provides a strong reason to use the Distributed Leadership Inventory that was earlier proposed by Hulpia et al. (2009) but with the addition of quality of leadership functions to represent distributed leadership.

Hairuddin and Salisu (2015) further expanded the measure of distributed leadership in their study that explored its effect on school effectiveness with teachers' organizational commitment as a mediator. This study utilized a sample of 330 junior secondary students from Katsina State, Nigeria. Nevertheless, only 301 sets of questionnaires were actually used after rejecting 20 partially filled questionnaires and nine cases with multivariate outliers. The measure of distributed in their study adopted a five-dimensional distributed leadership inventory with three dimensions (leadership team cooperation and participation in decision making) from

Hulpia et al. (2010) and three dimensions (principal leadership, teacher leadership, and artifact from Davis (2009). Their study concluded that teacher commitment mediated the relationship of distributed leadership with self-efficacy. MacKinnon, Fairchild and Fritz (2007) explained that in a mediation model, a mediation effect must be present when significant relationships among the independent variable (distributed leadership), the mediator (teacher commitment) and the dependent variable (teacher self-efficacy) were found. This implies that the relationship between distributed leadership and teacher commitment is a significant and positive as well.

The progression of previous studies from Hulpia et al. (2009) and Davis (2009) leading towards Hulpia et al. (2010) and Hairuddin and Salisu (2015) has enriched the measures of distributed leadership and at the same continuously provided evidence that distributed leadership significantly affect teachers' organizational commitment. Both studies of Hulpia et al. (2009) and Hairuddin and Salisu (2015) focused on teachers in public secondary schools only. Therefore, the situation might show some differences in an international school context. Nevertheless, Hulpia et al. (2009) did mentioned that it was not so much about the difference between the schools but the situation within the school that contributed to explain distributed leadership practices and its relationship with teachers' commitment. Therefore, it might also be likely that distributed leadership does affect organizational commitment among teachers in the international school context.

Additionally, a recent study carried out by Akdemir and Ayik (2017) on 722 secondary schools' teachers working from Erzurum provide more substantive evidence. Similarly, the same Distributed Leadership Inventory which was developed by Hulpia et al. (2009) measured distributed leadership but a different scale was used to determine organizational commitment among the teachers. Previously in Hulpia et

al. (2009) and Davis (2009) to Hulpia et al. (2010) and Hairuddin and Salisu (2015), the organizational commitment of the teachers was measured using Mowday et al. (1979) Organizational Commitment Questionnaire. In the Akdemir and Ayik's (2017) study, the dimension of support in the distributed leadership behavior of the principal was regarded the highest by the teachers while team working dimension was the lowest. The teachers' commitment level was moderate. Distributed leadership was significantly correlated to teachers' commitment and upon more scrutiny, it was found that the team working had the highest correlation followed by supervision and least of all, support. The use of multiple linear regression analysis, support, supervision and team working were able to explain 42% of variance in organizational commitment of the teachers. The differences of the impact of distributed leadership variables on organizational commitment were noted in other studies (Hulpia and Devos, 2010; Hulpia, Devos and van Keer, 2011). As shown from findings in Hulpia, Devos, Roseel and Vlerick (2012), a variance of nine percent in organizational commitment of the teachers was contributed due to different types of schools. In addition, the setting of this study was also based on a state-run secondary school and therefore, there might be differences of distributed practices and the impact they have on organizational commitment among international schools' teachers in Malaysia. Nevertheless, these studies provided evidences of the possibility of distributed leadership in giving rational explanation on the variance in organizational commitment of the teachers that range from 9 to 42 per cent. The wide range of impact that distributed leadership has on the organizational commitment among the teachers in different school context insinuates that distributed leadership practices' intensity in the school determines the extent of how much commitment the teachers have to their schools.

Taking another research perspective, Devos et al. (2014) investigated deeper on the individual actors' impact on teachers' organizational commitment by examining the relationship of principal leadership with the organizational commitment among teachers that is mediated by distributed leadership. Findings of this study showed that principal leadership's influence on commitment was mediated by the actions of leadership by the assistant principals and teachers, cooperation within the leadership team and teachers' decision-making participation. Therefore, this study showed that the principal is the prominent enabler of distributed leadership within the school who ensures that the work conditions of the teachers are favorable through supportive actions of other members of the staff so that teachers are more committed to their work and organization (Torres, 2017). The impact of collaboration in decision making process on the organizational commitment among the teachers is influenced by some conditions such as the teachers' level of normative acceptance regarding such situations, the extent of openness that the management has towards the situations, the way that the participation process is organized, teacher effectiveness, the areas where these teachers can be effective, and the decision making process results (Ali and Yangaiya, 2015).

Jacobs (2010) also took a different way in studying the relationship of distributed leadership with commitment among teachers in terms of instrument and methods of statistical data analysis. In this study, the measurement of distributed leadership was based on the Leadership Density Inventory (LDI) which was adopted from Smith, Ross and Robichaux (2004) while organizational commitment was focused only on affective commitment that was measured with the Allen and Meyer's (1990) revised Affective Commitment Scale. The correlation of these variables was determined using Spearman rho correlation. Even with the use of different methods,

this study also revealed a moderate, positive and significant relationship of the practices of distributed leadership with the teachers' affective commitment.

These studies (Hulpia, Devos and van Keer, 2009; Akdemir and Ayik, 2017; Hairuddin and Salisu, 2015; Hulpia, Devos, Roseel and Vlerick, 2012; Devos et al., 2014) presented empirical evidence that distributed leadership affect organizational commitment among teachers in a significant and positive manner. Despite the varied samples, instrument and analysis used in these studies, findings consistently indicated that distributed leadership is critical to ensure commitment of the teachers to the organization. This brings to the perception that when the teachers are actively a part of the leadership team, their commitment is assured.

The description of past studies on distributed leadership and its relationship with organizational commitment in the past decades indicated that the growing interest in distributed leadership is quite recent but the idea of shared leadership and deviating away from single leadership concept is indeed evident. Further to that, these studies have consistently highlighted that distributed leadership is a multidimensional concept which mainly comprises of three dimensions: distribution of leadership function, team work and participation in decision making (Hulpia and Devos, 2010; Hulpia et al., 2009). Nevertheless, the statement of limitations in past studies (Hairuddin and Salisu, 2015; Hulpia and Devos, 2010; Hulpia et al., 2009) implied that it is not limited to these three only.

Literature also shows that affective commitment is the main researched dimension of organizational commitment that is associated with leadership (Ross, Lutfi and Hope, 2016; Trammell, 2016; Thien, and Adams, 2019). Ross et al. (2016) assessed the relationship of distributed leadership with affective commitment among teachers. The study was carried out in Southwest Florida involving a population

of 5,408 teachers in an urban school district. Stratified sampling was used to select 386 teachers for the analysis. The sample size was adequately represented the total population following the Krejcie and Morgan's (1970) sample size determination. Leadership was measured using the Leadership Density Inventory (LDI) comprising of student leadership, teacher leadership and leadership opportunity. Affective Commitment Scale (ACS) was used to measure affective commitment. The study concluded that teacher leadership has the strongest correlation with affective commitment compared to student leadership and leadership opportunity. Thus, this study contributed important empirical evidence to support the notion that the relationship of leadership with teacher commitment is significant and positive.

Trammell (2016) also explored the relationship between distributed leadership and affective commitment of public and private schools' teachers. A total of 65 public school teachers and 69 private school teachers, totaling 134 respondents had participated in the survey. The measurement scales were similar to Ross et al. (2016) whereby LDI and ACS were used. The findings showed that the correlation of distributed leadership with affective commitment was higher among private school teachers ($r = 0.59$) compared to public school teachers ($r = 0.53$). The result also supports that distributed leadership practices can increase teachers' affective commitment.

Thien and Adams (2019) also investigated the effect of distributed leadership on affective commitment to change among Malaysian primary schools' teachers. Commitment to change reflects the teachers' attachment to the schools' implementation of dynamic processes such as updated and newer policies, programmes, work protocols, technology and budgets (Neubert and Wu, 2009). The conceptualization of 'affective commitment to change' (ACC) is basically following

the revised organizational commitment scale previously developed by Mowday, Steers and Porter (1979). Herscovitch and Meyer (2002) presented a conceptualization of the variable, commitment to change as a multidimensional construct with three dimensions similar to the original concept of organizational commitment which are: affective, continuance and normative commitment to change. Hence, ACC relates to the feeling or desire of the teachers to provide support for an explicit change that are presented at the workplace. Their study was based on a 531-sample size comprising of primary school teachers who were randomly selected in Malaysia. Data gathered from the use of Herscovitch and Meyer's (2002) Affective Commitment to Change and Distributed Leadership Inventory (Hulpia et al., 2009) measurement scales were analyzed using a PLS-SEM approach. The research showed that the four dimensions of distributed leadership: participation in decision making, cohesiveness of the leadership team, leadership supervision and leadership support were related to affective commitment significantly and positively. Thus, this study also contributed empirical support on the relationship of distributed leadership at its dimension level with affective commitment to change.

In addition to that, in most of these studies, organizational commitment among the teachers was not regarded as multidimensional although the Mowday et al. (1979) Organizational Commitment Questionnaire is essentially divided into three dimensions reflecting affective, normative and continuance commitments. Further to that, these studies were mainly focused on public secondary school. Therefore, it is concluded that for the current research, the adoption of the three dimensions of distributed leadership (leadership function distribution, team work and participation in decision making) and a unidimensional organizational commitment was the best decision to adopt. This is because there are no studies so far that

investigates the relationship of distributed leadership with organizational commitment among international school's teachers.

Based on the supporting theories and evidences from past studies, the following research hypotheses are proposed:

H2:   Principals' distributed leadership is significantly and positively related to teachers' organizational commitment

H2a: Leadership function quality and distribution is significantly and positively related to teachers' organizational commitment

H2b: Supervision quality and distribution is significantly and positively related to teachers' organizational commitment

H2c: Cooperation in the leadership team is significantly and positively related to teachers' organizational commitment

H2d: Teacher decision making participation is significantly and positively related to teachers' organizational commitment

2.9.3.3 Relationship between Teachers' Job Satisfaction and Teachers' Organizational Commitment

The two research variables in this study, job satisfaction and organizational commitment are considered as popular and among the most researched phenomena in the field of human resource and organizational behavior (Culibrk, Delic, Mitrovic and Culibrk, 2018). The association of job satisfaction with organizational commitment has been studied quite consistently in the past decades (Falkenburg and Schyns, 2007; Moynihan and Pandey, 2007; Morrow, 2011; Werang and Agung, 2017; Tentama and Pranungsari, 2016; Ali and Bashir, 2018). There is general consensus that these two variables are related to each other but there are arguments about the

direction of the relationship. There are studies supporting the notion stating that job satisfaction is a predictor of organizational commitment (Tsai and Huang, 2008; Valaei and Rezaei, 2016; Yang and Chang, 2008; Yücel, 2012) while other studies reported that organizational commitment predicts job satisfaction ((Adekola, 2012; Akhtar, Durrani and Waseef-ul-Hassan, 2015; Bateman and Strasser, 1984; Curry et al., 1986; Leite et al., 2014; Nagar, 2012; Price and Mueller, 1981; Vandenberg and Lance, 1992).

The relationship of job satisfaction with organizational commitment among teacher too are seen as reciprocal as there are studies which identified organizational commitment as a predicting variable for job satisfaction (Lizote, Verdinelli and do Nascimento, 2017; Norizan, 2012; Singh and Sharma, 2014) and there are other studies that regarded job satisfaction as the independent variable to predict organizational commitment (Ali and Bashir, 2018; Larkin, Brantley-Dias and Lokey-Vega, 2016; Malik, Nawab, Naeem and Danish, 2010; Nagar, 2012).

However, in this study, the argument regarding the direction of the relationship between these two variables is further explored. Recent studies like Demitras (2015) and Leite, de Aguiar Rodrigues and de Alburquerque (2014) explored the direction linking job satisfaction to organizational commitment. These studies used similar methodology based on the application of structural equation modeling with AMOS. However, these studies explored different research questions. In Leite et al. (2014), two models were used to determine whether job satisfaction was a consequence of work-related aspects (tension at work, variety of tasks, scope of work, previous realistic expectations, and creativity in job context) mediated by organizational commitment, or whether job satisfaction was an antecedent that mediated the effect of work-related aspects on organizational commitment. In

Demitras (2015), the focus was solely on determining the impact of job satisfaction on organizational commitment. He used three models to map job satisfaction and organizational commitment linkage. In the first model, job satisfaction led to organizational commitment while in the second model, the opposite direction linking organizational commitment to job satisfaction was mapped and in the third model, the mutual relationship between job satisfaction and organizational commitment was exhibited. Table 2.6 summarizes the past researches that investigated the relationship between job satisfaction and organizational commitment.

Table 2.6

Past Research on the Relationship between Job Satisfaction and Organizational Commitment

No	Researchers	Year	Main Variables and Methodology	Main Findings
1	Leite et al.	2014	• A sample size of 10,052 was used for quantitative research • Six high command officers and a focus group from seven members of the three highest organizational levels were interviewed • Content analysis method analyzed data from qualitative procedures • SEM was used for the quantitative data	• Satisfaction is an antecedent of commitment and mediates other variables such as work and personal characterisitics.
2	Demitras	2015	• 400 elementary school administrators and teachers from the Elazig Province of Turkey participated in the study • Teacher Satisfaction Survey was used to measure job satisfaction	• Teachers aged 36-40 has the highest average for job satisfaction. • Teachers aged 41 and above has the lowest average for job satisfaction

'Table 2.6 Continued'

No	Researchers	Year	Main Variables and Methodology	Main Findings
3	Malik et al.	2010	• 331 sets of usable questionnaires from 650 distributed to teachers. • General Society Survey measured organizational commitment while Overall Job Satisfaction measured job satisfaction • Stepwise regression technique determines which dimension of job satisfaction influence teacher's organizational commitment the most.	• Pay satisfaction, satisfaction with work itself and quality of supervision were significantly and positively related to organizational commitment of the teachers. • Job satisfaction and organizational commitment was significantly related
4	Werang and Agung	2017	• The impact of job satisfaction on organizational commitment and job performance was determined. • A sample of 105 teachers was used based on purposive sampling from 11 elementary school teachers • Job satisfaction was measured with Job Satisfaction Survey • Hayday's Organizational Commitment Scale measured organizational commitment	• Regression analysis showed that job satisfaction significantly affected organizational commitment ($R^2 = 0.336$, p <0.01) and job performance ($R^2 = 0.317$, p<0.01).

'Table 2.6 Continued'

No	Researchers	Year	Main Variables and Methodology	Main Findings
5	Yucel and Bektas	2012	• Used a sample of 432 teachers but only 173 questionnaires were analyzed. • Job satisfaction was measured with JSS while organizational commitment was measured with Mowday et al. (1979) Organizational Commitment Questionnaire • Hierarchical regression analysis was used for data analysis	• Job satisfaction and organizational commitment has an inverted U-shape association for older teacher and a U-shape for the younger teacher.

Based on a sample of 10,052 surveyed workers, Leite et al. (2014) study confirmed the notion of job satisfaction being an antecedent rather than a consequence of organizational commitment. This notion was further confirmed in Demitras' (2015) study among 400 elementary school administrators and teachers in the Elazig Province of Turkey. In all three models, the relationship of job satisfaction with organizational commitment was strong as well as significant. Comparatively however, job satisfaction predicts organizational commitment better than vice versa. This was also confirmed by other studies (Dirani and Kuchinke, 2011; Markovitz, Davis, Fay and Dick, 2010). Therefore, taking evidence from these studies, the present study adopts the notion that job satisfaction is the independent variable that cause an effect on the dependent variable, organizational commitment.

The investigation on the relationship between job satisfaction and organizational commitment is indeed popular in various sectors (Azman and Mohd Ridwan, 2016; Ros Intan Safinas, Nurhazirah, Syukrina Alini, Baharom and Ramlee,

2014; Syed, 2010). Ros Intan Safinas et al. (2014) examined the relationship between job satisfaction and organizational commitment in Malaysia involving 197 nurses from seven health tourism hospitals. Stratified random sampling method was used for selecting these nurses as respondents of the study. The measurement scales include Smith, Kendall and Hulin's (1969) Job Descriptive Index and Allen and Meyer's (1993) Organizational Commitment Questionnaire. Their findings showed that job satisfaction is significantly linked to the three dimensions of organization commitment.

Using the same instruments, Syed (2010) examined the relationship of employees' job satisfaction and organizational commitment in Oman Sultanate. A total of 128 service industry employees selected to participate in this study randomly. Their study also confirms the significant and positive relationship of job satisfaction with organizational commitment.

Another study carried out by Moonsri (2018) focused on job satisfaction and its effect on organizational commitment. In this study, 550 employees from small and medium enterprises in Phetchabun, Thailand participated in the survey. Job satisfaction index measured the employees' satisfaction for work condition (safety workplace and conducive to work, salary and benefits, co-workers, regulation) and individualism (work that is interesting, utilization of skills and talents, work accomplishment, and work-life balance). Organizational commitment was measured using the OCQ (Allen and Meyer, 1990). Findings highlighted the positive correlation of job satisfaction to organizational commitment. The correlation between satisfaction on individualism ($\beta = 0.386$, $t = 10.153$, $p<0.01$) was greater compared to the correlation of satisfaction on work ($\beta = 0.303$, $t = 7.949$, $p<0.01$) with organizational commitment. Both satisfaction on work and satisfaction on individualism were able to

explain 33% of variance in organizational commitment. Despite using a different measure of job satisfaction, this study also showed that job satisfaction and organizational commitment are positively linked.

Studies on the relationship between job satisfaction and organizational commitment among teachers in developing countries are indeed abundant in literature. Among these studies are like Malik, Nawab, Naeem and Danish (2010), Werang and Agung (2017), and Yucel and Bektas (2012).

In Pakistan, Malik et al. (2010) assessed the impact of teachers' job satisfaction on perceived organizational commitment involving public sector universities. Their study was based on 331 sets of usable questionnaires out of 650 distributed to the targeted teachers. Organizational commitment was determined using the General Social Survey (Lincoln and Kalleberg, 1990) while job satisfaction was assessed based on the Overall Job Satisfaction (Schriesheim and Tsui, 1980). Stepwise regression technique was employed to determine which dimensions of job satisfaction presented the greatest influence on the organizational commitment of the teachers. The result of confirmed that pay satisfaction, satisfaction with work itself and quality of supervision were significantly and positively related to organizational commitment of the teachers. Hence, the empirical evidence of this study supports that job satisfaction and organizational commitment are significantly related.

Werang and Agung (2017) examined the impact of job satisfaction on organizational commitment and job performance of elementary school teachers in the remote district of Merauke, Papua. A total of 105 teachers were selected using purposive sampling from a population of 11 among the elementary school teachers in this district. The measurement of job satisfaction was made possible with the adapted Spector's (1997) Job Satisfaction Survey (JSS) while the modified Hayday's (2003)

organizational commitment scales was used to measure organizational commitment. The construct of job satisfaction comprises of several elements such as pay, promotion, relation with co-workers, relationship with supervisors, nature of work, management recognition, safety at the workplace, training and development. Organizational commitment was divided into three dimensions namely: affective, continuance and normative organizational commitment. Job performance was measure using Richey's (1973) descriptors of effective teacher. Results from the regression analysis showed that job satisfaction significantly affected organizational commitment ($R^2 = 0.336$, p <0.01) and also, on job performance ($R^2 = 0.317$, p<0.01).

Yucel and Bektas (2012) carried out an investigation on job satisfaction, organizational commitment and demographic characteristics among teachers of secondary school in Erzincan City. Questionnaires were distributed to 432 teachers but a response rate of 36% provided only 173 questionnaires for analysis. Similar to Werang and Agung (2017), their instrument choice to measure job satisfaction was the JSS. However, the measurement of organizational commitment used the Organizational Commitment Questionnaire which was developed by Mowday et al. (1979). The hierarchical regression analysis result showed that job satisfaction and organizational commitment are associated in a pronounced inverted U-shape for older teachers and a U-shape for younger teachers. In other words, the teacher's age moderated the curvilinear relationship between these two research variables: job satisfaction and organizational commitment. A U-shape relationship for the younger teachers implied that it is more possible that these teachers feel emotionally attached and identify the organization's problem as their own as well as expressing desire to spend their career with the organization despite being less satisfied with their job. When job satisfaction is moderate, this does not promote their organizational

commitment while greater job satisfaction is reflected by higher organizational commitment. In contrast, for the older teachers, the inverted U-shape relationship implied that when job satisfaction is moderate, their organizational commitment may still be high as it may be difficult for them to leave due to employment opportunities, scarcity of available alternative and interruption of their life. This study presented an interesting facet of the relationship of job satisfaction with organizational commitment and moderation by teachers' age but most importantly, this study also confirms that teachers' job satisfaction is correlated with organizational commitment.

Yucel (2012) investigated the relationship of job satisfaction with organizational commitment and turnover intention using 188 valid questionnaires from a Turkish manufacturing company. Structural equation modeling was used to analyze the data and found that higher level of job satisfaction leads to higher level of organizational commitment and lower level of turnover intention.

Ali and Bashir (2018) conducted a study to investigate the effect of job satisfaction on the organizational commitment of teachers in private sector universities in Punjab, Pakistan. A sample size of 150 teachers selected through convenience sampling was used in this study. linear regression analysis was used to confirm the significant and positive relationship between job satisfaction and organizational commitment. Larkin, Brantley-Dias and Lokey-Vega (2016) investigated the factors that influence job satisfaction, organizational commitment and turnover intentions among K-12 online teachers in a Southeastern state. This study was participated by 108 respondents. The result shows that these K-12 online teacher were moderately satisfied with their job mainly due to factors like meeting student needs, flexibility, professional community and technical support. Job satisfaction has been known as an important criterion for organizational performance (Nagar, 2012). Satisfaction at work

influence efficiency, productivity and employees' wellbeing and reduces the occurrence of absenteeism, turnover and intention to quit (Maghradi, 1999).

Valaei and Rezaei (2016) carried out an investigation on job satisfaction and organizational commitment of employees working with the Information and Communication Technology – Small and Medium-Sized Enterprises (ICT-SMEs) in Malaysia. Their study was based on the analysis of 256 valid questionnaires with the structural equation modelling using partial least squares. Based on the findings, factors of job satisfaction like benefits, payment, co-worker, promotion, communication, fringe benefit, nature of work and operating procedures were significantly and positively related to affective commitment. A slightly different combination of job satisfaction factors (fringe benefits, promotion, payment, contingent rewards, supervision, nature of work and operating procedures were significantly associated with normative commitment.

Hence, this study implies that different aspects of job satisfaction will lead to affective and normative commitment. Additionally, the impact of job satisfaction on normative commitment was the highest, followed by the impact on affective commitment and the lowest was on continuance commitment

Malik, Nawab, Naeem and Danish (2010) carried out a study to determine the effect of job satisfaction on organizational commitment of the teachers in the public universities in Pakistan. This descriptive survey was based on 331 questionnaires that were analyzed using stepwise regression analysis and t-tests. The findings of this study showed that three aspects of job satisfaction: work itself, pay and supervision quality had significant influence on organizational commitment.

Although there are bountiful studies on job satisfaction and organizational commitment carried out in public and private schools, and as well as in

higher education institutions, there seem to be a great lacking in studies involving international schools. Studies on organizational commitment examined other predictors such as work environment (Cheng and Kadir, 2018), teacher characteristics, school environment, and district level human resources management policies and practices (Yang, Badri, Al Rashedi and Almazroui, 2018) but did not include job satisfaction of the teachers. Therefore, despite the presence of a large volume of empirical evidence showing the relationship of teachers' job satisfaction with organizational commitment, studies involving the international school setting are still grossly lacking.

The following research hypothesis is presented to show the relationship between teachers' job satisfaction and teachers' organizational commitment.

H3: Job satisfaction is significantly and positively related to teachers' organizational commitment

2.9.3.4 Teachers' Job Satisfaction as a Mediator in the Principals' Distributed Leadership and Teachers' Organizational Commitment Relationship

There is a lack of studies which investigate the mediation of teachers' job satisfaction on the principal's distributed leadership and teachers' organizational commitment relationship. However, as the given explanation in the previous sections of this chapter, distributed leadership and its relations to organizational commitment are supported by empirical evidence (Hairuddin and Salisu, 2015; Hulpia et al., 2009, 2012; Hulpia and Devos, 2010). Likewise, distributed leadership and its relationship to job satisfaction is also empirically supported (Hulpia and Devos, 2009; Torres, 2018; Morris, 2016) as well as the relationship of job satisfaction with organizational

commitment (Hulpia et al., 2009; Sharma and Azmi, 2012; Leite et al., 2014; Mustabsar, Muhammad Shaukat, and Amina, 2015; Yousef, 2002).

A mediator variable exhibits an effect on the antecedent or the independent variable that is related to the dependent variable or outcome, either in partial or full mediation (Baron and Kenny, 1986; MacKinnon, 2008). MacKinnon, Coxe and Baraldi (2012) stated that when there are evidence of direct relationships between the antecedent, in this case, distributed leadership with the outcome, in this case, organizational commitment, and at the same time there is evidence of direct relationship between distributed leadership and job satisfaction as well as the relation of job satisfaction with organizational commitment, it is likely that mediation by the intermediate variable, in this case, job satisfaction can happen. Thus, job satisfaction mediating the relationship of distributed leadership with organizational commitment is investigated in this study.

The following research hypotheses present the effects of teachers' job satisfaction as a mediator on principals' distributed leadership and teachers' organizational commitment relationship.

H4:   Teachers' job satisfaction mediates the relationship between principals' distributed leadership and teachers' organizational commitment

H4a: Teachers' job satisfaction mediates the relationship between quality and distribution of leadership function and teachers' organizational commitment

H4b: Teachers' job satisfaction mediates the relationship between quality and distribution of supervision and teachers' organizational commitment

H4c: Teachers' job satisfaction mediates the relationship between cooperation within the leadership team and teachers' organizational commitment

H4d: Teachers' job satisfaction mediates the relationship between teacher participation in decision making and teachers' organizational commitment

2.10   Chapter Summary

This chapter has given the literature review which encompasses an explanation about international schools, and the theoretical and conceptual frameworks to describe the research variables with support of the literature review and related to the problem statements and research questions and objectives, this chapter ends with a proposed research framework that indicates the scope and focus of this study. The presentation of secondary data reviewed mainly from current literature from journal articles, books, website materials, conference papers, dissertations and other materials has given greater understanding about the situation relating to international schools, the need for distributed leadership and its relation to teachers' satisfaction with their job and commitment to the schools where they are teaching.

In the next chapter, Chapter 3 entails an explanation about the research methodology that was employed to gather data from a selection of a defined population and how these data are analyzed to obtain results that can provide answers to the research questions and fulfill the research objectives. The presentation of the research methodology is linked to the information provided in the first and second chapter of this dissertation.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter gives an explanation about the research methodology that was employed as the guideline to implement the research. The research paradigm and the research design are discussed in this chapter. In addition, the population of the study is identified, and an explanation about the sampling method along with the determination of the study sample are also included. The research instrument is also discussed which covers the explanation on the development of the research questionnaire and operationalization of the three main research variables: principals' distributed leadership, and teachers' job satisfaction and organizational commitment and their measurement. An explanation is also given regarding the pilot study whereby the validity and reliability of the questionnaire is determined. This chapter also explains how data will be collected and its data analysis is done.

3.2 Research Paradigm

In every study, there must be an alignment of the purpose and objectives of the study, the research questions that need to be answered and the methods used to ensure that these objectives and questions are fulfilled. Hence, it is necessary to look from a general viewpoint of the whole research first and then determine the right philosophy, paradigm, and design of the research so that there is a clear definition of pathways in the selected research methodology. The term 'paradigm' is explained by Kuhn (1970) as "universally recognized scientific achievements that for a time provide model problems and solutions to a community of practitioners" (p. 24). Therefore, it reflects

the notion that research is not something that is just done without a guideline, but it is basically a systematic way of understanding a particular situation or phenomenon. A research requires a paradigm which according to Weaver and Olson (2006) relates to patterns of beliefs and practices to control inquiry within a discipline by providing the researcher with lenses, frames and processes to ensure the study is implemented successfully. By using these windows on the research methodology, the findings unearthed from this study can therefore be considered as being able to provide the best explanation for the said phenomenon or issue.

Creswell (2014) presented a framework for implementing research based on various philosophies, approaches, designs and methods. The framework shows that there are many research paradigms that can be adopted in a study such as postpositivist, constructivist, transformative and pragmatic. Each of these paradigms offer different perspectives of the situation and there are studies that may be guided with just one paradigm while others used a blend of selected paradigms. The selection of any of these philosophical worldviews will determine the research design and the research approach to be undertaken for a study. By a process of systematically determining the research philosophy, the research design and the research approaches, there is a clear guideline of developing the research methods such as development of the research questions, procedures of data collection and data analyses, interpretation of data and validation of research findings.

A research paradigm is necessary as it offers valid arguments and reliable solutions to the identified research problems using commonly approved methods (Saunders, Lewis and Thornhill, 2007). A research paradigm is driven by three aspects: ontology (what is out there to be known?), epistemology (what and how the researcher can know about it?) and methodology (how to acquire the knowledge?). Based on the

simplified understanding of the terms, it can be implied that a research begins with the question of what particular situation, issue of phenomenon that piques the interest of the researcher to carry out the research, and leading to the question of what can be known from the situation and how it can be known, and lastly, after identifying what knowledge to be found and for what purpose, then the research methodology provides the means of acquiring the knowledge.

Ontology refers to the theory of being while epistemology is the theory of knowledge that the researcher uses to support the research. In other words, ontology is the assumptions about the nature of reality. It is about the logic of how to see the world as it is. Thomas and Hardy (2011) explained ontological assumption as being focused on how the problems identified on the study are being addressed. Burrell and Morgan (1979) explained epistemology as the assumptions about knowledge that is acceptable, valid and legitimate. Epistemology is about how to inform others about the specific known knowledge. According to Martin and Fernandez (2013), here are many kinds of knowledge which include numerical data, visual and textual data, as well as facts and interpretation. Heron (1996) defined axiology as the ethics and values imbedded in the process of research to guide the conduct of the study.

The epistemological assumption identifies four types of knowledge that can be sought in a study which are intuitive knowledge, logical knowledge, authoritarian knowledge and empirical knowledge. Intuitive knowledge is based on beliefs, intuition and faith whereas logical knowledge is about creating new knowledge based on logical reasoning. Authoritarian knowledge is based on information that can be found from books, articles and opinions from experts. Empirical knowledge are objective facts that can be established and demonstrated (Hallebone and Priest, 2009). Thus, there are different types of knowledge that a researcher can seek to explain a situation or a

phenomenon and the quest for this knowledge is not limited to one type only but a combination of two or more types of knowledge.

Based on the explanation of these types of knowledge, it can be concluded that authoritarian and empirical knowledge are used in the course of this study. The authoritarian knowledge reflects the use of literature that was reviewed to develop a better understanding of the studied phenomenon, and the research variables that are of interest in this study. The empirical knowledge refers to the data collected during the survey that would provide more understanding about the research problem being investigated (Saunders et al., 2012). The research questions are the main guiding principles of determining which method of research to select from. Therefore, there must be an alignment between the research questions and the manner in which data are collected and analyzed to answer the research questions.

The method provides the means to relate theory with empirical evidences (Morgan, 2014). In any study, the research paradigm provides three popular choices which are positivism, interpretivism and realism (Sekaran and Bougie, 2013). Based on the consideration of the epistemology, ontology, and axiology, this study considers a positivist method.

This study selects a positivist paradigm which adheres to the notion that only "factual" knowledge by conducting observation such as measurement of empirical data is considered trustworthy (Wilson, 2010). An interpretivism paradigm or a realism paradigm would have provided an in-depth of knowledge about the situation being studied but it would have limitations in terms of defining the degree to which the external factors are affecting or influencing the outcome. In the case of this study, the main focus is to determine what is the extent of influence that principals' distributed

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leadership can ensure teachers are committed to the schools where there are teaching through their feeling of satisfaction about their job.

The positivist approach is based on the application of a realist ontology and a representational epistemology. A realist ontology describes a research with an objectivist approach in its data assessment with the employment of logical analysis to produce a suitable result that can answer the research questions (Morgan, 2014). Collis and Hussey (2014) explained that positivism uses statistical analyses to assess empirical data collected during the study. A representational epistemology indicates the use of an objective reality with absolute principles and prediction, along with quantifiable observation that can be associated with the studied phenomena (Weaver and Olson, 2006). In other words, a positivist approach is grounded on the objectivity and therefore, it is independent or free from the opinion of the researcher (Bryman and Bell, 2015). However, it is limited due to its lack of insights on more in-depth issues as it provides description about the research variables and how they are interrelated (Wilson, 2010).

As for methodology, this study used a deductive approach whereby it assesses hypothetical generalization within a narrow angle lens based on a logical positive paradigm. Another alternative is to use an inductive research approach but in the case of this study, an inductive approach is not aligned to the research questions that need to be answered in the course of this study. Research methodology is defined as a systematic manner of seeking solution to an identified problem (Sekaran and Bougie, 2013). Therefore, by using a deductive approach, it tests the theory which is associated with the concept of principals' distributed leadership and its influences on job satisfaction and organizational commitment of the teachers.

A quantitative approach is also used to draw certain generalizations, which is applicable to a larger group form where the sample is taken (Weaver and Olson, 2006). It is also the application of statistical methods to transform raw data into meaningful information. In contrast, this study did not opt for a qualitative approach as this would not have been able to answer the research questions effectively. Table 3.1 summarizes the methodological paradigms employed in this study.

Table 3.1

Methodological Paradigms of This Study

Paradigms	Description
Positivist Approach	The outcomes of the study are independent of the researcher's opinion as it is based on objectivity. The representative size of samples is acquired from the targeted population and the constructs are operationalized within a particular context to measure the observations using best choice methods.
Quantitative	The study is grounded on the documentation of facts and the relationships of the research variables using mathematical and statistical methods. The results can be generalized to the wider population within known limits of error.
Deduction	The general results are used to attribute features of the study. True conclusion and premised are achieved based on valid arguments. It is often based on the verification or falsification of an existing theory and involves the testing of research hypotheses.
Confirmatory	The focus of the study is on hypotheses testing and verification of theories.

Source: Compiled by the researcher

3.3 Research Design

Research design is the entire plan that specifies the research framework and providing explicit details about the process that need to be followed when conducting the research (Creswell, 2012). In other words, a research design serves as a blue print to guide the researcher on how to implement the research so that data can be collected and analyzed with the intention of fulfilling the research objectives (Sekaran and Bougie, 2013). The research is descriptive in nature as it focuses on describing the relationships of principals' distributed leadership with job satisfaction and organizational commitment of the teachers and the mediating role of job satisfaction between principals' distributed leadership and the teachers' organizational commitment.

As a quantitative research, this research is regarded as a positivist paradigm which is based on realist ontology and representational epistemology. A research paradigm enables the understanding of the research knowledge and its nature (Morgan, 2014). Ontology answers the question of what is out there to be known while epistemology answers the question of what and how well this knowledge can be known. The combination of ontology and epistemology develop the methodology which is about how the knowledge can be acquired (Sekaran and Bougie, 2013).

In a positivist paradigm, the focus is on an objectivist approach to assess the data that are collected using logical analysis so that the result can fulfil the research purposes and objectives. Thus, the phenomena of principals' distributed leadership and its effect on job satisfaction and organizational commitment of the teachers are studied based on an objective reality, absolute principles and prediction, and using quantifiable observation of the phenomena being studied (Weaver and Olson, 2006).

Therefore, the present study chooses a descriptive survey design. Polit and Beck (2004) explained a survey descriptive research design as the use of a representation of the population with the purpose of examining the characteristics, perception or opinions of the said population. A sample of the population is drawn in the present study from among the teachers in international schools in Kuala Lumpur for the purpose of gathering their perspectives about the role of distributed leadership of the principal and job satisfaction of the teachers in shaping the teachers' organizational commitment. In a descriptive study, the research variables are free from the researcher's interference (Burns and Grove, 2001; Chua, 2011). Therefore, this study provides a description of their perceptions on these three research variables without manipulation of the variables or any control on the research setting. Nevertheless, data collection conditions were standardized to ensure that data quality is maintained.

3.4 Research Setting

This study had opted to use international schools as the school context to understand more about principals' distributed leadership and its impact on the organizational commitment of the teachers through their satisfaction with the job. These international schools showed higher quality of education as evident from the academic performance of the students which had attracted more enrolment from local students in Malaysia. However, there are a lot of international schools in Malaysia, covering a wide span of areas and separated by geographical features. It is not cost-efficient to obtain information from international schools from all over Malaysia.

For the purpose of this research, a total of ten international schools in Kuala Lumpur were chosen as most international schools are located in this city. An Internet

survey of international schools' availability from the School Advisor website, (https://schooladvisor.my/international-schools/) showed that one of the main curricula offered by these schools are IGCSE, North American Curriculum and British National Curriculum. A total of 56 schools were shortlisted based on these criteria. In addition to these criteria, the selected international school must be established for at least five years. The principals selected for this study are those with at least three years in tenure ship with the school and more than five years working in the educational field. These criteria are set to ensure a greater likelihood that if the principals are practicing distributed leadership in the schools, then the teachers would have been exposed to such practice. A minimal period of three year is considered sufficient time for the principal to foster relationship with the teachers and work collaboratively in the school. Based on these criteria, a total of ten international schools were chosen.

3.5 Research Variables

In this study, the investigation is on the relationship between an independent variable that causes effect on a dependent variable that is linked through a mediator variable. The description of these variables is given below.

3.5.1 Independent Variable

The independent variable in a research is described as a variable that can be controlled or acts as the predictor to an outcome. It is also considered as an exogenous latent construct in a research method using structural equation modeling (SEM) approach. In this study, there is only one independent variable which is the principal distributed leadership. The dimensions of distributed leadership: leadership function quality and distribution, supervision quality and distribution, cooperation in the

leadership team, and teacher participation in the decision making are also independent variables in this study.

3.5.2 Dependent Variable

The dependent variable in a research is described as the outcome due to the effect of the independent variable. It is also called the endogenous latent construct in the SEM context. In this study, teacher organizational commitment is the dependent variable. It consists of three components: affective commitment, normative commitment and continuance commitment. However, in this study, teacher organizational commitment is considered as a unidimensional dependent variable.

3.5.3 Mediating Variable

The mediator is a research variable that links the independent variable to the dependent variable. Mediation is applicable when there are relationships between the independent variable and the mediator, the independent variable and the dependent variable, and the mediator and the dependent variable. In this study, teacher job satisfaction is the mediating variable. It has three dimensions: satisfaction with the students, satisfaction with the parents and satisfaction with the co-workers.

3.6 Research Population and Sample

The main purpose of a research is to provide answers pertaining to the research questions which are posed after the statement of the research problem and identification of research gaps. Taherdoost (2016) stated that it might be impossible to collect data from all the members of the population. Therefore, a sample needs to be selected. Figure 3.1 shows the process of sampling in a given study.
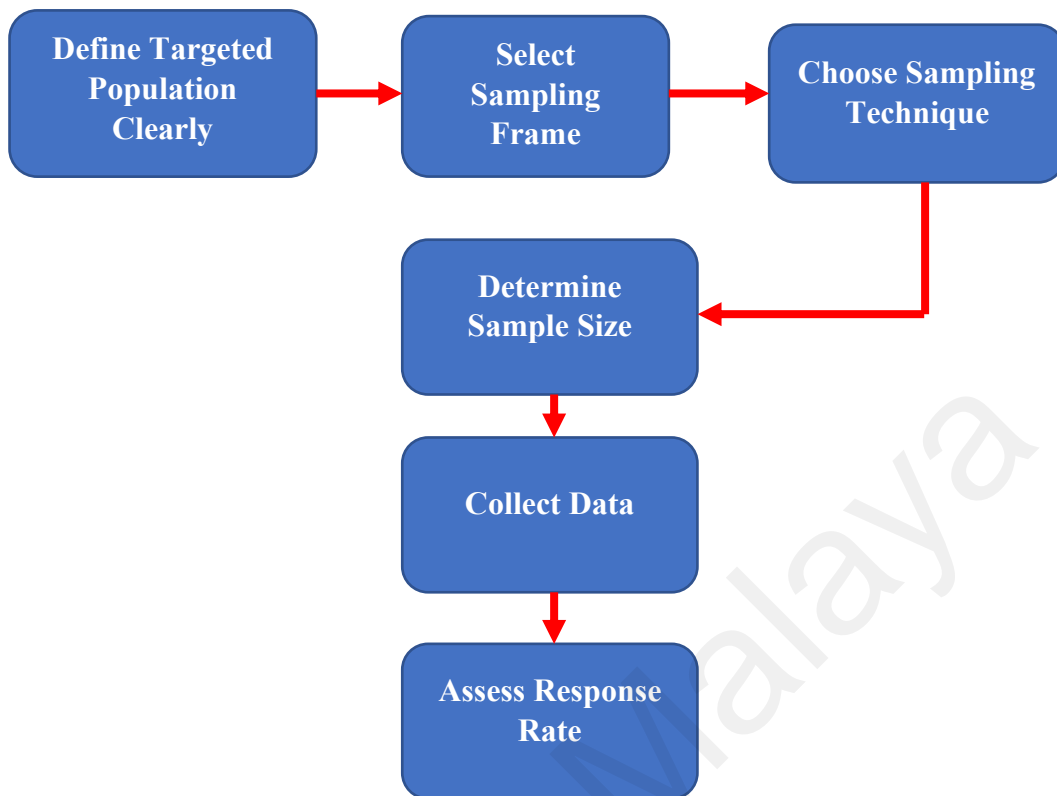
Figure 3.1. The Process of Sampling

Source: Taherdoost (2016)

3.6.1 Determination of the Study Population

The determination of the study population is important and should be done before sampling is carried out (Chua, 2014). Sekaran and Bougie (2013) explained the term 'population' as referring to a group of people or events and their characteristics which can be used to draw interesting conclusions. Kumar, Abdul Talib and Ramayah (2013) stated that population can be any set that comprises of people or subjects with common observable criteria. The population in this study is defined as teachers currently employed and working in ten international schools in the vicinity of Kuala Lumpur. Based on the listing of teachers provided from the ten participating international school, the population of this study is 652.

3.6.2 Select Sampling Frame

A sampling frame was created based on the information provided by each of the ten participating international schools. The population of teachers for each school was determined and the names of the teachers were identified and listed in alphabetical order. This becomes the sampling frame for this study.

3.6.3 Sampling Design

Sampling is considered as one of the most important aspect of research methodology as it is required to ensure the validity of the collected data and the representation of the sample to the population of the study. Sampling is basically a procedure to select a number of units from a given population to provide the representation from which conclusion can be drawn about the whole population (Creswell, 2014). According to Cavana et al. (2001), sampling in research is able to save the time, cost and resources of the researcher. This is because through sampling, the researcher need not have to study the entire population but look at the selected sample only. It is important to understand the numerous choices of sampling design that can be used in a research. Sampling in general, can be divided into two main designs, probability and non-probability sampling.

In a probability sampling design, the features of the intended population are represented by a known, non-zero change of being recruited as a respondent whereas for a non-probability sampling design, there is no known or predetermined change of being selected as a sample of the study. Sekaran and Bougie (2016) stated that there are at least four sampling techniques that can be chosen by the researcher under the probability sampling design which are simple random sampling, systematic random sampling, stratified random sampling and cluster sampling.

Simple random sampling is also referred to as 'straight random sampling' or 'unrestricted probability sampling' which provides and ensures that each member of the population has an equal opportunity to be chosen and selected as the respondent or sample of the study (Sekaran and Bougie, 2016).

On the other hand, systematic random sampling has a lesser degree of randomization compared to simple random sampling. However, Fowler (1993) explained that systematic random sampling is more convenient whereby it uses sampling units that are selected in sequences separated on lists by the interval of selection.

Stratified random sampling, according to Fink (1995) is "a random sample that is picked from a number of subgroups or strata in a population" (p. 11). This is normally chosen when the population has features which can be divided into subgroups and random sampling can be carried out at the subgroup level (Sekaran and Bougie, 2016).

Another sampling method under the probability sampling design is the cluster sampling which is quite similar to stratified random sampling. In this situation, the survey population is divided into distinguishable groups before sampling it (Henry, 1990). Sekaran and Bougie (2016) added that the term 'cluster' means that the group indicates "naturally occurring groups, for instance, households, schools etc." (p. 246).

In non-probability sampling, the sample has limitation to represent the entire study population. In other words, the generalization of the research findings is somewhat limited. The key to select which sampling design should be taken depends on the availability of the sampling frame. In the case where it is available, a probability sampling design is advised (Sekaran and Bougie, 2016).

There are two major types of non-probability sampling techniques that can be used in survey research. The first one is the convenience sampling method which refers to the collection of data from members of the population whom are considered as suitable and readily available for the study. In the exploratory stage of a study, convenient sampling is perhaps the fastest and most efficient approach of sampling in order to get preliminary information about the area of study. Hence, in pilot study, this sampling method is often utilized. However, convenience sampling does have some limitations in terms of generalizability (Sekaran and Bougie, 2016).

The second type of non-probability sampling is the purposive sampling. This refers to the selection of the respondents of the study based on specific knowledge about the population in terms of its features that can be aligned to the research objectives. In other word, respondents of the study are selected because they fulfill certain criteria or features to be examined in the study (Frey et al., 2000).

Hence, after reviewing each type of sampling, this study adopts a probability sampling method which is the stratified random sampling as there are several international schools to be chosen from and each school has its own population fro which samples can be drawn.

3.6.4 Choosing a Sampling Technique

In a given study, the main aim is to ensure that the sample selected from the population would be able to represent the population so that the findings of the study can be generalized to the population. Polit and Beck (2010) explained generalization as the intent of drawing broad inferences or conclusions from particular situation. It is generally important in evidence-based practice to apply the research findings to the people, situations and times other than those in the study and often considered as a

major criterion to determine the quality of a study (Polit and Beck, 2008). As a quantitative study, the main purpose in this study is to achieve statistical generalization. The goal of selecting the respondents from the population is to ensure that they are able to represent the population (Lincoln and Guba, 1985). The best way to achieve this is to use probability or random sampling method whereby each member of the population has an equal chance to be selected as the study sample (Polit, 2010). Teddlie and Tashakkori (2009) however cautioned that to get a truly random sample is not always attainable in actual study because of various limitations such as research resources, time and access to the population.

The selection of the respondents or study sample is based on stratified simple random sampling technique. This technique is a probability sampling technique in which situation, the sampling is done randomly in the specified stratum (Sekaran and Bougie, 2013). Stratified simple random sampling enables sampling from each school, which are considered as strata (Tolmie, Muijs and McAteer, 2011). Randomizing at the strata level ensures that there is minimal or no sampling bias at all because the final sample is based on equal representation of each strata from the whole population (Neuman, 2011). This method also has higher statistical precision as the variability within the strata is lower in comparison with the entire population, thus resulting in a smaller margin of errors (Hancock and Mueller, 2010).

In this study, theories like the social exchange theory and the investment theory are used to explain the phenomenon in a different context. Hence, this study is more focused on theory generalization rather than sampling generalization (Hulland, Baumgartner, and Smith, 2017). According to Memon, Ting, Ramayah, Chuah and Cheah (2017), sampling generalizability in most situations is not necessarily needed if the aim of the study is rigorously on testing the theory as in the case of this study.

Thus, using a stratified random sampling is considered as the best choice of sampling method for selecting the respondents of this study.

3.6.5   Determining the Sample Size

The determination of the sample size is critical to ensure adequacy of the sample to represent the population. An adequate sample size ensures the generalization from a random sampling and to avoid errors and bias in sampling (Taherdoost, 2016). Malhotra (2008) explained that the required sample size is determined by a series of factors including the selected data analysis technique used in the study. Factor analysis which is used in PLS-SEM is sensitive to sample size and it is considered to be less steady when a small sample size is used (Tabachnick and Fidell, 2007). An adequate sample size is also necessary in developing the model structure (McQuitty, 2004).

There are many ways of determining the sample size for a research. Most often, for a study with a known population, the formula presented below can be used.

$n= p (100-p) z^2 / E^2$

where n is the required sample size;

P is the percentage of an event to happen

E is the percentage of maximum error required

Z is the value showing the required level of confidence

E refers to the error margin or the degree of accuracy or risk that is acceptable by the researcher. Normally, a value of 5% is considered as an acceptable error margin in science social and educational research. A smaller E value gives the assumption that a larger sample size is needed but the large sample size does not ensure accuracy (Bryman and Bell, 2003).

Z refers to the level of confidence that the findings of the study is accurate. This reflects the degree to which the researcher is confident that the estimated characteristics of the population are accurate based on the study sample. Normally in a management research, the acceptable value of Z is at 95% (0.05: Corresponding Z value is 1.96) or 99% (0.01: Z = 2.57). The confidence level of 95% explains that 95 out of 100 samples have the real value of the population in a specified error margin (E).

The P component explains the estimated variance or the heterogeneity of the population (Zikmund, 2002). According to Bartlett, Kotrlik, and Higgins (2001), the P value at 50% is often suggested as this can maximize the variance and produce the highest sample size.

Krejcie and Morgan (1970) stated that for a known population of 652, then a sample size is 242 corresponds to the need of ensuring adequacy of sampling. Hence, this study chooses 242 as the number of samples drawn from the targeted international school population. Based on the stratified random sampling technique, the calculation of the representing sample size from each school (strata) is provided in Table 3.2. The calculation of the sample size in each school is based on the ratio of the school population and total population and times with the total sample size (e.g. for school A: school population/totl population x total sample = 82/652 x 242 = 30.4) to yield the sample size of the school.

Table 3.2

Teacher's Sample Size Calculation from Each School

Schools	Population Size	Sampling Calculation	Sample Size	Actual Sample Size
School A	82	$\frac{82 \times 242}{652}$	30.4	30
School B	40	$\frac{40 \times 242}{652}$	14.8	15
School C	100	$\frac{100 \times 242}{652}$	37.1	37
School D	70	$\frac{70 \times 242}{652}$	26.0	26
School E	50	$\frac{50 \times 242}{652}$	18.6	19
School F	50	$\frac{50 \times 242}{652}$	18.6	19
School G	70	$\frac{70 \times 242}{652}$	26.0	26
School H	70	$\frac{70 \times 242}{652}$	26.0	26
School I	80	$\frac{80 \times 242}{652}$	29.7	29
School J	40	$\frac{40 \times 242}{652}$	14.8	15
TOTAL	**652**			**242**

Nevertheless, it should be cautioned that there might be challenges of obtaining the proposed sample size such as teachers' reluctance to participate in the survey, incomplete questionnaire and extreme responses (positive or negative) or straight-lined responses to the items in the questionnaire (Podsakoff, MacKenzie, Lee, and Podsakoff, 2003). Thus, the determination of sample size adequacy should also consider other methods as well.

The use of power analysis to decide on the minimum size of the samples has been found to be more reliable and less biased compared to other methods used in determining sample size (Westland, 2010). A relatively greater power has been shown to reduce both the Type I and Type II errors (Simmons, Nelson and Simonsohn, 2011).

Sample size determined using statistical power should therefore be considered in this study. This is defined as the likelihood that a statistical significance test causes the rejection of the null hypothesis and the acceptance of an alternative hypothesis at a specified value (Cohen, 1988). Power which is expressed as $1 - \beta$, and β being the probability of making a Type II error, which means the acceptance of a null hypothesis wrongly when it is actually false. Cohen (1992) suggested that a statistical power of 0.80 is adequate to avoid committing a Type I or a Type II error.

The sampling size of the teachers can be estimated by Cohen's (1988) statistical power analysis. Cohen (1988) uses a statistical power analysis which considers five factors which are significance level or criterion, effect size, desired power, estimated variance and sample size. The statistical level of significance for most studies is normally fixed at $\alpha = 0.05$. This refers to the probability of committing a Type I error which is to wrongly reject the null hypothesis (Kim, 2015). The use of alpha at 0.05 is often used in the field of education and regarded as the most conventional level of significance (Ary, Jacobs, Sorensen and Walker, 2014).

Effect size refers to the extent to which a phenomenon occurs in the population or the extent to which that a false null hypothesis is attained (Cohen, 1988). The magnitude of the effect size has been determined as 0.02 for small, while an effect size of 0.15 is moderate and an effect size of 0.35 is considered as large (Cohen, 1992; Hair et al., 2014). In most fields, setting the effect size at moderate ($f^2 = 0.15$) is considered desirable and appropriate (Cohen, 1992). A medium size effect represents an effect which according to Cohen (1992) is "visible to the naked eye of a careful observer" (p. 156).

The G*Power 3.1.3 calculator can be used to determine the adequacy of sample size. Faul et al. (2009) stated that the tool is efficient, precise and user friendly. As

shown in Figure 3.2, for a study with seven predictors (four sub-constructs of distributed leadership and three sub-constructs of job satisfaction), a minimum and adequate sample size is 103 to provide an acceptable result of the hypothesized relationships in the research model.
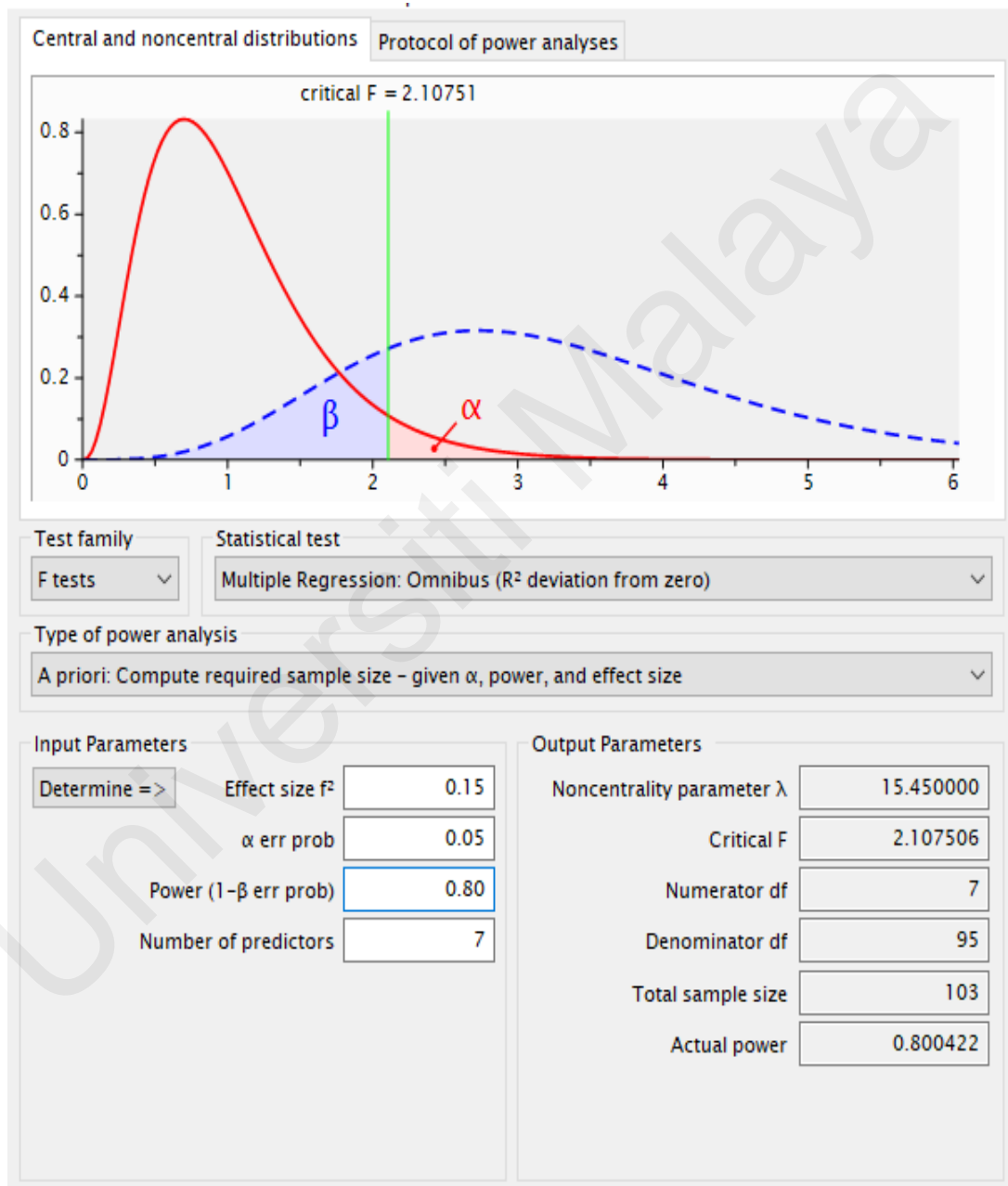
Figure 3.2. The Determination of Sample Size with G*Power 3.1.2

Hence, based on Cohen's power test (1988), it is determined that a sample size of 103 is adequate to give a representation of the population. Hoyle (2012) stated that a 100 to 200 sample size is considered suitable if a path modelling is used as in the case of this study. Wong (2013) advised to increase the sample size of the objective of the study is to determine the inter-correlation of low value factors with weak power indicators. Both Hoyle (2012) and Wong (2013) stated that a larger sample size can establish the validity and representational effect from the research finding. Marcoulides and Saunders (2006) added that a larger sample size is required for data cases that are moderately not normal despite having indicators in the model which may exhibit high reliability. Thus, smallest sample size that can be accepted in this study is 103 while the recommended sample size for a known population is 242.

3.7   Research Instrument

As a descriptive research design is used in this study, thus it requires the gathering of data revolving around the characteristics of persons, events or situations describing the phenomenon. Survey method is often associated with descriptive research design. Thus, the research instrument in the form of a questionnaire was employed to gain quick access to cross-sectional data from the samples to determine principals' distributed leadership, and the job satisfaction and organizational commitment of the teachers. Monette, Gullivan and DeJong (2011) explained that a questionnaire is a means of collecting data in a survey whereby it comprises of questions that require the responses of the individuals which are recorded directly without the interference of the researcher. The decision on questionnaire in this study is supported by the various advantages arising from its use. Firstly, questionnaire is a familiar instrument which can gather a huge amount of data with minimal effort. Secondly, the respondents are

allowed the time to complete the questionnaire at their own pace. Thirdly, it is cost

saving as it can be distributed to respondents at different location. Table 3.3 presents

an overview of the advantages and disadvantages of using questionnaire in a study.

Table 3.3

Advantages and Disadvantages of Research Questionnaire

Criteria	Description
Advantages	• Questionnaire is an instrument that is familiar to many users or respondents who find it easier to complete the items at their own pace when ample time is given to respond to the questionnaire. • Questionnaire is able to obtain a massive amount of data with minimal effort • Questionnaire is convenient when the participants are available in one place so this can save the time and cost of distributing the questionnaires • Questionnaires can be used many times to assist researchers in identifying variations observed among people. Therefore, it is a reliable data collection tool. • The administrator of the questionnaire can build good rapport with the respondents and clarify to them the objectives of the study and other aspects of the questionnaire. • Good questionnaire can identify the correlations among data especially quantifiable data.
Disadvantages	• Questionnaires when it is distributed to the intended sample might end up not returned thus yielding a low percentage of return rate. • Distributed questionnaire is a one-time occasion with lesser possibility of follow-up. • Due to the ease of production and distribution, the researcher might have more data than necessary. • The completion of the questionnaire is subjected to the willingness and time availability of the respondents. • In the case of mailed or online questionnaire, there is limited personal contact and explanation about the purpose of the survey cannot be presented clearly.

Source: Sekaran and Bougie (2016); Muijs (2011)

The questionnaire is therefore, a tool used by the respondents of the study who has the full responsibility to interpret and response to the items in the questionnaire (Richey and Klein, 2014). Vaus (2013) explained that the questionnaire comprises of a set of sound questions to ask the respondents who are familiar with the research subject. Therefore, the design of the questionnaire needs to be good and the emphasis should be on ensuring that the questionnaire is relevant and accurate (Neuman, 2006).

3.7.1 Relevancy of the Questionnaire Items

A questionnaire is designed based on items to represent a research variable and it is necessary that the relevancy of these items is without prejudice. The relevancy of the items is achieved when the information needed to solve the research problem is attained (Zikmund, 2003). Therefore, in order to ensure the reliability of the questionnaire, only suitable items are included based on the requirements as stipulated by the research questions (Fink, 2013).

In this study, there were a series of revision and editing during the construction of the questionnaire. Since job satisfaction and organizational commitment are popular research variables with a lot of existing measurement scale to adopt or adapt, hence, the relevancy of the items may not be much of an issue. Distributed leadership has also been a popular research variable in the last decade that there are also measurement scales that can be used for this study. Hence, the revision of these measurement scales are more focused towards ensuring the suitability of the items in the context of Malaysian culture.

3.7.2 Selection of Measurement Scales

Three measurement scales were selected in this study to represent principal distributed leadership, teacher organizational commitment and teacher job satisfaction.

3.7.2.1 Principal Distributed Leadership

A scale on distributed leadership was developed by Davis (2009) based on the Distributed Leadership readiness Scale created by the Connecticut State's Department of Education (2004), the Teacher Leadership School Survey by Katzenmeyer and Katzenmeyer (1998) and the School Leadership Survey by Michigan University (2001). This scale had seven dimensions with 37 items. The sub-dimensions of the measurement scale include school organization, school vision, school culture, instructional program, artifacts, teacher leadership and principal leadership. The developed scale was used by Ersozlu and Ulusoy (2016) in Turkey where it was translated into Turkish language. After validation, the measurement scale had 34 items for the Turkish sample.

Trammell (2016) also investigated distributed leadership in his study. The inventory to measure distributed leadership was based on a revised Leadership Density Inventory (LDI) which was developed by Smith, Ross and Robichaux (2004). This instrument was established using a panel of higher education faculty members to scrutinize the items of the LDI. After piloting the instrument, the revised LDI used to measure distributed leadership in Trammell's study (2016) had 16 items as a unidimensional variable.

Hulpia and his associates have been developing and improving on the measurement scale for distributed leadership. Hulpia, Devos and Rosseel (2009) presented validated scores on Distributed Leadership Inventory which consisted of

three dimensions which are: support, supervision and coherent leadership team. The support dimension had 10 items, supervision with three items and coherent leadership team had 10 items too.

Distributed leadership was also measured based on the Distributed Leadership Inventory developed and used in Hulpia et al (2012). In this study, distributed leadership used four dimensions: quality and distribution of support; quality and distribution of supervision; cooperation in the leadership team; and participative school decision making. Leadership support consisted of 10 items while Leadership supervision has three items, cooperation in the leadership team has 10 items and participative school decision making has six items.

These measurement scales on distributed leadership provided different items to assess distributed leadership. All the measurement scales were validated and but based on the assessment through a panel of expert from higher institutions, the Distributed Leadership Inventory used in Hulpia et al. (2012) was chosen to be used in this study in an adapted version.

3.7.2.2 Teacher Job Satisfaction

Teacher job satisfaction has been an interesting variable in past researches that there are many measurement scales. Some of the popular ones include the Job Descriptive Index (JDI) (Leong and Vaux, 1992) which comprises of 18 items, the Job Satisfaction Survey (Spector, 1985) with nine dimensions and 36 items, the Minnesota Satisfaction Questionnaire (Hirschfeld, 2000) with 20 aspects of satisfaction represented with 100 items, and the Teacher Job Satisfaction Questionnaire (Lester, 1987) with nine job satisfaction domain comprising of

colleagues, supervision, pay, working condition, work, responsibility, security, advancement and recognition.

A recent questionnaire on job satisfaction was developed by Pepe et al. (2017) called the Teacher Job Satisfaction Scale (TJSS-9). This scale represents three dimensions of satisfaction about the teacher relationship with student, parents and co-workers with each dimension awarded with three items. The dimensions of the TJSS was based on a higher-order need and focused on the intrinsic aspect of job satisfaction.

Based on the assessment of these measurement scales for teacher job satisfaction, the expert panel of this study selected the Teacher Job Satisfaction Scale (Pepe et al., 2017) to measure teacher job satisfaction because of its high relevance to the research questions and the objectives of this study.

3.7.2.3   Teacher Organizational Commitment

Gokyer (2018) investigates about organizational commitment of high school teachers. However, he used a different measurement scale adopted from Celep (1998) to determine the commitment of teachers to advances task consciousness, commitment to colleague, commitment to teaching profession and commitment to the development of the school. The measurement scale had 32 items with a five-point Likert scale to determine the frequency of their feeling about their commitment ranging from 'almost never' to 'always'. However, this measurement scale was not used for this study because it has low frequency of usage in other studies.

The assessment of teacher organizational commitment could also be made possible with the selection of two most popular measurement scales often used in research. The first one is the Organizational Commitment Questionnaire which was developed by Porter, Steers, Mowday and Boulian (1974). This questionnaire

comprises of 15 items, but it did not provide a clear delineation of the three components of organizational commitment.

Another questionnaire was development by Allen and Meyer which had been revised over a few years. The first one was developed and reported in Meyer and Allen (1984) that provided an assessment of two types of organizational commitment: affective commitment and continuance commitment. Then, Allen and Meyer (1990) introduced a third dimension called normative commitment. Further review of the measurement scale was reported in Meyer, Allen and Smith (1993) with a revision of the normative commitment scale to distinguish this component from the other component, affective commitment.

The earlier versions of the questionnaire (Meyer and Allen, 1984, 1991; Allen and Meyer, 1990) had 24 items with eight items for each dimension but the reviewed versions (Meyer et al., 1993; Meyer and Allen, 1997) had only 18 items with six items for each dimension. For this study, the assessment from the expert panel led to the selection of the Organizational Commitment Questionnaire with the 24 items as presented in Allen and Meyer (1990).

3.7.3   The Research Questionnaire

The research instrument in this study is a questionnaire. The questionnaire is divided into four sections. Section A: Respondent's Demographic Characteristics; Section B: Principal's Distributed Leadership; Section C: Teachers' Job Satisfaction; and Section D: Teachers' Organizational Commitment. These three measurement scales in Section B, C and D were adapted from past studies. Permission to utilize the scales was sought from the original developers of the scales. Letters of communication seeking permission to use with the respective authors are appended in Appendix A, B.

and C. Face validity was also conducted on these scales involving three experts in education leadership in Malaysia to ensure that there is suitability of language and contents in the scales for respondents in Malaysia. Further to that, Rasch model analysis was implemented to ensure the measurement scales' reliability and validity. These were carried out in a pilot study. More elaboration of these actions is presented in the pilot study section.

3.7.3.1   Section A: Respondent' Demographic

In the respondent's demographic section, information such as gender, academic background, work experience as a teacher and length of work experience in the current school are gathered to provide some background about the respondents.

3.7.3.2   Section B: Principals' Distributed Leadership

Principal's distributed leadership was measured based on the Distributed Leadership Inventory developed and used in Hulpia et al (2012). Permission from the authors of the questionnaire has been sought as evident in Appendix A. The instrument consists of 29 items and four major components: leadership function quality and distribution, supervision quality and distribution, cooperation in the leadership team, and teacher participation in decision making. Ten items measure the leadership function quality and distribution, three items measure the supervision quality and distribution, ten items measure the cooperation in the leadership team, and another six items measure teacher participation in decision making. The responses to the items in this section used a 5-point Likert rating scale ranging from 'never' to 'always'. Likert scale rating is one of the most basic and commonly used psychometric tools in field of education and social sciences (Joshi,

Kale, Chandel and Pal, 2015). The scale is a rating scale with attitude scores whereby the respondents are required to answer from a choice of five possible response. Each of this response is allocated a point value and the respondent's score is ascertained by the total of the point values of all the items (Gay, Mills and Airasian, 2009).

Table 3.4 presents the items to measure Principal's Distributed Leadership. The items in the questionnaire were randomized to avoid or ensure minimization of common method bias (Podsakoff et al., 2003). There are no negative items in the questionnaire.

Table 3.4.

Distribution of Items in the Principal's Distributed Leadership Questionnaire

Dimensions	Item No	Total Items
Quality and Distribution of Leadership Function	1,3,4,5,6,7,9,10,12,13	10
Quality and Distribution of Supervision	2,8,11	3
Cooperation within the Leadership Team	14,15,16,18,21,22,24,25,28,29	10
Teachers' Participation in Decision making	17,19,20,23,26,27	6
Total Items		29

The internal consistency of DLI in past studies was at an acceptable range. In Hulpia, Devos and Rosseel (2009b), Cronbach's alpha for coherent leadership team dimension ($\alpha = 0.91$), support by principal ($\alpha = 0.93$), by assistant principal ($\alpha = 0.93$) and by teacher leaders ($\alpha = 0.91$), and supervision by principal ($\alpha = 0.83$), by assistant principal ($\alpha = 0.85$) and by teacher leaders ($\alpha = 0.79$) was above the cut-off value of 0.70. According to Nunnally and Bernstein (1994), the values

should be 0.80 or higher to establish reliability. In Akdemir and Ayik (2017), the total internal consistency factor for DLI was 0.96, while for support was 0.90, for supervision was 0.90, and for team working was 0.94. These are high internal consistency level, thus indicating that the scale has good reliability.

3.7.3.3 Section C: Teachers' Job Satisfaction

Teachers' job satisfaction was measured based on the Teacher Job Satisfaction Scale (TJSS-9) that was used in a study conducted by Pepe et al. (2017). Permission from the authors has been sought as evident in Appendix B to use the questionnaire in this study. The instrument rated three types of satisfaction which include satisfaction with co-workers, parents and students with each type being apportioned three items. The items were responded to using a 5-point Likert rating from 'strongly disagree' to 'strongly agree'. Table 3.5 presents the randomized items in the teacher's job satisfaction questionnaire. There are no negative items in the questionnaire.

Table 3.5

Distribution of Items in the Teacher's Job Satisfaction Questionnaire

Dimensions	Item No	No. of Items
Satisfaction with Co-worker	1,5,9	3
Satisfaction with Parents	2,4,8	3
Satisfaction with Students	3,6,7	3
Total Items		9

Pepe et al. (2017) had assessed the invariance in TJSS across six countries. The reliability analysis for the six countries showed that Cronbach's alpha

for the dimensions, satisfaction with students ranges from 0.722 to 0.898, satisfaction with co-workers that ranges between 0.789 and 0.884, satisfaction with parents ranges from 0.787 to 0.937. The measurement scale has high internal consistency and acceptable across six countries.

3.7.3.4 Section D: Teachers' Organizational Commitment

Teachers' organizational commitment was measured using the organization commitment scale developed by Allen and Meyer (1990). Permission from the authors of the questionnaire has been sought as evident in Appendix C. The instrument dimensions comprise of three types of commitment: affective, continuance and normative with each type being apportioned eight items. For this section, the responses of the teachers were based on a range of 'strongly disagree' to 'strongly agree' in a 5-point Likert rating scale.

Table 3.6 presents the randomized items in the teacher's job satisfaction questionnaire. There are no negative items in the questionnaire.

Table 3.6

Distribution of Items in the Teacher's Organizational Commitment Questionnaire

Dimensions	Item No.	No. of Items
Affective	1,3,5,7,10,11,15,24	8
Continuance	2,6,8, 12,13,17,19,20	8
Normative	4,9,14,16,18,21,22,23	8
Total Items		24

The use of OCQ in other studies indicated that measurement scale has good internal consistency. Aslamiah (2019) reported that the reliability of OCQ based

on Cronbach's alpha in her study was acceptable for overall organizational commitment (α = 0.90), affective (α = 0.81), continuance (α = 0.94) and normative (α = 0.90) commitments. In Mowday et al. (1982), the range of internal consistency given by Cronbach's alpha was between 0.82 and 0.93. Kanning and Hill (2013) who validated the OCQ in six languages (English, German, Polish, Hungarian Spanish and Malay) found that the range of Cronbach's alpha was between 0.70 and 0.96. These findings imply that OCQ has acceptable values for validity.

3.8   Pilot Study

Bless et al. (2006) stated that a pilot study or a small-scale study should be carried out before the actual study to ensure that the methodology, sampling, instrument and analyses used in the study are sufficient and suitable. It assesses the research protocols, data collection instruments, acquisition of respondents and other research techniques so that things go smoothly in the actual study (Zailinawati, Schattner and Mazza, 2006).

Polit, Beck and Hungler (2001) stated that pilot study is regarded as an experimental run to ensure that the full-fledged study is implemented successfully. The purpose of a pilot study is to identify potential problematic areas of study, particularly the research protocols and instruments before the actual study is done. It also provides familiarization with the research protocol and procedures to ensure distribution of questionnaire during the survey is efficient (Ismail, Kinchin and Edwards, 2018). Most importantly, a pilot study ensures that there is clarity in the questionnaire through the assessment of the questionnaire using selected respondents with the intention of identifying and correcting flaws in the questionnaire (Wilkinson and Birmingham,

2003). Piloting helps in clarifying ambiguous and vague questions in the questionnaire. As explained in De Vos et al. (2011), some functions of a pilot study include:

- Discovering probable defects in the process of measurement such as ambiguous instruction or insufficient time for completing the questionnaire;

- Identifying vague or unclear items in the questionnaire by directing the questions or statements to a selected group of respondents who will interpret them and analyzing their responses qualitatively and quantitatively;

- A chance for the researcher to identify the paralinguistic characteristics of the respondents which prompts a rephrasing of the questions or items.

The validity and reliability of the principal's distributed leadership, teachers' job satisfaction and organizational commitment questionnaires were determined in the pilot study. This type of study is a small-scale research that is normally carried out before the final full-scale research is done. This study is normally conducted to test in reality how likely the selected research process will work so that the best decision can be made for the actual study. Most importantly, a pilot study provides the researcher with the opportunity to refine the research questions, determine the best methods to use and estimate the time required to complete the study as well as the resources needed to implement the actual study (Ismail, Kinchin and Edwards, 2017).

Several phases were undertaken in the pilot study to guarantee that the questionnaire used during the actual study has acceptable level of reliability and validity.

3.8.1   First Phase: Face validity of the questionnaires

The first step in the pilot study was to conduct a face validity of the adapted questionnaires for principal's distributed leadership, and job satisfaction and organizational commitment of the teachers. Validity is a concept that explains how well the collected data covers the actual area of investigation. Field (2005) defines validity as the measure of what it is intending to measure. One of the types of validity that is always done on social science research is face validity. It is a subjective judgment about the operationalization of a research variable. Face validity assesses the feasibility, readability, consistency of style and formatting and the clarity of language used in the questionnaire (Taherdoost, 2016). The presentation and relevance of the items in the research instrument are assessed subjectively using face validity (Azwani, No'rain and Noor Shah, 2016). Hence, the assessment includes checking grammar accuracy, item clarity, spelling, sentence structure, suitability of font size and type, and the format of the questionnaire (Oluwatayo, 2012).

In this study, the targeted respondents were teachers from ten international schools in Kuala Lumpur and since the medium of instruction in these schools is English, it is safely assumed that the respondents have adequate command of the English language. Dimaggio (2013) stated that language is a critically important consideration because it obtains information from the people. However, the questionnaires used in this study originated from a Western context and therefore, there is a need to examine the presentation of the items in terms of wording, phrasing and sensitivity (Birley and Moreland, 2014). This is to ensure that there is no confusion of the meaning presented in each item in the questionnaire to the respondents.

Face validity of the adapted questionnaires for principal's distributed leadership, and job satisfaction and organizational commitment of the teachers was

carried out with the help of three experts in the field of educational leadership from University of Science Malaysia (USM), University of Nottingham Malaysia (UNM) and the National University of Malaysia (UKM). Their comments on the questionnaires led to the improvement of the items in the questionnaires in terms of language, especially in the choice of words and structuring of the sentences.

The course of amendments on the items in the questionnaires recommended by the panel of experts is presented in Appendix D while the final questionnaire is shown in Appendix E.

The presentation of the questionnaire was also given some thoughts. Neuman (2006) stated that a two to three pages of questionnaire is considered good. In addition to that, the content of the questionnaire is systematically organized and printed in 12-point Times New Roman font so that it is easy to read. The spacing of the questionnaire is also given some thoughts to ensure that all the items are arranged in order. The arrangement includes a division of the questionnaire into sections beginning with an introduction about the research and general information about the questionnaire as well as the general instruction to complete the questionnaire. Then, the principal distributed leadership section is presented followed by teacher job satisfaction and lastly, the teacher organizational commitment. The items in each of the sections were randomly mixed so that there is randomness and lesser obvious relationship from one item to the other.

Another aspect of concern is the response scale. Bernard (2012) explained that a simple attitude scale should use some symbols of characters to show either the agreement or disagreement to the item, or frequency of observation, from never to always about an item. In this study, the principal distributed leadership used the frequency of observation from 'never' to 'always' in a five-point Likert scale while

teacher job satisfaction and teacher organizational commitment used the agreement or disagreement response, also in a five-point Likert scale. Sarantakos (2012) stated that the five point of agreements: strongly disagree, disagree, neutral, agree and strongly agree, are commonly used in research.

3.8.2   Second Phase: Pilot Testing the Questionnaire

For the second phase of the pilot study, the questionnaire with the three measurement scales of principals' distributed leadership, and the job satisfaction and organizational commitment of the teachers were administered to 100 selected teachers in an international school in Kuala Lumpur that did not participate in the actual study but only 81 sets of questionnaires were usable. A total of 19 questionnaire was rejected in the pilot study due to incompleteness. Cooper and Schindler (2011) suggested that a sample size for a pilot study can range between 25 to 100 respondents. In the pilot study, a total of 100 questionnaires were sent to targeted respondents but only 80 were completed fully and returned, indicating a return rate of 81%. Thus, for a pilot study, the sample size was accepted as adequate.

This pilot study was carried out in March 2019. Piloting the questionnaire is important as this helps to identify any ambiguities in the questionnaire items and to identify the range of possible responses for each question. Furthermore, the pilot study determines the acceptability, validity, and reliability of the measure being tested (Vogel and Draper-Rodi, 2017). In the pilot study, the measurement instrument is assessed to ensure that the items are comprehensible and appropriate, well understood and presented in a consistent manner (Ismail et al., 2018).

3.8.3   Third Phase: Questionnaire Validation with Rasch Modeling Technique

In order to assess the validity of the questionnaires, data obtained from the pilot study was then tested using the Rasch Modeling technique. Questionnaire is an evaluation scale based on psychophysics and psychometrics. Psychophysics approximates the quantification process of perception whereby the intangible phenomena is translated into numbers while psychometrics ensures the study on the adaptation of the scale to the phenomenon. In a way, psychometric relates to the object of measurement and the quality of measurement (Garcia de Yebenes Prous, Salvanes and Ortells, 2009).

The Rasch model was introduced by Georg Rasch (1960), a Danish mathematician to support true measurement. The model was based on the notion that in the attempt to measure a single trait, the respondents are more inclined to response to the easy items correctly than difficult items and that there is a greater tendency that all items are answered correctly by high-ability respondents on the construct that they are assessing compared to low-ability respondents (Boone and Noltemeyer, 2017). Rasch model analysis is an item response theory which determines the probability of a respondent to respond correctly to an item depending on the difficulty of the item as well as the respondent's ability regarding the latent trait being measured (Wilson and Moore, 2011; Santos et al., 2016).

This study verifies and establishes the validity of the research instruments, by testing the psychometric properties of the three measurement scales based on the framework of Item Response Theory (IRT). Item-testing based on the Rasch measurement method were computed with Winsteps (Version 3.73). The assessment includes Cronbach Alpha, item reliability, person reliability, item separation, person

separation, item Infit Mean Square, and person Infit Mean Square. The details of the analysis with Rasch model are shown in Appendix F (for Principal Distributed Leadership), Appendix G (Teacher Organizational Commitment) and Appendix H (Teacher Job Satisfaction).

3.8.3.1 Generating Logit Data

In Rasch analysis, the respondents' ability and item difficulty are measured using the same unit, called logits. The WINSTEPS software mathematically transformed raw ordinal data or Likert-type data which is used in the present study questionnaire through calibration of item difficulties and person abilities, based on frequency of response that are taken as probability, to become logit (log odd unit) via the logarithm function. These logits were then used to assess the overall fit of the instrument as well as person fit (Linacre, 2012; Bond and Fox, 2015; Adams, Sumintono, Mohamed and Mohamad Noor, 2018). The respondents' ability is calculated as the natural logarithm of the probability of success divided by the probability of failure ratio, ln (p/(1-p). The positive values of higher logits indicate better ability while negative values of lower logits imply lower ability level. The same scale of logits is used to display the respondents' ability and item ability. A zero value on the scale refers to the center of the ability as well as the difficulty range. Therefore, a zero logit means that the respondent has an average ability about the knowledge being assessed. Based on the Rasch model, the likelihood of a correct answer is predicted by the difference between the respondents' ability and item difficulty. Thus, a respondent's ability that equals item difficulty will have 0 logits and therefore, the probability of a respondent to answer a question is 50% (Tavakol and Dennick, 2013).

a) Person Reliability and Item Reliability

Bond and Fox (2007) stated that person reliability and item reliability should show a value of more than 0.8. As shown in Table 3.7, person reliability for principal's distributed leadership, teachers' job satisfaction and teachers' organizational commitment were 0.92, 0.90 and 0.87 respectively, which are all above 0.8. For item reliability, principal's distributed leadership (0.85), teachers' job satisfaction (0.95) and teachers' organizational commitment (0.91) have values above 0.8 A reliability index of more than 0.80 indicates that the expected consistency on the logit scale for the responses on differing sets of items that measure the same variable (Adams et al., 2018; Bond and Fox, 2015; Linacre, 2012).

Table 3.7

Person Reliability and Item Reliability

Principal's Distributed Leadership	Logit	Teachers' Job Satisfaction	Logit	Teachers' Organizational Commitment	Logit
Item Reliability	0.85	Item Reliability	0.95	Item Reliability	0.91
Person Reliability	0.92	Person Reliability	0.90	Person Reliability	0.87

b) Item Separation and Person Separation

Item separation and person separation should have value which is 2.0 or more (Linacre, 2012). In Table 3.8, item separation for principal's distributed leadership (2.38), teachers' job satisfaction (4.33) and teachers' organizational commitment (3.11) showed values exceeding 2.0. For person separation, all the

measurements of principal's distributed leadership (3.30), teachers' job satisfaction (2.24) and teachers' organizational commitment (2.61) exceeded the cut-off value.

Table 3.8

Item Separation and Person Separation

Principal's Distributed Leadership	Logit	Teachers' Job Satisfaction	Logit	Teachers' Organizational Commitment	Logit
Item Separation	2.38	Item Separation	4.33	Item Separation	3.11
Person Separation	3.30	Person Separation	2.24	Person Separation	2.61

c)   Item Infit Mean Square and Person Infit Mean Square

Bond and Fox (2015) stated that in infit mean square for item and person should be between 0.6 and 1.4. The result of the analysis of data in Table 3.9 showed that item infit mean square and person infit mean square for all measurement scales are acceptable. Therefore, item fit is indicated for distributed leadership, job satisfaction and organizational commitment.

Table 3.9

Item Infit Mean Square and Person Infit Mean Square

Principal's Distributed Leadership	Logit	Teachers' Job Satisfaction	Logit	Teachers' Organizational Commitment	Logit
Item Infit Mean Square	0.99	Item Infit Mean Square	1.00	Item Infit Mean Square	1.02
Person Infit Mean Square	1.02	Person Infit Mean Square	1.18	Person Infit Mean Square	1.25

d) Cronbach Alpha

The internal consistency of the measurement scales is reflected by the Cronbach's Alpha value. According to Bond and Fox (2015), the accepted value should be more than 0.8. In Table 3.10, it was shown that all three research variables have good internal consistency with principal's distributed leadership, teachers' job satisfaction and teachers' organizational commitment measured at 0.91, 0.82 and 0.92 respectively.

Table 3.10

Cronbach's Alpha Measures

Principal's Distributed Leadership	Logit	Teachers' Job Satisfaction	Logit	Teachers' Organizational Commitment	Logit
Cronbach Alpha	0.91	Cronbach Alpha	0.82	Cronbach Alpha	0.92

e)   Unidimensional and Rating Scale Analysis

Rasch model is grounded on the essential assumption that the scale is unidimensional. Reckase (1979) explains that unidimensional arises when the Rasch model could explain a minimum of 20% variance while Linacre (2012) stated that a 40% or more in variance indicates strong multidimensionality characteristics. Embretson and Reise (2000) proposed that multidimensionality is evident when there is a ratio of 3:1 of the first variance explained with the next dimension. The second highest percentage in the second dimension of more than 15% indicates multidimensionality is present in the measurement scale. Hence, according to Ruiz-Menjivar (2016), the assessment of unidimensional quality is based on the following requisites:

1. The variance explained by Rasch measure (primary measurement dimension) is less than 20%

2. The variance explained by the first component of the residuals (second dimension) is less than 15%

3. Minimum ratio of 3:1 for the variance in the measurement dimension compared to the variance of the first principal component of residuals.

Table 3.11 presents the percentage of variance explained for the three constructs of this study. The determination of dimensionality is based on the three requisites as stated above. All constructs have variance explained of the first dimension of more than 20%. Organizational commitment and job satisfaction have second dimension's variance explained of more than 15%. Distributed leadership has a ratio exceeding 3:1. The result shows that teachers' organizational commitment and teachers' job satisfaction complied with two of the criteria (variance explained of the

first dimension and variance explained of the second dimension) but did not comply with the third criterion (minimum ratio). On the other hand, principal distributed leadership complied with the first criterion (variance explained of the first dimension) and the third criterion (minimum ratio) but did not comply with the second criterion (variance explained of the second dimension). In other words, to a certain extent, it can be concluded that principal distributed leadership, teacher job satisfaction and teacher organizational commitment are dimensional.

Table 3.11

Assessment of Dimensional Quality of the Constructs

Variable	Variance Explained of First Dimension (%)[a]	Variance Explained of Second Dimension (%)[b]	Ratio 3:1[c]	Dimensionality
Teacher's Organisational Commitment	35.8	24.1	1.49:1	Yes
Teachers' Job Satisfaction	54.0	31.7	1.70:1	Yes
Principal's Distributed Leadership	65.5	3.8	17.24:1	Yes

Note: a: <20%; b: <15%; c: <3:1 indicate unidimensionality

3.8.3.2 Decision Based on Rasch Model Analysis

The Rasch model analysis is very much dependent on its unidimensional concept. As indicated in the dimensionality test, it was shown that principal distributed leadership, teacher job satisfaction and teacher organizational commitment are multidimensional. However, all other results indicated that each of

these variables have good validity and reliability. From the findings presented from the Rasch analysis, it can be concluded that the questionnaire with the three measurement scales are reliable and valid to use in the actual study. In general, the functionality of the items and persons showed that the measurement has high reliability. Thus, its use in the actual study should provide a reliable and valid measure of the three variables in this study.

3.9   Data Collection Procedures

In order to obtain study sample from the participating schools, official approval from the Ministry of Education, (MOE) Malaysia was obtained. The approval letter received from the Ministry of Education is shown in Appendix I. Upon receiving the official approval letter from the MOE, the Board of Management of each school was consulted and the intent to select the school in this study was made known to its management. Once the school agreed to participate in the survey, requisition from the school's Board of Management to have access to the teachers teaching in these schools and participate in the survey was obtained.

Data collection was done after obtaining consent from these schools. Letters seeking consent for the survey were addressed to the schools' principals and a courtesy call was done to see them personally. A sample of the letter sent to one of the international schools is shown in Appendix J. Communication following the courtesy call was done through phone calls and WhatsApp. Dates for distribution of the questionnaire to the schools was discussed with the school principals. Briefing was given on site during distribution of the questionnaires to the teacher and queries were answered. The questionnaire was also attached with a cover letter to explain the survey and instruction to answer the questionnaire. In the briefing and the cover letter, the

teachers' consent to become a respondent in the survey and the confidentiality of their responses were stated. The questionnaire takes about 10 to 15 minutes to complete. Figure 3.3 presents a flow chart of the process of data collection that was followed through in this study.
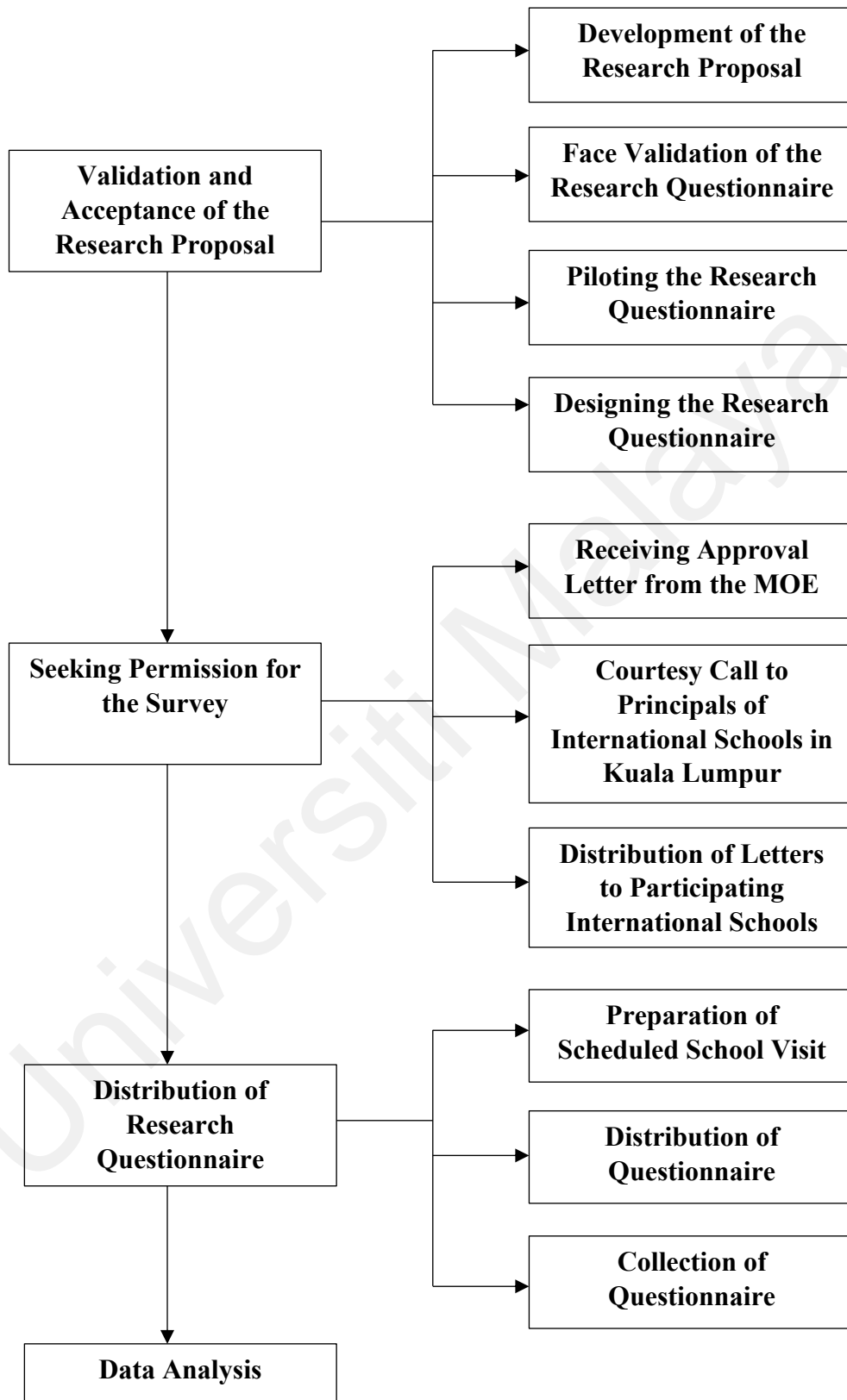
Figure 3.3. Flow Chart of Data Collection Procedures

3.10   Data Analysis

Data from the questionnaire will be analyzed using two software, the IBM SPSS Version 23.0 and SmartPLS Version 3.2.8. IBM SPSS Version 23.0 is a statistical tool often used in social science research. It is a popular statistical tool for quantitative research.

The partial least square and structural equation modelling (PLS-SEM) approach is to assess multiple variables simultaneously to explain their interrelationships (Hair, Hult, Ringle and Sarstedt, 2017). SEM runs on a series of multiple regression to assess the interrelationships of latent variables in combination with a factor analysis. It addresses two major concerns: understanding the correlational patterns among the latent variables and explaining as much as possible their variances within the specified model (Kline, 1998). PLS-SEM is able to run simultaneously the measurement models and structural model assessment, thus allowing a more vigorous analysis of the research model (Hair et al., 2017). This approach is also able to increase the explained variance of the endogenous latent variable (Hair, Ringle and Sarstedt, 2011). SEM combines factor analysis and multiple regression to estimate a series of inter-related causal relationships concurrently. Thus, it is possible to answer a set of interlinking research questions using a single yet systematic and all-inclusive analysis through modelling of the relationships of the various exogenous and endogenous constructs at the same time (Gefen et al., 2000). Kline (1998) stated that SEM is used to understand the correlational patterns among the research variables and to explain as much as possible their variance within the specified model.

SEM is a second-generation model of multivariate analysis (Fornell, 1987) and therefore, provides a greater accuracy in predicting the interrelationship of variables in the research model. The first-generation techniques include ANOVA or analysis of

variance, logistic regression and multiple regression but these techniques are limited in such a way that they are build on a simpler model structure and based on the assumption that all research variables can be observed (Haenlein and Kaplan, 2004). On the contrary, these assumption in the real world are too restrictive especially in a situation where there is greater complexity and realistic (Shugan, 2002). Chin (1998) added that each observation of the real world should also consider random error and systematic error when measuring the true score of an item. In first-generation techniques, these errors are ignored which do not reflect the situation in reality (Haenlin and Kaplan, 2004).

SEM is a multivariate analysis of the second-generation technique that can overcome the limitations of the first-generation techniques. SEM enables the simultaneous modeling of relationship among varied dependent variables and independent variables (Gefen, Straub and Boudreau, 2000). Hence, in SEM context, terms of independent and dependent variables are not used but exchanged with terms like endogenous and exogenous latent variables whereby the latter acts as an independent variable. The dependent variable is regarded as the endogenous latent variable in the measurement and structural models which can be explained by the relationships existing with the independent or exogenous latent variables (Diamantopoulos, 1994). Thus, the second-generation technique like SEM is able to analyze more complex model compared to the first-generation technique (Gefen et al., 2000) with consideration of the measurement errors in the model (Haenlin and Kaplan, 2004).

In general, SEM technique has two main approaches: the covariance-based SEM (CB-SEM) and PLS-SEM. Table 3.12 presents a comparison between the two

techniques. Based on the comparison between the two techniques, this study chooses PLS-SEM because of the following reasons:

1. Normal distribution of data is not mandatory required in PLS-SEM. Although this study employs a stratified random sampling technique, the collected data might not be able to attain a normal distribution of data. However, it ensures that extreme outliers are minimized (Hair et al., 2014).

2. Easy application of the tool for a complex research model with large number of constructs, sub-constructs and indicators (Wong, 2013).

3. PLS-SEM has the capability of addressing both formative and reflective indicators as well as single-item measures (Hair et al., 2017).

4. The present study focuses on determining the direct effects of distributed leadership and job satisfaction on organizational commitment and the indirect effect of distributed leadership on organizational commitment through the mediation of job satisfaction PLS-SEM is a predictive-oriented approach that can run simultaneous analyses and therefore, suits the purpose of this study (Wong, 2013; Hair et al., 2011; 2017).

Table 3.12

Comparison of CB-SEM and PLS-SEM Techniques

Criteria	PLS-SEM	CB-SEM
Objective	Orientation towards prediction	Orientation towards parameter
Approach	Based on variance	Based on covariance
Assumption	Non-parametric with emphasis on predictor specification	Multivariate normal distribution is indicated. Parametric in nature based on independent observations
Parameter estimates	Large indicators and sample size ensure consistency	Consistent
Latent variable scores	Explicitly estimated	Indeterminate
Epistemic relationship between latent variable with its corresponding measures	Can be modelled as formative and reflective	Only true for reflective indicators, but formative model is also supported
Implications on model complexity	Optimal for prediction accuracy. Can accommodate large complexity of 1000 constructs and 1000 indicators	Optimal for parameter accuracy. Small to moderate complexity with less than 100 indicators
Sample size	Power analysis is based on the portion of the model with the largest number of predictors. Minimal recommendation is 30-100 cases	Ideally based on power analysis of specified model. Minimal recommendation is 200 – 800 cases
Type of optimization	Locally iterative	Globally iterative
Significance test	Only by simulations, comes with a restricted validity	Available
Global Goodness of Fit (GoF) metric availability	New version has the metric, but not the older version	Established metric is available

Adapted from: Urbach and Ahleman (2010)

PLS-SEM is suitably chosen for this study as it provides a combined and simultaneous assessment of the measurement and structural models with consideration of the errors of the observed variables (Hair et al., 2014). The PLS-SEM approach is employed to investigate the interrelationships of the research variables: principals' distributed leadership, teachers' job satisfaction and teachers' organizational commitment so that the theory can be further developed (Urbach and Ahlemann, 2010).

The selection of PLS-SEM as the statistical means of testing the measurement and structural models of this study is supported by the following arguments (Urbach and Ahlemann, 2010):

- Normal-distributed input data is not explicitly needed in PLS-SEM. However, this study used a stratified simple random sampling to ensure that normality of data is attained.

- The three research variables used in this research: principals' distributed leadership, teachers' job satisfaction and teachers' organizational commitment are represented by a number of items. Thus, it poses a complex structural equation model which can easily be assessed using PLS-SEM.

- The theory to explain the role of distributed leadership and job satisfaction to enhance organizational commitment is not clear cut like the theory of planned behavior to explain behavioral intention (Ajzen, 1991). Therefore, this study is focused on theory development and not theory testing.

- The purpose of this study is to assess how principals' distributed leadership contribute to organizational commitment of the teachers through the mediation of job satisfaction. Therefore, its main purpose is the prediction of an

exogenous latent construct's effect on an endogenous construct which is supported by the use of PLS-SEM (Hair et al., 2014).

PLS-SEM is therefore, considered a better choice rather than CB-SEM due to several reasons. Firstly, using PLS-SEM will gain a higher level of statistical power and greater convergence behavior in comparison to CB-SEM when the model structure is complex like in the current study (Henseler, 2010). Secondly, PLS-SEM provides greater prediction capability as it stresses the prediction objective to identify key target constructs to capitalize on the explained variance of the endogenous latent constructs (Hair et al., 2017). PLS-SEM also carries out a blindfolding procedure to determine the predictive validity or relevance of the structural model (Chin, 1998). It confirms that empirical data can be collected and easily reassembled with the aid of a model and the PLS parameter for the current study (Fornell and Cha, 1994). Thirdly, PLS-SEM works with highly complex model of multivariate relationships among observed and latent variables (Hulland, Ryan and Rayner, 2010). Thus, Hair et al. (2014) argued that PLS-SEM is more vigorous to be used with a complex model especially when there is mediation and moderation involved.

The procedure of using PLS-SEM in data analysis is shown in Figure 3.4. There are eight stages of implementation which are carried out systematically to ensure that the result can answer the research questions.

Stage 1	**Specifying the Structural Model**
Stage 2	**Specifying the Measurement Models**
Stage 3	**Data Collection and Examination**
Stage 4	**PLS Path Model Estimation**
Stage 5	**Assessing PLS-SEM Results of the Measurement Models**
Stage 6	**Assessing PLS-SEM Results of the Structural Models**
Stage 7	**Advanced PLS-SEM Analyses (Mediation Analysis)**
Stage 8	**Interpretation of Results and Drawing Conclusions**

Figure 3.4. Systematic Procedures of PLS-SEM Application

3.10.1 Descriptive Statistics

Descriptive statistics is carried out using IBM SPSS Ver 23.0 whereby calculation of frequency and percentage is done to describe the demographic profiles of the respondents. Mean, mode, median and standard deviation values were used to determine the level of respondents' perception about principals' distributed leadership, teachers' job satisfaction and teachers' organizational commitment. This provides answers to the first three research questions of this study. The level of teachers'

perception regarding practices of distributed leadership of their principal and the job satisfaction and organizational commitment among the teachers is based on the categorization of the mean score into three categories: low, moderate and high. Table 3.13 shows the three levels of perception for these research variables.

Table 3.13

Categorization of Mean Score

Mean Score	Level
1.00 – 2.34	Low
2.35 – 3.67	Moderate
3.68 – 5.00	High

Source: Tajularipin et al. (2016)

Common method bias or common method variance is also determined in this study to ensure that the result is not based on any bias in the respondents' responses as this study was carried out using the same respondents for all three research variables and the responses were all captured using a five-point Likert scale (Podsakoff et al., 2003). Therefore, the unrotated factor solution principal component analysis was done in IBM SPSS 23.0 in an analysis called Harman's single-factor test. Common method bias is said to be present when the percentage of the first component is more than 50 percent (Yuksel, 2017).

Another test conducted for the actual study data is the normality test. This is to determine the normal distribution of data for each item and for each research variable. Although normality test is not really necessary for a study with sample size that exceeded 100 as in the case of this study, but its inclusion in the analysis provides support that the result of this study is meaningful (Ghasemi and Zahedias, 2012;

Mishra et al., 2019). Hence, the descriptive analysis in IBM SPSS 23.0 can provide the measurement of normality using Skewness (measure of symmetry) and Kurtosis (measure of peakedness) (Kim, 2013).

3.10.2 Inferential Statistics

Inferential statistics is carried out using SmartPLS3.2.8 based on a PLS-SEM approach that determines the direct and indirect relationships of the research variables. It involves two stages of assessment beginning with the measurement model assessment and then, the assessment of the structural model. Thus, the first three research objectives of this study were fulfilled by analyzing data descriptively using IBM SPSS Version 23.0 while PLS-SEM is employed in the assessment of the remaining five research questions of this study.

The measurement model provides information about the relationship of the measured variables or indicator and their respective latent constructs (Hair et al., 2014). In general, the indicators can be either formative or reflective (Hair et al., 2014; Sarstedt and Schloderer, 2010). The formative indicators cause the latent variable and therefore, its' arrows pointing from the indicators to the corresponding latent construct (Urbach and Ahlemann, 2010). The formative indicator represents different dimension on the latent construct and thus, requires no correlation among them (Gefen, 2000). This means that the increase in an indicator does not necessarily result in the increase in other indicators (Chin and Newstead, 1999). On the other hand, a reflective indicator reflects or is caused by the latent variable with its arrow pointing towards the indicator from the latent construct (Gefen, 2000). Therefore, a reflective indicator is a representation of the construct with a unidimensional correlation to measure the latent construct (Urbach and Ahlemann, 2010). Hence, a change in one indicator will cause

changes in other indicators as well (Diamantopoulos and Siguaw, 2006). Reflective

indicators are basically interchangeable, and their removal does not change the

meaning of the latent variable (Bollen, 2011). In this study, the indicators are

representing the three research variables. Thus, all indicators in this study are reflective

in nature with their arrows from the indicators to the latent construct. Table 3.14

presents a comparison between the reflective and formative indicators.

Table 3.14

Comparison of Reflective and Formative Indicators

Indicators	Description
Reflective	• The direction of causality is from the latent construct to the indicator. • The indicators or items are expected to be correlated. • The indicators are interchangeable. • Adding or deleting an indicator from the measurement model does not change the meaning of the latent construct.
Formative	• The direction of causality is from the indicator to the latent construct. • The indicators or items are not correlated. • The indicators are not interchangeable. • Adding or deleting an indicator from the measurement model might change the meaning of the latent construct.

Source: Hair et al. (2014); Henseler et al. (2009)

The reflective measurement models' assessment includes the measures of

internal consistency, indicator reliability, construct validity, convergent validity and

discriminant validity (Hair et al., 2014). Composite Reliability (CR) and Cronbach's

alpha are used to determine internal consistency. Both measures require a cut-off limit

of 0.7 and higher to imply accepted internal consistency (Nunnally, 1978; Nunnally

and Bernstein, 1994). Indicator reliability is measured using Outer Loading of the

indicator. Hair et al. (2017) explained that an outer loading of 0.708 and above is

required. However, outer loading between 0.40 and 0.70 can be retained provided that the composite reliability and construct validity have reached their recommended threshold (Henseler et al., 2009). Outer loading below 0.4 should be discarded from the list of representative indicators of the latent construct unless the meaning of the construct is tied to the indicator (Hair et al., 2014). The Average Variance Extracted (AVE) provides the measurement of construct validity whereby its value should be more than 0.5 (Chin, 2010). Convergent validity is achieved when the measurement model has acceptable measures of composite reliability and construct validity. If convergent validity is not attained, then, removal of the indicators with outer loading with value less that 0.7 is done sequentially to ensure there is convergent validity (Hair et al., 2014). Discriminant validity is measured with Fornell-Larcker (1981) Criterion whereby the square root of the AVE of the latent variable must be higher than the correlations among the latent variables (Hair et al., 2014). The measurement of discriminant validity is also done with Heterotrait-Monotrait Ratio (HTMT) whereby the threshold value is 0.850 or below (Clark and Watson, 1995). HTMT values nearing 1 indicates lack of discriminant validity (Hair et al., 2014).

Apart from assessing the validity and reliability of the measurement model, the determination of Goodness of Fit (GOF) is also required. Kline (2016) explained that GOF indices help to provide the factors to be investigated based on the level of coincidence observed in the covariance matrix of the structural model against the sampled covariance matrix. Thus, GOF is represented by (a) absolute fit measures using Chi-Square statistics, Goodness-of-Fit statistics (GFI) and Root Mean Square Error of Approximation (RMSEA); and (b) incremental fit measure with Normed Fit Index (NFI), Incremental Fit Index (IF) and Comparative Fit Index (CFI) (Hair et al., 2017).

SRMR or Standardized Root Mean Square Residual is the Goodness of fit measure to avoid model misspecification and it is the measure of difference between the observed correlation and the model's implied correlation matrix (Henseler et al., 2014; Hair et al., 2014). The value of SRMR should be leass than 0.08. The squared Euclidean distance (d_ULL) and the geodesic distance (d_G) are used to determine discrepancy whereby its measure is based on the confidence interval with the upper bound at 95 percent (Djikstra and Henseler, 2015; Hair et al., 2014). Both d_ULS and d_G should be insignicant with p value more than 0.05. The Normal Fit Index (NFI) is defined as "1 – χ^2 of the proposed model divided by the χ^2 of the null model. This value should be more than 0.90. The RMS_theta is the root mean squared residual covariance matrix of the outer model residuals (Lohmoller, 1989) which is reported for a reflective model. A measure nearing zero means that the model is good (Hair et al., 2014). An accepted value is less than 12.0.

The structural model assessment uses bootstrapping and blindfolding analyses. Using the bootstrapping analysis in SmartPLS3.2.8, the interrelationship of the research variables in this study can be determined. The bootstrapping analysis is based on a one-tailed analysis at a 95% confidence level (Hair et al., 2017). A significant relationship of the research variables is indicated when T statistics is more than 1.64 or P, significance is less than 0.05.

The determination of which dimensions of the principals' distributed leadership are the main predictors of organizational commitment among the teachers can also be determined through bootstrapping analysis. The beta coefficient value (β) and the effect size (f^2) can be used to show which dimension of distributed leadership as the main predictor of organizational commitment of the teachers. Hair et al. (2011) stated that for effect size, it can be divided into three levels: small effect size at cut-off

value of 0.02, medium effect size at cut-off value of 0.15, and a 0.35 cut-off value or large effect size.

Further to that, the mediation of job satisfaction is considered as an indirect relationship between principals' distributed leadership and teachers' organizational commitment and this can be determined or assessed through bootstrapping analysis. The bootstrapping analysis is based on a two-tailed analysis at 95% confidence level (Hair et al., 2017). The mediation effect is significant when T statistics is more than 1.96 or P, significance is less than 0.05. Table 3.15 summarizes the ranges of acceptable values and cut-off values that are used in the reflective measurement models assessment. Table 3.16 presents the statistical requirements used in the assessment of the structural model.

Table 3.15

Summary of Important Values for the Reflective Measurement Model Assessment

Measures	Indices	Acceptable Ranges /Cut-Off
Indicator Reliability	Outer loading	• Outer Loading should be higher than 0.7. • Outer loading below 0.4 should be deleted. • Outer Loading between 0.4 and 0.7 considered for retaining or deletion depending whether the composite reliability and validity have reached its recommended threshold.
Construct Reliability	Composite Reliability	• Composite reliability should be higher than 0.7.
Internal Consistency	Cronbach's Alpha	• Cronbach's Alpha should be higher than 0.7.
Construct Validity	Average Variance Extracted (AVE)	• AVE should be higher than 0.5.
Convergent Validity	Outer Loading and AVE	• All outer loading should be higher than 0.7. • In situation where AVE is less than 0,5, outer loading between 0.4 to 0.7 should be deleted or removed until AVE of 0.5 or higher is attained.
Discriminant Validity	Fornell-Larcker (1981) Criterion Hetero-trait Mono-trait Ratio (HTMT)	• The Square Root of the AVE should be higher than the correlations of the latent variables. • The HTMT values should be higher than 0.85.

Source: Chin (2010), Hair et al. (2014); Henseler et al. (2009)

Table 3.16

Summary of Important Values for the Reflective Structural Model Assessment

Measures	Indices	Acceptable Ranges /Cut-Off
Significant of direct and indirect relationship	p-value	$p < 0.05$ indicates that the research hypothesis is accepted. There is significance in the direct relationship of variables.
Predictive accuracy	R^2	Recommended cut-off value is 0.2. 0.02 Weak 0.13 Moderate 0.26 Substantial
Predictive relevance	Q^2	should be more than zero (> 0)
Effect size	f^2	0.02 small effect size 0.15 medium effect size 0.35 large effect size

Source: Chin (2010), Hair et al. (2014); Henseler et al. (2009)

3.10.3 Ethical Consideration

In conducting a research, consideration must be given to an ethical approach and processes of the research. Ethical guidelines can be obtained from various sources such as the Social Research Association (SRA), the Economic and Social Research Council's Research Ethics Framework (ESRCREF), British Educational Research Association (BERA) and British Sociological Association (BSA). Based on these documents, five key ethical principles were extracted and used as the ethical guidelines for this study. It includes the following (Howling, 2017):

1.   Avoidance or minimization of harm to respondents

2.   Voluntary participation of the respondents after being informed thoroughly about the aims, methods and usage of the research

3.   Respecting respondents' privacy, ensuring confidentiality and preserving anonymity

4.   Research is high quality

5.   Research offers reciprocity

Along the course of the research processes and journey, ethical issues did arise, and these principles were used to guide actions. In planning and designing the study, the best method was chosen and employed to ensure the integrity and quality of the study (BERA, 2011). Thus, careful thoughts were given to the research paradigm and philosophy in determining the research methods. An exploration of the paradigms, approaches and methods led to the use of a positivist, deductive, quantitative and descriptive research for this study. This is considered the best method to explain the relationships among the research variables of this study. Further to that, permission was sought from the original developers of the scales used in the questionnaire. Responses gathered from the authors of Distributed Leadership Inventory (Hulpia et al., 2012), Teacher Job Satisfaction Scale (Pepe et all., 2017) and Organizational Commitment Questionnaire (Allen and Meyer, 1991) are shown in Appendix A, Appendix B and Appendix C respectively.

In addition, access to the international school was obtain after seeking consent and approval from the MOE (Private Division) and the principals of the participating schools. Briefing and explanation were presented to the management of the schools through courtesy calls to the respective principals or assistant principals. During the survey, teachers were provided with adequate information to ensure that they can make informed decision on their consent to participate in the survey (Bryman, 2008). The respondents were given the autonomy to participate in the survey after guaranteed with

privacy, confidentiality and anonymity about their involvement (BSA, 2002). They were also informed about their rights to withdraw from the research at any time without the need for explanation (Mutch, 2005). Hence, in the front page of the questionnaire, it was explained that the research is carried out for the purpose of satisfying the requirement for the conferment of a doctorate title and the research is not for public circulation. The anonymity of the schools, principals and teachers were also maintained. The personal particulars and phone number of the researcher was also provided to ensure that the respondents can reach out and ask questions about the study at any time.

Ethical consideration was also practiced in the distribution of questionnaire. The date, day and time of distribution of the questionnaire was planned ahead of time so that the respondents are ready, and time has been assigned from their busy schedule to participate in the survey. Hence, throughout the research journey, ethical consideration was given emphasis at all time.

3.10.4 Summary of Data Analysis

Table 3.17 presents the summary of data analysis guided by the research questions and research hypotheses that were answered and tested in this study.

Table 3.17

Summary of Data Analysis

	Research Questions	Data Analysis
1.	What are the distributed leadership practices in international schools in Kuala Lumpur as perceived by teachers based on leadership function quality and distribution, supervision quality and distribution, cooperation within the leadership team, and teacher decision making participation?	Descriptive analysis with mean value using IBM SPSS 23.0
2.	What are the levels of organizational commitment in international schools in Kuala Lumpur based on affective, normative and continuance commitment among teachers?	Descriptive analysis with mean value using IBM SPSS 23.0
3.	What are the levels of job satisfaction in international schools in Kuala Lumpur based on satisfaction with students, co-workers and parents among teachers?	Descriptive analysis with mean value using IBM SPSS 23.0
4.	Is there a significant relationship between distributed leadership and job satisfaction of teachers in international schools in Kuala Lumpur? H1: Principals' distributed leadership is significantly and positively related to teachers' job satisfaction	Inferential analysis using bootstrapping method with SmartPLS3.2.8 Hypothesis is accepted when $p<0.05$, T > 1.64
5.	Is there a significant relationship between job satisfaction and organizational commitment of teachers in international schools in Kuala Lumpur? H2: Principals' distributed leadership is significantly and positively related to teachers' organizational commitment	Inferential analysis using bootstrapping method with SmartPLS3.2.8 Hypothesis is accepted when $p<0.05$, T > 1.64

'Table 3.17 Continued'

Research Questions	Data Analysis
6. Is there any significant relationship between distributed leadership and organizational commitment of teachers in international schools in Kuala Lumpur? H3: Job satisfaction is significantly and positively related to teachers' organizational commitment	Inferential analysis using bootstrapping method with SmartPLS3.2.8 Hypothesis is accepted when $p<0.05$, $T > 1.64$
7. Which of the distributed leadership dimensions are the significant predictors of organizational commitment of teachers in international schools in Kuala Lumpur? H2a: Leadership function quality and distribution is significantly and positively related to teachers' organizational commitment H2b: Supervision quality and distribution is significantly and positively related to teachers' organizational commitment H2c: Cooperation in the leadership team is significantly and positively related to teachers' organizational commitment H2d: Teacher decision making participation is significantly and positively related to teachers' organizational commitment	Inferential analysis using bootstrapping method with SmartPLS3.2.8 Based on effect size, f^2 and path coefficient, β Hypothesis is accepted when $p<0.05$, $T > 1.64$

'Table 3.17 Continued'

Research Questions	Data Analysis
8. Is job satisfaction a mediator for the relationship between distributed leadership and organizational commitment among teachers in international schools in Kuala Lumpur?	Inferential analysis using bootstrapping method with SmartPLS3.2.8
H4: Teachers' job satisfaction mediates the relationship between principals' distributed leadership and teachers' organizational commitment	Hypothesis is accepted when $p<0.05$, $T > 1.96$
H4a: Teachers' job satisfaction mediates the relationship between quality and distribution of leadership function and teachers' organizational commitment	
H4b: Teachers' job satisfaction mediates the relationship between quality and distribution of supervision and teachers' organizational commitment	
H4c: Teachers' job satisfaction mediates the relationship between cooperation within the leadership team and teachers' organizational commitment	
H4d: Teachers' job satisfaction mediates the relationship between teacher participation in decision making and teachers' organizational commitment	

3.11   Chapter Summary

This chapter has given a thorough and comprehensive explanation about the research methodology. The explanation has touched the topic of research paradigm, research design, population and sampling method, research instrument, pilot study, data collection procedures, ethical consideration and data analysis procedures.

The next chapter discusses the result of data analyses based on the PLS-SEM approach. Findings from these analyses could answer the research questions and fulfill the research objectives, as well as answering all the research questions in this study.

CHAPTER 4

FINDINGS

4.1   Introduction

In this chapter, the result from the analysis of data using IBM SPSS 23.0 for descriptive analysis and PLS-SEM approach with the employment of the SmartPLS3.2.8 software for inferential analysis. Prior to reporting the main findings, this chapter precedes with a description of the management of data to ensure common method bias was addressed. Then, the demographic profiles of the respondents are described. This is followed by the descriptive analysis results to determine the perception of the teachers regarding the principals' distributed leadership practices, and their organizational commitment and job satisfaction. The reporting of the inferential analysis using PLS-SEM approach is presented in two sections. The first section is the analysis output for confirmatory factor analysis, or the assessment result of the measurement models and the second section reports the multiple regression analysis that determines the significance of the direct and indirect relationships of the three research variables: principals' distributed leadership, teachers' job satisfaction and teachers' organizational commitment.

4.2   Data Screening

Prior to data analysis, data screening was done to ensure that the set of data used for analysis and obtaining the result of this study with high reliability and validity. Missing data is one of the issues that needs to be resolved before data is analyzed. Cohen and Cohen (1983) explained that missing data of less than 10 percent does not cause any serious issues in data interpretation. Thus, questionnaires with more than 10 percent of data missing are considered as incomplete and not used in the actual data analysis.

Therefore, this study did collect 242 questionnaires from the respondents, but 35 sets were rejected due to high percentage of missing data. The occurrence of missing data less than 10 percent with the remaining questionnaires was addressed with treatment of missing data with a method called Expected Maximization. This method is better compared to other methods like the list-wise deletion and mean substitution (Graham, Hofer, Donaldson, MacKinnon and Schafer, 1997). In Expected Maximization, the missing data is replaced with the variable median responses for each variable. This method of substituting median for missing data is commonly used in research (Hair et al., 2014).

Outliers are also problematic to obtain reliable and valid data for analysis. By going through the set of data, respondents who answered straight lined to the extreme positive and negative are excluded from the study. A total of seven questionnaires were rejected and not included in the study.

The findings of this study are therefore based on the analysis of 200 collected and completed questionnaires from the targeted schools. Although a total of 242 questionnaires were distributed to the teachers in ten international schools in Kuala Lumpur, a total of 35 sets of questionnaires were not accepted for analysis because it was not fully completed by the respondent teachers. In addition, seven sets of questionnaires were also removed from data analysis because of multiple outliers. This shows that the response rate of the questionnaire is 82.8%. The final analysis was based on a sample size of 200.

4.3   Common Method Bias

Common method bias (CMB) or also called as common method variance is a situation whereby the use of the same respondents who assessed the three research variables:

principals' distributed leadership, teachers' job satisfaction and teachers' organizational commitment may have led to a bias in their response. The assessment of common method bias is often considered in the course of a research to ensure that findings of the study can assuredly describe the studied phenomenon. Furthermore, these research variables used five-point Likert scale, also contributing to common method bias (Podsakoff et al., 2003). The determination of CMB is done using the Harman's single-factor test given by the unrotated factor solution principal component analysis in the IBM SPSS 23.0 software. Yuksel (2017) explained that common method bias is present when the percentage of the first component yielded more than 50%. The excerpt of data analysis using principal component analysis (PCA) in IBM SPSS 23.0 shown in Appendix K indicated that the first component yielded 38.8% which is less than 50%. Thus, this ensures that CMB is not an issue in this study.

Bagozzi, Yi and Phillips (1991) suggested that latent variable correlation matrix can also be used to determine the presence of common method bias. They stated that common method bias can be overruled when the correlation among the different latent variables are less than 0.90. The latent variable correlation matrix was computed using the SmartPLS3.2.8 and the result is illustrated in Table 4.1.

The correlation between principal distributed leadership and teacher job satisfaction is 0.37 while the correlation between principal distributed leadership and teacher organizational commitment is 0.49. It is also shown that the correlation between teacher job satisfaction and teacher organizational commitment is 0.59. Therefore, it is shown in this table that the correlation among the different variables were all less than 0.90, thus ruling out the presence of common method bias.

Table 4.1

Latent Variable Correlation Matrix Result

	Principals' Distributed Leadership	Teachers' Job Satisfaction	Teachers' Organizational Commitment
Principals' Distributed Leadership	1.00	0.37	0.49
Teachers' Job Satisfaction	0.37	1.00	0.59
Teachers' Organizational Commitment	0.49	0.59	1.00

4.4   Normality Test

This study performs data analysis based on correlation and regression through the PLS-SEM analysis procedures. Normality test is done to ensure that the data collected in a study follows a normal distribution. However, central limit theorem did state that when the sample size is 100 or more, the violation of normality is not considered as a big issue (Altmand and Bland, 1995; Ghasemi and Zahediasl, 2012). Nevertheless, for a meaningful conclusion, it is advisable to consider that the assumption of normality has been met regardless whether the sample size exceeds 100 (Mishra et al., 2019). The determination of normality is based on the Skewness and Kurtosis values. Skewness is the measure of the asymmetry while Kurtosis measures the 'peakedness' of a distribution (Kim, 2013).

The normality test for this study was done for each of the items in the three research variables: 29 items in principals' distributed leadership, 9 items in teachers' job satisfaction and 24 items teachers' organizational commitment. Appendix L presents a more detailed outcome of the analysis. All of the items had Skewness values between -2 to +2 which indicates accepted normality (George and Mallery, 2010).

The normality test for the research variables and for principals' distributed leadership (including its dimensions), teachers' job satisfaction and teachers' organizational commitment is shown in Table 4.2. It is shown that for Principals' Distributed Leadership, Skewness was within the range, but Kurtosis was above the range (Skewness = -1.68, Kurtosis = 4.21). However, West, Finch and Curran (1995) stated that a value of more than 7 reflects an absolute Kurtosis and therefore, values below +7 are still considered as acceptable. Furthermore, Hair et al. (2018) mentioned that normality is not a strict requirement in PLS-SEM. Therefore, having a few items with Skewness and Kurtosis outside the range of -2 and +2 is still acceptable. The normality tests for the sub-dimension, Quality and Distribution of Leadership Function (Skewness = -1.21, Kurtosis = 2.40), Quality and Distribution of Supervision (Skewness = -1.02, Kurtosis = 1.87), Teacher Participation in Decision making (Skewness = -1.25, Kurtosis = 2.61), and Cooperation within the Leadership Team (Skewness = -1.41, Kurtosis = 3.10) were acceptable.

The normality tests for the variable, Teachers' Organizational Commitment (Skewness = -1.45, Kurtosis = 2.08) and its dimensions, Normative Commitment (Skewness = -1.38, Kurtosis = 1.98), Affective Commitment (Skewness = -1.34, Kurtosis = 1.89) and Continuance Commitment (Skewness = -1.45, Kurtosis = 1.65) were acceptable.

Further to that, the tests for the variable, Teachers' Job Satisfaction (Skewness = -0.64, Kurtosis = 1.92) and its three dimensions, Satisfaction with Students (Skewness = -0.53, Kurtosis = 1.52), Satisfaction with Parents (Skewness = -0.39, Kurtosis = 0.71) and Satisfaction with Co-Workers (Skewness = -0.25, Kurtosis = 0.78) were also acceptable.

Table 4.2

Skewness and Kurtosis of the Research Variables

Variable	Skewness	Kurtosis
Principals' Distributed Leadership	-1.68	4.21
Leadership Function Quality and Distribution	-1.21	2.40
Supervision Quality and Distribution	-1.02	1.87
Teacher Participation in Decision making	-1.25	2.61
Cooperation in the Leadership Team	-1.41	3.10
Teachers' Organizational Commitment	-1.45	2.08
Normative Commitment	-1.38	1.98
Affective Commitment	-1.34	1.89
Continuance Commitment	-1.45	1.65
Teachers' Job Satisfaction	-0.64	1.92
Satisfaction with Students	-0.53	1.52
Satisfaction with Parents	-0.39	0.71
Satisfaction with Co-Workers	-0.25	0.78

4.5 Demographic Profiles of the Respondents

The gender, age group, educational level, teaching experience and the length of time they have worked in the present school make up the demographic profiles of the respondents. The description of their demographic profiles is shown in Table 4.3. The findings show that there were fewer male respondents (n = 66, 33.0%) compared to female respondents (n = 134, 67.0%). There were only 66 males or 33% compared to 134 feamles ot 67%. The distribution of the respondents based on age group shows that there were 33 respondents (16.5%) aged below 35 years old while those aged between 35 and 44 years old totaled 89 respondents (44.5%). There were also 44 respondents (22.0%) aged between 45 and 54 years old, and 34 respondents (17.0%) were aged 55 years old and above.

In terms of educational level, only 16 respondents (8.0%) had diploma, 96 respondents (48.0%) had Bachelor while 65 respondents (32.5%) with Master and 23

respondents (11.5%) with PhD. Based on teaching experience, there were 75 respondents (37.5%) with 5 years and less, while 98 respondents (46.0%) have taught between 6 and 10 years old. A total of 9 respondents (4.5%) had teaching experience between 11 and 15 years and 18 respondents (9.0%) with 16 to 20 years' experience in teaching. None of the respondents had teaching experience more than 20 years. The distribution of the respondents based on the length of time they have worked in the present school indicated that 96 respondents (48.0%) had 5 years and less, 102 respondents (51.0%) with 6 to 10 years, and two respondents (1.0%) with 11 to 15 years. None of the respondents had more than 15 years of working experience in the present schools.

Table 4.3

Demographic Profiles of the Respondents

Demographic Features	Frequency (N)	Percentage (%)
Gender		
Male	66	33.0
Female	134	67.0
Age Group		
Below 35 years old	33	16.5
35 – 44 years old	89	44.5
45 – 54 years old	44	22.0
55 years old and above	34	17.0
Educational Level		
Diploma	16	8.0
Bachelor	96	48/0
Master	65	32.5
PhD	23	11.5
Teaching Experience		
5 years and less	75	37.5
6 – 10 years	98	46.0
11 – 15 years	9	4.5
16 – 20 years	18	9.0
More than 20 years	0	0.0
Length of Time Working in Present School		
5 years and less	96	48.0
6 – 10 years	102	51.0
11 – 15 years	2	1.0
16 – 20 years	0	0.0
More than 20 years	0	0.0

4.6   Results of the Study

The result of the descriptive statistics analysis from SPSS ver. 23.0 and the inferential

statistics from SmartPLS3.2.8 are reported as follows.

4.6.1 **What are the distributed leadership practices in international schools in Kuala Lumpur as perceived by teachers based on leadership function quality and distribution, supervision quality and distribution, cooperation within the leadership team, and teacher decision making participation?**

The principals' distributed leadership is represented by four dimensions: leadership function quality and distribution (10 items), supervision quality and distribution (3 items), cooperation in the leadership team (10 items), and teacher participation in decision making (6 items).

Table 4.4 illustrates the result of descriptive analysis on the level of teachers' perception about the practices of principals' distributed leadership in their schools. Based on the result, each of the four dimensions of principals' distributed leadership is perceived highly and on overall, the level of principals' distributed leadership is high (Mean = 4.00, Mode = 4.41, Median = 4.19, SD = 0.58). In comparison among the dimensions, quality and distribution of leadership function (Mean = 4.01, Mode = 4.30, Median = 4.20, SD = 0.63) was perceived the highest and followed by teachers' participation in decision making (Mean = 4.01, Mode = 4.17, Median = 4.17, SD = 0.67), then, cooperation within the leadership team (Mean = 3.99, Mode = 4.50, Median = 4.20, SD = 0.65), while least of all is the quality and distribution of supervision (Mean = 3.98, Mode = 4.00, Median = 4.00, SD = 0.73).

The dimension, leadership function quality and distribution have a Skewness value of -1.21 and a Kurtosis value of 2.40. For the dimension, teacher participation in decision making have a Skewness value of -1.25 and a Kurtosis value of 2.61. The Skewness value and the Kurtosis value for the dimension, cooperation in the leadership

team are -1.41 and 3.41 respectively. As for supervision quality and distribution, the Skewness value and the Kurtosis value are -1.02 and 1.87 respectively. Overall, for the variable, distributed leadership, the Skewness value and the Kurtosis value are -1.68 and 4.21 respectively. The Skewness and Kurtosis values of each dimension indicate acceptable normality of data with Skewness between -2 and +2 and Kurtosis between -7 and +7.

The mean, mode and median values of the dimensions of principal distributed leadership are not much differentiated from one another and most likely not significantly different statistically. However, the comparison of the mean, mode, median and standard deviation showed that quality and distribution of leadership function is perceived to happen more frequent, followed by teacher participation in decision making, cooperation within the leadership team and lastly, quality and distribution of supervision.

Table 4.4

Descriptive Analysis Result of Principals' Distributed Leadership

Dimensions	Mean	Mode	Median	SD	Skewness	Kurtosis	Level
QD_LF	4.01	4.30	4.20	0.63	-1.21	2.40	High
TP_DM	4.01	4.17	4.17	0.67	-1.25	2.61	High
CP_LT	3.99	4.50	4.20	0.65	-1.41	3.10	High
QD_SP	3.98	4.00	4.00	0.73	-1.02	1.87	High
Overall	4.00	4.41	4.19	0.58	-1.68	4.21	High

Key: Low: 1.00-2.34; Moderate: 2.35-3.67; High: 3.68-5.00; SD – Standard Deviation; QD_LF: Quality and distribution of leadership function; TP_DM: Teacher participation in decision making; CP_LT: Cooperation within the leadership team; QD_SP: Quality and distribution of supervision

4.6.1.1 Itemized Descriptive Statistics for Leadership Function Quality and Distribution

The result of descriptive analysis presented in Table 4.5 gives the mean and standard deviations of the individual items representing quality and distribution of leadership function. The result shows that all items have high mean value with the highest for item DL1h (Mean = 4.08, SD = 0.82), and item DL1i (Mean = 4.07, SD = 0.74).

There are six items with mean values in between the highest at the lowest mean. These include item DL1b (Mean = 4.06, SD = 0.81), item DL1g (Mean = 4.05, SD = 0.78), item DL1c (Mean = 4.04, SD = 0.81), item DL1d (Mean = 4.00, SD = 0.75), DL1a (Mean = 3.99, SD = 0.81), and item DL1f (Mean = 3.98, SD = 0.72). The least mean value is for item DL1j (Mean = 3.95, SD = 0.80) and DL1e (Mean = 3.88, SD = 0.74).

Table 4.5

Mean and Standard Deviation for Individual Items in Leadership Function Quality and Distribution

Item	Description	Mean	SD
DL1h	Encourage teacher to improve themselves through professional learning?	4.08	.82
DL1i	Encourage teacher to try new practices consistent with students' needs?	4.07	.74
DL1b	Discuss the school vision?	4.06	.81
DL1g	Look out for the personal welfare of the teachers?	4.05	.78
DL1c	Compliment teacher?	4.04	.81
DL1d	Assist teacher in their work?	4.00	.75
DL1a	Provide a long-term vision?	3.99	.81
DL1f	Is available after school to assist teacher when help is needed?	3.98	.72
DL1j	Provide organizational support for teacher's interaction?	3.95	.80
DL1e	Explain reasons for criticism the teacher?	3.88	.74

Key: Low: 1.00-2.34; Moderate: 2.35-3.67; High: 3.68-5.00; SD – Standard Deviation

4.6.1.2   Itemized Descriptive Statistics for Teacher Participation in Decision making

The result of descriptive analysis presented in Table 4.6 gives the mean and standard deviations of the individualized items representing teacher participation in decision making. The result shows that all mean values of the items are high. The highest mean values were for item DL4c (Mean = 4.05, SD = 0.76), item DL4a (Mean = 4.02, SD = 0.79), item DL4b (Mean = 4.02, SD = 0.79), and item DL4d (Mean = 4.02, SD = 0.81). The items with the least mean values are DL4e (Mean = 4.01, SD = 0.78) and item DL4f (Mean = 3.94, SD = 0.80).

Table 4.6

Mean and Standard Deviation for Each of the Items in Teacher Participation in Decision making

Item	Description	Mean	SD
DL4c	Ensure that teacher is involved in decision making?	4.05	.76
DL4a	Delegate activities for achieving school goals?	4.02	.80
DL4b	Distribute leadership tasks among team members?	4.02	.79
DL4d	Ensure effective organizational structure for decision making in the leadership team?	4.02	.81
DL4e	Ensure facilitation of effective communication among staff within the leadership team?	4.01	.78
DL4f	Ensure appropriate level of autonomy in decision making?	3.94	.80

Key: Low: 1.00-2.34; Moderate: 2.35-3.67; High: 3.68-5.00; SD – Standard Deviation

4.6.1.3 Itemized Descriptive Statistics for Cooperation in the Leadership Team

The result of the descriptive analysis presented in Table 4.7 gives the mean and standard deviations of the individual items representing cooperation in the leadership team. The result shows that high mean values for all the items. Item DL3h (Mean = 4.09, SD = 0.78) has the highest mean followed by item DL3a (Mean = 4.04, SD = 0.77) and item DL3c (Mean = 4.00, SD = 0.76). There are four items with mean values in between the higher and lower means. These are for item DL3d (Mean = 4.00, SD = 0.80), item DL3f (Mean = 3.99, SD = 0.79), item D3i (Mean = 3.99, SD = 0.82) and item DL3e (Mean = 3.99, SD = 0.87). The items with the least mean values are DL3j (Mean = 3.96, SD = 0.77), DL3b (Mean = 3.96, SD = 0.81) and item DL3g (Mean = 3.92, SD = 0.83).

Table 4.7

Mean and Standard Deviation for Each of the Items in Cooperation in the Leadership Team

Item	Description	Mean	SD
DL3h	Ensure the leadership team members know the task they have to perform?	4.09	.78
DL3a	Ensure a well-functioning leadership team in the school?	4.04	.77
DL3c	Support the leadership team to attain the goals of the school?	4.00	.76
DL3d	Ensure all the leadership team members work in the same strain on the school's core objectives?	4.00	.80
DL3f	Ensure the management team members divide their time according to their schedule?	3.99	.79
DL3i	Ensure the leadership team has willingness to execute a good idea?	3.99	.82
DL3e	Ensure the right person is on the right place, taking the competencies into consideration?	3.99	.87
DL3j	Ensure the leadership team members are assigned to do their tasks?	3.96	.77
DL3b	Ensure the leadership team work well together?	3.96	.81
DL3g	Ensure the school leadership team has clear goals?	3.92	.83

Key: Low: 1.00-2.34; Moderate: 2.35-3.67; High: 3.68-5.00; SD – Standard Deviation

4.6.1.4 Itemized Descriptive Statistics for Supervision Quality and Distribution

The descriptive analysis result in Table 4.8 gives the mean and standard deviation for the individual items in the Supervision Quality and Distribution. The result shows that all means are high with item (Mean = 4.03, SD = 0.78), followed by item DL2b (Mean = 4.00, SD = 0.83). The lowest mean is for item DL2a (Mean = 3.92, SD = 0.81).

Table 4.8

Mean and Standard Deviation for the Individual Items in Supervision Quality and Distribution

Item	Description	Mean	SD
DL2c	Is involved in the student 's learning to provide continuous feedback to teachers?	4.03	.78
DL2b	Is involved in the evaluation of student's learning after a training program for the teachers?	4.00	.83
DL2a	Evaluate the performance of the staff?	3.92	.81

Key: Low: 1.00-2.34; Moderate: 2.35-3.67; High: 3.68-5.00; SD – Standard Deviation

4.6.2 What are the levels of organizational commitment in international schools in Kuala Lumpur based on affective, normative and continuance commitment among teachers?

The teachers' organizational commitment has three dimensions which are: affective continuance (8 items), continuance commitment (8 items) and normative continuance (8 items). Table 4.9 shows the descriptive analysis result of the level of respondents' perception about the practices of teachers' organizational commitment in their schools. The result shows that the overall teachers' organizational commitment is highly perceived (Mean = 3.84, Mode = 4.33, Median = 4.13, SD = 0.72). Normative commitment (Mean = 3.86, Mode = 4.63, Median = 4.06, SD = 0.77) has the highest mean value followed by affective commitment (Mean = 3.83, Mode = 4.38, Median = 4.00, SD = 0.71) and least of all is continuance commitment (Mean = 3.83, Mode = 4.25, Median = 4.13, SD = 0.73).

Normative commitment has an accepted normality of data distribution which is indicated by the Skewness and Kurtosis values of -1.38 and 1.98 respectively. Affective commitment also has acceptable normality of data distribution with

Skewness value of -1.34 and a Kurtosis value of 1.89. Likewise, continuance commitment has a normal set of data as indicated by a Skewness value of -1.30 and a Kurtosis value of 1.65. Overall, the Skewness value for teacher organizational commitment is -1.45 and the Skewness value is 2.08. Hence, the distribution of data for each of the dimensions and overall, for teacher organizational commitment is acceptable in terms of normality.

The values of mean, mode, median and standard deviation of the dimensions of organizational commitment are slightly different from each other and comparison through statistical measure might show an insignificant difference. However, based on the distribution of data for this research variable, it can be concluded that normative commitment is greater among the teachers followed by affective commitment and least of all, continuance commitment.

Table 4.9

Descriptive Analysis Result of Teachers' Organizational Commitment

Dimensions	Mean	Mode	Median	SD	Skewness	Kurtosis	Level
Normative Commitment	3.86	4.63	4.06	0.77	-1.38	1.98	High
Affective Commitment	3.83	4.38	4.00	0.71	-1.34	1.89	High
Continuance Commitment	3.83	4.25	4.13	0.73	-1.30	1.65	High
Overall	3.84	4.33	4.13	0.72	-1.45	2.08	High

Key: Low: 1.00-2.34; Moderate: 2.35-3.67; High: 3.68-5.00; SD – Standard Deviation

4.6.2.1 Itemized Descriptive Statistics for Normative Commitment

The result of the descriptive analysis presented in Table 4.10 gives the mean and standard deviations of the individual items representing normative commitment. The result shows that all items have high mean values. The three items with the highest means are item OC3e (Mean = 3.91. SD = 0.91), item (Mean = 3.90, SD = 0.87) and OC3f (Mean = 3.90, SD = 0.93). Another three items are item OC3c (Mean = 3.88, SD = 0.88). item OC3g (Mean = 3.86, SD = 0.88), and item OC3b (Mean = 3.84, SD = 0.90). Meanwhile, the two items with the least mean values are item OC3d (Mean = 3.82, SD – 0.93) and OC3a (Mean = 3.80, SD = 0.95).

Table 4.10

Mean and Standard Deviation for Each of the Items in Normative Commitment

Item	Description	Mean	SD
OC3e	Main reason to continue work is the belief that loyalty is important and the sense of moral obligation to stay	3.91	.91
OC3h	Unethical behavior of repeated changing organization.	3.90	.87
OC3f	Belief in being always loyal to the organization.	3.90	.93
OC3c	Staying in one organization for most of the career is better	3.88	.88
OC3g	People now often moving from a company to another	3.86	.88
OC3b	Belief in the value of remaining loyal to an organization.	3.84	.90
OC3d	Being a 'company man' or 'company woman' is sensible.	3.82	.93
OC3a	Not feeling right to leave my organization even if offered a better job elsewhere	3.80	.95

Key: Low: 1.00-2.33; Moderate: 2.33-3.67; High: 3.68-5.00; SD – Standard Deviation

4.6.2.2 Itemized Descriptive Statistics for Affective Commitment

The result of the descriptive analysis presented in Table 4.11 gives the mean and standard deviations of the individual items representing affective commitment. The result shows that all the mean values were high. The highest mean was for item OC1g (Mean = 3.95, SD = 0.86) followed by item OC1e (Mean = 3.89, SD = 0.86) and item OC1f (Mean = 3.87, SD = 0.86).

The tabulation of the items based on mean values showed item OC1h (Mean = 3.86, SD = 0.96), item OC1c (Mean = 3.81, SD = 0.85), and item OC1a (Mean = 3.81, SD = 0.86). The two items with the least mean value are OC1d (Mean = 3.76, SD = 0.88) and item OC1b (Mean = 3.67, SD = 0.86).

Table 4.11

Mean and Standard Deviation for Each of the Items in Affective Commitment

Item	Description	Mean	SD
OC1g	The organization has great personal meaning.	3.95	.86
OC1e	Feeling like 'part of the family'.	3.89	.86
OC1f	Feeling 'emotionally attached'.	3.87	.86
OC1h	Feeling a 'strong' sense of belonging	3.86	.96
OC1c	Enjoy discussing my organization with others	3.81	.85
OC1a	Happy to spend the rest of career with the organization.	3.81	.86
OC1d	Not easily attached to other organization as I the present one	3.76	.88
OC1b	Feeling very few options to consider leaving the organization	3.67	.86

Key: Low: 1.00-2.33; Moderate: 2.33-3.67; High: 3.68-5.00; SD – Standard Deviation

4.6.2.3 Itemized Descriptive Statistics for Continuance Commitment

The result of the descriptive analysis presented in Table 4.12 shows the mean and standard deviations of each of the items representing continuance commitment. The result shows that items have high mean values. The highest mean values are for item OC2a (Mean = 3.89, SD = 0.86), item OC2f (Mean = 3.89, SD = 0.95) and item OC2e (Mean = 3.86, SD = 0.85). In between the highest and lowest means are item OC2b (Mean = 3.86, SD = 0.85), item (Mean = 3.83, SD = 0.87), and item OC2h (Mean = 3.81, SD = 0.84). The two items with the lowest mean values are item OC2d (Mean = 3.76, SD = 0.85) and item OC2c (Mean = 3.72, SD = 0.88).

Table 4.12

Mean and Standard Deviation for Each of the Items in Continuance Commitment

Item	Description	Mean	SD
OC2a	Afraid of what might happen if quitting job without having none lined up.	3.89	.86
OC2f	Staying with the organization now is a necessity and desire.	3.89	.95
OC2e	Too costly to leave the organization now.	3.86	.85
OC2b	Feeling of owning the organization's problems.	3.86	.85
OC2g	A consequence of leaving the organization is limited alternatives available.	3.83	.87
OC2h	Major reason to continue working for the organization is in the benefits that cannot be obtained elsewhere.	3.81	.84
OC2d	Leaving the organization causes too much disruption in life.	3.76	.85
OC2c	Very hard to leave the organization now even if wanting to.	3.72	.88

Key: Low: 1.00-2.33; Moderate: 2.33-3.67; High: 3.68-5.00; SD – Standard Deviation

4.6.3 What are the levels of job satisfaction in international schools in Kuala Lumpur based on satisfaction with students, co-workers and parents among teachers?

Teachers' job satisfaction has three dimensions: satisfaction with co-worker (3 items), satisfaction with parents (3 items) and satisfaction with students (3 items). Table 4.13 shows the descriptive analysis result of the level of teachers' perception about the practices of teachers' job satisfaction in their schools. The result shows that the overall teachers' job satisfaction is highly perceived (Mean = 3.75, Mode = 3.33, Median = 3.67, SD = 0.62). Satisfaction with students is perceived the highest (Mean = 3.79, Mode = 3.67, Median = 3.67, SD = 0.70), followed by satisfaction with parents (Mean = 3.77, Mode = 3.67, Median = 3.67, SD = 0.68) and least is the satisfaction with co-worker (Mean = 3.70, Mode = 4.00, Median = 3.67, SD = 0.67).

The Skewness and Kurtosis values for the individual dimensions and overall teachers' job satisfaction are within the range of acceptance for normality. Satisfaction with Students has a Skewness value of -0.53 while the Kurtosis value is 1.52 whereas Satisfaction with Parents has a Skewness value of -0.39 while the Kurtosis value of 0.71, and Satisfaction with Co-workers has a Skewness value of -0.25 while the Kurtosis value of 0.78. Overall, teacher job satisfaction has a Skewness value of -0.64 while the Kurtosis value of 1.92.

The mean, mode, median and standard deviation of the dimensions of teacher job satisfaction are only slightly different from one another and mostly are centered on a neutral response. However, based on the distribution of data, it can be concluded that the teachers are more satisfied with the students, followed by the parents and lastly, the co-workers.

Table 4.13

Descriptive Analysis Result of Teachers' Job Satisfaction

Dimensions	Mean	Mode	Median	SD	Skewness	Kurtosis	Level
Satisfaction with Students	3.79	3.67	3.67	0.70	-0.53	1.52	High
Satisfaction with Parents	3.77	3.67	3.67	0.68	-0.39	0.71	High
Satisfaction with Co-worker	3.70	4.00	3.67	0.67	-0.25	0.78	High
Overall	3.75	3.33	3.67	0.62	-0.64	1.92	High

Key: Low: 1.00-2.33; Moderate: 2.33-3.67; High: 3.68-5.00; SD – Standard Deviation

4.6.3.1 Itemized Descriptive Statistics for Satisfaction with Students

The result of the descriptive analysis presented in Table 4.14 shows the mean and standard deviations of each of the items representing satisfaction with students. The result shows that all the mean values were high. Item JS3b (Mean = 3.83, SD = 0.80) has the highest mean followed by item JS3a (Mean = 3.78, SD = 0.83) and lastly, item JS3c (Mean = 3.77, SD = 0.80).

Table 4.14

Mean and Standard Deviation for the Individual Items in Satisfaction with Students

Item	Description	Mean	SD
JS3b	Satisfied with the behaviours of students	3.83	.80
JS3a	Students act in a self-disciplined manner	3.78	.83
JS3c	Overall, satisfaction with students' discipline	3.77	.80

Key: Low: 1.00-2.33; Moderate: 2.33-3.67; High: 3.68-5.00; SD – Standard Deviation

4.6.3.2 Itemized Descriptive Statistics for Satisfaction with Parents

The result of the descriptive analysis presented in Table 4.15 shows the mean and standard deviations of the individual items representing satisfaction with parents. The result shows that all the mean values were high. The highest mean was for item JS2c (Mean = 3.84, SD = 0.83), followed by item JS2a (Mean = 3.77, SD = 0.76), and last by item JS2b (Mean = 3.71, SD = 0.78).

Table 4.15

Mean and Standard Deviation for the Individual Items in Satisfaction with Parents

Item	Description	Mean	SD
JS2c	Overall, satisfaction with parents	3.84	.83
JS2a	Parents showed high interest in children's education	3.77	.76
JS2b	Parents supportive of school and its programs	3.71	.78

Key: Low: 1.00-2.33; Moderate: 2.33-3.67; High: 3.68-5.00; SD – Standard Deviation

4.6.3.3 Itemized Descriptive Statistics for Satisfaction with Co-Workers

The result of the descriptive analysis presented in Table 4.16 gives the mean and standard deviations of the individual items representing satisfaction with co-workers. The result shows that all the mean values were high. Item JS1c (Mean = 3.74, SD = 0.77) has the highest mean followed by item JS1b (Mean = 3.71, SD = 0.74) and item JS1a (Mean = 3.67, SD = 0.76).

Table 4.16

Mean and Standard Deviation for the Individual Items in Satisfaction with Co-Workers

Item	Description	Mean	SD
JS1c	Overall, satisfaction with colleagues	3.74	.77
JS1b	Colleagues give encouragement and support at work	3.71	.74
JS1a	Good relationship with colleagues.	3.67	.76

Key: Low: 1.00-2.33; Moderate: 2.33-3.67; High: 3.68-5.00; SD – Standard Deviation

4.7 Measurement Models Assessment

PLS algorithm in the SmartPLS3.2.8 software was used in the assessment of the measurement models. The measurement model assessment includes the determination of the indicator reliability, construct reliability, internal consistency and construct validity.

Indicator reliability is the proportion of the variance of the indicator that is explained by the latent variables of principals' distributed leadership (and its four dimensions), teachers' job satisfaction and teachers' organizational commitment (Ab Hamid, Sami and Mohamad Sidek, 2017). The indicators refer to the items in the questionnaire that represents the corresponding latent variable. The indicator

reliability is given by the outer loading. A value of 0.7 or higher is considered as highly satisfactory (Memon and Rahman, 2014) while 0.5 is considered as acceptable. A value of 0.4 can be considered as acceptable (Hulland, 1999) but Henseler et al. (2012) argued that any outer loading between 0.4 and 0.7 should be eliminated if the elimination of the indicators with loading between 0.4 and 0.7 increases the composite reliability, then it should be eliminated.

The construct reliability is determined based on the composite reliability that has a value between 0 and 1, whereby the value of 1 indicates a perfect estimated reliability (Garson, 2016). In an exploratory model, the composite reliability is accepted at a threshold of 0.6 (Chin, 1998; Hock, Ringle and Sarstedt, 2010) but for a confirmatory model, the accepted composite reliability is 0.7 or higher (Garson, 2016). The internal consistency is given by Cronbach's alpha value with 0.70 or more as an acceptable range (Hair et al., 2014).

The construct validity is given by the value of average variance extracted (AVE) which is the average communality for each of the latent variables in the reflective measurement model (Garson, 2016). The AVE is recommended to be at least 0.5 (Chin, 1998; Hock, Ringle and Sarstedt, 2010) to indicate that the convergent validity of the research latent construct is met. An AVE that is less than 0.5 is an indication that the error variance is greater than the explained variance.

Convergent validity is also established by pairing the indicator reliability (outer loading) and the construct validity (AVE). The acceptance value for outer loading, composite reliability and Cronbach's Alpha is 0.700 while for AVE is 0.50 (Hair et al., 2014).

4.7.1 Indicators and Constructs Reliability and Validity

Table 4.17 presents the indicators and construct reliability and validity for the principals' distributed leadership construct. The result showed that all outer loadings were more than 0.700 thus showing acceptable indicator reliability (Hair et al., 2014). All ten items in the leadership function quality and distribution dimension have outer loading ranging from 0.80 to 0.83, which have exceeded the cut-off value of 0.70. No items were deleted for the dimension, Leadership Function Quality and Distribution, For the dimension, Supervision Quality and Distribution, all three items have outer loadings ranging from 0.87 to 0.91, indicating the acceptable range for indicator reliability for this dimension. All three reflective indicators reflecting this dimension were retained for the structural model assessment. In addition to that, the dimension, Cooperation in the Leadership Team have 10 items with outer loading ranging from 0.77 to 0.83. This means that the indicator reliability for the dimension, Cooperation in the Leadership Team is acceptable, and no items were removed from this dimension. Lastly, the six items in the dimension, Teacher Participation in Decision making have six items with acceptable indicator reliability as evident from the range of outer loading from 0.81 to 0.86. Similarly, all the items were retained to represent this dimension.

The Cronbach's Alpha (CA) for Leadership Function Quality and Distribution (CA = 0.942), Supervision Quality and Distribution (CA = 0.887), Collaboration in the Leadership Team (CA = 0.941) and Teacher Participation in Decision making (CA = 0.919) were greater than the threshold of 0.708 (Hair et al., 2018) and therefore, suggests acceptable internal consistency.

The value of Composite Reliability (CR) for Leadership Function Quality and Distribution (CR = 0.943), Supervision Quality and Distribution (CR = 0.930),

Collaboration in the Leadership Team (CR = 0.950) and Teacher Participation in Decision making (CR = 0.937) was more than the threshold of 0.708 (Hair et al., 2018) and thus imply adequate construct reliability.

The AVE for Leadership Function Quality and Distribution (AVE= 0.657), Supervision Quality and Distribution (AVE = 0.817), Collaboration in the Leadership Team (AVE = 0.655) and Teacher Participation in Decision making (AVE = 0.712) also were more than the threshold of 0.50 (Hair et al., 2018). This indicates that construct validity has been attained.

Table 4.17

Indicators and Construct Reliability and Validity for Principals' Distributed Leadership

Dimension	Indicator	Outer Loading	CA	CR	AVE
Leadership Function Quality and Distribution	DL_1a	0.83	0.94	0.94	0.66
	DL_1b	0.80			
	DL_1c	0.82			
	DL_1d	0.80			
	DL_1e	0.83			
	Dl_1f	0.83			
	Dl_1g	0.80			
	Dl_1h	0.81			
	Dl_1i	0.80			
	Dl_1j	0.80			
Supervision Quality and Distribution	DL_2a	0.93	0.89	0.93	0.82
	Dl_2b	0.91			
	Dl_2c	0.87			
Collaboration Within the Leadership Team	DL_3a	0.77	0.94	0.95	0.66
	DL_3b	0.83			
	DL_3c	0.81			
	DL_3d	0.82			
	DL_3e	0.83			
	DL_3f	0.82			
	DL_3g	0.83			
	DL_3h	0.78			
	DL_3i	0.81			
	DL_3j	0.80			

Dimension	Indicator	Outer Loading	CA	CR	AVE
Teacher Participation in Decision making	DL_4a	0.81	0.92	0.94	0.71
	DL_4b	0.86			
	DL_4c	0.83			
	DL_4d	0.86			
	DL_4e	0.84			
	DL_4f	0.86			

Table 4.18 presents the indicators and construct reliability and validity for the teachers' job satisfaction construct. The result showed that all outer loadings were more than 0.70 thus showing acceptable indicator reliability (Hair et al., 2014). The nine items representing three items each for the three dimensions, satisfaction with the students, satisfaction with the parents and satisfaction with the co-workers have outer loading ranging from 0.70 to 0.85. Therefore, indicator reliability threshold has been achieved and all these items were retained to represent teacher job satisfaction and used for the assessment of the structural model.

The Cronbach's Alpha (CA) of 0.92 suggests acceptable internal consistency and Composite Reliability (CR) of 0.94 implies adequate construct reliability (Hair et al., 2014). The AVE of 0.62 has exceeded 0.50, indicating that construct validity has been attained (Hair et al., 2014).

Table 4.18

Indicators and Construct Reliability and Validity for Teachers' Job Satisfaction

Dimensions	Indicator	Outer Loading	CA	CR	AVE
Satisfaction with Co-Workers	JS1a	0.80	0.92	0.94	0.62
	JS1b	0.80			
	JS1c	0.80			
Satisfaction with Parents	JS2a	0.80			
	JS2b	0.82			
	JS2c	0.76			
Satisfaction with Students	JS3a	0.85			
	JS3b	0.73			
	JS3c	0.70			

Table 4.19 presents the indicators and construct reliability and validity for the teachers' organizational commitment construct. The result showed that all outer loadings were more than 0.70 thus showing acceptable indicator reliability (Hair et al., 2014). There were 24 items with eight items each representing the three dimensions of teacher organizational commitment, affective commitment, normative commitment and continuance commitment. The range of the outer loading was between 0.75 and 0.87. No item was removed from this latent construct and all the items were used to represent teacher organizational commitment in the structural model assessment.

The Cronbach's Alpha (CA) of 0.98 suggests acceptable internal consistency and Composite Reliability (CR) of 0.98 implies adequate construct reliability (Hair et al., 2014). The AVE of 0.66 has exceeded 0.50, indicating that construct validity has been attained (Hair et al., 2014).

Table 4.19

Indicators and Construct Reliability and Validity for Teachers' Organizational Commitment

Dimension	Indicator	Outer Loading	CA	CR	AVE
Affective Commitment	OC_1a	0.75	0.98	0.98	0.66
	OC_1b	0.79			
	OC_1c	0.79			
	OC_1d	0.84			
	OC_1e	0.80			
	OC_1f	0.82			
	OC_1g	0.84			
	OC_1h	0.86			
Continuance Commitment	OC_2a	0.79			
	OC_2b	0.79			
	OC_2c	0.72			
	OC_2d	0.76			
	OC_2e	0.78			
	OC_2f	0.86			
	OC_2g	0.82			
	OC_2h	0.79			
Normative Commitment	OC_3a	0.84			
	OC_3b	0.83			
	OC_3c	0.84			
	OC_3d	0.87			
	OC_3e	0.83			
	OC_3f	0.83			
	OC_3g	0.85			
	OC_3h	0.80			

4.7.2   Discriminant Validity

The discriminant validity of the measurement models in Table 4.20 is based on Fornell-Larcker Criterion. According to Hair et al. (2014), the values that are shown in the table represent the square root of the AVE of the latent constructs. The value on the uppermost top represents the square root of the multiplied AVE of the same latent constructs while the other values are the square root of the multiplied AVE of respective latent constructs. Discriminant validity is attained when the value at the top of the column is more compared to other values below and to its left based on Fornell-

Larcker criterion (Hair et al., 2014). The highest value on top of the first column representing the square root of AVE for leadership function quality and distribution was 0.81 which was higher than other values below it. Similarly, in the second column, the square root of AVE for supervision quality and distribution was 0.90 which was higher than other values to the left and below it. In the third column, the square root of the AVE for cooperation in the leadership team was 0.81, which was higher that the values to the left and below it. As for the fourth column, the value 0.84 represents the square root for the dimension, teacher participation in decision making which is higher than any values to the left and below it. The fifth column shows a square root of AVE for teacher job satisfaction at 0.79, which is higher than other values to its left and below it. Finally, the last column shows that square root of AVE for teacher organizational commitment, with a value of 0.81 which was higher than all other values to its left.

Based on the result in Table 4.20, the uppermost top values are greater than other numbers below and to its left, thus concluding that Fornell-Larcker criterion has been met, indicating discriminant validity of the measurement models.

Table 4.20

Discriminant Validity Based on Fornell-Larcker Criterion

	QD_LF	QD_SP	COP_LT	TP_DM	TJS	TOC
QD_LF	**0.81**					
QD-SP	0.71	**0.90**				
COP_LT	0.76	0.71	**0.81**			
TP_DM	0.72	0.67	0.68	**0.84**		
TJS	0.57	0.56	0.58	0.57	**0.79**	
TOC	0.78	0.72	0.79	0.80	0.65	**0.81**

Note: COP-LT – Cooperation within Leadership Team; QD-LF – Quality and Distribution of Leadership Function; QD-SP - Quality and Distribution of Supervision; TJS – Teachers' Job Satisfaction; TOC – Teachers' Organizational Commitment; TP_DM – Teacher Participation in Decision Making

Another means of determining discriminant validity is the use of the Hetero-trait-mono-trait (HTMT) ratio. Hair et al. (2014) stated that discriminant validity is obtained when values are less than 0.85. As shown in Table 4.21, all values are less than 0.85. The range of the HTMT ratios was between 0.60 to 0.84. Thus, discriminant validity using the HTMT ratio is established.

Table 4.21

Discriminant Validity Based on Hetero-Trait-Mono-Trait Ratio

	QD_LF	QD_SP	COP_LT	TP_DM	TJS	TOC
QD_LF						
QD-SP	0.78					
COP_LT	0.81	0.78				
TP_DM	0.77	0.75	0.74			
TJS	0.60	0.62	0.62	0.61		
TOC	0.81	0.77	0.82	0.84	0.68	

Note: COP-LT – Cooperation within Leadership Team; QD-LF – Quality and Distribution of Leadership Function; QD-SP - Quality and Distribution of Supervision; TJS – Teachers' Job Satisfaction; TOC – Teachers' Organizational Commitment; TP_DM – Teacher Participation in Decision Making

4.7.3 Collinearity Issue

Table 4.22 determines whether the measurement models have any collinearity issues. The situation is said to arise when the variance inflation factor (VIF) exceeds 5.00 (Hair et al., 2014). Based on the information provided below, it is shown that VIF are all less than 5.00, and therefore, leading to the conclusion that collinearity issue is not found in the measurement models. The highest values for VIF were 3.10 for the correlation between leadership function quality and distribution and teacher job satisfaction and 3.13 for the correlation between leadership function quality and distribution with teacher organizational commitment.

Table 4.22

Variance Inflation Factor

	COP_LT	QD_LF	QD_SP	TJS	TOC
COP_LT				2.86	2.95
QD_LF				3.10	3.13
QD_SP				2.50	2.55
TJS					1.72
TOC					
TP_DM				2.44	2.51

Note: COP-LT – Cooperation within Leadership Team; QD-LF – Quality and Distribution of Leadership Function; QD-SP - Quality and Distribution of Supervision; TJS – Teachers' Job Satisfaction; TOC – Teachers' Organizational Commitment; TP_DM – Teacher Participation in Decision Making

4.7.4 Model Fit

Table 4.23 shows the model fit statistics given by SRMR, d_ULS, d_G, NFI and RMS Theta. SRMR stands for Standardized Root Mean Square Residual which is a goodness of fit measure that was introduced by Henseler et al. (2014) in PLS-SEM to avoid model misspecification. Hair et al. (2014) explained that SRMR is the measure of difference between the observed correlation and the model implied correlation matrix.

On the other hand, the squared Euclidean distance (d_ULL) and the geodesic distance (d_G) compute discrepancy in different manners (Djikstra and Henseler, 2015). Its measure is often based on the confidence interval with the upper bound at 95% point (Hair et al., 2014). A model that fits well has a significance of more than 0.05. The NFI stands for Normal Fit Index which is defined as "$1 - \chi^2$" value of the proposed model and divided by the Chi square (χ^2) value of the null model. Lastly, the RMS_theta refers to the root mean squared residual covariance matrix of the outer model residuals (Lohmoller, 1989), This measurement is required for reflective models only. The measure that is closer to zero indicates a good model fit (Hair et al., 2014).

SRMR must be less than 0.08 whereas NFI exceeds 0.90 and RMS theta should be less than 12.0. In addition, d_ULS and d_G must have an insignificant value of more than 0.05. As shown in the table below, SRMR of 0.046 is less than 0.08, d_ULS and d_G have p values of 4.218 and 2.916 respectively which are more than 0.05, while NFI of 0.981 is more than 0.90 and RMS theta of 9.7% is less than 12.0%. Thus, these statistics implied that model fit has been attained (Hair et al., 2018).

Table 4.23

Model Fit Statistics

	Saturated Model	Estimated Model	p at 95%	Value
SRMR	0.05	0.05		
d_ULS	4.23	4.23	5.45	
d_G	2.92	2.92	5.28	
NFI	0.98	0.98		
RMS Theta				0.10

4.8   Structural Model Assessment

The bootstrapping analysis in SmartPLS3.2.8 was run for the structural model assessment. The assessment of the direct relationships of principals' distributed

leadership with teachers' job satisfaction and teachers' organizational commitment, and the direct relationship between teachers' job satisfaction and teachers' organizational commitment as well as the indirect relation caused by mediation of teachers' job satisfaction on the relationship between principals' distributed leadership and teachers' organizational commitment were done.

4.8.1 Assessment of Direct Relationships of Principals' Distributed Leadership, Teachers' Job Satisfaction and Teachers' Organizational Commitment

The assessment of the direct relationships of principals' distributed leadership, teachers' job satisfaction and teachers' organizational commitment are based on the research questions stated as follow:

1. Is there a significant relationship between distributed leadership and job satisfaction of teachers in international schools in Kuala Lumpur?

2. Is there a significant relationship between job satisfaction and organizational commitment of teachers in international schools in Kuala Lumpur?

3. Is there any significant relationship between distributed leadership and organizational commitment of teachers in international schools in Kuala Lumpur?

The following research hypotheses also serves as a basis for testing the direct and indirect relationships among the research variables.

H1:   Principals' distributed leadership is significantly and positively related to teachers' job satisfaction

H2:   Principals' distributed leadership is significantly and positively related to teachers' organizational commitment

H3:   Job satisfaction is significantly and positively related to teachers' organizational commitment

H2a: Leadership function quality and distribution is significantly and positively related to teachers' organizational commitment

H2b: Supervision quality and distribution is significantly and positively related to teachers' organizational commitment

H2c: Cooperation in the leadership team is significantly and positively related to teachers' organizational commitment

H2d: Teacher decision making participation is significantly and positively related to teachers' organizational commitment

H4:   Teachers' job satisfaction mediates the relationship between principals' distributed leadership and teachers' organizational commitment

H4a: Teachers' job satisfaction mediates the relationship between quality and distribution of leadership function and teachers' organizational commitment

H4b: Teachers' job satisfaction mediates the relationship between quality and distribution of supervision and teachers' organizational commitment

H4c: Teachers' job satisfaction mediates the relationship between cooperation within the leadership team and teachers' organizational commitment

H4d: Teachers' job satisfaction mediates the relationship between teacher participation in decision making and teachers' organizational commitment

Figure 4.1 gives the graphical representation of the structural model with the interrelationships between principals' distributed leadership, teachers' job satisfaction

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and teachers' organizational commitment. The figure shown on the lines connecting exogenous and endogenous constructs are the path coefficient, beta (β) and the T statistics. The direct relationship is considered as significant when the T statistics exceeds 1.64 in a one-tailed analysis. The indirect relationship is considered as significant when the T statistics exceeds 1.96 based on a two-tailed analysis. Additionally, the relationship is not significant when p value exceeds 0.05 (Hair et al., 2014).
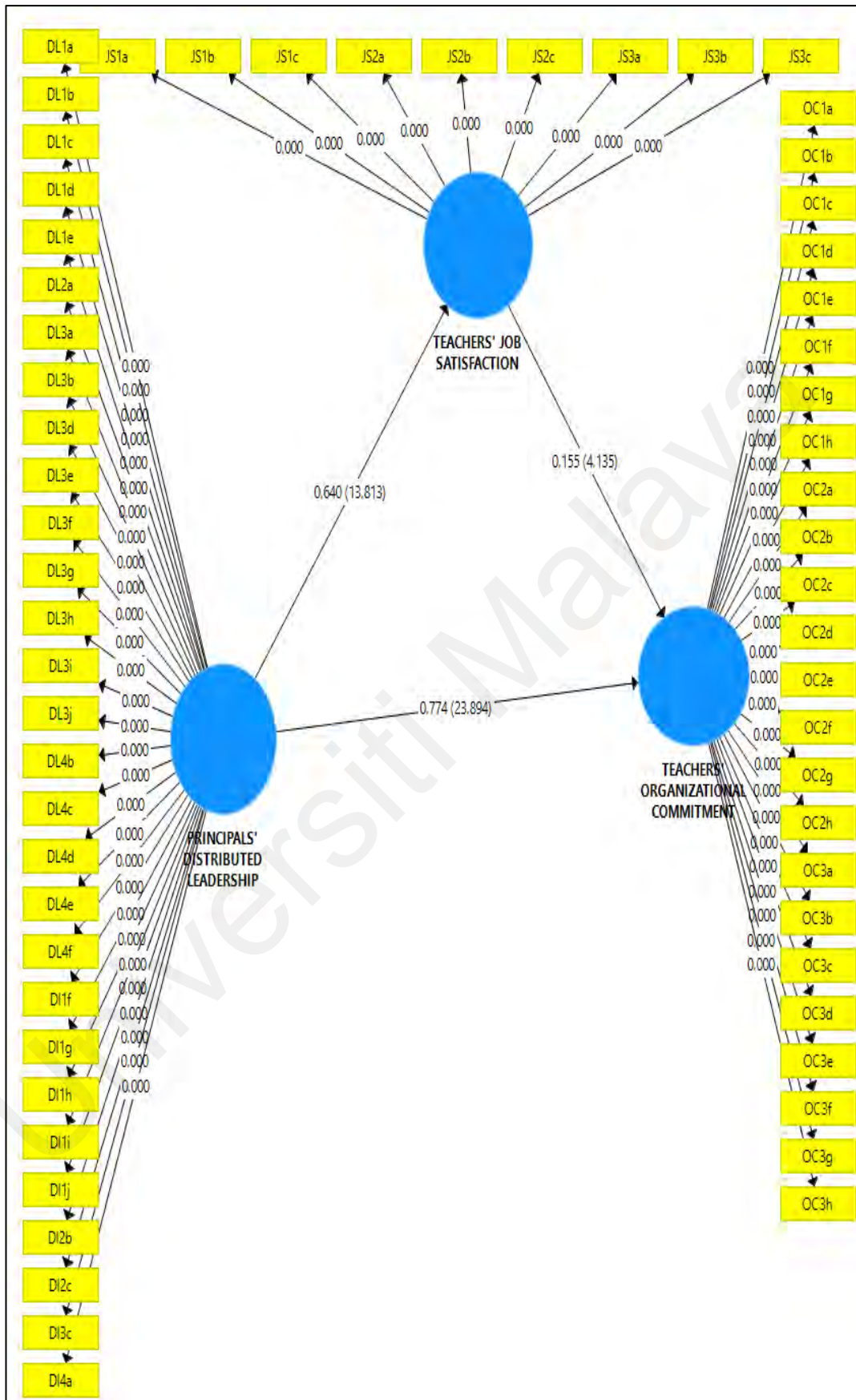
Figure 4.1. The Structural Model of the First Order Reflective Constructs

Table 4.24 gives the result of the bootstrapping analysis computing the assessment of the direct relationship between principals' distributed leadership and teachers' job satisfaction, principals' distributed leadership and teachers' organizational commitment and between teachers' job satisfaction and teachers' organizational commitment. The result shows that principals' distributed leadership and teachers' job satisfaction ($\beta = 0.640$, T = 13.817, p = 0.000) have positive and significant relationship. The first research hypothesis, H1 is supported. In addition, principals' distributed leadership and teachers' organizational commitment ($\beta = 0.774$, T = 23.894, p = 0.000) was also positive and significant. The second research hypothesis, H2 is supported. In comparison, principals' distributed leadership has a lesser impact on teachers' job satisfaction ($\beta = 0.640$) compared to its impact on teachers' organizational commitment satisfaction ($\beta = 0.774$). Teachers' job satisfaction was also positive and significantly related to teachers' organizational commitment ($\beta = 0.155$, T = 4.135, p = 0.000). The third research hypothesis, H3 is supported.

Therefore, the three research hypotheses, H1, H2 and H3 are supported. The direct relationships between principal distributed leadership and teacher job satisfaction, principal distribution leadership and teacher organizational commitment and the relationship of teacher job satisfaction with teacher organizational commitment are positive and significant.

Table 4.24

Assessment of the Direct Relationships among Constructs

	Path	Beta, β	Statistics, T	p Values	Conclusion
H1	PDL→TJS	0.640	13.817	0.000	Significant
H2	PDL → TOC	0.774	23.895	0.000	Significant
H3	TJS → TOC	0.155	4.135	0.000	Significant

**4.8.2   Assessment of Direct Relationships of Dimensions of Principals'
Distributed Leadership with Teachers' Job Satisfaction and
Teachers' Organizational Commitment**

The assessment of the direct relationships between each of the dimensions of
principals' distributed leadership with teachers' organizational commitment are based
on the following research question: Which of the principals' distributed dimensions
are the significant predictors of teachers' organizational commitment in international
schools in Kuala Lumpur?

Figure 4.2 illustrates the graphical representation of the structural model with
the interrelationships between the four dimensions of principals' distributed
leadership, teachers' job satisfaction and teachers' organizational commitment. The
figure shown on the lines connecting the constructs are the path coefficient, beta (β)
and the T statistics.
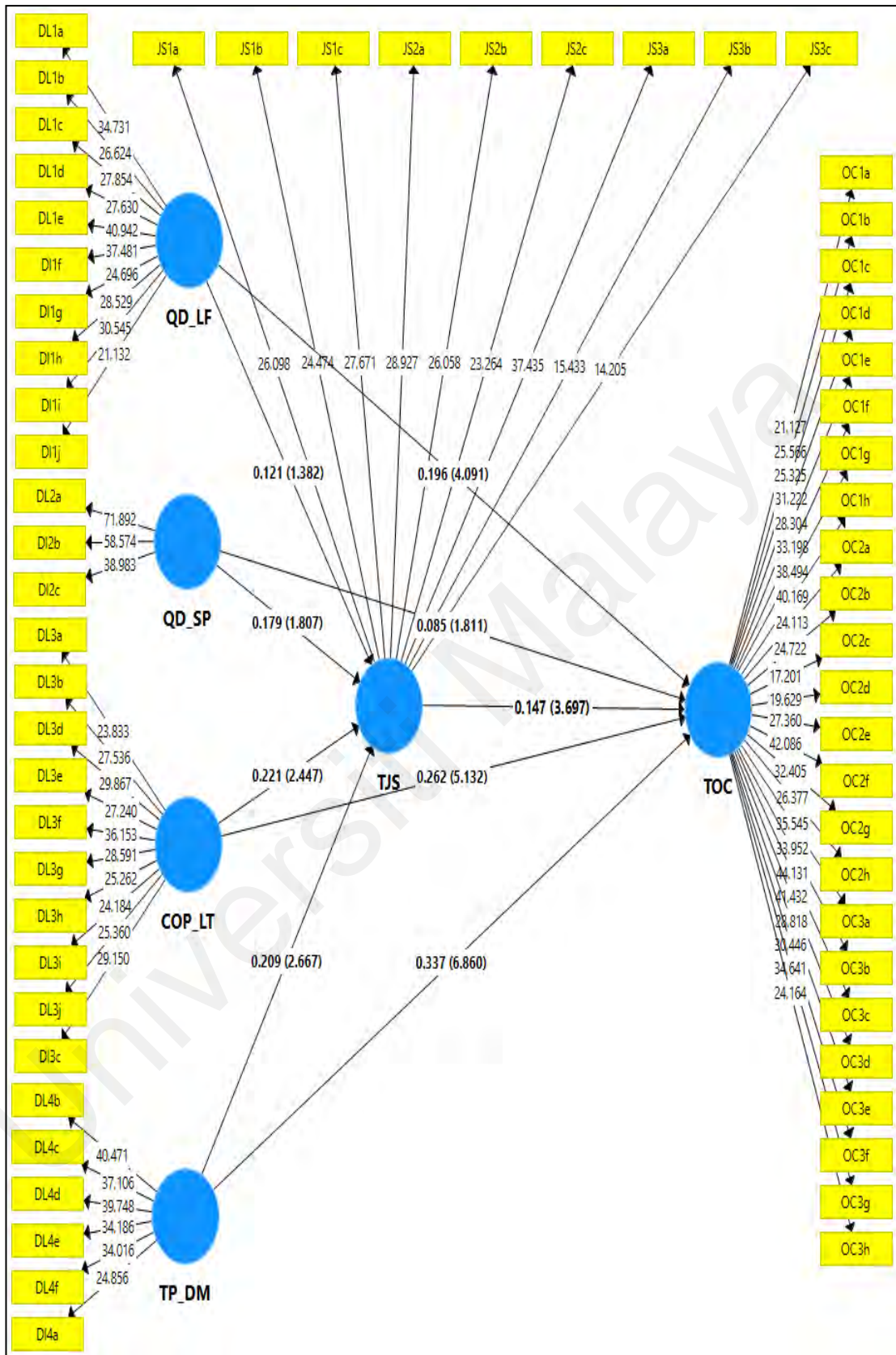
Figure 4.2. The Structural Model of the First Order Reflective Constructs and Dimensions

Table 4.25 shows the direct effect of the four dimensions of principal's distributed leadership comprising of leadership functions quality and distribution (QD_LF), supervision quality and distribution (QD_SP), collaboration in the leadership team (COP_LT) and teacher participation in decision making (TP_DM) on teachers' organizational commitment. The result indicated that the direct effect of leadership functions quality and distribution on teachers' organizational commitment ($\beta = 0.196$, $T = 4.091$, $p = 0.000$) was positive and significant. However, the direct effect of supervision quality and distribution on teachers' organizational commitment ($\beta = 0.085$, $T = 1.811$, $p = 0.070$) was positive but not significant. Additionally, the direct effect of cooperation in the leadership team on teachers' organizational commitment ($\beta = 0.262$, $T = 5.132$, $p = 0.000$) was positive and significant. Further to that, the direct impact of teacher participation in decision making on teachers' organizational commitment ($\beta = 0.337$, $T = 6.860$, $p = 0.000$) was positive and significant.

Therefore, this concluded that three of the research hypotheses, H2a, H2c and H2d are supported while one research hypothesis, H2b is not supported. The relationships between leadership function quality and distribution with teacher organizational commitment, cooperation within the leadership with teacher organizational commitment, and teacher participation in decision making with teacher organizational commitment are significant and positive. The relationship between supervision quality and distribution was positive but not significant.

Table 4.25

Assessment of the Direct Relationships of Principals' Distributed Leadership Dimensions with Teachers' Organizational Commitment

	Paths	Beta, β	Statistics, T	p	Conclusion
H2a	QD_LF→TOC	0.196	4.091	0.000	Significant
H2b	QD_SP → TOC	0.085	1.811	0.070	Not Significant
H2c	COP_LT → TOC	0.262	5.132	0.000	Significant
H2d	TP_DM → TOC	0.337	6.860	0.000	Significant

4.8.3 Assessment of Indirect Relationships of Principals' Distributed Leadership Dimensions with Teachers' Organizational Commitment

The result of the assessment of indirect relationships of the four dimensions of principals' distributed leadership with teachers' organizational commitment is based on the following research question: Is teachers' job satisfaction a mediator for the relationship between principals' distributed leadership and teachers' organizational commitment in international schools in Kuala Lumpur?

Table 4.26 shows the assessment of indirect effect relationships whereby the mediation effect of teachers' job satisfaction on the relationship of principal's distributed leadership with teachers' organizational commitment was determined. The result indicated that the indirect effect of principal's distributed leadership on teachers' organizational commitment via the mediation of teachers' job satisfaction ($\beta = 0.099$, $T = 3.830$, $p = 0.000$) was positive and significant. The indirect effect of leadership function quality and distribution on teachers' organizational commitment via the mediation of teachers' job satisfaction ($\beta = 0.018$, $T = 1.230$, $p = 0.219$) was positive but not significant. Similarly, the indirect effect of supervision quality and distribution on teachers' organizational commitment via the mediation of teachers' job satisfaction ($\beta = 0.026$, $T = 1.488$, $p = 0.137$) was positive but not significant. Nevertheless, the

indirect effect of cooperation in the leadership team on teachers' organizational commitment via the mediation of teachers' job satisfaction ($\beta = 0.032$, T = 2.018, p = 0.044) was positive and significant. In addition, the indirect effect of teacher participation in decision making on teachers' organizational commitment via the mediation of teachers' job satisfaction ($\beta = 0.031$, T = 2.419, p = 0.016) was positive and significant.

Overall, the result shows that the fourth main research hypothesis, H4 is supported. At the dimensional level, two of the research hypotheses, H4a and H4b were not supported while another two research hypotheses, H4c and H4d were supported. The relationship between principal distributed leadership with teacher organizational commitment through the mediation of teacher job satisfaction was positive and significant. The relationship between leadership function quality and distribution with teacher organizational commitment through the mediation of teacher job satisfaction was positive but not significant. Similarly, the relationship between supervision quality and distribution with teacher organizational commitment through the mediation of teacher job satisfaction was also positive but not significant. Nevertheless, the relationship of cooperation within the leadership team and teacher organizational commitment was significantly mediated by teacher job satisfaction. Lastly, this study also concludes that the relationship of teacher participation in decision making and teacher organizational commitment was mediated by teacher job satisfaction.

Table 4.26.

Assessment of the Indirect Relationships (Mediated by Teachers' Job Satisfaction)

Paths	Beta, β	Statistics, T	p Values	Conclusion
H4 PDL→TJS → TOC	0.099	3.830	0.000	Significant
H4a QD_LF → TJS → TOC	0.018	1.230	0.219	Not Significant
H4b QD_SP → TJS → TOC	0.026	1.488	0.137	Not Significant
H4c COP_LT → TJS → TOC	0.032	2.018	0.044	Significant
H4d TP_DM → TJS → TOC	0.031	2.419	0.016	Significant

4.8.4   Predictive Accuracy and Relevancy of the Structural Model

Two models were used whereby in the first model as illustrated in Figure 4.3, the relationships are based on first order reflective exogenous construct of principals' distributed leadership with first order reflective endogenous constructs of teachers' job satisfaction and teachers' organizational commitment. The second model as indicated in Figure 4.4 has the first order reflective exogenous sub-constructs or dimensions of principals' distributed leadership (QD-LP, QD_SP, CP_LT and TP_DM) linked to the first order reflective endogenous constructs of teachers' job satisfaction and teachers' organizational commitment.
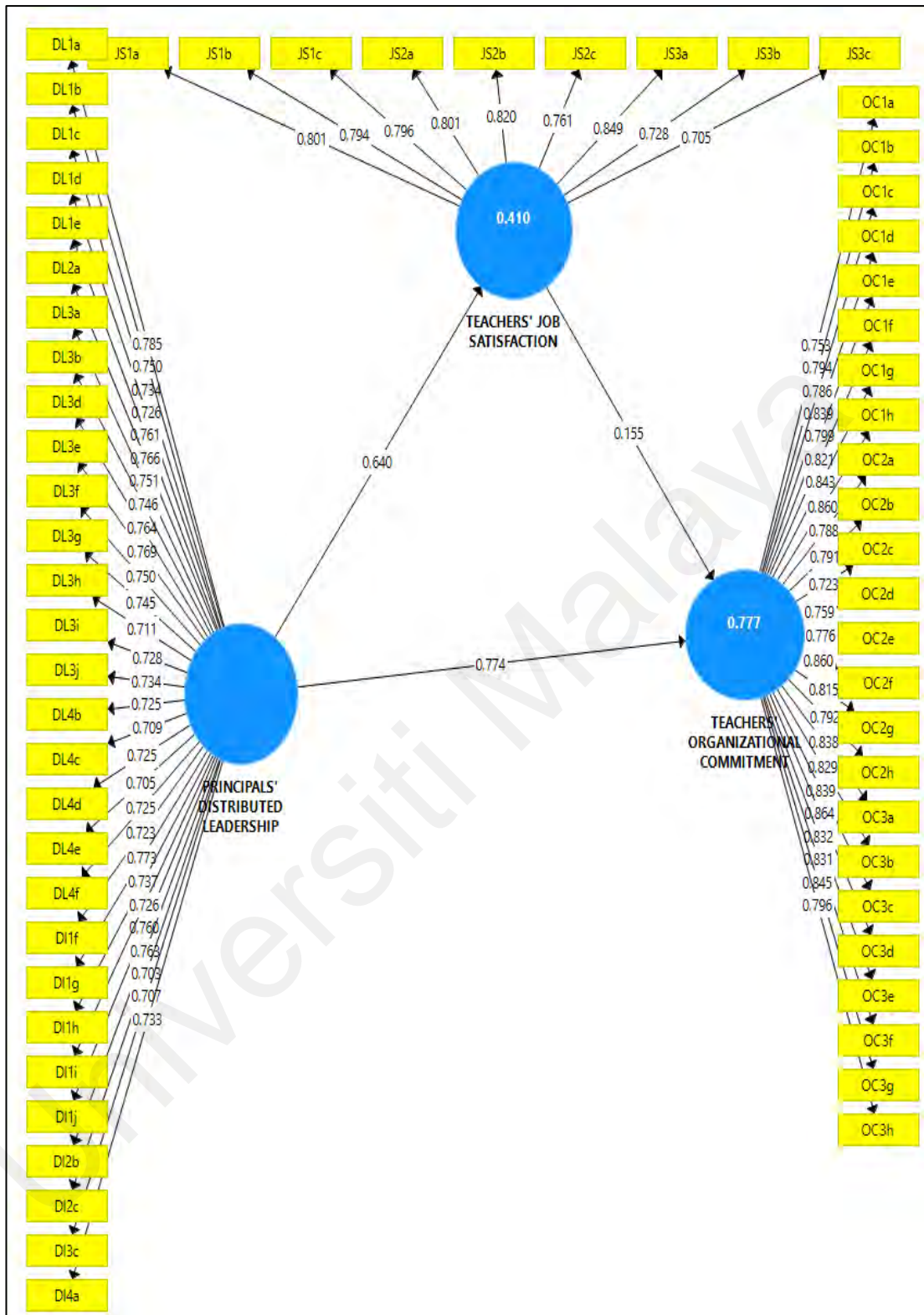
Figure 4.3. PLS Algorithm Output in the First Order Reflective Constructs Structural
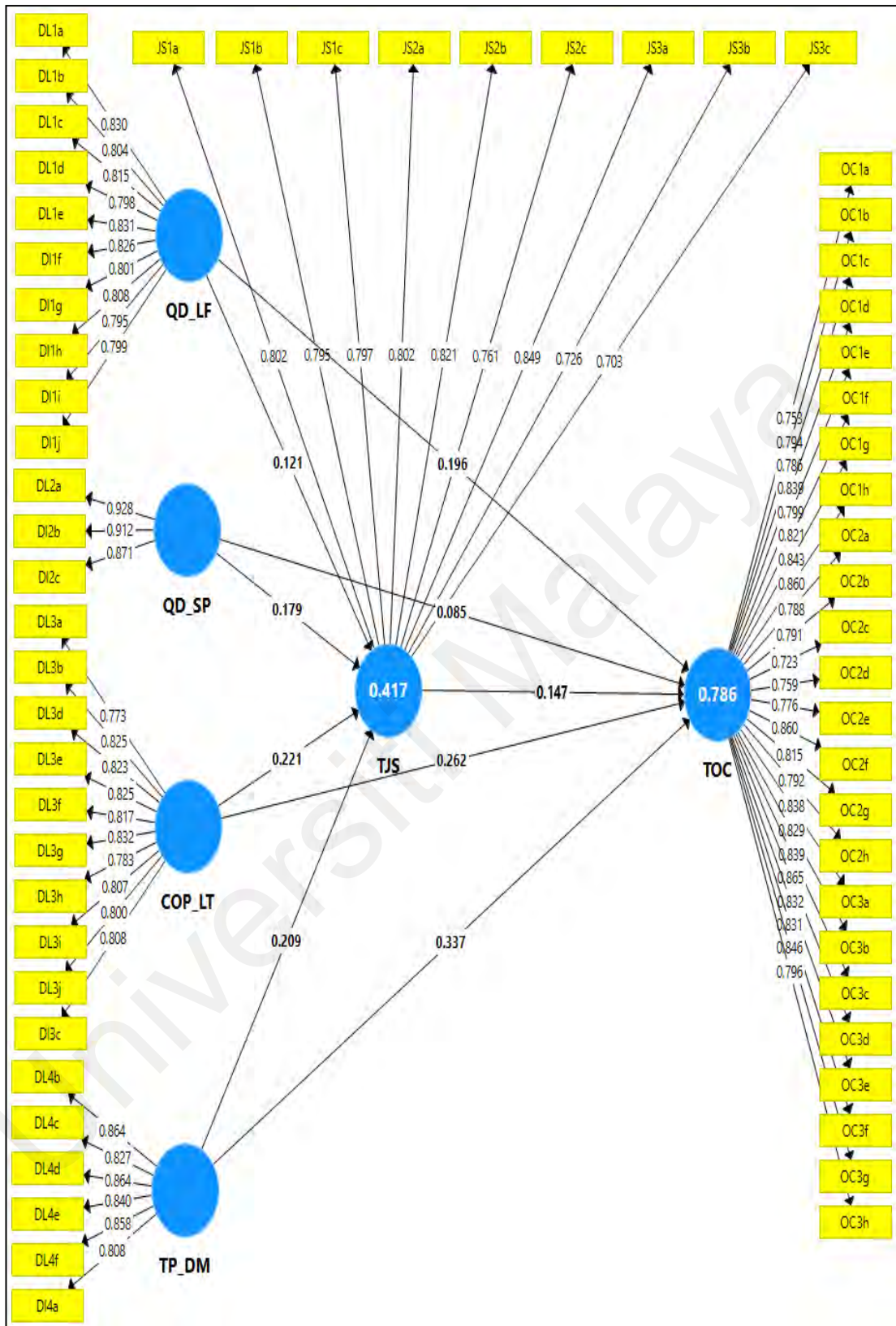
Model

Figure 4.4. PLS Algorithm Output in the First Order Reflective Constructs and Dimensions Structural Model

The result based on the first model shows that principal's distributed leadership as a construct can explain 41.0% of variance in teachers' job satisfaction whereas 77.7% of variance in teachers' organizational commitment can be explained by the effect of the construct of principal's distributed leadership through teachers' job satisfaction. The result shows that predictive accuracy as given by R square is lower to explain teachers' job satisfaction but higher to explain teachers' organizational commitment.

The result based on the second model shows that four dimensions of principal's distributed leadership can explain 41.7% of variance in teachers' job satisfaction whereas 78.6% of variance in teachers' organizational commitment is explainable by the effect of the combined dimensions of principal's distributed leadership through teachers' job satisfaction. The result shows that predictive accuracy as given by R square is lower to explain teachers' job satisfaction but higher to explain teachers' organizational commitment.

The blindfolding analysis in SmartPLS3.2.8 implied that both teachers' job satisfaction (Q square = 0.231) and teachers' organizational commitment (Q square = 0.476) have positive Q square in the first model as shown in Figure 4.5. Therefore, this concluded that the predictive relevancy of the structural model has been accomplished.

By using the second model, the blindfolding analysis in SmartPLS3.2.8 implied that both teachers' job satisfaction (Q square = 0.234) and teachers' organizational commitment (Q square = 0.481) have positive Q square as shown in Figure 4.6. Therefore, this concluded that the predictive relevancy of the structural model has been accomplished.
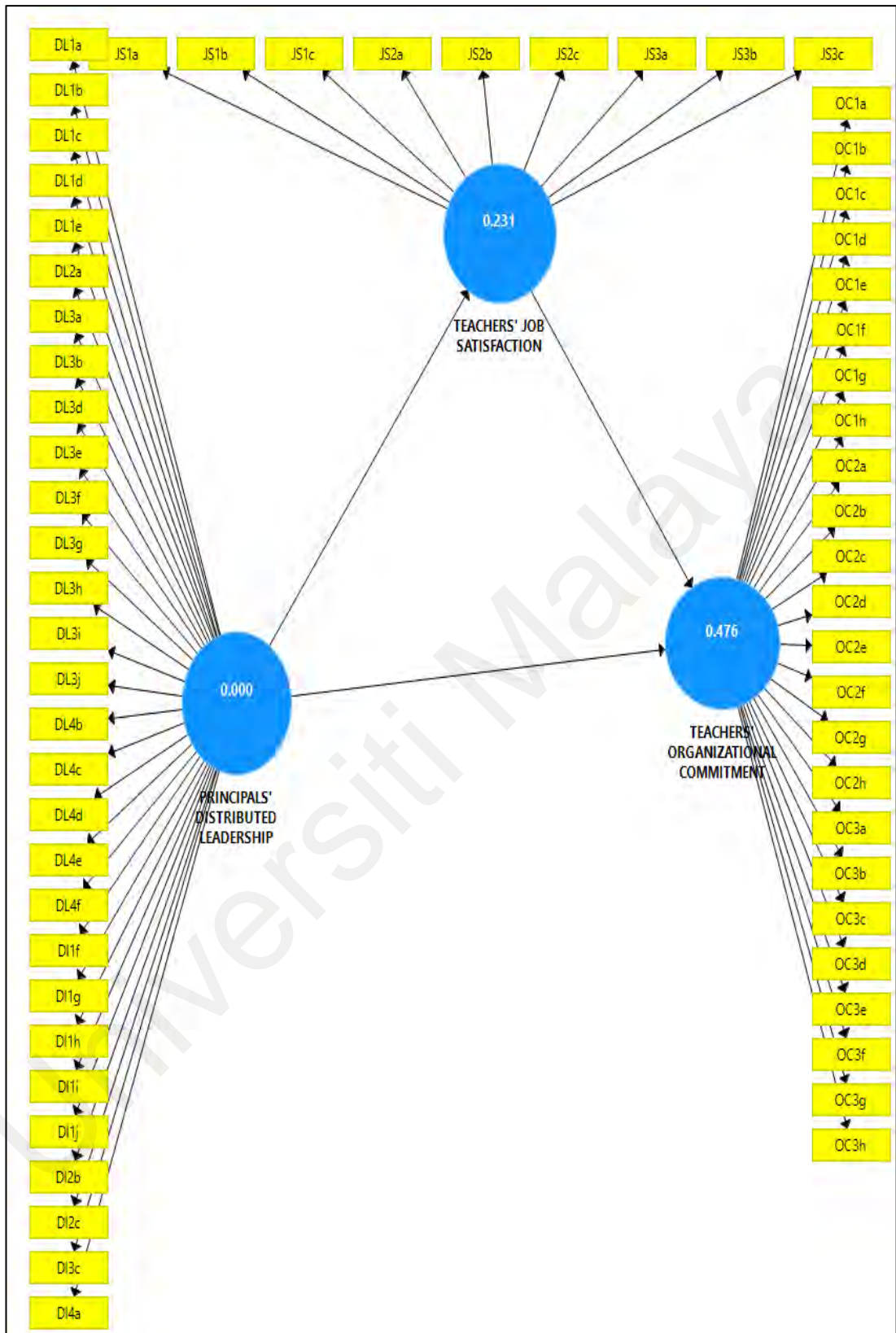
Figure 4.5. Blindfolding Output in the First Order Reflective Constructs Structural
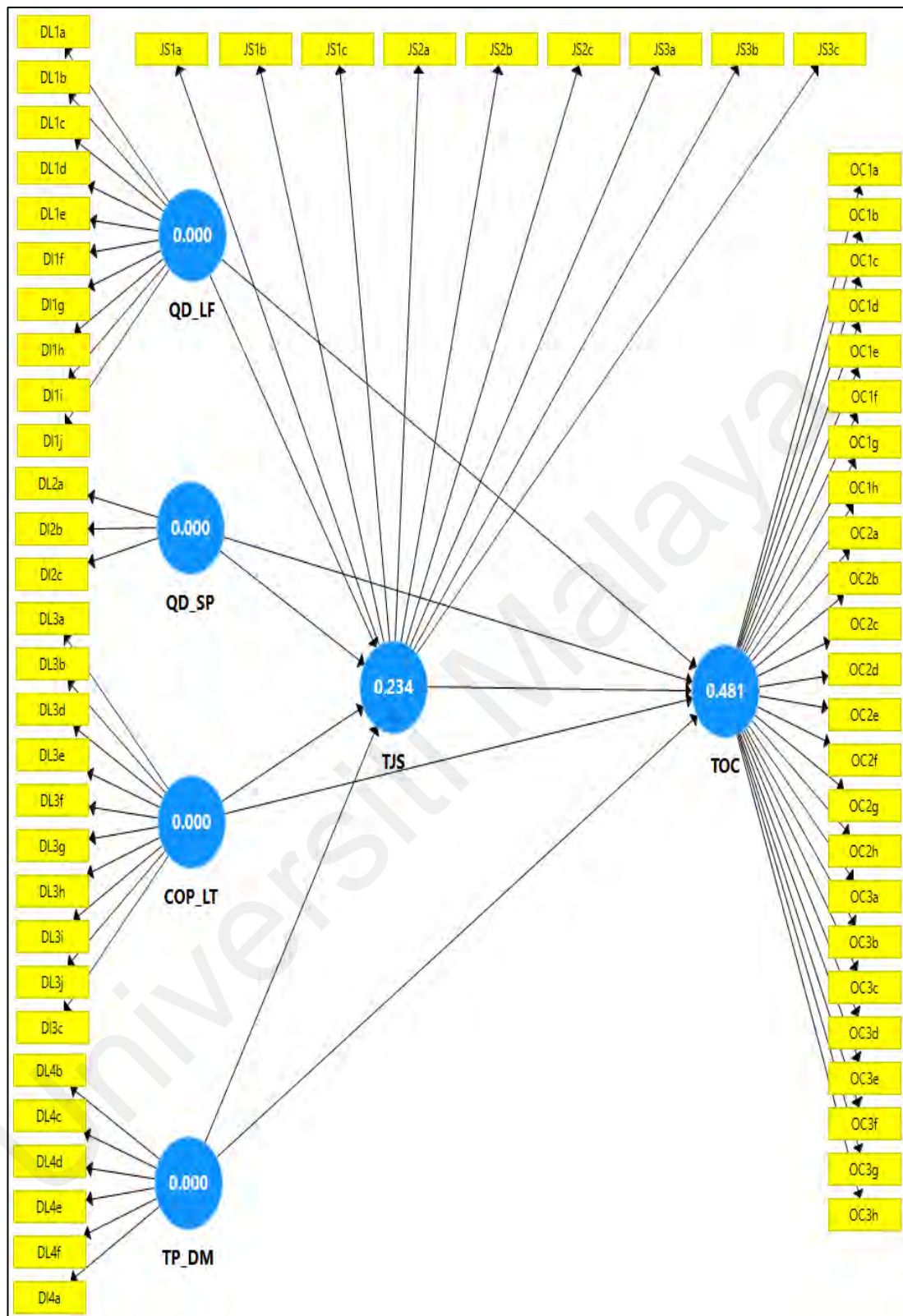
Model

Figure 4.6. Blindfolding Output in the First Order Reflective Constructs and Dimensions Structural Model

Table 4.27 summarized the result of the predictive accuracy and relevancy of the structural model based on the first and second models.

Table 4.27

Predictive Accuracy and Relevancy of the Structural Model

	R Square		Q Square	
	1st Model	2nd Model	1st Model	2nd Model
Teachers' Job Satisfaction	0.410	0.417	0.231	0.234
Teachers' Organizational Commitment	0.777	0.786	0.476	0.481

Note: 1st Model: Construct to Construct Relationship; 2nd Model: Dimensions of PDL to TJS and TOC Constructs Relationships

4.8.5 Effect Sizes of the Predictors

Table 4.28 presents the effect sizes of the predictors, principals' distributed leadership and teachers' job satisfaction on their respective outcomes. The result shows that principals' distributed leadership has a large effect size on teachers' job satisfaction and teachers' organizational commitment, but with a smaller effect size on teachers' job satisfaction ($f^2 = 0.694$) compared to the effect size on teachers' organizational commitment ($f^2 = 1.583$). The effect size of teachers' job satisfaction on teachers' organizational commitment ($f^2 = 0.063$) is small. In comparison, the effect size of teachers' job satisfaction on teachers' organizational commitment ($f^2 = 0.063$) is smaller compared to the effect size of principals' distributed leadership on teachers' organizational commitment ($f^2 = 1.583$).

The effect sizes of each dimension of principals' distributed leadership are small on teachers' job satisfaction with Leadership Function Quality and Distribution ($f^2 = 0.008$), Supervision Quality and Distribution ($f^2 = 0.022$), Cooperation in the Leadership Team ($f^2 = 0.029$), and Teacher Participation in Decision making ($f^2 = 0.031$) did not reach the threshold for moderate effect size of 0.15. In addition, the

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effect sizes of three dimensions of principals' distributed leadership on teachers' organizational commitment are small. These dimensions are Leadership Function Quality and Distribution ($f^2 = 0.057$), Supervision Quality and Distribution ($f^2 = 0.013$), Cooperation in the Leadership Team ($f^2 = 0.109$). However, Teacher Participation in Decision making has a moderate size effect on teachers' organizational commitment ($f^2 = 0.212$).

Table 4.28

Effect Sizes of Constructs and Dimensions

	Teachers' Job Satisfaction	Teachers' Organizational Commitment
Principals' Distributed Leadership	0.694	1.583
Teachers' Job Satisfaction		0.063
Leadership Function Quality and Distribution	0.008	0.057
Supervision Quality and Distribution	0.022	0.013
Cooperation in the Leadership Team	0.029	0.109
Teacher Participation in Decision making	0.031	0.212

Key: low, <0.02; moderate, <0.15; high, >0.35

4.9 Summary of the results

A summary of the results is shown in Table 4.29 based on the research questions. All eight research questions were answered using appropriate analysis of data gathered from the research questionnaires.

Table 4.29

Summary of the Research Findings

Research Questions	Findings
What are the distributed leadership practices in international schools in Kuala Lumpur as perceived by teachers based on leadership function quality and distribution, supervision quality and distribution, cooperation within the leadership team, and teacher decision making participation?	Principals' distributed leadership was perceived high (Mean = 4.00, SD = 0.58). Leadership Function Quality and Distribution was perceived the highest (Mean = 4.01, SD = 0.63), followed by Teachers' Participation in Decision making (Mean = 4.01, SD = 0.67), Cooperation in the Leadership Team (Mean = 3.99, SD = 0.65), and lastly, Supervision Quality and Distribution (Mean = 3.98, SD = 0.73).
What are the levels of organizational commitment in international schools in Kuala Lumpur based on affective, normative and continuance commitment among teachers?	Teachers' Organizational Commitment was perceived high (Mean = 3.84, SD = 0.72). Normative commitment was perceived the highest (Mean = 3.86, SD = 0.77), followed by Affective Commitment (Mean = 3.83, SD = 0.71), and lastly, Continuance Commitment (Mean = 3.83, SD = 0.73).
What are the levels of job satisfaction in international schools in Kuala Lumpur based on satisfaction with students, co-workers and parents among teachers?	Teachers' Job Satisfaction was perceived high (Mean = 3.75, SD = 0.62). Satisfaction with students was perceived the highest (Mean = 3.79, SD = 0.70), followed by Satisfaction with Parents (Mean = 3.77, SD = 0.68), and lastly, Satisfaction with Co-Workers (Mean = 3.70, SD = 0.67).
Is there a significant relationship between distributed leadership and job satisfaction of teachers in international schools in Kuala Lumpur? H1: Principals' distributed leadership is significantly and positively related to teachers' job satisfaction	Principals' distributed leadership was significantly and positively related to teachers' job satisfaction (β = 0.640, T = 13.817, p = 0.000). The research hypothesis, H1 is supported.

| Research Questions	Findings
Is there a significant relationship between job satisfaction and organizational commitment of teachers in international schools in Kuala Lumpur? H2: Principals' distributed leadership is significantly and positively related to teachers' organizational commitment	Principals' distributed leadership was significantly and positively related to teachers' organizational commitment (β = 0.155, T = 3.899, p = 0.000). The research hypothesis, H2, was supported.
Is there any significant relationship between distributed leadership and organizational commitment of teachers in international schools in Kuala Lumpur? H3: Job satisfaction is significantly and positively related to teachers' organizational commitment	Teachers' job satisfaction was significantly and positively related to teachers' organizational commitment (β = 0.774, T = 22.482, p = 0.000). The research hypothesis, H3 was supported.
Which of the distributed leadership dimensions are the significant predictors of organizational commitment of teachers in international schools in Kuala Lumpur? H2a: Leadership function quality and distribution is significantly and positively related to teachers' organizational commitment H2b: Supervision quality and distribution is significantly and positively related to teachers' organizational commitment H2c: Cooperation in the leadership team is significantly and positively related to teachers' organizational commitment H2d: Teacher decision making participation is significantly and positively related to teachers' organizational commitment	Leadership Function Quality and Distribution (β = 0.196, T = 4.091, p = 0.000), Cooperation in the Leadership Team (β = 0.262, T = 5.182, p = 0.000) and Teacher Participation in Decision making (β = 0.337, T = 6.860, p = 0.000) were significantly and positively related to teachers' organizational commitment. However, Supervision Quality and Distribution was not significantly related to teachers' organizational commitment (β = 0.085, T = 1.811, p = 0.070). The research hypothesis, H2a, H2c and H2d were supported but the research hypothesis, H2b was not supported.

'Table 4.29 Continued'

Research Questions	Findings
Is job satisfaction a mediator for the relationship between distributed leadership and organizational commitment among teachers in international schools in Kuala Lumpur? H4: Teachers' job satisfaction mediates the relationship between principals' distributed leadership and teachers' organizational commitment H4a: Teachers' job satisfaction mediates the relationship between quality and distribution of leadership function and teachers' organizational commitment H4b: Teachers' job satisfaction mediates the relationship between quality and distribution of supervision and teachers' organizational commitment H4c: Teachers' job satisfaction mediates the relationship between cooperation within the leadership team and teachers' organizational commitment H4d: Teachers' job satisfaction mediates the relationship between teacher participation in decision making and teachers' organizational commitment	Teachers' job satisfaction is a significant mediator of the relationship between principals' distributed leadership with teachers' organizational commitment (β = 0.099, T = 3.830, p = 0.000). At the dimension level, Cooperation in the Leadership Team (β = 0.032, T = 2.018, p = 0.044) and Teacher Participation in Decision making (β = 0.031, T = 2.419, p = 0.016) relationships with teachers' organizational commitment were significantly mediated by teachers' job satisfaction. However, Leadership Function Quality and Distribution (β = 0.018, T = 1.230, p = 0.219) and Supervision Quality and Distribution (β = 0.026, T = 1.488, p = 0.137) relationships with the teachers' organizational commitment were not significantly mediated by teachers' job satisfaction. The research hypotheses, H4, H4c and H4d were supported but the research hypotheses, H4a and H4b were not supported.

4.10 Revising the Research Model

The result presented above indicated that there were three insignificant relationships in the structural model: (i) QD_SP $\rightarrow$ TJS; (ii) QD_LF $\rightarrow$ TJS and QD_SP -$\rightarrow$ TOC. The research model was redrawn with the exclusion of the insignificant relationships. Figure 4.7a and Figure 4.7b compares the bootstrapping analysis result before and after exclusion of these insignificant relationships. From the path coefficient values, it is shown that the strengths of relationships between COP_LT and TJS (β_{before} = 0.221; β_{after} = 0.365) and between TP_DM and TJS (β_{before} = 0.209; β_{after} = 0.318) have

increased. The strengths of the relationships between QD_LF and TOC ($\beta_{before} = 0.196$; $\beta_{after} = 0.219$), between COP_LT and TOC ($\beta_{before} = 0.262$; $\beta_{after} = 0.287$) and between TP_DM and TOC have increased ($\beta_{before} = 0.337$; $\beta_{after} = 0.356$). Similarly, the strength of the relationship between TJS and TOC has increased ($\beta_{before} = 0.147$; $\beta_{after} = 0.157$).

Figure 4.8a and Figure 4.8b shows the PLS Algorithm analysis result before and after exclusion of the insignificant relationships. The result shows that the predictive accuracy for TJS has reduced ($R^2_{before} = 41.7\%$; $R^2_{after} = 39.4\%$). Similarly, the predictive accuracy for TOC has also reduced ($R^2_{before} = 78.6\%$; $R^2_{after} = 78.3\%$)
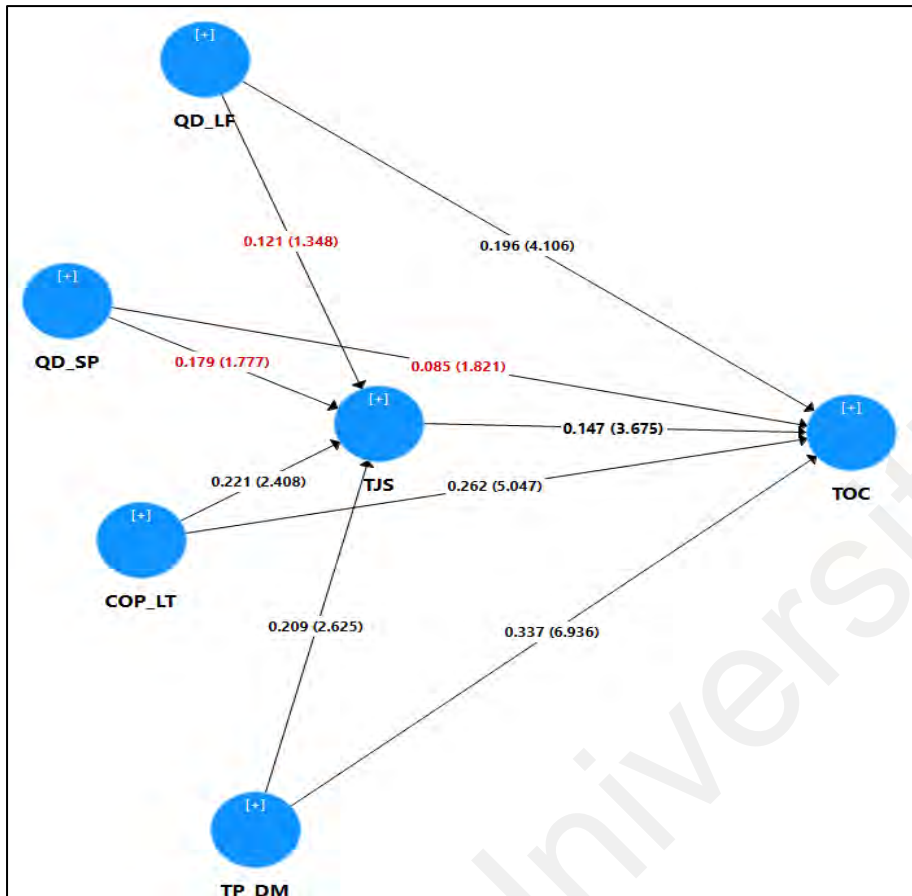
Figure 4.7a: Bootstrapping Analysis in Initial Research Model
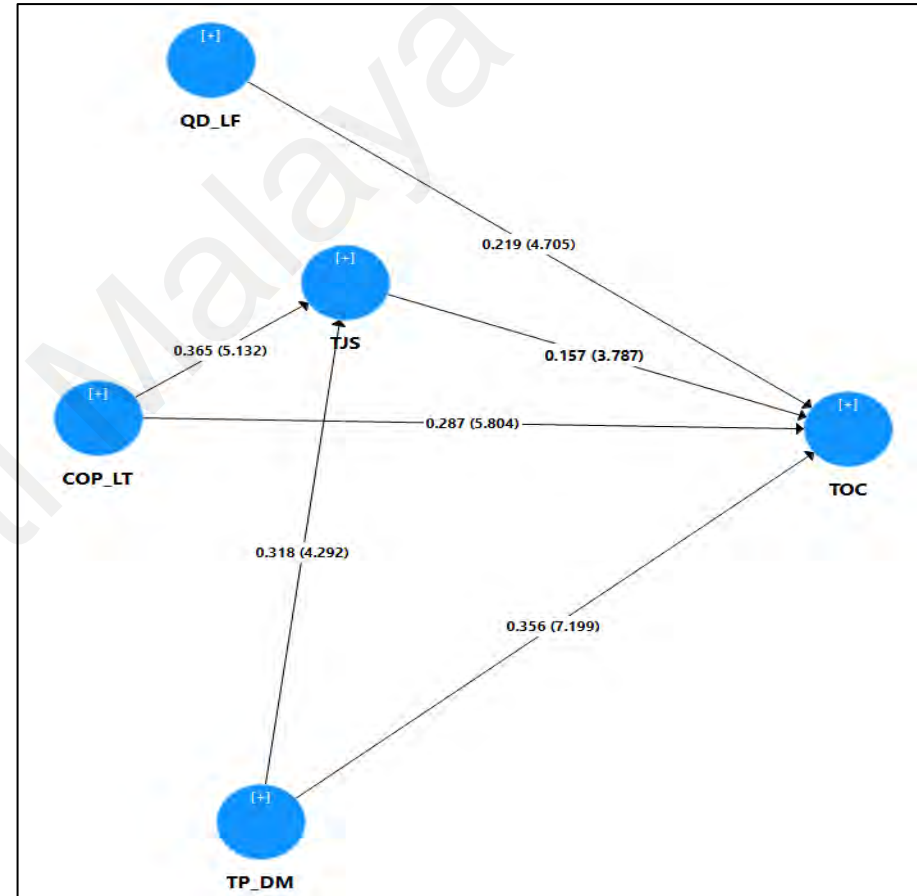
Figure 4.7b: Bootstrapping Analysis After Excluding Insignificant Relationship
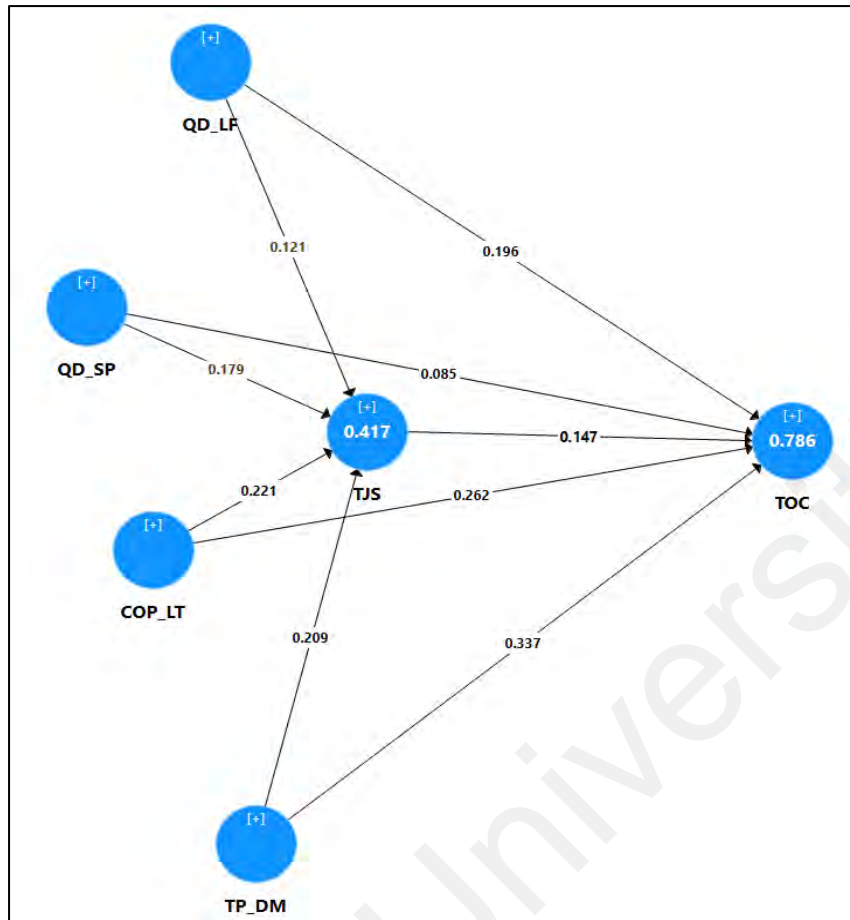
Figure 4.8a: PLS Algorithm Analysis in Initial Research Model
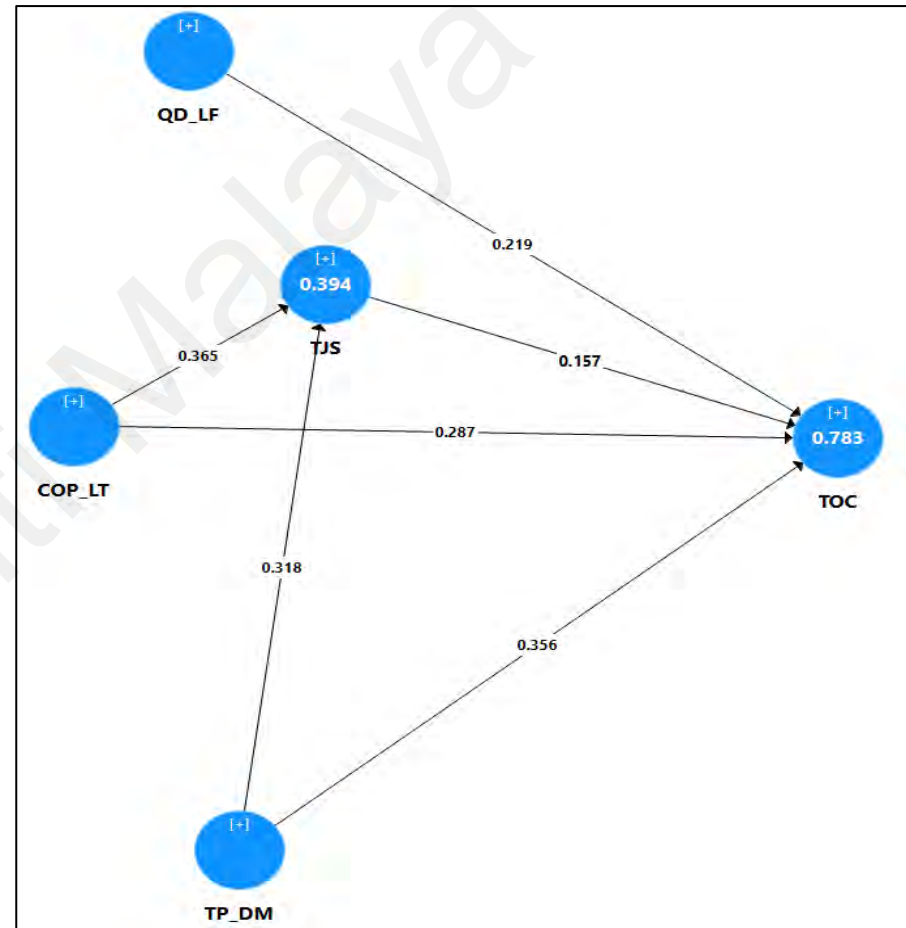
Figure 4.8b: PLS Algorithm Analysis After Excluding Insignificant

Relationship

4.11 Chapter Summary

This chapter has presented the result of data analyses using IBM SPSS 23.0 and SmartPLS3.2.8. The common method bias and normality test have been determined and found to be not an issue in this study. Therefore, this supports the findings in terms of providing this study the reliability of the results to explain the phenomenon relating to distributed leadership in the international schools and its relationship with the job satisfaction and organizational commitment of the teachers. The demographic profiles of the respondents described them based on gender, age, educational level, experience in teaching and working experience at the present school. It shows that the respondents came from different demographic background based on the characteristics explained in the findings. The results of descriptive analysis show the level of principals' distributed leadership practices, teachers' organizational commitment and teachers' job satisfaction. From the assessment of the measurement models, the reliability and validity have been established based on indicators and constructs reliability and validity, discriminant validity, collinearity issue and model fit. The structural model assessment was done using the bootstrapping analysis in SmartPLS3.2.8.

Overall, the result presented in this chapter were able to answer each of the research questions. Further discussion about the research result is presented in the subsequent chapter.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1   Introduction

In this chapter, further discussion on the research findings, in particular, responding to the eight research questions posed in the first chapter is given. These research questions are restated below:

1. What are the distributed leadership practices in international schools in Kuala Lumpur as perceived by teachers based on leadership function quality and distribution, supervision quality and distribution, cooperation within the leadership team, and teacher decision making participation?

2. What are the levels of organizational commitment in international schools in Kuala Lumpur based on affective, normative and continuance commitment among teachers?

3. What are the levels of job satisfaction in international schools in Kuala Lumpur based on satisfaction with students, co-workers and parents among teachers?

4. Is there a significant relationship between distributed leadership and job satisfaction of teachers in international schools in Kuala Lumpur?

5. Is there a significant relationship between job satisfaction and organizational commitment of teachers in international schools in Kuala Lumpur?

6. Is there any significant relationship between distributed leadership and organizational commitment of teachers in international schools in Kuala Lumpur?

7. Which of the distributed leadership dimensions are the significant predictors of organizational commitment of teachers in international schools in Kuala Lumpur?

8. Is job satisfaction a mediator for the relationship between distributed leadership and organizational commitment among teachers in international schools in Kuala Lumpur?

The discussion also includes the implications of the research findings. Recommendations arising from the research findings are also presented. This chapter provides an overall conclusion of the study at the end.

5.2 Discussion on the Research Findings

This study aimed to investigate principals' distributed leadership and how it relates to teachers' job satisfaction and teachers' organizational commitment. The reliability and validity of the measurement models were evaluated at indicator, construct, and among the construct before the direct and indirect relationships of the research variables were determined. Based on the assessment of the measurement models, it was shown that all necessary thresholds for accepting the measurement models as reliable and valid have been ascertained.

In the structural model assessment, both the direct and indirect relationships were assessed and the predictive accuracy and relevancy as well as effect size of the predictors were determined. The research findings are presented and discussed more elaborately as follows.

5.2.1 Principals' Distributed Leadership

The principals' distributed leadership was represented by four dimensions: leadership function quality and distribution, supervision quality and distribution, cooperation in the leadership team and teacher participation in decision making. These four dimensions were also regarded as individual latent construct in its relationship with job satisfaction and organizational commitment of the teachers.

The descriptive statistical analysis provided the mean, mode, median and standard deviation scores of these sub-constructs and the items in each sub-construct. Findings showed that leadership function quality and distribution was perceived with greater frequency of occurrence followed by teachers' participation in decision making and then, cooperation in the leadership team while supervision quality and distribution was perceived with lower frequency of occurrence. Each of these sub-constructs and the overall construct of principals' distributed leadership were perceived highly by the teachers in the survey. In other words, leadership function quality and distribution were observed as the dominant distributed leadership practices of the principal, but supervision quality and distribution were the lowest.

The importance of leadership function that is distributed to the teachers by the principal shows that the principals at international schools in this study are aware of the need to distribute leadership function (Lee, Hallinger and Walker, 2012; Cravens, 2019). Findings in Harris (2008) identified the importance of distributed leadership to improve students' outcomes and ensure organizational development and change. This could be one of the reasons that contributed to the higher quality of education programs delivered by international schools in Malaysia, as perceived by most parents leading to more preferences among these parents to enroll their children in international schools.

Dimmock (2012) added that distributed leadership requires the multiple leaders to interact while Lewis and Murphy (2008) asserted the need for a principal to work with senior and middle leaders as a team and collaboratively in the school context. Principal as the sole leader cannot lead alone effectively (Hermann, 2016; Spillane and Diamond, 2007). The principals in this study showed great awareness on the need to develop the leadership of others by giving them the opportunities to learn and gain maturity through the process of leading. Thus, this implies that the principals in international school are open to share their leadership responsibilities with other teachers in the school. This is also an important matter in terms of succession planning to prepare the teachers to become future leader of the school.

As shown from the mean of the items representing the dimension of quality and distribution of leadership function, the teachers perceived that their principals provided encouragement to them to improve through professional learning and encouraged the them to try new practices consistent with students' needs. In the era of the 21st century now, giving the teachers the opportunity to practice innovative and creative learning is necessary to sustain success and performance of the students. Elmore (2002) stated that principals as the administrative leaders carry the task to enhance the skills and knowledge of the teachers in the school. This could lead to enhance the human capital of the school which is a competitive advantage for the school, especially in today's situation where the competition has become more intense with a growing trend in terms of numbers for international schools and students' enrolment in international schools.

It was also shown in past studies that high-performing schools would practice largely distributed transformational leadership (Gurr and Day, 2014; Leithwood, Sun and Pollock, 2017). Thus, this study provides some empirical evidences that the

principals in the international schools are keen in distributing the leadership functions with others in the leadership team. This could provide a good environment and opportunity to the teachers working in international school to gain experience of being leaders themselves. It is in the alignment to the educational goal as stated in Shift Four of the Malaysian Education Blueprint 2013-2025 relating to enhancement of teacher leadership and creating more subject experts and master teachers.

The dimension of teacher participation in decision making was perceived positively and highly by the respondents in the survey. This was the second dimension in the research variable, principal distributed leadership that has a high mean value. Therefore, this implies that the principals in the international schools are promoting teachers to participate in decision making. The teachers are empowered to make decisions and not being delegated with tasks and responsibilities only.

The items stating that the teachers' involvement in decision making was ensured and activities were delegated for achieving school goals were perceived as being practiced more frequently among the teachers. Therefore, the teachers play greater and active roles as leaders at their own level to realize the vision of the schools in their practice.

In addition, the teachers agreed that leadership was distributed among the team members. Involving the teachers in decision making is important in order to build capacity for reform in the school context (Murphy, Smylie, Mayrowetz and Louis, 2009). The full participation of the teachers and other staff in decision making at school is a move to make them accountable (Spillane, 2005). Findings of this study agreed that shared decision making is an accepted practice in the principals' distributed leadership (Grant, 2011; Holloway, 2017). Clutter-Shields (2011) stated distributed leadership is about the empowerment of teachers within the school so that they are

involved in decision making process. The openness and acceptance of teacher participation in decision making would ensure that the teachers felt acknowledged and their contribution is recognized to develop the students and the teachers. Thus, this helps in getting them to feel appreciated and part of the ecosystem of the school. This could also be a strategic means of nurturing loyalty and commitment of the teachers towards the school, thus reducing the desire for attrition and moving to other schools.

Additionally, this study found that the dimension of cooperation in the leadership team was perceived highly by the teachers. Cooperation in the leadership team means that the teachers have respect for each other and are willing to share their expertise to build and develop other teachers for the benefits of the students and school.

The descriptive statistics of the items representing this dimension showed that principals' practice to ensure the leadership team members know the task which they have to perform, having a team that is well-functioning in the school and supporting the leadership team to attain the goals of the school were perceived highly by the teachers. Therefore, the principal in this case shows both transactional and transformational leadership qualities that bring the best out of the leadership team.

Effective principal leadership is accepted as a critical factor of school success (Lieberman and Miller, 2004). Nevertheless, the principals of today are entrusted with a lot of complex and varied job responsibilities that they require the support of teachers and others as instructional leaders (Lambert, 2003; Camburn, Rowan and Taylor, 2003; Clutter-Shield, 2011). With so many managerial duties to accomplish, the school principals have been reported feeling overawed as they still need to find enough time to focus on curricular program and student learning improvement (Danielson, 2007). It becomes imperative that these principals learn to depend on others in the school like the assistant principal, senior teachers, and other teacher leaders to assist them in

leading the school. Therefore, collaborative effort of the leadership team is necessary and accomplished through a distributed leadership approach in the school (Camburn et al, 2003). Others in the leadership team such as the assistant principal, teacher leaders, senior teachers and experienced teacher can also be apportioned with the authority to carry out tasks without constantly seeking approval from the principal. This means that other leaders in the school are empowered within their means to make decision and lead others in school activities to ensure the mutual and shared goals are attained. This could contribute to the efficiency of the school system as those in the leadership team collaborate with one another to run the school together.

The dimension of supervision quality and distribution was ranked with the least mean value. However, it does not mean that the principals are not keen to ensure the quality of supervision and distribute this responsibility to other leaders in the school. This is because the mean score for this dimension is still high, except that in comparison with the other dimensions, supervision quality and distribution was perceived the lowest.

The highest means were for the items relating to the involvement of the principal in students' learning to provide continuous feedback to the teachers and the involvement of the principal in the evaluation of students' learning after a training program for the teachers. Similarly, among the secondary schools in Kubang Pasu, Kedah, the supervision of teaching and learning was also perceived highly in the study of Darishah, Daud and Omar Fauzee (2017). Therefore, supervision might still be considered as a main task by the principal and not entirely shared with the others in the leadership team because it serves as a means for the principal to observe the teacher in the classroom and provides his or her personal feedback to the teachers. Further to

that, supervision in the classroom is also one of the main ways that the principal can justify the promotion and to support the professional development of the teacher.

In addition to that, supervision is a crucial leadership function and considered as a function of designated leader in a formal context like a principal, but its distribution is more difficult (Eden, 2001; Goldstein, 2003). Findings from the teaching and learning supervision of teachers in schools (Abebe, 2014; Anusuya, 2013; Hamdan and Mohd, 2011; Mardhiah and Rabiatul Adawiyah, 2016; Vijamalar and Suhaida, 2013) agreed that there are issues on the effectiveness of supervision which may have likely contributed to its difficulty to distribute. Therefore, this could be one reason why quality and distribution of supervision is considered less important compared to the other three dimensions of the principal distributed leadership. Even so, it should also be noted that based on the mean, mode and median values, the teachers still perceived this dimension highly. Thus, it is also distributed quite well in the international school setting.

Overall, this study had shown that the practice of distributed leadership among the principals in the international schools were high. Evidence from literature (Cravens, 2019; Harris, 2011; Lee and Walker, 2018) supported the outcomes of this study. This reflects that the international school principals are aware of their responsibility and commitment on the teaching and learning process in the school which were carried out through the distributed leadership process. This also agrees with the current notion that leaders cannot work alone in the school context and there is a requirement to invest in the leadership of others, mainly the teachers. Distributed leadership emphasizes on the essence of teamwork, values and beliefs as well as relationships, (Bush, 2012; Bush and Glover, 2014; Harris, 2008; Spillane, 2006), which are deem important to ensure success of any school but even more critical for

international schools. This is because of the competitive environment where international schools need to ensure that they are capable of sustaining their high quality and excellent performance to continue being in existence in the market.

It was identified that there are four main practices that ensure successful school leadership which are: developing the vision and values as well as setting the direction, having an understanding and develop the people and the organization, while managing the teaching and learning process (Barber, Whelan and Clark, 2010; Howling, 2017; Leithwood and Day, 2007; Leithwood and Riehl, 2003). These practices are also features describing what distributed leadership is. Principals who progressively distribute leadership are more likely to improve student outcomes and ensure efficient and effective organizational change and development (Harris, 2008; Howling, 2017). Thus, this can significantly provide competitive advantages to international schools and ensure that they are able to survive in an industry that is dynamic and growing.

5.2.2   Teachers' Organizational Commitment

International schools are dependent on the availability of competent and committed teachers who would continue their services with the school for a longer duration of time. Therefore, the examination of the teachers' organizational commitment in this study could provide insights to the extent of their commitment to their present school.

It is shown in this study that the teachers who participated in the survey perceived highly each of the dimensions and the overall teachers' organizational commitment. Normative commitment was perceived the highest, followed by affective commitment and lastly, continuance commitment. Hence, this implies that the teachers in the international schools who participated in this study are committed to the schools

based on compulsory aspects, that is; they stay with the school due to their sense of security and responsibility (Gökyer, 2018) as well as their feeling of belonging to the school but lesser on the reason that they have to stay with the current school. This is justifiable considering that the teaching profession in international and private schools in Malaysia or globally is considered lucrative and promising that teachers can move from one school to another quite easily but might be impeded by the need to gain seniority through longer employment in a particular school, bounded by employment contract among other things. Furthermore, most international schools in Malaysia are small in size and this could promote closeness and rapport among the teachers, students and parents that they feel the school is an extension of a safe home for them.

Based on the itemized responses, their normative commitment is based more on their personal perception about loyalty to an organization. The highest means for the items were reflected by the statements like "I believe that a person must always be loyal to his or her organization, "jumping from organization to organization does seem unethical to me, and "one of the major reasons I continue to work in this organization is that I believe loyalty is important and therefore feel a sense of moral obligation to remain". The lowest mean item was a statement that "if I got another offer for a better job elsewhere, I would not feel it was right to leave my organization".

These items represent the teacher's sense of loyalty due to security reasons. This resonates with the context of an international school which experience high teacher turnover (Odland and Ruzicka, 2009; Tkachyk, 2017). It implies that teachers in international school are driven by their need for job security and a better job offer would not tie them to the present school that they were attached to. People are seeking for job security now as the employment market becomes more challenging and finding a good paying job becomes more difficult. Therefore, one of the probable strategies

employed by international school is to offer good salary to experience teachers so that they maintain their loyalty with the school.

Although Malaysia is considered as having a low rate of unemployment in general, the rate of unemployed among graduates who are more likely and suitable to work as teachers in the international school is high. Thus, landing a job as a teacher in an international school is still considered as lucrative and stable. Due to the difficulties of getting a good salaried job, even inexperienced but qualified graduates might find the teaching position in an international school as something that should be considered and tried.

The teachers' level of affective commitment has the second highest mean in this study (Mean = 3.83). This type of commitment implies the desire of the teachers to commit emotionally to the organization. This suggests that the teachers are staying with the organization due to their own free will and desire (Gökyer, 2018). The highest means were for the items, "this organization has a great deal of personal meaning to me" (Mean = 3.95), "I feel like 'part of the family' in this organization" (Mean = 3.89), and "I feel 'emotionally attached" to this organization" (Mean = 3.97). Based on these findings, the working environment in the international schools where the teachers taught was assumed to provide them with personal attachment to the school. The demographic profile of the teachers was used to gain an understanding of this finding and it was found that slightly more than half of the teachers have worked between 6 to 10 years in the present schools compared to 48% who have worked for five years or less in those schools. Based on the age of the teachers in the survey, only 16.5% were below 35 years of age. This study implies that teachers aged 35 and above would be more likely to stay at one job longer and feeling the belongingness as a member of the organization. The longer a person stayed in an organization, this could likely mean that

he or she has developed good relationship with others in the organization, and therefore, have emotional and sentimental reasons for continuing to stay in the organization. Some teachers may have developed rapport with the students who have been with them from a younger age or parents who have been sending their children to the same school for a number of years. Therefore, the teacher might have the obligation to ensure that these students complete their education from the start until they completed their secondary education successfully.

Besides that, studies like Nifadkar and Dongre (2014), Mohammed and Eleswed (2013) and Kanchana (2015) showed that age was positively related to commitment. However, in Khan and Zafar (2013), Rana and Agrawal (2016) and Dogar (2014) studies, age had an insignificant influence on affective commitment. Thus, it can only be said that in general, teachers who are older are more committed compared to younger ones. However, a comparison of the teacher organizational commitment based on age was not done in this study so it cannot be conclusively stated that age is a contributing factor to teacher organizational commitment. This serves as one of the limitations of this study and the issue could be taken up in future studies.

Continuance commitment was perceived with the lowest mean in comparison to normative and affective commitment but the difference in their mean values are slight and might not be significantly different. Nevertheless, the mean still indicates that the teacher's continuance commitment at high level of too. Furthermore, this study was not intended to seek whether there is a significant difference in the level of organizational commitment based on the types of organizational commitment.

In a study by Nurharani, Norshidah and Afni Anida (2013), continuance commitment was perceived to be in the middle between affective commitment as the highest and normative commitment as the lowest. In Tadesse's study (2019),

continuance commitment was perceived with the highest mean compared to affective and normative commitment. The findings in Koul (2016) agreed with the finding in this study which indicated that continuance commitment is perceived among the three dimensions of organizational commitment with the lowest mean. Koul (2016) had evaluated the organizational commitment of college teachers in Chandigarh where 120 participants were selected from the Government Colleges. The result showed that the highest mean score was for normative commitment, followed by affective commitment and least of all, continuance commitment. The teachers' organizational commitment was not differentiated based on gender, qualification and years of services of the teachers. These findings reflect that teachers in varied school context place emphasis on continuance commitment differently.

Allen and Mayer (1991) explained that continuance commitment relates to the decision made by the teachers to remain with the organization due to their sense of security and responsibility. Their sense of security was reflected in the three items with the highest means which are: "I am afraid of what might happen if I quit my job without having another one lined up", "right now, staying with my organization is a matter of necessity as much as desire", and "it would be too costly for me to leave my organization now". In Malaysia, unemployment rate is at a minimum with 3.3%. However, deeper scrutiny of the issue shows that the number of unemployed persons had increased at 2.2% from last year (The Star Online, 2019). Although this statistic does not give the exact situation of unemployment in Malaysia, but it provides implying evidence that job security is important in Malaysia and having secured a good job with competitively attractive salary in international schools is something that one should hold on too. It is likely that the teachers develop continuance commitment with the school that they are currently working for because of this situation. Therefore, this

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suggests that the international school is a potential place of work that graduates can sought for employment.

5.2.3 Teachers' Job Satisfaction

In this study, it is shown that the teachers' job satisfaction was perceived highly by the teachers in the survey. Similar finding was observed in a research conducted by Shen, Basri and Asimiran (2018) who compares job satisfaction of private school teachers and those at international schools in Malaysia. Their finding indicated that teachers who are teaching in international schools had greater satisfaction with their job compared to those in private schools. In addition, findings from Wongthaworn and Sucaromana (2012) who assessed job satisfaction among staff members in an international school in Thailand also showed job satisfaction at a high level. According to Odland and Ruzicka (2009), one of the main reasons why teachers chose to remain in international school is because of the happy working climate in the school. This is characterized by the feeling of appreciation and being respected by their colleagues and administration, having a great sense of security, and good relationships with not only the colleagues but with the students as well. However, in Demitras' study (2010), primary school teachers in the Elazig City Center in Turkey were found to have moderate job satisfaction level. Therefore, these studies showed that teachers' perception of their job satisfaction may vary with the school context and might not agree with the findings of this study. Furthermore, the measurement of job satisfaction in these studies are not based on the same aspects of job satisfaction. Therefore, the comparison with other findings in past studies is subjective. Based on the dimensions, the teachers' job satisfaction in this study was highest with the students, followed by the parents and lastly, their co-workers.

Malakolunthu, Idris and Rengasamy (2010) stated that one of the factors related to job satisfaction is recognition. Teacher recognition is based on student achievement. In international schools, the competitiveness of the students is high, and their achievement is given more emphasis not only because of the general need to excel for future employment purposes but due to the need of ensuring that money invested by the parents for their children to study in the expensive international schools are well-spent with high student achievement. Therefore, teachers are satisfied with their student because of their mutual affinity for achievement.

Further to that, teachers would also gain satisfaction when they are dealing with well-mannered students (Fong, 2015). The items for satisfaction with students in this study showed that the teachers perceived highly about the students' behaviours and their self-discipline manner. It can be assumed that the teachers find the students in the international schools more disciplined and therefore, it contributed to their satisfaction with the students.

The teachers also perceived highly on their satisfaction with parents. Van Maele and Van Houtte (2012) in his study of secondary school teachers in Belgium came to a conclusion that trust in parents correlates positively with job satisfaction. In this study, the teachers showed high agreement on the items stating that the parents who are highly interested in the education of their children, and the parental support towards the school and its programs. Additionally, Darmody and Smyth (2010) mentioned that a good relationship between the teacher and parent leads to an improvement of the teachers' self-perception and satisfaction significantly. Parents in international school setting may be more participative and involved because they are investing in their children education. Furthermore, parents who send their children to international schools might be aiming for them to further their studies abroad.

Therefore, their concern for the quality of teaching in the international school might lead them to develop close rapport with the teachers so they can monitor the progress of their children. Additionally, most of these international schools have a lot of programs that provide greater interaction between parents and teachers, and thus, might have contributed to the greater rapport between the teachers and the parents.

This study also found that the teachers showed satisfaction with their co-workers. Ghenghesh (2013) stated that the teachers' relationship with those that they work with in the school is a key factor influencing their job satisfaction. Shen, Leslie, Spybrook, and Ma (2012) explained that satisfaction with co-workers is linked to the collegiality and positive working relationships among the teachers. Collegiality is represented by active collaboration and recognition which lead to satisfaction among teachers. Schools that encourage teachers' contribution in decision making increases job satisfaction (Sarafidou and Chatziionnidis, 2013). Based on the demographic characteristics of the teachers, it is assumed that most of these teachers have been working in the same school for quite a few years and this may have contributed to their rapport and closer relationship with each other. Thus, the teachers provide not only collegiality and friendship but cooperation among them.

However, it should also be noted that in this study, the teachers' job satisfaction with co-workers was ranked the third. This might be due to the nature of the teachers' job where they are responsible for teaching and other tasks that limit their daily interaction with other teachers in the school. Often, teachers work in isolation despite being in contact with others daily in school but most of the time, they are engrossed with completing their own job for the day. Therefore, they are mostly neutral in assessing their satisfaction with their co-workers. Interestingly, this finding was contrary to the findings from Van Maele and Van Houtte (2012) who found that the

strongest type of job satisfaction is with co-workers compared to parents and students. Thus, this brings to an assumption that the working culture in the school might contribute towards making teachers being satisfied or less satisfied with their co-workers.

Overall, teachers' job satisfaction is high among the teachers in the international school. This suggests that the working environment in the school are able to provide them with a positive or pleasant emotional state about their job (Demitras, 2010). The satisfaction of teachers is generally thought to be important and critical in maintaining their happiness state. Happy teachers are more ready to share their knowledge and experience with others in the school compared to unhappy teachers who might be more likely to keep to themselves and not participating in school activities. Further to that, happy teachers would be more willing to stay longer in a school and not changing jobs too often or too fast.

5.2.4 Relationship between Principals' Distributed Leadership and Teachers' Job Satisfaction

The bootstrapping analysis in SmartPLS3.2.8 concluded that principals' distributed leadership showed a strong, positive and significant relationship with teachers' job satisfaction. This also serves as the first research hypothesis of this study which has been shown to be supported by empirical evidence. Based on the descriptive analysis of this study, a high level of principals' distributed leadership can contribute to high level of teachers' job satisfaction. Such findings agree with results of past studies (Hulpia and Devos, 2009; Hulpia et al., 2012; Torres, 2018; Liu and Werblow, 2019; Angelle, 2010).

In this study, principals' distributed leadership is conceptualized as referring to the leadership function and supervision quality and distribution, cooperation in the leadership team and participative decision making (Hulpia et al., 2012). Hence, these dimensions relate to shared accountability of the principals and the teachers. These findings lead to the implication that the teachers respond better to supportive principal leadership and welcome the collaborative opportunities in the school setting (Liu and Werblow, 2019). Grant, Gardner, Kajee, Moodley and Samaroo (2010) further clarified that when staff members have greater participation in decision making, not only their productivity is increased but their job satisfaction as well. According to Ngotngamwong (2012), having autonomy in decision making is an important factor leading to teacher's satisfaction with their job. In addition, Mukhtar, Hapzi and Rusmini (2017) also pointed out that job satisfaction stems from the aspect of human relationship, as evidenced from the relationships of the teachers with the principals and other co-workers. Supervision and guidance from the principals are considered as values of the school meaningful to the teachers and contributing to the fulfillment of their higher order of needs. The alignment of school vision and goals, the accountability and shared leadership roles through the principals' distributed leadership influence the teachers' interpersonal relationship with the students, parents and co-workers. Therefore, by sharing leadership, the teachers become more satisfied with their work.

Greater job fulfillment is also related to the provision of opportunities for the teachers to develop themselves through professional learning communities (Bailey, 2013). The opportunities through professional learning communities provide the teachers with basic skills and continuing their education that enable them to work

collaboratively with colleagues, practice their skills in classroom instruction and maintain their happiness with their works (Adera and Bullock, 2010; Pasalo, 2012).

The impact of principals' distributive leadership practice on the job satisfaction of the teachers is considered as important since it is easier to replace one principal with poor distributive leadership practice than dealing with disgruntled and dissatisfied teachers. As past literature (Cansoy, 2019; Yangaiya and Magaji, 2015) supported the predicting capacity of leadership behavior on job satisfaction, therefore, the teachers' job satisfaction is more probable due to having a principal with competence in practicing distributed leadership in the school.

To an educational institution such as the international school, having highly satisfied teachers is crucial to ensure retention of the staff and minimizing incidence of turnover. Lack of support for the teachers is one of the main reasons why teachers leave the school prematurely resulting in teacher turnover (Armer, 2011; Butler, 2014). Other than that, lacking in administrative support, lacking in freedom and limited autonomy, disappointment about student performance, lacking in opportunities for professional growth also contribute to teacher turnover (Tkachyk, 2017). Therefore, it is equally important the principal is a leader that welcomes the idea of distributed leadership and treat their teachers as leaders too.

5.2.5 Relationship between Teachers' Job Satisfaction and Teachers' Organizational Commitment

The relationship between teachers' job satisfaction and teachers' organization commitment were studied in many researches in the past and in almost all these studies, positive and significant relationship was found (Ali and Bashir, 2018; Larkin, Brantley-Dias and Lokey-Vega, 2016; Malik, Nawab, Naeem and Danish, 2010;

Nagar, 2012; Tsai and Huang, 2008; Valaei and Rezaei, 2016; Yang and Chang, 2008; Yücel, 2012). However, other studies like Curry, Wakefield, Price and Mueller (1986) and Gangai and Agrawal (2015) found that insignificant relationship between job satisfaction and organizational commitment. Nevertheless, it was found in this study that teachers' job satisfaction positively and significantly impacts on their organizational commitment. This was the second research hypothesis that was supported with empirical evidence from this study. However, the inconsistent findings in past studies may suggest that there are school contexts that need to be considered and the school contexts of the international schools that participated in this study seems to support the relationship between job satisfaction and organizational commitment of the teachers.

Literature and past studies have shown that job satisfaction is defined based on differing constructs. In this study, the construct of job satisfaction was based on Pepe et al. (2017) which focused on the teachers' perception of the students, the parents and the co-workers. The teachers' satisfaction based on the relationship with these group of stakeholders implies higher order needs in the Maslow's Needs Hierarchy and argued by researchers like Gavish and Friedman (2010) and Skaalvik and Skaalvik (2011) as being better at describing teachers' satisfaction compared to the use of lower order needs like pay incentives (Spector, 1997). Most studies however, do measure the organizational commitment of the participants using Allen and Meyer's (1990) organization commitment questionnaire.

Thus, this study provides a shed of insights from a different perspective of teachers' job satisfaction that is linked significantly to teachers' organizational commitment. In summation, teachers' high level of satisfaction with students, parents and co-workers contribute to their high organizational commitment level.

5.2.6 Relationship between Principals' Distributed Leadership and Teachers' Organizational Commitment

The relationship between principals' distributed leadership and teachers' organizational commitment was found in this study to be positive and significant. This was the third research hypothesis which was supported by empirical evidence in this study. This finding agrees with past studies' results (Akdemir and Ayik, 2017; Devos et al., 2014; Hairuddin and Salisu, 2015; Hulpia, Devos, Roseel and Vlerick, 2012; Hulpia, Devos and van Keer, 2009) and therefore, concludes that principals' distributed leadership practices in international schools in Kuala Lumpur also exhibited similar findings.

The positive and significant impact of principals' distributed leadership on organizational commitment of the teachers in the international school setting further strengthened the notion that school leadership provided by the principal and shared with the teachers is important to ensure teachers are committed and lesser incidence of turnover is anticipated (Dajani, 2013; Howling, 2017). Due to the shared accountability with the teachers, this had ensured that teachers are more responsible and committed to bring significant productivity and performance of the students and the school. By making teachers accountable for their actions, this may have contributed to their feeling of accomplishment and belonging to the school. Therefore, they developed a loyalty and commitment to the school where they are teaching.

The practice of principals' distributed leadership contributes towards creating a democratic environment in the school. When the principals are more transparent about the direction of the school and share responsibilities with the teachers, their commitment increases by showing greater professional efforts and cooperation and are

less expected to exit the organization. The practice of principals' distributed leadership directly and indirectly influences teachers to be more committed and loyal to their schools because they are given the freedom to choose their own will (Akdemir and Ayik, 2017). By sharing leadership responsibility, the teachers are willing to work because they want and need to contribute to the school meaningfully especially when it is closely related to ensuring the academic success of their students.

5.2.7 Principals' Distributed Leadership Dimensions as Predictors of Teachers' Organizational Commitment

This study used a structural equation modeling approach to determine the direct effect of principals' distributed leadership at dimensional level on teachers' organizational commitment which are: (i) leadership function quality and distribution; (ii) supervision quality and distribution; (iii) cooperation in the leadership team; and (iv) teacher participation in decision making (Hulpia et al., 2012). From this study, it was found that leadership function quality and distribution, cooperation in the leadership team, and teacher participation in decision making were significantly related to teachers' organizational commitment but not supervision quality and distribution. Thus, three out of four research hypotheses that relate the dimensions of principal distributed leadership with teacher organizational commitment were supported and one was not supported. Hence, this brings to an interesting finding that not all aspects of the distributed leadership of principals can explain organizational commitment among the teachers.

It is highlighted in this study that teacher participation in decision making positively and significantly affect their organizational commitment with a moderate effect size. The path coefficient and effect size are almost twice than cooperation in

the leadership team and four times the effect of leadership function quality and distribution.

The effect of teacher participation in decision making on their organizational commitment was acknowledged by Meyer and Allen (1997). This finding agrees with the result of the study from Mathieu and Zajac (1990), Bogler (2005), Bryne (2011), Diosdado (2008), Evers (1990), Kushman (1992) and Hulpia et al. (2012) who also found the significant correlation of teacher participation in decision making with their organizational commitment. Nevertheless, in Hulpia et al. (2012), teacher participation in decision making is less important compared to cooperation in the leadership team and leadership function support quality and distribution. In this study however, teacher participation in decision making is the main predictor of organizational commitment among the teachers. Hence, this reflects that the situational context in the international school may differ in terms of culture and value with other types of school. In the international school setting, the greater the participation of teachers in decision making, the more committed they are to their organization.

In this study, leadership function quality and distribution were positively and significantly related to organizational commitment among the teachers, but it was also noted that the effect size was small ($f^2 = 0.057$). Hulpia et al. (2012) explained that this dimension reflects the supportive leadership function per se that combines the instructional and transformational leadership models. The principals are responsible to foster and set a shared school vision and clear goals, motivate and provide assistance to the teachers, and stimulate the professional learning of the teachers (Leithwood and Jantzi, 1999). This study corroborates the findings in Hulpia et al. (2012) who indicated that the principals' leadership function quality and distribution enhance teachers' organizational commitment. The finding may be due to the fact that this

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leadership function sets the directions and provide clear goals to the teachers and at the same time encourages them to develop themselves professionally so that they can contribute meaningfully to the organization. These are also characteristics of transformational leadership that the principal exhibit to help teachers deal with changes in their work environment. Therefore, despite the changes that are experienced by teachers, it does not affect their commitment too much because of the openness of the principal to share leadership functions with these teachers.

On the other hand, this study was not able to conclude that there is a significant relationship between supervision quality and distribution with teachers' organizational commitment. Similar findings were indicated in Hulpia et al. (2012) although other studies like Ebmeier (2003) and Robinson (2008) did find that supervision impacted significantly on the organizational commitment among the teachers. The supervision quality and distribution are based on the instructional leadership model where the principal is the main leader who control and monitor the teachers in the school (Bamburg and Andrews, 1990). The insignificant impact of this dimension to teachers' organizational commitment might be due to the fact that teachers are sometimes not under the direct supervision of the principals but might be supervised by the assistant principals or other senior teachers within the school for the purpose of improving instructional strategies implementation in the classroom. Most often, the principal provides supervision and monitoring in a formal context through the periodic or annual evaluation of the teacher but might not be related to improvement of their delivery in the classroom (Hulpia et al., 2012). Thus, the teachers might relate to supervision with different perspectives depending on which supervision they reflected on when answering the items in the questionnaire.

Concurrently, this study also shows that cooperation in the leadership team was positively and significantly associated with teachers' organizational commitment but similar to leadership function quality and distribution, the effect size was small. However, in comparison, the path coefficient given by the beta value and the effect size of cooperation in the leadership team was almost twice than the leadership function quality and distribution. The finding however contradicted the outcome in Hulpia et al. (2012) who did not find the significant impact of cooperation in the leadership team on organizational commitment of the teachers. This study showed that the teachers prefer a leadership that puts the emphasis on cohesion of the group, clarity of roles and orientation towards a goal. Therefore, the significant relationship between cooperation in the leadership team and teacher organizational commitment could be due to the alignment of the leadership team's goals and the personal goals of the teachers.

5.2.8 Mediating effect of Teachers' Job Satisfaction on the Relationship between Principals' Distributed Leadership and Teachers' Organizational Commitment

The mediating effect of teachers' job satisfaction on the relationship between the constructs and sub-constructs of principals' distributed leadership showed an insightful evidence. It was found that job satisfaction of the teachers mediates the relationship between principals' distributed leadership and organizational commitment among the teachers. Thus, the fourth research hypothesis of this study pertaining to the relationship of the two variables: principals' distributed leadership and teacher organizational commitment through the mediation of teacher job satisfaction was supported. The mediation by job satisfaction on the relationship between the constructs

and sub-constructs of principals' distributed leadership was expected as past studies have shown strong empirical evidence of the relationship between principals 'distributed leadership and organizational commitment (Hairuddin and Salisu, 2015; Hulpia and Devos, 2010; Hulpia et al., 2009, 2012), the relationship between distributed leadership of the principals and teachers' job satisfaction (Hulpia and Devos, 2009; Morris, 2016; Torres, 2018) and the relationship between teachers' job satisfaction and their organizational commitment (Hulpia et al., 2009; Leite et al., 2014; Mustabsar et al., 2015; Sharma and Azmi, 2012; Yousef, 2002). The possibility of mediation when all three interlinking relationships is an indication of mediation (Mackinnon et al., 2012).

However, a scrutiny at the dimensional level of principals' distributed leadership led to a deeper understanding about which aspects of principals' distributed leadership matter the most to explain organizational commitment among the teachers through their job satisfaction. The findings showed that the indirect relationship of cooperation in the leadership team and teacher participation in decision making through job satisfaction of the teachers had a significant impact on their organizational commitment. The path coefficient of both dimensions indicated similar strength of association. Thus, this study shows that teachers' effort to cooperate in the leadership team and participate in decision making contribute towards their satisfaction with their job and commitment to the school. However, the leadership function and supervision quality and distribution which are reflected mainly by the principals' effort did not lead to organizational commitment through the teachers' satisfaction with their job. Therefore, two of the research hypotheses pertaining to the relationships of the dimensions of principals' distributed leadership (cooperation in the leadership team and teacher participation in decision making) were supported while two of the

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dimensions (leadership function quality and distribution, and supervision quality and distribution) were not supported.

Since there are limited studies that have ever investigated the mediation of job satisfaction on the relationship between distributed leadership and organizational commitment at the construct or sub-construct levels, these findings contributed to the novelty of this study. The findings presented the importance of teachers' job satisfaction to ensure that cooperation in the leadership team and teacher participation in decision making impact profoundly on teachers' commitment to the school. Most profoundly, this study showed that cooperation in the leadership and teacher participation in decision making contribute to teacher job satisfaction, which further lead to teacher organizational commitment.

5.2.9 The Predictive Accuracy and Relevancy of the Teachers' Organizational Commitment Model with the Effects from Principals' Distributed Leadership and Teachers' Job Satisfaction

The PLS algorithm analysis on the structural model in this study showed that job satisfaction among the teachers is significantly predicted with high accuracy and relevancy by principals' distributed leadership as a construct or through the combined effects of its four sub-constructs: leadership function quality and distribution, supervision quality and distribution, cooperation in the leadership team and teacher participation in decision making. However, the effect sizes of supervision quality and distribution, cooperation in the leadership team and teacher participation in decision making were small while the effect size of leadership function quality and distribution was negligible on teachers' job satisfaction. Nevertheless, the use of a structural equation modeling approach provided more rigor to the findings as it was not only able

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to assess the significance of relationships, but this study showed that a research model with high predictive accuracy and relevancy to explain teachers' job satisfaction. This study identifies the importance of supervision quality and distribution, cooperation in the leadership team and teacher participation in decision making to ensure that teachers are satisfied with their job.

Simultaneously, this study also highlighted that the construct, teachers' organizational commitment can be explained with a research model comprising of principals' distributed leadership at construct and sub-construct levels in the presence of the mediator, teachers' job satisfaction with an even greater predictive accuracy and relevancy. Thus, these findings supported findings of past studies especially Hulpia et al. (2009, 2010, 2012), and Hulpia and Devos (2010).

In the determination of the predictive accuracy and relevancy of the structural model using the dimensions of principals' distributed leadership, the non-significant paths (QD_SP $\rightarrow$ TJS; QD_SP $\rightarrow$ TOC; QD_LF $\rightarrow$ TJS) were not deleted from the research model in preference to using the significant paths only (QD_LF $\rightarrow$ TOC; COP_LT $\rightarrow$ TOC; TP_DM $\rightarrow$ TOC). As shown in Figure 4.7a and Figure 4.7b in the previous chapter, the removal of the insignificant paths has indeed led to greater strengths in the relationships of the significant factors. However, Figure 4.8a and Figure 4.8b indicated that the removal of these insignificant paths has led to a decrease in predictive accuracy (R^2) of TJS and TOC. Hence, it implies that despite being insignificant, QD_SP and QD_LF still have some amount of effect on TJS and QD_SP also has some amount of effect on TOC.

Kline (2016) stated that trimming the model by deleting the nonsignificant paths from a structural equation model is not advisable. This is because it would strongly capitalize on sample-specific variation (change). Loehlin (2004) suggested

that if the path was theoretically justified based on literature, then it should be retained even if the coefficient is not significant. Furthermore, the model fit of the initial model (with the inclusion of the significant and non-significant paths) was within acceptable range in terms of RMSEA, CFI, Chi-Square and other measures (Goodboy and Kline, 2017). Therefore, this study maintains that the four dimensions of principals' distributed leadership are instrumental in determining and predicting the organizational commitment of the teachers through the mediation of their job satisfaction despite the fact that two of the dimensions: leadership function quality and distribution, and supervision quality and distribution were not significantly mediated by job satisfaction to link with organizational commitment. It does leads to a justifiable reason to explore more about the research model, particularly in questioning whether there are other intervening variables that should be investigated.

5.3   Implications of Research Findings

The implications of the research findings are discussed based on three perspectives comprising of theoretical, methodological and practical.

5.3.1   Theoretical Implications

The theoretical framework presented in the second chapter had included an explanation of the school leadership, organizational commitment and job satisfaction. The theories were able to explain the respective research variables of this study and there appears many overlapping areas that interrelate the research variables but there were no single model or theory to explain the workings of principals' distributed leadership and its influence on organizational commitment through job satisfaction among the teachers.

In the two theories of the exchange approach and the investment approach to explain teachers' organizational commitment, the predicting role of principals' distributed leadership could be explained to some extent. The social exchange theory for instance, describes the unspecified obligations done to another party in the expectation of a future return (Emerson, 1981). In this case, it provides a blurry explanation to substantiate the role of principals' distributed leadership in ensuring committed teachers as it links the sense of obligation and trust resulting from the principals' practices in distributed leadership among the teachers. Similarly, the investment approach to explain teachers' organizational commitment stresses on the participation and involvement in leadership processes among the teachers in the school. Therefore, it provides some substantial claim to the relevance of the dimensions of cooperation in the leadership team and teacher participation in decision making of the principals' distributed leadership and their impact on organizational commitment among the teachers. Findings of this study provide empirical evidence to support these theories in explaining how distributed leadership of the principals relates and influences the commitment of the teachers to their schools. The empirical evidence collected from this study contributes to other evidences from past study to substantiate the use of the social exchange theory to explain the impact of principals' distributed leadership on teachers' organizational commitment through their job satisfaction. In other words, this study contributed towards developing the existing theory and suggest a practical model to conceptualize the relationships between principals' distributed leadership, teachers' job satisfaction and teachers' organizational commitment. It also suggests that these two theories: social exchange and investment theories should be integrated into a new and revised theory that could explain how distributed leadership

can assure job satisfaction and organizational commitment in the organizational context.

Similarly, the theories of job satisfaction that were highlighted in this study include the Herzberg's two-factor theory and the Vroom's Valence Expectancy theory. Teachers' job satisfaction has a dual role in this study. Firstly, as the outcome of principals' distributed leadership and secondly, as the antecedent to teachers' organizational commitment. Thus, teachers' job satisfaction plays a mediating role in the research model. The Herzberg two-factor theory attempts to describe the role of principals' distributed leadership to predict the job satisfaction of the teachers by addressing the dimensions in the principals' distributed leadership as motivators or job-related factors that bring satisfaction to the teachers. On the other hand, the Vroom's Valence Expectancy theory attempts to describe how teachers' job satisfaction from three perspectives – the satisfaction with students, parents and co-workers as determiners of job satisfaction (Gavish and Friedman, 2010; Skaalvik and Skaalvik, 2011). Nevertheless, these theories were not able to relate job satisfaction to organizational commitment of the teachers. Henceforth, there is a gap in theories as identified in this study that could support the strong and consistent empirical evidence of the relationship between teachers' job satisfaction and their commitment towards the organization. It does highlight the fact that the real essence of job satisfaction that matter to the teachers' organizational commitment is the intrinsic aspect of job satisfaction or those that are related to the relationship aspects based on higher-order needs. In other words, relationships with students, teachers and co-workers are drivers of organizational commitment but these aspects are not really explicitly related to the existing theories of job satisfaction. Thus, this study provides some reflections on how to address the theoretical gap on job satisfaction.

Additionally, the theories of school leadership had explored five groupings of leadership models which included the traitist theories, the behavioural theories, the situational theories, the transactional and the transformational theories. In comparison to these theories, the concept of distributed leadership presented as a deviation from these earlier theories by adopting a more systemic perspective of leadership based on a collective social process as a consequence of the interaction of multiple actors (Bolden, 2011; Uhl-Bien, 2006). The concept proposes that there are various actors in the school setting in different leadership position who participate in directing and coordinating works with varying degree of success (Bolden, 2011). Most importantly, the theory of distributed leadership identifies the involvement of teachers during the decision-making process and their partaking in the accountability of the students and school performance (Muijs, 2011). Thus, the findings of this study lend support to the new paradigm of leadership based on the principals' distributed leadership. Empirical evidence of this study added to findings of past studies to support the notion that a solo heroic traditional leadership practices of a principal is no longer practical or applicable in the school setting. To a certain extent, the concept of transformational leadership with the leader focusing on developing the leadership and capacity of others is still valid since the school is still facing a lot of changes and challenges. Nevertheless, delegating authority and power as indicated in the concept of transactional leadership may need to be revisited as distributed leadership goes more than delegation (Harris, 2012). Additionally, the theory relating to instructional leadership of the principal also need a review, particularly to relate the significance of supervision as a shared responsibility to drive teachers' satisfaction and commitment.

To summarize, the implications to theories due to the findings of this study has led to the following:

(a)   The findings of this study could be supported by the two theories: social exchange and investment theory but there might be a need for an integration of these two theories into one to ensure better theoretical support to explain distributed leadership and its relationship with job satisfaction and organizational commitment.

(b)   The aspects of job satisfaction in this study were focused not on the extrinsic aspect of the job or the lower-order needs of the Maslow's hierarchical needs which were not explicitly explained in the existing theories of job satisfaction. Findings of this study showed that these intrinsic and higher-order needs are more relevant to explain teacher job satisfaction especially in its relations with distributed leadership and organizational commitment. Hence, there is also a need to revise the current job satisfaction theories and extend a greater focus on the intrinsic nature of the job to sustain job satisfaction.

(c)   The findings of this study also showed that the concept of single leadership may have been override by the concept of distributed and shared leadership in the school context. The evidence of high practices of distributed leadership and its predictive ability to ensure job satisfaction and organizational commitment expressed the need to improve on the underlying theories to support distributed leadership.

5.3.2   Methodological Implications

This study had adapted the operational definition used in Hulpia et al. (2009, 2012) of the construct, principals' distributed leadership. Therefore, the use of their distributed leadership inventory (DLI) was able to confirm the usability of this measurement scale in this study to assess principals' distributed leadership. In the pilot

study, this measurement scale was assessed using an item-response analysis with Rasch measurement together with the other two variables, job satisfaction and organizational commitment among the teachers. It was found that DLI has good reliability and validity at item-response level. The use of measurement model assessment in PLS-SEM further supported the reliability and validity of DLI when it is used together with job satisfaction and organizational commitment of the teachers. All the items in the DLI from the four identified dimensions were retained and used to assess principals' distributed leadership in the structural model assessment. Thus, from a methodological viewpoint, these findings assured the robustness of the measurement scale to asses principals' distributed leadership in the international school setting. The use of the distributed leadership inventory in this study testified to its relevancy as a measuring scales for distributed leadership. However, it should also be noted that the distributed leadership inventory was not adopted per se but adapted with slight changes to the presentation of the items in the questionnaire.

Hulpia et al. (2012) had employed the measurement of the impact of distributed leadership at dimensional level on teachers' organizational commitment based on multilevel regression modeling techniques with MLwiN 2.02 (Rauden-bush and Bryk, 2002). Although this method was able to provide the multilevel regression models, but it has limited usage coverage compared to PLS-SEM which has gain more popularity of usage in educational research. Therefore, this study offers empirical evidence to support the practical use of PLS-SEM to measure the impact of principals' distributed leadership at construct and sub-construct level on job satisfaction and organizational commitment among the teachers.

Additionally, this study had explored the use of the teacher job satisfaction scale (TJSS) that consist of three dimensions, namely, satisfaction with students,

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parents and co-workers to represent the gratification of higher order needs (Pepe et al., 2017). Van Droogenbroeck, Spruyt and Vanroelen (2014) stated that interpersonal relationship matters more to define the teachers' work and therefore, their satisfaction based on the positive relationships with students, parents and co-workers can mitigate some of the negative aspects of teachers' responsibilities (Gavish and Friedman, 2010; Skaalvik and Skaalvik, 2011). The use of TJSS in this study deviates from the use of the measurement scale for job satisfaction in prior studies by Hulpia and Devos (2009) and Hulpia et al. (2012). In Hulpia and Devos (2009) for example, distributed leadership relates to job satisfaction using the job enthusiasm scale from De Cuyper and De Witte (2011). This scale assessed the level of satisfaction for the overall job based on a general attitude regarding the job. Similar to DLI, this study has also run a pilot study using Rasch measurement to assess the validity and reliability of TJSS using item-response analysis. The employment of PLS-SEM also further validated TJSS as a reliable measurement of teacher job satisfaction. Thus, TJSS offers an alternative measurement of teacher job satisfaction with focus on relationship with the students, co-workers and parents. This study has also provided evidence that the TJSS is reliable and relevant to use for the measurement of teacher job satisfaction as all nine items of the measurement scale were validly used to measure teacher job satisfaction. However, the original version of the teacher job satisfaction scale was revised in this study and adapted to the cultural aspect of the respondents in Malaysian international schools.

This study has also measured the organizational commitment of the teachers based on the three dimensions of normative, affective and continuance commitment (Mowday, Steers and Porters, 1979). This scale was also subjected to Rasch measurement analysis and factor analysis in PLS-SEM, thus validating its use to

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measure organizational commitment among the teachers. The organizational commitment questionnaire has been widely used in educational studies in Malaysia and the reliability of this measurement scale to obtain result in this study further confirms its practicality within the cultural context of the people in this country. This study showed that the organizational commitment questionnaire is one of the most reliable questionnaires to measure organization commitment despite the fact that it was developed in the 1980s and revised in 1990s. However, the items used in this study had been subjected to revision and the organizational commitment questionnaire was not adopted but adapted to the purpose and context of this study.

Overall, this study has contributed to the methodological aspects of the research by exploring the measurement of principals' distributed leadership using DLI (Hulpia and Devos, 2009; Hulpia et al, 2012), the measurement of teachers' job satisfaction based on TJSS (Pepe et al., 2017) and the measurement of organizational commitment among teachers (Mowday et al., 1979) within the framework of PLS-SEM approach. The application of PLS-SEM as a second-generation multivariate data analysis moves away from the first-generation method like ANOVA and multiple regression analysis (Wong, 2013). The use of PLS-SEM enables the examination of the relationships that exist among the variables and identify which factors are more important to explain an outcome. In the case of this study, the use of PLS-SEM was able to identify which dimensions of principals' distributed leadership matter the most to predict teachers' organizational commitment. Thus, by identifying cooperation in the leadership team and teacher participation in decision making as the two main aspects of principals' distributed leadership that ensure commitment of the teacher, this provides more meaningful information that can be used in the strategic planning of the school programmes and activities.

To summarize the implications of the findings to methodology, the following statements are presented:

(a)   This study had selected existing measurement scales to assess distributed leadership, job satisfaction and organizational commitment in the school context. These measurement scales underwent a series of refinement before it was adapted and used in this study. The efforts executed in the pilot study included the use of an expert panel to select the best instrument from several available measurement scales, evaluate its contents and provide best options to adapt the existing instrument to the socio-cultural aspects of the international schools in Malaysia. Further to that, the questionnaire was subjected to an item-response analysis with Rasch measurement to determine the reliability and validity of the measurement models. These measures were able to produce a research questionnaire that could gather data from the respondents and provide reliable information to relate the research variables of this study. Therefore, the efforts of piloting the research is considered a crucial matter leading to a highly responsive, relatable and relevant questionnaire as the main tool for data collection.

(b)   This study adapted three existing measurement scales: Distributed Leadership inventory by Hulpia et al. (2012), teacher job satisfaction scale by Pepe et al. (2017) and organizational commitment questionnaire by Allen and Meyer (1990). These measurement scales showed high level of reliability and validity in the pilot study and actual study. Hence, this study provides empirical evidence to the robustness of these measurement scales to measure the research variables.

(c)   The application of a structural equation modeling through partial least square as a second-generation statistical model to assess the multivariate relationships of the research variables in this study has provided insightful findings which can be used by future researchers, academicians and practitioners. The use of PLS-SEM had not only assured the reliability and validity of the measurement models but at the same time, it has provided empirical evidence about the significance of the direct relationships of principal distributed leadership and its components with teacher organizational commitment, and the indirect relationships of principal distributed leadership and its components with teacher organizational commitment through the mediation of teacher job satisfaction. Additionally, it has identified which of the dimensions of principal distributed leadership affected teacher job satisfaction and teacher organizational commitment the most based on the beta coefficient and effect size. It has also provided evidence to the predictive accuracy and relevancy of the research model to explain teacher organizational commitment. Hence, the PLS-SEM is considered as a powerful statistical analysis that had been able to provide answers to the research questions in a very convenient yet reliable manner.

5.3.3   Practical Implications

Leadership is very important in management. Without leadership, the organization is merely people and machine which are not organized and used for their optimal potentials. The findings from this study pointed to the imminent need of greater acceptance and practice of principals' distributed leadership which is marked by accountability of multiple leader actors and collaborative decision making with the

leadership as a whole (Hulpia et al., 2012) in the school setting, particularly in international schools. Globally, international schools have shown an encouraging growth trend with wider spread of the concept to a lot of countries including Malaysia (Javadi et al., 2017). As people become more mobilized, the need for international school to offer alternatives than the public and private schools have been significant (Bailey, 2015). Thus, international schools are feeling the heat from the challenges due to globalization and technological and demographic changes (Barber et al., 2010) and school leadership is increasingly regarded as a competency needed to manage these dynamic changes (Howling, 2017; Harris and Jones, 2015; Harris et al., 2018; Walker, 2015). As the international schools in Malaysia and other parts of the world continue to grow, there is a need to constantly assess its competence in delivering high quality education to its students. These schools need teachers who are committed to their job of teaching the students with effective and efficient measures.

The findings of this study have shown that organizational commitment among the teachers is the outcome of distributed leadership of the principal through the mediation of the teachers' job satisfaction. Thus, the empirical evidence gathered in this study prompted the school management on the importance of building and developing the school leadership using the underlying concept of distributed leadership. Robinson (2008) stated that the relationship between distributed leadership and student achievement has inconsistent empirical evidence from past studies but the relationship of distributed leadership with teacher commitment and satisfaction have always been positive (Angelle, 2010; Bellibas and Liu, 2017; Hulpia and Devos, 2010; Liu and Werblow, 2019). The current trend of international schools in Malaysia which made an allowance for more Malaysians enrolled in these schools further necessitated the critical need to ensure high quality education is provided by competent teachers whom

are not only committed but has high satisfaction with their job and work environment. Thus, it is imperative that school leadership promotes the practice of distributing leadership particularly in the assurance of cooperation in the leadership team, and teacher participation in decision making as well as having efficient and effective distribution of leadership function support and supervision. Not only does the focus on the right kind of leadership will result in teachers being more satisfied, but it also ensures that they are committed towards fulfilling the goals of the international schools. Henceforth, it leads to the practical implications such as ensuring that the school policies are open and encouraging distributed leadership and the need for deliberate intervention to promote shared and distributed leadership as the school culture.

Although the findings of this study can only be generalized to the international school population in Kuala Lumpur, Malaysia, but the apparent relationships of distributed leadership with job satisfaction and organizational commitment are still a major indicator of the importance of distributed leadership to represent school leadership. Therefore, findings in this study serves as a reminder to other types of schools, especially the public and government-funded schools in Malaysia to be more acceptable of the shifting paradigms of school leadership in schools. In alignment with the professional development of the teachers, a distributed leadership form of school leadership would be more apt and effective to promote teacher leadership and ensure school performance, as envisioned in the Malaysia Education Blueprint 2013-2025.

This study confirms that principal leadership is still an important aspect of school leadership as the principals are the catalyst to distribute leadership and cultivate teachers to become leaders while at the same time, building relationships and developing network of collaboration in the school (Fullan, 2001). Principals have the

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ample opportunity of providing support to teachers in dealing with classroom management issues, prioritizing planning and minimizing disruptions to instructional activities in the classroom (DeMatthews, 2014). Aligned to the concept of distributed leadership, effective principals need not push teachers into leadership position but instead, give them the leadership opportunities in alignment to the school vision and mission so that the teachers can engage in leadership practices and expand their capabilities (DeMatthews, 2015). Therefore, this implies that principals should not only be transformational leaders but at the same time, be more willing and open to share leadership with others. The principals' task is not only about creating and making leaders from among the teachers but at the same time, the principals need to nurture them and include them in shared decision making. The findings of this study thus, encourage principals to empower more teachers to work together as leaders of the school for a brighter future.

The practice of distributed leadership and its significant contribution to teachers' job satisfaction and organizational commitment shows how principals can spread leadership across the school with the involvement of passionate and committed teachers, extending more than delegation to a greater level of collective action (Heika, Waniganayake and Hujalan, 2013). Viewing leadership as a distributed concept is significant as this support the practice of professional learning communities in the school environment as a means of enhancing teacher capacity and leadership (Spillane, 2012). As the principals have the authority to manage resources and influence organizational culture and expectations, it is apparent how their openness to distribute leadership functions, supervision and encourage teacher participation in decision making as well as promoting cooperation within the leadership team are aligned to the building a culture of professional learning communities in the school (DeMatthews,

2014). Thus, this study led to a practical implication that distributed leadership is necessary to develop the professional learning communities which in turn generates greater teacher commitment (Vescio, Ross and Adams, 2008). It also identifies the principals in the international schools in Kuala Lumpur as role models on how distributed leadership is practiced in their schools.

Tkachyk (2017) stated that work environment and job satisfaction are some of the key factors contributing to teacher attrition from international schools. Teacher turnover needs to be addressed seriously because it has an adverse effect on the continuity of curriculum and education program as well as losing the dynamic stability and continuity of relationships that exist among the teachers, students and other members of the school community (Mancuso, 2010; Wu, 2012).

Overall, a summary of the implications of the research findings to practice is given as follows:

(a)   This study confirms that international schools are more open to accept and implement distributed leadership as their choice of school leadership and this could be one of the reasons why these international schools are able to offer high-quality education that appeals to local students in Malaysia. Therefore, other schools should learn from these international schools and consider the alternative of embracing change by adopting distributed leadership as the preferred school leadership in their organizational culture too.

(b)   The importance of principal distributed leadership to ensure teacher job satisfaction and teacher organizational commitment should serve to remind international schools and other schools as well that there is a need to understand which aspects of principal distributed leadership matters the most. Schools should emphasize on improving the participation of teachers in decision

making and ensuring greater collaboration in the leadership team. At the same time, the quality and distribution of leadership function and supervision need to be improved as well because these dimensions were also considered important for school leadership.

(c)   The findings of this study also provide empirical support to the Malaysian Education Blueprint 2013-2025 which had acknowledged distributed leadership as a choice for school leadership. Therefore, it could be used to change the current policy and ensure more acceptance and openness for the stakeholders in school to share and distribute their leadership roles.

5.4   Recommendations

Leadership in the school context happens at all levels and it must be cultivated as a distributed perspective to enable the school as a learning organization (Hermann, 2016). Leithwood et al. (2007) stated that there are four functions of leadership in the school. Firstly, to set the school vision so that all stakeholders in the school have mutual and share goals. Secondly, to develop people so that they too can become leaders for the school. Thirdly, managing instructional practice so that the school goals related to academic performance of the student and school are attained. Lastly, redesigning the school in alignment with the changes happening all the time. Therefore, the concept of leadership in school is very important and it should be done effectively and efficiently.

In today's situation, single leaders have become ineffective and it is now crucial that a collaborative culture of leadership in the school context is embraced where responsibilities and authority are delegated and dispersed (Copland, 2003). The principal as the administrative leader is held accountable and responsible to enhance

the knowledge and skills of the people in the school (Elmore 2002) and by employing distributed leadership perspective, the administrative leader should also be able to identify natural leaders in the school and organize these leaders based on their skills, roles and knowledge so they can collaborate as a team to improve instructional practices and enhance students learning (Elmore, 2000; Hermann, 2016).

Although distributed leadership means that there is a network of leadership collaborators to address changes in the school, the principal is still held accountable to steer the organization, influence the actions of the teachers and prevent the teachers from going in circles (Leithwood et al., 2006; Spillane & Diamond, 2007). The principal as a leader in the concept of distributed leadership sill need to monitor leadership activities so that he or she can support the efforts of the teachers as they lead changes in classroom instruction and student learning (Hermann, 2016).

Based on the findings of the study which had shown that principals' distributed leadership can contributed significantly to the organizational commitment of the teachers through their job satisfaction. This study indicated that the most important aspect of principals' distributed leadership to ensure satisfied and commitment teachers is the teachers' participation in decision making. It was also shown that cooperation in the leadership and leadership functions quality and distribution were importantly regarded by the teachers to drive not only their satisfaction but ensuring their commitment as well. However, the findings of this study are limited to the teachers who participated in this study from the identified international schools in Kuala Lumpur. Thus, the generalization of this study is limited. Further studies need to include more international schools at the national level in Malaysia through a greater representation of these schools. As the number of international schools and enrollment in these schools increases, the need for a wider range of sampled schools is needed to

understand the situation better. Henceforth, a nationwide research involving more teachers and more international schools should be carried out to provide more understanding about school leadership in the form of distributed leadership. Adding to that, the exploration of the interrelationship among principals' distributed leadership, teacher job satisfaction and teacher organizational commitment should be extended to other types of schools such as private schools and public schools. Comparison of these types of schools might lend even more insightful information that could benefit the researchers, academicians and practitioners, as well as the policy makers.

Further to that, this study had used a measurement of job satisfaction that relates more to the interpersonal relationship of the teachers with student, parents and co-workers. Although the findings have presented an insightful information, but these factors are mainly related to the motivators in the two-factor Herzberg's theory. There is a lack of understanding on how 'hygiene' factors are related to dissatisfaction and is influenced by distributed leadership of the principals and organizational commitment of the teachers. Thus, in future studies, the hygiene factors such as reward, work condition could be included. This could provide a comparison of which factors are more valued to relate distributed leadership to organizational commitment.

Additionally, the number of researches on principals' distributed leadership and its interrelationships with job satisfaction and organizational commitment of the teachers is still small. There is a need to carry out more studies similar to this and add more empirical evidence to understand this phenomenon. At the same time, the research model seems incomplete without a link to student and school performance. Thus, this should be included in future studies. Additionally, the findings of this study could provide the motivation for future researches to explore the practice of distributed leadership in the school context and assess its impacts with a broader research model.

Lastly, the present study did not explore any moderating factors in the research model. Most often, studies in educational management include demographic characteristic such as age, gender, experience and so forth. In past studies (Devos et al., 2014; Hulpia et al., 2011, 2012; Mosadeghrad and Ferdosi, 2013), demographic characteristics were included in the examination of distributed leadership on organizational commitment, but it was excluded in the current study because the focus was on exploring the relationships of distributed leadership as a construct and its dimensions on teacher organizational commitment through their job satisfaction. Nonetheless, demographic should be considered as moderators in future studies as this could give a deeper and comprehensive analysis of the situation.

As an emerging theory of school leadership, the concept of distributed leadership is important because it focuses on the individual capabilities, skills and talents of the all leaders in the school who are jointly responsible for the school performance (Mayrowetz, 2008; Bennett, 2010). Hence, distributed leadership encourages a system of interaction among the stakeholders in the school who are open to boundaries and embrace sharing of their expertise (Triegaardt, 2014). Due to the collaborative relationships, there is a collective action based on shared values that can affect positive changes in the school setting (House and Aditya, 2012) as there are participation of leadership at all levels of the decision-making processes (Gronn, 2008). Thus, it would certainly lead to the enhancement of organizational commitment and job satisfaction of the teachers.

This study provides empirical evidence that can encourage greater practices of distributed leadership aimed at improving teachers' organizational commitment through satisfaction with their job. Therefore, these findings strengthen the notion that distributed leadership is useful as a management planning strategy for international

schools. This would ensure that international schools which are facing intense competition in a dynamic and changing environment will have the competitive advantage to sustain high quality of education provided by satisfied and committed teachers. It could also reduce the incidence of teacher attrition that is often associated with private and international schools. By improving practices of distributed leadership, the international schools not only maintained their human capital, but it also become the key driver of the school performance.

5.5 Conclusion

This study was able to provide insightful information that can be used to support school leadership practices and future research. This study has shown that the research model comprising of principals' distributed leadership, teachers' job satisfaction and teachers' organizational commitment has good predictive accuracy and relevancy.

Based on the first research model using all three first-order reflective constructs, it was found that principals' distributed leadership could explain 41.0% of variance in job satisfaction of the teachers, and through the mediation of job satisfaction, it can explain 77.7% of variance in organizational commitment of the teachers. The effect sizes of principals' distributed leadership are large for both teachers' job satisfaction and organizational commitment.

The employment of the second research model depicting the interrelationship of the first-order reflective sub-constructs of the principals' distributed leadership with the first-order reflective constructs of job satisfaction and organizational commitment of the teachers also yielded high predictive accuracy and relevancy. With this model research, the combination of principals' distributed leadership dimensions was able to

explain 41.7% of variance in job satisfaction and 78.6% of variance in organizational commitment of the teachers.

The findings showed that all direct relationships among the constructs were positive and significant. Thus, this study concluded that principals' distributed leadership has a positive and significant effect on job satisfaction and organizational commitment of the teachers. The effect size of distributed leadership of the principals on the organizational commitment of the teachers is greater than on job satisfaction of the teachers. Additionally, job satisfaction also has a positive and significant effect on organizational commitment among the teachers.

The findings showed that three of the direct relationships of the principals' distributed leadership at sub-construct level with organizational commitment of the teachers were positive and significant. The effects of leadership function quality and distribution, cooperation in the leadership team, and teacher participation in decision making were positive and significant but the effect of supervision quality and distribution was positive but not significant on teachers' organizational commitment. The effect of teacher participation in decision making was the highest with moderate size followed by cooperation in the leadership team and leadership function quality and distribution with small effect sizes.

The findings showed the indirect relationships of the antecedent at construct and sub-construct level of the principals' distributed leadership with organizational commitment of the teachers through the mediation of their job satisfaction. Overall, the relationship of distributed leadership of the principals with teachers' organizational commitment was mediated by job satisfaction of the teachers. The relationships at sub-construct level of leadership function and supervision quality and distribution with teachers' organizational commitment were not mediated by their job satisfaction.

However, the relationships of cooperation in the leadership team and teacher participation in decision making with their organizational commitment were mediated by job satisfaction. However, the effect sizes of these relationships were small.

This study on the overall had been able to support and enrich the existing theories that explain teachers' organizational commitment and the impact of principals' distributed leadership through job satisfaction of the teachers. The use of the measurement scales that were validated through Rasch analysis and factor analysis in PLS-SEM provided significant methodological implications for future studies. Furthermore, this study contributed insightful information that could be used in the management of international school from the perspectives of ensuring teachers' job satisfaction and commitment through effective and efficient principals' distributed leadership practice. Conclusively, the novelty of this study can be gleaned in its contribution of adding more empirical evidence to a research model that depicts the interrelationships between distributed leadership of the principals, and job satisfaction and organizational commitment of the teachers in the international schools setting in Kuala Lumpur based on validated measurement scales with repeatability of usage in future studies.

REFERENCES

Ab Hamid, M. R., Sami, W. and Mohamad Sidek, M. H. (2017). Discriminant validity assessment: use of Fornell & Larcker criterion versus HTMT criterion, *IOP Conference Series: Journal of Physics, 890*(012163), 1-6. doi :10.1088/1742-6596/890/1/012163

Abd Razak, N., Darmawan, I. G. N. and Keeves, J. P. (2010). The influence of culture on teacher commitment, *Social Psychology of Education, 13*(2), 185-205.

Abdul Hads and Nurhayati. (2010). *Mamajemen Mutu Pendidikan*, Bandung: Alfabeta.

Abdul Halim, R. (2015). Kepemimpjnan distributive, factor kontekstual dan efikasi kendiri guru di Malaysia" (Distributed leadership, contextual factors and teacher self-efficacy in Malaysia), *Educational Leadership Journal, 2*(4), 47-61

Abdul Shukor Abdullah, (2007). Apakah sekolah kluster adalah sekolah berkesan? Kertas ucap utama *Seminar Pendidikan Kebangsaan Fakulti Pendidikan*. Universiti Malaya

Abdullah, N.H.R., Ahmad, R. and Zuraidah, B. (2012). *Kepemimpinan Distributif di Sekolah Premier di Klang, Malaysia* (Distributive leadership in premier schools in Klang, Malaysia), Faculty of Education, State University of Malang, East Java

Abebe, T. (2014), The practices and challenges of school-based supervision in government secondary schools of Kamashi zone of Benishangul Gumuz Regional State, *Thesis* University of Ethiopia

Aburizaizah, S., Kim, Y., and Fuller, B. (2016). Diverse schools and uneven principal leadership in Saudi Arabia. *International Journal of Educational Research*, *80*, 37–48

Adams, D., Sumintono, B., Mohamed, A. and Mohamad Noor, N. S. (2018). E-learning readiness among students of diverse backgrounds in a leading Malaysian higher education institution, *Malaysian Journal of Learning and Instruction*, *15*(2), 227-256.

Addimando, L. (2013). I comportamenti controproducenti dei genitori a scuola: Un'analisi sulla soddisfazione e l'autonomia lavorativa degli insegnanti [Parents counterproductive behaviors: Analyzing teachers' job satisfaction and teachers' autonomy]. *Psicologia della Salute, 2*, 33-51. doi:10.3280/PDS2013-002004

Adekola, B. (2012). The impact of organizational commitment on job satisfaction: A study of employees at Nigerian universities, *International Journal of Human Resource Studies*, *2*(2), 1-18.

Adera, B. A., and Bullock, L. M. (2010). Job stressors and teacher job satisfaction in programs serving students with emotional and behavioral disorders. *Emotional & Behavioral Difficulties, 15*(1), 5-14. doi:10.1080/13632750903512365

Adom, D., Hussein, E. K. and Agyem, J. A. (2018). Theoretical and conceptual framework: mandatory ingredients of a quality research, *International Journal of Scientific Research*, *7*(1), 438-441.

Aelterman, A., Engels, N., Van Petegem, K. and Verhaeghe, J.P. (2007). The wellbeing of teachers in Flanders: The importance of a supportive school culture. *Educational Studies*, *33*(3), 285-298.

Ajzen, I. (1991). The theory of planned behavior, Organizational *Behavior and Human Decision Processes*, *50*(2). 179-211.

Akdemir, O. A. and Ayik, A. (2017). The impact of distributed leadership behaviors of school principals on the organizational commitment of teachers, *Universal Journal of Educational Research*, *5*(12B), 18-26. DOI: 10.13189/ujer.2017.051402

Akhtar, A., Durrani, A. B. and Waseef-ul-Hassan (2015). The impact of organizational commitment on job satisfaction and job performance: An empirical study from Pakistan, *IOSR Journal of Business and Management*, *17*(6), Ver. II, 75-80.

Akhtar, S. N., Hashmi, M. A. and Naqvi, S. I. (2010). A comparative study of job satisfaction in public and private school teachers at secondary level, *Procedia Social and Behavioral Sciences*, *2*, 4222-4228.

Albaum, G. (1997). The Likert scale revisited, *International Journal of Market Research, 39*(2), 1-21.

Alfayad, Z. and Mohd Arif, L. S. (2017). Employee voice and job satisfaction: An application of Herzberg's two-factor theory, *International Review of Management and Marketing, 7*(1), 150-156.

Ali, M. H. and Bashir, I. (2018). The effect of job satisfaction on teacher's organizational commitment, with special reference to private sector universities of Punjab, Pakistan, *International Journal of Scientific and Research Publications*, *8*(3), 114-125.

Ali, H. M. and Yangaita, S. A. (2015). Distributed leadership and empowerment influence on teachers' organizational commitment, *Academic Journal of Interdisciplinary Studies*, *4*(1), 73-84. Doi:10.5901/ajis.2015.v4n1s1p73

Allen, P. M. and Allen, N. J. (1991). A three-component conceptualization of organizational commitment, *Human Resource Management Review, 1*(1), 61-89.

Allen, N. and Meyer, J. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology 63*, 1–18.

Allen, N. J., and Meyer, J. P. (1993). Organizational commitment: Evidence of career stage effects? *Journal of Business Research, 26*, 49-61.

Allen, N. J. and Meyer, J. P. (1996). Affective, continuance and normative commitment to the organization: An examination of construct validity. *Journal of Vocational Behavior, 49*, 252-276.

Altman, D. G. and Bland, J. M. (1995). Statistics notes: The normal distribution. *British Medical Journal, 310,* 298

Al-Mahdy, Y. F., Al-Harthi, A. S., and Salah El-Din, N. S. (2016). Perceptions of school principals' servant leadership and their teachers' job satisfaction in Oman. *Leadership and Policy in Schools, 15*(4), 543-566. https://doi.org/10.1080/15700763.2015.1047032

Amanchukwu, R., Stanley, G., and Ololube, N. (2015). A review of leadership theories, principles and styles and their relevance to educational management. *Management, 5*, 6-14.

Amernic, J. H. and Aranya, N. (1983). Organizational commitment: Testing two theories, *Industrial Relations, 28* (2), 319-343.

Angelle, P. S. (2010). An organizational perspective of distributed leadership: a portrait of a middle school, *Research in Middle Level Education, 33*(5), 1-17.

Anusuya, K. (2013). Tahap kualiti penyeliaan pengajaran dan pembelajaran dalam bilik darjah dengan efikasi guru di SK Zon Batu Anam, Segamat, *Thesis* University Teknologi Malaysia

Armer, T. T. (2011). *Science teachers: Factors that affect job satisfaction* (Order No. 3460037). Retrieved from http://search.proquest.com/docview/876194755?accountid=12085

Armstrong, M. (2006). *A Handbook of Human Resource Management Practice*. 10th Edition, London: Kogan Page Publishing.

Ary, D., Jacobs, L.C., Sorensen, C. K. and Walker, D. (2014). *Introduction to research in education* (9th Ed). London: Wadsworth.

Aslamiah. (2019). Teachers' organizational commitment in elementary school: A study in Banjarmasin, Indonesia, *The Open Psychology Journal*, *12*, 1-6.

Asyikin Zakaria and Suhaida Abdul Kadir, (2013). Kepimpinan distributif sekolah menengah di daerah Kangar, Perlis. *Seminar Pasca Siswazah dalam pendidikan* (GREDUC 2013)

Avolio, B. J., and Bass, B. M. (1995). Individual consideration viewed at multiple levels of analysis: A multi-level framework for examining the diffusion of transformational leadership. *The Leadership Quarterly, 6*(2), 199–218. https://doi.org/10.1016/1048-9843(95)90035-7

Avci, A. (2015). Investigation of transformational and transactional leadership styles of school principals, and evaluation of them in terms of educational administration, *Educational Research and Reviews*, *10*(20), 2758-2767. DOI: 10.5897/ERR2015.2483

Awais, M., Malik, M. S. and Qaisar, A. (2015). A review: the job satisfaction act as mediator between spiritual intelligence and organizational commitment, *International Review of Management and Marketing, 5*(4), 203-210.

Aydin, A., Sarier, Y. and Uysal, S. (2011). The Effect of Gender on Organizational Commitment of Teachers: A Meta Analytic Analysis, *Educational Sciences: Theory & Practice, 11*(2), 628-632.

Azman, I. and Mohd Ridwan, A. R. (2016). Job satisfaction as a determinant of organizational commitment, *Journal of Contemporary Issues and Thought, 6,* 10-18.

Azwani, M., Nor'ain, M. T, and Noor, S. S. (2016). Evaluating the face and content validity of a Teaching and Learning Guiding Principles Instrument (TLGPI): a perspective study of Malaysian teacher educators. *Geografia: Malaysian Journal of Society and Space, 12*(3), 11-21.

Bader, B. M. (2008). Leader-member exchange and work outcomes: a multiple leadership perspective, *Master Thesis*, University of Lethbridge, Alberta, Canada.

Bagozzi, R. P., Yi, Y. and Phillips, L. W. (1991). Assessing construct validity in organizational research, *Administrative Science Quarterly, 36*(3), 421-458.

Bailey, C. (2013, September 2). *Why every great leader is also a great follower* [Web log message]. Retrieved May 31, 2018 from http://danblackon leadership.info/archives/3997

Bailey, B. W. (2013). An investigation of the factors that motivate K-12 Christian school teachers to participate in professional development and the relationship to job satisfaction and retention. *Doctoral dissertation*. Retrieved from Liberty University

Bailey, L. (2015). The experience of host country nationals in international schools: A case-study from Malaysia, *Journal of Research in International Education*, *14*(2), 85-97.

Balyer, A., Karatas, H. and Alci, B. (2015). School principals' roles in establishing collaborative professional learning communities at schools, *Procedia – Social and Behavioral Sciences*, *197*, 1340-1347.

Bamburg, J., and Andrews, R. (1990). School goals, principals and achievement. *School Effectiveness and School Improvement, 2*(3), 175-191.

Barber, M., Whelan, F., and Clark, M., (2010). *Capturing the leadership premium: how the world's top school systems are building leadership capacity for the future*. London: McKinsey.

Barth, R. (1990). *Improving schools from within*. San Francisco, CA: Jossey-Bass

Barker, R. (2001). The nature of leadership. *Human Relations, 54*, 469–494.

Baron, R. M., and Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173-1182.

Bartlett, J. E., Kotrlik, J. W. & Higgins, C. C. (2001). Organizational research: determining appropriate sample size in survey research. *Learning and Performance Journal, 19*, 43-50.

Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York: Free Press.

Bass, B. M. (1997). Does the transactional – transformational leadership paradigm transcend organizational and national boundaries? *American Psychologist, 52*(2),130-139.

Bass, B. M. (1998). *Transformational leadership: Industry, military, and educational impact*. Mahwah, NJ: Erlbaum.

Bass, B. M., and Avolio, B. J. (1990). Developing transformational leadership: 1992 and beyond. *Journal of European Industrial Training, 14*(5). Https://doi.org/10.1108/03090599010135122

Bateman, T. S., and Strasser, S. (1984). A longitudinal analysis of the antecedents of organizational commitment. *Academy of Management Journal, 27*, 95–112. doi: 10.2307/255959

Bates, R. (2012). Is global citizenship possible, and can international schools provide it? *Journal of Research in International Education, 11*(3), 262-274.

Beare, H., Caldwell, B. and Millikan, R. (1989). *Creating an Excellent School: Some New Management Techniques.* London: Routledge

Beck, A.P. (1981). A study of group phase development and emergent leadership. *Group Dynamics: Theory, Research, and Practice, 5*, 48–54.

Becker, G. S. (1960). An economic analysis of fertility. In Roberts G. B. (Ed.), *Demographic and Economic Change in Developed Countries,* pp. 209–240. New York, NY: Columbia University Press. National Bureau of Economic Research, http://www.nber.org/chapters/c2387

Bellibas, M. S., & Liu, Y. (2017). Multilevel analysis of the relationship between principals' perceived practices of instructional leadership and teachers' self-efficacy perceptions. *Journal of Educational Administration, 55*(1), 49–69.

Bennett, N. (2010). *Distributed leadership*. Oxford: Report for the National College for School Leadership

Bennett, N., Harvey, J., Wise, C. and Woods, P. (2003). *Distributed Leadership: A Desk Study,* Nottingham: NCSL.

Bennis, W. and Nanus, B. (1985) *The Strategies for Taking Change.* New York: Harper and Row, p. 21.

BERA (2011). Ethical Guidelines for Educational Research. *British Education Research Association*. Retrieved May 31, 2019 from: http://the-sra.org.uk/wpcontent/uploads/ethics03.pdf

Berita Harian (2019). Jumlah pelajar Malaysia dan luar negara di sekolah antarabangsa, *Berita Harian*, 18 November 2019.

Beycioglu, K., Ozer, N. and Ugurlu, C. T. (2012). Distributed leadership and organizational trust: the case of elementary schools, *Procedia – Social and Behavioral Sciences, 46*, 3316-3319.

Bishop, P. A. and Herron, r. L. (2015). Use and misuse of the Likert item responses and other ordinal measures, *International Journal of Exercise Science, 8*(3), 297-302.

Blau, P. M. (1964). *Exchange and power in social life.* New York: John Wiley

Bless, C., Higson-Smith, C. and Kagee, A. (2006). *Fundamentals of Social Research Methods: An African Perspective*. 4th edition. Cape Town: Juta Publishers

Bogler, R. (2005). Satisfaction of Jewish and Arab teachers in Israel, *The Journal of Social Psychology, 145*(1), 19-33.

Bogler, R., and Somech, A. (2004). Influence of teacher empowerment on teachers' organizational commitment, professional commitment and organizational citizenship behavior in schools, *Teaching and Teacher Education, 20*, 277-289. http://dx.doi.org/10.1016/j.tate.2004.02.003

Bolden, R. (2011). Distributed leadership in organizations: A review of theory and research, *International Journal of Management Reviews, 13*, 251-269.

Bolden, R. (2013). Editorial: Change the world or go home, *Business Leadership Review, 10*(2), 3-4.

Bolden, R., Petrov, G. and Gosling, J. (2009). Distributed leadership in higher education: Rhetoric and reality, *Educational Management, Administration and Leadership*, *37*(2), 257-277.

Bolden, R., Hawkins, B., Gosling, J. and Taylor, S. (2011). *Exploring leadership: individual, organizational, and societal perspectives,* Oxford: Oxford University Press.

Bollen, K. A. (2011). Evaluating effect, composite, and causal indicators in structural equation models. *MIS Quarterly, 35,* 359–372. doi: 10.2307/23044047

Bond, T. G., and Fox, C. M. (2007). *Applying the Rasch model: Fundamental measurement in the human sciences* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates

Bond, T.G., and Fox, C.M. (2015). *Applying the Rasch Model, Fundamentals Measurement in the Human Sciences* (3rd edition). New York: Routledge.

Boon, Y. and Tahir, Y. (2013). Kepimpinan tersebar dan hubungannya dengan tekanan dan komitmen kerja (Distributed leadership and job stress and job commitment), *2nd International Seminar on Quality and [6.2.1.1] Affordable Education*, ISQAE.

Boone, W. J. and Noltemeyer, A. (2017). Rasch analysis: a primer for school psychology researchers and practitioners, *Educational Psychology and Counseling*, *4*, 1-13

Boshoff, C. & Mels, G. (1995). A causal model to evaluate the relationships among supervision, role stress, organizational commitment and internal service quality. *European Journal of Marketing, 29*(2), 23-42

Botha, R. J. N. (2016). Improving South African school effectiveness through distributed leadership: A study of gender, *Gender and Behaviour*, *14*(2), 6804-6813.

Botha, R. J. and Triegaardt, P. K. (2014). Distributive leadership as management strategy for school effectiveness: the place and role of the OSCAR coaching model in South African schools, *Journal of Social Science, 40*(20, 251-260.

Brayfield, A. H., and Rothe, H. F. (1951). An index of job satisfaction, *Journal of Applied Psychology, 35*(5), 301-311 Https://doi.org/10.1037/h0055617.

Bridges, E. (1967). Instructional leadership: A concept re-examined. *Journal of Educational Administration, 5,* 136-147

Brondizo, E., Leemans, R., and Solecki, W. (2014). *Current opinion in environmental sustainability.* Texas, U.S.A.: Elsevier Press Inc. http:// dx.doi.org/ 10.1016/j.cosust.2014.11.002 CC BY-NC-SALicense

Bryant, S. E. (2003). The role of transformational and transactional leadership in creating, sharing and exploiting organizational knowledge, *Journal of Leadership and Organizational Studies*, *9*(4), 32-44.

Bryman, A. (2008). *Social research methods*. New York: Oxford University Press.

Bryman, A. and Bell, E. (2003). *Business research methods*, Oxford, Oxford University Press.

Bryman, A. and Bell, E. (2015). *Business research methods*, Oxford: Oxford University Malaysia.

BSA (2002). *Statement of ethical practice for the British Sociological Association*. Retrieved May 31, 2018 from: https://www.britsoc.co.uk/equalitydiversity/statement-of-ethical-practice.

Bunnell, T. (2016). Teachers in international schools: a global educational 'precariat'? *Globalisation, Societies and Education, 14* (4): 543-559.

Burns, J. M. (1978). *Leadership*. New York: Harper and Row.

Burns, J. M. (2003). *Transforming leadership: A new pursuit of happiness*. NY: Atlantic Monthly Press.

Burns, N. and Grove, S.K. (2001). *The practice of nursing research, conduct, Critique, and utilization*. 4th Edition, Philadelphia: W.B. Saunders Company.

Burrell, G, and Morgan, G. (1979). *Sociological paradigms and organizational analysis: Elements of the sociology of corporate life*. London: Heinemann

Bush, T. (2010). Leadership development, in Bush, T., Bell, L. and Middlewood, D. (eds.) *The Principles of Educational Leadership and Management*. 2nd Edition. London: Sage. 112-131

Bush, T. (2012). International perspectives on leadership development: making a difference, *Professional Development in Education, 38* (4): 663-678.

Bush, T. (2019). Distributed leadership and bureaucracy: changing fashions in educational leadership, *Educational Management, Administration and Leadership*, *47*(1), 3-4.

Bush, T. and Glover, D. (2003). *School leadership: Concepts and evidence*. Nottingham: NCSL.

Bush, T. and Glover, D. (2012). Distributed leadership in action: leading high-performing leadership teams in English schools, *School Leadership and Management, 32*(1), 21-36.

Bush, T. and Glover, D. (2014). School leadership models: what do we know? *School Leadership and Management*, *34*(5), 553-571.

Bush, T. and Ng, A. Y. M. (2019). Distributed leadership and the Malaysian Education Blueprint: from prescription to partial school-based enactment in a highly centralized context, *Journal of Educational Administration, 57*(3), 279-295. https://doi.org/10.1108/ JEA-11-2018-0206

Bush, T., Glover, D., Ng, A.Y.M. and Romero, M.J. (2016). Master teachers as teacher leaders: evidence from Malaysia and the Philippines, *International Studies in Educational Administration*, *43*(2), 19-40.

Bush, T., Suriani. A. H., Ng., A. and Kaparou, M. (2018). School leadership theories and the Malaysia Education Blueprint: findings from a systematic literature review, *International Journal of Educational Management, 32*(7), 1245-1265.

Butler, L. G. (2014). Teacher attrition variables that influence retention and job satisfaction. *Doctoral dissertation*. Walden University

Byrne, D. M. (2011). *The relationship of leadership style of the department head to nursing faculty professional satisfaction and organizational commitment*. (Order No. 3515889, University of Missouri – Columbia).

Cambren, E. R. (2003). Didtribted leadership in schools: The case of elementary schools adopting comprehensive school reform models. *Educational Evaluation and Policy Analysis, 25* (4), 347-373.

Camburn, E., Rowan, B., and Taylor, J. E. (2003). Distributed leadership in the schools: The case of elementary schools adopting comprehensive school reform models. *Educational Evaluation and Policy Analysis, 25,* 347-373. doi:10.3102/01623737025004347

Cansoy, R. (2019). The relationship between school principals' leadership behaviours and teachers' job satisfaction: A systematic review, *International Education Studies, 12*(1), 37-52.

Cansoy, R., and Parlar, H. (2017). Examining the relationships between the level of schools for being professional learning communities and teacher professionalism. *Malaysian Online Journal of Educational Sciences*, *5*(3), 13–27.

Carson, J. B., Tesluk, P. E. and Marrone, J. A. (2007). Shared leadership in teams: an investigation of antecedent conditions and performance, *The Academy of Management Journal, 50*(5), 1217-1234.

Castro, M., Exposito-Casas, E., Lopez-Martin, E., Lizasoain, L., Navarro-Asencio, E., and Gaviria, J. L. (2015). Parental involvement on student academic achievement: A meta-analysis. *Educational Research Review*, *14*, 33-46. doi:10.1016/j.edurev.2015.01.002

Celep, C. (1998). Organizational commitment of teachers in educational organizations. *Journal of Education and Science, 22*(108), 56-62.

Cemaloglu, N., Sezgin, F., and Kilinc, A. C. (2012). Examining the relationships between school principals' transformational and transactional leadership styles and teachers' organizational commitment, *The Online Journal of New Horizons in Education*, *2*(2), 53-64.

Chang, I. H. (2011). A study of the relationships between distributed leadership, teacher academic optimism and student achievement in Taiwanese elementary schools. *School Leadership and Management, 31*(5), 491–515. https://doi.org/10.1080/13632434.2011.614945

Charry, K. (2012). *Leadership theories - 8 major leadership theories*. Retrieved March 23, 2018 from http://psychology. about.com/od/leadership/p/leadtheories.htm

Chen, C.F. (2006), Job satisfaction, organizational commitment, and flight attendants' turnover intentions: A note. *Journal of Air Transport Management*, *2*, 274-276.

Chen, Y. (2007). Principals' distributed leadership behaviors and their impact on student achievement in selected elementary schools in Texas. *Unpublished doctoral dissertation*. Texas A&M University, USA.

Cheng, N. P. and Kadir, S. A. (2018). Relationship between work environment and organizational commitment among private school teachers in Klang Valley, *International Journal of Academic Research in Business and Social Sciences*, *8*(7), 782-793.

Cherry, K. (2019). The great man theory of leadership. V*erywellmind*, Retrieved May 31, 2019 from: https://www.verywellmind.com/the-great-man-theory-of-leadership-2795311

Chin, W. W. (1998). The partial least squares approach to structural equation modelling. In Marcoulides G. A. (Ed.), *Modern methods for business research* (pp. 295–336). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Chin, W. W. (2010). Bootstrap cross-validation indices for PLS path model assessment. In V. Esposito Vinzi, W.W. Chin, J. Henseler, & H. Wang (Eds.), *Handbook of partial least squares: concepts, methods and applications* (pp. 83-97). Berlin Heidelberg: Springer-Verlag.

Chin, W. W., & Newsted, P. R. (1999). Structural equation modelling analysis with small samples using partial least squares. In R. H. Hoyle (Ed.), *Statistical strategies for small sample research* (pp. 307–341). Thousand Oaks, CA: Sage

Chircir, R. K., Kemboi, A., Kirui, W., and Ngenu, V. (2014). Leadership style and teacher commitment in public primary schools in Bomet County, Kenya, *Journal of Education and Practice*, *5*(39), 175-183.

Chua, Y. P. (2011). *Kaedah dan statistik penyelidikan: Kaedah penyelidikan*, Edisi Kedua, McGraw-Hill.

Chua Yan Piaw. (2014). K*aedah dan Statistik penyelidikan-Asas Statistik Penyelidikan (Buku 2)* Edisi Ketiga. Kuala Lumpur: Mc Graw Hill Education.

Claessens, L. C. A., van Tartwijk, J., van der Want, A. C., Pennings, H. J. M., Verloop, N., den Brok, P.J. and Wubbels, T. (2017). Positive teacher-student relationships go beyond the classroom problematic ones stay inside, *Journal of Educational Research*, *110*(5), 478-493. DOI: 10.1080/00220671.2015.1129595

Clark, L. A., and Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment, 7*(3), 309–319. https://doi.org/10.1037/1040-3590.7.3.309

Claude, S. (1992). *Supervision in action* (3rd ed.). Sydney: Chapel Hill.

Clutter-Shields, J. L. (2011). Does distributed leadership influence the decision making of teachers in the classroom: examining content and pedagogy, *Doctor of Education Dissertation*, University of Kansas

Cochran, W.G. (2007). *Sampling Techniques*. Hoboken: John Wiley & Sons.

Cogaltay, N., Yalcin, M. and Karadag, E. (2016). Educational leadership and job satisfaction of teachers: a meta-analysis study on the studies published between 2000 and 2016 in Turkey, *Eurasian Journal of Educational Research*, *62*, 255-282.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Earlbaum Associates

Cohen, J (1992). A power primer. *Psychological Bulletin*, *112*, 155–159. doi:10.1037/0033-2909.112.1.155. PMID 19565683

Cohen, J., and Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum

Coles, E.S. (1995). *A comparative study of the experiences of specialist and non-specialist teachers of physical education in elementary schools*. Unpublished master's thesis, Memorial University, St. John's, NL.

Collis, J & Hussey, R. (2014). *Business research: A practical guide for undergraduate and postgraduate students,* 4th edition, Palgrave Macmillan.

Cooper, G. (2012). Examining the transformational and distributive leadership styles of secondary principals: a mixed methods study, *Doctor of Education Dissertation*, Texas Tech University

Cooper, D. and Schindler, P. (2011). *Business research methods*. 11th Edition, Boston: McGraw Hill.

Copland, M. A. (2003). Leadership of inquiry: building and sustaining capacity for school improvement, *Educational Evaluation and Policy Analysis, 25*(4), 375-395.

Cravens, X. (2019). School leadership in international schools: perspectives and practices, *Peabody Journal of Education*, 1-7, DOI: 10.1080/0161956X.2018.1515818

Crawford, M. (2012). Solo and distributed leadership: definitions and dilemmas, *Educational Management, Administration and Leadership*, *40*(5), 610-620.

Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Thousand Oaks, CA: Sage.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Boston, MA: Pearson.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage

Crow, G, M. (2005). Developing leaders for schools facing challenging circumstances. In M.J. Coles and G. Southworth, (Eds), *Developing leadership: creating the schools of tomorrow*. Maidenhead, UK: Open University Press

Crowther, F., Kaagan, S., Ferguson, M., and Hann, L. (2002). *Developing teacher leaders: How teacher leadership enhances school success.* California: Corwin Press

Culibrk, J., Delic, M., Motrovic, S. and Culibrk, D. (2018). Job satisfaction, organizational commitment and job involvement: the mediating role of job involvement, *Frontiers in Psychology, 9*(132), 1-12,

Curry, J. P., Wakefield, D. S., Price, J. L., and Mueller, C. W. (1986). On the causal ordering of job satisfaction and organizational commitment. *Academy of Management Journal, 29*, 847–858. doi: 10.2307/255951

Dajani, A. E. (2013). Qualitative investigation of principal behaviour that impact teacher turnover intention and job satisfaction in an American international school, *Doctor of Education Dissertation*, Northcentral University.

Dampson, D. G., Havor, F. M. & Laryea, P. (2018). Distributed leadership an instrument for school improvement: The study of public senior high schools in Ghana, *Journal of Education and e-Learning Research, 5*(2), 79-85.

Danielson, C. (2002). *Enhancing student achievement: A framework for school improvement. Association for Supervision and Curriculum Development (ASCD),* 1703 N. Beauregard Street, Alexandria, VA 22311

Danielson, C. (2007). The many faces of leadership. *Educational Leadership, 65*(1), 14-19.

Dansereau, F., Graen, G., and Haga, W. (1975). A vertical dyad approach to leadership within formal organizations. *Organizational Behavior and Human Performance, 13*, 46-78.

Dantzer, M. R. (2000). Leadership requirements in the 21st Century: The perceptions of Canadian public sector leaders", *Dissertations*. 315. https://digitalcommons.andrews.edu/dissertations/315

Darishah, P., Daud, Y. and Omar Fauzee, M.S. (2017). Teaching and learning supervision by school management, attitude of teachers and competency of teaching, *International Journal of Development and Sustainability, 6(*10), 1367-1381.

Darmody, M., and Smyth E. (2010). *Job satisfaction and occupational stress among primary school teachers and school principals in Ireland*. The Teaching Council and ESRI

Davis, M. W. (2009). *Distributed leadership and school performance*. Unpublished doctoral dissertation, The School of Education and Human Development, George Washington University, USA

Day, C., Harris, A., Hadfield, M., Tolley, H. and Beresford, J. (2000). *Leading schools in times of change*. Milton Keynes: Open University Press

Day, C., Sammons, P., Hopkins, D., Harris, A., Leithwood, K., Gu, Q. and Brown, E. (2010) *10 Strong claims about successful school leadership*. Nottingham: National College for School Leadership. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file / 327938/10-strong-claims-about-successful-school-leadership.pdf

De Cuyper, N., and De Witte, H. (2011). The management paradox: Self-rated employability and organizational commitment and performance. *Personnel Review, 40*(2), 152-172. doi: 10.1108/00483481111106057

De Vos, A.S., Strydom, H, Schulze, S. and Patel, L. (2011). The sciences and the profession. In De Vos A.S., Strydom, H., Fouché C.B. & Delport C.S.L. *Research at the grass roots for the social sciences and human service professions*. 4th ed. Pretoria: JL Van Schaik Publishers.

Deluga, R. J. (1990). The effects of transformational, transactional and Laissez Faire leadership characteristics on subordinate influencing behavior. *Basic and Applied Social Psychology, 11*(2), 191-203.

DeMatthews. D. (2014). Principal and teacher collaboration: An exploration of distributed leadership in professional learning communities, *International Journal of Educational Leadership and Management*, *2*(2), 176-206.

DeMatthews, D. (2015). Clearing a path for inclusion: Distributing leadership in a high performing elementary school. *Journal of School Leadership, 25*(2), 1000-1038.

DeMatthews, D. E., Edwards, D. B., Jr., and Rincones, R. (2016). Social justice leadership and family engagement: A successful case from Ciudad Juárez, Mexico. *Educational Administration Quarterly, 52*(5), 754–792.

Demitras, Z. (2010). Teachers' job satisfaction levels, *Procedia Social and Behavioural Sciences, 9*, 1069-1073.

Demirtas, Z. (2015). The relationship between job satisfaction and organizational commitment: A study on elementary schools, *Kastamonu Education Journal*, *23*(1), 253-268.

Denis, J. L., Lamothe, L. and Langley, A. (2001). The dynamics of collective leadership and strategic change in pluralistic organizations. *Academy of Management Journal, 44*, 809–837.

Derue, D. S., Nahrgang, J. D., Wellman, N. and Humphrey, S. E. (2011). Trait and behavioral theories of leadership: an integration and meta-analytic test of their relative validity, *Personnel Psychology, 64*, 7-52.

Desroches, S. M. (2013). *Exploring teacher turnover in American accredited schools in South America. Lehigh University*, ProQuest Dissertations Publishing.

Devos, G., Tuytens, M. and Hulpia, H. (2014). Teachers' organizational commitment: examining the mediating effects of distributed leadership, *American Journal of Education, 120*, 205-230.

Diamantopoulos, A. (1994). Modelling with LISREL: A guide for the uninitiated. *Journal of Marketing Management, 10*, 105–136.

Diamantopoulos, A. and Siguaw, J. (2006). Formative versus reflective indicators in organizational measure development: A comparison and empirical illustration, *British Journal of Management, 17*(4), 263-282.

Dimmock, C. (2012). *Leadership, capacity building and school improvement.* Oxon: Routledge

Dimmock, C. and Walker, A (2005). Developing leadership in context. In Coles M, J and Southworth, G (Eds). *Developing leadership: creating the schools of tomorrow*. Maidenhead, England: Open University Press.

Diosdado, M. S. A. (2008). Creating better schools through democratic school leadership, *International Journal of Leadership in Education, 11*(1), 43-62.

Dirani, K.M. and Kuchinke, K.P. (2011). Job satisfaction and organizational commitment: Validating the Arabic satisfaction and commitment questionnaire (ASCQ), testing the correlations, and investigating the effects of demographic variables in the Lebanese banking sector. *The International Journal of Human Resource Management, 22*(5), 1180–1202.

Disney, N. A. (2013). Schools of thoughts: Developments in the Malaysian school sector, *IEM Spotlight Newsletter, 10*(2), August, retrieved from: https://www.nafsa.org/Professional_Resources/Browse_by_Interest/Internatio nal_Students_and_Scholars/Network_Resources/International_Enrollment_M anagement/Schools_of_Thought__Developments_in_the_Malaysian_School_ Sector/

Djikstra, T. K. and Henseler, J. (2015). Consistent partial least squares path modeling, *Management Information System Quarterly, 39*(2), 297-315.

Dogar, N. (2014). Relations between organizational commitment and demographic factors: A research in banking sector. *International Scientific Journal*, 103-115.

Dou, D., Devos, G. and Valcke, M. (2017). The relationship between school autonomy gap, principal leadership, teachers' job satisfaction and organizational commitment, *Educational Management Administration and Leadership*, *45*(6), 959-977. DOI: 10.1177/1741143216653975

DuFour, R., and Mattos, M. (2013). How do principals really improve schools? *Educational Leadership, 70* (7), 3440.

Ebmeier, H. (2003). How supervision influences teacher efficacy and commitment: An investigation of a path model. *Journal of Curriculum and Supervision, 18(*2), 110–141.

Eden, D. (2001). Who controls teachers? Overt and covert control in schools. *Educational Management and Administration, 29,* 97-111.

Edmonds, R. (1979). Effective schools for the urban poor. *Educational Leadership, 37*, 15-24

El-Hilal, N. and Al-Rashidi, L. (2015). The impact of parental involvement, personality traits and organizational support on satisfaction, *Procedia – Social and Behavioral Sciences*, *177*, 408-419.

Elmore, R. F. (2002). *Bridging a new structure for school leadership* (Washington, DC: Albert Shanker Institute). Available online at: http://www.shankerinstitute.org/education. html,

Elstad, E., Christophersen, K. A. and Turmo, A. (2011). Social exchange theory as an explanation of organizational citizenship behaviour among teachers, *International Journal of Leadership in Education,* 1-17. http://dx.doi.org/10.1080/13603124.2010.524250

Embretson, S. E., and Reise, S. P. (2000). *Multivariate applications books series. Item response theory for psychologists.* Mahwah, NJ, US: Lawrence Erlbaum

Emerson, R. M. (1976). Social exchange theory. *Annual Review of Sociology*, *2*, 335-362

Emerson, R. M. (1981). Social exchange theory, *Annual Review of Sociology, 2*(1), 335-362.

Epstein, J. (2001). *School, family, and community partnerships*. Boulder, CO: Westview Press

Erdogan, B. and Bauer, T. N. (2015). Leader-member exchange theory, *International Encyclopedia of the Social and Behavioral Sciences,* 2nd Edition, Vol. 13, 641-647

Ereş, F., & Akyürek, M., İ. (2016). İlkokul müdürlerinin dağıtılmış liderlik davranışları ile öğretmenlerin iş doyumu algıları arasındaki ilişki düzeyleri [The relationship between elementary school principals' distributed leadership behaviours and teachers' job satisfaction]. *Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi, 36*(3), 427-449

Ersozlu, A. & Ulusoy, T. (2016). Adaptation of distributed leadership scale into Turkish: The validity and reliability study. *European Journal of Educational Research, 5*(2), 43-52.

Eyal, O. and Rith, G. (2011). Principals' leadership and teachers' motivation: self-determination theory analysis, *Journal of Educational Administration*, *49*(3), 256-275.

Evers, C. W. (1990). Schooling, organizational learning and efficiency in the growth of knowledge. In Chapman, J. (Ed.), *School-based decision making and management* (pp. 55–70). London: Falmer.

Falkenburg, K., and Schyns, B. (2007). Work satisfaction, organizational commitment and withdrawal behaviours. *Management Research News, 30*, 708–723. doi: 10.1108/01409170710823430

Faul, F., Erdfelder, E., Buchner, A., and Lang, A. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, *41*(4), 1149-1160. doi:10.3758/brm.41.4.1149

Field, A. P. (2005). *Discovering statistics using SPSS*. London: Sage

Firas, J. S., Jinan. H. I. and Paiman, O. M. (2011). Perceptions towards distributed leadership in school improvement, *International Journal of Business and Management, 6*(10), 256-264.

Firestone, W. A. and Martinez, M. C. (2007). Districts, teacher leaders, and distributed leadership" changing instructional practice, *Leadership and Policy in Schools, 6*(1), 3-35.

Fletcher, J. K. and Käufer, K. (2003). Shared leadership: Paradox and possibility. In Pearce, Craig L. & Conger, Jay A. (eds). *Shared leadership: Reframing the Hows and Whys of leadership*. London: Sage publications. pp. 21-47.

Fong, B. (2015). Job satisfaction and dissatisfaction factors influencing contract renewal of generation Y and non-generation Y teachers working at international schools in Asia, *Doctoral Dissertations and Projects*. 1101. https://digitalcommons.liberty.edu/doctoral/1101

Fong, H. W. B. (2015). Job satisfaction and dissatisfaction factors influencing contract renewal of generation Y and non-generation Y teachers working at international schools in Asia, *Doctor of Education Dissertation*, Liberty University

Fornell, C. (1987). *A second generation of multivariate analysis: classification of methods and implications for marketing research*, Issue 414 of Working paper (University of Michigan. Graduate School of Business Administration. Division of Research)

Fornell, C., and Cha, J. (1994). Partial least squares. In R. P. Bagozzi (Ed.), *Advanced methods of marketing research* (pp. 52–78). Cambridge, England: Blackwell

Fornell, C., and Larcker, D.F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50.

Friedman, I. A. (2006). Classroom management and teacher stress and burnout. In C. M. Evertson and C. S. Weinstein (Eds.), *Handbook of classroom management: Research, practice, and contemporary issues* (pp. 925–944). Mahwah, NJ: Erlbaum.

Fullan, M. (2001). *Leading in a culture of change.* San Francisco, CA: Jossey-Bass Inc.

Fullan, M. (2006). *The development of transformational leaders for educational decentralization.* Toronto, Canada: Michael Fullan.

Fullan, M. (2011). *Change leader: Learning to do what matters most.* San Francisco, CA: John Wiley and Sons

Gaire, A. K. S. and Fatta Bahadur, K. C. (2016). Co-workers' impact on attitudinal behavior of the faculty member of educational institutions of Nepal, *Journal of Advanced Academic Research*, *3*(1), 1-11.

Gangai, K.M. and Agrawal, R. (2015). Job satisfaction and organizational commitment: Is it important for employee Pperformance. *International Journal of Management. Business Research, 5* (4), 269-278.

Garcia de Yebenes Prous, M. A., Rodriguez Salvanes, F., and Carmona Ortells, L. (2009). Validation of questionnaires, *Reumatologia Clinica*, *5*, 171-7.

Garcia-Gabrera, A. and Garcia-Soto, G. (2012). Organizational commitment in MNC subsidiary top managers: antecedents and consequences. *The International Journal of Human Resource Management 23* (15), 3151–3177.

Garson, G. D. (2016). *Validity & reliability, 2016 Edition.* Asheboro, NC: Statistical Associates Publishers.

Gaskell, R. (2016). The global expansion of international schools, *ECIS Global Insights, 2*, 24-27.

Gavish, B., and Friedman, I. A. (2010). Novice teacher's experience of teaching: A dynamic aspect of burnout. *Social Psychology of Education*, *13*, 141-167. doi:10.1007/s11218-009-9108-0

Gay, L.R., Mills, G.E. and Airasian, P. (2009) *Educational research competencies for analysis and applications*. Pearson, Columbus.

Gefen, D. (2000). E-commerce: the role of familiarity and trust. *OMEGA 28*(6), 725-737.

Gefen, D., Straub, D. W., and Boudreau, M. C. (2000). Structural equation modelling and regression: Guidelines for research practice. *Communications of the Association for Information Systems, 4,* 1–79.

George, D. and Mallery, P. (2010). *SPSS for Windows step by step: A simple guide and reference* 17.0 Update. 10th Edition, Pearson, Boston

Ghasemi A. & Zahediasl S. (2012). Normality tests for statistical analysis: A guide for non-statisticians. *International Journal of Endocrinology Metabolism, 10,* 486-489.

Ghazinejad, M., Hussein, B. and Zidane, Y. J. T. (2018). Impact of trust, commitment, and openness on research project performance: Case study in a research institute, *Social Sciences, 7*(22), 1-11, doi:10.3390/socsci7020022

Ghazzawi, K., El Shoughari, R. & El Osta, B. (2017). Situational leadership and its effectiveness in rising employee productivity: A study on North Lebanon organization, *Human Resource Management Research, 7*(3), 102-110.

Ghenghesh, P. (2013). Job satisfaction and motivation – What makes teachers tick? *British Journal of Education, Society and Behavioural Science, 3*(4), 456-466.

Goddard, Y. L., Goddard, R. D., and Tschannen-Moran, M. (2007). A theoretical and empirical investigation of teacher collaboration for school improvement and student achievement in public elementary schools. *Teachers College Record, 109* (4), 877-896.

Goksoy, S. (2016). Analysis of the relationship between shared leadership and distributed leadership, *Eurasian Journal of Educational Research, 65,* 295-312.

Gökyer, N. (2018). Organizational commitment of high school teachers, *Journal of Education and Training Studies, 6*(3a), 115-125.

Goldstein, J. (2003). Making sense of distributed leadership: The case of peer assistance and review. *Educational Evaluation and Policy Analysis, 25,* 397-421.

Goleman, D. (2002). The *new leaders: Transforming the art of leadership into the science of results*. London: Little Brown.

Goodboy A. K. and Kline, R. B. (2017). Statistical and practical concerns with published communication research featuring structural equation modeling, *Communication Research Reports, 34*(1), 68-77.

Gouldner, A. W. (1960). The norm of reciprocity: a preliminary statement. *American Sociological Review 25*,161-78.

Graham, J. W., Hofer, S. M., Donaldson, S. I., MacKinnon, D. P., and Schafer, J. L. (1997). Analysis with missing data in prevention research. In K. J. Bryant, M. Windle, & S. G. West (Eds.), *The science of prevention: Methodological advances from alcohol and substance abuse research* (p. 325–366). American Psychological Association. https://doi.org/10.1037/10222-010

Grapragasem, S., Krishnan, A. and Mansor, A. N. (2014). Current trends in Malaysian higher education and the effect on education policy and practice: an overview, *International Journal of Higher Education*, *3*(1), 85-93.

Grant, C. (2011). *The relationship between distributed leadership and leadership effectiveness in North Carolina*. North Carolina State University, Educational Research and Policy Analysis. Raleigh: North Carolina State University.

Grant, C., Gardner, K., Kajee, F., Moodle y, R. and Samaroo, S. (2010). Teacher leadership: A survey analysis of KwaZulu-Natal teachers' perceptions, *South African Journal of Education, 30*, 401-419.

Grant, C. and Osanloo, A. (2014). Understanding, selecting, and integrating a theoretical framework in dissertation Rresearch: Creating the blueprint for 'House'. *Administrative Issues Journal: Connecting Education, Practice and Research*, 12-22 DOI: 10.5929/2014.4.2.9

Grant, C. and Singh, H. (2009). Passing the buck: this is not teacher leadership! *Perspectives in Education, 27*(3), 1-15.

Gronn, P. (2002). Distributed leadership as a unit of analysis. *Leadership Quarterly*, *13*, 423-451.

Gronn, P. (2002). Distributed leadership in Leithwood, K. and Hallinger, P. (Eds), *Second international handbook of educational leadership and administration*, Dordrecht: Kluwer Academic Publishers, pp. 653-96

Gronn, P. (2003) Leadership: who needs it? *School Leadership and Management*, *23*(3), 267–290.

Gronn, P. (2008). The future of distributed leadership, *Journal of Educational Administration*, *46*,2, 141-158.

Gronn, P. (2010). "Where to next for educational leadership?", in Bush, T., Bell, L. and Middlewood, D. (Eds), *The principles of educational leadership and management*, Sage, London, pp. 70-85

Guarino, C. M., Santibanez, L. & Daley, G.A. (2006). Teacher recruitment and Retention: A review of the recent empirical literature. *Review of Educational Research, 76*(2), 173-208

Güngör, S.K. (2016). The prediction power of servant and ethical leadership behaviours of administrators on teachers' job satisfaction. *Universal Journal of Educational Research, 4*(5), 1180-1188. https://doi.org/10.13189/ujer.2016.040531

Gurr, D. and Day, C. (2014). Thinking about leading schools, in Day, C. and Gurr, D. (eds.) *Leading schools successfully: Stories from the field*. London: Routledge. 194-208.

Haenlein, M., and Kaplan, A. M. (2004). A beginner's guide to partial least squares (PLS) analysis. *Understanding Statistics, 3*, 283-297. doi:10.1207/s15328031us0304_4

Hair, J.F., Ringle, C.M. and Sarstedt, M. (2011). PLS-SEM: Indeed, a silver Bbullet. *Journal of Marketing Theory and Practice*, *19*, 139-151. https://doi.org/10.2753/MTP1069-6679190202

Hair, J.F., Hult, G.T.M., Ringle, C.M. and Sarstedt, M. (2014). *A primer on partial least squares structural equation modeling*, Sage, Thousand Oaks, CA

Hair, J.F., Hult, G.T.M., Ringle, C.M. and Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM).* 2nd Edition, Sage Publications Inc., Thousand Oaks, CA.

Hair, C. M., Sarstedt, M., Mitchell, R. and Gurdergan, S. P. (2018). Partial least squares equation modelling in HRM research, *The International of Human Resource Management*, 1-28.

Hairon, S., & Goh, J. W. (2015). Pursuing the elusive construct of distributed leadership: Is the search over? *Educational Management Administration & Leadership, 43*(5), 693–718. https://doi.org/10.1177/1741143214535745.

Hairuddin, M. A. and Salisu, A. Y. (2015). Investigating the influence of distributed leadership on school effectiveness: a mediating role of teachers' commitment, *Journal of Educational and Social Research*, *5*(1), 163-174.

Hallebone, E & Priest, J. (2009). *Business and management research: Paradigms and practices*, UK: Palgrave Macmillan

Hallinger, P. (2011). Developing a knowledge base for educational leadership and management in East Asia. *School Leadership and Management, 31*(4), 305-320.

Hallinger, P., and Heck, R. H. (1996). Reassessing the principal's role in school effectiveness: A review of empirical research, 1980–1995. *Educational Administration Quarterly, 32,* 5-44

Hallinger, P., and Heck, R. H. (2010). Collaborative leadership and school improvement: Understanding the impact on school capacity and student learning. *School Leadership and Management, 30,* 95-110

Hallinger, P., and Heck, R. H. (2010). Leadership for learning: Does collaborative leadership make a difference in school improvement? *Educational Management Administration and Leadership, 38* (6), 654-678. doi:10.1177/1741143210379060

Hallinger, P., and Murphy, J. (1985). Assessing the instructional leadership behavior of principals. *Elementary School Journal, 86*, 217-248.

Hallinger, P., Walker, A., and Lee, M. (2010). *A study of successful practices in the IB program continuum*. Hong Kong: Hong Kong Institute of Education.

Halverson, R. (2007). Systems of practice and professional Ccommunity: The Adams Case. In J. P. Spillane (Ed.), *Distributed Leadership in Practice*. New York: Teachers College Press

Hamdan, S. and Mohd, A.S. (2011). Penyeliaan pengajaran di sekolah-sekolah kebangsaan daerah Johor Bahru, *Thesis*, Faculty of Education, University Teknologi Malaysia.

Hanasya, J, R, M., Khalid, K., Mat, N, K, N., Sarrasina, F., Rahman, M, Y, B, A., and Zakaria, A, S, B. (2012). Transformational leadership and job satisfaction. *American Journal of Economics Special Issue*, 145-148.

Hancock, G. R. and Mueller, R. O. (2010). *A review of "The Reviewer's Guide to Quantitative Methods in the Social Sciences",* New York, NY: Routledge

Hans, A., Mubeen, S. A. and Al Ghabshi, A. S. (2014). A study on locus of control and job satisfaction in private international schools in Sultanate of Oman, *International Journal of Application or Innovation in Engineering and Management, 3*(1), 91-98.

Hansen, S. D. (2011). Ethical leadership: a multi-foci social exchange perspective, *The Journal of Business Inquiry, 10*(1), 41-55.

Hargreaves, A (2005). Developing leadership for succession. In M.J. Coles and G. Southworth, (Eds), *Developing leadership: creating the schools of tomorrow*. Maidenhead, UK: Open University Press.

Hariri, H., Monypenny, R., & Prideaux, M. (2012). Principalship in an Indonesian school context: can principal decision-making styles significantly predict teacher job satisfaction? *School Leadership & Management, 32*(5), 453-471. https://doi.org/10.1080/13632434.2012.723617

Harris, A. (2003). Teacher leadership and school improvement. In A. Harris, C. Day, D. Hopkins, M. Hadfield, A. Hargreaves, & C. Chapman (Eds.), *Effective leadership for school improvement* (72-83). London: Routledge/Falmer.

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

Harris, A. (2008). Distributed school leadership: According to the evidence, *Journal of Educational Administration, 46*(2), 172-188.

Harris, A. (2010). Distributed leadership: current evidence and future direction", in Bush, T., Bell, L. and Middlewood, D. (Eds), *The principles of educational leadership and management*, Sage, London, pp. 55-69.

Harris, A. (2011). Distributed leadership: Implications for the role of the principal. *Journal of Management Development, 31*(1), 7-17.

Harris, A. (2012). Distributed leadership: Implications for the role of the principal. *Journal of Management Development, 31*(1), 7-17.

Harris, A. (2013). *Distributed school leadership: Developing tomorrow's leaders,* Sage, London

Harris, A. (2015). Distributed leadership and school improvement, *Educational Management Administration and Leadership*, *32*(1), 11-24.

Harris, J., Caldwell, B. and Longmuir, F. (2013) *Literature review: A culture of trust enhances performance*, Australian Institute for Teaching and School Leadership, Melbourne.

Harris, A. and Chapman, C. (2002) *Effective leadership in schools facing challenging circumstances:* Final Report. Nottingham: NCSL.

Harris, A., Day, C., Hadfield, M., Hopkins, D., Hargreaves, A. and Chapman, C. (2005). *Effective leadership for school improvement,* Canada, Routledge Falmer

Harris, A., and DeFlaminis, J. (2016). Distributed leadership in practice: Evidence, misconceptions and possibilities. *Management in Education, 30*(4), 141–146.

Harris, A., Hargreaves, A., and Fink, D. (2008). Distributed leadership: Democracy or delivery? *Journal of Educational Administration, 46*(2), 229-240.

Harris, A. and Jones. M. (2015). International comparisons: Critique, culture and context. In A. Harris and M. Jones (Eds). *Leading futures: Global perspectives on educational leadership*. London: Sage.

Harris, A., Jones, M., Adams, D., Sumintono, B. and Nashwa, I. (2017). Leading school turnaround and improvement in Malaysia and Indonesia, *THF Working Paper, Working Papers Series* No. 2/2017, retrieved May 31, 2018 from: https://oro.open.ac.uk/54053/7/2017%202%29%20Leading%20School%20T urnaround%20and%20Improvement%20in%20Malaysia%20and%20Indonesi a.pdf

Harris, A., Jones, M., Adams, D. and Cheah, K. (2018). Instructional leadership in Malaysia: a review of the contemporary literature, *School Leadership and Management*, DOI: 10.1080/13632434.2018.1453794

Harris, A., Jones, M., Cheah, K. S. L., Devadason. E. and Adams, D. (2017). Exploring principals' instructional leadership practices in Malaysia: insights and implications, *Journal of Educational Administration*, *55*(2), 207-221.

Harris, A. and Lambert, L. (2003). *Building leadership capacity for school improvement,* Buckingham: Open University Pres

Harris, A., Leithwood, K., Day, C., Sammons, P., and Hopkins, D. (2007). Distributed leadership and organizational change: Reviewing the evidence. *Journal of Educational Change, 8*, 337-347.

Harris, A., and Muijs, D. (2005). *Improving schools through teacher leadership*, Maidenhead: Open University Press.

Hartley, D. (2010). Paradigms: how far does research in distributed leadership "stretch"? *Educational Management Administration & Leadership, 38*(3), 271-285.

Hayday, S. (2003). *Question to measure commitment and job satisfaction*, aRetrieved May 31, 2018 from: www.employmentstudies.co. uk/ system /files/ .../ files/mp19.pdf

Hayden, M. and Thompson, J. (2008). *International schools: growth and influence*, Paris: UNESCO: International Institute for Educational Planning.

Hayden, M., and Thompson, J. (2016). International schools: the developing agenda. In M. Hayden, & J. Thompson (Eds.), *International schools: current issues and future prospects* (2 ed., Vol. 26, pp. 9-16). (Oxford Studies in Comparative Education; Vol. 26, No. 2). Oxford: Symposium Books.

Hayward, S. J. (2015). Success factors in the transition towards distributed leadership in large organizations, *DBA Thesis*, Manchester Business School.

Heck, R. H., and Hallinger, P. (2009). Assessing the contribution of distributed leadership to school improvement and growth in math achievement, *American Educational Research Journal*, *46*(3), 659–689. http://dx.doi.org/10.3102/0002831209340042

Heenan, D. and Bennis, W. (1999). *Co-Leaders: The Power of great partnerships*. Hoboken, NJ: Wiley.

Heikka, J., Waniganayake, M., and Hujala, E. (2013). Contextualizing distributed leadership within early childhood education: Current understandings, research evidence and future challenges. *Educational Management, Administration and Leadership, 41*(1), 30-44. doi: 10.1177/1741143212462700

Heng, J. S., Basri, R. and Asimiran, S. (2018). Relationship between job stress and job satisfaction among teachers in private and international school in Malaysia. *International Journal of Academic Research in Business and Social Sciences, 8* (12), 275-286.

Henseler, J. (2010). On the convergence of the partial least squares path modeling algorithm, *Computational Statistics, 25* (1), 107-120.

Henseler, J., Dijkstra, T., Sarstedt, M., Ringle, C., Diamantopoulos, A., Straub, D., Ketchen, D., Hair, J., Hult, T., and Calantone, R. (2014). Common beliefs and reality about PLS: comments on Rönkkö & Evermann (2013). *Organizational Research Methods*, *17*(2), 182-209.

Henseler, J., Fassott, G., Dijkstra, T.K. and Wilson, B. (2012). Analysing quadratic effects of formative constructs by means of variance-based structural equation modelling, *European Journal of Information Systems, 21*(1), 99-112.

Henseler, J., Ringle, C.M., and Sinkovics, R.R. (2009). The use of partial least squares path modeling in international marketing. In R.R. Sinkovics & P.N. Ghauri (Eds.), *Advances in International Marketing* (AIM, vol. 20, pp. 277-230).

Hermann, K. R. (2016). The principal's role: Distributed leadership, *Doctor of Philosophy (PhD) Dissertation,* Educ Foundations and Leadership, Old Dominion University, https://digitalcommons.odu.edu/efl_etds/8

Heron, J. (1996). *Co-operative inquiry: research into the human condition*. London: Sage

Herscovitch, L., and Meyer, J. P. (2002). Commitment to organizational change: Extension of a three-component model, *Journal of Applied Psychology, 87*(3), 474–487. doi:10.1037/0021- 9010.87.3.474

Herzberg F., Mausner B. and Synderman B. (1959). *The motivation to work*. NY: Wiley.

Hill, I. (2015). What is an international school? *The International Schools Journal, 35*(1), 9-21.

Hirschfeld, R. R. (2000). Does revising the intrinsic and extrinsic subscales of the Minnesota Satisfaction Questionnaire Short Form make a difference? *Educational and Psychological Measurement*, *60*(2), 255-270. doi:10.1177/00131640021970493

Ho, J., and Ng, D. (2017). Tensions in distributed leadership. *Educational Administration Quarterly, 53*(2), 223–254.

Hock, C., Ringle, C. M., and Sarstedt, M. (2010). Management of multi-purpose stadiums: importance and performance measurement of service interfaces, *International Journal of Services Technology and Management, 14*(2), 188-207.

Hofmans, J., De Gieter, S. & Pepermans, R. (2013). Individual differences in the relationship between satisfaction with job rewards and job satisfaction. *Journal of Vocational Behavior, 82*(1), 1-9. doi:10.1016/j.jvb.2012.06.007

Hoi, W. B. F. (2015). Job satisfaction and dissatisfaction factors influencing contract renewal of generation Y and non-generation Y teachers working at international schools in Asia, *Doctor of Education Dissertation*, Liberty University

Holloway, M. Y. C. (2017). Understanding the distributed leadership experience of principals, assistant principals and teacher leaders in high schools, *Doctor of Philosophy Dissertation,* Auburn University.

Holtz, R. (2004). Group cohesion, attitude projection, and opinion certainty: Beyond interaction. *Group Dynamics: Theory, Research, and Practice, 8*(2), 112–125. https://doi.org/10.1037/1089-2699.8.2.112

Homans, G. C. (1957). Review: social relations and morale in small groups, *ILR Review, 10*(30, 467-468.

Homans, G. C. (1961). *Social Behaviour: Its Elementary Forms.* New York: Harcourt, Brace and World, Inc.

Hoppock, R. (1935). *Job satisfaction.* Harper.

House. R. J. and Aditya, R. N. (2012). The social scientific study of leadership: `quovadis'? *Journal of Management, 23*, 409-473.

Houtenville, A. J., and Conway, K. S. (2008). Parental effort, school resources, and student achievement. *The Journal of Human Resources*, *43*(2), 437-453. doi:10.3368/jhr.43.2.437

Howling, S. E. (2017). Learning, becoming, leading: the experiences of international school principals, *Doctoral Thesis*, University of Leicester, retrieved from: https://lra.le.ac.uk/bitstream/2381/40916/1/2017howlingsedsocsci.pdf

Hoyle, R. H. (2012). *Handbook of structural equation modelling.* New York, London: The Guilford Press: A Division of Guilford Publications, Inc.

Hrebiniak, L. G. and Alutto, J. A. (1972). Personal and role-related factors in the development of organizational commitment, *Administrative Science Quarterly*, *17*, 563-573.

Huang, H., Jenatabadi, H., Noor Azina, I. and Che Wan Jasumah, W. M. R. (2013). Principal's leadership style and teacher job satisfaction: a case study in China, *Interdisciplinary Journal of Contemporary Research in Business*, *5*(4), 175-184.

Huang, Y. H., Zohar, D., Robertson, M. M., Garbet, A., Lee, J. and Murphy, L. A. (2013). Development and validation of safety climate scales for lone workers using truck drivers as exemplar, *Transportation Research Part F: Traffic Psychology and Behaviour, 17*, 5-19.

Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: a review of four recent studies. *Strategic Management Journal, 20*(2), 195–204. doi: 10.1002/(SICI)1097-0266(199902)20:23.3.CO;2-Z

Hulland, J., Baumgartner, H., and Smith, K. M. (2017). Marketing survey research best practices: evidence and recommendations from a review of JAMS articles. *Journal of the Academy of Marketing Science*, 1-17. doi: 10.1007/s11747-017-0532-y

Hulland, J. Ryan, M.J. and Rayner, R.K. (2010). Modeling customer satisfaction: a comparative performance evaluation of covariance structure analysis versus partial least squares, in Esposito Vinzi, V.; Chin, W.W.; Henseler, J.; Wang, H. (Eds.), *Handbook of partial least squares: Concepts, methods and application*. Springer, Germany, 307-325.

Hulpia, H. and Devos, G. (2009). Exploring the link between distributed leadership and job satisfaction of school leaders, *Educational Studies, 35*(2), 153-171.

Hulpia, H. and Devos, G. (2010). How distributed leadership can make a difference in teachers' organizational commitment? A qualitative study, *Teaching and Teacher Education, 26*(3), 565-575.

Hulpia, H., Devos, G. and van Keer, H. (2009). The influence of distributed leadership on teachers' organizational commitment: a multilevel approach, *The Journal of Educational Research, 103*(1), 40-52, DOI: 10.1080/00220670903231201

Hulpia, H., Devos, G. and Van Keer, J. (2010). The influence of distributed leadership on teachers' organizational commitment: A multilevel approach, *The Journal of Educational Research, 103*(1), 40-52.

Hulpia, H., Devos, G. and Rosseel, Y. (2009a). The relationship between the perception of distributed leadership in secondary schools and teachers' and teacher leaders' job satisfaction and organizational commitment, *School Effectiveness and School Improvement, 20*(3), 291-317, DOI: 10.1080/09243450902909840

Hulpia, H., Devos, G. and Rosseel, Y. (2009b). Development and validation of scores on the distributed leadership inventory, *Educational and Psychological Measurement, 69*(6), 1013-1034.

Hulpia, H., Devos, G., Roseel, Y. and Vlerick, P. (2012). Dimensions of distributed leadership and the impact on teachers' organizational commitment: a study in secondary education, *Journal of Applied Social Psychology, 42*(7), 1745-1784.

Hulpia, H., Devos, G., and Van Keer, H. (2011). The relation between school leadership from a distributed perspective and teachers' organizational commitment: examining the source of the leadership function. *Educational Administration Quarterly, 47*(5), 728–771.

Hutchins, E. (1993). *Cognition in the wild*. Cambridge, MA: MIT Press.

Ibrahim, M. and Iqbal, M. (2015). Teachers' perceptions of professional commitment (affective, continuance and normative commitment) to teaching profession, *European Journal of Business and Management*, *7*(10), 64-80.

Ibrahim, N., Abdul Aziz, A. H. & Nambiar, R. M. K. (2013). What master teachers do: A case study of planning, facilitating, role modelling and developing materials, *International Education Studies, 6*(6), 86-94.

Iles, P. and Feng, Y. (2011). Distributed leadership, knowledge and information management and team performance in Chinese and Western Groups. *Journal of Technology Management in China*, *6*(1), 26-42.

Ingersoll, M. L. (2010). Spheres of influence: understanding international school choice in Malaysia. *Unpublished Master's Thesis*, Faculty of Education, Queen's University, Ontario, Canada.

Inkson, K. and Kolb, D. (2002). *Management, perspectives for New Zealand*. Auckland: Pearson.

International School. (2018, May 15). Retrieved May 15, 2018 from: http://www.malaysia-education.com/international-schools.html

Irfanullah K. Allah, N. and Farhatullah, K. (2013). The impact of organizational commitment and job satisfaction on the ITL of academicians in HEIs of developing countries like Pakistan. *Industrial Engineering Letters*, *3*(9), 18-26.

Ismail, N., Kinchin, G. and Edwards, J. A. (2017). Pilot study, does it really matter? Learning lessons from conducting a pilot study for a qualitative PhD thesis, *International Journal of Social Science Research, 6*(1), 1-17.

Ismail, N., Kinchin, G. and Edwards, J. A. (2018). Pilot study, does it really matter? Learning lessons from conducting a pilot study for a qualitative PhD thesis, *International Journal of Social Science Research*, *6*(1), 1-17.

Isaiah, M. (2014). Parental involvement in the Junior Secondary Schools and its effects on teachers' job dissatisfaction. *International Review of Social Sciences and Humanities*, *4*(2), 1-12.

Izani Ibrahim (2014). Pengaruh kecerdasan emosi pemimpin dan kepimpinan servant terhadap pengurusan perubahan di sekolah. *Tesis PhD Pendidikan*, Universiti Utara Malaysia. Tidak Diterbitkan

Jackson, D. & Temperley, J. (2007). From professional learning community to networked learning community in Stoll, L. and Seashore Louis, K. (Eds), *Professional learning communities*, New York, NY: Open University Press.

Jacobs, M. (2010). *Personal posting in university course education leadership 714. The role of school leaders in special education*, Western Carolina University, Cullowehee, NC.

Jamallulail, A. W., Aida Hanim. A. H., Surayati, Z. and Md. Fiad, M. R. (2013). The relationship between headteachers' distributed leadership practices and teachers' motivation in national primary schools, *Asian Social Science, 9*(16), 161-167.

Jamalullail, W., Che Fauzlina, M. F., Hazita, I. and Samsidah, M. (2014). Headmasters' transformational leadership and their relationship with teachers' job satisfaction and teachers' commitments, *International Education Studies, 7*(13). 40-48.

Javadi, V., Bush, T. and Ng, A. (2017). Middle leadership in international schools: evidence from Malaysia, *School Leadership and Management, 37*(5), 476-499, DOI: 10.1080/13632434.2017.1366439

Javadi, M.H.M., & Yavarian, J. (2011). Effect of organizational identity and commitment on organizational citizenship behaviour (Case study: Educational Department of Isfahan province). *Interdisciplinary Journal of Contemporary Research in Business, 3*(2), 100–112.

Jeynes, W. H. (2007). The relationship between parental involvement and urban secondary school student academic achievement. *Urban Education, 42*(1), 82-110. doi:10.1177/0042085906293818

Jeynes, W. H. (2010). The salience of the subtle aspects of parental involvement and encouraging that involvement: Implications for school-based programs. *Teachers College Record, 112*(3), 747-774.

Jeynes, W. H. (2016). A meta-analysis: the relationship between parental involvement and Latino student outcomes, *Education and Urban Society*, 1-25, DOI: 10.1177/0013124516630596

Jimenez-Silva, M. & Olson, K. 92012). A community of practice in teacher education: Insights and perceptions, *International Journal of Teaching and Learning in Higher Education, 24*(3), 335-348.

Jones, M., Adams, D., Tan. M. H. J., Muniady, V., Perera, C. J. and Harris, A. (2015). Contemporary challenges and changes: principals' leadership practices in Malaysia, *Asia Pacific Journal of Education, 35*(3), 353-365.

Jones, M., Adams, D., Joo, M.T.H., Muniandy, V., Perera, C.J. and Harris, A. (2015). Contemporary challenges and changes: principals' leadership practices in Malaysia, *Asia Pacific Journal of Education, 35*(3). 353-365.

Joshi, A., Kale, S., Chandel, S. and Pal, D. K. (2015). Likert scale: explored and explained, *British Journal of Applied Science and Technology, 7*(4), 396-403.

Junqueira, K. E. & Nolan, K. T. (2016). Considering the roles of mathematics specialist teachers in grade 6-8 classroom, *IEJME – Mathematics Education, 11*(4), 975-989.

Kadı, A. (2015). Investigating teachers' organizational socialization levels and perceptions about leadership styles of their principals. *Journal of Education and Training Studies, 3*(4), 101-109. https://doi.org/10.11114/jets.v3i4.837

Kaliski, B.S. (2007). *Encyclopedia of Business and Finance*, Second edition, Thompson Gale, Detroit, p. 446

Kanchana, P. N. (2015). Role clarity and affective commitment. *International Journal of Research Institute, 2*(2), 234-249

Kanning, U. P. and Hill, A. (2013). Validation of the organizational commitment questionnaire (OCQ) in six language, *Journal of Business and Media Psychology, 4*(2), 11-21.

Kanodia, R. and Sacher, A. (2016). Trait theories of leadership, 6th International *Conference on Science, Technology and Management*, India International Centre, New Delhi, retrieved from: http://data.conferenceworld.in/ICSTM6/P141-153.pdf

Keller, D. (2015). Leadership of international schools: understanding and managing dualities, *Educational Management Administration and Leadership, 43*(6), 900-917.

Keung, E. K., and Rockinson-Szapkiw, A. J. (2013). The relationship between transformational leadership and cultural intelligence: A study of international school leaders, *Journal of Educational Administration*, *51*(6), 836-854, https://doi.org/10.1108/JEA-04-2012-0049

Khan, F., and Zafar, S. (2013). An empirical study of affective commitment across demographic groups in the banking sector of Pakistan. *Pakistan Journal of Commerce and Social Sciences, 7*(3), 555-563.

Khan, M. S., Khan, I., Kundi, G. M., Khan, S., Nawaz, A., Khan, F. and Yar, N. B. (2014). The impact of job satisfaction and organizational commitment on the intention to leave among academicians, *International Journal of Academic Research in Business and Social Sciences, 4*(2), 114-131.

Khan, R. S., Rao, B., Usman, K. and Afzal, S. (2017). The mediating role of job satisfaction between transformational leadership and organizational commitment within the SMEs of Karachi, *International Journal of Applied Business and Management Studies, 2*(1), 46-55.

Kim, H. Y. (2015). Statistical notes for clinical researchers: Type I and type II errors in statistical decision, Open Lecture on Statistics, *The Korean Academy of Conservative Dentistry*, 249-252.

Kirby, P. C., Paradise, L. V., and King, M. I. (1992). Extraordinary leaders in education: understanding transformational leadership, *The Journal of Educational Research,* *85*(5), 303-311. http://dx.doi.org/10.1080/00220671.1992.9941130

Klar, H. W. (2012). Fostering distributed instructional leadership: A sociocultural perspective of leadership development in urban high schools. *Leadership and Policy in Schools*, 365-390.

Kline, R. B. (1998). *Principles and practice of structural equation modeling*. New York, NY: The Guilford Press.

Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). New York, NY: Guilford Press.

Koul, N. (2016). Evaluation of organizational commitment of teachers: A study in selected government colleges of Chandigarh, *IOSR Journal of Business and Management, 18*(12), Ver. III, 11-15.

Koutouzis, M. and Malliara, K. (2017). Teachers' job satisfaction: the effect of principal's leadership and decision-making style, *International Journal of Education*, *9*(4), 71-88.

Koutouzis, M. and Malliara, K. (2017). Teachers' job satisfaction: the effect of principal's leadership and decision-making style, *International Journal of Education*, *9*(4), 71-88.

Kouzes, J. M. and Posner, B. Z. (1995). *The leadership challenge: How to keep getting extraordinary things done in organizations*. Jossey-Bass, San Francisco.

Krejcie, R.V. and Morgan, D.W. (1970). Determining sample size for research. *Educational and Psychological Measurements, 30*, 607-610.

Kuhn, T. S. (1962). *The structure of scientific revolution, International Encyclopedia of Unified Science*, Second Edition, Vol. I and II, Foundations of the Unity of Science, London: The University Chicago Press.

Kuhn, T.S. (1970). *The structure of scientific revolutions*. 2nd Edition, Chicago Uni. The University of Chicago Press.

Kumar, M. J. (2013). Making your research paper discoverable: title plays the winning trick, *IETE Technical Review, 30*, 361-363.

Kumar, M., Talib, S.A., and Ramayah, T. (2013). *Business research methods*, Kuala Lumpur: Oxford University Press

Kushman, J. W. (1992). The organizational dynamics of teacher workplace commitment: A study of urban elementary and middle schools, *Educational Administration Quarterly, 28*(1), 5-42.

Lai, E. (2015). Enacting principal leadership: exploiting situated possibilities to build school capacity for change, *Research Papers in Education*, *30*(1), 70-94. OI: 10.1080/02671522.2014.880939

Lamb, R. (2013). *How can managers use participative leadership effectively?* Retrieved March 17, 2018, from http://www.task.fm/participative-leadership

Lambert, L. (2002). A framework for shared leadership. *Educational Leadership, 59*(8), 37-40

Lambert, L. (2003). *Leadership capacity for lasting school improvement*. Alexandria, VA: Association for Supervision and Curriculum Development.

Larkin, I. M., Brantley-Dias, L. and Lokey-Vega, A. (2016). Job satisfaction, organizational commitment, and turnover intention of online teachers in the K-12 setting, *Faculty Publications*. 3827. https://digitalcommons.kennesaw.edu/facpubs/3827

Lazandou, A., and Iordanides, G. (2011). The principal's role in achieving school effectiveness. *International Studies in Educational Administration (Commonwealth Council for Educational Administration and Management)*, *39*(3), 3-19.

Lee, M., & Hallinger, P. (2012). National contexts influencing principals' time use and allocation: Economic development, societal culture, and educational system. *School Effectiveness and School Improvement, 23(*4), 461–482.

Lee, M., Hallinger, P., and Walker, A. (2012). A distributed perspective on instructional leadership in International Baccalaureate (IB) schools. *Educational Administration Quarterly, 48*(4), 664–698. doi:10.1177/0013161X11436271

Lee, J., Lee, H. and Park, J. (2014). Exploring the impact of empowering leadership on knowledge sharing, absorptive capacity and team performance in IT service, Info*rmation Technology & People*, *27*(3), 366-386. https://doi.org/10.1108/ITP-10-2012-0115

Lee, M. and Walker, A. (2018). School leadership in international school: perspective and practices, *Peabody Journal of Education, 93*(5), 465-467.

Lee, M., Walker, A. & Bryant, D. (2018). What leadership practices are associated with International Baccalaureate (IB) student achievement" An exploratory study of IB schools in Southeast Asia, *Peabody Journal of Education, 93*(5), 565-583.

Leite, N. r. P., de Aguiar Rodrigues, A. C. and de Albuquerque, L. G. (2014). Organizational commitment and job satisfaction: what are the potential relationships, *Brazilian Administration Review*, *11*(4), article 6, 476-495.

Leithwood, K., (1994). Leadership for school restructuring. *Educational Administration Quarterly, 30* (4), 498-518

Leithwood, K. and Day, C. (2007). Starting with what we know, in Day, C. and Leithwood, K. (eds.) *Successful principal leadership in times of change.* Dordrecht, Netherlands: Springer. 1-15

Leithwood, K., Day, C., Sammons, P., Harris, A., & Hopkins, D. (2006). *National College for School Leadership*, Annesley: Department for education and Skills. University of Nottingham.

Leithwood, K., Day, C., Sammons, P., Harris, A. & Hopkins, D. (2007). *Leadership and student learning outcomes*, Interim Report, London: DCSF.

Leithwood, K. and Jantzi, D. (1999). The relative effects of principal and teacher sources of leadership on student engagement with school. *Educational Administration Quarterly*, *35*, 679–706.

Leithwood, K., & Jantzi, D. (2000). The effects of different sources of leadership on student engagement in school. In K. A. Riley & K. S. Louis (Eds.), *Leadership for change and school reform: International perspectives* (pp. 50-66). New York: Routledge Falmer

Leithwood, K., Louis, K.S., Anderson, S. and Wahlstron, K. (2004). *How leadership influences students learning*. Retrieved May 15, 2018 from: www.wallacefoundation.org

Leithwood, K. and Mascall, B. (2008). Collective leadership effects on student achievement, *Educational Administration Quarterly, 44*(4), 529-561.

Leithwood, K., Mascall, B., and Strauss, T. (2009). New perspectives on an old idea. In K. Leithwood, B., Mascall, & T. Strauss (Eds.), *Distributed leadership according to the evidence* (1-14). London: Routledge.

Leithwood, K., Mascall, B., Strauss, T., Sacks, R., Memon, N., and Yaskina, A. (2006). Distributing leadership to make schools smarter: Taking the ego out of the system. *Leadership and Policy in Schools*, *6*(1), 37-67.

Leithwood, K. and Menzies, T. (1998). A review of research concerning the implementation of site-based management. *School Effectiveness and School Improvement 9*(3), 233–285.

Leithwood, K., & Montgomery, D. (1982). The role of the elementary principal in program improvement. *Review of Educational Research, 52*, 309-339

Leithwood, K. A. and Riehl, C. (2003). *What we know about successful school leadership*. Philadelphia, PA: Laboratory for Student Success, Temple University

Leithwood, K. A., & Seashore-Louis, K. (2012). *Linking leadership to student learning*. San Francisco, CA: Jossey-Bass.

Leithwood, K., Sun, J., and Pollock, K. (2017) (eds.) How school leaders contribute to student success: The four paths framework, *Studies in Educational Leadership, 23*, Cham: Springer

Leong, F. T. L., and Vaux, A. (1992). Job Descriptive Index, In D. J. Keyser and R. C. Sweetland (Eds.), *Test critiques* (Vol. M, pp. 319-334). Austin, TX, USA: Pro-Ed

Lester, F. (2005). On the theoretical, conceptual, and philosophical foundations for research in mathematics education. *ZDM: The International Journal on Mathematical Education*, *37*(6), 457-467.

Lester, P. E. (1987). Development and factor analysis of the Teacher Job Satisfaction Questionnaire (TJSQ). *Educational and Psychological Measurement, 47*(1), 223-233. doi:10.1177/0013164487471031

Lewis, P. and Murphy, R. (2008) *Review of the landscape: Leadership and leadership development.* Nottingham: National College for School Leadership

Lieberman, A., and Miller, L. (2004). *Teacher leadership*. San Francisco, CA: Jossey-Bass

Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology, 140*, 44-53.

Lin, W., Lee, M. & Riordan, G. (2018). The role of teacher leadership in professional learning community (PLC) in International Baccalaureate (IB) schools: A social network approach. *Peabody Journal of Education, 93*(5), 534-550.

Linarce, J.M. (2012). *A user's guide to Winsteps Ministeps Rasch model computer programs* [version 3.74.0], Chicago IL: Winstep.com

Lincoln, Y. S. and Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage Publications.

Lincoln, J. R. and Kalleberg, A. L. (1990). *Culture, control and commitment. A study of work organization and work attitudes in the United States and Japan*, Cambridge: Cambridge University Press.

Lipham, J. (1961). *Effective principal, effective school*. Reston, VA: National Association of Secondary School Principals

Liu, Y. and Werblow, J. (2019). The operation of distributed leadership and the relationship with organisational commitment and job satisfaction of principles and teachers: A multi-level model and meta-analysis using the 2013 TALIS data, *International Journal of Educational Research*, *96*, 41-55. doi: 10.1016/j.ijer.2019.05.005

Lizote, S.A., Verdinelli, M. A., and do Nascimento, S. (2017). Organizational commitment and job satisfaction: A study with municipal civil servants, *Brazilian Journal of Public Administration*, *51*(6), 947-967.

Locke, E.A. (1969), What is job satisfaction? *Organizational Behavior and Human Performance*, *4*(4), 309-336.

Loehlin, J. C. (2004). *Latent variable models: An introduction to factor, path, and structural equation analysis* (4th ed.). Mahwah, NJ: Lawrence Erlbaum

Lokman, M. T., Sui, L. L., Mohammed, B., Musah, H., Jaffri, M. N., Naruzuan, M. S. and Mohd Hanafi, M. Y. (2016). Challenges in distributed leadership: evidence from the perspective of headteachers, *International Journal of Education Management*, *30*(6), 1-24.

Lucian, R. (2016). Rethinking the use of Likert scale: tradition or technical choice? *Brazilian Journal of Marketing, Opinion and Media Research, 9*(1), 11-26.

Lunenburg, F. (2010). Leader-member exchange theory: Another perspective on the leadership process. *International Journal of Management, Business and Administration, 13*(1), 1-5.

Lyso, I. H., Stensaker, B., Aamodt, P. O. and Mjoen, K. (2011). *Led to leadership. The national leadership education for school principals in lower and upper secondary schools in Norway: in an international perspective*, Report 1 from Evaluation of the National Leadership Education for School Principals, retrieved from: https://www.udir.no/globalassets/filer/tall-og-forskning/rapporter/2011/5/nifu-report-1-led-to-leadership.pdf

MacBeath, J. (Ed.). (1998). *Effective school leadership: Responding to change*. London: Paul Chapman

MacDonald, J. (2006). The international school industry: examining international schools through an economic lens, *Journal of Research in International Education, 5*(2), 1919-213.

Machumu, H. J. and Maitila, M. M. (2014). Influence of leadership styles on teachers' job satisfaction: a case of selected primary schools in Songea and Morogoro Districts, Tanzania, *International Journal of Educational Administration and Policy Studies*, *6*(4), 53-61. DOI: 10.5897/IJEAPS12/036

MacKinnon, D. P. (2008). *Introduction to statistical mediation analysis*. Hillsdale, NJ: Erlbaum.

MacKinnon, D. P., Coxe, S., and Baraldi, A. N. (2012). Guidelines for the investigation of mediating variables in business research. *Journal of Business and Psychology, 27*(1), 1-14.

MacKinnon, D. P., Fairchild, A. J. and Fritz, M. S. (2007). Mediation analysis, *Annual Review of Psychology, 58*, 593-614.

Madenoğlu, C., Uysal, Ş., Sarıer, Y., & Banoğlu, K. (2014). Okul müdürlerinin etik liderlik davranışları ile öğretmenlerin iş doyumlarının örgütsel bağlılıkla ilişkisi [The relationship between school principals' ethical leadership behaviours and teachers' job satisfaciton]. *Kuram ve Uygulamada Eğitim Yönetimi Dergisi, 20*(1), 47-69. https://doi.org/10.14527/kuey.2014.00

Maghradi, A. (1999). Assessing the effect of job satisfaction on managers. *International Journal of Value Based Management, 12*(1), 1-12

Malakolunthu, S., Idris, A. R., and Rengasamy, N. C. (2010). Teacher professional experience and performance: Impact of the work environment and general welfare in Malaysian secondary schools. *Asia Pacific Education Review, 11*(4), 609-617. doi:10.1007/s12564- 010-9108-y

Malasa, D. P. (2007). Effective school leadership: An exploration of issues inhibiting the effectiveness of school leadership in Solomon Island's secondary schools, *Master Thesis,* University of Waikato, retrieved from: https://core.ac.uk/download/pdf/29196714.pdf

Malaysia Education (2019). *Private schools and international schools in Malaysia*, Retrieved May 12, 2019 from: http://www.malaysia-education.com/schools.html

Malhotra, N. K. (2008). *Basic marketing research*, Amazon.com.

Malik, W. U., Javed, M. and Hassan, S. T. (2017). Influence of transformational leadership components on job satisfaction and organizational commitment, *Pakistan Journal of Commerce and Social Science*, *11*(1), 146-165.

Malik, M. E., Nawab, S., Naeem, B. and Danish, R. Q. (2010). Job satisfaction and organizational commitment of university teachers in public sector of Pakistan, *International Journal of Business and Management*, *5*(6), 17-26.

Malloy, J. P. (2012). *Effects of distributed leadership on teachers' academic optimism and student achievement,* Doctorate in Education, Department of Theory and Policy Studies, Ontario Institute for Studies in Education of The University of Toronto

Mancuso, S. V. (2010). *An analysis of factors associated with teacher turnover in American overseas schools* (Doctoral dissertation). Retrieved from Lehigh University

Mancuso, S. V., Roberts, L., & White, G. P. (2010). Teacher retention in international schools: The key role of school leadership, *Journal of Research in International Education, 9*(3), 306-323.

March, J. G. and Simon, H. A. (1958). University of Illinois at Urbana-Champaign's Academy for entrepreneurial leadership historical research *Reference in Entrepreneurship*. Available at SSRN: https://ssrn.com/abstract=1496194

Marcoulides, G. A., and Saunders, C. (2006, June). Editor's comments – PLS: A Silver Bullet? *MIS Quarterly*, *30*(2), iii-ix.

Mardhiah, J. and Rabiatul Adawiyah, A.R. (2016). Hubungan kualiti penyeliaan pengajaran dengan efikasi kendiri guru, *Working Paper,* Universiti Sains Malaysia, 3 July

Markovits, Y., Boer, D. and van Dick, R. (2014). Economic crisis and the employee: The effects of economic crisis on employee job satisfaction, commitment, and self-regulation. *European Management Journal, 32*(3), 413-422.

Markovits, Y, Davis, A.J., Fay, D., and Dick, R.V. (2010): The link between job satisfaction and organizational commitment: differences between public and private sector employees, *International Public Management Journal*, *13*(2), 177-196

Marks, H. M., & Printy, S. M. (2003). Principal leadership and school performance: An integration of transformational and instructional leadership. *Educational Administration Quarterly, 39*(3), 370–397. https://doi.org/10.1177/0013161X03253412

Marlia, J. and Yahya, D. (2016). Distributed leadership and commitment of teachers based on cohort of generations, *Proceedings of the International Conference on education towards Global Peace,* pp. 1-17.

Mascal, B., K. Leithwood, T. Straus, R. and Sacks, P. (2008). The relationship between distributed leadership and teachers' academic optimism. *Journal of Educational Administration, 46*(2), 214-228.

Mathieu, J.E. and Zajac, D. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment, *Psychological Bulletin, 108*, 171-194. https://doi.org/10.1037/0033-2909.108.2.171

Mayrowetzç D. (2008). Making sense of distributed leadership: exploring the multiple usages of the concept in the field. *Educational Administration Quarterly, 44*(3), 424–435

Mazlini, A. and Nor Shaheera, I. (2018). The willingness of mathematics teachers in facing 21st century skills, *The Turkish Online Journal of Design, Art, and Communication, Special Edition*, 1346-1353.

McCarty, S., Wallin, P. and Boggan, M. (2014). Shared leadership model for 21st century school: principal and counselor collaborative leadership, *National Forum of Educational Administration and Supervision Journal*, *32*(4), 1-9

McClesky, J. A. (2014). Situational, transformational and transactional leadership and leadership development, *Journal of Business Studies Quarterly, 5*(4), 117-130.

McCollum, I. (2014). *Beginning teachers' perceptions of a teacher mentoring program* (Doctoral dissertation). Retrieved from Walden University.

McLeod, S. A. (2019, Aug 03). *Likert scale*. Simply Psychology. Retrieved May 31, 2019 from: https://www.simplypsychology.org/likert-scale.html

McQuitty, S. (2004). Statistical power and structural equation models in business research, *Journal of Business Research, 57*(2), 1175-183.

Memon, A. H. and Rahman, I. A. (2014). SEM-PLS analysis of inhibiting factors of cost performance for large construction projects in Malaysia: perspective of clients and consultants, *The Scientific World Journal, 1*, 1-10.

Memon, M. A., Ting, H., Ramayah, T., Chuah, F. and Cheah, J. H. (2017). A review of the methodological misconceptions and guidelines related to the application of structural equation modeling: A Malaysian scenario, *Journal of Applied Structural Equation Modeling, 1*(1), i-xiii.

Mendels, P., and Mitgang l. D. (2013. Creating strong principals. *Educational Leadership, 70* (7), 22-29.

Merriam, S. B. (2001). *Qualitative research and case study applications in education*, 2nd edition, San Francisco: Jossey_Bass.

Meyer, J. and Allen, N. (1984). Testing the 'side-bet theory' of organizational commitment: Some methodological considerations. *Journal of Applied Psychology, 69*, 372-378.

Meyer, J. and Allen, N. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review, 1*(1), 61-89.

Meyer, J.P., and Allen, N.J. (1997). *Commitment in the workplace: Theory, research and application,* Thousand Oaks, CA: Sage Publications

Meyer, J., Allen, N., & Smith, C. (1993). Commitment to Organizations and occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology, 78*, 538-551

Miles, M. B., and Huberman, A. M. (1994*). Qualitative data analysis: An expanded source book* (2nd ed.). Newbury Park, CA: Sage.

Ministry of Education Malaysia. (2008). *Education in Malaysia: A journey to excellence*. Malaysia: Educational Planning and Research Division.

Ministry of Education. (2012). *Malaysia Education Blueprint 2013-2025*. Retrieved May 28, 2018, from http://www.moe.gov.my/userfiles/file/PPP/PreliminaryBlueprint-Eng.pdf

Ministry of Education (2013). *Malaysia Education Blueprint 2013-2025*. Kuala Lumpur: Ministry of Education

Ministry of Education. (2017). *Quick Facts 2017: Malaysia Educational Statistics*, Kuala Lumpur: Educational Planning and Research Division.

Mirkamali, S. M., Thani, F. N. N. and Alami, F. (2011). Examining the role of transformational leadership and job satisfaction in the organizational learning of an automotive manufacturing company, *Procedia – Social and Behavioral Sciences, 29*, 139-148.

Mishra, P., Pandey, C. M., Singhm U., Guptam A., Sahum C. & Keshri, A. (2019). Descriptive statistics and normality tests for statistical data. *Annals of Cardiac Anesthesia,22*, 67-72.

Mitchell, R. (2017). Democracy or control? The participation of management, teachers, students and parents in school leadership in Tigray, *Ethiopia. International Journal of Educational Development*, *55*, 49–55.

Mitgang, L., Gill, J., & Cummings, H. J. (2013, February). *Districts matter: Cultivating the principals urban schools need*. (T. W. Foundation, Producer, & The Wallace Foundation) Retrieved February 26, 2015, from Wallace foundation.org: www.wallacefoundation.org

Mohammed, F., and Eleswed, M. (2013). Job satisfaction and organizational commitment: A co-relational study in Bahrain. *International Journal of Business, Humanities and Technology, 3*(5), 43-53.

Monette, D.R., Gullivan, T.J. and DeJong, C.R. (2010). *Applied social research: A tool for the human resources*, Cengage Learning

Moonsri, K. (2018). The influence of job satisfaction affecting organizational commitment of the small and medium business employee, *Asian Administration and Management Review*, *1*(1), 138-146.

Morgan, D. L. (2014). Pragmatism as a paradigm for social research, *Qualitative Inquiry*, *20*(8), 1045-1053.

Morris, M. E. (2016). School and district leadership and the job satisfaction of novice teachers: the influence of distributed leadership, *Doctoral Thesis*, Boston College

Morrison, A. R. (2013). Educational leadership and change: structural challenges in the implementation of a shifting paradigm, *School leadership and Management, 33*(4), 412-424. DOI: 10.1080/13632434.2013.813462

Morrow, P. C. (2011). Managing organizational commitment: insights from longitudinal research. *Journal of Vocational Behavior, 79*, 18–35. doi: 10.1016/j.jvb.2010.12.008

Mosadeghrad, A. M. and Ferdosi, M. (2013). Leadership, job satisfaction and organizational commitment in health sector: proposing and testing a model, *Material Socio-Media*, *25*(2), 121-126.

Mottaz, C.J. (1988), Work satisfaction among hospital nurses. *Hospital and Health Services Administration*, *33*(1), 57-74.

Mowday, R. T., R. M. Steers, and L. W. Porter. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior, 14*(2), 224–247. doi:10.1016/0001-8791(79)90072-1

Mowday, R.T., Porter, L.W. & Steers, R. (1982). *Employee-organizational linkages: The phycology of commitment, absenteeism, and turnover*, New York: Academic Press.

Moynihan, D. P., and Pandey, S. K. (2007). Finding workable levers over work motivation: comparing job satisfaction, job involvement, and organizational commitment. *Administration & Society, 39*, 803–832. doi: 10.1177/0095399707305546

Mujis, D. (2011). Leadership and organizational performance: from research to prescription? *International Journal of Educational Management, 25*,1,45-60.

Muijs, D., Chapman, C. and Armstrong, P. (2013). Can early career teachers be teacher leaders? A study of second-year trainees in the teach first alternative certification programme, *Educational Management Administration & Leadership, 41*(6), 761-781.

Mukhtar, Hapzi, A. and Rusmini (2017). Teacher's job satisfaction: an analysis of school's principal leadership and school culture at the State Islamic Senior High School in Jambi Province, *Saudi Journal of Humanities and Social Sciences, 2*(5), 404-415.

Mulford, B., and Silins, H. (2005). Developing leadership for organisational learning. In M.J. Coles and G. Southworth, (Eds), *Developing leadership: creating the schools of tomorrow*. Maidenhead, UK: Open University Press

Mulford, B., & Silins, H. (2009). Revised models and conceptualization of successful school principalship in Tasmania. In B. Mulford & B. Edmunds (Eds.), *Successful school principalship in Tasmania* (pp. 157-183). Launceston, Australia: University of Tasmania, Faculty of Education.

Murphy, J., & Hallinger, P. (1992). The principalship in an era of transformation. *Journal of Educational Administration, 30*(3), 77-88.

Murphy, J., Smylie, M., Mayrowetz, D., and Louis, K. (2009). The role of the principal in fostering the development of distributed leadership. *School Leadership and Management, 29*(2), 181-214.

Mustabsar, A., Muhammad Shaukat, M. and Amina, Q. (2015). A review: job satisfaction act as mediator between spiritual intelligence and organizational commitment, *International Review of Management and Marketing, 5*(4), 203-210

Mutch, C (2005). *Doing educational research: A practitioner's guide to getting started*. Wellington, New Zealand: NZCER Press.

Nagar, K. (2012). Organizational commitment and job satisfaction among teachers during times of burnout, *VIKALPA: The Journal for Decision Makers*, *37*(2), 43-60

Naicker, S. R. and Maestry, R. (2013). Teachers' reflections on distributive leadership in public primary schools in Soweto, *South African Journal of Education*, *33*(2), 1-15.

Nakata, A., Irie, M., and Takahashi, M. (2013). A single-item global job satisfaction measure is associated with quantitative blood immune indices in white-collar employees. *Industrial Health*, *51*(2), 193-201. doi:10.2486/indhealth.2012-0059

Nandamuri, P. P. and Rao, K. V. (2011). Leadership and school principals – a study, Asia Pacific *Journal of Research in Business Management, 2*(12), 18-28.

Nasa, A., S. Pilay, and A. Vijain-Dren. (2014). International School Boom. *The New Strait Times* (online). Retrieved from: https://www.pressreader.com/malaysia/new-straitstimes/20170423/281479276298177

Nasa, A., and Pilay, S. (2017). International schools: why their numbers are growing, *New Strait Times*, April 23, 2017, Retrieved May 15, 2018 from: https://www.nst.com.my/news/exclusive/2017/04/233140/international-schools-why-their-numbers-are-growing

Nasra, M. A., & Heilbrunn, S. (2016). Transformational leadership and organizational citizenship behavior in the Arab educational system in Israel: The impact of trust and job satisfaction. *Educational Management Administration & Leadership, 44*(3), 380-396. https://doi.org/10.1177/1741143214549975

Natsiopoulou, E., & Giouroukakis, V. (2010). When teachers run the school. *Educational leadership , 67* (7)

Nazim, F. and Mahmood, A. (2016). Principals' transformational and transactional leadership style and job satisfaction of college teachers, *Journal of Education and Practice*, *7*(34), 18-22.

Nazir, S., Wang, Q., Li, H. and Shafi, A. (2018). Influence of social exchange relationships on affective commitment and innovative behaviour: role of perceived organizational support, *Sustainability, 10*(4418), 1-20, doi:10.3390/su10124418

Neimann, R. and Kotze, T. (2006). The relationship between leadership practices and organizational culture: An educational management perspective, *South African Journal of Education*, *26*(4), 1-10.

Neubert, M. J., and Wu, C. (2009). Action commitments In Klein, H. J. Becker, T. E. and Meyer, J. P., *Commitment in organizations: Accumulated wisdom and new directions*, pp. 179 −213. New York: Routledge

Neuman, W. L. (2011). *Social research methods: qualitative and quantitative approaches*, 7th Edition, Pearson Inc.

Ngotngamwong, R. (2012). Effects of participative leadership on teacher job satisfaction. *Australian Journal of Management, 10*(2), 15-30. http://dx.doi.org/10.1177/00131610121969460

Nguni, S., Sleegers, P. and Denessen, E. (2006). Transformational and transactional leadership effects on teachers' job satisfaction, organizational commitment and organizational citizenship behavior in primary schools: The Tanzanian case, *School Effectiveness and School Improvement: An International Journal of Research, Policy and Practice, 17*(2), 145-177.

Nifadkar, R. S., and Dongre, A. P. (2014). To study the impact of job satisfaction and demographic factors on organizational commitment among girls' college, Pune, India. *Journal of Business Management and Social Sciences Research, 3*(1), 1-8.

Nikezic, S., Puric, S. and Puric, J. (2012). Transactional and transformational leadership: development through changes, *International Journal for Quality Research, 6(*3), 285-296.

Nolan, J. J., & Hoover, L. A. (2004). *Teacher supervision and evaluation*: NJ: John Willey & Sons

Noraani, M. (2013). Measuring job satisfaction from the perspective of interpersonal relationship and faculty workload among academic staff at public universities in Kelantan, Malaysia, *International Journal of Business and Social Science*, *4*(15), Special Issue, 120-124.

Norizan, I. (2012). Organizational commitment and job satisfaction among staff of higher learning education institutions in Kelantan, *Master of Human Resource Management Thesis*, Universiti Utara Malaysia, retrieved from: http://etd.uum.edu.my/3003/1/Norizan_Ismail.pdf

Northouse, P.G. (2007). *Leadership: Theory and practice*. 4th Edition, Sage, Thousand Oaks.

Northouse, P. G. (2016). *Leadership: Theory and practice*. 7th Edition, Sage, Thousand Oaks.

Northouse, P. G. (2015). *Leadership: Theory and practice*, London: Sage publications.

Norwawi, S. (2017). Leadership features of high performing principals in selected Malaysian secondary schools, *Unpublished PhD thesis*, University of Nottingham, Nottingham.

Nunnally, J. (1978). *Psychometric theory*. New York, NY: McGraw-Hill.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd Ed.). New York: McGrawHill

Nurharani, S., Norshidah, N. and Afni Anida, A. (2013). Rekindle teachers' organizational commitment: The effect of transformational leadership behavior, *Procedia – Social and Behavioral Sciences, 90*, 566-574.

Nyenyembe, F. W., Maslowski, R., Nimrod, B. S., & Peter, L. (2016). Leadership styles and teachers' job satisfaction in Tanzanian public secondary schools. *Universal Journal of Educational Research, 4*(5), 980-988. https://doi.org/10.13189/ujer.2016.040507

Odland, G. and Ruzicka, M. (2009). An investigation into teacher turnover in international schools, *Journal of Research in International Education, 8*(1), 5-29.

Oduro, G. (2004). Distributed leadership in schools. *Education Journal, 80*, 23–25.

Oduro, G. K. T. (2004). Distributed leadership in Schools: What English head teachers say about the 'pull' and 'push' factors, *British Educational Research Association Annual Conference*, University of Manchester, 16-18 September

OECD (2014). *TALIS 2013 results: An international perspective on teaching and learning.* Retrieved from http://www.istruzione.it/allegati/2014/OCSE_TALIS_Rapporto_Internazionale_EN.pdf.

Oguz, E. (2010). The relationship between the leadership styles of the school administrators and the organizational citizenship behaviours of teachers. *Procedia Social and Behavioral Sciences*, *9*, 1188–1193.

Olcer, F. (2015). An empirical study on the relationships among transformational leadership dimensions, job satisfaction, and organizational commitment of bank employees, *International Journal of Research in Commerce and Management, 6*(3), 31-39.

Ololube, N. P. (2013). *Educational management, planning and supervision: Model for effective implementation*. Owerri: SpringField Publishers.

Oluwatayo, J. (2012). Validity and reliability issues in educational research. *Journal of Educational and Social Research 2,* 391-400.

Pasalo, E. C. (2012). *Teacher satisfaction and teacher retention in the State of Hawaii: A mixed method study using a modified Delphi design* (Doctoral dissertation). Retrieved from Jones International University

Pashiardis, P. (1993). Group decision making: the role of the principal. *International Journal of Educational Management, 7*(2), 8-11

Paulhus, D. L. (1981). Control of social desirability in personality inventories: Principal-factor deletion. *Journal of Research in Personality, 15,* 383-388

Pearce, C. and Conger, J.A. (2003). *Shared leadership: Reframing the Hows and Whys of leadership*. London: Sage

Pearce, C. and Sims, H. P. (2002). Vertical versus shared leadership as predictors of the effectiveness of change management teams: An examination of aversive, directive, transactional, transformational and empowering leader behaviors, *Group Dynamics Theory Research and Practice, 6*(2), 172-197.

Penlington, C., Kington, A., and Day, C. (2008). Leadership in improving schools: A qualitative perspective. *School Leadership and Management*, *28*(1), 65 - 82. http://dx.doi.org/10.1080/13632430701800086

Pepe, A., and Addimando, L. (2013). Comparison of occupational stress in response to challenging behaviours between general and special education primary teachers in Northern Italy. *International Journal of Special Education*, *28*(1), 14-26

Pepe, A, Addimando, L. and Veronese, G. (2017). Measuring teacher job satisfaction: assessing invariance in the teacher job satisfaction scale (TJSS) across six countries, *Europe's Journal of Psychology, 13*(3), 396-416.

Peretomode, V. F. and Bello, S. O. (2018). Analysis of teachers' commitment and dimensions of organizational commitment in Edo State public secondary schools, *Journal of Educational and Social Research, 8*(3), 87-92

Perry, M. J. (2003). Distributed cognition. In J. M. Carroll (Ed.), *HCI models,theories, and frameworks: Toward a multidisciplinary science* (pp. 212–223). San Francisco, CA, USA: Morgan Kauffman Publishers.

Pitsoe, V. J. (2013). Teacher attrition in South Africa: Trends, challenges, and prospects. *Journal of Social Science, 36*(3). 309-318. doi: 10.1596/978-0-8213-7066-7

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y. and Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychol*ogy, *88*, 879–903.

Podsakoff, P. M., Mackenzie, S. B. and Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *The Annual Review of Psychology*, *63*, 539-569.

Polit, D. F., Beck, C. T. and Hungler, B. P. (2001). *Essentials of nursing research: methods, appraisal and utilization*, 5th ed. Philadelphia: Lippincott.

Polit, D.F. and Beck, C.T. (2004). *Nursing research: Principles and methods*. 7th Edition, Lippincott Williams & Wilkins, Philadelphia.

Polit, D.F. and Beck, C.T. (2008). *Nursing research: Generating and assessing evidence for nursing practice*. 8th Edition, Wolters Kluwer Health/Lippincott Williams & Wilkins, Philadelphia, 796 s.

Polit, D. F., & Beck, C. T. (2010). Generalization in quantitative and qualitative research: Myths and strategies. *International Journal of Nursing Studies, 47*(11), 1451-1458. doi: https://doi.org/10.1016/j.ijnurstu.2010.06.004

Pont, B., Nusche, D. and Moormen, H. (2008). Improving school leadership, Volume 1: Policy and practice, organization for economic cooperation and development (OECD), *International Journal of Educational Management, 25*(1), 1-10.

Porter, L, Steer, R., Mowday, R., Boulian, P. (1974). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology, 59*, 603-609.

Price, J. L., and Mueller, C. W. (1981). A causal model of turnover for nurses. *Academy of Management Journal, 24*, 543–565. doi: 10.2307/255574

Prime Minister Department (2017). *National Transformation Programme Annual Report 2017*, Kuala Lumpur: Civil Service Delivery Unit.

Provost, J., Boscardin, M. and Wells, C. (2017). Perceptions of principal leadership behaviors in Massachusetts in the era of education reform, *Journal of School Leadership*, *20*, 532-560.

Purwanto, D. (2017). The role of school principal and school supervisors in improving teacher competency in the application of leading scientific approach in vocational high school, *Journal of Applied Management, 15*(3), 389-398.

Qian, J., Wang, B., Han, Z. and Song, B. (2017). Ethical leadership, leader-member exchange and feedback seeking: A double-moderated mediation model of emotional intelligence and work-unit structure, *Frontiers in Psychology*, 1-11. doi: 10.3389/fpsyg.2017.01174

Ramey, M. (2013). The international school scene in Malaysia: An overview. *The Expat Education Guide* (online). Retrieved May 15, 2018 from: http://www.theexpatgroup.com/magazine/Education-Guide-2013.pdf.

Rana, S., and Agrawal, P. (2016). Influence of demographical variables on teachers' affective commitment: A study of management institutions, *European Academic Research, IV* (6), 5325-5348.

Rasch, G. (1960). *Probabilistic model for some intelligence and achievement tests*. Copenhagen: Danish Institute for Educational Research.

Raudenbush, S. W. Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods*, second edition. Newbury Park, CA: Sage.

Reckase, M. D. (1979). *Uni-factor latent trait models applied to multifactor tests: results and implications*, *4*(3), 207-230.

Rhodes, C. and Brundrett, M. (2006). The identification, development, succession and retention of leadership talent in contextually different primary schools: A case study located within the English West Midlands, *School Leadership and Management*, *26*(3), 269-287.

Rhodes, C. and Brundrett, M. (2012) Retaining leadership talent in schools, *International Studies in Educational Administration, 40,* 1, 19 – 34.

Richey, R.W. (1973). *Planning for teaching: An introduction to education,* McGraw-Hill, New York

Riesbeck, R. R. (2008). *The impact of leadership and other factors on successful International Baccalaureate Diploma Programs in the United States* (Unpublished doctoral dissertation). College of William and Mary, Williamsburg, VA.

Ripley, R. E. & Ripley, M. J. (1992). Empowerment the corner stone of quality: Empowering management in innovative organizations in the 1990s, *Management Decision, 30*(4), 20- 43. http://dx.doi.org/10.1108/00251749210014743

Ritter, A. A. (2016). *Why do they stay? An analysis of factors influencing retention of international school teachers,* Thesis. Massey University, Albany, New Zealand.

Robert, A.E. (2000), *The psychology of ultimate concerns: Motivation and spirituality in personality*. New York: Guilford Publication

Roberts, B, W., Hill, P. L. and Davis, J. P. (2017). How to change conscientiousness: The sociogenic trait intervention model, *Personality Disorders: Theory, Research and Treatment, 8*(3), 199-205, http://dx.doi.org/10.1037/per0000242

Robertson, J. (1995). *Theories of leadership*. PROF 502- 04A (NET) Class Forum

Robinson, V.M.J. (2008). Fit for purpose: An educationally relevant account of distributed leadership, distributed leadership: What we know? *Journal of Educational Administration*, *46*(2), 1-10.

Robinson, V. M. J. (2008). Forging the links between distributed leadership and educational outcomes. *Journal of Educational Administration, 46*(2), 241–256. https:// doi.org/10.1108/09578230810863299.

Robinson, V., Hohepa, M. and Lloyd, C. (2009). *School leadership and student outcomes: Identifying what works and why (Best Evidence Synthesis Iteration).* Auckland: University of Auckland

Robinson, V. M., Lloyd, C. A., & Rowe, K. J. (2008). The impact of leadership on student outcomes: An analysis of the differential effects of leadership types. *Educational Administration Quarterly, 44*, 635-674.

Rocco, T. S. and Plakhotnik, M. S. (2009). Literature reviews, conceptual frameworks, and theoretical frameworks: terms, functions and distinctions, *Human Resource Development Review, 8*(1), 120-130.

Rogers, Y. (1997). *A brief introduction to distributed cognition*. United Kingdom, Europe. https://doi.org/10.1007/s00607

Ros Intan Safinas, M., Nurhazirah, H., Syukrina Alini, M. A., Baharom, A, R. and Ramlee, A. R. (2014). Relationship between job satisfaction and organizational commitment at health tourism hospital in Malaysia, *Knowledge Management International Conference,* 738-743.

Rosenthal, C.S. (1998). Determinants of collaborative leadership: civic engagement, gender or organizational norms? *Political Research Quarterly, 51*, 847–868.

Ross. J. A., & Gray, P. (2006). Transformational leadership and teacher commitment to organizational values: The mediating effects of collective teacher efficacy. *School Effectiveness and School Improvement, 17,* 179-199. doi:10.1080/09243450600565795

Ross, L., Lutfi, G. A. and Hope, W. C. (2016). Distributed leadership and teachers' affective commitment, *NASSP Bulletin, 100*(3), 159-169. doi:10.1177/0192636516681842

Ross, L., Rix, M. and Gold, J. (2005). Learning distributed leadership: Part 1, *Industrial and Commercial Training*, *37* (3), 1-10.

Rosseel, Y., Devos, G., & Hulpia, H. (2009). The relationship between the perception of distributed leadership in secondary schools and teachers' and teacher leaders' job satisfaction and organizational commitment. *School Effectiveness and School Improvement, 20*(3), 291–317. https://doi.org/10.1080/09243450902909840.

Ruiz-Menjivar, J. (2016). Researcher Profile: An Interview with Jorge Ruiz-Menjivar. *Journal of Financial Therapy*, 7 (1) 7. https://doi.org/10.4148/1944

Rusbult, C. E. (1983). A longitudinal test of the investment model: The development (and deterioration) of satisfaction and commitment in heterosexual involvements. *Journal of Personality and Social Psychology, 45*, 101-117.

Rusbult, C. E., Coolsen, M. K., Kirchner, J. L., and Clarke, J. A. (2006). Commitment. In A. L. Vangelisti and D. Perlman (Eds.), *The Cambridge handbook of personal relationships* (pp. 615-635). New York, NY, US: Cambridge University Press.

Rusbult, C. E., Agnew, C. and Arriaga, X. (2011). The investment model of commitment process, *Department of Psychological Sciences Faculty Publications, Paper 26,* 1-34.

Rybing, J. (2018). *Studying simulations with distributed cognition*. Dissertation. Linkoping University, Sweden.

Saunders, M, Lewis, P & Thornhill, A. (2012). *Research methods for business students*,6th edition, Pearson Education Limited

Salahuddin, A. N. (2010 - 2011, June - July). Distributed leadership in secondary schools: Possibilities and impediments in Bangladesh. *The Arts Faculty Journal 4*, 19-32.

Salancik, G. (1977). Commitment and the control of organizational behavior and belief, In Staw, B. and Salancik, G., Eds., *New directions in organizational behavior*, St. Clair Press, Chicago, 1-

Samuel, C. C. (2006). *Supervision*: New York: McGraw-Hill Company.

Santos,S., Cadime, I., Viana, F., Prieto, G., Chaves-Sousa, S., Spinillo, A. G. and Ribeiro, I. (2016). An application of the Rasch Model to reading comprehension measurement, *Psicologia: Reflexao e Critica*, 29-38.

Sanzo, K. L., Sherman, W. H. and Clyaton, J. (2011). Leadership practices of successful middle school principals, *Journal of Educational Administration, 49*(1), 31-45. DOI 10.1108/09578231111102045

Sarafidou, J., and Chatziioannidis, G. (2013). Teacher participation in decision making and its impact on school and teachers. *International Journal of Educational Management 27*(2), 170- 183. doi: 10.1108/09513541311297586

Sarstedt, M. and Schloderer, M. P. (2010). Developing a measurement approach for reputation of non-profit organizations, *International Journal of Nonprofit & Voluntary Sector Marketing, 15*(3), 276-299.

Saunders, M., Lewis, P. and Thornhill, A. (2007). *Research methods for business students*. 4th Edition, Financial Times Prentice Hall, Edinburgh Gate, Harlow.

Sayadi, Y. (2016). The effect of dimensions of transformational, transactional, and non-leadership on the job satisfaction and organizational commitment of teachers in Iran. *Management in Education, 30*(2), 57-65. https://doi.org/10.1177/0892020615625363

Scarpello, V., and Campbell, J. P. (1983). Job satisfaction: Are all the parts there? *Personnel Psychology*, *36*, 577-600. doi:10.1111/j.1744-6570.1983.tb02236.x

Schriesheim, C. and Tsui, A.S. (1980). Development and validation of a short satisfaction instrument for use in survey feedback interventions, *Western Academy of Management Meeting*, pp. 115-117

Schooladvisor.my (2019). *List of 144 international schools in Malaysia*, retrieved from: https://schooladvisor.my/international-schools/

Scott, S. G., and Bruce, R. A. (1995). Decision-making style: The development and assessment of a new measure. *Educational and Psychological Measurement*, *55*(5), 818-831. Https://doi.org/10.1177/0013164495055005017

Sekaran, U. & Bougie, R (2010). *Research methods for business*. John Wiley & Sons Ltd

Sekaran, U. and Bougie, R (2013). *Research methods for business*. John Wiley and Sons Ltd

Senior, B. and Swailes, S. (2007). Inside management teams: developing a teamwork survey instrument, *British Journal of Management, 18*(2), 138-153.

Sergiovanni, T. J. (2005). The virtues of leadership, *The Educational Forum, 69*(2), 112-123.

Shah, M. (2012). The importance and benefits of teacher collegiality in schools – a literature review, *Procedia – Social and Behavioral Sciences*, *46*, 1242-1246.

Shah, M. J., Rehman, M. U., Akhtar, G., Zafar, H., and Riaz, A. (2012). Job satisfaction and motivation of teachers of public educational institutions. *International Journal of Business and Social Science, 3*(8), 271-281.

Shapira-Lishchinsky, O. & Rosenblatt, Z. (2010). Formal ethical climate and voluntary absence: The mediation effect of organizational commitment. *Journal of Educational Management, 48*(2), 164-181.

Sharma, G. M. and Azmi, E. T. (2012). Job satisfaction as a mediator in the relationship between job factors and organizational commitment: a study of B-school teachers, *IMS Mantan*, *VII* (2), 75-86.

Sheldon, M. e. 91971). Investments and involvements as mechanisms producing commitment to the organization, *Administrative Science Quarterly, 16,* 143-150.

Shen, H. J., Basri, R., and Asimiran, S. (2018). Relationship between job stress and job satisfaction among teachers in private and international school in Malaysia. *International Journal of Academic Research in Business and Social Sciences, 8(*12), 275–286.

Shen, J., Leslie, J.M., Spybrook, J.K., and Ma, X. (2012). Are principal background and school processes related to teacher job satisfaction? A multilevel studying using Schools and Staffing Survey 2003-04. *American Educational Research Journal, 49(*2), 200-230. doi:10.3102/0002831211419949

Sheykhshabani, S. H. and Shojaei, A. (2015). The relationship between principals' transformational leadership style and teachers' organizational citizenship behaviors, *International Journal of Psychology*, *9*(1), 104-133.

Shore, L. M., Tetrick, L. E., Lynch, P., & Barksdale, K. (2006). Social and economic exchanges: construct development and validation. *Journal of Applied Social Psychology, 36,* 837-867. http://dx.doi.org/10.1111/j.0021-9029.2006.00046.x

Shugan, S. M. (2002). Marketing science, models, monopoly models, and why we need them, *Marketing Science, 21*, 223–228.

Siccone, F. (2012). *Essential skills for effective school leadership*. Boston, MA: Pearson

Silins, H. and Mulford, W. (2002). *Leadership and school results*. Dordretcht, the Nertherland. Kluwer

Simmons, J.P., Nelson, L.D., & Simonsohn, U. (2011). False-positive psychology: Undisclosed flexibility in data collection and analysis allows presenting anything as significant. *Psychological Science, 22*, 1359-1366

Singh, P. (2017). Study of impact of principal leadership behavior on occupational stress among teachers, *International Journal of Academic Research and Development*, *2*(5), 651-653.

Singh, S. P. and Sharma, H. K. (2014). Organizational commitment and job satisfaction of teachers in higher education: An empirical study, *IFRSA Business Review*, *4*(3), 436- 440.

Skaalvik, E. M., and Skaalvik, S. (2011). Teachers' feeling of belonging, exhaustion, and job satisfaction: The role of school goal structure and value consonance. *Anxiety, Stress, and Coping*, *24*(4), 369-385. doi:10.1080/10615806.2010.544300

Sloan, T. (2013). Distributed leadership and organizational change: implementation of a teaching performance measure, *New Educator, 9*(1), 29-53.

Slocum, J.W & Hellriegel, D (2007). *Fundamental of Organizational Behavior. Belmont: Thomson the multifactor leadership questionnaire*. Redwood City, CA: Mind Garden.

Smith, B. S. (2016). The role of leadership style in creating a great school. *Saskatchewan Educational Leadership Unit Research Review, 1*(1), 65-78.

Smith, T. S. (2016). Teachers' and administrators' perceptions of the characteristics of effective leadership for K-12 international schools, *All NMU Master's Thesis*, 106. Retrieved from: https://commons.nmu.edu/cgi/viewcontent.cgi?article=1119andcontext=these s

Smith, P. C., Kendall, L., and Hulin, C. L. (1969). *The measurement of satisfaction in work and retirement*. Chicago: Rand McNally.

Smith, R. W., Ross, M., & Robichaux, R. (2004). Creation and validation of a measure of leadership density in elementary and middle schools. *The Journal of Research for Educational Leaders, 2*(2), 79-111.

Song, S. and Mustafa, M. (2015). Factors impacting on teachers' job satisfaction related to science teaching: A mixed methods study, *Science Education International, 26*(3), 358-375.

Southworth, G (2005). Overview and conclusions. In M.J. Coles and G. Southworth, *(Eds), Developing leadership: creating the schools of tomorrow*. Maidenhead, UK: Open University Press.

Spector, P. E. (1985). Measurement of human service staff satisfaction: Development of the job satisfaction survey. *American Journal of Community Psychology*, *13*(6), 693-713. doi:10.1007/BF00929796

Spector, P. E. (1987). Method variance as an artifact in self-reported affect and perceptions at work: Myth or significant problem? *Journal of Applied Psychology, 72*(3), 438–443. https://doi.org/10.1037/0021-9010.72.3.438

Spector, P. E. (1997). *Job satisfaction: Application, assessment, causes, and consequences*. London, United Kingdom: Sage

Spector, B.A. (2015). Carlyle, Freud, and the Great Man Theory more fully considered. *Leadership*, *12*(2),250-260. doi:10.1177/1742715015571392

Spillane, J. (2005). Distributed leadership. *The Educational Forum*, *69*, 143-150.

Spillane, J.P. (2006). *Distributed Leadership*. San Francisco, CA: John Wiley and Sons.

Spillane, J. P. (2009). Managing to lead: reframing school leadership and management, *Phi Delta Kappan, 91*(3), 70-73.

Spillane, J. P. (2012). *Distributed Leadership*. San Francisco, CA: JosseyBass

Spillane, J. P., & Diamond, J. B. (2007). *Distributed leadership in practice*. New York: Teachers College Press, Columbia University

Spillane, J. P, Diamond, J.B, Sherer, J. Z and Coldren, A, F (2005). In M.J. Coles and G. Southworth, (Eds), *Developing leadership: creating the schools of tomorrow*. Maidenhead, UK: Open University Pres

Spillane, J. P., Halverson, R., & Diamond, J. B. (2001). Investigating school leadership practice: A distributed perspective. *Educational Researcher, 30*, 23-28.

Spillane, J., Halverson, R., & Diamond, J. (2004). Towards a theory of leadership practice: a distributed perspective. *Journal of Curriculum Studies, 36*(1), 3-24.

Spillane, J. P., and Healey, K. (2010). Conceptualizing school leadership and management from a distributed perspective: An exploration of some study operations and measures. *Elementary School Journal*, *111*(2), 253-281. https://doi.org/10.1086/656300

Spillane, J., Healey, K., Parise, L. M. and Kenney, A. (2011). A Distributed Perspective on Leadership Learning, in Robertson, J., Timperley, H. (eds.), *Leadership and learning*, London, Sage

Spillane, J. P., Parise, L. M. and Sherer, J.Z. (2011). Organizational routines as coupling mechanisms: Policy, school administration, and the technical core. *American Educational Research Journal 48*(3), 586–619.

Spilt, J. M., Koomen, H. M. Y., and Thijs, J. T. (2011). Teacher well-being: The importance of teacher-student relationships. *Educational Psychology Review*, *23*, 457-477. doi:10.1007/s10648-011-9170-y

Sreenivasulu, S. E. (2013). Role and importance of educational for effective growth of Indian economy: an overview, *IOSR Journal of Humanities and Social Sciences*, *7*(5), January – February, 32-35.

Stogdill, R. (1974). *Handbook of leadership: A survey of theory and research*. New York: The Free Press.

Stoll, L., and Bolam, R, (2005). Developing leadership for learning communities. In M.J. Coles and G. Southworth, (Eds), *Developing leadership: creating the schools of tomorrow*. Maidenhead, UK: Open University Press

Stoll, L., Bolam, R., McMahon, A., Wallace, M., and Thomas, S. (2006). Professional learning communities: A review of the literature. *Journal of Educational Change, 7*(4), 221-258. doi: 10.1007/s10833-006-0001-8

Stott, K and Sing Kong, L. (2005). Developing innovative leadership. In M.J. Coles and G. Southworth, (Eds), *Developing leadership: creating the schools of tomorrow*. Maidenhead, UK: Open University Press

Stump, M., Zlatkin-Troitschanskaia, O. and Mater, O. (2016). The effects of transformational leadership on teachers' data use, *Journal of Educational Research Online*, *8*(3), 80-99.

Sudarjat, J., Abdullah, T. and Sunaryo, W. (2015). Supervision, leadership, and working motivation to teachers' performance, *International Journal of Managerial Studies and Research, 3*(6), 146-152.

Sullivan, S. & Glanz, J. (2000). Alternative approaches to supervision: *Cases from the Field,* 212-235.

Susanj, Z. and Jakopec, A. (2012). Fairness perceptions and job satisfaction as mediators of the relationship between leadership style and organizational commitment, *Psychological Topics*, *3*, 509-526.

Syed, M. A. (2010). Job satisfaction and organizational commitment among employees in the Sultanate of Oman, *Psychology*, *1*, 295-299.

Sylvester, R. (2002). Mapping international education: A historical survey 1893-1944. *Journal of Research in International Education, 1*(1), 90-125.

Szeto, E. and Cheng, A. Y. N. (2017). Pedagogies across subjects: what are preservice teachers' TPACK patterns of integrating technology in practice, *Journal of Educational Computing Research, 55*(3), 346-373.

Tabachnick, B. G., and Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Allyn & Bacon/Pearson Education.

Tadesse, E. F. (2019). Teachers' organizational commitment at secondary school in Addis Ababa, Ethiopia, *International Journal of Education and Research, 7*(4), 53-68.

Taherdoost, H. (2016). Sampling methods in research methodology: how to choose a sampling technique for research, *International Journal of Academic Research in Management*, 5(2), 18-27.

Tan, C. C. (2012). International schools' boom. *New Straits Times*, 27 May (New Straits Times database). Available at: http://www2.nst.com.my/nation/general/international-schools-boom-1.88061

Tan, A. (2015). College choice behaviors of international students, *SAGE Open, 5*(4), 1-14.

Tanriogen, A. and Iscan, S. (2016). Effect of distributive leadership behaviours of foreign language schools' principals on the job satisfaction of instructors, *International Journal of Educational Administration and Policy Studies, 8*(6), 48-56, DOI: 10.5897/IJEAPS2016.0472

Tajularipin Sulaiman, Norameerah Zamzuri and Ahmad Fauzi Mohd Ayub. 2016. The use of multiple intelligence approach and alternative assessment in teaching, *SEAAIR 16th Annual Conference*, Suan Dusit University, Thailand, 21-23 September.

Tavakol, M. and Dennick, R. (2013). Psychometric evaluation of a knowledge-based examination using Rasch analysis: an illustrative guide: AMEE guide no. 72, *Medicine Teaching*, *35*(1), 838-848.

Teddlie, C. and Tashakkori, A. (2009). *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences*. Sage, London

Teh, T.L. (2011). School principal leadership styles and teachers' organizational commitment, *2nd International Conference on Business and Economic Research Proceeding*.

Tengi, M. L., Mansor, M. & Hashim, Z. (2017). A review theory of transformational leadership for school. *International Journal of Academic Research in Business and Social Science, 7*(3), 792-799.

Tentama, F. and Pranungsari, D. (2016). The roles of teachers' work motivation and teachers' job satisfaction in the organizational commitment in extraordinary schools, *International Journal of Evaluation and Research in Education*, *5*(1), 39-45.

Tesfaw, T. A. (2014). The relationship between transformational leadership and job satisfaction: The case of government secondary school teachers in Ethiopia. *Educational Management Administration & Leadership, 42*(6), 903-918. https://doi.org/10.1177/1741143214551948

Thakur, G. R. (2014). Transformational and transaction leadership of principals in colleges of education, *European Academic Research, II* (3), 4428-4442.

The Star Online (2019). Unemployment rate in Nov unchanged at 3.3%, *The Star Online*, January 15, 2019, Retrieved May 31, 2019 from: https://www.thestar.com.my/business/businessnews/2019/01/15/unemployment-rate-in-nov-unchanged-at-3pt3pct

Thiagaraj, D. and Thangaswamy, A. (2017). Theoretical concept of job satisfaction – A study, *International Journal of Research – Granthaalayah*, *5*(6), 464-470.

Thien, L. M. and Adams, D. (2019). Distributed leadership and teachers' affective commitment to change in Malaysian primary schools: the contextual influence of gender and teaching experience, *Educational Studies,* https://doi.org/10.1080/03055698.2019.1680349

Thomas, R and Hardy, C. (2011). Reframing resistance to organizational change. *Scandinavian Journal of Management*, *27*(3), 322-331.

Thompson, J. A. and Bunderson, J. S. (2003). Violations of principle: ideological currency in the psychological contract, *The Academy of Management Review, 28*(4), 571-586.

Thorpe, R., Gold, J. and Lawler, J. (2011). Locating distributed leadership, *International Journal of Management Research*, *13*(3), 239-250.

Tkachyk, L. M. (2017). Perceptions of international teacher turnover in East Asia Regional Council of Schools, *Walden Dissertations and Doctoral Studies Collection*, Retrieved May 31, 2019 from: https://pdfs.semanticscholar.org/3f24/b8c1f83a24db4d9e042bebf6270bcfa301e7.pdf?_ga=2.68252753.1173287656.1566439529-1445814397.1566439529

Tian, M., Riksu, M. and Colin, K. (2016). A meta-analysis of distributed leadership from 2002 to 2013: theory development, empirical evidence and future research focus, *Education Management Administration and Leadership, 44*(1), 146-164.

Timperley, H. (2005). Distributed leadership: developing theory from practice. *Journal of Curriculum Studies, 37*(4), 395-420

Timperley, H. S., et al. (2009). Distributing leadership to improve outcomes for students. In K. Leithwood (Ed.). *Distributed leadership according to the evidence* (pp. 197– 222). New York: NY: Routledge.

Tok, T. N., & Bacak, E. (2013). Öğretmenlerin iş doyumu ile yöneticileri için algıladıkları dönüşümcü liderlik özellikleri arasındaki ilişki [The relationship between teachers' job satisfaction and administrators' perceived transformational leadership characteristics]. *International Journal of Human Sciences, 10*(1), 1135-1166

Tolmie, A., Muijs, D. and McAteer, E. (2011). *Quantitative methods in educational and social research using SPSS*. Maidenhead: McGraw-Hill House

Top, M., Akdere, M. and Tarcan, M. (2014). Examining transformational leadership, job satisfaction, organizational commitment and organizational trust in Turkish hospitals, public servant versus private sector employees, *The International Journal of Human Resource Management, 26*(9), 1259-1282.

Top, M., Akdere, M. and Tarcan, M. (2015) Examining transformational leadership, job satisfaction, organizational commitment and organizational trust in Turkish Hospitals: Public servants versus private sector employees. The *International Journal of Human Resource Management, 26*, 1259-1282. https://doi.org/10.1080/09585192.2014.939987

Torres, D. G. (2017). Distributed leadership and teacher job satisfaction in Singapore, *Journal of Educational Administration, 56*(1), 127-142. doi:10.1108/jea-12-2016-0140

Torres, D. G. (2018). Distributed leadership and teacher job satisfaction in Singapore, *Journal of Educational Administration*, *56*(1), 127-142. https://doi.org/10.1108/JEA-12-2016-0140

Trammel, J. M. (2016). Relationship between distributed leadership and affective commitment, *Doctor of Education Dissertation*, Carson-Newman University, Retrieved May 31, 2018 from: https://www.cn.edu/libraries/tiny_mce/tiny_mce/plugins/filemanager/files/Dissertations/John_Matt_Trammell.pdf

Triegaardt, P. K. (2014). The role of distributed leadership as strategy to ensure effective South African schools: a comparative study within selected South African schools. *Unpublished DE thesis*. Pretoria: University of South Africa

Troen, V., & Boles, K. C. (2010). TEAM SPIRIT: Teachers work together to establish and achieve key goals. *Journal of Staff Development, 31*(1), 59-62,71

Tsai, M.-T., and Huang, C.-C. (2008). The relationship among ethical climate types, facets of job satisfaction, and the three components of organizational commitment: a study of nurses in Taiwan. *Journal of Business Ethics, 80*, 565–581. doi: 10.1007/s10551-007-9455-8

Tsu, K. T. and Cheng, Y. C. (1999). School organizational health and teacher commitment: A contingency study with multi-level analysis, *Educational Research and Evaluation, 5*(3), 249-268, DOI: 10.1076/edre.5.3.249.3883

Uhl-Bien, M. (2006). Relational leadership theory: exploring the social processes of leadership and organizing, *The Leadership Quarterly, 17*(6), 654-676.

Urbach, N., and Ahlemann, F. (2010). Structural equation modeling in information systems research using partial least squares. *JITTA: Journal of Information Technology Theory and Application*, *11*(2), 5-10.

Uzohue, C. E., Yaya, J. A. and Akintayo, O, A. (2016). A review of leadership theories, principles, styles and their relevance to management of health science libraries in Nigeria, *Journal of Educational Leadership and Policy, 1*(1), 17-26.

Valaei, N., Valaei, N., Rezaei, S., and Rezaei, S. (2016). Job satisfaction and organizational commitment: an empirical investigation among ICT-SMEs. *Management Research Review, 39*, 1663–1694. doi: 10.1108/MRR-09-2015-0216

Van Droogenbroeck, F., Spruyt, B., and Vanroelen, C. (2014). Burnout among senior teachers: Investigating the role of workload and interpersonal relationships at work. *Teaching and Teacher Education*, *43*, 99-109. doi:10.1016/j.tate.2014.07.005

Van Maele, D., and Van Houtte, M. (2012). The role of teacher and faculty trust in forming a teachers' job satisfaction: Do years of experience make a difference? *Teacher and Teacher Education, 28*(6), 879-889. doi:10.1016/j.tate.2012.04.001

van Saane, N., Sluiter, J. K., Verbeek, J. H. A. M., and Frings-Dresen, M. H. W. (2003). Reliability and validity of instruments measuring job satisfaction: A systematic review. *Occupational Medicine*, *53*(3), 191-200. doi:10.1093/occmed/kqg03

Vandenberg, R. J., and Lance, C. E. (1992). Examining the causal order of job satisfaction and organizational commitment. *Journal of Management, 18*, 153–167. doi: 10.1177/014920639201 800110

Veeriah, J. (2017). The relationship between principal transformational leadership practices, teacher organizational commitment, and school culture in primary cluster schools in Selangor, *Degree of Doctor of Philosophy Thesis*, University Malaya, Retrieved May 31, 2018 from: http://studentsrepo.um.edu.my/7931/6/Thesis_-_sushma_veera.pdf

Velarde, J. (2017). Instructional leadership practices in international schools in Malaysia: A case study, *International Online Journal of Educational Leadership, 1*(1), 90-117.

Veldman, I., van Tartwijk, J., Brekelmans, M., and Wubbels, T. (2013). Job satisfaction and teacher-student relationships across the teaching career: Four case studies. *Teaching and Teacher Education*, *32*, 55-65. doi: 10.1016/j.tate.2013.01.005

Vescio, V., Ross, D., and Adams, A. (2008). A review of research on the impact of professional learning communities on teaching practice and student learning. *Teaching and Teacher Education*, *24*(1), 80-91. doi: 10.1016/j.tate.2007.01.004

Vijayaamalar, G. and Suhaida, A.K. (2013). *Sikap guru terhadap penyeliaan pengajaran yang dijalankan di sekolah menengah kebangsaan , zon Bangsar, Kuala Lumpur*, School of Education, University Putra Malaysia (GREDUC), 1 Dec

Vlachadi, M., and Ferla, M. (2013). Differentiation of teachers' and principals' engagement in distributed leadership according to their demographic characteristics. *Journal of Education and Learning*, *2*(4), 19–30.

Vogel, S. and Draper-Rodi, J. (2017). The importance of pilot studies, how to write them and what they mean, *International Journal of Osteopathic Medicine*, *23*, 2-3

Volante, L. (Ed.). (2012). *School leadership in the context of standards-based reform: International perspectives*, Vol. 16. Dordrecht, Netherlands: Springer Science/Business Media

Vroom, V.H. (1964). *Work and motivation*. Wiley

Walker, A. D. (2015). Clones, drones and dragons: Ongoing uncertainties around school leader development. *School Leadership and Management, 35*(3), 300–320.

Walker, A. and Hallinger, P. (2015). A synthesis of reviews of research on principal leadership in East Asia, *Journal of Educational Administration*, *53*(4), 554-570.

Wan Omar, W. A. and Fauzi Hussin, (2013). Transformational leadership style and job satisfaction relationship: a study of structural equation modeling (SEM), *International Journal of Academic Research in Business and Social Sciences, 3*(2), 346-365.

Wanous, J. P., Reichers, A. E., and Hudy, M. J. (1997). Overall job satisfaction: How good are single-item measures? *The Journal of Applied Psychology*, *82*(2), 247-252. doi:10.1037/0021-9010.82.2.247

Weaver, K. and OIson, J. K. (2006). Understanding paradigms used for nursing research, *Journal of Advanced Nursing*, *53*(4), 459-469.

Wells, C. M., and Feun, L. (2013. Educational change and professional learning communities: A study of two districts. *Journal of Educational Change, 14* (2), 233-257. doi:10.1007/s10833-012-9202-5

Wenger, E. (2000). Communities of practice and social learning systems. *Organization, 7*(2), 225-246

Wenger, E., & Snyder, W. M. (2000). Communities of practice: The organizational frontier. *Harvard Business Review, 78*(1), 139-145.

Werang, B.R. and Agung, A.A.G. (2017), "Teachers' job satisfaction, organizational commitment, and performance in Indonesia: A Study from Merauke District, Papua", *International Journal of Development and Sustainability*, *6*(8), 700-711

West, S. G., Finch, J. F.and Curran, P. J.)1995). Structural equation models with non-normal variables: problems and remedies. In Hoyle R. H. (Ed.). *Structural equation modeling: Concepts, issues and applications*. Newbery Park, CA: Sage; 1995. p56-75

Westland, J. C. (2010). Erratum: lower bounds on sample size in structural equation modeling, *Electronic Commerce Research and Applications, 9*(6), 476-487.

Wickins, E. (2013). Principal perspectives: distributed leadership in Hong Kong international schools. *Doctor of Education Dissertation*, University of Bristol.

Wikhamn, W. and Hall, A. T. (2012). Social exchange in a Swedish work environment, *International Journal of Business and Social Science, 3*(23), 56-64.

Wilkey, G. G. (2013). Research into the characteristics of effective high school principals: A case study of leadership practices used in the high school setting, *All Graduate Theses and Dissertations*. 1478. https://digitalcommons.usu.edu/etd/1478

Wilkinson, David and Birmingham, Peter. (2003). *Using research instruments: A guide for researchers*. NY: RoutledgeFalme

William, C.G. (2011). Distributed leadership in South African schools: possibilities and constraints, *South African Journal of Education*, *31*(2), 190-200.

Williams, L.J. and Anderson, S.E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management, 17*(3), 601-617.

Wilson, J. (2010). *Essentials of business research: A guide to doing your research project,* UK: SAGE Publications.

Wilson, M., and Moore, S. (2011). Building out a measurement model to incorporate complexities of testing in the language domain. *Language Testing*, *28*(4), 441–462. doi:10.1177/0265532210394142

Winkler, I. (2010). *Contemporary leadership theories. Enhancing the understanding of the complexity, subjectivity and dynamic of leadership*. Heidelberg: Physica-Verlag (Springer)

Wong, K. K. K. (2013). Partial least square structural equation modeling (PLS-SEM) techniques using SmartPLS, *Marketing Bulletin*, *24*(1), 1-32.

Wongthaworn, J. & Sucaromana, U. (2012). Job satisfaction among staff members in an international school. *The 8th International Postgraduate Research Colloquium: Interdisciplinary Approach for Enhancing Quality of Life*, 54-63.

Woods, P. A., Bennett, N., Harvey, J. A. and Wise, C. (2004). Variabilities and dualities in distributed leadership: findings from a systematic literature review, *Educational Management Administration & Leadership, 32*(4), 439-457.

Woods, P. A. and Gronn, P. (2009). Nurturing democracy: the contribution of distributed leadership to a democratic organizational landscape, *Educational Management Administration & Leadership, 37*(4), 430-451.

Wu, S. (2012). *Using an integrated economic and organizational approach to understand new teacher mobility, attrition and retention* (Doctoral dissertation). University of Hawai'i at Manoa, ProQuest Dissertations Publishing. (3520668)

Wubbels, T., Brekelmans, P., den Brok, P., and van Tartwijk, J. (2006). An interpersonal perspective on classroom management in secondary classrooms in the Netherlands. In C. Evertson and C. Weinstein (Eds.), *Handbook of classroom management: Research, practice, and contemporary issues* (pp. 1161-1191). Mahwah, NJ, USA: Lawrence Erlbaum Associates

Wulandari, P., Mangundjaya, W. and Utoyo, D. B. (2015). Is job satisfaction a moderator or mediator on the relationship between change leadership and commitment to change, *Procedia – Social and Behavioral Sciences*, *172*, 104-111

Yaakob. D., Zuraidah. J. M., Rozalina, K., Yahya, D., Omar-Fauzee, M. S., Raman, A. and Fauzi, H. (2015). Distributive leadership among leaders in effective schools, *Journal of Teaching and Education, 4*(3), 423-433.

Yaakob, D., Zuraidah, J. M. Y., Rozalina, K., Yahya, D., Omar-Fauzee, A., Arumugam, R. dan Fauzi, H. (2015). Distributive leadership among leaders in effective schools, *Journal of Teaching and Education*, *4*(3), 423-433.

Yang, M. (2012). Transformational leadership and Taiwanese public relations practitioners' job satisfaction and organizational commitment, *Social Behavior and Personality*, *40*(1), 31-46.

Yang, G., Badri, M., Al Rashedi, A. and Almazroui, K. (2018). The social and organizational determinants of school commitment of expatriate teachers, *Journal of Research in International Education, 17*(1), 33-48.

Yang, F. H. & Chang, C. C. (2008). Emotional labor, job satisfaction and organizational commitment amongst clinical nurses: a questionnaire survey. *International Journal of Nursing Studies, 45*(5), 879-887.

Yangaiya, S. A. and Magaji, K. (2015). The relationship between school leadership and job satisfaction of secondary school teachers: A mediating role of teacher empowerment, *People: International Journal of Social Sciences, 1(*1), 1239-1251,

Yilmaz, A. I. and Beycioglu, K. (2017). Distributed leadership behaviours among elementary school teachers, *International Journal of Pedagogies & Learning, 12*(1), 41-61.

Yousef, D. A. (2002). Job satisfaction as a mediator of the relationship between role stressors and organizational commitment, *Journal of Managerial Psychology*, *17*(4), 250-266. http://dx.doi.org/10.1108/02683940210428074

Yücel, ˙I. (2012). Examining the relationships among job satisfaction, organizational commitment, and turnover intention: an empirical study. *International Journal of Business Management, 7*,44. doi: 10.5539/ijbm.v7n20p44

Yucel, I. and Bektas, C. (2012). Job satisfaction, organizational commitment and demographic characteristics among teachers in Turkey: Younger is better? *Procedia – Social and Behavioral Sciences, 46*, 1598-1608.

Yukl, G. A. (1989). *Leadership in organizations*, India: Pearson Education

Yukl, G. (2012). Effective leadership behavior: What we know and what questions need more attention. *Academy of Management Perspectives*, *26*(4),66-85. doi:10.5465/amp.2012.0088.

Yuksel, A. (2017). A critique of "response bias" in the tourism, travel and hospitality research. *Tourism Management*, *59*, 376–384. doi: 10.1016/j.tourman.2016.08.003

Zailinawati, A. H., Schattner, P. and Mazza, D. (2006). Doing a pilot study: why is it essential? *Malaysian Family Physician*, *1*(2 and 3), 70-73.

Zhang, Z., Lee, J. C., & Wong, P. H. (2016). Multilevel structural equation modeling analysis of the servant leadership construct and its relation to job satisfaction. *Leadership & Organization Development Journal, 37*(8), 1147-1167. https://doi.org/10.1108/LODJ-07-2015-0159

Zikmund, W.G. (2002). *Business research methods*. 7th Edition, The Dryden Press, Fort Worth.

Zou, W. C., Yong, Z. and Jia, L. (2015). The impact of transformational leadership on the helping behavior of hotel employee, *Journal of Economic, Business and Management, 3*(3), 322-325.