PRINCIPAL LEADERSHIP PRACTICES AND TEACHER COLLEGIALITY IN MALAYSIAN HIGH PERFORMING SCHOOLS

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INSTITUTE OF EDUCATIONAL LEADERSHIP
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THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN EDUCATIONAL LEADERSHIP

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in Malaysian High Performing Schools.

Field of Study: Educational Leadership

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ABSTRACT

The Malaysian Education Blueprint 2013 – 2025 stipulates that high performing school leaders are now more accountable for increasing or maintaining their school achievement outcomes. The intention of this study is to examine the leadership practices of principals' in Malaysian high performing daily secondary schools in particular, the relationship between principal leadership practices and teacher collegiality.

A mixed-methods research design was chosen for this study. Empirical data was gathered via a survey encompassing a sample of 290 school teachers followed by intensive data collection in 6 Malaysian high performing daily secondary schools. The data collection methods included semi-structured interviews, focus group discussions, questionnaires, documentary analysis and on-site observations at each of the school sites.

This research study substantiates and affirms the central role that high performing school principals play in securing better performance. Conclusions from this study revealed a positive and moderate relationship between principal leadership practices and teacher collegiality. The findings from this study also highlighted that principals who are transformational and focus on building positive relationships with their teachers, make a significant and positive difference to teacher collegiality. This finding supports empirical work conducted in other countries and provides new evidence about the leadership practices of principals in high performing schools in Malaysia.

This thesis reflects an interest in identifying successful principal leadership practices that can positively impact teacher collegiality and develop a learning environment conducive for student high achievements.

ABSTRAK

Pelan Induk Pembangunan Pendidikan Malaysia 2013 - 2025 menetapkan bahawa pemimpin sekolah berprestasi tinggi kini lebih bertanggungjawab untuk meningkatkan atau mengekalkan hasil pencapaian sekolah mereka. Tujuan kajian ini adalah untuk mengkaji amalan kepimpinan pengetua di sekolah menengah berprestasi tinggi harian di Malaysia khususnya, hubungan antara amalan kepimpinan dan keserakanan guru.

Reka bentuk kaedah campuran dipilih untuk kajian penyelidikan ini. Data empirikal dikumpulkan melalui kajian selidik yang merangkumi sampel 290 orang guru sekolah diikuti dengan pengumpulan data secara intensif di 6 buah sekolah menengah berprestasi tinggi harian di Malaysia. Kaedah pengumpulan data termasuk temu bual separa berstruktur, perbincangan kumpulan fokus, soal selidik, analisis dokumen dan pemerhatian di setiap lokasi sekolah.

Kajian penyelidikan ini mengenai sokongan dan peranan penting yang dimainkan oleh pengetua sekolah berprestasi tinggi dalam mendapatkan prestasi yang lebih baik. Kesimpulan daripada kajian ini menunjukkan hubungan yang positif dan sederhana antara amalan kepimpinan pengetua dan keserakanan guru. Hasil dapatan kajian ini juga menekankan bahawa transformasi pengetua lebih memberikan tumpuan dalam membina hubungan positif dengan guru-guru mereka, di samping menunjukkan perbezaan yang signifikan dan positif terhadap keserakanan guru. Hasil kajian ini juga menyokong hasil kajian empirikal yang dijalankan di negara-negara lain dan memberikan bukti baru mengenai amalan kepimpinan pengetua di sekolah-sekolah berprestasi tinggi di Malaysia.

Tesis ini menunujukan kepentingan dalam mengenal pasti amalan kepimpinan pengetua yang berjaya yang boleh memberi kesan positif terhadap keserakanan guru dan membangunkan persekitaran pembelajaran yang kondusif dalam peningkatan prestasi pelajar.

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My warmest and heartfelt gratitude and appreciation goes out to my dearest Family, Husband, Son and best friend Venu, for their unwavering support, love and understanding in enduring this process with me, as I laboured over the completion of this study. My Sister and her Pastors at Living Word, whose prayers manifested miracles. I have made all of you proud and so this is as much as Your Success as it is mine.

DEDICATION

My Doctor of Philosophy (Ph.D.) award is especially dedicated to my dearly beloved Father, Andrew Joseph Perera, who was my source of inspiration throughout this endeavour. You were the driving force and the reason that inspired me to accomplish a dream that no one in our family has reached, so this is for you… I'm now Dr Perera.

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LIST OF SYMBOLS AND ABBREVIATIONS

BPSBPSK : *'Bahagian Pengurusan Sekolah Berasrama Penuh and Sekolah Kecemerlangan'* (lit. Fully Residential and Excellent School Management Division).

CTT : Classical Test theory

Edu NKRA : Education 'National Key Results Area'.

EPRD : Educational Planning and Research Division.

GPS : *'Gred Purata Sekolah'* (lit. School Grade Point Average).

GTP : Government Transformational Programme.

HOTS : High Order Thinking Skills.

HPS : High Performing School.

IRT : Item Response Theory

JNJK : Inspectorate of Schools and Quality Assurance Department.

JPN : *'Jabatan Pendidikan Negeri'* (lit. State Education Department).

KPI : Key Performance Indicator.

KPM : *'Kementerian Pendidikan Malaysia'* (lit. Malaysian Ministry of Education).

KSSM : *'Kurikulum Standard Sekolah Menengah'* (lit. Standard Curriculum for Secondary Schools).

MOE : Malaysian Ministry of Education.

OECD : Organization for Economic Cooperation and Development.

PADU : Education Performance and Delivery Unit.

PEMANDU : Performance Management Delivery Unit.

PISA : Programme for International Student Assessment

PLP : Principal Leadership Practices

PMR : *'Penilaian Menengah Rendah'* (lit. Lower Secondary Assessment).

PPD : *'Pejabat Pendidikan Daerah'* (lit. District Education Department).

PPQ : Principal Practices Questionnaire, 2014

PT3 : *'Pentaksiran Tingkatan 3'* (lit. Form 3 Assessment).

SBT : *'Sekolah Berprestasi Tinggi' (lit.* Malaysian High Performing School).

SEAL : *'South East Asia Leadership'* Study

7SLS : *7 System Leadership Study*, involving 7 differentially performing education systems (Malaysia, Indonesia, Singapore, Hong Kong, Australia, Russia and England). Initially known as 'SEAL'.

SKPM	:	*'Standard Kualiti Pendidikan. Malaysia'* (lit. School Self-Evaluation Score).
SMK	:	*'Sekolah Menengah Kebangsaan'* (lit. National Secondary Schools).
SMKA	:	*'Sekolah Menengah Kebangsaan Agama'* (lit. National Religious Secondary Schools).
SPM	:	*'Sijil Pelajaran Malaysia'* (lit. Malaysian Certificate of Education).
SQEM	:	Standards for Quality Education in Malaysia.
STAM	:	*'Sijil Tinggi Agama Malaysia'* (lit. Malaysian Higher Certificate for Religious Education).
STPM	:	*'Sijil Tinggi Persekolahan Malaysia'* (lit. Malaysian Higher School Certificate Examination).
TC	:	Teacher Collegiality
TCS	:	Teacher Collegiality Scale, 2011
TIMSS	:	Trends in International Mathematics and Science Study
UPSR	:	*'Ujian Pencapaian Sekolah Rendah'* (lit. Primary School Assessment Test).

LIST OF APPENDICES

CHAPTER 1: INTRODUCTION

In this digital age, the evolving nature of school environments, has placed high demands on educational leaders and education reform strongly emphasises the development of leadership skills to promote effective teaching and high level learning (Chan & Gurnam Kaur Sidhu, 2009). In reviewing the evidence linking school renewal efforts and successful leadership, Leithwood, Louis, Anderson, & Wahlstrom, (2004, p. 3) contend that leadership is "second only to teaching among school-related factors in its impact on student learning", and that the impact is greatest where "the learning needs of students are most acute".

There is a corpus of international literature on school leadership, within a western context (Harris, Jones, Adams, Perera, & Sharma, 2014). It has been observed that western education systems differ from those in Malaysia, in terms of leadership practices, school culture and values. Therefore, western school leadership may not be adopted in entirety, but could be adapted according to the context (Oplatka, 2004). Of late, there has been a renewed interest among international publications of educational leadership and management, from an Asian perspective. The contemporary studies that have recently emerged, have laid the groundwork for further conceptual analyses of Asian leadership in context (Fox, 2014; Hallinger, 2013; Hallinger & Bryant, 2013; Hallinger & Chen, 2015; Jensen, Hunter, Sonneman, & Burns, 2012; Jones & Harris, 2014). By comparison, a systematic search of literature on transformational leadership in Malaysia, had revealed that much of the local literature were published in international refereed journals, local Malaysian journals and archived as unpublished dissertation and doctoral theses in Malaysian public universities and the Malaysian government's repository. Refer to Appendix A1 on pp. 349-355, for the 'Article and Keyword Search Strategy'. This

literature review also revealed that, there has been a relatively lesser amount of research, which investigates principal leadership practices and its inter-relationship with school variables in Malaysia. As such, this research study aims to examine the variables of principal leadership practices and teacher collegiality, in a high performing school environment, in Malaysia. In a broader sense, this study will investigate how principals' leadership practices co-relate with teacher collegiality, in contributing towards the overall success of high performing school systems.

1.1 Purpose of the Study

This research study is part of a cross-national research project, which explores school leadership development, principal leadership practices and education systems across seven countries, namely Malaysia, Indonesia, Singapore, Hong Kong, Australia, England, and Russia. It is an international comparative study of education systems, involving the collaboration of inter-institutional and inter-cultural researcher engagement. Despite having an international coverage, the present study is a 2-year national study with a domestic-driven research agenda, which will contribute towards educational leadership research. This research project is funded by the *"South East Asia Leadership" (SEAL)* project grant (J-50105-73519), and is administered by the Institute of Research Management & Monitoring (or Institut Pengurusan dan Pemantauan Penyelidikan (IPPP), University of Malaya (UM). The purpose of this present study is to investigate principal leadership in Malaysia, identify their predominant leadership practices and to assess whether teacher collegiality could result in the general improvement of Malaysian high performing daily secondary schools.

1.2   Background of Study

The purpose of this section is to outline the relevant background to this study. The research context of this study is Malaysian high performing schools (HPS), which are recognised as the top performing public schools in the country. The selection of the first 20 high performing schools in 2010, was introduced as part of the Government Transformation Programme (GTP 1.0), with the Education Minister, holding the academic stewardship of this HPS programme (PEMANDU, 2012; The Star Online, 2014).

The establishment of the HPS cluster was built upon niche areas of academic disciplines, co-curriculum and sports. These cluster schools are benchmarks of school excellence and they play an important role in benchmarking the standard for quality education in Malaysia. With quality education being the major focus of the Malaysian Ministry of Education (MOE), the '*Malaysian Clusters of Excellence Policy*' was implemented in line with transforming the nation into a regional hub for high quality education, by the year 2020 (Noor and Crossley, 2013). The implementation of the HPS programme is viewed as an innovative solution by the government's NKRA Unit (National Key Results Area), aimed at elevating academic excellence and nurturing towering personalities among HPS students, to foster student readiness and their preparation for global competitiveness.

In the Malaysian secondary schools hierarchy, principals hold the highest position and so they play the most vital role in leading their schools effectively. With the implementation of the HPS programme, mandates have been placed on the HPS principals and they are expected to be much more accountable for their school's success.

As a result, the principal's leadership practices are critical aspects in determining successful school outcomes. In addition, school principals have the power to influence their teachers by the leadership practices they exhibit. It is therefore crucially important for principals to maintain an interpersonal relationship with their teachers, since teachers have the most contact with students, and thereby have an influence on the school environment and student achievement.

Teacher collegiality is the other variable that this study focuses on, since this concept has been identified with high performing school systems and the continuous improvement of schools. School effectiveness studies have found high levels of teacher collegiality in successful schools compared to lower achieving schools. There is thus a need for a research study that can illuminate the dynamics of the high performing daily secondary schools, where the perceptions of teachers on their principal's leadership practices, can be further investigated. Consequently, principal leadership practices and teacher collegiality are the chosen themes for this study, and an important topic for research within the context of Malaysian high performing daily secondary schools.

A detailed account of the '*Malaysian Educational Context'* has been appended in Appendix A2 (pp. 355-373). The content of this sub-section is admittedly lengthy, but the researcher considers the content to be vital for a holistic understanding of Malaysia's education system and how it has evolved through the legislative framework formulated by the MOE for the purpose of system reform.

1.3   Research Problem

The 21st century is the digital age where countries like Malaysia are experiencing a paradigm shift in school performance. It is an era where the evolving nature of school environments and the growing complexities of educational change, are altering the expectations of the principals' leadership, who increasingly have to comply with stringent accountability standards placed on them. There have been new legislative measures, formulated by the MOE, which have placed high demands on school leaders to lead their schools towards successful school outcomes. On the global front, the Malaysian education system is also challenged by higher international education standards, as reported by the general decline in test scores for international assessments like PISA and TIMSS (see Appendix A3, pp. 374-375 for Malaysia's past performance in TIMSS and PISA). As a result, the MOE continues to champion the cause of educational reform by generating new initiatives for school excellence and enabling strategic reform.

The nation's philosophy of education may be identified with the ideals of Malaysia's first Prime Minister, Tunku Abdul Rahman, who believed in the virtues of a "sound education and high standards to keep up with the nation's progress and the rest of the world" (The STAR, 22 Sep 2013). The former Deputy Higher Education Minister, Datuk Saifuddin Abdullah, echoed the same sentiments about prioritizing strategies to improve the quality of education in national schools (The STAR, 26 Aug, 2013). Malaysia's current Prime Minister, Datuk Seri Najib Razak continues to stress the importance of the country staying ahead in the increasingly competitive global environment, calling for a transformation of its entire education system to raise the achievement levels for all students (NST, 31 Dec 2013a). To this end, educational priorities continue to focus on improving the quality of education, with the prime objective of making Malaysia the

regional hub for educational excellence, and realising the nation's aspiration of becoming a fully developed country by the year 2020. This is envisaged by Vision 2020, as the national agenda initiated in 1997 for attaining the status of a developed nation (Noor & Crossley, 2013; United Nations Report, 2005; Ahmad, 2004).

In line with the aim to attain the country's vision of becoming a developed nation by the year 2020, Rahimah and Ghavifekr (2014) emphasised that Malaysian school leadership should be looked at holistically and assimilated with values of globalisation, and further added that local heritage and national identity should be preserved. This study further pointed out that the focus of the education policy makers in the new millennium, as inscribed by the *'National Education Philosophy'*, confronted global values within local contexts, to ensure that schools are relevant and continue to operate as they are expected to (MOE, 2007).

In an era of strict demands and accountabilities, Malaysian school leaders are increasingly being challenged to meet the accountability standards of the MOE and to be able to accommodate the expectations and diverse needs of the students, teachers and the local community (Anthony, Said, Ismail, & Mahani, 2015; Tie, 2012). As a consequence of the increased accountabilities imposed by the Ministry of Education, several local studies highlighted the new demands and challenges experienced by school principals'. They supported the premise that principals are responsible for promoting the learning environment in their schools. The school principal's responsibilities are seen to have evolved from an administrative and managerial role to that of a broader professional role (Kim, 2010). Chang, Chin, & Hsu, (2008) and Koyama, (2013) also claim that principals are laden with accountabilities, and are expected to lead student learning and comply with policy mandates.

These are among the local Malaysian studies which claimed that effective principal leadership played the most important role in determining students' academic excellence. These studies placed the principal in the highest order of priority, and maintained that principal practices are the main contributing factors in creating effective schools: (Ghani et al., 2011; Jainabee & Jamelaa, 2011; Karim, 1989; Khuan, Chua, & Manaf, 2004; Maimunah Muda, 2005; Marzuki, 1997; Marzuki & Ghani, 2007; Rahimah et al., 1999; Sharma, 2010; Tahir & Kaman, 2011; Tee, Hoon, Liu, Ting, & Porodong, 2010). Suraya and Yunus (2012) further added that principals played the most important role for determining students' academic excellence and added that strong principal leadership is perceived to be one of the most important contributory factors to a school's success. In this regard, Mahmood (1989) argued that the active support and endorsement of the school leadership is required for the implementation of planned change. Furthermore, Perera et al. (2015) added that the overall concern for Malaysian principals is to reskill new practices and deploy effective strategies that can drive student outcomes.

Recognising the culture of accountability as extensive and challenging, the role of the principal is now seen as a strong driver of process improvement and a reflection of what schools should be delivering (Perera et al., 2015). As initiatives aimed at attaining educational excellence, Ayob Jantan, (2005) and Jainabee & Jamelaa, (2011) claimed that successful principals can innovate and implement change in the school system itself. Tee et al. (2010) also suggested that Malaysian schools should be reconceptualised to involve the principal's role in stimulating academic success.

Driven by the ideals of Vision 2020, the Malaysian government has been visionary in its planning and commitment towards education, evidenced by its five-year national development plans, aimed at improving accessibility of education and enhancing quality

in schools (United Nations Report, 2005, p. 75). Part of the MOE's initiatives in promoting the nation's philosophy of education was the implementation of the 'Education Development Plan 2001–2010' in the year 2001. Subsequently in 2010, the MOE introduced the 'High Performing Schools' (HPS) programme as an initiative under the Government Transformational Programme (GTP 2.0) (Awang, Ismail, Flett, & Curry, 2011; Noor & Crossley, 2013). The HPS programme was part of the MOE's initiatives in improving and expanding the national education system. With the introduction of the HPS pocket of schools, students are further expected to excel in academic, co-curricular activities and non-academic niche areas like sports, so that they become the role models for other schools to emulate (Noor & Crossley, 2013). The HPS initiative aims at generating a student body of engaged learners, who are recognised for their 'high level order thinking skills' (HOTS). In their continued pursuit of academic excellence for the nation, these elite learning institutions remain steadfast in their resolution, to transform the tremendous learning energy of these 'bright sparks' into being self-directed, creative, adaptable and unique, and thus be on par with advanced countries on the international stage.

Malaysian school systems are seen as largely bureaucratic and "hierarchical in nature" (Nur Ain Wong Abdullah, 2009; Rahimah & Ghavifekr, 2014, p. 51). There has been much debate about the centralised governance and autonomy within the educational fraternity, whereby the MOE has enforced "highly restricted levels of autonomy" (World Bank, 2013, p. 2). The World Bank Report further highlights that the Malaysian education system was reported as having the most centralized governance system among 23 other high and middle income countries and that this centralized governance structure is "one of the key obstacles to quality education" (World Bank, 2013, p. 4). Selamat, Nordin, and Adnan (2013) further affirm that Malaysia is a highly centralised country, known for its

bureaucratic top-down approach. The New Economic Model, (2010), supported by the 10th Malaysian Plan, also advocates that the present education system should be refocused on improving autonomy and accountability at the school level (World Bank, 2013, pp. 47-48). The World Bank (2013, p. 67) also claimed that for most of the high performing education systems, like in Finland, there is substantial autonomy conferred to their local authorities as well as to their schools and that their students scored exceptionally well for international assessments, like PISA and TIMSS. However by comparison, Hanushek, Link, and Wößmann (2011) suggested that well-developed autonomous systems tend to indicate higher student achievements, whereas autonomy affects student achievement negatively in developing and low-performing countries. Moreover, OECD, (2009, p. 13) maintained that "school leaders can only have an impact on student outcomes if they have sufficient autonomy to make important decisions about improving student learning". In an analysis to assess how system level factors such as accountability and autonomy, affect student success, the World Bank, (2013) shows that,

> "Greater autonomy in decision-making related to curricula design, assessments, and resource allocation are associated with higher student achievement, particularly when schools operate within a culture of accountability and transparency. Importantly, autonomy affects student achievement negatively unless decentralization in decision-making is balanced in the system with transparency and accountability" (World Bank, 2013, p. 74).

With the introduction of the HPS scheme, PEMANDU (2012) reported on the initial prospect of granting greater levels of autonomy to high performing schools, to allow the flexibility of decision-making in various school-related domains. These include school budget allocations, human and fiscal resources, student disciplinary practices, student admissions and assessment policies, curriculum development, infrastructure

improvement and the procurement of textbooks (World Bank, 2013, pp. 70-71; 83). According to Ismail and Ghani Abdullah (2011, p. 2), the MOE has allowed for "some degree of autonomy" granted to high performing schools in curriculum management, financial and staffing matters. HPS principals thus have greater autonomy in school administration to implement quality educational programmes that could "accelerate their organizational excellence".

Subsequently in 2013, the Malaysian Education Blueprint (2013 – 2025) (referred to thereafter as 'Blueprint') was developed to provide for the sustainable transformation of the education system through to 2025 (Muhammad Faizal A. Ghani, 2013, p. 23). The Blueprint represents the Governments initiatives to formulate a comprehensive transformational plan (identified by its '11 shifts'), to elevate the country's education system (The STAR, 2 Sep 2013). Among the major impacts envisioned by the Blueprint, 'Shift 5' elaborates on enriching the quality of principal leadership and ensuring high performing school leaders in schools. It highlights strategic approaches aimed at equipping all schools with high-performing school leaders, who will adopt sharper accountability for improving student outcomes (Malaysian Education Blueprint, pp. E-27). Outstanding principals will be selected to serve at low performing schools where their expertise can be further leveraged on. These high-performing principals are encouraged to take up these positions in lieu of "faster career progression opportunities" and attractive revised incentives provisioned for them through a "New Principal Career Package" designed to assist principals achieve their full potential towards delivering higher student outcomes.

Policy-makers and the community at large have high expectations of principals as professionals, role models and school leaders. With the growing emphasis and general

consensus among policy-makers that school outcomes is being made the prime responsibility of principals, initiatives should be aimed at enhancing principal leadership competency, with reform efforts being directed towards reconstructing educational conceptions to suit local capacity.

Another key component highlighted by the Blueprint is the renewed emphasis on principal evaluation for the enhancement of leadership competency. For continuous learning and development, the Blueprint has provisioned for professional development programmes that can benefit school principals. In succession planning, the incoming appointed principal will have the opportunity to work in tandem with the outgoing 'principal-in-office' for a period of one month so that the new principal is better prepared for the proper hand-over of duties. Once in office, the newly appointed principal will get to undergo a *"coaching and mentoring"* programme either by an experienced principal or by an appointed 'District School Improvement Partner', also referred to as *'SiPartner+'* *(*Malaysian Education Blueprint, pp. E-27*)*. Henceforth, the Blueprint has reported that there will be annual assessments conducted to evaluate principals' leadership performance as a measure towards maintaining standards and upholding the quality of principal leadership in Malaysia. Principals may draw on "extra coaching support", if further assistance with their leadership is required. With the renewed focus on principal effectiveness, underperforming principals may stand the risk of being discharged from office and "redeployed back to a teaching position in another school". This is for cases where continued underperformance is reported, despite evidence of concerted support provided (Malaysian Education Blueprint, 2013, pp. E-26 – 27).

Under the pressures and mandates underlining the Blueprint, principals will be challenged to look for strategic ways to increase student outcomes, in order to meet these

imposed demands. The new leadership paradigm calls for a shift towards added accountability on the part of the Principal to lead and manage school education in the new century. Principal evaluation can be used as an inference for national policy reformation in line with the MOE's efforts to sustain and inspire high leadership performance that can drive better student outcomes. Justified by the line of evidence from previous international research as: "outstanding principals who focused on instructional-based leadership can raise student outcomes by as much as 20%", the Blueprint (2012, p. E-26) has mapped out a priority list of commitments for nation-wide educational reform.

In 2012, under the initiatives of the Government Transformational Programme 2.0 (GTP 2.0), *'Education NKRA'* (Edu NKRA) introduced the *'New Deal Charter for Principals'*, which is an extension of the *'New Deals Programme'* implemented in GTP 1.0 (PEMANDU, 2012, p. 110). The initiatives of the GTP is in line with the goals of the Blueprint (PEMANDU, 2012). Edu NKRA has invested in principals and head teachers by implementing this robust professional development programme, tailored to encourage them improve their performance by providing them with financial and career incentives. (PEMANDU, 2012, pp. 96, 107). The main objective of the New Deals Charter is to improve the overall quality of student outcomes by improving the performance of school leaders in Malaysia (PEMANDU, 2009b, p. 42). Geared to emphasise quality, the principal's performance contracts (also known as *'Bai'ah'*) are awarded to high performing principals who can demonstrate outstanding school performance and can achieve the following criteria:

- Schools Composite Scores are used for the assessment of the 'New Deals for Principals' evaluation. A target composite score of above 88%, or a year-on-year improvement of 300 places for secondary schools.

- An Annual Appraisal Report (LNPT) score of higher than 90.

- An approved financial audit report from the State Education Department.

- No history of disciplinary action.

Source: PEMANDU, 2012, p. 107.

The Blueprint offers a route that proposes major transformation in Malaysia's education system and is viewed as a potential strategy for securing educational improvement and change (Muhammad Faizal A. Ghani, 2013).

There has been a growing body of contemporary research that supports collective capacity building, where principals and teachers join forces as a cohesive unit and develop reciprocal accountability, commitment and collective responsibility for securing school outcomes (Harris, 2011; Jensen et al., 2012; Jones & Harris, 2014). Similarly, Harris et al. (2013), confer that effective principals build strong and functional collaborative teams that are seen to have the potential to change classroom practice, and develop a cohesive teaching force that is pivotal for the academic and holistic development of student's achievements. According to Devine (2013), there has been relatively limited research undertaken in the field of educational leadership concerning school leadership practices, while Leithwood & Sun (2012), advocate that future research should be aimed at testing the more specific leadership practices: *"More attention by researchers need to be devoted to the impact of specific leadership practices"*. In addition, there has also been limited literature of principal leadership practices in association with teacher collegiality. Taking the lead from Leithwood & Sun (2012), who advocate that future research should be aimed at testing the more specific leadership practices, the present study will explore the relationship between principal leadership practices and teacher collegiality in Malaysian high performing day schools. It will also seek to identify the level of teacher collegiality and the collegial processes prevalent within high performing school environments.

The Malaysian Government's commitment to education is evidenced by their large capital investments in educational infrastructure (United Nations Report, 2005). The Malaysian Government has reported that from the years 2000 to 2012, the nation has spent "RM106 billion for education development" (TheEdge, 21 Oct 2013). In addition, the Director-General of MOE, Datuk Dr Khair Mohamad Yusof, had declared that under the 2014 Budget, RM54.6 Billion, was allocated for education purposes, with the aim of providing the education system with better opportunities for improvement (NST, 31 Dec 2013b). A media coverage, (TheEdge, 30 June 2014) reported that an estimated 25 percent of RM264.1 Billion (the total 2014 Federal Government Budget) was shared by 20 Malaysian public universities and the total of 10,091 primary and secondary public schools as at December 2013 (KPM, 2014, pp. 101, 140). Although it was the case where Malaysia's education expenditure is "more than double that of other ASEAN countries", there has been a decline in learning outcomes which were assessed well below the performance in "standardized international student assessments" (World Bank, 2013, pp. 2, 46). Dr Nungsari Radhi, Economist and Advisor to the Malaysian Ministry of Finance, voiced his viewpoint about the poor performance of international tests, with the view that there should be a reallocation of the nation's education funding, that should focus more on primary and secondary education instead of on public universities of higher education, as this would induce competition and the pursuit of excellence towards better achievements (TheEdge, 30 June 2014).

Currently, Malaysian students are challenged to cultivate *'high order thinking skills'* ('HOTS'), where they are expected to be globally competitive and remain relevant with the expectations of the industry and current market, and be able to face the increasing international challenges and competitions (Yusof, Mohd, & Jaafar, 2014, p. 146). Adding to this, the Malaysian Education Blueprint (2013-2025) highlights the MOE's

commitment to revise the current secondary school curriculum (KSSM) by 2017, by incorporating more problem-based and project-based subjects, formative assessments and an accelerated learning pathway for high performing students to complete their secondary education in four rather than five years. In addition, all national standardized examinations and school-based assessments will be streamlined with 'higher order thinking' questions by 2016. This will include an 80% increase for the Form 3 assessment (PT3), 75% increase for SPM core subjects and 50% increase for SPM electives. This renewed focus on HOTS, is to equip students with cognitive skills that will train them to think critically and be able to creatively extrapolate and apply logical reasoning in various settings. Furthermore, in February 2012, NST, (23 Dec 2013) reported that the MOE had taken strategic initiatives to set up a special task force, for the purpose of enhancing 'HOTS' among students and also for the *"continuous professional development of teachers"*. "Well-designed literacy programmes" are being developed to improve HOTS among students, as well as to provide teachers the teaching support needed for their "diagnostic assessment" and for monitoring students' academic achievements (Rosnarizah Abdul Halim, 2008).

The MOE's collaborative task force includes the following professional bodies:

- Malaysian Industry-Government Group for High Technology (*MIGHT*)

- Southeast Asian Ministers of Education-Regional Centre for Education in Science and Mathematics (*SEAMEO RECSAM*)

- Academy of Sciences Malaysia (*ASM*)

- Malaysian Institute of Chemistry

- Petrosains.

Source: (NST, 23 Dec 2013)

In addition, the Curriculum Development Director, Dr Masnah Ali Muda, affirmed that the MOE is intent on working towards improving the future scores of TIMSS and PISA in line with the nation's aspirations of attaining among the top three placing of these international assessments, within the next fifteen years (2012 IAB Annual Report, 2013; NST, 23 Dec 2013).

Although international assessments like PISA and TIMSS, remain a fundamental national concern, the local public examinations held at the national level are quite the reverse. There is a general upward trend reported on the 'Average School Grades', better known as the abbreviation 'GPS' (*Gred Purata Sekolah*), in public schools across Malaysia. However, according to the MOE's 2012 Sustainability Inspection Report, the JNJK (*Inspectorate of Schools and Quality Assurance Department*), reported a fluctuation in the GPS scores for some of the high performing schools (HPS) featured in the present study (JNJK, 2012). Table 1.2 (p. 26) shows the GPS scores sourced from the JNJK Resource Centre as well as from the *'Fully Residential and Excellent School Management Division'* (BPSBPSK). Refer to Appendix A4, (p. 376), for the official letter of consent, from the 'School Inspectorate Department' (JNJK), for these GPS School scores to be cross-referenced in this study.

The purpose of this present study is to examine the leadership practices of principals in high performing, Malaysian daily schools. In recent years, apart from the fact that schools are becoming increasingly complex with accountability pressing schools to do more for less, the situation has become even more challenging for school leaders, who are immersed in a highly centralised, hierarchical bureaucracy. School leaders are made responsible for the ultimate accountability of their school outcomes, in facilitating school leadership and empowering their teams towards improved school outcomes. Faced with

the latest education demands of organisational developments, constant changing roles, increased interventions and the retreat to time honoured traditions, school leaders are faced with the leadership predicament of being constrained to the rigidity of organisational and policy structures are forced into a 'new' kind of leadership. They can no longer confine to one prescribed framework of performance, but to be proactive in engaging the participation of all school stakeholders to shape and manage the future of their schools. As a result, the Malaysian Ministry of Education had transformed and reconceptualised the shape of its educational system by revising their educational policies to strengthen schools capacity to manage change. Therein, school leaders are challenged to raise the education and achievement levels of students in all schools. However, in retrospect, despite the education system in Malaysia is fast reaching its 58 years of post-independence, school improvement efforts across schools in Malaysia have yet to achieve their target to ensure a developed nation through human capital development in education (Tie, 2006).

In summary, the current education developments in Malaysia are predetermined by the fact that the government of Malaysia aspires to culminate a knowledge-based economy by developing human capital through education by the year 2020 (MOE, 2006). Only then can schools confront the realities of a major reform such as that of the HPS programme. There is a need for a study that looks at how leadership in high performing schools is enacted and realised. The insights gained from this investigation will be relevant to other schools in Malaysia who are pursuing improvement.

1.4   Objectives and Scope of Study

With the rapid pace of globalization, technological changes and international competitiveness, education policies and school reform efforts have taken the centre stage, by promoting school excellence through the establishment of the high performing school programme in Malaysia. In keeping with the current emphasis on globalization, the education transformation plan will be reformed through 11 strategic and operational initiatives, as outlined in the Education Blueprint (2013 - 2025). With the aim of ensuring high performing school leadership in every national school, this study explores the various aspects of principals' leadership practices and teacher collegiality found among Malaysian high performing daily secondary schools. Specifically, the objectives of this study, aim to determine the following:

- The relationship between principal leadership practices and teacher collegiality.

- The predominant principal leadership practice based on the five dimensions of transformational leadership practices (Model; Inspire; Challenge; Enable; Encourage).

- The predominant dimension of teacher collegiality, based upon the seven dimensions of teacher collegiality (Mutual support and trust; Observing one another teaching; Joint planning and assessment; Sharing ideas and expertise; Teaching each other; Developing curriculum together; Sharing resources).

- The influence of principal leadership practices in predicting teacher collegiality within Malaysian daily, secondary high performing schools.

- The principals' leadership practices demonstrated within Malaysian daily, secondary high performing schools.

- Professional development and leadership preparation of Malaysian high performing school principals. [1]

- The effectiveness of NPQEL as the mandatory national qualifications for principalship in Malaysia. [2]

- The extent to which high performing daily secondary school principals encourage teacher collegiality.

1.5   Research Questions

This study is guided by eight research questions that have been formulated to examine the phenomena under investigation. Various components of the literature had helped to formulate the research questions for the study undertaken. Based on the theoretical model and research objectives, the first five research questions were answered using a quantitative approach, while the remainaing research questions were answered using a qualitative approach.

The following research questions direct this study:

Question 1:   Based on the teachers perceptions, is there a significant relationship between principal leadership practices and teacher collegiality among the high performing daily secondary schools?

Question 2:   Is there a significant difference in response between each of the following five constructs of principal leadership practices?
[a] Model the way
[b] Inspire a shared vision
[c] Challenge the process
[d] Enable others to act
[e] Encourage the heart

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[1] This research objective extends into the cross national research projects (SEAL & 7SLS) of which this present study is part of. It addresses Malaysian school leadership preparation and professional leadership development.

[2] This research objective is part of the SEAL & 7SLS research projects, which addresses the effectiveness of the Malaysian national accreditation programme (NPQEL), which prepares aspiring principals for principalship.

Question 3:   Is there a significant difference in response between each of the following seven constructs of teacher collegiality?
[a] Mutual Support & Trust
[b] Observing One another Teaching
[c] Joint Planning & Assessment
[d] Sharing Ideas & Expertise
[e] Teaching Each Other
[f] Developing Curriculum Together
[g] Sharing Resources

Question 4:   Based on the teachers perceptions, which constructs of principal leadership practices predict teacher collegiality?

Question 5:   Based on the teachers perceptions, is there a significant difference among the five constructs of principal leadership practices, across the sample high performing daily secondary schools?

Question 6(a): How are principals in Malaysian high performing daily secondary schools prepared for their leadership role? [3]

Question 6(b): What are the teachers' views on the national accreditation programme (NPQEL), in line with being future principals in Malaysian high performing schools? [4]

Question 7:   To what extent do principals encourage teacher collegiality?

Question 8:   What are the predominant leadership practices used by principals in Malaysian high performing daily secondary schools?

1.6   Significance of the Study

This study seeks to identify the contribution of principal leadership practices and teacher collegiality, towards the overall success of daily secondary high performing school systems in Malaysia. The findings of this study have key messages for current and

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[3] Research Question 6(a) is part of the SEAL & 7SLS research projects, which investigates Malaysian school leadership preparation and professional leadership development.

[4] Research Question 6(b) is part of the SEAL & 7SLS research projects, which investigates the effectiveness of the Malaysian national accreditation programme (NPQEL), in line with principalship in Malaysian public schools.

aspiring principals, policy makers and pre-service school leadership programmes. It would contribute towards the future developmental needs of school leaders across the nation, as they could acquire knowledge on transformational leadership practices and be able to further develop their skills and leadership styles. The findings will also contribute towards the body of research on educational leadership and management, and will help policy-makers, educators and relevant stakeholders, make comparative and evaluative judgements that can inform educational policy and practice.

In addition, the research findings would serve as an evidential base, to build further discussions with policy-makers, on an area of prime interest − strategic policy reforms and a gainful action plan. This would ensue an agenda that can serve as the basis for policy development and reforms in an approach to enhance school leadership and quality education in this country. This study can further serve as a guide for policy makers and system-level decision makers and would provide a valuable insight into the dynamics involved in high performing school structures and the measures taken to sustain school excellence. As a consequence, the research results will provide an insight about effective principal leadership practices within daily, secondary high performing school systems. It offers pragmatic solutions that could be of great use to the MOE, for the purpose of analysing school leadership policies and practices, and develop a common understanding of where and how to take action, henceforth.

A review of the evidence will also be of tremendous use to the *'National Institute of Educational Management and Leadership'* (also known as 'IAB' − Institut Aminuddin Baki), which represents the training arm of the MOE. The available evidence of this research study, will provide the principals and teachers views of 'NPQEL' (National Professional Qualification for Educational Leaders), and its effectiveness as a prerequisite

made mandatory for aspiring public school leaders. These findings can also contribute towards reinforcing IAB's leadership training initiatives and their leadership competency profiling, which could help enhance the capacity of school leaders, who are responsible for leadership in their schools (Sazali Yusoff, Abd Razak Manaf, & Rosnarizah Abdul Halim, 2007). More importantly, the contribution of this study will be directed towards building a robust knowledge base in educational leadership, particularly on school improvement practices, that can be leveraged upon by the research community at large.

1.7   Operational Definitions

Within the scope of this research study, the following terms have been defined for further clarity and understanding of key terms and concepts referenced throughout this study. The operational and conceptual definition of terms, provided below, are unique to this research inquiry, which investigates principal leadership practices and teacher collegiality in high performing schools, and are hereby described for further clarity of purpose.

(a) *Principal Leadership Practices*

Principal leadership practices are initiatives or actions taken by principals with the aim of addressing salient features of a school, which can subsequently contribute to the outcomes desired by schools (Hallinger & Heck, 1998). Kouzes & Posner (2012) defines leadership practices as "observable and learnable qualities that manifest themselves when leaders actually do them". In the context of this study, principal leadership practices are investigated to explore how principals exhibit their leadership practices in enacting leadership in their schools.

(b) *Teacher Collegiality*

Teacher collegiality refers to teachers who function in "professional collegial communities", whom are considered vital for substantive school improvement, organizational productivity, quality, and performance (Shah, 2012a, p. 131). Teacher collegiality was viewed by Lieberman and Miller (1999) as quality professional relationships among teachers, whereby teachers openly and continually investigated and critiqued classroom practice for school improvement. According to Shah, (2012a, p. 134) and Shah, (2012b, p. 1242), *"teacher collegiality is regarded as one of the most common attributes found in all successful and effective schools".* For this present study, teacher collegiality is based on the seven dimensions of teacher collegiality, as defined in (Shah, (2011) (Mutual Support; Observing; Joint Planning; Sharing Ideas; Teaching; Developing Curriculum; Sharing Resources).

(c) *Daily Secondary Schools*

Daily secondary schools (*sekolah harian)* in the Malaysian context, refers to national-type public schools that are funded by the government, but are responsible for their own school administration. These are Malaysian public schools attended by secondary students from Form 1 to Form 5, with some of these schools offering Form 6 as well. Most of the students in daily schools commute daily between school and home. Some of these daily secondary schools do provide student hostel facilities to a limited number of students who live more than 20 kilometres from school.

(d) *High Performing Schools (HPS)*

High Performing Schools (otherwise known as, '*Sekolah Berprestasi Tinggi'* or 'SBT') are titles awarded to public schools that have earned a superior academic reputation for their continuous academic excellence and accomplishments, both at

national and international levels. The HPS programme was implemented in 2010 by 'PEMANDU', with the aim of elevating academic excellence and student readiness for global competitiveness. New students who applied for admission into these schools, were filtered by the MOE, where only those who scored straight A's in their UPSR (Primary School Assessment Test, or PMR (*Penilaian Menengah Rendah*) public examinations, were given acceptance. Presently, HPS fall under the purview of the BPSBPSK and the JNJK, and these authorities are responsible for monitoring and ensuring that these schools make adequate progress, so that they are not at risk of deflecting from their targeted deliverables.

Malaysian high performing schools are currently under the purview of the BPSBPSK, with the Education Minister, holding the academic stewardship of this programme. As at 30th October 2014, 128 Malaysian public schools were accorded as 'high performing schools', for having met these defining criteria:

i. Schools with ethos, character and a unique identity which enables the school to excel in all aspects of education.

ii. Schools having strong and excellent work cultures and a dynamic national human capital for holistic and continuous development, in addition to being able to compete in the international arena.

iii. Schools having a conducive teaching and learning environment which promotes collaboration between public and private sector to accelerate students' achievement.

Source: (Ministry of Education, 2010, p. 4)

The criteria for which these High Performing Schools are evaluated depend upon the following benchmarks:

- Composite Scores Index
- SKPM scores ('Standard Quality Education in Malaysia')
- School leadership evaluation
- Quality of teaching
- Student Development Programmes

Source: NKRA Education, 2010.

A reward system has also been tailored specifically for these high performing schools, with a performance-incentives package which include:

- Renewed autonomy granted to school leaders.
- Specialised training and capacity-building for their teachers and school heads.
- Annual financial incentives to all members of staff.

Source: NKRA Education, 2010.

(e) *Composite Score*

The Composite Score is the school's key performance indicator (KPI), used to assess which schools qualify to be awarded as a 'high performing school' (PEMANDU, 2012). It is a unit of analysis, based on a percentile scale score, which constitutes 70% weightage of the School Grade Point Average (GPS) and 30% weightage of the School Self-Evaluation Score (SKPM). The initial criteria for Malaysian public schools to be deemed as 'HPS', is to attain a minimum score of 90% for their Composite Score or not less than the school ranking of 300 (KPM, 2010, pp. 10, 45) (Ministry of Education, 2010). As for year-on-year performance monitoring, the composite score target was revised to above 88% for high performing schools (PEMANDU, 2012).

(f) *Band*

Public schools in Malaysia are classified in terms of 'Band', depending on their school performance outcomes. There are seven bands (1 to 7) and high performing schools are in either Band 1 or 2. Schools that attain a composite score within the range of 90 to 100 are eligible to be accorded the 'HPS' status and they will be listed under the Band 1 category (see Table 1.1 on p. 26). As for HPS schools that fall short into the Band 2

category, they will be subjected to close monitoring and inspection by the 'Inspectorate of Schools and Quality Assurance' (JNJK).

Table 1.1: Composite Score and Band for Malaysian Secondary Schools
Source: KPM, 2010, p. 53

Composite Score (%)	Band
90.00 to 100.00	**1**
80.00 to 89.99	2
70.00 to 79.99	3
60.00 to 69.99	4
50.00 to 59.99	5
40.00 to 49.99	6
Less than 40.00	7

(g) *GPS Score*

The GPS (*Gred Purata Sekolah*) or the School Grade Point Average is the unit of measure that represents students' academic achievement results. It constitutes the cumulative average scores of public examinations (PMR, SPM and STPM) offered by Malaysian secondary public schools. The GPS is a percentile value that is calculated by obtaining the average scores of the three public examinations held over two successive years (the present year and the year before), based upon the percentage weightage stipulated by PEMANDU, (2009a). Refer to Tables 1.2 and 1.3 for weightage and calculation of GPS.

Table 1.2: GPS Score Weightage for Malaysian Secondary Schools
Source: PEMANDU, 2009a

Public Examinations	Weightage (%)		
	PMR	SPM	STPM
PMR	100%	-	-
SPM	-	100%	-
PMR + SPM	40%	60%	-
SPM + STPM	-	95%	5%
PMR + SPM + STPM	35%	60%	5%

Table 1.3: Calculation of GPS Scores
Source: (PEMANDU, 2009a)

Public Examination	Conversion Formula
PMR	(1-(GPS-1) / 4) X (Weightage Value)*
SPM 2009 onwards	(1- (GPS) / 9) X (Weightage Value)*
STPM	(1-(4-GPS) / 3) X (Weightage Value)*

* Number of public examinations offered by respective schools

(h) *SKPM*

The SKPM is the 'Standards for Quality Education in Malaysia' (SQEM) which represents schools self-evaluation score. It is a standard quality instrument, first developed in 2004, to benchmark the educational quality standards for Malaysian schools (Muhammad Faizal A. Ghani, 2013, p. 59). The SKPM is used to evaluate school performance, based on the following four main dimensions ('Standards') of varying weightage:

i. Standard 1 (10%):   Leadership and Direction (*Kepimpinan dan Hala Tuju*).

ii. Standard 2 (30%):   Organizational Management (*Pengurusan Organisasi).*

iii. Standard 3 (45%):   Curriculum (*Pengurusan Kurikulum).*

 Co-curricular and Sports (*Pengurusan Kokurikulum dan Sukan*).

 Student Affairs Management (*Pengurusan Hal Ehwal Murid).*

iv. Standard 4 (15%):   Learning and Teaching (*Pembelajaran dan Pengajaran*).

High performing schools in Malaysia are required to attain a minimum SKPM score of 90% in order to retain their HPS status (KPM, 2010).

(i) *Item Response Theory (IRT)*

Item response theory (IRT) is a theoretical framework organized around the concept of the latent trait. IRT encompasses a set of models and associated statistical procedures that relate observed responses on an instrument to a person's level of the latent trait.

1.8   Summary of Chapter

This chapter has served to introduce the nature of this study, by outlining its purpose, background, research problem, objectives, research questions and significance of the study. Definitions of certain terms relevant to this study have also been included. Chapter 2 reviews related literature on school effectiveness, leadership models and theories, including school leadership in Malaysia, with a view to examine the relationship between principal leadership practices and teacher collegiality.

CHAPTER 2: LITERATURE REVIEW

Chapter 2 reviews past research studies and examines publications on educational leadership as well as school-based articles on school leadership, principal leadership practices, school outcomes and teacher collegiality. In establishing the theoretical framework for this study, this chapter discusses the key concepts of school leadership emanating from the effective schools movement, which first established the importance of leadership on organizational outcomes, through to the emergence of various leadership theories that have made significant contributions to this area of study.

2.1   Educational Leadership

Over the past few years there has been a growing and renewed emphasis on educational leadership, (Hallinger & Chen, 2015). The educational leadership landscape increasingly reflects the current emphasis on changes in educational institutions, mainly due to global trends which include "globalization, competition, the knowledge-driven economy" and the expansion in information technology (Botha, 2013, p. 431; Rahimah & Ghavifekr, 2014). In addition, continual school-wide reforms and restructuring have transformed the concept of educational leadership to a "global discourse that has undergone several reconstructions" (Botha, 2013, p. 441). At the same time, there is a growing need for school principals to acquire the knowledge to understand the changes in the delivery of education, because ultimately it will affect their behaviour and approaches to leadership. For the future development of schools across the globe, Botha, (2013) stressed that "there must first be a major shift in the definition of educational leadership" to allow for the reconstruction of thinking, assumptions and practices that can bring wholeness and openness to the reality of leadership as it enters the educational leadership discourse. As

a result, "educational leaders of this new age" will need to take up a "new mission" and "acquire a new discourse" in educational leadership (Grace, 2000, p. 242).

In keeping with the concept of globalisation, and social media innovation, Fox, (2014) recognises that the future direction for educational research could be more wide-reaching to enable global connections for international research. Nevertheless, there has been a substantial amount of research studies being published in this domain over the last three decades, with a greater focus on school leadership. This trend has led to a renewed interest among scholars, who have further ventured into exploring educational leadership in Asia (Fox, 2014; Hallinger, 2012; Hallinger, 2013; Hallinger & Bryant, 2013; Hallinger & Chen, 2015; Harris et al., 2014; Jensen et al., 2012; Jones & Harris, 2014).

2.1.1   School Leadership and Management

Concepts underlining school leadership originally emerged from the realms of business management (Pansiri, 2011). In this regard, Tyack & Hansot, (1987) provide a compelling account of the origins of public school leadership in America after it had burgeoned out of the business sector. Christie (2010) also elaborates on the studies of school leadership that developed from America, United Kingdom and Australia over the recent decades.

Some research studies of a non-school contexts, were found to have business-generated concepts like Management by Objectives (MBO) and Total Quality Management (TQM), having "crossed borders into education". This was considered a breakthrough, as it "gained significant educational stakeholder attention" (Leithwood & Sun, 2012; Peck & Reitzug, 2012). In the 1950s and 60s, educational research on

"management of schools" was seen as paramount (Sergiovanni, 1995). According to Leithwood, Jantzi, & Steinbach, (2000, p. 193), "school improvement moved to management territory since the 1960s". That said, it was Zaleznik, (1977) who led the trend of contrasting management and leadership, and this resulted in the shift from education management to education leadership.

During the 1970s and 1980s, the "managerialism" aspect in education was considered inappropriate at that time, for educational organizations (Zhang, Lin, & Foo, 2012, p. 369). Despite the functional differences between management and leadership, Kotter, (2008) argues that they both are "complimentary activities", that are "equally necessary for the effective running of an organization" (see Figure 2.1 in Appendix B1, p. 377). In this regard, Bolden, (2004, p. 6) shows that, "leadership is not necessarily better than management or a replacement for it". Likewise, Christie, (2010, p. 696) claims that there are numerous research studies in South Africa which suggests that, "good management is essential for the functioning of schools", and that "if schools are not competently managed, teaching and learning is likely to suffer".

2.2   Effective Schools Research

This section reviews various aspects of the effective schools research, touching on the theoretical constructs of various principal leadership models and the correlates of school effectiveness. Effective schools research is considered the starting point for investigating the impact of educational leadership on student outcomes (Witziers, Bosker, & Kruger, 2003, p. 401). It provides an analytical framework for interpreting what makes schools effective (Kercheval & Newbill, 2001, p. 2). From a broad perspective, effective schools research looks at what can be transformed in education, to be implemented for school

improvement (Harris, 2005a). The pioneers of this movement, Reynolds, Hopkins, & Stoll, (1993) and Reynolds & Stoll, (1996) advocate that effective schools research and school improvement are mutually beneficial because school improvement initiatives can put effective schools research to practice. It also serves as a tool to test out theories and identify factors that can contribute to increased student achievement (Creemers, 2002, pp. 343-344).

The effective schools movement' arose in North America and Britain, in the late 1970s, as a reaction against the controversial 1966 Coleman's Report (Kercheval & Newbill, 2001, p. 1; Sammons, Hillman, & Mortimore, 1995). It was regarded that schools had an insignificant impact on student achievement and that 'out-of-school factors', such as socio-economic status and family background were highly correlated with student achievement (Angelo, 2005; Raptis & Fleming, 2003; Sammons et al., 1995, p. 6). Suffice to say, it was eventually, the Coleman's Report that became the catalyst that spurred interest in research on student achievement and school effectiveness (Raptis & Fleming, 2003). However, Edmonds, (1979) refuted the Coleman's Report, by revealing that other school factors contribute to increased student achievement. Ron Edmonds was thus acclaimed as the pioneer and founder of the effective schools research, mainly due to his influential findings of the "five-factor model of school effectiveness", documented in the 'Effective Schools for the Urban Poor' (Raptis & Fleming, 2003). The correlates that arose from this research, led to   (Hallinger, 2003; Kruger, Witziers, & Sleegers, 2007).

2.2.1   School Effectiveness and School Improvement

The literature on effective schools research has been instrumental in identifying a framework for interpreting what makes schools effective. It also provides the evidence that support the premise that "strong leadership is important for successful schools" (May, Huff, & Goldring, 2012, p. 418). Tracing the developing interest in the concept of school effectiveness moving into school improvement, the following was viewed in varying perspectives:

"A systematic sustained effort aimed at change in learning conditions and other related internal conditions in a school with the ultimate aim of accomplishing educational goals more effectively" (Velzen, Eckholm, Hameyer, & Robin, 1985).

"An effort to determine and provide from within and 'with-out', conditions under which the adults and youngsters who inhabit schools will promote and sustain learning among them" (Barth, 1990).

"A process of improving the way a school organizes, promotes and supports learning and that includes changing aims, expectations, ways of learning, methods of teaching and organizational culture" (Mortimore, 1998).

Hopkins & Reynolds, (2001) merged these perspectives and reconceptualised school improvement as a distinct approach to educational change that aims to enhance student outcomes as well as strengthen the schools capacity for managing change by focusing on the teaching-learning process and the conditions that support it.

Brown, (2001) draws on the work of Weber, (1971) as one of the first 'effective schools' studies to determine that academic achievements can contribute to school effectiveness. This study also found "strong leadership embodied in Principalship" and that the "principal was instrumental in setting the tone of the school" (p. 20). Subsequently, various studies identified "correlates of effective schools", associated with the effective schools reform movement, where specific leadership behaviours were correlated to high student achievement: (Angelo, 2005; Edmonds, 1979; Lezotte, 1991; Lezotte, 1989; Mortimore, Sammons, Stoll, Lewis, & Ecob, 1988; Rutter, 1982). Adding to this, Chrispeels and Meaney (1985), recommended that "school effectiveness results from the interaction among these correlates," as a whole instead of separately.

2.2.2   Emergence of Instructional Leadership

One of the defining characteristics that resulted from the early studies of 'schools effectiveness' was instructional leadership (Waters, Marzano, & McNulty, 2003). Roberson, (2012) points out to the primacy of instructional leadership and its early conceptions, underscored by research on highly effective schools. According to Hallinger (2003), instructional leadership is an "important characteristic of school effectiveness research" and it emerged concurrently with the early 1980s research on effective schools (Kruger et al., 2007, pp. 2-3).

For the most part, the literature on school leadership and school improvement studies have been skewed towards more established western counterparts (Harris et al., 2014). However, the concept of school effectiveness and school improvement has spread to other countries and are seen to have taken effect in classrooms, all over the world including the U.S., Canada, Australia, New Zealand, and not leaving out Malaysia, (Hargreaves,

Lieberman, Fullan, & Hopkins, 2010; Harris, 2005a; Hopkins, 2001; Perera, Donnie, & Vasu, 2015; Sammons, 1999; Sammons et al., 1995). As a result, various studies have since reported that school improvement efforts have been ongoing to enhance school systems and strengthen their capacity to manage change (Adams, 2004; Bush, 2009; Harris & Lambert, 2003; Nur Ain Wong Abdullah, 2009).

"The concept of school effectiveness and improvement" in Malaysia is relatively new (Ghani, Siraj, Radzi, & Elham, 2011, p. 1707). In 2008, Muhammad Faizal A. Ghani devised the "School Effectiveness Model" applicable for the Malaysian school context. This model takes into consideration the Malaysian school structure and culture, a view shared by (Rahimah, Manaf, & Marzuki, 1999). To obtain the best school outcomes, Ghani et al., (2011, p. 1707) asserted that schools will have to "re-implement the practices of an effective school". On the same note, Rahimah & Ghavifekr, (2014) further offered a holistic perspective on "school effectiveness and improvement", with the argument that the school is viewed as a learning organisation, and that the future of effective school leadership should be distributed, as it can contribute towards better school outcomes. On the other hand, Lee & Nie, (2014) argued that school leaders should adopt a more empowering approach in their leadership to facilitate teacher empowerment, as this could have further impact on classroom improvement and school effectiveness. Adding on, Selamat et al., (2013), stated that teachers should hold the responsibility of uplifting school effectiveness since they are directly involved in the teaching and learning process. Meanwhile Mustamin & Yasin, (2012), argues that it is the role of the school leader to work in concert with their stakeholders and be accountable for quality education and school effectiveness. This is why this literature is so germane to the study of leadership practices.

Although fairly new, the concept of school improvement in Malaysia is gaining ground. In comparison to western school leadership practices, it is observed that much of the local studies may not be able to model the western practices entirely, since they have been conducted in different educational settings. However, it is argued that they could be adapted to suit the differing school culture, practices and values found in Malaysia (Nur Ain Wong Abdullah, 2009; Oplatka, 2004).

2.2.3   Leadership Models

There are a range of leadership models identified by Pitner, (1988,) which is used to study the effect of principals on school effectiveness. These include "direct-effects, antecedent-effects, mediated-effects, reciprocal-effects and moderated-effects models". Using Pitner's framework, Hallinger & Heck, (1996b, p. 10) identified forty studies that examined the relationship between principal leadership and school effectiveness, but omitted the moderated-effects model, to focus on the conceptual orientation of their analysis. Two additional studies under the direct effects model were included in this list as they were reanalysed to test for their theoretical model (Hallinger & Heck, 1996b, p. 18). Refer to Table 2.1 of Appendix B2 (p. 377) for Hallinger and Heck's principal-effect theoretical models according to the studies published and their publication years.

2.2.3.1   Direct Effects Model

During the 1970s and 1980s, there were numerous research studies that centred on the "bivariate" relationship between school leadership on student outcomes: (Brookover, Beady, Flood, Schweitzer, & Wisenbaker, 1979; De Maeyer, Rymenans, Van Petegem, Van Den Bergh, & Rijlaarsdam, 2007; Edmonds, 1979; Rutter, 1982; Weber, 1971;

Witziers et al., 2003). These studies were focused predominantly on the "unitary role" of the school principal, which resembled the direct-effects model and the findings revealed that there was either no effect or a weak effect on student achievement (Hallinger, Bickman, & Davis, 1996; Hallinger & Heck, 1998) (see Figure 2.2, p. 378).

2.2.3.2 Direct with Antecedent-Effects Model

The antecedent-effects model revealed how school factors and the principal's characteristics have an effect on the principal's leadership. It also indicated how it shaped their perspective towards carrying out their role (Hallinger & Heck, 1996b). Antecedent variables, in the context of schools and the environment, include features of the school and its community, such as school size, school level, geographical location of the school, socio-economic status of families, parental expectations and ethnic homogeneity of community (Hallinger et al., 1996, p. 532). The antecedent variables of the principal's personal characteristics include gender, values and believes, background, training and previous experience (Hallinger & Heck, 1996b, p. 28).

2.2.3.3 Mediated-Effects Model

This is a framework modelled on Bossert, Dwyer, Rowan, & Lee, (1982) and it employs indirect paths to study the impact of principal leadership on student performance, (Kruger et al., 2007, p. 5) (see Figure 2.3, p. 378). Bossert's model suggests that principals can have a direct effect on "in-school factors" and an indirect effect on student achievement (Hallinger & Heck, 1996b, p. 8). According to Leithwood & Jantzi, (2000, p. 417), "the largest proportion of principal effects on students is mediated by school conditions". It is thus a challenging feat in leadership research to identify the various

school conditions that could have a 'direct effect' on students, as well as the task of determining the relationship between school conditions and the leadership.

In a more recent study Day et al., (2010, p. 2), discovered that successful school leaders define success not only in terms of test and examination results, but also in terms of pupil and staff motivation, the quality of teaching and learning and the school's contribution to the community. Bruggencate, Luyten, Scheerens, & Sleegers, (2012, p. 700) found considerable evidence which hypothesizes that "leaders achieve their effect on school outcomes through indirect paths". At the school level, there can be several mediating variables that explain the indirect influence of leadership on school outcomes, like "professional capacity, parent–community–school ties, and student-centred learning climate".

2.2.3.4   Mediated with Antecedent Effects Model

This is the most robust conceptual framework which investigates the principal's role in school effectiveness, across multiple levels of school organizations. This is due to the theoretical richness of the relationship between organizational variables (antecedent variables), the principal leadership, in-school processes (intervening variables) and student achievement (Hallinger & Heck, 1996b, pp. 26-27) (see Figure 2.4, p. 378). Hallinger & Heck, (1996b) revealed that out of the fifteen studies that adopted the 'mediated with antecedent effects model' (see Table 2.1, p. 377), eleven of them found that principal leadership had a significant effect on school processes and an indirect effect on school achievement Along the same lines, Hallinger et al., (1996, p. 531) developed a model that was influenced by (Bossert et al., 1982) (see Figure 2.5, p. 379).

This model incorporates four antecedent variables, of which two measure community context: school-level socio-economic status and parent involvement, while the other two measure principal characteristics: gender and teaching experience. The two dimensions of school organization (instructional climate and instructional organization), mediate the effects of principal leadership on school effectiveness. In the same vein, the conceptual model that underlies the present study, has been conceptualized from the principal-effects framework of Pitner, (1988), described under sub-section 2.2.4.

2.2.4   Conceptual Framework

The conceptual framework draws upon this literature to provide the building blocks of this research. In particular it looks at studies that examine the relationship between principal leadership practices and teacher collegiality. The concept of teacher collegiality is heavily prevalent in the leadership literature. It shows that the principal is key in developing teacher collegiality, and thus teacher collegiality is associated with successful and effective schools (Barth, 2001; Fullan, 2001; Fullan & Hargreaves, 1991; Harris & Muijs, 2002; Harris & Anthony, 2001; Jarzabkowski, 2002; Little, 1982). In addition, the 'effective schools research' had laid the groundwork, for showing that leadership matters. Further, the work of Hallinger and Heck (1996b) and the recommendation put forth by Witziers et al. (2003), have also played a contributory role in underlining that leadership and teacher collegiality are positively connected.

The conceptual framework of this research study (see Figure 2.6, p. 40) therefore encapsulates teachers' perceptions of their principal's leadership practices and teacher collegiality, in a high performing daily, secondary school environment.

Principal Leadership Practices	**Teacher Collegiality**
i. Modelling the Way ii. Inspiring a Shared Vision iii. Challenging the Process iv. Enabling Others to Act v. Encouraging the Heart	i. Mutual Support & Trust ii. Observing One Another Teaching iii. Joint Planning & Assessment iv. Sharing Ideas & Expertise v. Teaching Each Other vi. Developing Curriculum Together vii. Sharing Resources
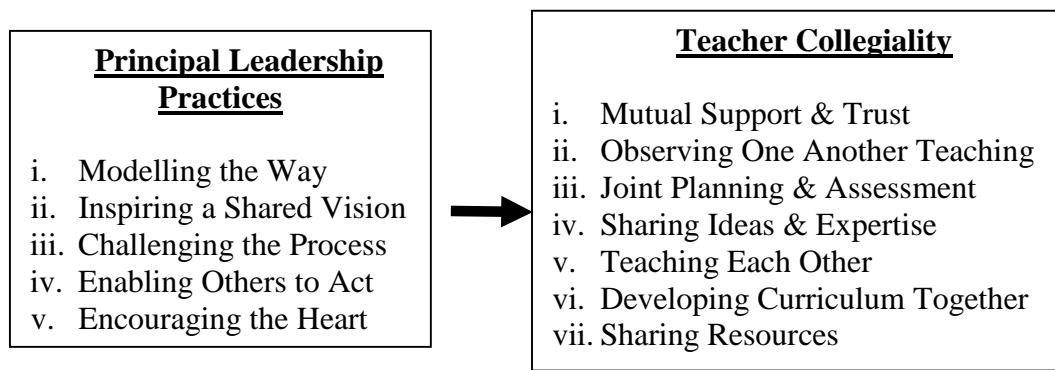
Figure 2.6: Conceptual Framework

The theoretical background of these two constructs stem from the literature. 'Principal Leadership Practice' was framed upon Kouzes and Posner's model of five Practices of Exemplary Leadership (2012), which includes [a] Model the way [b] Inspire a shared vision [c] Challenge the process [d] Enable others to act and [e] Encourage the heart. This model is described in further detail under 'Leadership Practices Inventory' under Section 3.6.2. As for 'Teacher Collegiality', this variable was framed upon the seven dimensions of the Teacher Collegiality described in (Shah, 2011). These dimensions include: [a] Mutual Support & Trust [b] Observing One another Teaching [c] Joint Planning & Assessment [d] Sharing Ideas & Expertise [e] Teaching Each Other [f] Developing Curriculum Together [g] Sharing Resources. More about these two variables, and how these concepts have emerged, the literature will be described in further detail in the subsections that follow.

2.2.5   Principal Leadership Practices

The concept of 'best practice' in school leadership as noted already is associated with effective school leadership practices. The idea of 'best practices' in leadership was first used in 2002 as the theme to the 'National College for School Leadership Conference' in

England: 'An international future: learning from best practice worldwide' (Glatter & Kydd, 2003). Although there were views against the use of 'best practice' in association with school leadership practices, which argued that practices cannot be labelled as 'best' because of the notion of 'continuous learning and improvement' inculcated within school institutions. Apart from this, it also contends that there is no prescribed formula or a 'one-size-fits-all' solution when it comes to defining the characteristics of leadership practices.

Fulmer and Wagner (1999, p. 31) defined key leadership talent as a "natural predisposition" or "recurring pattern of behaviour", applied productively, while Day et al. (2010) claimed that successful principals could improve student outcomes if they adapted their leadership practices, to suit their unique context. On the same note, Ngang (2012, p. 231) noted that "effective educational change is dependent on the exercise of appropriate leadership roles". Conversely, Devine (2013, p. 392) argued that there is a lack of relevant literature concerning "the role of school leaders in shaping integrative practices". In the same vein, May et al. (2012, p. 417) found a considerable amount of literature that focused on the effects of school leadership on teaching and learning but relatively little on "how principals' spent time on leadership activities" that possibly affect student outcomes.

Less evident, in the literature is research on specific principal practices that have caused some principals to be "more successful than others" (Branch, Hanushek, & Rivkin, 2013, p. 63). Leithwood and Sun (2012, pp. 387-388) advocated that, "more attention by practitioners and researchers needs to be devoted to the impact of specific leadership practices and less to leadership models", as various nations are in an "urgent search for leadership practices that matter most". Spillane (2005, p. 143) argued that there is inadequate attention paid to leadership effective practices, as there appeared to be more

attention and focus on daily performance of "structures, functions, routines, and roles". In this regard, Harris (2005b, p. 256) pointed out to the need 'for more empirical support to investigate how leadership can make a difference to organisational change'.

Khan and Iqbal (2014) viewed principal leadership as an essential element in the equation of school effectiveness. Other studies (Harris, 2005a; Wahlstrom & Louis, 2008) similarly affirmed that the principal is the key factor in supporting student achievement and that there was evidence to suggest that the quality of leadership positively enhances teaching and learning. A number of research studies link principal leadership, student achievement and school outcomes this way:

"School leaders achieve effects on their schools indirectly. Skilful school leaders influence school and classroom processes that have a direct effect on student learning. School leaders themselves are subject to considerable influence via the norms and characteristics of the school and its environment" Hallinger and Heck (1999) as cited in Bell, Bolam, and Cubillo (2003, p. 7)

Social interaction is a critical component of leadership practice, found to be integral for achieving better outcomes, and for improving the culture of an organisation (Harris, 2013). As more and more research is being conducted in offering insights into the causal chain between principal leadership and school outcomes, it remains an important area of interest. Bell et al. (2003, p. 7) further asserted that there should be more focus on trying to identify the paths in which this leadership effect can be achieved.

The key to a successful school was widely believed to be "the amount of influence exercised by successful school leaders" (Leithwood, Day, Sammons, Harris, & Hopkins,

2008, p. 4). Pont, Nusche, and Moorman (2008) offered strong evidence to support the premise that improved school leadership practices can enhance school outcomes. Similarly, Donaldson, (2006) added that the school leadership can mobilize stakeholders and get them to adapt their practices in order to optimize the students' learning process.

Sammons et al. (1995) drew on the empirical literature published during the period 1980 to 1995, which centred on principal leadership and school effectiveness: (Hallinger, 1989; Hallinger et al., 1996; Hallinger & Heck, 1996b; Hallinger & Heck, 1998; Leithwood & Montgomery, 1982; Murphy, 1988; Pitner, 1988; Pounder, Ogawa, & Adams, 1995). During this span of fifteen years, various researchers expanded their effort and began to conceptualise the principal leadership role, through systematic empirical investigations. This generation of studies, explored theoretical models of leadership effects that focused explicitly on the effects of principal leadership on student outcomes. This was mainly due to the increased attention among policy makers and researchers at that time, in having to address the critical concerns raised in line with improving student achievement. As such, researchers increasingly grew interested in further investigating principal leadership and other variables like teacher and school-level variables, based upon the conceptual underpinnings of empirical literature (Hallinger & Heck, 1996b).

Principal leadership was subsequently regarded as critical for school effectiveness and student success (Renihan, 2012). The following studies bear conclusive evidence of the measurable but indirect effect, principal leadership practices have on student outcomes: (Hallinger & Heck, 1996a, 1996b; Hallinger & Heck, 1998; Leithwood & Jantzi, 2008; Leithwood et al., 2004; Leithwood, Patten & Jantzi, 2010; Robinson, 2008; Silins, Mulford, & Zarins, 2002; Witziers et al., 2003). By comparison, there are however relatively fewer studies which indicated that principal practices have a substantial and

significant effect on school outcomes: (Branch et al., 2013; Jackson & Marriot, 2012; Kythreotis, Pashiardis, & Kyriakides, 2010; Ogawa & Bossert, 1995).

As the debate on whether principal leadership has a direct or indirect effect on student achievements continued studies like Kythreotis et al. (2010), Teddlie & Reynolds, (2000), and Leithwood and Sun (2012) highlighted that more empirical studies are required to establish the possible relationship between principal leadership and student outcomes, and more specifically the impact of principal leadership practices on these outcomes. Nevertheless, Waters et al. (2003) argued that the emergent theories that resulted since the early 1970s, remained largely theoretical and failed to provide principals with the practicalities of how to tailor their leadership strategies accordingly. In this aspect, the meta-analyses which synthesised the exhaustive review of theoretical literature, which purported to examine the effects of leadership on school outcomes, has done incredible justice to the body of research, significantly associated with leadership practices and student achievement (Waters et al., 2003).

One of the well-known meta-analysis conducted in the United States, between the years 1978 and 2001 was "School Leadership that Works: From Research to Results" (Marzano, Waters, & McNulty, 2005). This was considered rare among the limited research on school leadership at that time, which proved that school leadership does have an impact on student achievements. Marzano and colleagues examined 70 studies that investigated the effect of principal leadership on student academic outcomes and they identified "21 leadership responsibilities, practices, and traits" that have a significant relationship with student achievement (Marzano et al., 2005, pp. 42-43; Merturi, 2010, p. 31; Wilkey, 2013). The findings from this meta-analysis revealed a weak, positive correlation of .25 between principal leadership and student achievement, (Shin, Slater, &

Backhoff, 2013), while Klar and Brewer (2013) described Marzano's 2005 meta-analysis as having had a significant but indirect effect on student learning. Merturi (2010, p. 32) argued that the relationship between leadership practices and student success was significant enough to necessitate principals to develop ways to improve their leadership aptitudes. In contrast, Bruggencate et al. (2012) made a comparison of other meta-analyses that examined the effects of school leadership, stating that Witziers et al. (2003) "show negligible effect sizes" compared to the meta-analyses of (Chin, 2007; Marzano et al., 2005; Robinson et. al., 2008), which indicate "small to medium effects". Leithwood and Sun (2012) provided a statistical report of these meta-analyses, which were concerned with significant contributions of principal practices on student learning:

- Witziers et al. (2003, p. 417) – small but significant achievement effects.

- Chin (2007, pp. 173-174) – direct effect of leadership on school outcomes; student achievement is significant and positive.

- Marzano et al. (2005, pp. 128-133) – a weak relationship between leadership and student academic achievement.

Source: (Leithwood & Sun, 2012, pp. 408-409).

The next section outlines the concept of teacher collegiality from the available literature.

2.2.6   Teacher Collegiality

Teacher collegiality refers to the cooperative relationships among teachers (Shah, 2012a). It is associated with a teacher culture based on positive social collaboration and the building of a collaborative working relationship in schools (Jarzabkowski, 2002). The terms 'collegiality' and 'collaboration' are often used interchangeably, although Jarzabkowski (2002) as cited in Shah, (2012a) further attempted to differentiate these

terms and define teacher collegiality as described under Section 7.1.5.7. There have also been other views on how teacher collegiality has been defined. Barth (1990) viewed collegiality as what resulted when educators worked collaboratively with colleagues. Kelchtermans (2006) further defined collegiality as the quality of the relationships among staff members in a school, while Shah (2012a, p. 131) referred to it as "the cooperative relationships among colleagues".

Other positions on teacher collegiality, include the eradication of "teacher isolation", Wahlstrom & Louis, (2008, p. 461). Attempts were made to compare the "cellular arrangement" and the "organic management" of schools, which assumed a collegial working arrangement among teachers (Rowan, 1990, p. 374). As such, it was suggested that teachers should "abandon their traditional norms of isolation and autonomy", since labels of "teacher isolationism, individualism and privatism" are perceived as threats or barriers to collegial cultures. The implication arising is that the school culture needs to be changed from less isolating to more collaborative (Shah, 2012b). In the school improvement literature, Judith Little and her colleagues have contributed towards the notion of teacher collegiality in school settings. They have built upon a healthy teaching culture in schools that focused on "norms of collegiality" (Little, 1982). According to Lieberman, (1990, p. 127), "norms of collegiality" are shared norms and work orientations within school-wide processes. Little, (1982, pp. 334-337) has identified three characteristic components of collegiality found in effective schools:

- The greater the effort involved in initiating collegiality, the greater the prospects that it will influence school success.
- The greater the shared technical competence involved in observing, planning and teaching practices, the greater the likelihood of collegial interactions among

teachers and the greater the prospect that teacher collegiality will influence school success.

- The greater the tolerance for teachers and administrators to acquire the appropriate skill competence, the greater the probability that collegiality would occur and the quicker the acquisition of skill competence is achieved.

Little (1982) also found that principal leadership could promote collegiality by explicitly expressing their support for "norms of collegiality", by clearly defining expectations of collegial interactions among teachers, being supportive of collegial norms and rewarding staff that are collegial, while sanctioning those who isolate themselves or are indifferent to collegial practices.

The work practices of teachers were described as collegial, in four successful schools in the United States compared to less successful schools (Little, 1982). The teachers and administrators were found to be more engaged in discussions about teaching practices and other sensible perspectives of teaching. They were also engaged in mutual observations of each other's classes and collaborated in a joint effort for curriculum development. The aspects of collegiality described by Little, (1982) portrays effective schools as engaging in collaborative planning and collegial relationships, where teachers view each other as resources for professional growth. The development of these "norms of collegiality", involved schools in intensive forms of collaboration and collegiality. These were found to be different from the teaching culture revealed by Zahorik, (1987), where teachers remained satisfied with the "norms of privacy" (Rowan, 1990, p. 376). Rutter, (1982), found that there was no shared responsibility for joint curriculum planning, among the teachers of less successful schools and these teachers were not guided by their senior teachers in planning what to teach.

This review of the literature found that most of the studies on teacher collegiality have used either single or multiple case studies to draw general observations about collegial practices of school teachers (Shah, 2011). Caron and McLaughlin (2002) is an example of a study that evaluated six principals of exemplary schools. The findings revealed that three of these schools provided formal time for teachers to engage in collaborative activities on a regular basis and the principal was seen to be engaged in building collaboration and collegiality among the teachers. Heng and Marsh (2009, p. 533) pointed out that in order to transform traditional school cultures, teachers should "work together collectively to set priorities" and participate in decision-making. Similarly, Muijs and Harris (2006, p. 967), asserted that there was evidence of a collegial culture that supported "teacher leadership, collaboration and partnership" and that there was also evidence of a "high degree of trust and teacher engagement in research activities", where the element of trust is the key driver for the school, in which it needed to work both ways. The management needs to trust that teachers will exercise sound judgement with the interests of students and the school at heart, while teachers need to trust that the motives of the management is in line with their interests and that it will commensurate accordingly. Consequently, to summarise the literature on teacher collegiality, Shah (2011) highlights the positive outcomes due to teacher collegiality, as follows:

- Positive attitude towards teaching (Brownell, Yeager, Rennells, & Riley, 1997).

- Enhanced job satisfaction (Woods & Weasmer, 2002).

- Reduced stress and burnout (Maslach & Leiter, 1999; Numeroff, 2005).

- Improved efficacy (Shachar & Shmuelevitz, 1997).

- High morale (Nias, 1999).

- Professional growth and development (Hopkins, Beresford, & West, 1998; Knapp, 2003).

- Reduced staff turnover (Abdallah, 2009; Jarzabkowski, 2003).

- Assistance to new and beginning teachers (Jian, Odell, & Schwille, 2008; Williams, Prestage, & Bedward, 2001).

- Increased levels of trust (Muijs & Harris, 2006; Tschannen-Moran, 2001).

The concept of teacher collegiality has also found its presence in the realms of TPC – 'Teacher Professional Community'. As described in Thoonen, Sleegers, Oort, Peetsma, and Geijsel (2011, p. 232), shared collaboration and collegial relationships are at the core of professional learning communities. Although it has been suggested in Stepney, Callwood, Ning, and Downing (2011) that 'collaboration' is a "common sense approach", Ngang (2013) conferred that collaboration within educational communities and the development of a collegial culture can contribute towards students' learning.

Research has proven that collegiality among teachers can result in substantive school improvement (Barth, 1990). Just as Fullan (2001, p. 68) asserted that collegiality is paramount, Hoppey and McLeskey (2013) also stressed the need for teachers to be more collegial, as a means towards enhancing their professional development and improving student learning. Sergiovanni (2001) also believed strongly that collegiality has a strong connection to the academic success of students.

The practice of teacher collegiality has grown to be accepted as essential to professional practice (Shah, 2011, p. 2). Various factors in the literature highlight the effects of collegiality and sustaining collegial relations for improving teaching activities and enhancing teacher commitment (Rowan, 1990, p. 377). According to Ryan and Guthrie (2009, p. 338), teacher collegiality is evident where teachers demonstrate strong commitment to academic values, over self-interest. Furthermore, this study claimed that respect for colleagues and collegial processes also symbolised collegiality.

Shah (2012a, p. 132) found a considerable number of studies that relate to how teacher collegiality can positively affect their organizational commitment. This study has also found previous research studies which claimed that teacher collegiality is likely to augment their organizational commitment, and suggested the following positive outcomes that collegiality can lead to:

- increased social and emotional interaction and healthy peer inter-collegial relations in the workplace;

- increased involvement and ownership among teachers in coaching, mentoring, being role models for observation, action research, critical dialogue, and collegial problem-solving;

- better communication (teacher talk), more trust, and comfortable to share their expertise and seek professional help from peers;

- positive encouragement, caring, sharing and recognition;

- enjoyment in supporting, encouraging, and cooperating with colleagues;

- good level of job satisfaction, positive attitude, and mutual respect;

- social support for achievement and authentic pedagogy.

  Source: (Shah, 2012a, pp. 131, 134).

Research has also underlined the contribution of strong collegial relationships to school improvement and success, where authentic teamwork is an essential characteristic of successful organizations (Shah, 2012b, p. 1242). The following studies explored the extent to which teacher collegiality is related to student academic achievement: (Bolam et al., 2005; Goddard, Goddard, & Tschannen-Moran, 2007; Leanna & Pil, 2006). These studies found that schools with higher levels of teacher collegiality demonstrated higher achievement scores. Collegial relations among teaching staff, enhanced the quality of instruction and in turn, resulted in increased student academic achievement. As for the

schools where teachers took collective responsibility for student achievement, the students appeared to show better results in their core subjects (Garmston & Wellman, 2003). Schmoker (1999) conducted a comparative study between high-performing and low-performing schools in Michigan and found that high levels of collaboration was exhibited among teachers in high-performing schools (McDowell, 2004). In another high performing school in Tennessee, their weekly school meetings were incorporated as part of their collaborated activities, as "horizontal collaboration" was a mandated exercise to sustain organisational effectiveness (Wald & Castleberry, 2000).

Although much has been proclaimed about the positive effects that teacher collegiality can have in schools, Shah (2012a, pp. 144-145) raised some contradictions regarding the findings about "strong teacher collegial relationships associated with student achievement". These studies found that teacher collegiality could not be directly linked to improved student achievement. Nevertheless, Shah (2012a) further asserted that "collegiality should be structured and organized to influence teaching and instructional practices". Adding that, when teachers routinely function as teams and value the elements of teacher collegiality, such as "peer observation, joint assessment, and collaborative curriculum development", they may be willing to identify and adapt their own strategies and take responsibility for improved quality instruction and school performance (Shah, 2012a, pp. 134, 144-146).

With the enormous benefits that teacher collegiality can have in schools, the clear implication is that principals should engage in enhancing interpersonal relations among teachers, so that "organizationally committed teachers" will feel "recognised and valued" (Shah, 2012a, pp. 145-146). Likewise, Mohd Izham Mohd Hamzah, Fuziah Mat Yakop, Norazah Mohd Nordin, and Rahman (2011) highlighted that principals should

demonstrate their strong commitment to creating a collaborative and collegial climate in schools, as this would encourage teachers to have a positive perception of their school leadership.

Teacher collegiality is a workplace factor that can improve the organisation's effectiveness. The noteworthy effects of principal leadership on school's performance is seen in Friedkin and Slater (1994), where the principals centrality and the cohesiveness of the teacher network, fosters school performance outcomes. Following this social acceptance, the principal is encouraged to "engage in the manifold interpersonal interactions" with the teaching staff, including being involved in dealing with problems of the school, like parent-school issues and district policies (pp. 141-142).

This review of the literature reinforces that the school principal can have a direct bearing on the 'principal-teacher' relationship and an indirect effect on student achievement (Leithwood et al., 2004; Wahlstrom & Louis, 2008). Understanding the tenets of principal leadership and creating a positive environment that can enhance teacher collegiality, is largely depended upon the school principal. In fostering teacher collegiality, the principal acts as a facilitator, knowing when to intervene and when not to (National Commission on Excellence in Educational Administration, 1987). Effective leaders know the importance of promoting collegiality and collaborative relationships for securing better performance and outcomes (Jones & Harris, 2014; Wood & Govender, 2013). The next section of this review will now look at the literature on leadership styles and theories.

2.3   Leadership Styles and Theories

Leadership style refers to the cognitive ability of leaders to guide people by varying their approaches in a given situation (Tan, Tie, & Chua, 2015). Effective leadership styles are important for the organisation's effectiveness, as it guides leaders with what they should do, the attributes they should focus on and their combination of skills to be applied when the situation warrants (Bolden, 2004, pp. 14 - 15). As the notion of leadership styles surfaced, situational theories of leadership emerged. These theories suggest that leadership style should be adopted according to the situation (Bolden, 2004, pp. 8-10). Hersey, Blanchard, & Johnson, (2001) points out that in the changing face of leadership, the leader is increasingly required to become more flexible and to adapt their leadership style, to suit the situation. There is no 'one-size-fits-all' approach to leadership (Pedersen, 1980). Neither is there a single leadership style that is fitting for all school settings (Watts, 2009, p. 46).

Leadership theories have a strong influence on current leadership practices, education and policies and provide a useful framework for identifying different leadership styles and behaviors (Bolden, 2004, pp. 8 - 10). Leadership theories suggest that different situations require different leadership styles and so these trend-setters defined how school leadership was conceptualized and operationalized over time (Sheh, 2009). Leadership theories can be traced back to the 1920s "trait" phase, Cowley, (1928) the 1950s "behavioural" phase Bennis, (1959) and the 1970s "contingency" phase (Fiedler, 1972). The early theories often assumed that leaders would be men, as in the 'Great Man' theory. This theory was particularly favored with political, religious and military leaders (Dawson & Andriopoulos, 2014, p. 294). The most prevalent leadership theories found in academia is Trait Theory, Instructional Leadership, Transformational Leadership and

Distributed Leadership. According to Boris-Schacter & Langer, (2006), it is important to retrace and examine the direct and indirect influence that these leadership theories have on student academic achievement.

2.3.1   Trait Theory and Situational Leadership

In the early twentieth century, leadership was associated to a "finite set of traits" with the assumption that "people were born to be leaders and would excel by virtue of their personality alone" (Bolden, 2004, p. 9). Early leadership theories focused on the personal traits of a leader. Trait theory defined leadership through a natural selection that stemmed from the belief that true leaders possessed traits or characteristics, that had to do with "natural heritage, birth order and age" (Bass, 1985). Through the review of research in leadership traits, it was becoming increasingly clear that leadership was being viewed as a "relationship among individuals within a social context" (Wilkey, 2013, p. 35). However, the early trait studies were proven unsuccessful, because they failed to identify leadership traits that could distinguish a leader from a non-leader, and ignored the leader-follower interaction (Dawson & Andriopoulos, 2014, p. 294). It became apparent that leadership was being viewed in the context and social situation in which it is being evaluated (Fidler, 1997).

After much debate regarding the notion of the 'Great Man' theory, variables such as situation, circumstances and context emerged as important components of leadership (Northouse, 2012). This led to a breakthrough in research Wilkey, (2013, p. 36) with the rise of the situational leadership theory, which looked at the natural abilities of the leader as well as the circumstance and background. Situational leadership was developed by Paul Hersey and Kenneth Blanchard in the late 1960s (Watts, 2009, p. 40). According to

Hersey et al. (2001), situational approach to leadership is based on task and relationship behaviours, which is influenced by subordinate maturity and development. The effectiveness of a situational leader will thus depend on their flexibility and adaptive behaviour to effectively assess the situation. As their followers grow in confidence and ability, leaders should learn to vary the amount of tasks and psychological support they provide and be aware of opportunities to develop the skills and confidence in others (Wilkey, 2013, p. 36). However, through the extensive review of leadership traits, it has now been widely accepted that there is "no such definitive set of traits" that can serve as the basis for leadership (Bolden, 2004, p. 9).

"Leadership has nothing to do with having charisma or other exotic personality traits. It's not the province of a chosen few" (Bolden, 2004, p. 6).

Some organizations are known to use the trait approach as a useful benchmark for leader recruitment (Bolden, 2004, p. 14). The distinction of 'true' leadership is associated with "non-coercive, interpersonal influence" where the "leader induces followership through what she or he does" (Bolden, 2004, p. 4). However, Kellerman (2004) argues that "leadership is not a moral concept" and that leaders are like the rest of us, adding that, "to assume that all leaders are good people, is to be willfully blind to the reality of the human condition, and it severely limits our scope for becoming more effective at leadership". In summary, leadership is viewed as the influence a leader has in inspiring people to work towards group goals, not through coercion, but through personal motivation (Bolden, 2004, pp. 4-5).

2.3.2   Transactional Leadership Theory

Most of the early leadership theories tend to focus on the characteristics of transactional leadership: contingent reward, management by exception and laissez-faire (Zembat, Kocyigit, Tugluk, & Dogan, 2010). During the 1960s and 1970s, an effective school principal was regarded as "a programme manager, generally leading in a transactional style with contingent reinforcement" (Hallinger, 1992). The transactional leader is described as authoritative, manager-oriented and reliant on contingent rewards for employee motivation (Watts, 2009, pp. 2, 118).

"Transactional leaders tend to use rewards to motivate employees. Transactional leaders tend to take coercive action only if and when their followers under-perform" (Dawson & Andriopoulos, 2014, p. 304).

According to Watts (2009) transactional leadership is seen as an exchanged-based style, where communication channels are open to all levels of the organization. This enables managers to have a better understanding of their subordinates, whom will be aware of what is expected of them. Transactional leadership can lead to increased productivity, as a consequence of contingent rewards based upon effort expended and performance level achieved (Yukl, 2006).

There is considerable evidence found in local Malaysian studies stating that transactional leadership is evident among school principals, as well as department heads of public universities (Afshari, Abu Bakar, Luan, Abu Samah, & Fooi, 2008, 2009; Amin & Yusof, 2012; Shakir, Issa, & Mustafa, 2011; Tahir, Abdullah, Ali, & Daud, 2014), while Mohd Rozi Ismail (2012) further described these leaders as those who expect

respect when leading their organizations. Malaysian school governance structures, described in Nur Ain Wong Abdullah (2009) and Rahimah and Ghavifekr (2014, p. 51) are viewed as bureaucratic and hierarchical, and are seen to operate under a cloud of accountability mandates. According to Kim, (2010) the bureaucratic top-down management style described in Noor & Crossley, (2013) and Selamat et al., (2013) is regarded as transactional leadership. More coverage on Malaysian school leadership and the complexities of principal accountabilities, are outlined in further detail under Section 2.5.

2.3.3   Instructional Leadership Theory

Roberson (2012) points out that there has been over three decades of research on highly effective schools which underscores the primacy of instructional leadership. Similarly, Hallinger (2005) highlights that instructional leadership was the "predominant model" in use since the turn of the twenty-first century, owing to the increased global emphasis on school leadership accountability. The early conceptions of instructional leadership during the 1970s and 1980s, focused on the managerial role of the principal. The school principal's role shifted to that of an instructional leader, which was transactional in nature, but with more focus in managing school processes and procedures related to curriculum, instruction and assessment (Watts, 2009, pp. 2-3). However, with the onset of the school reform movement, instructional leadership lost its centrality, as transformational leadership emerged as the model of systemic change, needed by principals to steer their schools through reform (Marks & Printy, 2003, p. 391).

2.3.4 Transformational Leadership

The concept of transformational leadership had originally derived from non-educational settings (Geijsel, Sleegers, & Berg, 1999). It was not till the 1980s and 1990s, that research on transformational leadership penetrated the academic sphere through the initiatives by Leithwood and his associates in Canada. They clearly assert that transformational leadership is indeed essential for schools in current society (Geijsel et al., 1999).

Transformational leadership is actually a leadership model that has surfaced from transactional leadership (Dawson & Andriopoulos, 2014). The shift towards transformational leadership was due to the onset of the "global, information-based economy", which placed new demands on leaders, requiring them to be "transformational in their practices" (Roberson, 2012, p. 29). Given the emergent popularity of transformational leadership, there was considerable educational research conducted using the transformational leadership model, which rapidly yielded a knowledge base for the receptive audience of the educational community (Hallinger, 2003). According to Leithwood and Sun (2012), the transformational leadership model was most widely adopted and tested, especially evidenced by the literature published during the years 1990 to 2003. It has long been advocated that transformational practices have contributed significantly towards the reforms of school restructuring initiatives (Leithwood & Jantzi, 1999, p. 452). Bryman (1992) referred to transformational leadership as the "new leadership" that gained recognition for its "systematic empirical inquiry" within school contexts (Leithwood & Jantzi, 1999, p. 453). With the evolving trends of educational reform, transformational leadership has been the most frequently used model, aimed primarily at "developing the organization's capacity to innovate" (Hallinger, 2003, p.

330). In the same vein, Yukl (2006, p. 262) provided the following insight: "Transformational leadership focuses on change. Followers feel trust, admiration, loyalty, and respect towards the leader. As a result, they are inspired to perform more duties than they are expected to do".

The following sub-sections describe the evolution of transformational leadership, focusing on the works of Burns, Bass and Leithwood's models of transformational leadership. Their research initiatives have set a bedrock in the field of educational leadership.

2.3.4.1 Burns Model of Transformational Leadership (1978)

Transformational leadership was first conceptualized in 1978 by James MacGregor Burns, who was known for his Pulitzer prize-winning book entitled, 'Leadership' (Bolden, 2004; Chin, 2007; Leithwood, 2010). This seminal work provided a firm conceptual footing on transformational and transactional leadership (Leithwood, Tomlinson, & Genge, 1996). Burns played a pivotal role in establishing the concept of "transforming leadership", Geijsel et al. (1999, p. 310) to signify the relationship between the leader and 'followers' (Marks & Printy, Afshari 2003, p. 375). According to Hallinger (2003, p. 335), this was the time when "transformational leadership was first elucidated as a theory".

Burns built the distinction between transactional and transformational leadership. According to Stewart (2006), Burns outlined a theory that juxtaposed both these leadership styles. Transactional leadership that flourished in bureaucratic systems was considered "managerial", as it focused on operational aspects of the organization and the

use of "extrinsic rewards to motivate followers" (Goodnow & Wayman, 2009, p. 4; Stewart, 2006). On the contrary, according to Burns (1978), the transformational leadership model calls for the leader to be morally uplifting, by seeking to satisfy followers fundamental needs, aspirations and values, with the purpose of transforming followers self-interests into collective concerns. Nevertheless, Goodnow and Wayman (2009, p. 5) asserts that transformational leaders are expected to be "burdened with the ethical imperative to act morally".

Burns (1978) illustrates how both leaders and followers raise one another to higher levels of motivation and morality (Leithwood, 2010). Stewart (2006, p. 5) describes Burns conception of transformational leadership as a "reciprocal relationship between leader and follower, who share the commitment to realize a common ethical purpose". This was supported by Howell and Avolio (1992) who asserted that true transformational leaders were concerned with the common good and tend to be selfless and focused on the betterment of their followers.

With the view that transformational leadership transforms both the leader as well as the follower, Burns (1978) examined the transformational leadership practices of leaders and the ways in which these leaders inspired their followers to develop new levels of energy, commitment and moral purpose Roberson (2012, pp. 29-30). Further implications are drawn from Burns definition of transformational leadership, as outlined in Roberson (2012, p. 30), as one who:

   i. raises the followers' level of consciousness about the importance and value of designated outcomes and ways of reaching them;

  ii. motivates the followers to transcend their own self-interests for the sake of the team, organization, or larger polity;

iii. raises the followers' level of needs according to Maslow's hierarchy, from lower-level concerns for safety and security to higher-level needs for achievement and self-actualization.

2.3.4.2 Bass Model of Transformational Leadership (1985)

Bass, (1985) is an expansion of the original ideas of Burns (1978) that reconceptualised the transformational leadership theory model based on four dimensions known as the four 'I's, that measure the leader's influence on their followers: "idealized influence, inspirational motivation, intellectual stimulation and individualized consideration" (Aydin, Sarier, & Uysal, 2013, p. 806; Bass & Avolio, 1993, 1994; Chin, 2007; Leithwood, 2010; Leithwood & Jantzi, 2005; Watts, 2009; Wilkey, 2013). These four dimensions are grounded in moral foundations. Bass theory posits that transformational leaders should exhibit at least one of those elements (Marks & Printy, 2003, p. 375). The survey instrument, "Multifactor Leadership Questionnaire" (MLQ), developed by Bass and his colleagues measures the concepts of both transactional and transformational leadership (Bass & Avolio, 1994; Chin, 2007, pp. 166-167; Robinson, Lloyd & Rowe, 2008).

Bass theorized that transformational leaders garner trust, respect, and admiration from their followers. According to Bass and Stogdill (1990), transformational leaders can elevate the interest and generate awareness among followers to look past their own self-interests for the good of the organization. Moreover, by raising their consciousness about the importance of organizational goals, transformational leaders can motivate and inspire their followers to transcend their own self-interest for the sake of the organization (Marks & Printy, 2003). The following section explores further into the four dimensions that

measure transformational leadership: (i) idealized influence; (ii) inspirational motivation; (iii) intellectual stimulation and (iv) individualized consideration (Bass & Avolio, 1993, 1994).

Idealized Influence is a representation of a transformational leader seen as a "role model" with a strong compelling vision, "idealized by followers" (Aydin et al., 2013, p. 807). It is also referred to as 'charisma', of which the leader behaves in admirable ways that cause followers to want to identify with their leader (Watts, 2009, p. 37). This particular dimension of transformational leadership encourages followers to mirror the behaviour of their role model. Modeling based on high ethical behavior, beliefs, and values, can instill pride, respect and trust in the followers. Consequently, the respect and admiration that the leader earns, places the leader at a higher level of influence and importance. Moreover, the ability of the leader to demonstrate a willingness to change one's practices due to circumstances, symbolizes success (Leithwood & Sun, 2012, p. 400).

Inspirational motivation refers to the extent to which transformational leaders can "articulate an appealing vision", which can "inspire followers" to have a strong sense of purpose, "team spirit and enthusiasm" (Aydin et al., 2013, p. 807). Leaders who "articulate a shared vision" that is "appealing and inspiring", will motivate and build "goal consensus" among the followers, towards achieving their shared goals. Such leaders will also monitor the progress of these achievable goals, while holding high expectations of professionalism and innovation from staff (Leithwood & Sun, 2012, p. 400).

Intellectual stimulation refers to transformational leaders who encourage their followers to be "innovative, analytical and creative" (Aydin et al., 2013, p. 807). This

type of transformational leader "challenges assumptions, takes risks and encourages input" from followers (Watts, 2009, p. 37). Transformational leaders use intellectual stimulation to highlight the problems faced by their followers and improve their understanding in dealing with these problems (Nguni, Sleegers, & Denessen, 2006, p. 148). By providing intellectual stimulation, such leaders can stimulate the creativity within their staff members and help them evaluate and refine their practices so that they could carry out their tasks more effectively (Leithwood & Sun, 2012, p. 400).

Taking on the role as a mentor or coach, the transformational leader takes into consideration individuals' opinions, desires and needs, extending their 'individualized support' towards the professional development of their followers (Leithwood & Sun, 2012, p. 400). Individualized consideration is a dimension that entails how much "mentoring or coaching orientation", leaders give their followers, in terms of personal attention, advice and opportunities to develop (Bass, 1986; Nguni et al., 2006, pp. 148 – 149). Transformational leaders act as mentors or coaches by paying special attention to their followers needs, and showing concern for their achievement and growth (Bass, 1986; Roberson, 2012, p. 31).

2.3.4.3 Leithwood's Model of Transformational Leadership

In the 1990s, Leithwood and colleagues, Jantzi and Steinbach attempted to conceptualize transformational leadership theory, by exploring its nature and effects through extensive research (Leithwood et al., 2000, p. 189). They built and extended on the concepts of transformational leadership theory that began with Burns and Bass, and explored transformational leadership practices which became the subject of systematic empirical inquiry in the context of schools (Jantzi & Leithwood, 1996). Hallinger and

Heck (1996b, p. 28), has also acknowledged the evidence of Leithwood's empirical research studies conducted on transformational school leadership, which explored various leadership constructs and their effects on internal school processes and student achievement. Through their research initiatives, Leithwood and his colleagues have gained a wealth of experience and accumulated expertise within educational settings, which has contributed considerably towards transformational leadership for schools (Leithwood et al., 2000, p. 189).

In the early 90s, Podsakoff, MacKenzie, Moorman, and Fetter (1990) proposed an adapted version of the transformational leadership model. This was modified by Leithwood and his colleagues "to suit the leadership demands found in schools" (Leithwood & Sun, 2012, p. 388). The theoretical model of Leithwood (1994) suggested that transformational leadership was more compelling than instructional leadership, in relation to the social cohesion and human capital aspect manifested in schools (De Maeyer et al., 2007, p. 129). Viewing school leadership as moving from instructional to transformational leadership, Leithwood described leadership as having a direct effect only on curriculum, teacher instruction, professional development, and the supervisory role of the principal (Rideaux, 2011, p. 20). Leithwood and Jantzi (1999, p. 453) also point out that transformational leadership aims to "foster higher levels of personal commitment to organizational goals" on the part of the followers (Marks & Printy, 2003). Modelling after Bass, (1985) "two-factor theory", and advancing the model of transformational leadership, Jantzi and Leithwood (1996) identified six dimensions that make up their model:

  i.   building school vision and goals;
  ii. providing intellectual stimulation;
  iii. offering individualized support;
  iv. symbolizing professional practices and values;
  v.   demonstrating high performance expectations; and

vi. developing structures to foster participation in school decisions
Source: (Leithwood & Jantzi, 2000, p. 114).

Based on these dimensions, Leithwood (1994) developed the survey questionnaire, *'Nature of School Leadership Survey* (NSLS)*'* to measure specific leadership practices and examine problem-solving processes used by transformational leaders (Ng, 2008). Watts (2009) attempted to compare the dimensions of Bass's four-factor model against Leithwood's six-factor model, as seen in Table 2.2, (p. 379). It was noted that Leithwood began to view the transformational model as lacking in the transactional aspect of leadership which Bass had addressed in his model. Leithwood felt that the managerial component of transactional leadership is fundamental for the stability of an organization (Leithwood & Jantzi, 1999, p. 454). To this effect, Leithwood added four management dimensions, as a response to the criticism by Silins (1994), and this made a significant contribution towards transformational leadership in schools (Leithwood & Jantzi, 2000; 2005, p. 181). These four added dimensions include: (i) staffing (ii) instructional support (iii) monitoring school activities and (iv) community focus (Leithwood & Jantzi, 2000, p. 114). In total, ten dimensions have been formulated to further investigate specific leadership practices (Leithwood & Jantzi, 1999, p. 454).

2.3.5   Distributed Leadership

The theoretical framework of distributed leadership is built upon the theory of transformational leadership. By examining the effects of transformational practices, Leithwood and Jantzi (1999) found evidence of a distributed form of transformational leadership. Similarly, Hallinger (2003, pp. 330-331; 338-339) also views transformational leadership as "a type of shared or distributed leadership", since it is

concerned with "developing a shared vision and shared commitment to school change". Hallinger further described the characteristics of transformational leadership as "distributed in nature" and is conceptualized as an "organizational entity" with "multiple sources of leadership" that stimulates change through a "bottom-up participation". Leithwood et. al. (2004) also maintained that transformational leadership is leadership that is 'distributed' throughout an organization and it is this element of 'distribution' that generates the capacity for change. Adding on Jackson (2000) as cited in Hallinger (2003, p. 340) highlighted that the evolution of shared transformational leadership within a school community, will result in additional stakeholder involvement for the implementation of school reforms.

The phenomena of distributed leadership, as a contemporary leadership theory, is currently gaining much attention in the field of educational leadership. According to Harris, Leithwood, Day, Sammons, & Hopkins, (2007), any form of collaborative activity or shared leadership may be defined under the category of distributed leadership. The notion of shared or distributed leadership is seen as the leadership activity of an organization, primarily concerned with "the co-performance of leadership and the reciprocal interdependencies that shape leadership practice" Harris, (2013, p. 548). For this concept to work most effectively, leaders should "actively model reciprocal trust, responsibility and accountability". To put it from another perspective, formal leaders should influence and "actively encourage others to step up and contribute their expertise". Mostly academic literature on leadership writes about "leadership being a powerful force for good". Conversely, when distributed leadership is abused and leaders try to "control rather than empower", it can be a case where such leaders can "aggressively prevent others from influencing and taking the opportunity to lead". This is where the misuse of distributed leadership can be a "potentially damaging force" (Harris, 2013, p. 70).

Hargreaves and Fink, (2008, p. 232) presents a conceptual discussion of the emerging lateral approach to educational change, through the distributed leadership model, compared against the "top-down, micro-managed' technocratic approach, to meet performance targets. This study illustrates how communities require leaders who can inspire, connect and engage, in which their "leadership may be distributed in an emergent and benevolent way". Mintzberg (2004) further states that:

"Responsibility for making decisions and developing strategic initiatives has to be distributed, so that responsibility can flow to whoever is best able to deal with the issue at hand".

The concept of distributed leadership first emerged with (Gibb, 1954). In this handbook of social psychology, Gibb suggested that leadership should be taken as shared functions among individuals, instead of the monopoly of the individual. A review of the literature showed evidence of seminal works by Gronn, Spillane and Harris, who theorised the concept of distributed leadership from varying perspectives. Gronn (2002, p. 429) viewed distributed leadership as the "concertive action", involving the spontaneous working relations of a group of interacting individuals. Harris and Chapman (2002) conceptualised distributed leadership within the context of effective school leadership, as a series of tasks among various leaders, who are seen empowering others to lead, building positive relationships and promoting collaboration among colleagues. Spillane, Halverson, and Diamond (2001) unfolded the thought process that went into distributing leadership given any situation and defined it from the perspective of "cognitive and activity theory", to facilitate teaching and learning.

2.3.5.1   Gronn's Theoretical Framework of Distributed Leadership

Gronn's understanding of distributed leadership shifts away from the traditional dependence of followers on leaders and is instead grounded in a theory of action, involving the dynamic working relations of leadership teams. Viewed as a "division of labour", Gronn redefined the authorship that expressed two new forms of leadership patterns: "additive" and "holistic". Additive is an "uncoordinated" form of distributed leadership that disregards the leadership activities of others within the organization. Whereas, holistic leadership is a "collaborated" form of distributed leadership involving others within the organization. Gronn went deeper into examining the distinction between "co-performed work" and "collectively performed work". Gronn refers to this taxonomy as a "hybrid leadership practice" as opposed to distributed leadership per se, explaining the existence of "concerted actions" within an institution, where there may be "team leadership groupings" (either "solo, dyadic, triadic") working in parallel with collectivities (Lee, Hallinger, & Walker, 2012). In his view, "hybridity" is a more "accurate representation" of such leadership practices that exist in organisations (Gronn, 2008, pp. 150, 152, 155).

2.3.5.2   Spillane's Theoretical Framework of Distributed Leadership

James Spillane holds a prescriptive description of how distributed leadership was viewed as a "social phenomenon", where leadership roles and responsibilities are shared. However, Spillane frames his argument and points out that distributed leadership in his perspective, is not about leading a school "single-handedly", but is essentially about the "three constituting elements of principal leadership" : "the interactions of school leaders, followers and their situation" (Spillane, 2005, pp. 143 - 145).

Spillane's theoretical underpinnings of his framework sees leadership "chiefly as a function of individual personality, ability, cognition, and style". From the context of "distributed cognition and activity theory", Spillane describes the practice of distributed leadership as emerging through the interactions with people and the environment. In retrospective, Spillane "re-interprets relevant literature" in approaching this theory from the perspective of "understanding human action". This provides an insight for "leaders cognition and action", understood as "thinking and activity" that could enable leaders to reflect and analyse upon their practices to promote "change in leadership activity" (Spillane, Halverson, & Diamond, 2004, pp.3, 5, 7, 8).

2.3.5.3 Harris's Theoretical Framework of Distributed Leadership

Harris (2013) is seen to reinforce the scholarly uptake of this subject, offering answers to some of the misconceptions of distributed leadership and highlighting the practical implications of distributed leadership. Many of these works on distributed leadership (Harris, 2013; 2011; 2010; 2008; 2007; 2005a, 2005b) are insightful, as it connects theory to practice by re-examining the dynamics of distributed leadership practices and realigning it as the core of learning and teaching to secure improvement and change. Harris (2013) forged a new view of distributed leadership, seen as one that moves away from the bureaucratic formalities emanated from formal leadership roles to one that relinquishes "authority and power in order to broker, facilitate and support the leadership of others". Jones and Harris (2014, p. 475) assert that effective principals draw upon "collective talent and ability within the organisation". Similarly, Bolden (2004, pp. 12-13) viewed the model of distributed leadership as, one that is "less formalized", "dissociated from the organizational hierarchy" and founded on the realization that "no

one individual is the ideal leader in all circumstances", further adding that distributed leadership is a "new school of leadership thought" and proposes that,

"Individuals at all levels in an organization, can exert leadership influence over their colleagues and thus influence the overall direction of the organization".

Harris's long and active engagement in research concerning distributed leadership practices, point towards the positive impact that distributed leadership has on organisational school outcomes. Further, Harris (2013) has reconceptualised the essentials of distributed leadership, with the argument that, distributed leadership does indeed matter and that it is expertise rather than role that defines a leader.

The following studies conceptualize the phenomenon of distributed leadership. These studies support the premise that distributed leadership does have a significant impact on school outcomes. They explore the theoretical aspects that underpin research in this area and draw upon conclusive recommendations for its adoption in schools. Bartlett (2008) recommended that distributed leadership practices should be adopted in schools so that it allows the principal to play an active role in the daily functions of the school, as it frees up time spent on operational issues and allows the principal to build closer relationships with staff members. Elmore (2007) had introduced the five fundamental principles of distributed leadership, essentially for school success and effectiveness:

- Principals and leaders should work to improve instructional practices within the organization.
- All educators should be continuously learning.
- Leaders must model the behaviours they expect.
- Each person's role should be dictated by their individual strengths, and not by the needs of the organization.

- Legislatures should provide the resources for advancing the needed improvements.

  Source: (Bartlett, 2008, p. 21).

In 2008, an OECD study on improving school leadership, highlighted the need to distribute school leadership by engaging broader participation of leadership teams (OECD, 2009). In a similar context, Leithwood and Sun (2012, p. 401), also held clear and strong believes that leaders should "distribute leadership broadly among staff" and establish working conditions that facilitate staff participation in decision-making, in curriculum planning and towards their professional growth. In another study, Leithwood & Jantzi, (1999, pp. 454, 462) examined the effect of transformational practices demonstrated through a distributed form of transformational leadership and measured the degree to which distributed leadership was being assimilated among staff.

Day et al. (2010, pp. 16-17) presented the following claims about successful school leadership, in line with the importance of distributed leadership:

- Successful heads distribute leadership progressively.

- The successful distribution of leadership depends on the establishment of trust.

This study also identified new evidence about leadership distribution among high performing principals:

- leadership distribution is common in schools but patterns of distribution vary

- the distribution of leadership responsibility and power varies according to local context

  Source: Day et al., 2010, p. 16.

On a similar note, Day et al. (2010) shared strong similarities with Hargreaves & Harris (2011), as these studies looked at high performing institutions, with the latter finding high performing leaders investing in the following:

- Building strong relationships.

- Sharing leadership with others.

- Developing collaborative teams.

- Generating high levels of intra-organisational trust.

  Source: Harris, 2013, p. 22.

Having presented a comprehensive overview of the leadership styles and theories that have emerged over time, a discussion will now follow with conceptualising leadership practices and understanding the ways in which successful principals define success and adapt their leadership practices to accommodate their unique context.

The following chapter outlines the research methodology used in this study, with a focus on the research design, research setting, instrumentation, validity of research instruments, research methods used and the mixed methods used for data analysis in this study.

CHAPTER 3: RESEARCH METHODOLOGY

Introduction

This chapter presents the methodology used and describes the overall resign design of this study, including the research instruments used, population, sampling distribution, data collection process, and the data analysis procedures utilized in this research study. This chapter also discusses in detail the research setting, the pilot study, the validation of the research instruments, ethical considerations and research protocols used in this study.

The research design involves a mixed-method approach, which combines both data analyses - quantitative and qualitative, to provide a more comprehensive understanding of the phenomena under study. Eventually, the process of triangulation, involving four data sets – the quantitative survey questionnaire, the qualitative interview, the observation field notes and the qualitative focus group discussion, will test and validate findings through cross-verification, to ensure the consistency of the research findings.

3.1 Research Paradigm

Based on the conceptual framework identified, the mixed-method approach is the chosen methodology for this study as it will employ both qualitative and quantitative probes. According to Creswell & Clark, (2007), as cited in (Lisle, 2011), "research teams are needed to conduct concurrent mixed methods studies because both components must be implemented at the same time". The rationale for this is that quantitative data, which usually make up a larger sample size, could offset the weaknesses inherent in a generally smaller qualitative sample size. On the other hand, qualitative data can rule over

quantitative data, as the former can provide in-depth understanding of the quantitative statistical results, through interview and focus group probing's. Such is the strength behind a mixed-method design, where both methodologies reign supreme, with quantitative data providing for generalizability, while qualitative data providing for deeper contextual understanding (Creswell, 2012). Employing a mixed method approach will therefore have the potential to clarify the findings, explain certain anomalies in the data and firm up the conceptual validation of the results by capturing logical patterns of relationship and meanings between the variables measured. This could eventually contribute towards more meaningful project results that can facilitate future policy directions.

Tracing the historical development of mixed methods research, this concept originated in 1959 when Campbell and Fiske used this approach to study the validity of psychological traits (Campbell & Fiske, 1959). It is also associated with the idea of triangulation which was first coined in (Webb, Campell, Schwart, & Sechrest, 1966). According to Thurmond, (2001) and Sporton, (1999), a mixed method approach which allows for further confirmation and comprehension of results is considered a beneficial component to any study. The debate on mixed methods continued with (Bryman, 1984) and (Lisle, 2011, p. 88), who "argued for the superiority of one method over another". During the 1970s, the quantitative approach was considered the "gold standard of educational research". However, the 1980s emerged as "the golden age of qualitative research". Nevertheless, Creswell, (2012) pointed out that educational research studies are not quantitative or qualitative, but instead contain some elements of both approaches. Despite the growing interest in the mixed methods movement, the challenges inherent in combining methodologies may constitute to "poor quality research" found to be a violation among "novice researchers", which may be a result of their "immature

readiness" of not having fully understood the essence of the mixed methods framework, an argument described in (Niglas, 2009, pp. 34, 36-37). Taking heed of these conflicting perspectives and challenges highlighted by the various research scholars of this field, this study adopted the mixed methodologies design, rather than the "mono-method" alternative known for its vast limitations (Onwuegbuzie & Leech, 2005, p. 384). A combined approach to this research inquiry reinforced the research framework, as well as expanded the repertoire of the researcher. This mixed methods approach also served as a frame of reference for future postgraduate students, who have opted for this methodology. Lisle, (2011) describes the booming years of mixed methods:

"The novelty of mixed methods is positioned firmly within the disciplines of sociology and education" (Lisle, 2011).

3.2 Research Design

The research design refers to "the researcher's plan of how to proceed" (Willis, 2007). This study began with a systematic approach of sourcing for information on the topic of research, followed by extracting weighted evidence and making relevant judgments that contributed to the research synthesis (Gough, 2007). The data extraction involved a detailed strategy of sourcing for scholarly information from academic research literature, as explained further in Appendix A1, on pp. 349-350. The methods and procedures of inquiry used in this study, together with the analysis process, formed a coherent framework that was fundamental for framing the research design.

The overall research design of this study had progressed through four phases, as illustrated in Figure 3.1 shown on p. 76. Phase 1 involved the pre-data collection phase, where various ethical procedures and protocols had to be looked into, before carrying out

research in schools. A feasibility study was then carried out in Phase 2, to endorse the research instruments and methodologies to be used, as well as to validate the research instruments. Subsequently, data collection began in Phase 3, using a combination of mixed methodologies, involving quantitative and qualitative research instruments. The final Phase 4 involved the data analysis phase which, concluded with the interpretation of research findings and implications for further research.
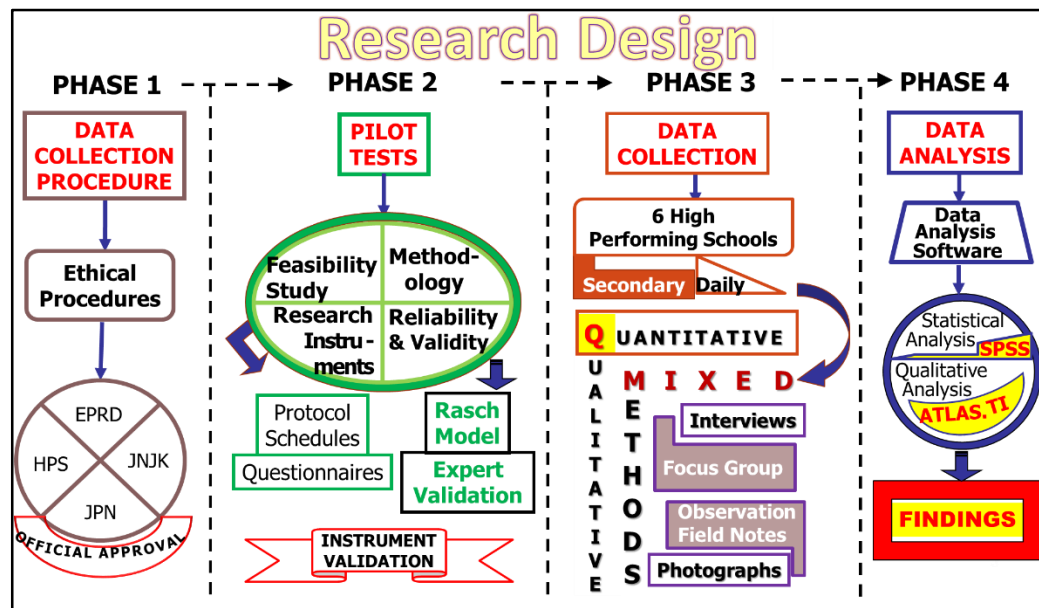
Figure 3.1: Research Design

3.3 Data Collection Procedure

The data collection of the main study commenced in mid-August 2014, where both forms of data (quantitative and qualitative) were collected concurrently. This is a cross sectional survey design, popular with educational research, where data is collected at one point in time and is useful in a situation where time is critical (Babbie, 2013). Considering the time frame allocated for school visits, the data collection process ran in parallel, to enable both quantitative and qualitative data to be collected concurrently.

Each of the six school principals were contacted by telephone and letters were emailed and sent by fax (facsimile) to each respective school, requesting for their participation in this study. Prior to scheduling the school visits in August 2014, several follow-up telephone reminders were made and letters re-faxed, requesting for their cooperation in this study. At the same time, several visits were made to various MOE subsidiaries, such as the 'School Inspectorate and Quality Assurance Department' (JNJK), the 'Fully Residential and Excellent School Management Division' (BPSBPSK) and the 'Education Performance and Delivery Unit' (PADU), to obtain statistical information on the sample schools, so that a cross verification could be carried out against each of the schools' performance records.

During the data collection phase, both quantitative and qualitative data were collected concurrently, between 16th August and 3rd November 2014. Data was gathered using multiple sources of research methods such as questionnaire surveys, interviews, focus group discussions, classroom observations, photographs, audio recordings and school documentation. The data collected through these mixed-methods, resulted in a large amount of eminently rich data, gathered at the school sites.

For the qualitative inquiry, face-to-face interviews and focus group discussions were carried out with selected principals and teacher participants. In an effort to reduce the *'Hawthorne Effect',* the interviews took place within the confines of their staff rooms, allowing for the participants to feel naturally comfortable in their familiar surroundings (Baiza, 2011, p. 69; Berg, 2004). This put the respondents at ease, as they felt safe about being research subjects for this study.

Throughout the nationwide data collection process, there were two researchers involved in the data collection of this study. By having two researchers to collect data, inter-rater reliability was established for this study. Additionally, the quality of this research inquiry was further substantiated by an audit trail, which documented the entire research process from the data collection phase to the analysis phase. A detailed time log of the interviews, focus group discussions, observations and transcriptions that followed, are listed in Table 3.1 in Appendix C1, p. 380.

3.3.1 Ethical Procedures for Data Collection

Considering the series of procedures and protocol involved in accessing Malaysian public schools to conduct research, official approval is required from the Educational Planning and Research Division (EPRD) and further clearance from the relevant State Education Departments (JPN), before carrying out research in Malaysian public schools. There are a sequence of tasks and procedures that need to be adhered to, prior to commencing field work and data collection. Firstly, all official school visits for research purposes, need to be pre-endorsed by the EPRD. For this study, a research proposal, the list of schools under study and the purpose of the school visit was submitted to EPRD through an online application and the approval was granted by the EPRD on 14th June 2013. Upon receiving the EPRD letter of approval, separate applications were made to each of the respective State Education Departments (JPN) to notify them of the names of schools to be visited and to obtain their official endorsement before commencing the school visits (see Appendix C2 under pp. 382 - 388).

In preparing for the school visits, written permission was obtained from the Educational Planning and Research Division (EPRD), the State Education Departments

(JPN), and the respective school principals. During the school visits, the research participants participated in the interviews and focus group discussions, on the mutually agreed dates between 16th August and 3rd November 2014. Before beginning the face-to-face interviews and focus group discussions, the purpose and scope of this research were read out and the reasons for selecting the sample schools were also explained to the research participants. Moreover, from an ethical standpoint, Dawson (2013, p. 205) confirmed that research subjects should be free from any coercive influence, and so during the data collection period, research subjects of this study were reminded that their participation in this research project is voluntary and that they may withdraw from the study at any time. In an effort to assure participants that their identity will be protected, each questionnaire form was prepared with a cover note, which explained the purpose of the study, the voluntary participation of respondents and the confidentiality clause (see pp. 394, 396 and 401).

As for the use of photography, audio and video recordings, prior consent was obtained from the participants before commencing the interviews and focus group discussions. All participants consented to photography and audio recordings, but none of the participants were willing to be video recorded. So in line with research ethics, there was no deception on the part of the researchers and as requested, none of the interviews or focus group discussions were video recorded. Furthermore, confidentiality was also promised to all participants, in which case, every effort was taken to protect the anonymity of the respondents, by ensuring that all names were represented by pseudonyms and schools were labelled with an identifier number, to identify which school the survey instruments came from.

3.3.2   Ethical Questionnaire Requisition

The questionnaires devised for this study adhered to ethical research procedures, in order to ensure that the relevant standards and guidelines were complied to. Official consent was obtained from the respective instrument developers, to use their instruments for the purpose of this research study. Once permission was granted on 23rd August 2013, from Ellen Peterson (Permission's Editor) and Debbie Notkin (Contracts Manager, Wiley) for the use of the 'Leadership Practices Inventory' (LPI) 2012, copies of this instrument were purchased from Wiley Publisher. As for the 'Teacher Collegiality Scale' (TCS) 2011, the developer of this instrument, Dr Madiha Shah, provided an email authorisation on 19 June 2014, to use this instrument for its exclusive use in this study. Refer to Appendix C3, p. 389 for the ethical requisition of these questionnaires.

3.4   Research Setting

During the research site selection, the process of establishing contacts, building rapport with research subjects and understanding the social dynamics when working in the field, took precedence. Gaining access to the Malaysian Ministry of Education was facilitated through a fellow course-mate, who played the role as the trusted and respected 'gatekeeper', who had willingly introduced the Researcher to the relevant officials in the Education Ministry. This facilitated my access to the various departments within the Ministry, and enabling the Researcher to obtain the official circulars needed for this study. There were also several informal discussions held with these relevant ministry officials, where pertinent information regarding this study, was obtained. It was important to gather such inferences during the early stage of data collection, as it later became more apparent in determining the sample schools to be selected for this study. The research setting was

also determined based on the selection criteria of the participants, discussed under Sub-sections 3.4.2.1, p. 83 (Principal Participants) and 3.4.2.2, p. 84 (Teacher Participants).

3.4.1   Population and Sample

The term 'population' in the context of surveys and sampling, refers specifically to the "research population". The population includes all items in a certain category that are being researched. Likewise, the 'sample' refers to the "relatively small part of the research population" selected to participate in the study (Denscombe, 2010, p. 23) (see Figure 3.2.
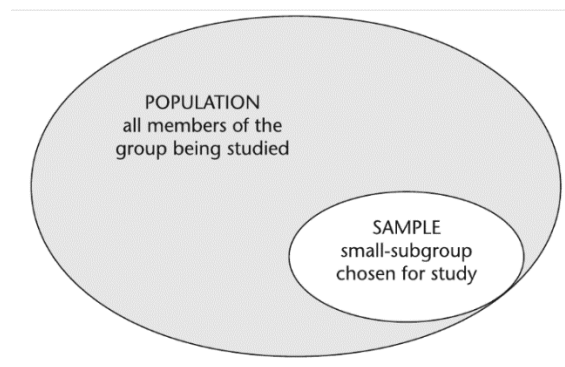
Figure 3.2: Population and Sample
Source: Denscombe, 2010, p. 23.

The population of this study comprised of seven daily, secondary high performing schools, throughout Malaysia. As at December 2013, KPM (2014) reported that there were a total of 115 high performing schools nationwide, out of which seven of the target population comprised of daily and partially residential, secondary schools. The sample of principals surveyed and schools analysed were limited to daily, secondary public schools, in the 2013-2014 school year.

The sample is a representative of a subset or segment of the whole population being studied, and is derived from a cross-section of the research population (Bryman, 2012, p.

187). According to Denscombe (2010, p. 24), representative samples tend to be associated with quantitative data, and are known to substantiate valid conclusions in a research investigation. In this study, a total of 290 respondents from six sample high performing daily secondary schools, had participated in this research study and they formed the sample of this present study. These respondents comprised of school principals and practicing teachers from these six sample schools. Refer to Table 3.2 for the six sample schools and the number of teacher respondents who participated in this research study (see Appendix C4, on p. 390).

3.4.2   Sampling Procedure

As at 12 June 2014, the BPSBPSK confirmed that there were 115 high performing schools throughout Malaysia, of which 55 were primary schools and 60 were secondary schools, as illustrated by Figure 3.3 (p. 391). Subsequently, the sixty secondary schools sample was further narrowed down to the 'National Secondary Schools' category, of which seven of these were daily high performing secondary schools (see Figure 3.3, p. 391). These seven schools represented the population of daily high performing secondary schools throughout Malaysia. The decision to include each of these schools as the sample of this study, was to allow for generalizability. However just before fieldwork began, two among these schools opted not to participate in this study. In addition, one other high performing day school was initially reluctant to participate, despite having been approached in person. However gentle persuasion on the part of the researcher did pay off, when the principal eventually committed to schedule an interview at an agreed time, on a later date. Ultimately, six schools participated in this research study, except for one school, which declined to participate, due to the interim status of the principal, who was approaching retirement. Table 3.3 describes the reasons given by principals for their non-

participation in this research project (see Table 3.3, on p. 390). This also explains the number of schools that eventually participated in this research.

Overall, there were six out of the seven high performing schools that participated in the survey while four of these school principals agreed to be interviewed. These six schools formed a representative sample, out of the population of seven daily secondary high performing schools in Malaysia. They were 'all-girls' schools, except for one which was co-educational. These sample schools were predominantly from urban and semi-urban areas across the following states: Kedah, Penang, Selangor, Wilayah Persekutuan Kuala Lumpur and Johor. Refer to the sampling distribution of schools illustrated in Figure 3.4 (p. 393).

The selection of teacher participants and school principals as research subjects were essential because these individuals assumed relevant roles in schools and were involved in the areas of teaching and learning. In Malaysia, school principals were also required to teach and so principals were also part of the teacher respondents. Responses from the sample respondents could provide further insight of their perceptions regarding their school leadership. This could be a useful form of input for this study, as it forms the primary data that will be analysed to obtain the research findings at a later stage.

3.4.2.1 Principal Participants

The sample of principal participants in this study was restricted by the tenure of the principals in their present schools. The criteria for principal participation was that, these principals must have served their role at their respective schools, for at least three subsequent academic school years, as this study determines a three-year principalship

effect from 2011 to 2013. As a result, during the data collection phase, principal participants responded to several open-ended questions during their individually scheduled principal interview. In addition, the principals agreed to support their teachers' voluntary participation in this research study.

3.4.2.2 Teacher Participants

A parallel survey was administered to teacher participants from each sample school, who voluntarily completed an 'Observer' questionnaire. Additionally, a teacher collegiality survey was also administered to these teachers, for them to evaluate the extent of teacher collegiality they perceived in their respective schools, based on their individual perceptions. Besides the survey, a focus group discussion was pre-arranged with each of the schools, where five teachers were selected from each school, to participate in a 'Teacher Focus Group' discussion. According to Dawson (2013), odd numbers work better for the number of focus group participants, so that they don't pair up and hold breakaway conversations. For this reason, five teachers were selected as the Researcher felt that five would be an ideal and manageable number of participants for a teacher focus group discussion. The criteria for focus group participation was confined to those teachers who had a minimum of three working years under their present school principal. It is crucial to set a criteria such as '3-working years', as a guideline for selecting teacher participants, as they would be in a better position to assess and evaluate their school principal under study, as compared to newly joined teachers, who are new in their acquaintance with their present principal. Hence, their responses as research subjects, will be a useful form of input for this research study.

3.5 Qualitative Research Instruments

Qualitative research can explore deeply into the central phenomenon of study. According to Creswell (2012, pp. 16-17), "qualitative research relies more on the views of participants in the study and less on the direction identified in the literature".

During the main study, semi-structured interview protocols were the qualitative research instruments used for the individual principal interviews and for the teacher focus group discussions, to facilitate the interview and focus group inquiries. The interview protocol was previously pilot tested with three principals in East Malaysia, as mentioned in Sub-section 3.7.1, p. 94, and was later used during the main study, to elicit open-ended responses from the school principals and teacher respondents. Refer to Appendix C9, on pp. 394-397, for the protocol schedules used in the main study.

3.5.1 Interview Protocol

Principal interviews were conducted at each of the six sample school sites. These interviews were semi-structured and they lasted approximately an hour each. The interviews were guided by an interview protocol that was adapted from the pilot questionnaires (pp. 414 - 421) as well as from the interview questions outlined in Raihani (2006, pp. 247, 252). This protocol was designed prior to conducting the interviews and were constructed to elicit responses from the Principals regarding their understanding of their leadership role, what influenced their leadership practices, their relationship with their teachers and their professional development, as recommended in Lumby & Heystek, 2012. Refer to the bilingual Interview Protocol in Appendix C9 on pp. 394-397).

During the course of the interview, principals were probed whenever further clarification was required, allowing for a clearer understanding of their responses. The interviews provided an opportunity for these principals to share their leadership successes and experiences and relate their perceptions on their principal leadership. The interview data was useful for obtaining experiential knowledge from the respondents, which contributed towards a rich and in-depth account of this inquiry.

3.5.2   Focus Group Protocol Schedule

The focus group discussion was similar to the Principal's interview, except that it was conducted with a group of five teacher respondents from each sample school. Before audio recording the conversations, teacher respondents were reminded to respond to the questions individually and not to speak, all at once. This was done in order to be able to distinguish among the voices of the respondents and help identify their voices, to facilitate the transcribing process. During the focus group discussion, a protocol schedule was used to guide these discussions. As with interviews, the focus group protocol schedule was designed specifically for the teacher participants to respond to an in-depth inquiry, regarding their perceptions of their principal's leadership Refer to the set of questions highlighted in the focus group protocol schedule in Appendix C9, on p. 394-397).

3.5.3   Observation Field Notes

Observations are yet another form of qualitative data gathering technique that can provide unexpected and useful information witnessed at the research sites. For such purposes, field notes were jotted down to capture as many aspects of a scenario, such as non-verbal gestures and expressions that could add value to the qualitative evidence.

Since this study was conducted in each of the school's premises, the school principals granted the Researcher permission to attend and bear witness to multiple observational settings, such as classroom observations, school assembly, staff meeting, school carnival, an in-house teacher training session, student performances, various collegial dialogues among teachers and student groups, document reviews and student co-curricular activities at various school sites.

> "One of the strengths of qualitative research is it uses rich descriptions and explanations of processes in naturalistic environments" (Miles & Huberman, 1994) as cited in (Miranda, 2011, pp. 55 - 57).

Observation reporting creates the opportunity to build social interactions with research subjects, and gather rich, detailed data within authentic, natural settings. Moreover, information obtained through casual conversations at the research sites, also provided important contextual data, which gave a different perceptive from that of a formal interview.

3.6   Quantitative Research Instruments

The search for an appropriate research instrument for this study, began with the extensive review of literature. It was found that quantitative research used "instruments with pre-set questions" to measure the variables of a study, in order to obtain "measurable and observable" quantitative data. Examples of these instruments include "survey questionnaires, standardized tests, and checklists", with questionnaires known to be reliable instruments recommended for quantitative research (Creswell, 2012, pp. 13-15).

3.6.1   Leadership Measurement Instruments

A list of quantitative research instruments that have manifested over time, were compiled and tabulated in Table 3.4 (pp. 391-393). The questionnaire chosen to measure leadership practices for this present study, was selected from Table 3.4, as it contains the list of questionnaires, which have stood the test of reliability and content validity. In conceptualizing transformational leadership, Leithwood & Sun, (2012) revealed five theory-based leadership approaches that model after transformational leadership. Table 3.5 shows the five research instruments that have been developed as a measurement tool, to measure the various dimensions of transformational leadership (see Table 3.5, on p. 398). These include:

- Multifactor Leadership Questionnaire (*MLQ*)

- Nature of School Leadership Survey (*NSLS*)

- Leadership Practices Inventory (*LPI*)

- Leadership Behavior Questionnaire (*LBQ*)

- Principal's Transformational Leadership Questionnaire.

The following section describes the properties of Kouzes and Posners 'Leadership Practices Inventory' (LPI, 2012), and its model of five exemplary leadership practices, of which this study is framed on.

3.6.2   Leadership Practices Inventory (LPI 2012)

The LPI, (2012) is highly acclaimed for its "sound psychometric properties" and is used to predict leadership effectiveness (Kouzes & Posner, 2013, p. 2). This study states that the LPI has "very strong reliability and validity" and each of its constructs are known

to be "highly correlated with one another". The LPI has been designed to measure leadership practices and is specifically acclaimed for its "Five Practices of Exemplary Leadership Model". This Model is an evidence-based leadership development model that was developed through more than thirty years of research and "has stood the test of time" (Sather, 1999, p. 511). The LPI comprises of five sub-dimensions: 'model the way'; 'inspire a shared vision'; 'challenge the process'; 'enable others to act' and 'encourage the heart'.

Carless (2001) is among the few studies that had investigated the construct validity of the Leadership Practices Inventory (LPI) and attempted to examine if the LPI measures transformational leadership behaviour as addressed in (Kouzes & Posner, 1987). The findings of Carless, (2001, pp. 233, 237) concluded that the "LPI assessed an over-arching higher order transformational leadership", suggesting that "there is clearly a need for replication of results".

In this study, further online discussions between the Researcher and the developers of the LPI, Kouzes and Posner, confirmed that the theoretical framework of the LPI was indeed associated with transformational leadership, and that this framework is a "derivative of the original premises of James McGregor Burns" (Posner, 2014b). Refer to the email correspondence of Appendix C11, on p. 399.

The LPI (2012) is widely known as the most trusted 360° leadership assessment tool of its generation and for its suite of instruments: LPI (Self) and LPI (Observer). Both these instruments contain 30 items that are similar in content and they measure leadership behaviours on a 10-point frequency scale: (i) Almost never; (ii) Rarely; (iii) Seldom; (iv) Once in a while: (v) Occasionally; (vi) Sometimes; (vii) Fairly Often; (viii) Usually; (ix)

Very Frequently; (x) Almost always. The LPI (Self) is to be completed by the leader while the LPI (Observer) is completed by up to ten respondents, selected by the leader. According to an email conversation with the developer of this instrument, the LPI (Observer) should be completed by a minimum of two 'observers' per leader and the more observers there are, the better it is (Posner, 2013) (see Appendix C12, on p. 400).

(i) Model the Way

In an organization, it is the leader that establishes certain standards of excellence, which sets an example for others to follow. *'Model the way'* relates to the leader's capability in providing direction, setting the right example and being able to provide the best explanations for most situations (Fulmer & Wagner, 1999). Exemplary leaders must be able to clearly articulate their deeply held beliefs and put what they say into practice, if they want to establish credibility, gain commitment and achieve the highest standards (Kouzes & Posner, 2008). As Posner et. al., (2011, p. 1) assert, *"do not ask anyone to do anything which you are unwilling to do first"*.

(ii) Inspire a Shared Vision

This is about leaders who envision the future through a personally held school vision. Visions need to be shared and emerged from experience, rather than being imposed. Exemplary leaders establish a "common purpose" and inspire a shared vision towards executing projected goals. Leaders need to enlist others, in a common vision by appealing to shared values, consistent with the aspirations of the organization (Fulmer & Wagner, 1999; Kouzes & Posner, 2013, p. 141; Kouzes & Posner, 2008, p. 63). According to Posner et. al., (2011, p. 1), the leadership practice, 'inspire a shared vision,' "enables people to realize their dreams", and in the process "become confident to do extraordinary

things". Leaders should thus aim to create attractive opportunities that can connect to people's dreams, hopes and aspirations. In some extreme cases, applying this practice can help "rejuvenate and reenergize a decaying organizational culture".

(iii) Challenge the Process

Leaders find ways to improve their team, by searching for opportunities to network, experiment, take risks and stay current with the field (Kouzes & Posner, 2008, p. 63). They are willing to step out into the unknown, to innovate, experiment and find new ways of doing things (Sather, 1999, p. 525). Exemplary leaders are innovative, proactive and relish challenges (Fulmer & Wagner, 1999). They seek for opportunities to get extraordinary things done through innovative and creative ideas (Kouzes & Posner, 2008, p. 69). This allows for the "formulation of new ideas", through open communication (Kouzes & Posner, 2007, p. 200). According to Posner et. al., (2011, p. 1), leaders are learners too, and so they need to learn from their failures and create opportunities for success.

(iv) Enable Others to Act

Successful leaders "foster collaboration, build trust and engage others in important decisions". They develop competence and build confidence, while "strengthening the capacity and the resolve of everyone in the organisation" (Kouzes & Posner, 2008, pp. 63, 72). Exemplary leaders enhance self-determination and increase confidence by extending power, responsibility and accountability to others. They actively involve others in the participative decision process, making them feel capable and mutually respected (Yavuz, 2010). Leaders recognize people's individuality and have the desire to help people develop and grow (Fulmer & Wagner, 1999). Since leadership is a team effort,

teamwork, trust and empowerment are essentials of leadership effort (Sather, 1999, p. 526). People should be strengthened by sharing power and be given a platform to put forth their ideas (Posner et. al., 2011, p. 1). They should involve themselves more in decision-making as this can foster collaboration.

(v) Encourage the Heart

Genuine acts of caring, showing appreciation, kindness, courtesy and respect (Covey, 1990) are essentials that leaders practice when "acknowledging good results and reinforcing positive performance" (Kouzes & Posner, 2008, p. 73). An essential aspect of this practice is "personalising recognition" (Sather, 1999, p. 518). Leaders who exhibit ethics of care can also attain a "collegial climate" (Sather, 1999, p. 527). Successful leaders "hold high performance expectations" (Hoy & DiPaola, 2009, p. 7), offer personalised recognition and celebrate staff accomplishments (Schmoker, 1999). Exemplary leadership is about relationships, credibility and demonstrating an enthusiastic and genuine belief in the capacity of others. By developing relationships, the team becomes "more cohesive" (Kouzes & Posner, 2008, p. 63) and by recognizing individual contributions, leaders can foster collaboration, teamwork and motivate internal drive among staff, which are important essentials for the long term health of any organization.

3.6.3   Survey Questionnaires

The two survey questionnaires used in this study are:

- 30-item Principal Practices Questionnaire (PPQ, 2014) and

- 38-item Teacher Collegiality Scale (TCS, 2011).

Refer to Appendix C13, on pp. 401-410 for these questionnaires.

The PPQ, 2014 was adapted from the Leadership Practices Inventory (LPI, 2012), developed by Kouzes and Posner, whereas the English version of the Teacher Collegiality Scale (TCS, 2011) that was developed by Madiha Shah, was used in its original form and translated to Malay language, after permission was obtained for its use in the present study (see Appendix C3, on p. 389). The LPI, (2012) and the TCS, (2011) were previously known for their sound psychometric properties and use with other studies where evidence of internal reliability and credibility was established. However, for use in the present study, these research instruments had to be adapted before use. The items of the LPI, (2012) were revised to suit a school context (see Appendix C14, on p. 411-413), after which the resultant questionnaire was named 'Principal Practices Questionnaire' (PPQ, 2014). Before both questionnaires were administered as a survey, they were designed as a bilingual (English-Malay) questionnaire and pilot tested before use in the main study. The PPQ, 2014 and the TCS, (2011) were used to test the variables of the main study – 'principal leadership practices' and 'teacher collegiality'.

3.7 Pilot Tests

Prior to commencing the main study, the research instruments were piloted in three phases. The series of pilot studies were conducted to exercise compliance with research protocols, to test the validity of the instruments and to substantiate the aims of this study. These pilot tests have also been instrumental in providing a conceptual footing, upon which a concurrent mixed methods approach, with quantitative and qualitative probes, were implemented in parallel, at each school site. According to Teijlingen and Hundley (2001, p. 2), the prime reasons for undertaking a pilot study are as follows:

- To identify an appropriate methodology for this study.

- To develop a research plan.

- To collect preliminary data.

- To develop and test the adequacy of research instruments.

- To assess the feasibility of a (full-scale) study / survey.

- To determine what resources (finance, staff) are needed for a planned study.

- To identify logistical problems which might occur using proposed methods.

- To convince funding bodies that the main study is feasible and worth funding.

Mason and Zuercher (1995, p. 12) made a compelling argument about the importance of a pilot being conducted although it may be "time-consuming, frustrating, and fraught with unanticipated problems, rather than investing a great deal of time, money, and effort in the full study". Besides, Crosswaite and Curtice (1994) further emphasised the ethical obligation on the part of researchers to share their research findings with the wider research audience.

3.7.1   First Phase: Pilot testing the Open-ended Questionnaire

The first pilot study was scheduled between 19th June and 31st July 2013. This Pilot test was regarded as a feasibility study to determine the methodology suitable for this large scale project and to convince stakeholders and funding parties that this research study is viable and worth funding. It involved the use of a bilingual open-ended questionnaire, which was pilot tested with three principals, from the best performing schools in East Malaysia. These principal participants responded to an open-ended questionnaire during their voluntary participation at their respective schools. Refer to Appendix C15 for the pilot study questionnaire (English version) on pp. 414-417 and Appendix C16 for pilot study questionnaire (Malay version) on pp. 418-421).

3.7.2   Second Phase: Pilot testing the Questionnaire

For the second pilot study, the bilingual survey questionnaires (PPQ, 2014 and TCS, 2011) were administered to 105 randomly selected teachers from two high performing schools, in the Klang Valley. These trial-runs had taken place during 30 June and 15 July 2014, essentially to pilot test the questionnaire instrument, and determine the expected response rate of the respondents. According to Dawson (2013, p. 66), piloting the questionnaire is of vital importance, as it ensures that research methods match with the purpose and objectives of the study.

In order to test the validity of the research instruments, the quantitative data obtained from the second pilot study, was then tested using the Rasch Modeling technique, described further under Sections 3.8.2 and 3.8.3 on pp. 99-102.

3.7.3   Third Phase: Pilot Retest

Subsequently, on 23 July 2014, the revised questionnaire was re-piloted to a randomly selected group of forty teachers, who had previously participated in the second pilot study. All 40 teachers who participated in this pilot test, completed the survey questionnaire and this represented a 100% completion rate. The high response rate may have been due to the personal administering of questionnaires at the school staff room by the Researcher, as well as the tokens that each teacher participant received for their completed questionnaire.

This pilot retest contained some modified items, whereby six negative-worded items were included. These items were: 4, 6, 23, 26, 27, and 30. The inclusion of these six

negative-worded items were intended to "force respondents to carefully read survey items" and was "typically meant to keep respondents attentive" as suggested in (Boone, Staver, & Yale, 2014, pp. 23, 26). These modifications were also done primarily to weed out respondents, who showed a tendency to consistently agree or disagree to a series of items in their responses, thereby resulted in "response bias" as highlighted in (Bryman, 2012, pp. 227, 258). This pilot retest was thus useful for pre-testing the questionnaire items and assessing the various data gathering mechanisms, for implementation during the main study. In addition, an interview was conducted with one of the teacher respondents, who was willing to be interviewed, for the purpose of clarifying the meanings of the revised questionnaire items and for providing essential feedback on identifying ambiguities and difficult questions. Among the six negative-worded items, two of these (items 26 and 30) were perceived by the interviewee as clearly worded, reflecting the true meaning of the questions, although they implied opposite stances. As for the remaining 4 negative-worded items, the interviewee suggested that they be reworded for better representation. Moreover, the interviewee also suggested altering the rating scale score which was set at "*1=never* to *7=always*". As such, the rating scale was thus altered to range from 'strongly disagree' to 'strongly agree', as pointed out previously by the interviewee.

Weighing the constructive feedback gained from the interview, the researcher made an informed decision about what goes into the final revisions, when fine-tuning the questionnaire, and having it ready for the main study. Furthermore, it is interesting to note that both the qualitative evidence obtained from the interviewee's feedback and the quantitative Rasch analysis, have identified the same four items (4, 6, 23 and 27) as misfit. This proved that these 4 items that have negative connotations were either not properly read by the respondents, or not clearly understood by them, that had led to misfitting

responses. This further emphasised the need for rewording these four items. Subsequently, these four items were reworded and back-translated appropriately. The revised questionnaires were also reviewed by three language experts who further confirmed the content validity of the questionnaires. Refer to their testimonials on questionnaire validation found under Appendix C17, on pp. 422 – 424.

3.8   Questionnaire Validation

Questionnaire validation is an important part of a quantitative research inquiry. This study verifies and establishes the credibility of the questionnaires, by testing the psychometric properties of the PPQ (2014) and the TCS (2011) questionnaires, using the framework of Item Response Theory (IRT). Based on IRT, the Rasch Modeling procedure facilitated the investigation of questionnaire validity, for the purpose of this study. Moreover, Bond & Fox, (2007) strongly assert that researchers should pay more attention to the scale construction in order to bestow more credibility on one's research.

3.8.1   Classical Test Theory

Quantitative data has been traditionally analyzed using Classical Test Theory (CTT), particularly between the years 1940 to 1980, as it was regarded as the only mode of analysing quantitative tests (Angoff, 1971; Bloom, Hastings & Madaus, 1971; Thorkildsen, 2005). One of the limitations of CTT is the emphasis placed on 'item difficulty' and item discrimination, when constructing items using CTT (Bhasah Abu Bakar, 2003). This means that when items are tested on a 'lesser able' group of respondents, the difficulty index will increase, and vice versa. This implies that the chosen sample respondents will have to be selected based on the level of difficulty of the items.

CTT is based on the basic measurement concepts of 'obtained score' (X); 'true score' (T), and 'error score' (e), where X = T + e. According to Harvill, (1991), the 'obtained score' (X) or the 'raw score', cannot be assumed as accurate because the obtained score can be influenced by a number of factors, which include:

- Ambiguous items

- Disinterested respondents

- Respondents may be experiencing fatigue

The True Score (T) represents the 'unchanging portion' of the observed score, which is not influenced by random events. However, True Scores also include any 'systematic errors' which may produce systematic incorrectness in the True Scores. The Error Score or 'Error of Measurement' is the difference between the 'Obtained Score' and the 'True Score'. According to Harvill, (1991), the Error Score is an unsystematic, random fluctuation, which is due to chance. Subsequently, various empirical studies like (Hambleton, 1991; Harwell & Gatti, 2001; Bond & Fox, 2007) have demonstrated that the Classical Test Theory is conceptually deficient due to the shortcomings of its basic measurement concepts, the issue of invariance and the assumption that all measurement error is random. These studies have also proven that CTT fails to take into account the reliability scores of items and persons simultaneously. Additionally, Rowe (2002) attempted to further alert fellow researchers about the use of traditional factor analysis procedures that continue to factor analyse test items, on the assumption that these test items are normally distributed continuous variables. In addition, the frequent use of exploratory factor analysis fails to account for the measurement, distributional and structural properties of the un-weighted data, based on Likert-type ordinal ratings. This can run the risk of generating biased and misleading estimates that can yield discrepant findings (Rowe, 2002, pp. 7, 9).

3.8.2 Item Response Theory

Recent years has seen an increasing use of the Item Response Theory (IRT), particularly the Rasch Model. IRT is also known as 'latent trait theory'. IRT models are used extensively in the study of cognitive and personality traits, "to measure unobservable characteristics of respondents" (StataCorp, 2015, p. 1). Latent traits cannot be measured directly, because they are unobservable, but can be quantified with an instrument, comprised of items that are designed to measure the level of the latent trait. IRT models allow researchers to study the relationship between each item and the level of the latent trait. The level of the latent trait is commonly referred to the 'person's ability' while item properties are commonly known as 'item difficulty'. This results in 'standardised testing'. One of the highlights for the use of IRT is in the reporting and interpreting of the international benchmark assessments (PISA examinations), launched by the OECD.

In the present study, data from the pilot studies were analysed using IRT to extend the evidence of validity and internal consistency of the questionnaires to be used in the main study. Rasch Modeling was used as the preliminary analysis of this study, as it is known for its competitive advantage over classical test theory (CTT) methods. Hence, item-testing based on the Rasch measurement model, were computed using *Winsteps* (version 3.73), and output tables like the Summary Statistics and Variable Map were used to validate the questionnaires and ensure that the research instruments measure the conceived variables and constructs of the main study.

3.8.3   Rasch Model

Rasch Model (Rasch, 1960) is a one parameter logistic model, developed by Georg Rasch in the 1950's. This method of analysis falls under IRT, so much so that the Rasch Model is sometimes referred to as the IRT model (Watson & Callingham 2003). Although fewer research studies have used Rasch Model for analysis, the specific form of Rasch Model known as 'Partial Credit Model' uniquely allows for the combination of both dichotomous and polytomous data in a single analysis. Therefore this means that the Rasch Partial Credit Model can be used to analyse an instrument that has items with two ordered categories as well as items with multiple ordered categories, in the same instrument. In addition Rasch Model is an ideal tool for determining the reliability and validity of the items in an instrument. The Variable Map is another important feature of Rasch analysis, as it can arrange items from easiest to most difficult, depicting the hierarchy of the items in the questionnaire (Watson & Callingham 2004). According to Boone et al. (2014, pp. 3, 36-37.), the robustness of the Rasch measurement, allows for the construction of an instrument that can measure human traits, similar to instruments designed for scientific research.

The uniqueness of this mathematical model is the ability to deal with "missing data" and the ability to rescale measures mathematically by converting raw ordinal data to linear and ratio measures (Ross and Genevois, 2006, p. 148; Linacre, 2006, pp. 24, 273; Wright & Linacre, 1989). Stelmack et al. (2004) claimed that Rasch Modeling was used to convert ordinal data to equal-interval scale, in order to interpret respondent's ability scores against the item difficulty criterion.

In this present study, Rasch Modeling was used to assess the questionnaire items and validate the instrument. Rasch analysis can compute the values of the psychometric properties of the questionnaire and indicate whether its values are desirable for a reasonable fit (Alagumalai, Curtis, & Hungi, 2005, p. 282). Rasch also provides a framework that can assess the validity and the consistency of questionnaires (Faye, Courcoux, Giboreau, & Qannari, 2013). According to Alagumalai et al. (2005), the Rasch analysis software, *Winsteps,* can analyze item response data. One of the advantages of a "Rasch-calibrated scale", as pointed out by Rowe (2002, p. 5) is that "evidence-based evaluations can be made" which emanates from the principle of item and person invariance. This refers to the invariance of Rasch measures which can assess estimates of item difficulty and estimates of person ability simultaneously (Bond, 2004).

Rasch measurement data is based on a logarithmic scale, where probability scores are expressed in logit units (Wright & Linacre, 1989). Logits is short for log odds units. Rasch model is particularly popular in psychometrics, because it can measure latent variables such as abilities, attitudes and personality traits. According to Huberty et. al. (2013, p. 113) the term 'person ability' is generally used to describe the latent trait that the instrument intends to measure. The 'Summary Statistics' and 'Variable Map' are evidential verifiers of the results of Rasch analysis, described in further detail in the subsections (3.8.5 and 3.8.6) that follow.

Boone et. al. (2014, pp. 32, 35) has reiterated the importance of using Rasch measurement scores, because Rasch can resolve the "unequal-interval problem" faced with ordinal data. This study goes on to elaborate on the consequence of using an ordinal rating scale in parametric statistical analyses, by stressing that "ordinal rating scale data are not linear" and that ordinal data are only "labels for the responses". Moreover, the use

of ordinal data in parametric statistical analyses, is described as "a massive error" because it can increase the probability of a Type I and Type II Error, and this could lead to inaccurate conclusions.

In this present study, Rasch measurement model helped to design the measurement scale of the survey instrument, whereby raw scores were mathematically transformed to logits, as stated by (Bond & Fox 2007), enabling the unit of measurement to be used confidently with parametric statistical tests. Futhermore, Boone et al. (2014, pp. 8-9, 15) asserted that raw data (ordinal) should not be directly used for parametric statistical tests, unless it is represented on an equal-interval scale. Hence, in this study, the Rasch measurement model was applied with intent, at the onset of the data-set analysis, in order to the convert the raw data from ordinal to equal-interval and ensure that the data is valid and reliable and can be used confidently in parametric statistical analysis.

3.8.4   Generating Logit Data

This section describes the Rasch analysis procedure that was used to transform raw data to logit data. During the data collection phase, a total of 290 questionnaires were collected and immediately after the data collection phase was over, the raw scores were keyed into an Excel spreadsheet. Subsequently, a cross-check was carried out, to ensure accuracy in the data entry, as there is always the potential for typo errors to occur during the data entry process. According to (Cox and Cox 2008), as cited in (Peredia, 2009), ensuring accuracy of data is crucial because only then will data be able to measure what it is intended to measure.

The Rasch procedure was computed twice, in order to measure each construct separately – 'Principal Leadership Practices' (PLP) and 'Teacher Collegiality' (TC). This was done in order to obtain the fit and reliability values for each of these constructs (PLP and TC). During the Rasch Modeling procedure, the raw ordinal data of PLP was transformed into logit measures using the software *Winsteps* (version 3.73). This generated 'Person logit measures' for the entire construct, PLP. Subsequently, 'person logit measures' were obtained for each of the five sub-dimensions of PLP, by selecting the 6 items that belonged to each of these 5 dimensions.This Rasch analysis procedure was then repeated for Teacher Collegiality (TC) and its seven sub-dimensions of TC, whereby person logit measures were obtained for TC and then for each of the 7 sub-dimensions of TC, by selecting the corresponding items that represent each of these 7 dimensions. The Rasch measurement procedure just described, illustrates how the raw ordinal data was totally transformed to equal-interval data, for further data analysis purposes.

The survey questionnaires developed for this present study, would result in new empirical measures. The important output tables of the Rasch analysis that are relevant in this study are the Summary Statistics, the Item-Fit Order and the Variable Map. The Summary Statistics and the Item-Fit Order output tables are used to establish the reliability and validity of the questionnaires, whereas, the Variable Map categorizes the item-spread according to the 'Item Separation Reliability' score shown in the Summary Statistics Table.

The fit and reliability indices for the Rasch analysis of PLP and TC, are summarized in logit measures as follows:

Principal Leadership Practices	Logit	Teacher Collegiality	Logit
Item Reliability	0.97	Item Reliability	0.98
Item Separation	5.80	Item Separation	8.06
Item Infit Mean Square	1.03	Item Infit Mean Square	1.03
Person Reliability	0.94	Person Reliability	0.91
Person Separation	3.95	Person Separation	3.16
Person Infit Mean Square	1.04	Person Infit Mean Square	1.21
Cronbach Alpha	0.96	Cronbach Alpha	0.95

The following sub-sections (3.8.5 and 3.8.6) provide a description of how Rasch analysis established the instrument's internal reliability scores, using the software, *Winsteps* (version 3.73).

3.8.5   Crediblity of the PPQ, 2014 using Rasch Modeling

The Summary Statistics provides the fit statistics that shows the overall quality of the Principal Practices Questionnaire, 2014 (see Appendix C18 on p. 425). This refers to the quality of the 'persons' (respondents) and items, as well as the interaction between the 'person' and items. The important properties of the Summary Statistics that are relevant to the context of this study are the following measurement statistics: Reliability measures, Separation measures, Mean Square values and Z-Standards. The results in the Summary Statistics of Appendix C18, (p. 425) indicate that the instrument – 'Principal Practices Questionnaire, 2014', has an Item Reliability score of 0.97, Item Separation score of +5.80, and an Item Strata of 8.07. The Item Reliability and Item Separation scores are identified as 'Excellent' (Fisher, 2007). Refer to Appendix C18 on p. 425).

(a) *Infit MNSQ and Outfit MNSQ (PPQ, 2014)*

The Infit and Outfit Mean Square are the key item fit statistics, which measure the consistency of fit. The Mean Square Infit and Outfit values can interpret content and item quality (Abdullah & Lim, 2013). According to the Summary Statistics of Appendix C18,

(p. 425), the Mean Infit and Outfit for Item Mean Square are 1.03 and 1.05 respectively. Similarly, the Mean Infit and Outfit Person Mean Square are 1.04 and 1.05 respectively. These values are within the acceptable fit range. When the Means of the Infit Mean Square (weighted index) and Outfit Mean Square (unweighted index) are close to the expected value of 1.00 (considered as a perfect score), on average they are very stable, and this reflects that the responses of the sample respondents are appropriate and consistent in responding to the items (Smith, Schumacker, & Busch, 1995). Infit ZSTD and Outfit ZSTD (PPQ, 2014).

The Infit and Outfit 'Z Standard' values are measures of significance, where the 'ZSTD' standardizes either the Infit or Outfit MNSQ to a unit normal distribution scale. As such, it is generally recommended that the optimal item set should include items that meet the criterion ZSTD < 1.96 for both Infit and Outfit 'Z Standards'. Then again, as for the Outfit or Infit ZSTD < (-1.96), this means that the items fit the Rasch Model better than expected (Karabatsos, 2001, pp. 392-393). The overall Infit and Outfit for the Item's 'Z Standard' are both -0.3, while the Infit and Outfit for the Person's 'Z-Standard' are both -0.2. Since the Mean Square and Z Standard are very close to their expected values, these values show that the conditions are an indication of acceptable fit.

(b) *Item Reliability (PPQ, 2014)*

The Summary Statistics of Appendix C18, (p. 425) indicates that the Item reliability score of 0.97, is identified as 'Excellent' in (Fisher, 2007). This indicates that the probability of respondents responding to items consistently, will be high, should this instrument be administered to a different group of respondents. Therefore, this instrument may be regarded as an independently, reliable instrument, as it does not depend on the respondents responses.

(c) *Item Separation Index (PPQ, 2014)*

The Item Separation Index refers to the 'separation' or spread of the items. It reflects the consistency of persons who respond to difficult items. The 'Item Separation' displayed in the Summary Statistics of Appendix C18, (p. 425) is +5.80 logit. The Item Strata can be calculated using the following formula:

$$\frac{4 \text{ (Item Separation Index) } + 1}{3} \quad = \quad \frac{4(5.80) + 1}{3} \quad = \quad 8.07$$

This indicates that the items can be categorized into maximum 8 groups of items. Refer to the Summary Statistics of Appendix C18, (p. 425).

(d) *Item Mean (PPQ, 2014)*

The Summary Statistics Table 3.6 (p. 425) shows that Item Mean is +0.00 ($SD = 0.60$). The most difficult item as +1.14 and the easiest item, − 1.02. By default, the Mean of item difficulty estimates is always arbitrarily set at 0.00 logit on the calibration scale (Bond, 2004) and is used as a baseline for the starting point of a Rasch analysis (Abdullah & Lim, 2013). Easier items lie in the negative range, while the more difficult items are in the positive range. The Standard Deviation for Item Mean Square is 0.60 and since this value is less than 2, this is an indication that the items have an overall fit.

(e) *Person Mean (PPQ, 2014)*

The Person Mean Measure = +1.66 logit ($SD = 1.39$). This value is greater than the Item Mean (+0.00). The Person Mean is the average Mean score of the respondents. A positive Mean value for 'Person', will indicate that the respondents tend to be agreeable to most of the items. The Standard Deviation for Person Mean Square is 1.39 and since this value is less than 2, this is an indication that the sample respondents have an overall fit.

(f) *Person Separation Index (PPQ, 2014)*

The Person Separation Index in Table 3.6 (p. 425) is (+3.95) logit. It indicates how well the items of the instrument 'separate' or spread out. Similarly the Person Strata can be calculated using the following formula:

$$\frac{4 \text{ (Person Separation Index)} +1}{3} \quad = \quad \frac{4(3.95) + 1}{3} = \quad 5.6$$

This means that the 'Persons' can be categorized into maximum 5 groups of respondents. It is also an indication that respondents are able to differentiate between agreeing and disagreeing to the items. Refer to the Summary Statistics of Appendix C18, (p. 425).

(g) *Person Reliability Index (PPQ, 2014)*

The Person Reliability Index is identified as 'Very Good' at + 0.94 logit by Fisher (2007, p. 1095) as cited in Aziz, (2011, p. 68). This score refers to the reliability of the respondents and whether they are consistent in their responses.

(h) *Cronbach's Coefficient Alpha (PPQ, 2014)*

The Cronbach Alpha measures the interaction between 'persons' and 'items'. With a reliability score of +0.96 logit, the Cronbach Alpha is categorized as 'Excellent' as cited in (Sumintono & Widhiarso, 2014, p. 112).

(i) *Person-Item Variable Map (PPQ, 2014)*

According to the Person-Item Variable Map, in Figure 3.5 (p. 428) the Person Mean logit value (+1.66) indicates that the conceptual understanding of the respondents, on average, have a higher level of ability than the average of the scale items (+0.00). This implies that the average respondents appeared to agree with the items. Figure 3.5 also

indicates the items that were easiest and hardest to agree, as well as the persons who were most agreeable and most disagreeable with the items. According to Stelmack et al. (2004), the Variable Map can also assess the capability of an instrument in distinguishing the level of conceptual understanding of the respondents as well as evaluate the measurement properties of the instrument. Refer to Figure 3.5 and the description about the Person-Item Variable Map in Appendix C19 on pp. 426 - 428).

(j) *Rating (Partial) Credit Scale (PPQ, 2014)*

The Rating Scale, developed by Andrich (1978) and the Partial Credit Scale, developed by Masters (1982) tested this data set to determine whether the probability of responses are well distributed within the ratings (Aziz, 2011, p. 56). The 'Observed Average' and 'Andrich Threshold' columns of Table 3.7 showed a cascading increase in values from negative to positive (see Appendix C20, on p. 429). This suggests that respondents could consistently discriminate between response options and understand the differences in the multiple choices.

(k) *Item Dimensionality (PPQ, 2014)*

One of the requirements for Rasch Modeling is to determine whether the items are unidimensional to prove the evidence of internal consistencies (Alagumalai et al., 2005; Curtis & Boman, 2007). Bond and Fox (2007, p. 37) defines unidimensionality of data as the concept of order involving item and person placement along a single line of inquiry. Based on the logic of order, Rasch performs a logarithm transformation on the 'person' and 'item' data, converting ordinal data to interval data and displays estimates on a logit scale.

On the basis of unidimensionality, the single difficulty / ability continuum can explain the item / person outcomes. Therefore, any aberrant performance by items or persons would be flagged by fit statistical tests like the Item Dimensionality test. The 'Raw Variance' result for Item Dimensionality tests (48.4%) holds up unidimensionality empirically (see Appendix C21, on p. 429). This variability measurement fulfils the minimum requirement of unidimensionality, which is 20%. According to Linacre, (2006) variability measurements above 40%, better establishes the concept of unidimensionality. In support of this diversity is the "Unexplained Variance" (< 15%) which forms the basis of several indicators of a good instrument.

3.8.6   Credibility of the TCS, 2011 using Rasch Modeling

Although the Teacher Collegiality Scale (TCS) met the acceptable standards of the internal consistency reliability analysis, as previously reported in Shah, (2011), this instrument was re-validated to ensure internal consistency of reliability, for its use in the present study. Subsequently, a series of Rasch analyses were conducted using *Winsteps*, to report on the overall fit of the instrument. The following sub-sections report on several fit statistics reported in the Summary Statistics of Table 3.8, shown in Appendix C22, on p. 430).

(a) *Infit MNSQ and Outfit MNSQ (TCS. 2011)*

According to Summary Statistics Table 3.8, the Person and Item Infit and Outfit MNSQ values have acceptable ranges of 1.21 to 1.1 and 1.03 to 1.1 respectively (see Summary Statistics Table 3.8 in Appendix C22, on p. 430). The expected value of this fit statistic is 1. According to Adams & Khoo (1993), the acceptable range is taken to be from 0.77 to 1.30.

(b) *Infit ZSTD and Outfit ZSTD (TCS, 2011)*

According to Summary Statistics of Table 3.8, the measure of significance of the Person and Item Infit and Outfit Z-Standard values are 0.3 – 0 and (-0.8) – (-0.7) respectively (see Summary Statistics Table 3.8 in Appendix C22, on p. 430). Since these values are close to the expected value of 0, they are an indication of acceptable fit (Karabatsos, 2001).

(c) *Person and Item Reliability Index (TCS, 2011)*

The indexes of 'Person Reliability' (+0.91) and 'Item Reliability' (+0.98) are identified as 'Very Good' and 'Excellent' by Fisher (2007, p. 1095) as cited in Aziz, (2011, p. 68). Refer to Summary Statistics Table 3.8 in Appendix C22, on p. 430.

(d) *Person and Item Separation Index (TCS, 2011)*

The Person and Item Separation indexes are found to be at (+3.16) and (+8.06) respectively, which is a clear indication of a good spread of items, across the range of respondents. In addition, the Person Strata of 4.5 and Item Strata of 11.08 provides evidence of the number of levels in terms of 'Person' ability and challenging items found in the TCS (2011).

$$\textbf{Person Strata} => \frac{4 \text{ (Person Separation Index)} + 1}{3} = \frac{4(3.16) + 1}{3} = 4.5$$

$$\textbf{Item Strata} => \frac{4 \text{ (Item Separation Index)} + 1}{3} = \frac{4(8.06) + 1}{3} = 11.08$$

(e) *Person and Item Mean (TCS, 2011)*

Person Mean (µPerson)   =   +1.14 logit (SD = 0.77)

Item Mean (µItem)   =   +0.00 logit (SD = 0.57)

Since the 'Person Mean' is higher than the 'Item Mean', it can be concluded that the items are relatively agreeable for the respondents, with the most difficult item at (+1.54) logit and the easiest at (-1.18) logit.

(f) *Person-Item Map (TCS, 2011)*

The items and 'Persons' plotted on the Person-Item Variable Map, shown in Figure 3.6 (p. 431) can be used to identify the following:

- Person Mean (+1.14)

- Item Mean (+0.00)

- 'Person' who is most agreeable

- 'Person' who is most disagreeable

- Item that is most difficult to agree – C18 at logit location (+1.54)

- Item that is easiest to agree – C33 at logit location (-1.18)

Refer to Figure 3.6 for the Person-Item Variable Map of TCS (2011) in Appendix C23, on p. 431.

(g) *Cronbach Alpha (TCS, 2011)*

The Cronbach Alpha value in the Summary Statistics Table 3.8 shows 0.95. This shows a very high level of reliability for this instrument and implies a high level of interaction between the Persons and Items and therefore is a reliable indicator of internal consistency of this instrument. Refer to Summary Statistics Table 3.8 in Appendix C22, on p. 430.

(h) *Item Dimensionality (TCS, 2011)*

The Raw Variances for Item Dimensionality are at 41.3% (see Table 3.9, p. 432). This is more than 40% and therefore meets the minimum definition of unidimensionality. In

addition, the "Unexplained Variance" scores are all below 15%, showing evidence of fit statistics. Refer to Table 3.9 in Appendix C24, on p. 432.

3.9   Development of the Research Instruments

In this research study, the 30-item Principal Practices Questionnaire (PPQ, 2014) of Section B, was adapted from the Leadership Practices Inventory (LPI), 2012. Originally, the LPI (2012), was predominantly used in corporate settings, to rate leadership behaviours within the business sector. In order to suit the educational setting of this research study, the PPQ (2014) was reconstructed to measure principal leadership practices within a school context. This instrument was also based on the same five constructs of the LPI and it is designed to measure the leadership practices of school principals. Refer to these dimensions and their corresponding items in Table 3.10 in Appendix C25 on p. 432.

After the series of pilot testing trial-runs had taken place, tests and retest were done to further validate the revised questionnaire. The results identified four misfit items that needed rewording and the possibility that a smaller rating scale range may constitute better data yield. The original LPI (2012) was thus reworded and modified and six of these items were also incorporated with negative connotations. These include items B4, B6, B23, B26, B27 and B30 (see Appendix C25, on p. 432).

Appendix C14, pp. 411-413, compares the items of the LPI (2012) and PPQ (2014), and highlights the modifications made to the items, to illustrate to what extent these instruments both differ. With all these modifications done to the original LPI (2012), a new instrument was developed – the 'Principal Practices Questionnaire' (PPQ, 2014).

The revised items of the PPQ (2014) have been modified to measure principal leadership practices, within an educational setting. The resultant PPQ, 2014 which comprises of 30 items, is based on the same five dimensions of the LPI (2012), and is therefore supported by the existing literature. Each construct is represented by six items, as shown in Table 3.10 (see Appendix C25 on p. 432).

In this research study, the TCS, 2011 was used in its original version, under Section C of the Questionnaire, with no modifications made except for replacing the original Urdu version with Malay language. The original TCS (2011) that was developed by Madiha Shah, was a bilingual questionnaire using English and Urdu for a study that explored teacher collegiality in secondary schools in Pakistan. As a result, permission was sought for the use of the TCS, 2011 in this present study, for a similar investigation in Malaysian secondary high performing schools (see Appendix C3 on p. 389). The TCS which comprises of 38 items, occupies Section C of this research questionnaire, and is based on a 7-point Likert rating which measures the following seven dimensions of collegiality. Refer to these dimensions and their corresponding items in Table 3.11 (see Appendix C26 on p. 432).

- Demonstrating mutual support and trust
- Observing one another teaching
- Joint planning and assessment
- Sharing ideas and expertise
- Teaching each other
- Developing curriculum together
- Sharing resources

The resultant survey questionnaire that was administered to teachers during the main study, was designed in the order of three sections: Section A: Teacher Demographics; Section B: Principal Leadership Practices and Section C: Teacher Collegiality. The ten demographic variables in Section A include: (1) Gender; (2) Age; (3) Race; (4) Academic

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Qualifications; (5) Working years with present principal; (6) Teaching Experience; (7) Working years in present school; (8) Job Grade; (9) Training and (10) Intention to be a school principal. Sections B contains the 30-item bilingual 'Principal Practices Questionnaire' (PPQ, 2014), while Section C contains the 38-item 'Teacher Collegiality Scale' (TCS, 2011). Teacher respondents who participated in this survey, were required to indicate their degree of agreement to the 68 Likert-type rating items, and elicit their perceptions regarding the issues explored.

This new instrument was subjected to rigorous item-testing, based on Rasch measurement procedures, computed by *Winsteps*, to ensure that it can accurately measure the conceived variables and constructs of the main study. The "rating partial credit scale" indicator is a Rasch technique that is used when different rating scales are used. The 10-point rating scale, used in the second pilot study questionnaire (*1 = never* to *10 = always*) was declared by the respondents to be too wide a range, therefore implying the use of a smaller range. Thus, the response categories ranging from 'strongly disagree' to 'strongly agree', without assigning any numbers to the response options, was decided upon. This was to avoid response sets that may be susceptible to rater bias.

For this present study, the survey instrument contained two sets of questionnaires, which used two rating scale categories, ranging from 'strongly disagree' to 'strongly agree'. These rating categories had no number coding scheme (such as 1, 2, 3, 4, 5, 6, 7), that label the responses. This rating range was intentionally designed in this manner, in order to reduce rater biasness, considering the possibility of some respondents having an uncanny preference for certain numbers. In order to avoid this, no numbers accompanied the ratings, and an instruction on the questionnaire clearly instructed respondents to place a tick in the appropriate box. The following shows the 5-Category Rating used in the

Principal Practices Questionnaire and the 7-Category Rating found in the Teacher Collegiality Scale:

5-Category Rating for the Principal Practices Questionnaire of Section B:

RATING / PENARAFAN				
STRONGLY DISAGREE *SANGAT TIDAK BERSETUJU*	← →			**STRONGLY AGREE** *SANGAT BERSETUJU*

Refer to Section B of Questionnaire - Appendix C13, on p. 404

7-Category Rating of the Teacher Collegiality Scale in Section C:

RATING / *PENARAFAN*						
STRONGLY DISAGREE *SANGAT TIDAK BERSETUJU*	← →					**STRONGLY AGREE** *SANGAT BERSETUJU*

Refer to Section C of Questionnaire - Appendix C13, on p. 406

Additionally, the 'construct validity' verified by Rasch Modeling, indicated that the final Principal Practices Questionnaire, 2014 has met the acceptable standards of validity and reliability, suggesting that this instrument will prove useful in measuring principal leadership practices in Malaysian schools and very likely to other countries of similar school environments. This also draws upon implications for future studies that can further validate this instrument, thereby strengthening its value as a research instrument.

3.9.1   Questionnaire Translation

Both these questionnaires were designed in two languages (English and Malay) (see Bilingual Questionnaires for School Teachers in Appendix C13, on pp. 401-410. The bilingual versions were established, to accommodate the respondents' language preference in this country. Since '*Bahasa Malaysia*' (lit. Malay) is the national official language, the questionnaires had to be translated to Malay as well. Subsequently, the English / Malay bilingual version was sent for content as well as face validity, to

authenticate the validity of the translation. Refer to the testimonials by three language experts on this questionnaire validation found under Appendix C17, on pp. 422 – 424.

To help ensure that the contents of the translated version had not deviated from the original English context, a three-step 'back-translation' procedure, as described in Brislin, (1970; 1986) was used to check the accuracy of the translation. This study stated that the use of bilingual translators are better in ensuring equivalence in both the original and translated instruments, and so the original English questionnaire was translated to Malay by a bilingual Malay native colleague. Subsequently, three language experts, competent in both languages and who are in the domain of educational leadership, examined the questionnaire, and verified the translations. They reviewed both versions and proceeded with a 'back-translation' to see if there were any ambiguities or discrepancies that arose among the items. These experts also highlighted some of the terms that either needed rephrasing or removal, where deemed appropriate, in order to improve the instrument. Their independent verifications ensured that the translations were linguistically correct and thereby established face and content validity of the research instruments (see Questionnaire Validation in Appendix C17, pp. 422 – 424). Following iterative rescaling and rewording, as described during the Pilot phase, this instrument was eventually refined to improve its internal validity to increase the likelihood of generating more legitimate findings during the main survey.

3.10   Method of Analysis

In this study, the method of analysis for both quantitative and qualitative data involves the analysis and interpretation of data and the drawing of conclusions, which will provide answers to the research questions (Creswell, 2012, p. 10). For qualitative analysis, data

gathered through semi-structured interviews and focus group discussions were recorded, transcribed and coded into different categories. The qualitative analysis of this study, adopted the data analysis strategy proposed by Corbin and Strauss (2014) and Yin, (2013), where axial coding was used to reassemble data into a set of interrelated themes. Refer to Figure 3.7.
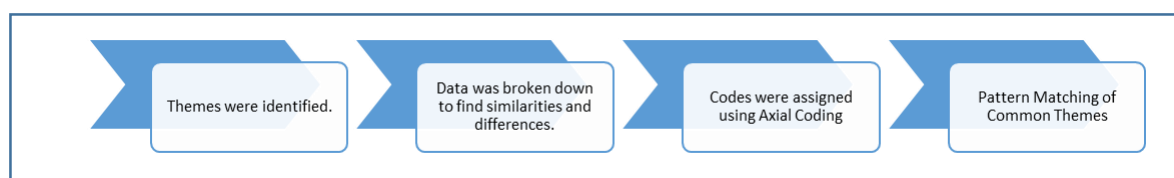
Figure 3.7: Statistical Analysis in Educational Research
Source: Miranda, 2011, p. 62.

For quantitative analysis, the data obtained from questionnaires were analysed using statistical tests. As for reporting and answering the quantitative research questions, a series of descriptive and inferential statistical procedures were employed using *SPSS* version 21.0. Selective parametric tests like the 1-Way ANOVA, Independent T-test, 1-Way Repeated Measures ANOVA, Pearson's r Correlation and Simple Linear Regression, were chosen for meaningful interpretation of results, and to detect significant relationships and differences between groups of variables. In this study, the p-value of $p < 0.05$, was used for these statistical tests.

3.10.1   Reverse Coding for Negative Items

Prior to data analysis, negative phrased items were reverse coded before Rasch analysis was conducted. Both questionnaires in Sections B and C, contained six negative items each. After data was keyed into the Excel spreadsheet, the negative items were reversed scored. For the Principal Practices Questionnaire (PPQ, 2014), the response values of the negative items 4, 6, 23, 26, 27 and 30 were re-coded in the following manner:

1	2	3	4	5
↓	↓	↓	↓	↓
5	4	3	2	1
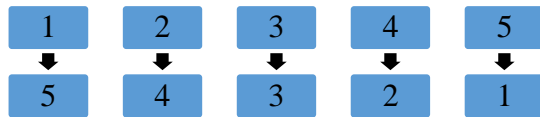
- 1 was changed to 5

- 2 was changed to 4

- 3 remained 3

- 4 was changed to 2

- 5 was changed to1

As for the Teacher Collegiality Scale, (TCS, 2011), the response values for the negative items 2, 11, 16, 27, 32 and 36 were converted as follows:

1	2	3	4	5	6	7
↓	↓	↓	↓	↓	↓	↓
7	6	5	4	3	2	1

- 1 was changed to 7

- 2 was changed to 6

- 3 was changed to 5

- 4 remained 4

- 5 was changed to 3

- 6 was changed to 2

- 7 was changed to 1

3.10.2 SPSS

SPSS is a highly popular statistical software package, developed by Norman H. Nie and C. Hadlai Hull of IBM Corporation in 1968. It is an acronym of *"Statistical Product and Service Solutions"* and originally stood for *"Statistical Package for the Social Sciences"* but it has been renamed to *"Predictive Analytics Software"* (PASW). SPSS

can perform descriptive and inferential data analysis. In this study, data was computed using parametric tests of SPSS, version 21. A detailed account of these parametric tests (1-Way ANOVA, Independent T-test, 1-Way Repeated Measures ANOVA, Pearson's r Correlation and Simple Linear Regression) are described in the sub-sections that follow.

3.10.2.1 Pearson Product-Moment Correlation

In the present study, the bivariate Pearson r Correlation test was carried out to determine the relationship between the variables, 'principal leadership practices' (including its 5 constructs) and teacher collegiality and to test the strength of their linear relationship. The Pearson Correlation test was used to answer Research Question 1 in the following chapter. The statistical interpretations of the analyses that follows, were modelled after Bourne (2009) and Cronk (2008).

The Pearson Product-Moment Correlation test (often known as Pearson correlation or Pearson's correlation) was used to investigate the relationship between the two variables under study (principal leadership practices and teacher collegiality). It generates a coefficient called the Pearson correlation coefficient, denoted as 'r', which measures the strength and direction of a linear relationship between the two continuous variables. According to Lund and Lund (2013) the coefficient of determination is the proportion of variance in one variable that is "explained" by the other variable and is calculated as the square of the correlation coefficient (r^2). Its value can range from (–1.00) (for a perfect negative linear relationship) to +1.00 (a perfect positive linear relationship) as described in Creswell (2012, p. 351) and Cronk (2008). A value of zero indicates no relationship between the two variables. Different studies predict different interpretations for determining the strength of the relationship between variables. In this

study, the interpretation of the correlation was based on Cohen (1988) guidelines, where $|r|$ means the absolute value of r:

Coefficient Value   **Strength of Association**

$0.1 < |r| < 0.3$ =>   Small effect

$0.3 < |r| < 0.5$ =>   Medium / Moderate effect

$0.5 < |r| < 0.7$ =>   Large / Strong effect

According to Cronk (2008, p. 42) "significant correlations are flagged with asterisks" and that it indicates a reliable relationship. In addition, Gliner, Morgan, and Leech (2000), as cited in Terrell, (2010, p. 71), established that "Pearson's r values that are close to +1, such as values above .7, are considered to be strong, positive relationships between the two variables". For positive correlation values that do not bear a minus sign (-) preceding any of its coefficient values, a positive relationship is deduced.

3.10.2.2 1-Way Repeated Measures ANOVA

In this study, the One-Way Repeated Measures ANOVA was used to answer Research Questions 2 and 3. This is a parametric test which involves a 'within-group' design, where multiple measurements of the responses are obtained from the same repeated measurements (Davis, 2002; Pallant, 2005, p. 223). However, the One-Way Repeated Measures ANOVA command can only be run on the assumption that the multiple measurements of the dependent variable should be normally distributed and measured on an interval or ratio scale, as described in (Bourne, 2009, pp. 396-406; Cronk, 2008, p. 72). Hence, normality standards were addressed in Section 4.2, before the One-Way Repeated Measures ANOVA was run

There are various output tables derived from this test results. The Descriptives table presents the descriptive statistics of the Mean, Standard Deviation and the number of respondents, represented by 'N'. The Multivariate Test output table presents the Wilks' Lambda statistic (λ), the p-value and the Partial Eta Squared value (η^2). The Partial Eta Squared value shows the effect size of the constructs. The effect size statistic (η^2) refers to the strength of the difference between the constructs. This value is then compared against the generally accepted criteria of the descriptors of effect sizes and guidelines, found in (Cohen, 1988):

.01 = small effect,

.06 = moderate effect,

.14 = large effect

An important assumption of the One-way Repeated Measures ANOVA is the assumption of sphericity. 'The assumption of sphericity' is a condition which states that the differences between the levels of the 'within-subjects' group have equal variances. When the assumption of sphericity is found to be violated, an adjustment is made to the 'degrees of freedom' (*df*) so that this test returns the correct *p*-value and a valid result (Lund & Lund, 2013).

The Mauchly's Test (provided by default in this One-way Repeated Measures ANOVA technique) is used to assess the assumption of sphericity. Hence, the Mauchly's Test of Sphericity, can determine whether the assumption of sphericity has been violated, or whether the sphericity assumption has been met. If Mauchly's test statistic is significant ($p < .05$), we conclude that there are significant differences between the variances and that the condition of sphericity has been violated. However if, Mauchly's test statistic is non-significant (i.e. $p > .05$) then it is reasonable to conclude that the

variances are not significantly different and that sphericity has been met. If the assumption of sphericity is violated, it means that the 1-way repeated measures ANOVA is regarded as biased, as it too easily returns a statistically significant result. However, a correction can be made to correct this bias, by adjusting the degrees of freedom used in calculating the p-value. This correction is called epsilon (ε) (Lund & Lund, 2013). When sphericity is not assumed, there are two commonly used correction estimates that may be used for estimating Epsilon, to correct the violation of assumptions and alter the degrees of freedom: Greenhouse-Geisser or the Huynh-Feldt (Geert van den Berg, 2014). More specifically, Guinea and Webster (2013, p. A4) recommended the use of Huynh-Feldt correction when estimates of sphericity (denoted by ε) are more than .75, while Maxwell and Delaney (2004) suggested using the Greenhouse-Geisser correction, if estimated epsilon (ε) is less than 0.75. The 'Test of Within-Subjects' is the core output results which confirms whether the within-subjects factor affects the mean ratings (Geert van den Berg, 2014). So the results in either the Greenhouse-Geisser or Huynh-Feldt rows of the Tests of Within-Subjects Effects table, is interpreted after adjustments have been made to the degrees of freedom. This gives the results of the one-way repeated measures ANOVA, and the epsilon corrections will then have an implication on the statistical significance (*p*-value) of the test. The *p*-value will indicate whether or not the means of the 'continuous dependent variable' are significantly different for the different levels of the within-subjects factor. The sample effect size, (which exists for the one-way repeated measures ANOVA), is also reported here. It is based on the within-subjects factor variability and is called partial eta squared (partial $\eta2$).

In order to identify the difference in the constructs, further Post Hoc tests need to be conducted, since there are more than 2 groups within the continuous dependent variable. However, there are no Post Hoc test function for repeated measures variables in SPSS.

Instead, the best alternative is to select optional tests such as 'Compare Main Effects' and 'Bonferroni Confidence Interval Adjustment', found within the Options menu. The Bonferroni post hoc test is run for the purpose of comparing the statistical significance for each pairwise combination and determining the confidence intervals for the mean difference of all possible pairwise combinations.

The statistical significance of the differences between the constructs and the multiple pairwise comparisons of estimated marginal means with Bonferroni adjusted alpha levels are indicated in the 'Pairwise Comparisons' output table. Asterisks (*) found next to the values listed in the column labelled 'Mean Difference', indicate that the two constructs being compared are significantly different from one another at the $p < .05$ level and the exact significant values are given in the column labelled 'Sig.'. According to Geert van den Berg (2014), when reporting the results from a Repeated Measures ANOVA, the following are reported:

- Some descriptive statistics.
- The outcome of the Mauchly's test.
- The outcome of the within-subjects test.

(a) *Partial ETA Squared*

The Partial Eta Squared value determines the sample effect size, based on the amount of variability due to the differences of the Means. The sample effect size based on the 'within-subjects' group variability is called partial eta squared (partial η^2). SPSS calculates and reports the sample effect size for the One-Way Repeated Measures ANOVA and so it does not need to be calculated manually. However, the sample effect size (partial η^2), is not presented in the One-way ANOVA test and so to generate the effect size, the GLM procedure in SPSS is run

Eta Squared can also be calculated manually, using the formula as follows:

$$\text{Eta squared} = \frac{t^2}{t^2 + (N1 + N2 - 2)}$$

The Eta squared value (η^2) is then compared against a set of descriptors outlined in the guidelines of Cohen (1988), which interprets effect size as follows:

.01 = small effect

.06 = moderate effect

.14 = large effect

3.10.2.3 Multiple Linear Regression

The Multiple Linear Regression was undertaken to predict how much of the independent variables can explain the variation of one continuous dependent variable (Pallant, 2005). A Multiple Linear Regression can be run when both independent and dependent variables are both continuous. According to Cronk (2008, pp. 45-46), the Multiple Linear Regression assumes that both variables are interval or ratio scaled and that the dependent variable should be normally distributed.

In the present study, a Multiple Linear Regression was calculated to determine the strength and direction between the two variables, principal leadership practices (independent variable) and teacher collegiality (dependent variable), using SPSS. The Multiple Linear Regression test generates three output tables, (i) The Model Summary Table (ii) ANOVA (iii) Coefficients, which provides the values of R^2, p-value, F value and degree of freedom. This information is crucial for determining the direction, strength and significance of the relationship between the variables and is needed to determine how well the regression model fits the data.

'R' in the 'R' column, is the absolute value of the Pearson correlation, between the dependent variable and the independent variable. R indicates the strength of the association between the two variables and the R^2 is the coefficient of determination found in the 'R Square' column. R^2 represents the proportion of variance in the dependent variable that can be explained by the independent variable. The Adjusted R^2 is an estimate of the effect size, according to the guidelines in (Cohen, 1988). The ANOVA summary table reveals the significance level of the linear regression between the variables. It informs whether the regression model results in a significantly better prediction of the dependent variable, than just computing the mean values. The significance level is found in the column labelled 'Sig.'. In this study, the table of coefficients, is the most important output table, as it can predict which among the constructs of principal leadership practices best explains the variation in teacher collegiality.

Before proceeding with the Multiple Linear Regression test, the following assumptions must be met for the Multiple Regression results to be valid:

- Assumption of Linearity

- Addressing Outliers

- Independence of errors (residuals).

- Assumption of Homoscedasticity of residuals (equal error variances).

- Normality of residuals

Various SPSS procedures are used to test each assumption in order to ensure that these assumptions are not violated and that they can ensure the accuracy of the Multiple Linear Regression predictions. These assumptions are also necessary to understand how well the Regression Model fits the data, as well as to determine if the variation in the dependent

variable (teacher collegiality) is due to the independent variables (principal leadership practices).

(a) *Assumption of Linearity*

A Scatterplot can establish whether a linear relationship exists between 'teacher collegiality' and 'principal leadership practices'. The assumption of linearity can be determined if a linear arrangement of dots are viewed on a Scatterplot. The dots in the Residual Scatterplot, lie around a reasonably straight diagonal line from bottom left to top right, as shown in Figure 3.8 in Appendix C27, on p. 433. This Scatterplot is the visual evidence to suggest that the relationship between 'teacher collegiality' and 'principal leadership practices' is linear, and thus proved that the assumption of linearity has been met.

(b) *Identifying Outliers*

The Multiple Linear Regression is sensitive to outliers. The presence of outliers, which appear as dots (or data points) do not follow the usual pattern of points, and so the Casewise Diagnostics was carried out in order to identify these Outliers. Table 4.16 found in Appendix D4, p. 442, pinpoints to the four outliers that have standardized residuals values greater than 3 standard deviations. For the Casewise Diagnostics procedure, the standardized residual values that are greater than ±3 are a common cut-off criteria used to define whether the particular residual represents an outlier or not. The presence of these outliers can also be detected in the Scatterplot of Figure 3.9, p. 433. Outliers can have a detrimental effect on the regression equation and statistical inferences, which can lead to a reduction in the accuracy of prediction. However, with a sample size of 290, it is common to find some extreme scores that show up as outliers, and so for this study, an

informed decision was made to retain these data points as part of the Linear Regression test, as their standardized residual values are only slightly over 3 standard deviations.

(c) *Independence of Errors*

The Durbin-Watson test is used to test for the independence of errors and to ensure that errors are not correlated. The Durbin-Watson statistic can range from 0 to 4 and a value close to '2' is considered acceptable. In the Model Summary Table 4.13, shown in Appendix D4, on p. 442, the Durbin-Watson statistic shows 1.94. This value is very close to 2 and so it can be accepted that there is independence of errors (residuals) and that the assumption of the independence of errors has been met.

(d) *The Assumption of Homoscedasticity*

Homoscedasticity assumes that the variance of errors are constant across the data points. The results in the Homoscedasticity Scatterplot of Figure 3.9 (see Appendix C28, on p. 433) indicates that the errors of prediction (y-axis) are spread across the standardized predicted values (x-axis), in a rectangular distribution, with most of the scores concentrated along the 0 point line. This means that the variance of the errors is constant across the observations and that the assumption of homoscedasticity has been met.

(e) *Normality of residuals (errors)*

The bell-shaped curve in the histogram of Figure 3.10 shows that the standardized residuals appear to be approximately normally distributed. Refer to Figure 3.10 in Appendix C29, on p. 434.

(f) *Normal P-P Plot*

The Normal P-P Plot can further confirm normality of data. Figure 3.11 in Appendix C30 (p. 434) denotes that the residual points are approximately aligned along the diagonal line. This indicates that the residuals of error are approximately normally distributed and that the assumption of normality has been met.

3.10.2.4 One-Way ANOVA

The One-way Analysis of Variance (ANOVA) is a parametric statistical test, used to test for a difference among two or more groups, in terms of one dependent variable (Creswell, 2012, p. 613). The One-way ANOVA is actually an extension of the Independent T-test, which can test if three or more means are equal. In a 1-way between groups ANOVA, there are different participants in each of the groups and this technique is used to indicate whether there are significant differences in the mean scores across the groups. For validity of results, the following assumptions have to be met, before the One-way ANOVA test can be applied:

- The population from which the sample was obtained must be normally distributed.
- The samples must be independent.
- The variances of the population must be equal.

(Source: (www.explorable.com, 2012)

According to Muijs (2004, p. 200), ANOVA can calculate "how well all the variables together predict the dependent variable (using the F-test and R square), and whether or not the individual variables are related to the dependent variable (using the F-test for statistical significance and the eta measure of effect size)". In this study, once the data had met normality standards, the 1-way ANOVA was performed.

(a) ***Homogeneity of Variances Violated***

The 1-way ANOVA procedure allows for homogeneity of variances to be tested using the Levene's Test for Equality of Variances and the robust Welch test that determines significance levels, in case the assumption of homogeneity of variances was violated. If the p-values for the Levene's test statistics, shown in the 'Sig.' column, is significant ($p < .05$), this means that the variances among groups are not homogenous and thus equal variances are not assumed. When the Homogeneity of Variances assumption is not met, the Welch test is the next approach for performing an ANOVA analysis. The 'Robust Tests of Equality of Means' table, derived from the ANOVA output is referred to, because it is a more robust estimate of central location. If the p-values in the Welch test are not statistically significant *(p > .05),* a post hoc test will not be followed up with and the results of the Welch test will be reported. However, if the p-values are statistically significant *(p < .05),* the Tamhane's T2 post hoc test results are reported, as it compares all possible pairwise combinations of group differences and provides confidence intervals for the differences between group means which shows whether the differences are statistically significant.

(b) ***Homogeneity of Variances Met***

On the other hand, if the Levene's test statistic is not significant, ($\alpha > .05$) then it can be concluded that there are no significant differences among the groups' variances and that the assumption of homogeneity has been met. When homogeneity of variances have been met, the standard 1-way ANOVA output table is referred to and the alpha levels are noted. If the p-values in the ANOVA output are not statistically significant *(p > .05),* a post hoc test will not be followed up with and the results of the 1-way Anova will be reported. If the p-values are statistically significant *(p < .05),* the Tukey Post Hoc results

are reported, as it provides the p-values for each pairwise comparison, and also provides confidence intervals for the mean difference for each comparison.

(c) *Post Hoc Multiple Comparisons Tests*

Post Hoc Multiple Comparisons tests are used to identify which group means differ from other group means (Boduszek, 2011). If equal variances are assumed, the post hoc 'Tukey HSD' test is selected in the Post Hoc Multiple Comparisons table. However, if the assumption of homogeneity of variances has been violated, (equal variances NOT assumed), the post hoc 'Tamhane's T2' test is selected (at $p = .05$). Post Hoc pairwise comparison tests are computed to determine which of the pairwise groups have statistical significant differences.

3.10.2.5 Independent-samples t-test

The Independent-samples t-test was used to determine if there was a statistically significant difference between the means of two independent groups on a continuous dependent variable (Lund & Lund, 2013). The t-test is known by a number of names, including the 'independent t-test', 'independent-measures t-test', 'between-subjects t-test' and 'unpaired t-test'. The purpose of conducting a t-test was to compare the means between two groups and to determine the mean difference, in terms of one dependent variable. An important assumption of the t-test is the equality of variances between the two groups, which is also known as the assumption of homogeneity of variances. The Levene's Test for Equality of Variances determines whether these variances are different in the population. If the significance p-value is greater than 0.05, the variances are equal and the assumption of homogeneity of variances has been met. However, if the *p*-value

is less than 0.05, the variances are unequal and the assumption of homogeneity of variances has been violated.

- The population from which the sample was obtained, must be normally distributed.

- The samples must be independent

- The variances of the population must be equal.

    Source: (www.explorable.com, 2012)

In this study, the Normality Tests addressed in Section 4.2, has tested and proven that the data is normally distributed. This means that the distributions of the populations from which the samples are selected are normal. Furthermore, the assumption of normality implies that the dependent variable is normally distributed in each of the groups.

The T-test gives rise to two output tables. The first is the 'Group Statistics' Table, which provides basic descriptive information about the groups comparisons, including the sample size (N), Mean and Standard Deviations for each group. The second output table is the Independent Sample Test Table, which indicates whether there is a significant difference in the means between the two groups and whether or not the data is homogeneous. It is divided into two parts: Levene's Test for Equality of Variances and t-test for Equality of Means. The Levene's F Test for Equality of Variances, is the most commonly used statistic, which tests the assumption of homogeneity of variance. The column labelled 'Sig. (2-tailed)' shows the significance level of the Levene's test (eg. $\alpha = .05$). If the p-value is more than .05, then it means that the data is homogenous and that equal variances are assumed, and vice versa. Subsequently, the Welch test results are reported from the line of data that corresponds to 'equal variances assumed'.

(a) *Cohen's* **d**

Cohen's *d* is an effect size statistic which is calculated when the means differ significantly in a t-test. Cohen's *d* refers to the difference between two sample means and is used to evaluate the degree of which the mean scores of two test variables differ. The calculated *d* can range from negative infinity to positive infinity and is measured in standard deviation units. In a t-test, the Cohen's *d* is calculated as a practical importance of a significant finding. However, SPSS does not provide Cohen's *d* values for t-tests. For this present study, the Cohen's *d* and the 95% confidence level was calculated using a "non-central *t* SPSS scripts, sav.file" reported in (Wuensch, 2006). The Cohen's *d* value was then compared against a set of descriptors outlined in the guidelines of Cohen (1988) which interprets effect size as follows:

$$0.2 \text{ to } 0.3 \quad = \quad \text{small effect}$$

$$\text{Around } 0.5 \quad = \quad \text{medium effect}$$

$$0.8 \text{ to infinity} = \quad \text{large effect}$$

3.10.3   Quantitative Data Analysis

A series of statistical analyses were applied to test and answer the research questions of this study. The research questions and statistical tests used to analyse each of these research questions are as follows:

Research Question 1 / Pearson's r Correlation Test

Research Question 1: Based on the teachers perceptions, is there a significant relationship between principal leadership practices and teacher collegiality, among the high performing daily secondary schools?

Statistical Test: Pearson's r Correlation Test

Research Question 2 / 1-Way Repeated Measures ANOVA

Research Question 2: Is there a significant difference in response between each of the following five constructs of principal leadership practices?
[a] Model the way
[b] Inspire a shared vision
[c] Challenge the process
[d] Enable others to act
[e] Encourage the heart

Statistical Tests: One-Way Repeated Measures ANOVA

Research Question 3 / 1-Way Repeated Measures ANOVA

Research Question 3: Is there a significant difference in response between each of the following seven constructs of teacher collegiality?
[a] Mutual Support & Trust
[b] Observing One another Teaching
[c] Joint Planning & Assessment
[d] Sharing Ideas & Expertise
[e] Teaching Each Other
[f] Developing Curriculum Together
[g] Sharing Resources

Statistical Tests: One-Way Repeated Measures ANOVA

Research Question 4 / Multiple Linear Regression

Research Question 4: Based on the teachers' perceptions, which constructs of principal leadership practices predict teacher collegiality?

Statistical Test: Multiple Linear Regression

Research Question 5 / 1-Way ANOVA

Research Question 5: Based on the teachers perceptions, is there a significant difference among the five constructs of principal leadership practices, across the sample high performing daily secondary schools?

Statistical Test: One-Way ANOVA

3.10.4   Qualitative Data Analysis

Using a qualitative approach, the following research questions were analysed using

the qualitative data analysis software, ATLAS.ti.

Research Question 6a / ATLAS.ti

Research Question 6(a):   How are principals in Malaysian high performing daily
                               secondary schools prepared for their leadership role? [5]

Research Question 6b / ATLAS.ti

Research Question 6(b):   What are the teachers' views on the national accreditation
                               programme (NPQEL), in line with being future principals
                               in Malaysian high performing schools? [6]

Research Question 7 / ATLAS.ti

Research Question 7:   To what extent do principals encourage teacher
                               collegiality?

Research Question 8 / ATLAS.ti

Research Question 8:   What are the predominant leadership practices used by
                               principals in Malaysian high performing daily secondary
                               schools?

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[5] Research Question 6(a) is part of the SEAL & 7SLS research projects, which investigates Malaysian school leadership preparation and professional leadership development.

[6] Research Question 6(b) is part of the SEAl & 7SLS research projects, which investigates the effectiveness of the Malaysian national accreditation programme (NPQEL), which prepares aspiring principals for principalship.

3.11   Summary of Chapter

Chapter 3 described the research methodology used in this study, detailing the overall research design that progressed through 4 phases: the pre-data collection phase, the 3 pilot tests phase, the data collection phase and the data analysis phase. It also describes the validation of questionnaires using Rasch Modeling. The validated research instruments were administered to 290 teacher respondents from 6 sample high performing schools, of which 5 teachers from 4 sample schools, who had a minimum of 3 working years under their present school principal, participated in focus group discussions, while 4 of their Principals agreed to be interviewed. During the data analysis phase, quantitative data was analysed using SPSS parametric tests and qualitative data was analysed using Atlas.ti. the next chapter presents the findings and a discussion of how the data was analysed using quantitative and qualitative analyses.

CHAPTER 4: DATA ANALYSIS AND RESULTS

Introduction

The aim and intent of this research is to identify the leadership practices of principals, from among the best performing public schools in Malaysia. The purpose of this study is to explore the relationship between the principals' leadership and teacher collegiality in the context of Malaysian high performing secondary day schools. The findings will illuminate the relationship that exists between school principals and teacher collegiality within the Malaysian high performing school landscape. In this chapter, statistical procedures were used to analyse the data, and answer the eleven research questions, that guide this study. A summary of the research findings will be presented through the interpretation of the results.

4.1   Data Analysis Procedure

The following sub-sections describe the data analysis procedure, used to answer the research questions that guide this study. Using the quantitative approach, five research questions were analyzed using SPSS parametric tests, while the remaining research questions were answered using the qualitative approach. The results of these analyses will be described and presented to address and answer each of the Research Questions.

For the quantitative research design, the format of reporting, adheres to the academic conventions of the American Psychological Association (APA), sixth edition format (APA, 2009). The parametric statistical tests used in this study requires "data measured on an interval or ratio scale" (Cronk, 2008, p. 22), and that the data should be normally

distributed and so for the purpose of this study, ordinal data had been transformed to equal-interval, as described under 'Questionnaire Validation', of sub-section 3.8, and the assumptions of normality have been met, as described by the normality tests in the sub-sections that follow.

4.2 Normality Tests

A normality test was conducted to ensure the quality of data, for use in parametric statistical methods. Normality tests were carried out to show evidence that the data is normally distributed. The three types of normality tests that follow, confirm that the data in this study, is indeed normally distributed.

4.2.1 Skewness and Kurtosis

Skewness and Kurtosis values are measures of normality. Skewness determines symmetry, and its value should lie between -2 and +2. Kurtosis determines the distribution and its value should lie between -1 and +1. According to the results of Table 4.1 (Appendix D1, on p. 435), the skewness and kurtosis values lie within the stipulated range. Principal Leadership Practices was normally distributed, with Skewness of -0.25 ($SE = 0.14$) and Kurtosis of 0.13 ($SE = 0.29$). Teacher Collegiality was normally distributed, with Skewness of 0.28 ($SE = 0.14$) and Kurtosis of 0.87 ($SE = 0.29$). Therefore, the data is normally distributed.

4.2.2   Histogram

The histograms in Figures 4.1 and 4.2 are visual representations of normal distribution of data. They are like bar charts that are commonly used to see the shape of data distribution. Their 'bell-shape curves' show normally distributed curves. Therefore, the assumption of normality of data for this study, has been met. Refer to Histograms in Appendix D1 on pp 435 – 436.

4.2.3   Normal Q-Q Plots

The Normal Q-Q Plot is a graphical illustration that also assesses data normality. The circular dots that represent the data points are positioned approximately along the diagonal line as seen in Figures 4.3 and 4.4. This indicates that the data is normally distributed. Refer to the Normal Q-Q Plots in Appendix D1 on pp 436 – 437.

4.3   Quantitative Data Analysis

In this study, quantitative data was collected and analysed based on the perceptions of 290 teacher respondents, across six high performing, secondary day schools in Malaysia. Before beginning the series of data analyses, the raw ordinal data was initially transformed into logit measures using the software *Winsteps* (version 3.73). This Rasch Modeling procedure was described and detailed under sub-sections 3.8.4 to 3.8.6. After the equal interval data measures were generated, a series of descriptive and inferential statistical procedures were employed, using *SPSS* version 21.0, described under Section 3.10.2, and selected parametric tests (Pearson Correlation, 1-way Repeated Measures ANOVA, Simple Linear Regression, 1-way ANOVA and Independent T-test) were

chosen for meaningful interpretation of results and to investigate significant relationships and differences between groups of variables. Each of these tests have been described in detail under sub-sections 3.10.2.1 to 3.10.2.5. These tests were based on the *p*-value of *p* < 0.05. Before running any of these statistical tests, the data was tested for normality, as addressed under sub-section 4.2. The following sub-sections address the research questions to hone in on the objectives of this study and its research findings.

4.3.1 Research Question 1

RQ. 1: Based on the teachers perceptions, is there a significant relationship between principal leadership practices and teacher collegiality?

For Research Question 1, the Pearson Correlation test was used to find out whether there was any significant relationship between the two continuous variables under study – 'principal leadership practices' and 'teacher collegiality'.

Table 4.2: Pearson's r Correlation Matrix

Correlations						
	Principal Leadership Practices	**Model the Way**	**Inspire a Shared Vision**	**Challenge the Process**	**Enable Others to Act**	**Encourage the Heart**
Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
N	290	290	290	290	290	290
	Pearson Correlation					
Teacher Collegiality	**.571**[**]	**.509**[**]	**.588**[**]	**.422**[**]	**.495**[**]	**.579**[**]
Mutual Support & Trust	.533[**]	.487**	.492**	.442**	.479**	.526**
Observing One Another Teaching	.432[**]	.420**	.380**	.330**	.368**	.468**
Joint Planning & Assessment	.511**	.441**	.531**	.366**	.441**	.529**
Sharing Ideas & Expertise	.465**	.441**	.481**	.353**	.389**	.455**
Teaching Each Other	.564**	.475**	.630**	.406**	.505**	.552**
Developing Curriculum Together	.431**	.360**	.531**	.275**	.367**	.432**
Sharing Resources	.454**	.404**	.492**	.328**	.398**	.436**

** Correlation is significant at the 0.01 level (2-tailed).

The results of the Pearson Correlation test in Table 4.2, indicated that, each of the constructs of Principal Leadership Practices have a positive and moderate correlation with Teacher Collegiality, $0.28 < r_{(288)} < 0.63$. Refer to Cohen, (1988) on p. 120. Further interpretation of these findings obtained through the Pearson Correlation test, are discussed in Chapter Five.

The following sub-section presents the analysis and results of Research Question 2.

4.3.2   Research Question 2

RQ. 2:   Is there a significant difference in response between each of the following five constructs of principal leadership practices?

[a] Model the way
[b] Inspire a shared vision
[c] Challenge the process
[d] Enable others to act
[e] Encourage the heart

For Research Question 2, the One-Way Repeated Measures ANOVA was conducted to determine whether there were any statistical significant differences among the five constructs of principal leadership practices. These five constructs are considered as a 'within-subjects' group, because each construct contains the same respondents. Section 3.10.2.2 (p. 120) describes the robustness of the One-Way Repeated Measures ANOVA technique and the reason for its selection to answer Research Question 2.Refer to results of the output tables in Appendix D2 on pp. 437 – 439.

Figure 4.5 (p. 141) is a graphical representation of the Means and Standard Deviations of the constructs of principal leadership practices, derived from the first output table of the One-Way Repeated Measures ANOVA. Figure 4.5 indicates that the construct

'Inspire a shared vision' ($M = 2.89$; $SD = 2.41$) is the most dominant principal leadership practice among the other constructs.
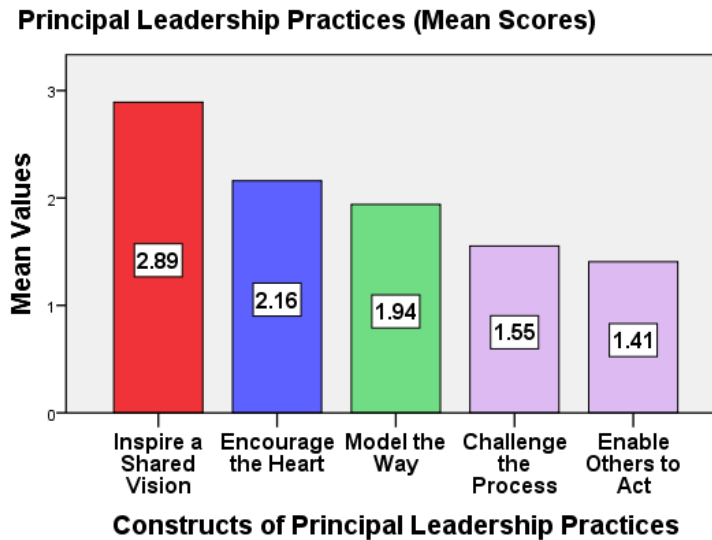
Figure 4.5: Mean Scores: Constructs of Principal Leadership Practices

For the One-Way Repeated Measures ANOVA, the assumption of sphericity is determined by the Mauchly's Test of sphericity. The Mauchly's Test shown in (Appendix D2: Table 4.5, p. 438) indicated that the assumption of sphericity had been violated, χ^2 $(9) = 132.42$, $p < .001$.

Mauchly's Test of Sphericity: Violated

Wilks' $\lambda = 0.63$, χ^2 $(9) = 132.42$, $p < .001$

To correct the violation of sphericity, the degrees of freedom were corrected using Huynh-Feldt estimates of sphericity ($\varepsilon = .799$) since the estimated epsilon was greater than 0.75, as explained in Section 3.10.2.2 on pp. 122-125 (see Appendix D2: Table 4.6 - Test of Within Subjects, p. 439). The Epsilon (ε) was 0.799, as calculated according to Huynh-Feldt, and it was used to correct the one-way repeated measures ANOVA. The partial eta squared value (partial $\eta^2 = 0.29$) indicated that the difference in effect size

among each of the constructs of principal leadership practices, account for 29% of their variability. This means that there was a statistically significant difference among the five constructs of principal leadership practices, with a partial eta squared effect size of high significance, $F_{(3.2, 924.2)} = 117.94$, $p < .001$, partial $\eta^2 = 0.29$.

Since the Epsilon estimates indicated that there was a statistical significant difference between the constructs of principal leadership practices, a Post Hoc test was run to determine the differences between all the possible pairwise comparisons among the constructs of principal leadership practices. The Bonferroni Post Hoc adjustment results presented in (Appendix D2: Table 4.7, p. 439) showed that there were statistical significant differences between each pairwise constructs, at $p < .001$, except for one pairwise combination between *'Challenge the Process'* and *'Enable Others to Act',* because there was no significant difference between these two constructs, at $p = 0.13$.

The Bonferroni Post Hoc results indicated that, there was no statistical significant difference between 'Challenge the process' and 'Enable others to act'*,*

$$(MD = 0.15, 95\% \ CI \ [-0.02, 0.31], p = .13)$$

Figure 4.6 is an illustration of the pairwise comparison among the constructs of Principal Leadership Practices:

Inspire a shared vision	Encourage the heart	Model the way	Challenge the process	Enable others to act
($M = 2.89$, $SD = 2.41$)	($M = 2.16$, $SD = 2.13$)	($M = 1.94$, $SD = 1.81$)	($M = 1.55$, $SD = 1.53$)	($M = 1.41$, $SD = 1.28$)
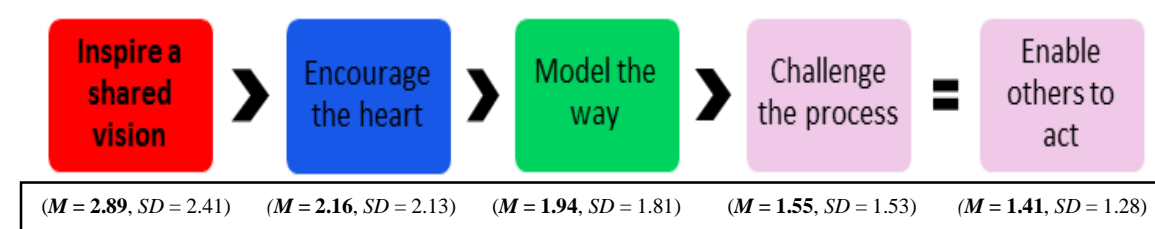
Figure 4.6: Significant Differences between Constructs of Principal Leadership Practices

In summary, the results of the One-way Repeated Measures ANOVA revealed that there were statistically significant differences among the pairwise constructs of principal leadership practices, with an effect size of 29% variability, except between *'Challenge the Process'* and *'Enable Others to Act'*, (MD = 0.15, 95% *CI* [-0.02, 0.31], p = .13).

There was a statistically significant difference among the constructs of principal leadership practices, with an effect size of 29% variability,

Wilks' λ = .63, $F_{(3.2, 924.2)}$ = 117.94, $p < .001$, partial η^2 = 0.29.

The Bonferroni Post Hoc test adjustment revealed that, there were statistical significant differences between each pairwise constructs of principal leadership practices, at $p < .05$) except between 'Challenge the process' and 'Enable others to act',

(MD = 0.15, 95% CI [-0.02, 0.31], p = .13).

Further interpretation of these findings obtained through the One-Way Repeated Measures ANOVA test, are discussed in Chapter Five under Section 5.2. The following sub-section presents the analysis and results of Research Question 3.

4.3.3   Research Question 3

RQ. 3:   Is there a significant difference in response between each of the following

seven constructs of teacher collegiality?

[a] Mutual Support & Trust
[b] Observing One another Teaching
[c] Joint Planning & Assessment
[d] Sharing Ideas & Expertise
[e] Teaching Each Other
[f] Developing Curriculum Together
[g] Sharing Resources

For Research Question 3, the One-Way Repeated Measures ANOVA was conducted to determine whether there were any statistical significant differences among the seven constructs of teacher collegiality. The seven constructs are considered as a 'within-subjects group' because each construct have the same respondents. Reasons for the selection of the One-Way Repeated Measures ANOVA to answer Research Question 3, had been described in Section 3.10.2.2 on pp. 120-123. Figure 4.7 is a graphical representation of the Means and Standard Deviations of the constructs of teacher collegiality (see Descriptive Statistics table in Appendix D3: Table 4.8 on p. 440). Figure 4.7 indicates that the construct 'Teaching each other' ($M = 2.98$; $SD = 2.32$) is the most dominant construct of teacher collegiality, among the other constructs.
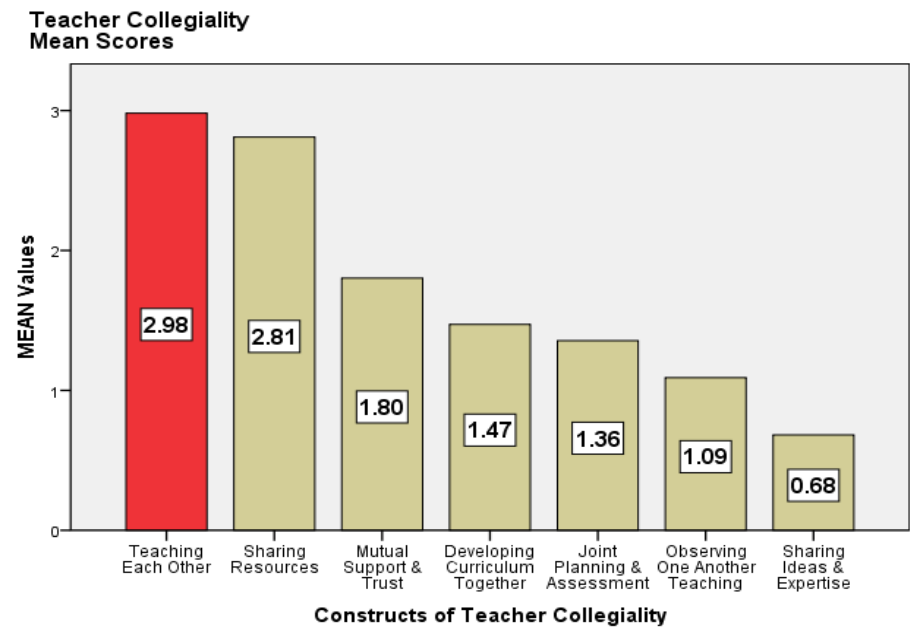
Figure 4.7: Mean Scores: Constructs of Teacher Collegiality

For the One-Way Repeated Measures ANOVA, the Mauchly's Test results in (Appendix D3: Table 4.10 on p. 440) indicated that the assumption of sphericity had been violated, $\chi^2 (20) = 542, p < .001$.

Mauchly's Test of Sphericity: Violated

Wilks' $\lambda = 0.15, \chi^2 (20) = 542, p < .001$.

To correct the violation of sphericity, the degrees of freedom were corrected using the Greenhouse-Geisser because its estimates of sphericity were less than .75 ($\varepsilon = 0.57$) (see Appendix D3: Table 4.11 on p. 441 - Test of Within Subjects). The Epsilon (ε) was 0.57, as calculated according to the Greenhouse-Geisser correction, and it was used to correct the One-way Repeated Measures ANOVA. The partial eta squared value (partial $\eta^2 = 0.43$) indicated that there was a large effect size and that it accounts for 43% of their variability. This means that there were statistical significant differences among the seven constructs of teacher collegiality, with a partial eta squared effect size of high significance,

$$F_{(3.44, 994.8)} = 221.1, p < .001, \text{partial } \eta^2 = 0.43.$$

Since the Epsilon estimates indicated that there was a significant difference between the constructs of teacher collegiality, a Post Hoc test was run to determine the differences between all possible pairwise comparisons among the constructs of teacher collegiality. For the Post Hoc analysis, the Bonferroni adjustment results were presented in (Appendix D3: Table 4.12 on p. 441). It was found that there were statistical significant differences between all pairwise constructs, at $p < .001$, except for the following two pairwise combinations because there were no significant differences found between these pairwise constructs:

- 'Teaching Each Other' and 'Sharing Resources',

  ($MD = 0.17$, 95% CI [-0.1, 0.45], $p > .05$).

- 'Developing Curriculum Together' and 'Joint Planning & Assessment',

  ($MD = 0.12$, 95% CI [-0.87, 0.32], $p > .05$).

The pairwise Comparisons Table 4.12 (Appendix D3, p. 441) hows the statistical significant results according to the Mean Differences (*MD*) and Confidence Intervals

(*CI*). Figure 4.8 is an illustration of the pairwise comparison among the constructs of teacher collegiality:
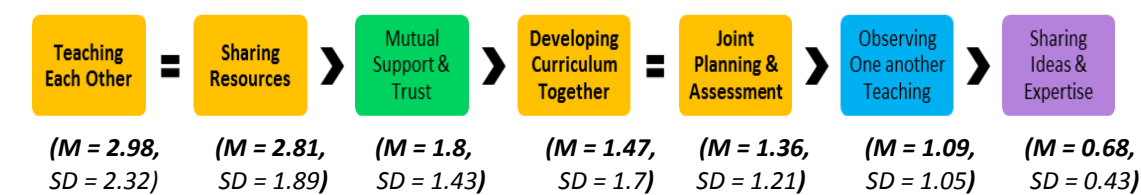
Figure 4.8: Significant Differences between Constructs of Teacher Collegiality

In summary, the results of the One-way Repeated Measures ANOVA revealed that there were statistically significant differences among the pairwise constructs of teacher collegiality, with an effect size of 43% variability, except between 'Teaching Each Other' and 'Sharing Resources', and 'Developing Curriculum Together' and 'Joint Planning & Assessment'. This means that there were statistical significant differences among the constructs of Teacher Collegiality, with an effect size of 43% variability,

$$\text{Wilks' } \lambda = 0.15 \ [F_{(3.44, 994.8)} = 221.1, \ p < .001, \text{ partial } \eta^2 = 0.43.$$

The Bonferroni Post hoc test adjustment revealed that, there were statistical significant differences found between each pairwise constructs of teacher collegiality, at $p < .05$ except between,

'Teaching Each Other' and 'Sharing Resources',

($MD = 0.17$, 95% *CI* [-0.1, 0.45], $p > .05$)

 and

'Developing Curriculum Together' and 'Joint Planning & Assessment',

($MD = 0.12$, 95% *CI* [-0.87, 0.32], $p > .05$).

Further interpretation of these findings obtained through the One-Way Repeated Measures ANOVA test, are discussed in Chapter Five under Section 5.3. The following sub-section presents the analysis and results of Research Question 4.

4.3.4   Research Question 4

RQ. 4:   Based on the teachers' perceptions, which constructs of principal leadership practices predict teacher collegiality?

A Multiple Linear Regression test was used to predict and determine how much of the principal leadership practices can explain the variation in teacher collegiality. The following assumptions have been tested for violations in order to ensure the accuracy of the Multiple Linear Regression predictions. Refer to Section 3.10.2.3 that highlights how these assumptions have been met:

- Assumption of Linearity (see Figure 3.8 in Appendix C27, on p. 433)

- Addressing Outliers

- Independence of errors

- Assumption of Homoscedasticity of residuals (see Figure 3.9 in Appendix C28, on p. 433)

- Normality of residuals (see Figures 3.10 and 3.11 in Appendices C29 and C30, on p. 434)

The 'Coefficient of Determination' (R^2) in the Model Summary Table 4.13 (p. 442), determined how well the regression model fits the data. ($R^2 = 0.38$). However, the Adjusted R^2 corrects the positively biased R^2 and provides a smaller value which better represents the population. The Adjusted R^2 statistic (0.37) is indicative of a small effect size, according to Cohen's (1988) classification, as described under Section 3.10.2.5 (p. 132). As such, the Adjusted R^2 is selected to report the proportion of variance, described as follows: Principal Leadership Practices account for 37% of the variance in Teacher Collegiality and that 63% of the variance in Teacher Collegiality is unaccounted for. The

ANOVA Table 4.14 (p. 442) revealed the results of the Regression Model. The significance level ($p < .001$) indicated that the Regression Model was statistically significant and was considered an acceptable, moderate fit in this study. This concludes that Principal Leadership Practices is a statistically significant predictor of Teacher Collegiality.

Regression Equation:

$$F_{(5, 284)} = 34.45, p < .001, R^2_{adj} = .37$$

The results in the Coefficients Table 4.15, (below) determine which among these five predictors of Principal Leadership Practices contribute towards Teacher Collegiality. It also presents the relative strengths and direction of the relationship between individual predictors and Teacher Collegiality. Based on the following Regression equation, the weightage of Teacher Collegiality was calculated below.

The Regression Equation:
Dependent Variable = [Constant] + [a IV$_1$] + [a IV$_2$] + [a IV$_3$] + [a IV$_4$] + [a IV$_5$]

Table 4.15: Multiple Linear Regression: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	.606	.057		10.599	.000	.493	.719					
Model	.024	.042	.057	.583	.560	-.058	.106	.509	.035	.027	.230	4.349
Inspire	.132	.033	**.412**	**4.006**	**.000**	.067	.196	.588	.231	.188	.207	4.822
Challenge	-.087	.042	**-.172**	**-2.042**	**.042**	-.170	-.003	.422	-.120	-.096	.310	3.224
Enable	-.015	.057	-.025	-.265	.792	-.128	.097	.495	-.016	-.012	.242	4.124
Encourage	.120	.038	**.331**	**3.186**	**.002**	.046	.194	.579	.186	.149	.203	4.922

a. Dependent Variable: Teacher Collegiality

Among the five predictors of Principal Leadership Practices, '*Inspire a shared vision*' ($\beta = .41, p < .001$), had the highest Beta value and is viewed as the strongest predictor of Teacher Collegiality. Therefore '*Inspire a shared vision*' had the biggest effect on

Teacher Collegiality, compared to the five constructs of Principal Leadership Practices. The following three predictors have a statistical significance on teacher collegiality, at p-value $< .05$. Together they explain 37% of the variation in Teacher Collegiality ($R^2_{adj} = .37$). The Standardized Regression Coefficient (also called Beta), is the slope of the regression line that represents the linear regression formula. It measures the strength of the relationship between the predictors and the dependent variable. In this study, the results of the Standardized Coefficient (β) indicate that,

'Inspire a Shared Vision' ($\beta = .41, t (5, 284) = 4.01, p < .001$)

'Encourage the Heart' ($\beta = .33, t (5, 284) = 3.19, p = .002$)

'Challenge the Process' ($\beta = - .17, t (5, 284) = -2.04, p = .04$)

- An increase in 'Inspire a Shared Vision', will result in an increase in Teacher Collegiality, ($\beta = .41, p < .001$).

- An increase in 'Encourage the Heart', will result in an increase in Teacher Collegiality, ($\beta = .33, p = .002$).

- An increase in 'Challenge the Process' will result in a decrease in Teacher Collegiality, ($\beta = - .17, p = .04$).

On the contrary, the constructs *'Model the Way'* ($\beta = .06, p = .56$) and *'Enable others to act'* ($\beta = - .03, p = .79$), have no statistical significance on Teacher Collegiality.

In summary, a Multiple Linear Regression was run to determine if principal leadership practices were predictors of teacher collegiality. All assumptions of linearity, outliers,

independence of errors, homoscedasticity and normality of residuals were met, before proceeding with the Multiple Linear Regression test.

The Regression Model had proven that:

- Principal Leadership Practices was a statistically significant predictor of Teacher Collegiality and it accounted for 37% of the variance in Teacher Collegiality,

$$F_{(5, 284)} = 34.45, p < 001, R^2_{adj} = .37$$

- 'Inspire a Shared Vision' ($\beta = .41, p < .001$) and 'Encourage the Heart' ($\beta = .33, p = .002$), had positive effects on Teacher Collegiality,

- 'Challenge the Process' ($\beta = -.17, p = .04$) had an inverse effect on Teacher Collegiality,

- 'Model the Way' ($p = .56$) and 'Enable others to act' ($p = .79$), had no effects on Teacher Collegiality.

- Teacher Collegiality =

0.606 + .41 (Inspire a Shared Vision) – .17 (Challenge the Process) + .33 (Encourage the Heart)

Further interpretation of these findings obtained through the Multiple Regression test, are discussed in Chapter Five under Section 5.1. The following sub-section presents the analysis and results of Research Question 5.

4.3.5   Research Question 5

RQ. 5:   Based on the teachers perceptions, is there a significant difference among the five constructs of principal leadership practices, across the six high performing sample schools?

For Research Question 5, the One-way ANOVA was used to compare the five constructs of principal leadership practices, and to identify which of these constructs have an impact on the six sample schools (see Table 4.17 on p. 443). Section 3.10.2.4 (pp. 128-130) describes the approach to a One-Way ANOVA and the reason for its selection to answer Research Question 5. The Levene's test results in Table 4.18 indicated that there was a significant difference among the Schools, for all principal leadership practices, at the $p < .05$ level, and that the homogeneity of variances had been violated (see Table 4.18 Appendix D5, on p. 444).

'Model the Way'   - $F_{(5, 284)} = 9.09, p < .001$

'Inspire a Shared Vision' - $F_{(5, 284)} = 7.82, p < .001$

'Challenge the Process'   - $F_{(5, 284)} = 9.08, p < .001$

'Enable Others to Act'   - $F_{(5, 284)} = 10.28, p < .001$

'Encourage the Heart'   - $F_{(5, 284)} = 12.09, p < .001$

As such, the Welch F Statistic derived from the 'Robust Test of Equality of Means' and the Partial Eta Square, obtained from Table 4.20 was referred to and was reported as follows (see Appendix D5, on pp. 444):

'Model the Way'   - $F_{(5, 98.72)} = 4.67, p = .001, \eta^2 = .12$

'Inspire a Shared Vision' - $F_{(5, 98.21)} = 27.70, p < .001, \eta^2 = .12$

'Challenge the Process'   - $F_{(5, 97.20)} = 7.11, p < .001, \eta^2 = .12$

'Enable Others to Act'   - $F_{(5, 98.21)} = 13.36$, $p < .001$, $\eta^2 = .12$

'Encourage the Heart'   - $F_{(5, 96.85)} = 13.01$, $p < .001$, $\eta^2 = .12$

Since the variances were found to be not homogeneous, the Post Hoc, Tamhane's T2 analysis, at the $p < .05$ level, was computed and the results of Table 4.21, in Appendix D5, (p. 445) indicated that there was a statistical significant difference between the pairwise Schools, according to each of the five constructs of 'principal leadership practices', reported as follows:

- For the construct, '*Model the Way'*, there were statistically significant differences found between the following pairwise comparisons:

  School I and School E, (*MD* = 1.80*, *SE* = 0.50, 95% *CI* [0.26, 3.34], $p = .011$).

  School G and School E, (*MD* = 1.69*, *SE* = 0.41, 95% *CI* [0.41, 2.98], $p = .003$).

  School E and School A, (*MD* = - 1.84*, *SE* = 0.38, 95% *CI* [- 3.05, - 0.62], $p = .001$).

  School E and School B, (*MD* = - 1.56*, *SE* = 0.43, 95% *CI* [- 2.90, - 0.23], $p = .011$).

- For the construct, '*Inspire a Shared Vision'*, there were statistical significant differences found between the following pairwise comparisons:

  School I and School A, (*MD* = - 2.24*, *SE* = 0.42, 95% *CI* [- 3.52, - 0.95], $p < .001$).

  School S and School A, (*MD* = - 2.17*, *SE* = 0.50, 95% *CI* [- 3.73, - 0.62], $p = .001$).

  School G and School E, (*MD* = 2.00*, *SE* = 0.50, 95% *CI* [0.44, 3.56], $p = .004$.

  School G and School A, (*MD* = - 1.96*, *SE* = 0.30, 95% *CI* [- 2.86, - 1.06], $p < .001$).

  School E and School A, (*MD* = - 3.96*, *SE* = 0.45, 95% *CI* [- 5.39, - 2.53], $p < .001$).

  School E and School B, (*MD* = - 1.88*, *SE* =0.54, 95% *CI* [- 3.53, - 0.24], $p = .014$).

  School A and School B, (*MD* = 2.08*, *SE* = 0.35, 95% *CI* [1.01, 3.15], $p < .001$).

- For the construct, *'Challenge the Process',* there were statistical significant differences found between the following pairwise comparisons:

  School G and School E, (*MD* = 1.97*, *SE* = 0.33, 95% *CI* [0.93, 2.99], *p* < .001).

  School E and School A, (*MD* = - 1.42*, *SE* = 0.28, 95% *CI* [- 2.32, - 0.52], *p* < .001).

  School E and School B, (*MD* = - 1.25*, *SE* = 0.33, 95% *CI* [- 2.28, -0.22], *p* = .007).

- For the construct, *'Enable Others to Act'*, there were statistical significant differences found between the following pairwise comparisons:

  School I and School E, (*MD* = 1.44*, *SE* = 0.35, 95% *CI* [0.38, 2.50], *p* = .002).

  School S and School E, (*MD* = 1.12*, *SE* = 0.35, 95% *CI* [0.05, 2.19], *p* = .033).

  School G and School E, (*MD* = 1.17*, *SE* = 0.26, 95% *CI* [0.35, 1.99], *p* = .001).

  School G and School A, (*MD* = - 0.53*, *SE* = 0.15, 95% *CI* [- 0.99, - 0.06], *p* = .014).

  School E and School A, (*MD* = - 1.70*, *SE* = 0.24, 95% *CI* [- 2.46, - 0.94], *p* < .001).

  School A and School B, (*MD* = 0.85*, *SE* = 0.19, 95% *CI* [0.29, 1.41], *p* < .001).

- For the construct, *'Encourage the Heart'*, there were statistical significant differences found between the following pairwise comparisons:

  School I and School E, (*MD* = 1.81*, *SE* = 0.57, 95% *CI* [0.05, 3.58], *p* = .04).

  School G and School E, (*MD* = 1.66*, *SE* = 0.49, 95% *CI* [0.11, 3.21], *p* = .03).

  School G and School A, (*MD* = - 1.14*, *SE* = 0.26, 95% *CI* [- 1.92, - 0.36], *p* < .001).

  School E and School A, (*MD* = - 2.80*, *SE* = 0.45, 95% *CI* [- 4.27, - 1.34], *p* < .001).

  School A and School B, (*MD* = 1.46*, *SE* = 0.34, 95% *CI* [0.43, 2.49], *p* = .001).

As a graphical representation, Figure 4.9 (p. 154) illustrates the significant differences among the six high performing sample schools, against each construct of 'principal leadership practices':
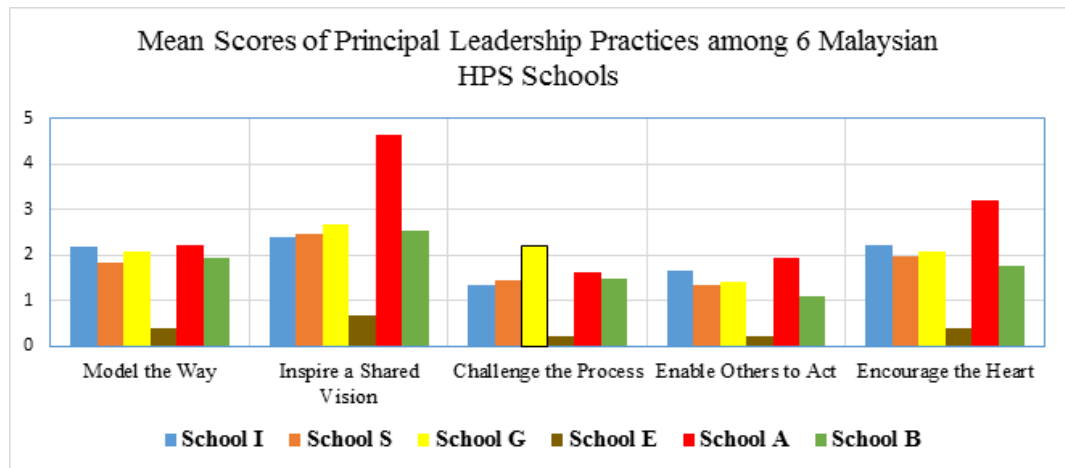
Figure 4.9 Mean Scores of Principal Leadership Practices among the 6 Sample Schools

In summary, the results indicate that among the six high performing sample schools,

- **School A** has the highest Mean score for each of the 5 constructs of Principal Leadership Practices, except for the construct, 'Challenge the way':

  'Model the way'   =   M = *2.22*, SD = *1.02*.

  'Inspire a shared vision'   =   M = *4.63*, SD = *1.14*.

  'Enable others to act'   =   M = *1.93*, SD = *0.63*.

  'Encourage the heart'   =   M = *3.21*, SD = *0.99*.

- **School G** was found to have the highest Mean score for

  'Challenge the process' (M = *2.18*, SD = *1.62*).

Further interpretation of these findings that show Schools A and G as the highest ranked schools with transformational principal leadership practices, are discussed in Chapter Five under Section 5.5.1. The following sub-section looks at the seven constructs of Teacher Collegiality to compare and investigate if there were any significant differences among these constructs.

4.3.6   Constructs of Teacher Collegiality

This Section is not part of the five main research questions that guide this study. This Section compares each of the seven constructs of Teacher Collegiality with the interest of analysing if there were any significant differences among these constructs. As such, a quantitative analysis using the One-way ANOVA was used to identify whether any of these seven constructs of Teacher Collegiality had an impact on the six sample high performing schools, under study.

The Levene's test results in Table 4.24 indicated that there was a statistically significant difference among the Schools, for the seven constructs of Teacher Collegiality, at the $p < .001$ level and that the homogeneity of variances had been violated (see Table 4.24 in Appendix D6, on p. 448).

'Mutual Support & Trust'   - $F_{(5, 284)} = 8.75, p < .001.$

'Observing One another Teaching'   - $F_{(5, 284)} = 9.12, p < .001.$

'Joint Planning and Assessment'   - $F_{(5, 284)} = 8.37, p < .001.$

'Sharing Ideas & Expertise'   - $F_{(5, 284)} = 14.59, p < .001.$

'Teaching Each Other'   - $F_{(5, 284)} = 5.86, p < .001.$

'Developing Curriculum Together'   - $F_{(5, 284)} = 6.31, p < .001.$

'Sharing Resources'   - $F_{(5, 284)} = 7.20, p < .001.$

As such, the Welch *F* Statistic obtained from the 'Robust Test of Equality of Means' (Table 4.26, p. 448) and the Partial Eta Square, obtained from Table 4.28, (p. 453) were referred to and reported as follows:

'Mutual Support & Trust'   - $F_{(5, 97.81)} = 3.24, p < .001, \eta^2 = .12.$

'Observing One another Teaching'   - $F_{(5, 96.18)} = 2.37, p < .001, \eta^2 = .12.$

'Joint Planning and Assessment'   - $F_{(5, 100.75)} = 22.83, p < .001, \eta^2 = .12.$

Sharing Ideas & Expertise   - $F_{(5, 93.66)} = 4.46$, $p < .001$, $\eta^2 = .12$.

'Teaching Each Other'   - $F_{(5, 103.23)} = 46.69$, $p < .001$, $\eta^2 = .12$.

'Developing Curriculum Together'   - $F_{(5, 102.08)} = 40.49$, $p < .00$, $\eta^2 = .12$.

'Sharing Resources'   - $F_{(5, 97.38)} = 14.65$, $p < .001$, $\eta^2 = .12$.

As equal variances were not assumed, a Post Hoc Tamhane's T2 analysis, was performed ($p < .05$ level) and the results in the Multiple Comparisons Table 4.27 (see p. 449) indicated that there was a statistical significant difference between the pairwise Schools, according to each of the following constructs of teacher collegiality, as denoted:

- For the constructs, *'Mutual Support & Trust'* and *'Observing One Another Teaching'* there were no statistical significant differences found between any of the six pairwise Schools ($p > .05$).

- For the construct, *'Joint Planning and Assessment',* there was a statistical significant differences found between the following pairwise Schools:

  School I and School A, at ($MD = - 0.83^*$, $SE = 0.24$, 95% CI [- 1.56, - 0.11], $p = .013$).

  School G and School A, ($MD = - 1.21^*$, $SE = 0.14$, 95% CI [- 1.63, - 0.80], $p < .001$).

  School E and School A, ($MD = - 1.23^*$, $SE = 0.16$, 95% CI [- 1.75, - 0.71], $p < .001$).

  School A and School B, ($MD = 0.74^*$, $SE = 0.21$, 95% CI [0.11, 1.38], $p = .010$).

- For the construct, *'Sharing Ideas and Expertise'*, there were statistical significant differences found between the following pairwise Schools:

  School A and School G, at ($MD = 0.19^*$, $SE = 0.06$, 95% CI [0.02, 0.37], $p = .023$).

- For the construct, *'Teaching Each Other'*, there were statistical significant differences found between the following pairwise Schools:

  School A and School S, at (*MD* = 2.75*, *SE* = 0.41, 95% *CI* [1.48, 4.02], *p* < .001).

  School A and School I, at (*MD* = 2.68*, *SE* = 0.40, 95% *CI* [1.47, 3.90], *p* < .001).

  School A and School G, at (*MD* = 3.15*, *SE* = 0.28, 95% *CI* [2.31, 3.98], *p* < .001).

  School A and School E, at (*MD* = 3.67*, *SE* = 0.32, 95% *CI* [2.65, 4.69], *p* < .001).

  School A and School B, at (*MD* = 2.64*, *SE* = 0.35, 95% *CI* [1.60, 3.69], *p* < .001).

- For the construct, *'Developing Curriculum Together'*, there were statistical significant differences found between the following pairwise Schools:

  School A and School S, at (*MD* = 1.97*, *SE* = 0.36, 95% *CI* [0.85, 3.09], *p* < .001).

  School A and School I, at (*MD* = 1.82*, *SE* = 0.26, 95% *CI* [1.04, 2.61], *p* < .001).

  School A and School G, at (*MD* = 2.21*, *SE* = 0.21, 95% *CI* [1.58, 2.84], *p* < .001).

  School A and School E, at (*MD* = 2.20*, *SE* = 0.23, 95% *CI* [1.47, 2.93], *p* < .001).

  School A and School B, at (*MD* = 1.83*, *SE* = 0.26, 95% *CI* [1.04, 2.62], *p* < .001).

- For the construct, *'Sharing Resources'*, there were statistical significant differences found between the following pairwise Schools:

  School A and School S, at (*MD* = 1.29*, *SE* = 0.41, 95% *CI* [0.01, 2.58], *p* = .05).

  School A and School I, at (*MD* = 1.44*, *SE* = 0.36, 95% *CI* [0.33, 2.55], *p* = .003).

  School A and School G, at (*MD* = 1.70*, *SE* = 0.23, 95% *CI* [0.99, 2.40], *p* < .001).

  School A and School E, at (*MD* = 1.41*, *SE* = 0.38, 95% *CI* [0.19, 2.62], *p* = .014).

  School A and School B, at (*MD* = 1.06*, *SE* = 0.30, 95% *CI* [0.15, 1.97], *p* = .011).

The graph in Figure 4.10 shows the significant differences among the six high performing sample schools, against each construct of teacher collegiality.
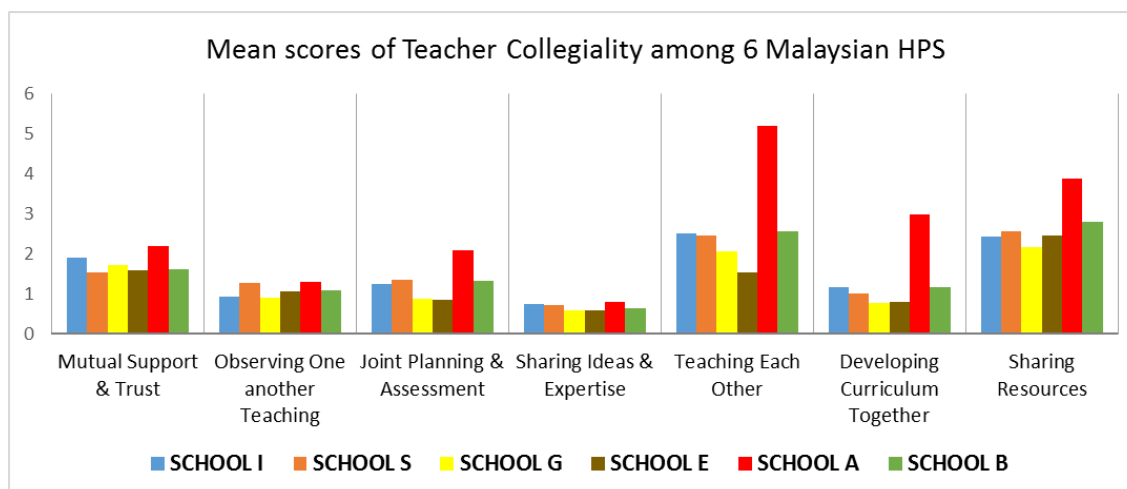
Figure 4.10: Mean Scores of Teacher Collegiality among the 6 Malaysian HPS

In summary, the results of this analysis indicated that among the six high performing sample schools,

School A scored the highest Mean score for each of the 7 constructs of Teacher Collegiality:

'Mutual Support & Trust'	=	$M = 2.18, SD = 0.68$.
'Observing One another Teaching'	=	$M = 1.30, SD = 0.45$.
'Joint Planning and Assessment'	=	$M = 2.08, SD = 0.58$.
'Sharing Ideas & Expertise'	=	$M = 0.79, SD = 0.14$.
'Teaching Each Other'	=	$M = 5.20, SD = 1.24$.
'Developing Curriculum Together'	=	$M = 2.99, SD = 0.84$.
'Sharing Resources'	=	$M = 3.86, SD = 0.90$.

In the present study, the component of 'teacher collegiality' in high performing Malaysian day schools, was not given too much emphasis. The Multiple Regression test results of Research Question Four also indicated that Principal Leadership Practices

accounted for 37% of Teacher Collegiality found among this group of sample schools (refer to Section 4.3.4 on pp. 147-150). One of the reasons could have been due to the dynamics of the high performing school culture found in these group of schools, where high stakes of accountability, and the demands of academic rigour at an accelerated pace, remains a high priority. As a result, these findings may suggest that the workforce relationship of establishing collegiality among teachers, in a high performing school environment, is given less importance.

The next sub-section looks at the teacher's demographic profile, out of interest to investigate if there were any significant differences between these teachers' demographics and their perceptions of their Principal's leadership practices.

4.3.7   Teachers Demographic Profile

This Section is not part of the five main research questions that guide this study. This Section is presented with an interest to further analyse the teacher demographic profile, with the purpose of identifying if there were any significant differences between principal leadership practices and each of the following teacher demographic variables: [a] Gender [b] Age [c] Academic Qualifications [d] Working years with present principal [e] Teaching Experience [f] Working years in present School [g] DG Job Grade. An analysis of these demographic variables provides useful background information about the teacher respondents and determines which among these variables tend to influence the teachers perception of their principal's leadership practices. As a result, a quantitative analysis was carried out, using T-tests and the One-way ANOVA, to further identify which among these teacher demographic profile, revealed statistically significant differences to their perceptions of their Principal's leadership practices.

The choice of each test depended mainly on the number of groups involved (eg. 2 groups – T-test; more than 2 groups – One-Way ANOVA) and the number of respondents within each group. The following sub-sections describe the relevant tests used to determine whether a significant difference exists between each of these seven teacher demographic profiles, regarding their perception of their principal leadership practices.

Gender

The T-test for Independent-samples was used to compare the Means of 'female' and 'male' teacher respondents and to investigate if there was a Mean difference between the genders. The purpose of conducting a t-test was also to determine whether or not the perceived principal leadership practices is more dominant in one of the gender groups of respondents.

The Levene's Test for Equality of Variances in Table 4.30 (p. 453) indicated that the assumption of homogeneity of variances had been met ($p = .31$), and the t-test for the Equality of Means showed that there were no statistically significant differences in the mean scores between the 254 females ($M = 1.62$, $SD = 1.41$) and 35 male ($M = 1.97$, $SD = 1.21$) teacher respondents. In conclusion, this T-test indicates that there was no statistically significant difference in gender, $t_{(287)} = -1.39$, $p = .17$. Refer to Tables 4.29 and 4.30 on p. 453).

Age

A one-way between groups analysis of variance (ANOVA) was used to compare the Mean scores of the Teachers ages, and to investigate if there were any mean differences

among the four age categories (< 30 years; 30 – 39 years; 40 – 49 years; 50 and above years), regarding their perceptions of their principal leadership practices (see Table 4.31 below).

Table 4.31: Age of Teacher Respondents

Descriptives			
Age	**N**	**Mean**	**Std. Deviation**
< 30 years	45	1.36	1.36
30 - 39 years	83	1.57	1.17
40 - 49 years	101	1.63	1.57
50 and above	59	2.13	1.30
Total	288	1.67	1.39

The Levene's test results in Table 4.32 (p. 454), revealed that there was a statistically significant difference among the age categories, at the $p < .05$ level and that the homogeneity of variances had been violated (see Table 4.32 on p. 454). As such, the 'Robust Test of Equality of Means' in Table 4.33 (p. 454) was referred to and the Welch F Statistic indicated that there was a statistically significant difference in the age categories at $p = .02$ (see Table 4.33 on p. 454).

As equal variances were not assumed, a Post Hoc Tamhane's T2 analysis, was performed (at $p < .05$ level) and the results in the Multiple Comparisons Table 4.34, (p. 454) further revealed that there was a statistical significant difference between the pairwise comparison of the age group 'less than 30 years' and 'more than 50 years'. The Partial Eta Squared value (Partial $\eta^2 = .03$) generated in Table 4.35, (p. 455) further revealed the sample effect size of the variances due to the difference in Means.

In summary, the results of the 1-Way ANOVA showed that there was a statistical significant difference in the Teachers age group of 'less than 30 years' and those with '50 years and above',

$F_{(3, 134.4)} = 3.45$, $MD = - 0.77*$, $SE = 0.26$, 95% CI [- 1.48, - 0.06], $p < .05$, $\eta2 = .03$.

All other pairwise comparisons of age groups were not significantly different ($p > .05$). Refer to the Multiple Comparisons Table 4.34 on p. 454).

Academic Qualifications

The Independent-samples t-test was conducted to compare the Means of Undergraduate and Postgraduate teacher respondents and to investigate if there was a Mean difference between these two groups. The purpose of conducting a t-test analysis was also to determine whether or not the perceived principal leadership practices were more dominant in either one of these two groups of respondents.

Before running the t-test, the five-category academic qualifications (Diploma, Bachelor, Master, PhD, Others) were divided into two broad categories: Undergraduate and Postgraduate, as the sample size for the Diploma, Master and PhD categories were less than thirty participants. The Levene's Test for Equality of Variances in Table 4.37 (p. 455) indicated that the assumption of homogeneity of variances had been met ($p = .11$), and the t-test for the Equality of Means showed that there were no statistically significant differences in the mean scores between the Undergraduate (*M = 1.64, SD = 1.36*) and Postgraduate (*M = 1.87, SD = 1.68*) teacher respondents. In conclusion, the T-test indicated that there was no statistically significant difference in teachers academic qualifications, $t_{(287)} = 0.85$, $p = .40$. Refer to Tables 4.36 and 4.37 on p. 455.

Teachers Working Years with Present Principal

The Independent-samples t-test was conducted to compare the two categories of teachers working years with their present Principal. The two groups were:

- Teachers with 'less than and equal to 5 working years with their present Principal.

- Teachers with 'more than 5 working years with their present Principal.

   Refer to Table 4.38 on p. 456.

The t-test was run in order to investigate if there were Mean differences between these two groups. The purpose of conducting a t-test analysis was also to determine whether the teachers' perceptions of their principal leadership practices is more dominant in either one of these groups of respondents.

The Levene's Test for Equality of Variances in Table 4.39 (p. 456) indicated that the assumption of homogeneity of variances had been met ($p = .47$), and the t-test for the Equality of Means showed that there were no statistically significant differences ($p = .08$) in the mean scores between the 111 teacher respondents who have 'less than and equal to ten working years with their present Principal', ($M = 1.54$, $SD = 1.32$) and the 107 teacher respondents with 'more than ten working years with their present Principal', ($M = 1.84$, $SD = 1.24$). In conclusion, the T-test indicated that there was no statistically significant difference in the Teachers 'working years with their present Principal', $t_{(216)} = 1.76$, $p = .08$. Refer to Tables 4.38 and 4.39 on p. 456.

Teaching Experience

A one-way between groups ANOVA was used to compare the Mean scores of the respondents' teaching experience and to investigate if there were any mean differences among the respondents' six categories of teaching experience: less than 1 year; 1-5 years; 6-10 years; 11-15 years; 16-20 years and more than 20 years (see Table 4.40 below).

Table 4.40: 1-Way ANOVA - Descriptives

Teaching Experience of Teacher Respondents

Teaching Experience	N	Mean	Std. Deviation
< 1 year	5	2.34	2.17
1 - 5 years	60	1.30	1.28
6 - 10 years	43	1.66	1.33
11 - 15 years	45	1.48	1.11
16 - 20 years	51	1.53	1.55
> 20 years	86	2.04	1.42
Total	290	1.66	1.39

The Levene's test results in Table 4.41 (p. 457), revealed that there was no statistically significant difference among the teaching experience categories, ($p > .05$) and that the homogeneity of variances had been met. As such, the 'ANOVA' Table 4.42 (p. 457), indicated that there was a statistically significant difference in the teaching experience categories at $p = .02$.

As equal variances were assumed, a Post Hoc Tukey HSD test, was performed and the results in the Multiple Comparisons Table 4.43 (p. 457) further revealed that there was a statistical significant difference between the pairwise comparison of the 'teaching experience' groups '1 to 5 years of teaching experience' and 'more than 20 years of teaching experience'. The Partial Eta Squared value (Partial $\eta^2 = 0.05$) generated in Table 4.44 further revealed the sample effect size of the variances due to the difference in Means. Refer to Table 4.44 – for the test of between subjects effect on p. 458).

In summary, the results of the 1-Way ANOVA showed that there was a statistical significant difference found between the 'teaching experience' group '1 to 5 years of teaching experience and 'more than 20 years of teaching experience,

$F_{(5, 284)} = 2.65$, $MD = -.74^*$, $SE = .23$, 95% CI [-1.40, -.08], $p = .02$, $\eta^2 = 0.05$

As for all the other pairwise comparisons of the 'teaching experience' groups, they were found to be not significantly different, as $p > .05$. The following is an extract from the Multiple Comparisons Table 4.43, found on p. 457:

- '< 1 year of teaching experience' and '1-5 years of teaching experience',

  $F_{(5, 284)} = 2.653, p = .581$.

- '< 1 year of teaching experience' and '6-10 years of teaching experience',

  $F_{(5, 284)} = 2.653, p = .902$.

- '< 1 year of teaching experience' and '11-15 years of teaching experience',

  $F_{(5, 284)} = 2.653, p = .767$.

- '< 1 year of teaching experience' and '16-20 years of teaching experience',

  $F_{(5, 284)} = 2.653, p = .807$.

- '< 1 year of teaching experience' and '> 20 years of teaching experience',

  $F_{(5, 284)} = 2.653, p = .997$.

- '1-5 years of teaching experience' and '6-10 years of teaching experience',

  $F_{(5, 284)} = 2.653, p = .773$.

- '1-5 years of teaching experience' and '11-15 years of teaching experience',

  $F_{(5, 284)} = 2.653, p = .986$.

- '1-5 years of teaching experience' and '16-20 years of teaching experience',

  $F_{(5, 284)} = 2.653, p = .951$.

- '6-10 years of teaching experience' and '11-15 years of teaching experience',

  $F_{(5, 284)} = 2.653, p = .989$.

- '6-10 years of teaching experience' and '16-20 years of teaching experience',

  $F_{(5, 284)} = 2.653, p = .997$.

- '6-10 years of teaching experience' and '> 20 years of teaching experience',

  $F_{(5, 284)} = 2.653, p = .677$.

- '11-15 years of teaching experience' and '16-20 years of teaching experience',

$F_{(5, 284)} = 2.653, p = 1.000.$ '

- 11-15 years of teaching experience' and '> 20 years of teaching experience',

  $F_{(5, 284)} = 2.653, p = .226.$

- '16-20 years of teaching experience' and '> 20 years of teaching experience',

  $F_{(5, 284)} = 2.653, p = .284.$

Teachers Working Years in Present School

The Independent-samples t-test was performed to investigate if there were Mean differences between these two groups:

- Teachers with 'less than and equal to 10 working years in their present School.

- Teachers with 'more than 10 working years with their present School.

  Refer to Table 4.45 on p. 458

The purpose of conducting this t-test analysis was also to determine whether the teachers' perceptions of their principal leadership practices was more dominant in either one of the 2 groups mentioned. The Levene's Test for Equality of Variances in Table 4.46 (p. 458) indicated that the assumption of homogeneity of variances had been met ($p = .81$), and that the t-test for Equality of Means showed that there was a statistically significant difference ($p = .03$) in the mean scores between the 97 teacher respondents who have 'more than ten working years in their present School, ($M = 1.91, SD = 1.39$) and the 193 teacher respondents with 'less than and equal to ten working years in their present School, ($M = 1.54, SD = 1.38$). With this significant finding, the Cohen's d effect size was calculated, as a further measure of practical significance, to determine the effect size of the two sample means, found to have a significant difference in the t-test ($p = .03$). The Cohen's d value ($d = 0.15$) in Table 4.47 (p. 459), implied that the difference in

Means was reported as a small significant effect, when compared against the effect size descriptors outlined in (Cohen, 1988), described on p. 121.

In summary, the results of the Independent Samples T-test indicated that there was a statistical significant difference between these groups, with teachers having 'less than and equal to 10 working years in the present school' ($N = 97$, $M = 1.91$, $SD = 1.39$), scoring higher than the teachers with 'more than 10 working years in the present school' ($N = 193$, $M = 1.54$, $SD = 1.38$). Refer to Tables 4.45, 4.46 and 4.47 on pp. 458-459.

$$t_{(288)} = 2.14, MD = 0.37, 95\% \ CI \ [0.03, 0.71], p = .03, d = 0.15.$$

DG Job Grade

A One-way ANOVA was initially run to test whether there were any significant differences among the nine categories of teachers' DG job grade (DG 29, DG 32, DG 34, DG 38, DG 41, DG 42, DG 44, DG 48, DG 52 and DG 54). The results indicated that DG 42 contained less than 2 participants, and as a result, the follow up Post Hoc test could not be generated. Subsequently, an informed decision was made to group these DG Job The Independent-samples t-test was conducted to investigate if there were Mean differences between the following two categories and to further determine whether the teachers' perceptions of their principal leadership practices were more dominant in either one of these groups:

- Teachers having DG Job Grades that are below DG 48.

- Teachers with DG 48 and above.

Refer to Table 4.48 on p. 459.

The Levene's Test for Equality of Variances in Table 4.49 (p. 459) indicated that the assumption of homogeneity of variances had been violated ($p = .02$). With equal variances not assumed, the t-test for Equality of Means showed that there was a statistically significant difference in the mean scores ($p = .03$) between the 198 teacher respondents having Job Grades below DG 48 ($M = 1.53$, $SD = 1.27$) and the 91 teacher respondents with 'DG 48 and above' ($M = 1.94$, $SD = 1.6$). The Cohen's d effect size was then calculated, to determine the effect size of the two sample means, found to have a significant difference in the t-test ($p = .03$). According to the effect size descriptors outlined in (Cohen, 1988), the Cohen's d value ($d = 0.18$) shown in Table 4.50 (p. 460), implied a small significant effect in the sample Mean difference.

The t-test results indicated that there was a statistically significant difference between these DG Grades, with the teachers having 'DG 48 and above' ($N = 91$, $M = 1.94$, $SD = 1.60$), scoring higher than teachers with Job Grades 'below DG 48' ($N = 198$, $M = 1.53$, $SD = 1.27$). Refer to Tables 4.47, 4.48 and 4.49, on p. 459.

$t_{(144)} = 2.19$, $MD = 0.42$, 95% CI [0.04, 0.79], $p = .03$, $d = 0.18$.

The following is the summary of results which shows that the T-tests and One-Way ANOVA tests revealed statistically significant differences between the following groups of teacher demographics:

- The Teachers age group of 'less than 30 years' and those with '50 years and above'

$F_{(3, 134.4)} = 3.45$, $MD = - 0.77^*$, $SE = 0.26$, 95% CI [- 1.48, - 0.06], $p < .05$, $\eta^2 = .03$.

- Teachers with Teaching Experience of '1 to 5 years' and 'more than 20 years'

$F_{(5, 284)} = 2.65, MD = -.74*, SE = .23, 95\% \text{ CI } [-1.40, -.08], p = .02, \eta 2 = 0.05.$

- Teachers with 'more than 10 working years in present school' and those with 'less than and equal to 10 working years in present school',

$MD = 0.37, 95\% \text{ CI } [0.03, 0.71], t_{(192.17)} = 2.14, p = .034, d = 0.15.$

- Teachers with 'DG Job Grade 48 and above' and those with 'below DG Job Grade 48',

$MD = 0.42, 95\% \text{ CI } [0.04, 0.79], t_{(144)} = 2.19, p = .03, d = 0.18.$

The subsequent sub-sections outline the qualitative data analysis that was conducted through the use of principal interviews, teacher focus groups and site observations.

4.4   Qualitative Data Analysis

After the quantitative analysis phase, this research inquiry proceeded with a qualitative phase of analysis. Among the six sample high performing schools, only four of these Schools (I, S, G, and A) agreed to participate in the Principal interview and Teacher Focus Group Discussion. The other two schools opted to only participate in the survey and their reasons for non-participation in the interviews, are highlighted in Appendix C5, on p. 390.

The interviews and focus group discussions were conducted in two languages, English and Malay, in order to suit the language preferences of the respondents. As for conversations captured in spoken Malay, these had been transcribed using English during the transcription process, in order to facilitate easier comprehension and to be able to

analyse the qualitative data for this study. Subsequently, all spoken dialogue was transcribed in English. Verbatim spoken material in English were directly extracted from the respective transcripts.

4.4.1 Recording and Transcription

During the initial preparation for qualitative analysis, audio recorded interviews and live focus group discussions, were transcribed into text, using a 'voice-to-text' software (*Listen N Write* software, version 1.12.0.11) which facilitated the transcription process. '*Listen N Write* 'is a media player bundled with a 'Text Editor' and 'Bookmarks Box', with useful playback controls, a volume slider and time marker, which was extremely useful for self-transcription. This enabled audio recordings to be re-listened to, any number of times, at a slower pace, in order to capture every detail of nuances, in context of the inflections, pauses and emphases heard in the recordings.

The verbal interchange and responses between the interviewers and the respondents were captured using a good quality digital voice recorder (Sony ICD-SX733), as suggested by (Creswell, 2012, p. 221; Dawson, 2013, p. 91). This audio recorder had exceptional sound quality and a retractable USB plug for transferring data onto a laptop. For added sound clarity, the use of headphones (Dr Dre's Beats Pro, known for its high sensitivity), was used to capture every nuance with utmost clarity.

Transcribing was a very time consuming procedure and it required good quality audio recording devices and suitable computer-aided software to facilitate the transcription process. During the analysis phase, all interviews and focus group discussions were transcribed in English, although most of the recordings comprised of a mixture of English

and Malay. Since Malay is the dominant spoken language in Malaysian schools, most of the interview responses were predominantly in Malay. Nevertheless, the qualitative data had to be translated to English and in doing so, there may have been nuances lost in the process of translation. This is one of the limitations faced during transcribing, as it is not an easy task to translate to another language and at the same time retain the actual meanings, because data is open to different interpretations. According to Bryman, (2012, pp. 13, 482), "qualitative researchers are frequently interested not just in what people say but also in the way that they say it". For these reasons, a field-notes journal was maintained throughout the data collection process, which enabled the Researcher to make notes regarding body language, facial expressions and any other details that may further add clarity to the qualitative data. Moreover, in this study, the presence of another researcher helped with member checks, and this increased the validity of data and reduced researcher bias.

4.4.1.1 Transcripts

Nine sets of single-spaced transcripts, were self-transcribed from the audio files of the principal interviews and teacher focus group discussions, into 'Word' documents. These transcripts were formatted according to the transcription format described in (www.tigerfish.com) and (Humble, 2012). Every page was divided into 4 columns: (i) Time Code (ii) Speaker Identification (iii) Verbatim Spoken Material (iv) Researcher's Reflections / Interpretations. The transcript template contained information about the name of the school, duration of the interview, date of interview, speakers' identification and the dates of which the transcribing process took place The cover page also listed the meanings and significance of 'special characters' and the commonly heard verbal jargon,

as shown in Table 4.52 (see Appendix D8, on p. 460). Detailed transcripts were then analysed by means of thematic content analysis, to find recurring patterns.

4.4.1.2 Coding

Coding is an important part of the qualitative analysis, which is concerned with reducing the large corpus of data gathered to make sense of the data with the research questions of the study (Huberman & Miles, 1994). It entails the "progressive process of defining and sorting scraps of collected data, such as observation notes, interview transcripts, memos, documents and notes from relevant literature (Glesne, 2006) as cited in (Baiza, 2011, p. 79). According to Bryman, (2012, p. 568), the data analysis stage is fundamentally about data reduction and so transcripts and observation field notes in the present study were repeatedly reviewed, and in doing so, themes and ideas of theoretical significance, emerged. Moreover Chua, (2012, pp. 83-84, 94), states that manual coding is possible for "single-spaced transcripts", which are "less than thirty pages". However, manual coding can become very tedious for larger volumes of qualitative data, and so the choice of qualitative software in Table 4.51 is suggested (see Appendix D8, on p. 460). In this study, *Atlas.ti* (version 7.5.2) was used to tabulate the occurrence of codes and categorise them to form broad themes (see 'List of Codes' in Appendix D10, on p. 463-464). Transcripts were then incorporated into *Atlas.ti* and a thematic analysis followed.

4.4.1.3 Thematic Structure

During the data analysis phase, the inductive approach was used to define broad themes and associated sub-themes. Qualitative data (obtained through the interviews and focus group discussions), were analysed in two stages. The first stage began with a

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vertical analysis, whereby each transcript was analysed separately. This was then followed by a horizontal analysis, in which a cross-case comparative analysis was carried out to identify commonalities and differences. Overall, the thematic analysis is an iterative process, where common recurring themes, regularities and contrasting patterns were constantly being identified (Flores & Day, 2006, p. 223). Following an iterative, analytic induction, emergent themes were re-explored and re-evaluated, then categorised into segments which formed part of a code scheme as described in (Crabtree & Miller, 1999). According to Anderson, (2004, p. 99), if repeated themes were counted, the frequency of its occurrences may be used as a measure for generalization.

4.4.2   Triangulation

This research study was based on a triangulated, mixed-methods typology, which included a triangulation model nested at the analysis level (Creswell & Clark, 2007). The quantitative approach took up an explanatory design, to clarify the primary intentions behind the overall study. Based on emphasis and purpose, the qualitative approach explored different but complimentary data. According to Merriam, (1998) the validity for qualitative research differs from that of empirical design and that the validity of qualitative research may be reinforced through triangulation.

To ensure the trustworthiness of the findings, as suggested by (Lincoln & Guba, 1986), different data sources and methods were triangulated in this study. Multiple sources of data sets from interviews, focus group discussions, observations, photographs and survey results were triangulated to enhance the findings and add to the external validity of this study, as described by (Merriam, 1995). Besides verifying the findings, triangulation was

also used to reduce the likelihood of misinterpretation, establish the credibility of this study and enable greater inferences from the results (Ismail & Ghani Abdullah, 2011).

4.5   Qualitative Research Design

There are four research questions guiding the qualitative inquiry of this study. These are as follows:

- How are principals in Malaysian high performing daily secondary schools prepared for their leadership role? [7]

- What are the teachers' views on the national accreditation programme (NPQEL) in line with being future principals in Malaysian high performing schools? [8]

- To what extent do principals encourage teacher collegiality?

- What are the predominant leadership practices used by principals in Malaysian high performing daily schools?

Common themes were identified in the order of appearance in the transcripts and the research questions were answered by using the set of principal interviews and teacher focus group data from the four participating schools. The research questions guiding this study called for a deeper understanding of the relationship between principal leadership practices and teacher collegiality. This study sought to identify the key leadership practices and its effect on teacher collegiality in Malaysian high performing daily schools. Throughout the qualitative data analysis phase, confidentiality was observed and

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[7] This Research Question is part of the SEAL & 7SLS research projects, which investigates Malaysian school leadership preparation and professional leadership development.

[8] This Research Question is part of the SEAL & 7SLS research projects, which investigates the effectiveness of the Malaysian national accreditation programme (NPQEL), which prepares aspiring principals for principalship.

respondents' identities were deliberately disguised through the use of pseudonyms. According to Creswell, (2012, pp. 219, 567) qualitative methods of analysis, in the form of interviews, focus group discussions, observations, document analysis and the like, can provide detailed and rich data, that can help us understand about the actual process of events and justify the inferences through the synthesis of research findings.

The sub-sections that follow, will address four research questions that guide the qualitative analysis part of this study. These research questions will be answered through a qualitative analysis of the interviews and focus group data gathered from four of the sample high performing schools (Schools I, S, G and A).

4.5.1 Research Question 6

Research Question 6 comprises of two sub-questions:

a) How are principals in Malaysian high performing schools prepared for their leadership role?

b) What are the teachers' views on the national accreditation programme (NPQEL) in line with being future principals in Malaysian high performing schools?

The following Section presents the qualitative analysis and results to the first sub-question:

Question 6(a): How are principals in Malaysian high performing schools prepared for their leadership role?

During the Principals' interview, each Principal was asked about the leadership preparation trainings they had undergone, prior to being appointed as a school principal.

4.5.1.1   School I – Principal Interview

These are the responses of Principal I, regarding her preparation for principalship. Principal I admitted that she did not undergo any pre-post trainings for principalship. However she did attend the leadership trainings, arranged by IAB especially for the newly appointed high performing principals.

"No ... I did not undergo any training at all"

"I never do NPQEL[1] ... Never – no"

"Daily running of the school ... you can't go for a course and learn"

"The government's policy then was -- to send us for the 2 weeks -- training for principals in IAB[2] ... so I have my training after that ... a few months after ... - after I become a principal"... it's called Kepimpinan (Leadership) la ... It's a ... leadership - uh – training ... But -- I don't find it so extraordinary ... Maybe ... my group -- we were too talkative -- we didn't give the lecturers much time to - go in-depth you see. Because everything was rushing - rushing - rushing – rushing ... it used to be 1 month ... Yeah they compact to 2 weeks ... I don't think it's that useful ... But because I have ... the background of doing the job for a long time ... So I ... pick it up faster ... So I don't find it something ... extraordinary"

"Most of the thing that ... I got ... I already know, you see... -- it's just that ... it's a refresher la -- I would say... but the - the ones I got after we got SBT [3] was... I think that ... that is helpful ... for us to ... uh -- to go forward ... so what I had ... was the - uh -- basic running of the school ... manpower, management and all ..."

(Principal I)

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[1] *NPQEL*: National Professional Qualification for Educational Leaders.
[2] *IAB*: Institute Aminuddin Baki. [3] SBT: High Performing School status.

Principal I's responses seemed to suggest that the leadership trainings that she underwent, were not as gainful in terms of new knowledge gained. As a result, Principal I's responses further suggested that she may not have thought of leadership trainings as a priority for enhancing her leadership skills. Principal I then elaborated on how her experience as a Senior Assistant was of benefit to her principal leadership at School I:

"I was a ... Senior Assistant for many years ... that helped a lot"
(Principal I)

4.5.1.2 School S – Principal Interview

These are the responses from the Principal S regarding her preparation for principalship. Principal S expressed her opinion about the importance of having the right knowledge and experience for a school leadership profession:

"To become a Principal, we have to have the knowledge in everything, which includes, Academic, Student Affairs Management, like the discipline part, the counselling part, and co-curriculum. As an SBT School, co-curriculum is another one of our KPI's to fulfil. I think I was lucky in the sense that, I went up not like what people say, "Up in a Parachute, down as a Principal".

"So my experience includes being a PK HEM[1], where I was also in charge of co-curriculum. Then after I pursued my Masters, I became a PK Kanan[2] for 2 years, then I rose to a Principal since year 2000 and have been a Principal for the past 14 years now".
(Principal S)

[1] *PK HEM*: Senior Assistant of Student Affairs; [2] *PK Kanan*: Senior Assistant;

Principal S also shared her experiences about the challenges she faced as a newly appointed Principal, without having undergone any formal leadership preparation trainings for principals. In most situations, Principal S informed that she put to practice, the knowledge that she acquired in theory and used various leadership styles, according to the situation:

"I had not undergone any training like NPQEL[1] to prepare me for this role. It was like groping around."

> *"In theory, I studied about the many leadership styles available which I regard as a contingency that could be applied in different situations"*
>
> **(Principal S)**

[1] NPQEL: National Professional Qualification for Educational Leaders.

4.5.1.3   School G – Principal Interview

The following are the responses of Principal G, about school leadership preparatory courses. During the time when Principal G was appointed as a principal, there were no specific leadership preparation trainings for school principals. She further assumed that the NPQH course available at that time, was offered for teachers who were aspiring to become principals in the future and so she never pursued this course, as her initial ambition was to be a school teacher.

> *"No, no … The time when we were appointed as Principals…"*
>
> *"It's just that, we... the earlier batches... we didn't have these opportunities. But when we were Principals, IAB[1] conducted a lot of Courses …Financial, Management…*
>
> *"NPQEL[2] …was supposed to prepare a person for becoming future leaders. There were some of my friends who took up. During my time it was in UM for 1 year, I think. It's NPQH [3]. But we have the idea, you go for that, you want to be a Principal."*
>
> *"At that time, we all Teachers -- uh, -- nobody wants to be the Principal. So I didn't want to take up that Course because I thought I just want to be a Teacher until I retire. But then, the Ministry of Education through the State Education appointed us without having any of this training. That was how Principals were appointed. No training, nothing"*
>
> **(Principal G)**

[1] *IAB*: Institute Aminuddin Baki [2] NPQEL: National Professional Qualification for Educational Leaders. [3] NPQH: National Professional Qualification for Headship.

Principal G's responses also included a brief account on numerous post-training IAB courses that she had to undergo, after being appointed as a principal at School G. Although these courses may have been useful, Principal G's responses seemed to suggest that these leadership development courses were too rushed and that having to attend these courses seemed to disrupt her daily work routine:

"I am given a School to run and at the same time you are taken out of the School for all these Courses. In a way it does help. These are knowledge which we need, but it is like 3 days, 5 days... Input, input, input, input... all the facts"

"Because there are so many things they want to tell you and it is tailored Courses...Financial, Office Management, Student Affairs - they are very specific, -- that kind of thing. -- How much can you remember? -- But I won't say it is bad la. But it's just that it disturbs the running of the School, the flow of the School, because you have to keep going out, -- you have to keep going out…"

(Principal G)

However, Principal G informed that her experience as a Senior Assistant, Head of Department and Principal of another secondary school, gave her the idea of what was expected of high performing principals:

"Mostly, we are Senior Assistants. We have assisted the Principal in some way or other so we sort of have an idea, what a Principal does."

"I was posted to this School, as a Principal… The appointment was based on maybe seniority …So at that time, I was a Senior Assistant, so I became the Principal."

"I was appointed as a Principal in 2004. That time the procedure was, you had to go through like some administrative post in the School. Seldom they pick you from an ordinary Teacher to become a Principal. So for myself, I was holding a lot of posts… So among the administrative posts, I was the Head of Department… then I became the Senior Assistant of Administration … and then I was posted as the HM (Headmistress) of a Secondary School,"

(Principal G)

4.5.1.4   School A – Principal Interview

The responses by Principal A were mostly in spoken Malay and so the responses were translated to English, to facilitate the qualitative analysis process. The following are excerpts from the interview where Principal A shared her experiences on how she became a principal and that her experience as a Senior Assistant in the areas of Student Affairs, Co-Curriculum and General Administration, contributed towards her leadership preparation as a principal:

"I first began as a Teacher. Then I became a Senior Assistant out of my option[1]"

"Subsequently I became a PK HEM [2]. At that time there was no PK Ko[3]. This means that the work of a PK HEM [2] included the PK Ko[3]."

"After being a PK HEM [2], I became a PK Kanan[4]"

(Principal A)

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[1] *Option*: specialisation. [2] *PK HEM*: Senior Assistant of Student Affairs. [3]*PK Ko*: Senior Assistant of Co-curriculum. [4] PK Kanan: Senior Assistant.

Principal A also added that what she learnt from her previous principal had prepared her for her role in school leadership.

"How do I know this? It's because I learnt from all my ex principals… I feel that my previous principal was a role model"

(Principal A)

These are the responses from Principal A to the query on pre-service Principalship courses. Admittedly, Principal A informed that she had not undergone any specific preparatory course for principal leadership:

"So if you ask me whether I have attended any Course … No"… those days, if you ask me, there were no Courses whatsoever."

> *"I became a Principal 14 years ago, -- in the beginning of 2001. So when I joined in the beginning as a Principal, there were no trainings"*
>
> *"But I can learn, although I hadn't undergone any trainings"*
> **(Principal A)**

However, Principal A elaborated on the local IAB courses that she had attended, as well as the international leadership learning exposure, she gained during the 2-month overseas government postings to Australia and London:

> *"After I first became a Principal there were so many Courses I attended."*
>
> *"Oh many, many… All the Courses depended on IAB[1]… I will be called up by IAB[1] and I'm invite to attend various types of Courses like Finance…Management, Administration and whatever."*
>
> *"Previously … before the implementation of SBT[2], principals were sent to foreign countries for 2 months to get international learning exposure. That was really good…It's probably not the same as in Malaysia… I went to Monash and King's College. Then later when I had another opportunity to go to London, I made some school visits… I went on my own. I went to Birmingham… Scotland to see how they handle their students… Like in Australia, I went to various schools where the students were a selected lot. So I could make comparisons. I felt that I prefer the way schools are run in Australia."*
> **(Principal A)**

[1] *IAB*: Institute Aminuddin Baki; [2] *SBT*: Malaysian high performing schools.

The following Section presents the qualitative analysis and results to the second sub-question.

4.5.2   Research Question 6(b)

Question 6b: What are the teachers' views on the national accreditation programme (NPQEL) in line with being future principals in Malaysian high performing schools?

In lieu of the principals responses regarding the absence of leadership preparatory training courses available at the time when they were appointed as principals, an inquiry was conducted with each of the focus group teacher respondents, to find out about their views on the recently mandated national accreditation programme, (NPQEL), required for the appointment of future public school leaders in Malaysia. The inquiry also covered questions on whether any of these teacher respondents had an aspiration or ambition to become a principal in the future.

The following are excerpts extracted from the focus group discussion, which presents their views and perceptions of the current NPQEL course for Malaysian school leaders.

4.5.2.1 Focus Group Responses regarding NPQEL

The focus group respondents of from School I and S, voiced their views about NPQEL. Respondent I5 appeared to discredit the NPQEL, with reasons that were not directed at the course itself, but was due to the workload that got piled up in school, after 2 to 3 weeks of having to undergo this training. Respondent I5 further added that this would ultimately affect the students, particularly the exam classes.

> *"I think that is a very terrible Course, you know – 6 months …– it was a terrible Course"*
>
> *"It's a horrible Course … you know why? … I'll tell you why … because I was offered it so I went through the whole thing. 2, 3 weeks you spend there, you stay there and you attend lectures, whatever and everything, then you come back here with loads of assignments and plus you got to catch up with your work. Who's going to do that for you? Nobody is going to … everyone has their own load you know. When you come back – and I'm PK HEM[1] and that time I was teaching Physics Form 5, who's going to cover for me? It's not fair to the students"*
>
> **(Respondent I5)**

[1]*PK HEM*: Senior Assistant of Student Affairs.

The response by Respondent I5 appeared to suggest that there were no prior arrangements made by the school, to have a replacement teacher cover the classes, where their appointed teacher was required to attend training.

Respondent S2 stated that she did undergo the NPQEL in 2013 and as a result, she seemed to be aware of the complexities involved in principalship:

"I did NPQEL[1] in 2013. That's why I said that I am aware of the Principals responsibilities, based on having undergone NPQEL[1]. The Principal's duties is not easy. The main responsibility involves monitoring and there's a lack of monitoring, I feel which is the weakness".

(Respondent S2)

[1]*NPQEL*: National Professional Qualification for Educational Leaders.

The teacher participants were then asked about being a Principal in the future. They declared their disinterest in becoming a principal, due to the heavy demands placed on principals:

"I think if you really want to be a HM[1] or Principal, you can go ahead. But as for me, I was really not interested"

(Respondent I5)

[1]*HM*: Headmaster or Headmistress of Malaysian public primary schools.

"No not us. I think if we were interested we would have gone long ago … long ago … all of us are so senior. We would have gone long before."

(Respondent I1)

"At this stage, I am still not prepared to be a Principal"

(Respondent S1)

> *"Definitely no. [Laughs]"… we made up our decision long time ago…Here, the Principal has to take care of everything A to Z…. The School is part of us. But ultimately, the person who is responsible is the Principal. And she has to take care of finance. She has to take care of academic performance, coco[1], she's to go out for meetings... So it's to me - it's very difficult for 1 person to handle so much heavy responsibilities"*
>
> **(Respondent I1)**

[1] Coco: Co-Curriculum

> *"No … none"*
> *"No … no! … How they have worked here, I think nobody will want"*
>
> **(All 'G' Respondents)**

Respondent I4 expressed her concern about taking on such heavy responsibilities, given the demands made by the Ministry and the parents:

> <u>[In Malay language]</u>
> *"Susah sebab susah dari segi … okay nak layan ibubapa, nak layan PPD kan? Dan kalau you tengok eh, pendidikan ini, transformasinya sangat cepat – sangat deras, sangat cepat. Takut takut masa tu saya tak terkejar. [Laughs] Ah, jadi cabarannya sangat hebatlah".*
>
> <u>[Translated to English]</u>
> *"It's too burdensome and challenging…. And I'm afraid that I won't be able to keep pace with the increasing transformations that are taking place in our education system, and also have time for parents and to attend to the directives sent out by the District Education Office."*
>
> **(Respondent I4)**

Respondent S4 and S2 felt half-hearted about accepting the role as principal because of the understanding that this profession is laden with heavy responsibilities. Moreover, Respondent S2 further indicated that principals generally require the support and commitment of their Senior Assistants to help them with their leadership. As such, Respondent S2 was indecisive about wanting to be a principal in the future:

"For me, if I had a choice it will be 60-40…60 – no… and 40, if forced to"
(Respondent S4)

"50-50. If in the event, I am put in that position I will accept it. Why I say 50-50 is because when I look at the amount of work that a Principal is tasked with, and the sacrifices that is made, I wonder whether I will be able to handle this job to my best ability. Because I feel that the workload is very heavy. And whether I will be able to have hard-working and committed Senior Assistants. That's why I feel unsure, that's why it can't even be 55%...it has to be 50-50"
(Respondent S2)

Some teacher respondents expressed their preference for the teaching profession in comparison to being a principal as it appeared to be due to their passion for teaching:

"No … no – among us, No! No thank you!… we are very happy with what we are"
(Respondent I2)

"Also definitely no. I'm quite happy with what I am now."
(Respondent I3)

"Definitely Teacher, not a Principal"
(Respondent I4)

"The joy is just teaching."
(Respondent G4)

"Yes … we love to teach …"
(All 'G' Respondents)

4.5.2.2 Quantitative Findings on NPQEL and Principalship

There was no qualitative evidence obtained from the focus group of School A regarding their opinion on the national accreditation programme, NPQEL and their interest in becoming a Principal in the future. As a result, the quantitative data analysis was used to provide some amount of evidence about the number of teacher respondents who undertook NPQEL and the number of these respondents who were interested in becoming a principal in the future.

Out of a total of 290 teacher respondents who were surveyed in this study, only 4 teachers declared to have undergone NPQEL while the remaining 272 had not undergone NPQEL. As for their interest in becoming a principal in the future, only 43 teachers indicated their interest in becoming future principals, compared to 245 teachers who indicated that they were not interested to become a principal in the future. These findings imply that the majority of teachers were certainly not interested in taking up the challenge of being a principal in the future. Their reasons may be justified by the focus group responses of Schools I, S and G, although it cannot be ascertained in School A, because during the focus group discussion at School A, the teacher respondents were not directly queried about NPQEL nor were they asked about a possible career in principalship.

4.5.2.3 Triangulation with Principals Interviews

The Principals from Schools I, S, G, and A informed that they had not undertaken *NPQEL* and that they underwent an intensive 2-week leadership training programme, only after being appointed as a principal. Moreover, when they were selected as Principals in the early 2000, *NPQEL* was not yet offered, nor were there any training programmes available for Principals then. The following are the Principals responses about whether they had pursued the NPQEL course:

"No ... I did not undergo any training at all…I never do NPQEL[1] ... Never – no…The government's policy then was -- to send us for the 2 weeks -- training for principals in IAB[2] ... so I have my training after that ... a few months after ... - after I become a principal" **(Principal I)**

---
[1] *NPQEL:* National Professional Qualification for Educational Leaders.
[2] *IAB*: Institute Aminuddin Baki.

"I had not undergone any training like NPQEL[1] to prepare me for this role. It was like groping around"

(Principal S)

---
[1] *NPQEL:* National Professional Qualification for Educational Leaders.

"The time when we were appointed as Principals…the earlier batches... We didn't have these opportunities. But when we were Principals, IAB[1] conducted a lot of Courses …Financial, Management…In a way it does help. These are knowledge which we need, but it is like 3 days, 5 days... Input, input, input, input… all the facts"…

"Because there are so many things they want to tell you and it is tailored Courses...Financial, Office Management, Student Affairs - they are very specific, -- that kind of thing. -- How much can you remember? -- But I won't say it is bad"
(Principal G)

---
[1] *IAB*: Institute Aminuddin Baki.

> *"So if you ask me whether I have attended any Course … No"… those days, if you ask me, there were no Courses whatsoever."*
> *"I became a Principal 14 years ago, -- in the beginning of 2001. So when I joined in the beginning as a Principal, there were no trainings"*
>
> *"After I first became a Principal there were so many Courses I attended."*
>
> *"Oh many, many… All the Courses depended on IAB[1]… I will be called up by IAB[1] and I'm invite to attend various types of Courses like Finance…Management, Administration and whatever"*
>
> **(Principal A)**

[1]*IAB*: Institute Aminuddin Baki.

These principals' responses seemed to indicate the absence of pre-leadership trainings available at the time when they were appointed as principals. This showed the lack of importance given to the investment of training and development programmes for school leadership in Malaysia. Anthony et al. (2015) pointed out that training and development is an expensive investment, of which some education systems may either consider it an unnecessary investment or that they were unclear about how such trainings could contribute towards the betterment of school leadership. Moreover, the emerging findings from this study could further imply that pre-service trainings were not made a criterion during the time when these sample HPS Principals were appointed as school leaders of these schools. However, Anthony et al. (2015) claimed that there have been recent developments in the importance given to training and development in Malaysia, as evidenced by the 10th Malaysian Plan, which has outlined the Government's allocation for training and development over the years 2011 to 2015. The same priority has been reflected in Malaysian school leadership, whereby as of 2014, NPQEL has been made the new mandatory qualification for school leaders in Malaysia (IAB, 2014). This was further reconfirmed by Principal S:

> *" To me the Training really plays an important role."*
>
> *"From this year* [2014] *NPQEL[1] has been made compulsory, meaning that, 1 of the criteria to be Principal is that they have to have NPQEL[1] when they apply. Otherwise, they won't be accepted"*
>
> **(Principal S)**

[1] *NPQEL:* National Professional Qualification for Educational Leaders.

The following sub-section will address and present the findings of Research Question 7 that was obtained through the qualitative analysis of the data.

4.5.3   Research Question 7

Question 7:   To what extent do principals encourage teacher collegiality?

During the principal interviews, the four Principals were queried about their relationship with their teachers, in an attempt to further examine how these principals' (as school leaders) contributed towards teacher collegiality in their respective schools. Observation field notes and photographs were also captured at each of these school sites, for the purposes of triangulating data sets to show further evidence of teacher collegiality in these high performing schools.

4.5.3.1   School I

(a) *School I – Principal Interview*

During the interview, it was perceived that Principal I appeared to have a close affinity with her teachers, particularly with the senior teachers, who have been teaching in School I for more than five years. Principal I asserted that respect was an important element determined her relationship with her teachers. She further claimed that having the knowledge and experience in school administration, gained more respect from the

teachers. Principal I also revealed that teachers generally showed more respect for their more experienced mentor teachers, knowing that they are more knowledgeable, experienced and credible in mentoring the junior teachers. This concurred with the findings of Roy (2007, p. 3), which asserted that "trust is built on the foundation of respect".

> *"We can guide our teachers ... or we can tell them - oh -- it should be done this way... Like timetable you ... must know how to do the timetable -- how to ... allocate teacher placement and so forth…"*
> *"I mean -- teachers will --know that it's a fairer timetable -- even if they complain they know that I know where to look for".*
>
> *"It's much easier for us -- you know what you are talking ... automatically the respect is there ... so -- that counts a lot ... if you are freshie".*
>
> *"Maybe because also ... they* [the teachers] *find that I know* [laughs] *- the things you know… How the things was run ... so ... when you are able to command their respect ... they* [the teachers] *will listen to you"*
> **(Principal I)**

At the same time, having been a teacher for a good number of years, Principal I was seen to show that she had the capacity to empathise and recognise her staff's feelings and concerns. According to Horsey (2010) collegial relations are characterised by empathy, understanding, support, and positive relationships. The emergent findings obtained through the principal interview, showed that Principal I had established effective relationships with her teachers, and was recognised as a leader with people acumen, seen to get teachers working collegially as a team even during school holidays:

> *"We've gone through ... teaching ... as a normal teacher, we understand their feelings."*
>
> *"On Saturdays... the teachers have to go and take care of their various - societies… I cannot ... you know -- get them [Teachers] out to have meeting also…You know -- we have to use our school holidays ... quite pitiful you know - uh – actually – I mean, since we've become SBT[1]".* **(Principal I)**

[1]*SBT:* Malaysian high performing schools.

Principal I informed that she uses *WhatsApp* mobile technology for communications with her Teachers. This could imply that Principal I made use of mobile communication channels to maintain open communications, which allow for both informal chats and for serious online discussions with her Teachers. In a sense, this could be a way of promoting teacher collegiality among her teachers. Having open communications with teachers, was described in Cheever and Earsing (2002) as the collegial time needed to enhance professionalism and collegial bonds. The findings of this study thus implied that Principal I maintained open communications with her teachers through the use of *WhatsApp* mobile technology. This was, seen as a social communication medium, favoured by the present generation, which enabled collegial relationships to develop among teachers at real time:

> *"Of course -- we do - we use WhatsApp very often… because WhatsApp is much faster"*
>
> **(Principal I)**

(b) *School I –Triangulation of 2 Data Sets*

This section triangulates the findings of three data sets to show the extent of teacher collegially in School I. Observations at the individual school sites and the quantitative results of Research Question 3 reinforced the findings of Research Question 7. Based on literature review, Shah (2012b, p. 1242) asserted that "strong and healthy collegial relationships among school teachers were regarded as an essential component of school effectiveness". It was also found that high levels of teacher collegiality were often associated with school improvement and success.

(i) Observation Report - School I

For this study, there was a strong sense of emotional connection observed among the teachers at School I. A teacher culture built on trust and collegiality seemed to permeate

across School I. According to Bryk and Schneider (2003, p. 45) trust is the "connective tissue that binds individuals together". This means that principals need to encourage and build teacher collegiality since strong collegial relationships can create a culture of trust, respect, openness, and commitment (Armstrong, 2012). In this study, the qualitative findings reported through observations conducted at the school sites, indicate that bonds of trust and genuine care have been a tradition in practice at School I, particularly with the more experienced, senior teachers, who had been teaching in School I for more than five years. This therefore implies that there exists a cohesive community of teachers in School I.

(ii) Questionnaire Survey Results – School I

The questionnaire results indicated that 56% of the total teacher population at School I, (52 teachers) were made up of senior teachers, who have more than five teaching years at School I (see Table 4.53 and Figure 4.14 on p. 465). Principal I is also one of the senior teachers, and an alumni of School I. It was found that these senior group of teachers were primarily the ones who formed positive relationships with the junior teachers, through collegial approaches such as, 'teaching each other', 'developing curriculum together' 'sharing ideas and expertise' and 'joint planning and assessment'. for the triangulation of photographs and the survey results of School I. According to Troller (2011), teachers of successful schools are often seen routinely sharing what they've learned with each other. When teachers work well with each other, it promotes collegiality among teachers and this model resonates well with the students.

4.5.3.2   School S

(a) *School S – Principal Interview*

When Principal S was queried about her relationship with her teachers, her immediate response indicated that she had a fairly good working relationship with her teachers and

that her leadership with her teachers was collegial, empowering and enabling. Principal S was seen to promote collegiality among teachers, by encouraging them to be cordial and supportive of each other, so as to create a conducive school climate and a good working relationship among colleagues:

"So far I feel that in my 4 years here, there are no major problems."

"I tell my Teachers to be nice to each other, to help and assist wherever possible so that when your turn comes for help, your colleagues will oblige your requests… this also means that it helps to be nice to everybody"

(Principal S)

Interestingly, Ferguson (2006, p. 61) pointed out that a participative environment is not just about "*being nice to each other"* and that disagreements are vital to generate outstanding ideas, provided that they do not escalate into personal attacks. Principal S acknowledged the good work shown by her teachers as they engaged in inter-professional teamwork activities, through joint curriculum planning and assessment as well as sharing of ideas and expertise. By recognising teachers' individualities and providing personalised recognition of good performance, Principal S further strengthened the capacity of her teachers, uplifted their spirits and promoted teacher collegiality in School S:

"Last year, I received a group of young enthusiastic Teachers who are really good. They will do whatever you say, really dedicated. I remember to tell these Teachers how good they are and I tell them to keep up with their work and that they have a very good future ahead of them if they go on this mode"

(Principal S)

At the same time, Principal S doesn't fail to recognise the efforts of other members of staff whom she equally has high regard for. According to Frankel (2007), showing appreciation need not be time-consuming or an everyday occurrence, but it can assure a repeated occurrence of that behaviour.

> *"We are about to loose the good and dedicated older Teachers because they are about to retire"*
>
> **(Principal S)**

These senior teachers made up 61% out of the 41 teacher respondents who participated in this survey (see Table 4.54 and Figure 4.15 on p. 466). As for newly transferred teachers (that made up 5% of the sample), they were also well received by Principal S, despite the time taken for these teachers to orientate to their new school culture

> *"We also take in Teachers who want to transfer in from other Schools … We try to change these Teachers to make them adapt with the present School Culture"*
>
> **(Principal S)**

In the study Johnson & Kardos, (2002), research conducted on rich teacher collaboration across teacher experience levels, found that the ongoing support received from principals and experienced teacher colleagues, was crucial for new teachers to flourish in an integrated professional culture that encourages teacher collegiality, teamwork and camaraderie in their work settings. Such was the case shared by Principal S during the interview, whereby she takes the effort to ensure that structures were in place to enable new teachers to integrate into professional teaching cultures.

Another concern raised by Principal S was the physical distance between the location of her room and the teachers' staff room, which is located in an adjacent block, a short distance away. Although it was not mentioned directly during the interview, her verbal response, *"the logistics is important"* may be interpreted as, sitting in isolation away from the staff room could have an adverse effect on her collegial relationship with her teachers. Further probing's revealed that the shift in these localities, was a decision made and agreed by the Parent-Teacher Association (PIBG) of School S. Therefore, this could also suggest that, since the PIBG had opted for this arrangement, it may be a case where the

principal does not have the final say in such decisions and that decisions are collectively deliberated and agreed upon:

> *"One thing is that my Office and the Teachers Staff Room is a distance away. The logistics of moving in and out is not there. The logistics is important. Formally the location of the Office and Teachers Staff Room was closer. However this Block was set up by the PIBG and they decided to shift the Administration Office here. So now it's a bit far to the Teachers Staff Room"*
>
> **(Principal S)**

In this situation, Principal S may be keen to establish closer ties with her teachers, but the distance between her room and the teacher's staff room may be of a hindrance. Although there may have been collegial interactions between Principal S and her teachers, being physically isolated as pointed out in Johnson & Kardos, (2002), can result in teachers not having easy access and intermittent sessions with their principal, to draw on the expertise and professional guidance needed to hone in their teaching skills.

In the meantime, a temporary solution to this problem is the *WhatsApp* communication channel that Principal S uses to communicate with her teachers. In addition, Principal S has shown to be IT-savvy and her technical competence is an added advantage, particularly when it comes to making school decisions regarding IT-related matters. As such Principal S is seen to keep abreast with the usage of current mobile technology and other modes of online communications like *Telegram*, which can establish closer ties with her teachers:

> *"But now we communicate through WhatsApp. We have two WhatsApp groups, one for social chats and another for management discussions. However, since WhatsApp allows for a maximum of 50 group members there is also "Telegram" that allows a larger capacity. So this is how we communicate these days using these technological applications." **(Principal S)***

(b) *School S – Observation Report*

Excerpts from the interview with Principal S was triangulated with supporting evidence from observation field notes and photographs taken at School S. Principal S was observed as one who encouraged her teachers to maintain a collegial relationship with each other and to take ownership of the successful outcomes of School S.

At the various school events, that the Researcher was present at, it was observed that the teachers shared an amicable and cordial relationship with each other, with Principal S in their midst. These observations seem to suggest that the teachers have a collegial relationship among themselves, which seemed to induce a pleasant and conducive working environment at School S.

During the interview, Principal S talked about the in-service trainings held for teachers, in line with the teacher training requirement specified by the Ministry of Education, in supporting teachers training needs. The following are excerpts from the interview with Principal S, triangulated with the observation field notes documented by the Researcher on various occasions at the school site.

- **In-service training at School S**

At the training session, there was an amicable, friendly atmosphere seen with the teachers, and as the meeting progressed, some teachers were seen to exchange humour and incite laughter among the rest of the other teachers. The use of humour is viewed by Alvy & Robbins, (2010) as a formidable leadership characteristic, when used at appropriate times, can defuse tensions, infuse creativity and steer teams towards collegial relationships. The Researcher found that the observations witnessed during the in-house

training session, did tally with what was related by Principal S, and this served as further evidence of triangulation:

Triangulation: In-house Training for Teachers at School S

INTERVIEW – PRINCIPAL S	OBSERVATION FIELD NOTES – SCHOOL S
"Because all Government Officials have to go through 7 days of training per year for LDP[1]. So my School arranges 5 Internal Trainings for everybody. And 2 more trainings that comprise of 12 hours, I leave it to the Subject Committee's."	An in-house training session for teachers was held after school hours, and all teachers including Principal S showed up for this session. The trainer was an experienced dietician who skilfully engaged the teachers' attention throughout the 2-hour session. Before the start of the training, teachers were seen mingling cordially among themselves and appeared unperturbed by the presence of the Researcher in their midst. Nor did they show any reservation towards Principal S, who was also present for this training. During the course of the training, some teachers amused the rest with candid light humour, and this kept their attention going throughout the session.

[1] LDP: *[Latihan Dalam Perkhidmatan]* In-service Trainings

- **Curriculum Review Meeting at School S**

At a Curriculum Review Meeting, Principal S was witnessed engaging with the teachers sharing insights about curriculum matters in a cordial fashion. Principal S was seen to promote ownership among her teachers, by providing them the opportunity to participate in joint planning and assessment. During their Curriculum Review Meeting, Principal S used collegial approaches to build consensus among the teachers while they were seen engaged in developing curriculum together and sharing ideas and expertise, thereby manifesting in teacher collegiality, a term described in Price, (2011) as a social phenomenon manifested through inter-personal relationships among teaching colleagues.

Triangulation: Curriculum Review Meeting at School S:

INTERVIEW – PRINCIPAL S	OBSERVATION FIELD NOTES – SCHOOL S
"At a minimum of once a month, we have Management Meetings where I get updates from the Academic, Student Affairs and Co-curricular divisions. Sometimes the Counsellor also joins in these Meetings. At times when I wish to check on the status of the library, I will invite the Teacher-in-charge to provide me information regarding the number of books being borrowed, book requests and the library users."	A Curriculum Review Meeting took place immediately after the in-house training session. The teachers were obviously tired out after the long hours spent in school but some teachers were seen taking the lead and running the meeting as planned, in the presence of Principal S. As the meeting progressed, the teachers gave their attention to their teacher colleagues who presented, and applauded intermittently, showing their approval and support for their teacher colleagues.

- **School Assembly at School S**

The School Assembly was another school activity where Principal S was witnessed empowering her teachers, by enabling them to act and encouraging them to be more involved in the weekly School Assembly. The following are excerpts from the interview with Principal S, triangulated with photographs and field notes, captured by the Researcher at the school site. The emergent findings gathered through these data sources, showed evidence that Principal S had created a positive school environment, opportunities for teacher participation and collegial trust among her staff at School S. Refer to Figure 4.11 on the following page.

Triangulation between Principal S Interview, Observation Field Notes and Photographs:

INTERVIEW – PRINCIPAL S	OBSERVATION FIELD NOTES – SCHOOL S	PHOTOGRAPHS – SCHOOL ASSEMBLY
"School Assembly is a weekly affair for 40 minutes where I first listen to what my Teachers present… I don't actually have an agenda prepared for the Assembly, but by listening to my Teachers… it gives me an idea of what to add on and share with them openly."	At the weekly school assembly attended by the Researcher, the teachers who presented at the School Assembly Hall, were seen to be very focused in their delivery, while engaging the attention of the students, in the presence of their principal. Principal S was seen paying close attention to each presentation and was later invited by her students to officiate their student project. Principal S then proceeded to address both Teachers as well as her Students, with her closing remarks directed at the students, as she further asserted some of the matters raised earlier by her Teachers pertaining to student conduct.	

Figure 4.11: School S – School Assembly

- **Classroom Observations at School S**

During the interview, Principal S suggested that the Researcher should observe some of her teachers' classes. This was an indication that Principal S was being open and transparent in her leadership, and would very likely have a good working relationship with her teachers and that they would not mind being observed by a third party, as long as Principal S had given her prior consent to classroom observation. This also suggested that Principal S was well aware of her teachers' competence and was very confident in their capabilities.

A triangulation of 3 data sets revealed that the teachers under classroom observation, were found to be competent in their teaching delivery. A brief conversation that the Researcher had with the students of both classes, confirmed that these teacher appeared to have shared a personal connection with their students. Moreover, these classes were sparked by the enthusiasm of the teachers, who made it conducive for a friendly exchange of question and answer dialogue with their students, who seemed to be receptive and had responded fairly well. The teachers appeared to have a profound positive impact on the school climate and this helped create a collegial atmosphere in School S. Refer to Figure 4.12 on p. 202.

Triangulation: Classroom Observations at School S

INTERVIEW – PRINCIPAL S	OBSERVATION FIELD NOTES – SCHOOL S
"I think it's best if you observe the classes of the Teachers you met during the Focus Group discussion …Like Puan S. [pseudonym] *is my Senior Assistant who is very experienced. Another young Teacher, Cik N.* [pseudonym] *is also very interesting, but she may be surprised if you show up suddenly. Even my Uztazah N.* [pseudonym]*, she teaches Islamic Studies using*	The Researcher conducted 2 classroom observations, after being invited to observe the classroom teaching of Science and Islamic Studies, immediately after the School Assembly was over. This was an ad hoc invitation by Principal S. However, the two teachers carried out their lessons as planned and agreed to allow the Researcher to have a short dialogue with the students. This was when the Researcher learnt that the students had a close affinity for their teachers and that they frequently confided in their teachers on a personal as well as on school-related matters. This was an indication that the teachers of School S are approachable and caring enough for the teenaged

INTERVIEW – PRINCIPAL S	OBSERVATION FIELD NOTES – SCHOOL S
computer because she is computer savvy. If you want to observe her ... There's no problem for you to enter the School Surau[1]."	young students to open up to. At the same time, the students shared their sentiments about how they enjoy coming to school, as they find School S to have a conducive learning environment for all students.

[1] *Surau:* Prayer Room for Muslims.

PHOTOGRAPHS – CLASSROOM OBSERVATIONS

Science Class in progress

Class Teacher engaged collegially with Students

Preparing Students for PT3 exam

Form 1 Students listening attentively to Teacher

Class Teacher engaged collegially with Students

Islamic Studies Class in progress

Figure 4.12: School S – Classroom Observation

- **Fund-raising Event at School S**

Whenever School S organised any carnivals or fund-raising events, their students often showcased their singing and dance performances. As the leader of School S, it was observed that Principal S fostered group cohesion and team effort by engaging all stakeholders in school events, especially for events involving fund-raising for repair work and general maintenance of the school. During the interview, Principal S promoted School S for its many talented students, and confidently claimed that her teachers are committed to their jobs and that they are even willing to come back on weekends to be involved in school activities. The true dedication and efforts displayed by the teachers could suggest that teacher collegiality is infused into the teacher culture of School S. These observations were also captured through the pictures taken during this event (see Figure 4.13 on p. 204).

Triangulation: Fund-raising Carnival at School S

INTERVIEW BY PRINCIPAL S	OBSERVATION FIELD NOTES AT SCHOOL S
"And even when we have some co-curricular activities during School Holidays over 3 days in UM, the Teachers seem okay with it as they seem to value these sessions. So far these are no issues and if the Teachers have something on, they can always come and see me with their request. They know that everybody has to involve themselves in these School activities and if they excuse themselves anytime, they will still need to participate in subsequent activities."	At a fund-raising school event ('*Entrepreneurship by School S Family*'), held at the school premises, all stakeholders were actively involved in this school event. Students and their parents set up booths selling knickknacks to help raise funds for School S. This event was open to public and was graced by the board members and influential government officials who sponsored RM20,000 towards the building fund and maintenance of School S. Principal S and her teachers showed up in full force, clad in their school national attire and were seen engaging cordially in the activities supported by the students and parents at School S.

(c) *School S – Photographs*

Figure 4.13: School S –Fund-Raising Carnival

4.5.3.3   School G

(a) *School G – Principal Interview*

During the interview with Principal G, she was queried about her relationship with her teachers, with the purpose of investigating the level of teacher collegiality experienced and perceived at School G. Principal G's initial reaction and responses seemed to suggest some animosity between the teachers and the principal and that there appeared to be a disconnect felt in the Principal-Teacher relationship. Principal G further conveyed the impression that she had maintained an official business-like relationship with her teachers:

> *"Honestly speaking, I do not have any problem with any Teacher.*
> *Of course I do reprimand Teachers. People are not perfect, you know.*
> *People do make mistakes. I know people are upset with you for*
> *whatever reasons. I know that they are angry with you, but it's just for*

During the interview, Principal G revealed the existence of teacher cliques in School G. This may be an indication to suggest that it may be a case where, there are varying degrees of teacher collegiality experienced in School G. This could also mean that collegial interactions may be stronger among the respective teacher cliques, but not necessarily across the whole teaching force of School G.

> *"Overall, I would say it is good… overall. Very bonded, very close. But there are also, groups of teachers, which are close to each other. We cannot help that la. The only problem is the young Teachers, those fresh Teachers who come in. It takes time for them. They don't like to seek for help. So when you reprimand them or anything… they say, "I don't know". Then I will say, "You should have asked" Then they will say that, "It's difficult to ask … that Senior Teacher… they are afraid to go to her". Some, Some … so mostly the young ones I have a bit of problem. But they clique among themselves, the young ones, the new one's that come in. But over time, overall I think, I don't have much problem with Teacher relationship"*
>
> **(Principal G)**

Principal G also informed about a mentor-mentee programme that had been implemented in School G. This programme may help in bridging the gap and improving the degree of collegial interactions among the teachers of School G:

> *"Yes, yes we do. … Mentor Mentee in terms of … Teacher and Teacher. I have a Staff Improvement Partner Group. For example, the Administrative Senior Assistant has 10 Teachers under her. Senior Assistant of Student Affairs… another 10 Teachers, so all the 123 Teachers have their own groups, whereby Senior Assistants are supposed to know more and are close… The problems of that Teacher, family related, work related, in terms of MC, in terms of coming in late, going back early… all that will be settled, will be monitored by the Mentor."*
>
> **(Principal G)**

During the interview, Principal G gave the impression that she was aware of her teachers' feelings of resentment among some of the teachers, quoting an example of the time when a decision was made, to extend the school hours till 3.30 pm:

> *"But of course, Teachers complain a bit… "So long – until 3.30".*
>
> *"But you know Teachers, normally like that they won't talk… pop, pop, pop, pop, pop… Speaking behind one's back … they know…they can talk what they want at the back, I don't care. Normally they come… some Teachers will come… "You know… we are so over-worked, all these things, can we cut this"… Yeah, and then, I listen. But if you complain at the back, which is something to me which is normal… How can everybody be pleased – 100% follow you … If I have five, 10% who are grumbling, it's fine."*
>
> **(Principal G)**

During the course of this interview, Principal G also shared an incident that had recently taken place, concerning a directive received from the Ministry, which required her immediate transfer, to another school. This incident appeared as a turning point in her career, which had led to several revelations, one of which were her renewed feelings of appreciation for her staff, which she expressed fervently during this interview:

> *"Just to share with you because something just happened to me recently, which I am so touched la. I was transferred out of this School… last week."*
>
> *"I got a Letter of Transfer during the 1 week School Break… By the Director… by the State Education Department. So I was shocked, plus I was not aware…"*
>
> *"Oh my God, if I tell you what happened after this"*
>
> *"Our PIBG and the Alumni, they were very upset… So they asked me, "Do you want to go or do you want to stay?" So I said, "As a Government Servant, I received the letter, I have to go, but if I had a choice, I want to stay"….*
>
> *"Okay. That's it … that's the only thing we want to hear from you, so let us work it out…". So this students of mine, created in Twitter… the 'Save Principal' group… they call it, -- Trending topic… this Trending Topic… was from number 10, it went up to the number 1 Trending Topic in the country… And the whole group of [School G], Teachers, Students, Ex-Teachers, Ex Students who are in Universities all over, were trending, "Please don't take my Pengetua away"… they tweet to _____ (Malaysia's Prime Minister, 2014) …*

"They tweet to _____ (Malaysia's Education Minister, 2014). They tweet to all the Ministers…"

"All the words were so touching you know and the messages and everything. So anyway I didn't do anything. The PIBG and the Alumni, they went to JPN… to see the Pengarah to explain to him that they wanted me to stay because I have 2 years actually. I am retiring in 2016. So I don't know, somehow the Pengarah agreed to let me stay, so here I am."

"With all these messages, which really touched – they were so touching you know so the 3 days was spent reading and crying because I am so touched. I didn't realise how close they feel to you."

"So when you asked the relationship …, oh my God …now that this has happened, which is actually a blessing in disguise you know. You see all the love pouring in from the children, from the Teachers, from the Parents … anyway I was so touched"

(Principal G)

Principal G's sharing's gave the Researcher the impression that the relationship between Principal G and her teachers have improved drastically after what had transpired and it would likely strengthen the bond between them.

Principal G then proceeded to speak enthusiastically about School G's annual events that are run by the students and teachers. Principal G confidently declared that there are a number of teacher teams who are actively engaged in these events like the 'International Student Conference', held on a yearly basis.This seemed to suggest the existence of cohesive teacher teams in School G, which can contribute towards stronger collegial interactions among the teachers:

"There are some Teachers who have been involved from Conference one until now, happily. New Teachers come in, some are just helping out. Some are just on that particular day, taking care of food, accommodation"

"At least easily 30 to 40 Teachers are involved. We are very accommodating – if you have plans during the holidays to go somewhere and all that, its fine. I have 123 Teachers. I don't need all to be there."

(Principal G)

At the same time, Principal G showed empathy, when she spoke about the teacher's commitment and dedication regarding their work duties and how they manage their work-life balance:

> *"Of course we have Teachers rushing home because of children, because of family, but we do have Teachers staying in School, doing work and don't mind the extra hours, if they need to finish a Project or something"*
> **(Principal G)**

(b) *School G – Triangulation with Focus Group G*

When the teachers at School G were queried about their teacher culture and their working relations among themselves, their responses indicated that there was a mutually collegial relationship among the teachers, and that they generally displayed a sense of responsibility for their respective jobs, which they strongly felt accountable for. The following are the responses from Focus Group G, seen to portray a collegial relationship among groups of teacher cliques, as they admit to have grown accustomed to the teacher culture at School G:

> *"I got very, very good friends to back me when I feel down. I got very good friends in the English team. I got very good friends overall, so we look out for each other … We help each other. That's the thing I really feel very – feel very – I appreciate being in this School"*
> **(Respondent G4)**

> *"It is a culture that has been built from the time I actually have been here and I see it becoming more and more strong."*

> *"Actually I should say the Teachers in this School, they are very conscious of their job. If it's their job, they will do it."*

> *"We are actually, very responsible and actually most of the Teachers are very dedicated to their jobs. They try their best not to say no, as far as possible."*
> *"Although School was until 3.30, as it's our job, if both of us had gone back, then we don't know what would have happened…So, she* (referring to another

teacher colleague) *waited until 5 o'clock and then for them to take the plants in then only ___ (Teacher) went home"*

(Respondent G2)

"Of course if you have the responsibility to run it, then you have to stay back and do it"

(Respondent G4)

"So in our own time we sacrifice"

(Respondent G1)

When asked about how new teachers orientate themselves with the existing teacher culture at School G, Respondent G4 stated that given some time, the novice teachers will usually adjust to the teacher culture and will eventually fit in:

"I think if they are here for quite a number of years, they slowly immerse into the culture [pause] or they ask to leave"

(Respondent G4)

As for the other teacher participants, they appeared to connect the idea of new teachers with teacher transfers. This could imply that the more experienced teachers at School G may not have taken the initiative to foster professional teaching exchange with the new teachers, by modeling their teaching skills, offering practical suggestions for effective teaching or providing mentoring support, which new teachers could benefit from. Furthermore, there may not have been attempts made by the more experienced teachers to engage collegially with the new teachers.

"If you cannot immerse, they ask to leave the School, I suppose"

(Respondent G2)

"Yes, yes they will request for a transfer"

(Respondent G4)

"Very high turnover – yes it's high. There were like 20 per year… Going to other School"

(Respondent G1)

"But there are a few of them that they were asked to leave the school"

(Respondent G5)

Johnson & Kardos, (2002) described the high turnover particularly among new teacher recruits, due to feelings of isolations felt among many, as a result of not being able to acquaint themselves with expert practice, and the lack of professional development provided by the their teacher mentors. On the same note, some of the teacher respondents further continued the discussion on teacher transfers, elaborating about the actual teacher transfer cases that ended up with these teachers being re-employed at School G, out of their personal request.

"We can ask for Transfer … twice a year now… Some Teachers who have left the School, have asked to come back."

(Respondent G2)

"And so the reason why they have come back is because … this is like pleasant – it's like Heaven. So personally I feel that is the reason. That's why they come back here. Because our girls, [referring to the students which are an all-girls school] *sometimes you marvel at what they can do. They'll be out of School with activities and all and yet they can perform academically"*

(Respondent G4)

"Some of them do not want to go to the School they are transferred to and rather stay here. The minute they are asked to transfer, they are not happy with the School, they ask to stay here"

(Respondent G2)

"I am still new to this school. Most of the reasons for transfer is because of family and not because we don't have it good here. As for me, when I first came to this school, I won't deny admitting that I felt the tension and was stressed up. It coincided with the time when this school received the high performing status… I felt very pressured as a new teacher. Initially I couldn't cope with the work stress, but I grew to take on a more positive outlook, which I can't deny has been a positive impact on my learning curve"

(Respondent G3)

4.5.3.4 School A

(a) *School A - Focus Group Responses*

During the school visit, there was a strong presence of team spirit felt among the teachers at School A. The focus group participants shared their positive views on the teacher culture and school climate of School A. Their responses describe the synergy of their teacher teams that functions as a result of their collaborative teamwork:

"Teamwork."

(Respondents A3)

"We work as a team… It is based on our own individual responsibilities"
(Respondent A2)

"Teamwork… teamwork plays an important role in this School."
(Respondent A1)
"We all work as a team. The Principal handles the management side of things. We work together. The Principal does the monitoring but if the Teachers wish to organise any programme, we do it together"
(Respondents A1 and A4)

The spirit of collegiality and a positive school climate at School A, is fostered by teacher cooperation, trust, teamwork and a sense of unity among her teachers. The following teacher responses reflect the teacher culture at School A, which is signified by

their proactive approach and dedication to teaching and learning, to the point where they seem to have developed a resilient mindset and positive attitude:

"We do not need monitoring... Proactive" **(Respondent A4)**

"Each of us know our own roles and responsibilities… Most of the Teachers in this School know their work and what to do… This culture has been this way for such a long time"
(Respondent A5)

"Management Meetings are fixed to be held once a month. But if there are other discussion needed we do arrange ad hoc meetings to deliberate over teacher's duties, so that everyone knows what to do and needn't be reminded"
(Respondent A1)

"Sometimes, there is no time for a meeting but if we get an instruction the day before, we act on it the following day… We all have our own respective assignments, all planned out that can further improve this School"
(Respondent A3)

"That's how the culture is with the Teachers. We hold a meeting only once and when everyone has understood what needs to be done, action is taken immediately"
(Respondents A1 and A5)

"If there is teamwork among the Teachers, and there's a job to do, even though there may be a few Teachers who don't want to conform … we take a vote and if the majority agrees to the plan, we go ahead. The Teachers who did not previously agree, have no choice but to agree and they will end up doing what they are supposed to do."
(Respondent A5)

(b) *School A – Triangulation of Data Sets*

The principal's interview and the focus group responses were triangulated to establish and justify the high level of cohesion that had been established between the teacher teams

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and Principal A. The triangulation between these two data sets provided corroborative evidence that verified the teachers' strong commitment and collaborative practices at School A. At the interview, Principal A explained how she nurtured her teacher teams and introduced innovative ways of improving instruction for the benefit of students:

> *"With the Teachers, when I first came in, I practiced this motto, "work because of responsibilities". The second is, "work and contribute" and the third is "work and sacrifice"... 3 different stages. Teachers are told to select which among these they want to adopt."*
>
> *"I kept having meetings, constantly showing them how to do things and reverted back to the old style of management, the new Teachers also learnt along from me. I set deadlines and they have to meet them. The new Teachers need second reminders but the old Teachers are much alert. I am fast paced and target based. The old Teachers are accustomed to my style. The others may be a little slower. But if you are slow, you need to be jolted then you will hurry up. That's what I do… This means I guide the Teachers"*
>
> **(Principal A)**

This was evidenced by the detailed explanation by Respondent A1 regarding the working ethics taught and implemented by Principal A that is currently practiced:

> *"There are 3 types of working hours practiced in this School. The first category are Teachers who wish to work regular school hours from 7.30 am to 2.10 pm. This is considered the lowest level of responsibility, where Teachers are said to work just for the salary ("gaji buta"). The second level is a little more extra. The 'Contributor level' is where the Teachers stay back and organise evening classes. The third level which is considered most honourable is the 'Sacrificial level'. This involves a lot of commitment and dedication on the part of Teachers, where they have to wake up very early to come to school just to run the early morning classes"*
>
> **(Respondent A1)**

Principal A admitted that there were some initial reservations held among the teachers,

> *"The Teachers were initially concerned and rather worried"*
>
> **(Principal A)**

Initially the change in working hours were not very well received by the teachers:

> *"Initially this arrangement had a bit of resistance from the Teachers"*
> **(Respondent A1)**

As Principal A continued to persevere in her drive towards transforming the teacher culture for the betterment of School A, the teachers grew to learn and develop from this experience. The renewed culture at School A has made Principal A proudly declare her the names of her teacher teams to the Ministry:

> *"Like now when the Department asked me whether there are any good Teachers in this school, I give them the information they want, as I know who exactly are the good Teachers"*
> **(Principal A)**

Similarly, the Teacher Respondents expressed the gratifying feeling of knowing how they have contributed to their School's success:

> *"But eventually when we see the achievement and results of the students, it is most gratifying"*
> **(Respondent A1)**

Moreover, the respondents were happy to declare that they now do help to orientate the new teachers, who were not yet accustomed to the working culture of School A:

> *"When the new Teachers who come in, they are not accustomed to the culture in this School... We organise a course for new Teachers to acclimatise them with our work culture practiced in this School...These are not first posting, fresh Teachers ... They are from other schools. It is expected that this culture is not practiced in their previous schools. So we have to expose them to the work culture in our School"*
> **(Respondents A1, A4 and A5)**

4.5.4   Research Question 8

Question 8:   What are the predominant leadership practices used by principals in
             Malaysian high performing daily schools?

4.5.4.1   Leadership at School I

During the interview, Principal I shared a brief account about her leadership at School I,
just after this school had received 'high performing' status in December of 2013. Principal
I openly discussed the challenges she faced during her first year of Principalship in School
I, and how her leadership evolved since:

> *"My first year – la - I realised ... uh- was not so organised la".*
>
> *"Kind of very challenging la when I came in…It was challenging actually
> because ... uh ... I was not given - an ordinary school ... you know".*
> *"My first year was terrible la, 2013 - we got the SBT[1] in December… we were
> 3rd batch… Because the money came ... 2 years ... But we got the allocation for
> the 1st year ... and then ...we got the money for the 2nd year… so we have 2 years
> allocation to be spent in 1 year".*
>
> *"Because Government procedure you must have your quotations -- any
> amount… more than 20 thousand, I cannot decide".*
> *"Paperwork ... so it's very stressful because my teachers got to teach… And I
> alone cannot manage all those things - you see -- so everybody is given a task to
> do -- you are in charge of uh ... networking -- you are in charge of uh choir ... you
> know, everybody got to do their own paperwork, which is very ... very stressful
> 2013"*
>
> **(Principal I)**

As the interview progressed, Principal I shared about her school administration, and a
large portion of her sharing seemed to suggest that she paid greater focus on the KPI's
that needed to be met, in line with the HPS status of School I. Principal I also elaborated
on the School Inspectorate's annual benchmarking visits, where the academic and co-

curricular achievements of School I were evaluated. As leader of this school, Principal I was required to present the school profile and the annual school outcomes, to the panel of School Inspectorates and ensure that all paperwork regarding academic and co-curricular matters were ready for their inspection:

> *"There's many things involved in the running of school… when I became a Principal… daily running of the school that is… There's still a lot of tiny little things that - you know".*
>
> *"We – SBT[1] we've so many projects to plan…everybody is so busy … Busy trying to achieve - the academic goals ... They don't really have much time to ... [pause] … relax… Tension is quite high…"*
>
> *"And basically ... to be SBT[1], we have to take care of a few areas la… 30% of the marks come from SKPM[2] … That means uh ... daily running of the school."*
>
> *"Our niche area -- English and choir ... meaning that…we go for like, debate…Public Speaking … you see we have to maintain our niche area -- a lot of marks come from the niche area, you see…for SBT[1] events…the children uh -- they are given marks for co- curriculum".*
> *"And then every year we have to present ... what you call our ... KPI[3] being verified… And I have to do presentations -- you know -- to present to them, what we've done"*
>
> **(Principal I)**

[1] *SBT:* Malaysian High Performing School (HPS); [2]*SKPM:* Standards for Quality Education in Malaysia; [3] *KPI*: Key Performance Index

It was rather obvious that the governance of School I was based on a shared leadership model, where Principal I shared her school leadership with her teacher leaders, by apportioning them some responsibility, without abdicating all authority. Principal I did admit that it was not possible for only the school leader to be responsible for the entire school administration and school outcomes. As such, Principal I maintained a delicate balance of sharing the school leadership and administration with her Teacher Leaders.

> *"There's no way you can do things your own way, you see…"*
>
> *"I can only ... do so much".*

"I feel that -- because we're SBT[1], we have so much to do - you see, so I do not, push my teachers very much".
"If you ... insist... people get fatigued ... very difficult to work ... just work for a short while ...so it won't work anymore"

"It should come… from the Teachers themselves -- they see the need".

"I think this is very important, then only I will insist… if it's normal decision, I don't insist -- as long as the job is done ... I do not interfere"

(Principal I)

[1] *SBT*: Malaysian High Performing School (HPS)

The so-called 'best practice' of Principal I is in keeping things simple and easy for the teachers. At the same time, her ultimate aim is to secure student outcomes.

"Simplify things for the Teachers"
"To achieve our goals … I normally try to simplify things… I tell my teachers -- no need to do ... stacks and stacks of document… I mean we just ... -the ... basic requirement will do la… Don't waste too much time on it -- because ... it's more for ... verification later on ... but the more important part will be the children… Their achievement ... to me that is ... our main function… to help those weak ones"

(Principal I)

In doing so, this is how Principal I managed to secure teacher support at School I:

"Every year I try to influence a little bit different -- something different for them… to conduct those activities for the children… so you must strike a balance ... between… produce result or… teachers to work very hard ... So if the children are reluctant, the Teachers are reluctant, there's no point, doing something for the sake of doing it… So ... there must be consensus"

(Principal I)

Many of her teachers are not hesitant to approach her to share their ideas and action plans:

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> *"Sometimes they'll just come and see me* [they- referring to Teachers in School I]*…say ... I got to do this - this - this - this - this"... So we put that into a package"*
>
> **(Principal I)**

Her strong teacher support, reassures Principal I in facing up to the realities and challenges of school leadership:

> *"We have very strong senior teachers here, who… Have been in the school for ... more than 20 years"… basically the main contribution was from the academics…So my teachers were with me… Generally they ... they are okay. They know their work ..."*
>
> *"We have to cope with the teachers also - I mean ... we have strong teachers, we have - you know -- to be frank… I'm telling you frankly… I mean anywhere we go there'll be ...* [laughs] *good mix of everything".*
> *"Basically the teachers here ... they - they're pretty good - pretty good, so ... when we ... uh tell them, it got to be done this way... they follow… Okay so ... we have to ... try to ... move the people along the targets - you know".*
>
> *"So when they're supportive… Generally their subordinates will follow suit"*
>
> **(Principal I)**

Principal I leveraged on the expertise of her Teachers and instilled the sense of ownership in them, to improve student outcomes. In this way, the Principal as well as the Teachers were both held accountable for the school's outcomes. When probed about the decision-making process, Principal I informed that it was a collaborative affair involving deliberations among the teachers and the principal during their periodically held Management Meetings. This indicated that Principal I showed a willingness to take into consideration, teachers views, before arriving at any major decisions concerning School I.

> *"Generally -- for me -- I would usually ... discuss issues with ... my Senior Teachers and Management team ... they understand that certain course of action got to be taken -- they are very supportive".*
>
> *"I normally give them ... the freedom to decide how they should go about it".*

"We have our gazetted meetings… We will have different reports from different departments ... then we trash out issues ... so we sort of come to an agreement"
(Principal I)

"Of course when we're discussing about mission vision ... we also discuss during our meetings -- is not solely my idea"

"Because they are also very senior and ... we have to listen first ... Before I finally make a decision ..."

"When need be -- I have to make decision la…but generally, normal decision ... I let everybody have a say first"... And then we decide ... what - which is the best course of action… But, there are certain things I will insist, especially pertaining to academics".

"But uh ... I think ... maybe because there was discussion ...So the other teachers also follow suit"

"But of course when we set goals ... I believe in ... what you call - ... input for everybody"
(Principal I)

According to Chopra and Fisher (2012), great leaders have empathy and compassion and are capable of relating both intellectually and emotionally to other people. It was evident that Principal I was skilful at negotiating and influencing her teachers so that a compromise or an agreement could be reached, with the aim of achieving mutual benefit and the best possible outcomes, in the interest of School I. Principal I was seen to negotiate and reason with teachers, over their subsidized overseas school trips. With all fairness and much deliberation with her teacher leaders, Principal I negotiated with teachers so that they fully understood and were acceptable with the collective decisions made with her Senior Assistants. She also empathised with the teachers, and showed her understanding towards the added responsibilities undertaken by these teachers, who accompanied students on international trips:

"In time to come the Government is not going to ... carry on giving us money"

"My Coco[1] was involved ... so we sort of come to an agreement... we decide - this is -- your budget ... So the budget is set -- we tell them how much the children come up -- we put it under PIBG[2] -- let the parents pay for it."

"If you want to learn something, you have to come up with some capital right?" ... You get to go for a trip and you get to see new things...With your children ... even"

"I mean it's only 20%... 25%... If we-- 100%... everybody wants to go -- how we going to select?"

"I told the teachers, take it this way – "this is also a learning trip for you ... a lot of times, the students are involved in the Festival, you ... just hang around only what…. - it's - it's no joke actually -- it's 24 hours with the kids"

"Those teachers who go with the children ... basically they're the ones ... who can afford...and who feel that, it is worth the trip"

(Principal I)

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[1] *Coco:* Senior Assistant of Co-curriculum. [2] *PIBG:* Parent-Teacher Association.

Principal I described her leadership style as democratic, where shared leadership is a common practice at School I. However, it is noted that vital school wide decisions are anchored by Principal I, and thus it has become known that Principal I is the person that Teachers and Students usually turn to when they face problems, that need solving or issues to be ironed out. Moreover, Principal I is particular about being in the know, especially with any issues concerning unfulfilled tasks by Teachers.

"I'm not so autocratic... I am more democratic"

"I told them -- it's their duty to inform me"

"But, they must let me know how they want to do some things... I have to know because ... when... the PPD[1] ... of the ... Department ... asks ... why is this done? Without my knowledge? I mean it'll be so embarrassing you see".

"That is part of the protocol la... That they have to inform ... I never stop them if there's some uh ... very urgent family ... matters to attend to-- they just got to give me an sms and say ... that their child is sick".

"We trust each other… they know that I'm quite fair with them"

(Principal I)

"That you are facing any problem ... then if you need help, I can help. But if you don't want to tell me, and you do not follow rules and regulation, of course I will have to tell you off"

"Or worse come to worse -- have to record -- there was some ... young ones who ... were a bit - what you call - blur blur here and there - I do have to call them up -- from time to time to remind them that it's not to be done this way -- I record ... my conversation with them ... but ... lately, no -- this past year there was no such incident".

"If they need whatever… that they cannot assess to like manpower… they often… "I need this Coach, I need uh -- "Okay okay okay okay" -- "let me think" -- then you know -- I'll get it for them -- I'll try to meet a contact first -- smoothing the way for them ... They know that there's anything that…. cannot be done… They'll come and see me ... I'll get it done for them ...And I find when I do it this way, my teams are pretty happy"

(Principal I)

Principal I had enforced similar rules and regulations with students too. Students have been told that they are required to inform the principal and teachers if they had any assignment to do away from class. Principal I also kept herself open to any students who wanted to see her on any matter and had claimed that there was no hesitance on the part of the students, as she is also their class teacher. This suggested that Principal I may probably be approachable, a problem-solver and decision-maker in most cases. Otherwise the students would not be willing to approach their Principal on their own and make their requests.

"They are always been told, if you have to do certain errands for certain teachers ... or ... you have certain jobs to do ... you got to inform the Principal, inform the HEM[1] ... So we will give out the ... we will give out a small notice to the teachers. Now we use WhatsApp"

[1]*HEM:* Senior Assistant of Student Affairs

4.5.4.2   Leadership at School S

Principal S was asked about her leadership practices applied in School S. She revealed that she used a variety of leadership styles in her school leadership, which she acquired through the various courses that she had undergone:

> *"In theory, I studied about the many leadership styles available which I regard as a contingency that could be applied in different situations... I felt that the style of leadership changes according to the different Schools. Like for example, my Senior Assistants that I have selected in this School, I could use Laizze Faire in my approach with them, because they are well versed in their job roles. However, I would not only use Laizze Faire but I would also do monitoring".*
>
> *"Although I planned for weekly monitoring, but due to my busy schedule, at a minimum of once a month, we have Management Meetings where I get updates from the Academic, Student Affairs and Co-curricular divisions. Sometimes the Counsellor also joins in these Meetings. At times when I wish to check on the status of the library, I will invite the Teacher-in-charge to provide me information regarding the number of books being borrowed, book requests and the library users".*
>
> *"With some Teachers, I sometimes practice 'Autocratic' style of leadership. Especially when things are not done, I need to be more assertive and direct them accordingly. So it really depends on your followers – what type of followers you get, will determine the type of leadership style I practice"*
>
> **(Principal S)**

Principal S also stressed the importance of the principal's leadership in a school, adding that principals' should be IT literate, as this had further facilitated her leadership of School S:

> *"Yes to me it is very, very important. Because as what I've mentioned, IT knowledge is very important for principals to have. Because this is how we can obtain all the information we require… and when we go for Courses ... I am*

aware of what is taught and I immediately present to my Teachers to show them the changes that has been implemented and the Teachers get the latest updated knowledge".

"Initially, the Teachers in most of the Schools that I have headed, are not able to understand ... because they have not been taught how to do so. So I teach them – what is it for."

"If the Principal doesn't make a move or take any initiative, then things can't progress as it's supposed to"

(Principal S)

Principal S has been observed as one who attempted to closely adhere to the policies and procedures, stipulated by the Ministry of Education. There were various instances, where Principal S confirmed that School S complied with the Ministry's requirements, and in doing so, Principal S had maintained good professional ties with the MOE:

"As far as possible, the Ministry encourages Students to run the School Assembly… Regarding our School Assembly, it is run by the Prefects. They will invite the Teachers..."

(Principal S)

As the Chairperson and Advisor for the planning and coordination of school events, Principal S abided by the rules stipulated in the 'Guide for Teachers Duties and Responsibilities' and used this guide for discussions with her Senior Assistants on school event management:

"This Book[1] serves as a structured guide for Teachers to know what their roles and responsibilities are when organising an event. The Chairperson is always the Principal. This means as the Chairperson, I have to be present. The Deputy Chairperson is the Senior Assistant. There are also areas where I take the role as an Advisor so that they can consult me when required. Guidance is communicated by the Senior Assistant, after having a discussion with me first. If I agree, then they proceed with what has been planned. So ultimately the Principal has to be in agreement. Although it is the same event every year, we still will discuss first"

(Principal S)

Principal S also conformed to the Ministry's teacher training mandate, by provisioning seven in-service trainings for teachers, on an annual basis, in order to meet their training needs.

> *"Because all Government Officials have to go through 7 days of training per year for LDP[2], so my School arranges 5 Internal Trainings for everybody and 2 more trainings that comprise of 12 hours… I leave it to the Subject Committees"*
> **(Principal S)**

[2] LDP [Latihan Dalam Perkhidmatan]: In-service Trainings.

The leadership competence of Principal S had come to the attention of the District Education Department (PPD) and they had requested that Principal S conduct a workshop on strategic planning for schools, as this was an area that school leaders could learn and benefit from. The following were various instances whereby Principal S complied with MOE's legislations:

> *"That's why recently, when the PPD[1] Official asked me to share with other Schools about strategic planning, since there have been so many such Courses that Principals and Senior Assistants have undergone. However, with all the Courses and Briefings we have received, some Principals don't share this information with their Teachers … The teachers have no idea how to do strategic planning for their Schools"*
> **(Principal S)**

[1] *PPD:* District Education Department.

With efforts being made towards shaping teaching and learning in School S, and contributing towards students' well-being, Principal S encouraged the Form Teachers of School S to focus more on developing quality relationships with their students, by playing a more active role and concern for their students' welfare and to monitor their daily school attendance:

> *"So if any students are absent, the Form Teacher should be well aware, since they are taking daily attendance. So in the event that there are students absent, the Form Teacher should take the initiative to call the student and find out whether the student is sick. It is the responsibility of the Form Teacher to know about the student's background, since personal details of the student is recorded during student registration. So the Form Teacher should roughly know if there are any of their Students that need additional assistance"*
>
> **(Principal S)**

4.5.4.3   Leadership at School G

Principal G was interviewed on how she exercised her leadership practices at School G. Principal G appeared to be a leader who adopted a top-down approach with her staff, and was seen to have a tight control on most of the decision-making powers concerning School G. Management meetings were conducted with her Senior Assistants and Programme Coordinators, every fortnight, to discuss prime issues concerning School G. Given her large teaching force, of 123 Teachers, the meetings could not accommodate the whole lot, and so it was the responsibility of the Senior Assistants and Programme Coordinators to disseminate the information to the rest of the teachers, so that teachers could stay informed about the decisions made and keep abreast with the current updates of School G.

> *"Normally if I come up with any idea, I just discuss with one person or I discuss in the Management Meeting"*
>
> *"We have the Management Meeting every 2 weeks, so normally that's where most of the decisions are made. It's difficult to make decisions with the whole group – 123 Teachers. Normally during that time, we will report whatever decisions we have made, any objections, any views … we will hear"*
>
> **(Principal G)**

It is also during these meetings that Principal G also addressed any concerns regarding classroom management or any other issues raised by the management team:

"Normally my approach is always to make comments during the Staff Meeting. Very often, these are general comments but I would say that the Teachers involved would feel that I am referring to them, but the others wouldn't know. But if it doesn't work, I don't see any change ... I will call the Teacher in. But I won't call the Teacher in immediately, unless it is very serious. So normally I will just bring up during Meetings, keep reminding them, -- punctuality – everything – we don't want students to complain. It's better that they come and tell me rather than go to JPN[1], PPD[2] and all that. So if there are positive changes, I just leave it. If not, I have to call them in."

(Principal G)

[1]*JPN*: State Education Department. [2]*PPD:* District Education Department.

For the most part, the daily management duties of Principal G involved coordinating and monitoring the work of teachers and students, on various school activities. At the interview, Principal G spoke about their annual Student Conference, which involved months of continued planning and preparations. This goes to show Principal G's commitment and dedication in ensuring the yearly success of the Conference. Periodic meetings were held with the teachers and students who were involved in these activities. At the interview, Principal G provided a detailed account of how she closely monitored the administrative job tasks assigned to the relevant students and teachers, in the lead up to the Student Conference:

"Yeah, yeah – Just make sure everything runs, keep checking. We have one Conference Coordinator so she is the person I always talk to – to make sure things are running. – Like this thing, [R1 shows and gestures to the draft Brochure that she has on the Table before her] must be submitted before 30th. So, she has done it, I'm checking, just revising it and make sure it goes to our Ministry of Education on time... Get approval... Be involved".

"But right now, they need to meet to discuss the theme. To have the layout. Then to check the Venue and everything because we need to send emails to all our partners, all over the World"

(Principal G)

When Principal G was queried about the challenges she faced in her principalship, she admitted that it was very challenging to be accountable for the schools outcomes and having to meet the expectations of the Ministry. Principal G also expressed her grievance about having to wait so long for the national school holiday schedule from the Ministry, which tended to delay a chain of tasks:

> *"I'm very upset la because the Ministry they don't come up with the planning… the holidays … they should come up early. They always wait and we want to – I want to plan now – what we want to do. We need to know the School Holidays because they fix, and then we can do our planning, so without that is very difficult. Normally, November… to me it's very late – very late. We actually start planning now you know … September… we have meetings … what we want to do next year … we put in everything so that we can give out to Teachers when we have our first Staff Meeting in December. Normally we give them a diary … this is something that we give to all our Teachers for the School Planning. So we need to get this ready before the first staff meeting. Students have 1 copy… Teachers have 1 copy"*
>
> **(Principal G)**

Principal G also revealed about the hard work and long hours that she had put in, strategizing about how her leadership could contribute towards improved school outcomes:

> *"This is a very hectic—very work involved School. There are so many programmes, activities, Projects going on. It's almost every day. Sometimes I need … not sometimes, many times I work until 5.30… 6. My working hours is actually 7.30 to 4.30 but seldom I go back at 4.30, unless I have Meetings or something, have to leave early. So a lot of time has to be spent in this School, thinking and planning – what next, what else do we do, are we going to do the same things that we have done? … What are the changes for next year? We already have to start planning for next year"*
>
> **(Principal G)**

Another common practice with Principal G is that she walked around the school, showed her presence at important school activities, and paid unexpected classroom visits,

especially when there was no teacher present in the classrooms. She used these opportunities to engage in dialogue with the students, enquiring about their student experience at School G. Drawing on her positional authority, Principal G assured the students that she would not reprimand their teachers, but will certainly take note of their feedback:

"I get the opportunity to talk to the exam classes, especially when the results are out."

"What I do is when I make my rounds… So sometimes I go around classes that don't have teachers yet because the Relief is not ready or the Teachers are late … 5 minutes … I cannot say it's a perfect place. People come in on the dot. From one building to another, they take at least 5 minutes, sometimes 10 minutes. So when I make my rounds, I see any classes without Teachers, I'll go in, "Who's your Teacher? Why is she not here?" Just talk to them, 5, 10 minutes. So I try to do as often as I can."

"Normally I will ask on the Teachers, on the Subjects. How is it? Are you finishing your syllabus? Is your Maths okay? Do you have any problem with the Teachers? They do tell me"

"Yeah, they will like look, look at each other, I know there is a problem. But if not…"No, Teacher, everything is fine, okay" But you know I can sense that they want to tell, then I will provoke. I'll say, "It's okay, I'm not going to do anything to your Teacher you know". So maybe they will say. You know the Teacher always late coming in, or the Teacher 'suka cerita' [tell stories] … instead of teaching, some Teachers like to chit-chat, talk more than teach…"

(Principal G)

Focus Group G

The focus group discussion at School G was held a month before the principal interview had taken place. At that time, Principal G was on medical leave and was unable to schedule in an interview. However, the focus group discussion among five teachers was conducted as planned, and so their responses are presented here to substantiate the evidence of Principal G's leadership at School G.

The teachers' responses left an impression that Principal G had a dominating personality and that she appeared to come across as a school leader who dominated the scene, and controlled everything that took place at School G.

> *"She's in control of everything actually that happens in the School."*
>
> *"She will get very upset if you actually don't tell her. But to me, I do make decisions and she has never said no to me. And the decision I've made she has never like got angry or anything with me. But I know many Teachers in this School, she doesn't really let them make their decisions. She wants them to go through her"*
>
> **(Respondent G5)**

The focus group teacher respondents also revealed that Principal G placed very high expectations on her teachers, and was known to continually monitor and scrutinize every minute detail of teachers' job tasks. It appeared that Principal G micro-managed her teams and assumed a management style of leadership, which tended to be autocratic, rigid and task-oriented. 'Micro-management' is described in Gorman (2007), as managing the details of subordinates, rather than letting them do the work, and this is a condition driven by leaders who had too small a set of responsibilities to keep busy.

> *"I find that there are many things where we can handle and decide without having to go through the principal. However, she wishes to get involved and wants to know every single thing that we do. Whenever we show her what we have done, she will end up making total changes. To me I find that some things are simple enough for teachers to decide but she appears to complicate matters when it is just a simple matter."*
>
> **(Respondent G3)**

Respondent G1's responses appeared to favour Principal G's style of leadership, which was aimed at achieving the school goals. She further suggested that Principal G had a strong influence on her teachers and was capable of mobilising her teachers towards their

desired school outcomes. However, the Researcher detected subtle hints of discontentment, judging from the teacher's body language, although the teacher respondents did not explicitly discriminate their principal in any way. Instead the teachers appeared to be very careful with their choice of words, when they spoke about Principal G's leadership style, despite the attempts made by the Researcher to probe further:

"As a new comer to this school, I have observed that our principal plays a contributory role by 'pushing' the top management of this organisation and the Teachers towards achieving the desired goals. Although the staff is cooperative, I see her as someone with a very strong influence. As a percentage, I would rank her ability to drive the teachers and students as 80%. This could be due to her aura or personality, which make her appear different."

"When she speaks, one tends to listen and give in."

(Respondent G1)

"Very dynamic"

"That day, she told me, "Why couldn't the Teacher make her own decision?" I just kept quiet. Maybe she has set that precedence that she must be told everything."

(Respondent G2)

"Dynamic is the word."

(Respondent G4)

The teachers generally understood that Principal G had the final say to the decisions made at Management Meetings, together with the Senior Assistants and Subject Experts. Respondents G2 further revealed that they were not in the know about what goes on during these Management staff meetings:

"They all actually have meetings together, every week, where they can take in whatever our grievances or whatever we want is told to this people and they take in for the meeting. I don't know how the discussion goes on … whether it's discussed or not, we really do not know what happens in there you see. So that is where decisions are made."

"She has meetings with them very often, the administration of the School, Head of Departments … for Science, for Language and for Humanities."
(Respondent G1)

"So our voice are heard in a way through our Head of Departments"
(Respondent G4)

4.5.4.4   Principal A

Principal A provided valuable insights of her leadership practices, which she perceived to be an important influence on her successful school leadership at School A. During her interview, Principal A spoke at length about her leadership strategies that led to the dramatic success of School A. The following excerpts from this interview provide a detailed account of how the principal leadership practices shaped the teacher culture at School A:

"The School culture has been already here. So when I worked here I learnt the School culture. I wanted the same culture to be reinstated so I told the Teachers that they have to work really very hard and not to be shoddy."

"I was at an advantage because I came to this School for the second time. Initially as a Senior Teacher. *Then I knew all the loop holes… I have noticed that the performance of this School was on the rise and then there was a period where the performance was a little stagnant. I felt something was not quite right. So I wanted to single out the old Teachers. At that time out of the total number of around 70 to 80 Teachers, only 20 to 24 were the "old Teachers". The rest were "new Teachers."*
"So on the first day of work, I held a meeting with all my Teachers and I told all my Teachers that I regard all those who worked with me previously when I was a Teacher in this School, to be 'old' Teachers"…

"So you sit on one side". And to those who joined this School after I had left, are considered as, 'new' Teachers."

"The reason I divided them in 2 groups is because I did not know the new Teachers yet."
"So I drilled the 'old' Teachers by reminding them of how this School was run previously, saying, "you all know me and I know you… You know how I worked at that time and I know the way you worked at that time. So you have to back me up strongly. I got more than 20, so I wanted to revive the previous nostalgia of leadership… I told the teachers that since I am back, I want things to go back to how it used to be in those days."
"Like last time… together with me… like last time."

"That's how I quickly revived the old culture."
"I don't like to take external candidates external teachers, not because I don't like them but because they don't know the working style in this school… They must learn to abide by the working culture of School A"

(Principal A)

Principal A was also recognised as a leader who was analytical and well organised and she had trained her teachers to conform to the rules and regulations set by School A, which adhered closely to the policies of the Education Ministry. Principal A's responses reflect her organisational skills, with a meticulous attention to detail:

"Before the event can take place, I will have a meeting to discuss things … Even though it may be a small thing, but I teach them how to organise an event… We give a bit but they will do heaps more. But if you don't guide at all and you leave them to do as they like, then whatever they do may not be to your liking. You may scold them but I pity them because you did not guide them at all right?"

"When it comes to the filing system, I also show at the beginning, how to do it. Then later I don't need to show again".

"Whenever Teachers make requisitions for books, I will approve after they have filled in their requisition forms. This is how I can keep track of what books are being bought and whether they are suitable or not. Teachers can't just simply buy any books…so the "Ketua Penitia[1]" must check whether suitable or not -- the books and the course syllabus. It shouldn't be the case where the books bought are not the same as the course syllabus provided by the Ministry. So this is the responsibilities of the "Ketua Panitia[1]" and "Guru Kanan[2]"

(Principal A)

In the course of the interview, Principal A elaborated on how she effectively mobilised the collaborative effort of her teachers, in taking ownership and engaging in meaningful collaboration, for value-added student learning:

"With the Teachers, when I first came in, I practiced this motto, "Work because of responsibilities". The second is "Work and contribute" and the third is "Work and sacrifice"… 3 different stages. Teachers are told to select which among these they want to adopt. If the Teacher feels that she works from 7.30 to 2.30, goes for all classes regularly, give students exercises to do, mark their assignments, and if the Teacher feels very noble about such working style, to me this is the lowest teaching approach, because all teachers, despite what DG job grade they have, they are paid to do just that. That is 'Basic'… with no extras."

"But if the teachers take note of the Principal's emphasis on student achievement, and they arrange to have extra classes, and coaching students during break time, this is regarded as 'Contribution'."

"But if they are determined to have all their students achieve A's, they work on weekends, and public holidays, they take the students back to their homes for further coaching and additional classes, then this is considered a 'Sacrifice' on their part. I can't pay them anything extra because the school does not have additional funds to pay these sort of Teachers but the reward they get is knowing that their students have come out with straight A's."

(Principal A)

Triangulation: Principal A's Interview and Focus Group Responses

Principal A is viewed as one who garnered support from her teachers to make decisions in her absence. The Teachers in School A had been empowered to reason, deliberate and communicate decisions. A triangulation between Principal A's interview and the focus group discussion, provided corroborative evidence concerning the unique and successful leadership practices, perceived as key contributory factors that had led to School A's academic success:

Triangulation between Principal A's Interview and Focus Group discussion:

INTERVIEW – PRINCIPAL A	FOCUS GROUP RESPONSES – SCHOOL A
Principal A: *"I start my class at 6.30 am. I don't think you believe me. But you must understand why it is 6.30… Because I introduced a model by dividing the students into 3 groups called, 'Formula 1, Highway and Jalan Kampung[1]' [Pathway]. So 'Jalan Kampung[1]' must come in the morning la because they don't perform… Weak performance according to specific subjects… remedial classes… yea … 6.30."*	**Respondent A1:** *Here in this school, we organise programmes from the 3rd week of January… We begin with providing extra evening classes. We also have extra classes organised for the weaker students who have failed certain subjects. During the School Holidays, we also arrange "Kelas Tambahan Perancang[2]" [Planned Additional Class] and 6 weeks prior to exams, we have special morning classes categorised this way, "Pelajar Jalan Kampung[3]", "The "Pelajar Jalan Kampung[3]", go by the subjects that they are poor in. These classes are from 6.30 to 7.30 am for a period of 6 weeks before their actual exams. In the evenings there are also extra "Kelas Kepong[4]" classes arranged for Form 3 and "Kelas SEDAR[5]" for Form 5's. S for 'Stay back'; E for 'Extra class'; D for Discussion; A for Analysis; R for Retest. We also have night classes arranged for the hostel students and band students who need extra coaching to catch up with their lessons."*
Principal A: *"At meetings, I always ask the Teachers 3 questions. "What have you completed with your students?", "What are you currently doing with your students?" and "What else do you plan to do?" Give me these answers. I want your students to get A. You can do whatever you want to do, I don't care."*	**Respondent 5:** *"Even the Principal says that you can do whatever you want, as long as the students get A for their subjects."*

[1]*Jalan Kampung:* Pathway. [2]*Kelas Tambahan Perancang:* Planned Additional Class. [3]*Pelajar Jalan Kampung:* Slow Learners / 'At-Risk Students. [4]*Kelas Kepong:* Enclaved classes specially arranged for Students preparing for Form 3 Exam. [5]*Kelas SEDAR:* Specially arranged classes for Students preparing for Form 5 Exam.

The following excerpts were the interview responses of Principal A triangulated with the responses of the Teacher Focus Group G, to reinforce the findings of Principal A's leadership style. Although Principal A clearly favoured distributed leadership, as

mentioned in her interview, the teachers are of the opinion that her leadership style was

not an important criteria, as long as Principal A discussed matters with the teachers before

making a decision:

INTERVIEW – PRINCIPAL A	FOCUS GROUP RESPONSES – SCHOOL A
Principal A: *"I keep debating within myself while trying to decide which Theory applies and which situation I can use, what I have learnt."*	**Respondent A5:** **"***Doesn't matter which leadership style she uses."*
Principal A: *"I think all! The one I like best is distributed leadership. I'll give you an example. The School Inspectorate wanted to know whether I practice distributed leadership. I said yes… When I go anywhere with my Senior Assistant… I'm not around and my Senior Assistant also not around, but all my Senior Teachers can manage the School. They can represent me in various situations and they can make decisions."*	**Respondent A4:** *"Democratic"*
	Respondent A2: "The Principal will discuss issues with us before making a decision."
	Respondent A5: *"Not much protocol required when dealing with her. Because of this, we Teachers feel more comfortable to talk and discuss anything with her"*

4.6   Summary of Chapter

Chapter 4 presented the results of the statistical data analysis as well as the qualitative findings of this study. The results indicated that there was a positive and moderate relationship between principal leadership practices and teacher collegiality. The qualitative findings also complement the quantitative findings, with the testimonies provided by the principals' interviews and the teacher focus groups, regarding the transformational leadership practices demonstrated by their respective principals. They also spoke of the accountabilities challenges that compel them to focus on sustaining excellent school outcomes. This explains the reason as to why high performing school principals do not seem to actively promote teacher collegiality as it should. These results also provide new directions of inquiry, which is presented in the final chapter as 'recommendations for future research'. The following chapter will continue with a discussion of these findings, according to the objectives of this study.

CHAPTER 5: DISCUSSION OF FINDINGS

The purpose of this chapter is to present the results of this study, obtained through the analysis of data in the preceding chapter. The following sub-sections discuss the findings, driven by the research objectives, and explains its implications on how the findings fit in with published literature on this topic.

This research study explored the various aspects of principals' leadership practices and teacher collegiality found among Malaysian high performing daily secondary schools and hereby seeks to interpret the findings based on the following research objectives that aimed to determine the following:

- The relationship between principal leadership practices and teacher collegiality.

- The predominant principal leadership practice based on the five exemplary leadership practices (Model; Inspire; Challenge; Enable; Encourage).

- The predominant dimension of teacher collegiality and the differences among the seven dimensions of teacher collegiality (Mutual Support; Observing; Joint Planning; Sharing Ideas; Teaching; Developing Curriculum; Sharing Resources).

- The principal selection process and the leadership preparation trainings for principals of high performing schools.

- The principal leadership practices demonstrated by each of the sample high performing schools.

5.1   Research Objective 1

- To determine the relationship between principal leadership practices and teacher collegiality in Malaysian high performing daily secondary schools.

One of the main aims of this study was to investigate the relationship between principal leadership practices and teacher collegiality. The results of the Pearson Correlations and Multiple Linear Regression analyses were presented and discussed in sub-sections 4.3.1 and 4.3.4. The Pearson Correlation test showed that principal leadership practices were moderately correlated with teacher collegiality. This can be inferred that, inspite of the Ministry's accountability mandates, which require high performing school principals to be accountable for ensuring excellent school outcomes, there was still a moderate and positive relationship that exists between these two variables

With evidence suggesting that principals influence teachers collegiality through direct and indirect means (Park and Lee, 2015; Tschannen-Moran, Gareis, and Bryant, 2015), the present research study identified a moderately positive correlation between Principal Leadership Practices and Teacher Collegiality in Malaysian high performing day schools, with Principal Leadership Practices assuming 37% of the variance in Teacher Collegiality. The results of this study proved that the same applied to Le Fevre and Robinson (2014), where principals demonstrated consistently low to moderate levels of skills, in their attempt to change the culture of "comfortable collegiality" among their teachers. However, Smith & Amushigamo (2015) revealed how an engaged school leadership had created a collaborative school culture involving a 'web of relationships' held with teachers and students, while Minckler (2013) provided evidence of moderate to high correlations between transformational leadership and teacher working relationships.

The results of the Multiple Regression analysis, with teacher collegiality as the dependent (criterion) variable and principal's transformational leadership practices as the independent (predictor) variable, further revealed the proportion of variance between these two variables. The contribution of the predictor variable towards the variance in this

study, was reported based on the Adjusted R^2 value ($R^2_{adj} = 0.37$), because this value could give a better estimation of the true population value. The results of the multiple regression model successfully indicated that the predictor (Principal's Transformational Leadership Practices) accounted for 37% of the explained adjusted variance in Teacher Collegiality, and that 63% is unaccounted for. Moreover, given the statistical significance ($p < .001$) and a Regression Model that was considered an acceptable and moderate fit, (F (5, 284) = 34.45, $p < .001$) these findings further indicated that encouraging teacher collegiality, does not appear to be given a very high priority among these principals of Malaysian high performing schools. It may further be the case where these principals may not have taken the effort to build stronger collegial relationships and the capacity needed to steer collegiality among teachers. This could also be associated with the relentless drive for these school leaders to meet standards of accountabilities for high performing system leadership in Malaysia. '*Shift 5* of the Malaysian Education Blueprint, (2013) has specifically highlighted the accountability mandates that require Malaysian high performing principals to ensure excellent and effective schools. Moreover, the non-performing school principals, were at risk of losing their gained recognition and high profile professions, by being transferred to a lower performing school. The general belief about the principals in this research, is that they were consciously trying all attempts to comply with the MOE's mandated policy changes, which were considered necessary for effective high performing leadership. Therefore, these are the reasons that can justify why the findings of 'moderate correlations' declared in this study further imply that teacher collegiality is not an overpowering concern among these high performing principals of this study.

Further analyses using Multiple Linear Regression proved some other interesting findings concerning the strength and 'direction' of the relationship between individual

predictors of Principal Leadership Practices and the criterion, Teacher Collegiality. The Standardised Beta Coefficients in Table 4.15 (below), which reflect the relative effects of each leadership practice on 'teacher collegiality', indicated that the highest predictor of Teacher Collegiality, in this study was *'Inspire a shared vision'* ($\beta = .41$, $p < .001$).

Table 4.15: Multiple Linear Regression Results

Model Principal Leadership Practices	Standardized Coefficients Beta	t	Sig.	Correlations	Collinearity Statistics Tolerence	VIF
(Constant)		10.599	.000			
Model the Way	.057	.583	.560	.509	.230	4.349
Inspire a Shared Vision	**.412**	4.006	**.000**	.588	.207	4.822
Challenge the Process	**-.172**	-2.042	**.042**	.422	.310	3.224
Enable Others to Act	-.025	-.265	.792	.495	.242	4.124
Encourage the Heart	**.331**	3.186	**.002**	.579	.203	4.922

This was followed by *'Encourage the Heart'* ($\beta = .33$, $p = .002$), where it was found to have a positive and significant effect on Teacher Collegiality. As for the leadership practices, *'Model the Way'* ($\beta = .06$, $p = .56$) and *'Enable others to act'* ($\beta = -.03$, $p = .79$), these practices had no statistical significance on Teacher Collegiality. Table 4.15 (above) also reported the multi-collinearity statistics for the variables of principal leadership practices. The values of Variation Inflation Factors (VIF) were less than 5, and so it can be concluded that the multi-collinearity phenomenon among the variables does not exist.

Recent studies that have used Kouzes and Posner's 'Five Leadership Practices Model', have shown that some of these leadership practices are more popular than others (Caza & Posner, 2014; Posner, 2014a; Tahir et al., 2014). In Zagorsek, Jaklic, and Stough (2004),

the findings were the complete reverse compared to this present study, whereby 'Model the way' and 'Enable others to act' were the most highly rated leadership practice.

The discussion that follows describes the triangulation between three data sets (the Multiple Regression results, Principal G's interview and the focus group responses of School G) to reinforce and explain why Principal G was admittedly challenged by the system, and the reverse effect that the practice *'challenge the process'* had on *'teacher collegiality'*. Since the Regression results revealed that *'Challenge the Process'* had a significant but inverse effect on *'Teacher Collegiality'*, ($\beta = -.17$, $p = .04$) this meant that an increase in *'Challenge the Process'* will result in a decrease in *'Teacher Collegiality'*. By triangulating these data sets, this reverse effect that *'challenge the process'* had on *'teacher collegiality'* was found to be particularly evident, with the findings of School G. Considering the highest Mean score that School G attained for the leadership practice *'challenge the process',* the triangulation does explain the challenges that Principal G imposed on her teachers, which seemed to show that it had an inverse effect on the teacher's collegial relations.

Another point of consideration is the increased accountabilities placed on Malaysian high performing school principals, to sustain school excellence and remain in 'Band 1'. Table 5.1 and Figure 5.1 (p. 242) reveal the band scores and the band trend of the sample schools yearly performance over a 3-year period. Figure 5.1 (p. 242) illustrates that Schools A, E and I have retained their Band 1 status over the period 2011 to 2013, while School G and B have continued to remain in Band 2. As for School S, there has been an improvement indicated in 2013 after School S achieved Band 1 status.

Table 5.1: HPS Sample Schools: Band Trend
Source: BPSBPSK (25 July 2014)

High Performing Sample Schools	2011	2012	2013
School S	2	2	1
School A	1	1	1
School G	2	2	2
School B	2	2	2
School E	1	1	1
School I	1	1	1
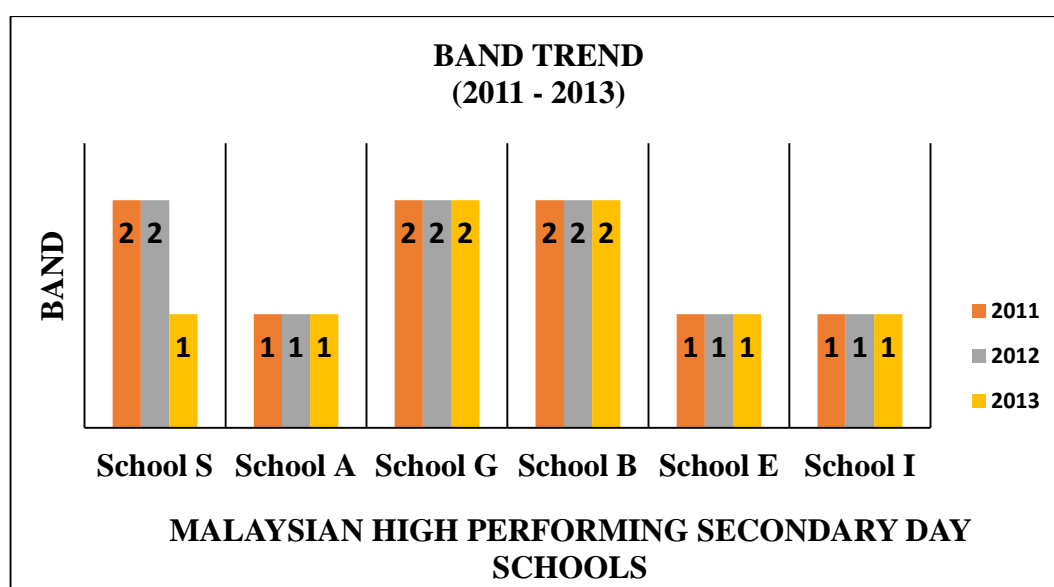
Figure 5.1: Band Trend of HPS (2011 – 2013)

Faced with the added pressure of having to meet these KPI's, these high performing school principals tended to be insistent on school-wide improvement, in order to drive excellent school outcomes. The following section presents the qualitative interview findings of Principal G.

Qualitative findings: Interview - Principal G:

During the interview, Principal G admitted that School G had been in Band 2 from the time this school was conferred with the high performing status, adding that the teachers

and students were much aware of her desperation to improve the annual academic results, with the hope of attaining Band 1 status:

"School G is in Band[1] 2… Yes we are still in Band[1] 2… Correct."

"To be in Band 1, the Composite Score should be 90%. And we had like 80 something."

"We are already SBT[2] and we're getting all the funds and the idea is to push Schools. So we should be pushing and I can't do it alone. So I have to instil in teachers and students, up to a stage I think I feel that everybody is thinking I'm so obsessed with Band[1] 1"

(Principal G)

[1]*Band*: School Ranking category that signifies the school's performance index; [2]*SBT:* Malaysian High Performing School.

At the same time, Principal G also acknowledged that she was aware of the feelings of discontent among some of her teachers and those who bicker about the demands placed on them:

"Of course I do reprimand Teachers. People are not perfect, you know. People do make mistakes. I know people are upset with you for whatever reasons. I know that they are angry with you, but it's just for a short while"

(Principal G)

Principal G also revealed the existence of teacher cliques in School G:

"But there are also, groups of Teachers, which are close to each other. We cannot help that"

(Principal G)

Usually teacher cliques were formed among groups of teachers who shared common interest among each other. At the same time, the existence teacher cliques may suggest a certain amount of teacher collegiality among these cliques. On the contrary, it could also indicate, low levels of teacher collegiality reflected across the entire teacher population

in each school, due to differing interests and mindset among the individual teacher cliques. However, as for the leadership style of Principal G, she appeared to adopt an authoritarian approach, whereby decisions and actions were enforceed upon teachers, leaving them very little room for negotiations. The following is an extract of Principal G's interview:

"I want this thing to go on. To me it's a must".
"If I make a decision, and they want to overrule, so what they do is, they will accept my decision first, then sometimes they discuss… there were some reservations la… So a group of them come back to me to discuss… I understand what they are saying… So finally after the discussion… I feel that, I have compromised la. But the Programme is still on"

(Principal G)

Besides, the following teachers at School G expressed their feelings of discontentment and the work stress that they have to endure in order to cope with these school's challenges:

"Yes it's very challenging – sometimes feel stress"

(Respondent G1)

"We have to every year continue doing better… so it become very burden for us… To sustain is difficult"

(Respondent G2)

"I tell you … it's terrible… we Teachers also trying so hard to help the Students… For our principal … nothing is impossible … Everything should be possible"

(Respondent G3)

Considering the stressful work environment that these teachers have to endure, this may further provoke feelings of hostility among the teachers, which could have a negative impact on the principal-teacher relationship. A school climate which resonates discontentment among the teachers, will certainly not be conducive to foster teacher collegiality. As a result, the triangulation of these data sets provides a rationale as to how the leadership practice *'challenge the process'* could have an inverse effect on *'teacher collegiality'*.

There is limited recent school leadership literature on the impact of principal's leadership on teacher collegiality. However, the recent findings of Park and Ham (2014), revealed that the principals' leadership had a negative influence on the teachers' engagement in collaborative activities and collegial interactions. These findings were found to be consistent across three countries of varying socio-cultural backgrounds. In addition, Brezicha, Bergmark, and Mitra (2014) found that by encouraging horizontal teacher support, and teacher social networking, there was an improvement in the teachers understanding of their workplace reforms and this facilitated their participation in the process. Park and Lee (2015) was another 4-country comparison study that showed evidence of a positive school climate on teacher collegial interactions. Again, Owen (2014) showed that teacher collegiality was a pivotal characteristic found to have an impact on the professional learning communities of three innovative schools in Australia.

5.2   Research Objective 2

- To determine the predominant principal leadership practice, among Malaysian high performing daily secondary schools, based on the five transformational leadership practices (Model; Inspire; Challenge; Enable; Encourage).

The Mean scores were calculated and was used to identify the most exhibited transformational leadership practice found among the principals of high performing secondary day schools in Malaysia. Table 4.3, on p. 437 reports on the Mean and Standard Deviation for the five constructs associated with transformational leadership practices. The Mean scores for each transformational leadership practice are arranged in descending order to rank them from the most exhibited construct of transformational leadership practice to the least exhibited construct of transformational leadership practice. The results indicated that the construct *'Inspire a shared vision'* ($M = 2.89$; $SD = 2.41$) was the highest ranked transformational leadership practice, as represented graphically in Figure 4.5 (p. 141). This was followed by 'Encourage the Heart', 'Model the Way', 'Challenge the Process' and finally 'Enable others to act'.

The highest Mean score attained for *'Inspire a Shared Vision'* implied that the teachers of these schools perceived that their Principals had the ability to envision a strategic fit for their respective schools and were capable of inspiring them in realizing the vision and mission of their shared school goals. The findings of this study is in line with a similar local quantitative research study (Selamat, 2012), whereby the daily secondary school teachers perceived the most exhibited dimension of their principal's transformational leadership behaviour as having "a widely shared vision for the school" ($M = 5.15$, $SD = 1.05$). A further comparison with another recent study Caza & Posner, (2014) showed that there were consistencies in the findings with the present research study. Caza and Posner (2014) investigated the leadership expectations of inexperienced followers that differed in national origin (Singapore and United States) and the results indicated that both groups preferred inspiring and caring leaders, but the Singaporeans did not expect their leaders to be enabling or challenging, as compared to the Americans. This study further predicted that the differences in leadership expectations was associated with their cultural values.

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On the same note, it is interesting to note that the findings in Caza and Posner (2014) do seem to draw parallels with the present Malaysian research study, as Malaysia and Singapore have very similar socio-cultural backgrounds, and thus could imply the reasons behind the similar findings.

The One-Way Repeated Measures ANOVA test results further found that there were statistically significant differences among the five leadership practices, and that the difference in effect size among each of these leadership practices, accounted for 29% of their variability, $F_{(3.2, 924.2)} = 117.94$, $p < .001$, partial $\eta^2 = 0.29$.

The Bonferroni Post Hoc analysis further revealed that there were statistical significant differences between each pairwise constructs, at $p < .001$, except for one pairwise combination between *'Challenge the Process'* and *'Enable Others to Act'*, ($p = 0.13$). Figure 4.6 (p. 142) is an illustration of the pairwise comparison among the constructs of Principal Leadership Practices, in decreasing order:

In this study, a line-up of each of these constructs in decreasing order, showed that according to the teachers perceptions, there were significant differences found among each of the following pairwise constructs of Principal Leadership Practices:

- *'Inspire a Shared Vision'* ($p < .001$).
- *'Encourage the Heart'* ($p < .001$).
- *'Model the Way'* ($p < .001$).

However, there were no statistically significant difference perceived by the teachers between *'Challenge the process'* and *'Enable others to act'*, at $p = 0.13$. In other words,

the teachers perceived their principals practices to be the same when it concerned 'challenging the process' and 'enabling others to act'.

There have been numerous studies in various settings that have measured leadership practices based on the five exemplary leadership model and, have reported these five leadership practices in varying frequencies. Kouzes and Posner (2002) reported that 'inspiring' was perceived as the least frequently engaged leadership practice among a group of managers in a business environment. Then again, in more recent study, Posner, Crawford, & Denniston-Stewart, (2015), the rank order of these leadership practices differed across this longitudinal study and 'enable others to act' was reportedly the most frequently engaging leadership practice among this group of Canadian students. Then in another recent study, Posner (2014a) explored the leadership practices of students, and it was reported that 'Enable Others to Act' was the leadership practice most frequently engaged in, followed by Encourage the Heart, Model the Way, Inspire a Shared Vision, then Challenge the Process.

5.3   Research Objective 3

- To determine the predominant dimension of teacher collegiality among the seven dimensions of teacher collegiality (Mutual support and trust; Observing one another teaching; Joint planning and assessment; Sharing ideas and expertise; Teaching each other; Developing curriculum together; Sharing resources).

The Mean scores were calculated and was used to identify the most dominant dimension of teacher collegiality found among the high performing secondary day schools in Malaysia. The results indicated that the construct, *'Teaching each other'* ($M =$ 2.98; $SD = 2.32$) was the highest ranked construct of Teacher Collegiality among the high

performing daily secondary schools in Malaysia, as represented graphically in Figure 4.7 (p. 144). The highest Mean score attained for *'Teaching each other'* implied that the teachers in this study perceived *'teaching each other'* as the main contributing factor of teacher collegiality, seen as a teacher-team concept that fosters collegiality.

There have been consistent findings about the norms of collegiality that are positively associated with *'teaching each other'*. Several studies have shown the improved productivity in the teaching arena due to the sharing of teaching practices among teacher teams (Horsey, 2010; Johnson & Kardos, 2002; Price, 2011; Roy, 2007). Horsey (2010) described shared teaching practices as professional development sessions and elaborates on the positive relationships that have developed among the teachers, in their ongoing search for skill-based techniques in improving instruction.

5.4 Research Objective 4

- To determine the principal selection process and the leadership preparation trainings for principals of high performing schools.

The content analysis of four principal interview data outlined under Section 4.5.1, was used to specify the basis for the selection of principals in Malaysian high performing schools. The following excerpts extracted from the Principals interviews, set a basis for the argument that guides this discussion.

The responses from both Principal I and Principal A seemed indecisive, as they were not totally in the know about the selection process of being appointed as a principal and the criteria required for school leadership in Malaysian high performing schools.

> *"The ... PPD[1] will -- I suppose recommend our names -- I mean -- forward our names to the JPN[2] ... JPN[2] will ... do a check on us and then ... forward to KPM [3], I suppose"*
>
> **(Principal I)**

[1] *PPD*: District Education Department; [2] *JPN*: State Education Department; [3] *KPM*: Ministry of Education.

Principal A's responses further indicated that she was either recommended by her ex-Principal or hand-picked by the MOE to officially report for duty at a specified school, to embark on her new role as principal and school leader, on a specified date:

> *"How the selection process took place, I don't know… maybe my Principal at that time mentioned me … but I'm not sure… So how was the way they choose, I don't. All I know is that I was called to come to the Department, where many others were also present and a memo was given to me. So when I opened and read, that was when I realised that I was appointed as a School Principal. It was so simple."*
>
> *"The selection is from the District Office, then the names are sent to the Education Department. So when I received my Memo, I was supposed to report for duty the following day as a Principal in another school. That was all. It was so simple"*
>
> **(Principal A)**

Further evidence provided by Principal G and Principal I, suggested that the principal selection process may have been due to seniority, their years of experience as a Senior Assistant and having achieved the job grade scale of DG 48[1]:

> *"I was posted to this School, as a Principal… The appointment was based on maybe seniority because they select Principal from people who have arrived at DG 48[1]. So at that time, I was DG 48[1] and I was a Senior Assistant, so I became the Principal"* **(Principal G)**

[1]*DG 48*: Job Grade level for teachers who are employed in government schools   (MOE Circular, 2013).

> *"I was a ... Senior Assistant for many years ... that helped a lot"* **(Principal I)**

This may be substantiated by the evidence found in Perera et al. (2015, p. 6) which states that most of the senior practicing principals in Malaysia only hold a teaching certificate and were appointed as principals based upon their "seniority and job performance as teachers". The study by Anthony & Hamdan Said (2010) further reported that there were no proper systematic planning regarding the appointment of headship in Malaysian schools, and that the appointment of principals were deemed by the Ministry, based on the seniority of teachers. Moreover, priority was given to teachers who held senior management positions in schools, such as Senior Assistants of Academic, Student Affairs and Co-Curricular, Afternoon Supervisors and Heads of Department.

When probed about their professional training and development and how they were equipped with the necessary capabilities to meet the educational challenges of their high performing school environment, these four principals declared that there were no leadership preparation trainings for school leaders, during the time when they were appointed as principals.

> *"Those days, if you ask me, there were no Courses whatsoever."*
>
> *"I became a Principal 14 years ago, -- in the beginning of 2001. So when I joined in the beginning as a Principal, there were no trainings"*
>
> *"After I first became a Principal there were so many Courses I attended"*
> **(Principal A)**

> *"I had not undergone any training like NPQEL[1] to prepare me for this role. It was like groping around"*
> **(Principal S)**

NPQEL[1]: National Professional Qualification for Educational Leaders.

They also added that, the MOE, through their training arm (IAB) had provisioned special principalship short courses for newly appointed principals:

"No ... I did not undergo any training at all"

"The government's policy then was -- to send us for the 2 weeks -- training for principals in IAB[1] ... so I have my training after that ... a few months after ... -after I become a principal"

(Principal I)

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[1] *IAB*: Institute Aminuddin Baki

"The time when we were appointed as Principals…the earlier batches. We didn't have these opportunities. But when we were Principals, IAB[1] conducted a lot of Courses …Financial, Management…In a way it does help."

(Principal G)

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[1] *IAB*: Institute Aminuddin Baki

Perera et al. (2015) confirmed that some of the senior principals had not undergone any formal trainings that prepared them for school leadership. Instead, according to Jamilah Ahmad and Yusof Boon (2011), principals undertook principalship training only after they became principals, and that is when they underwent workshops and short professional development courses to enhance their leadership skills and knowledge. This was further substantiated by the evidence found in Ibrahim Ahmad Bajunid (2000, p. 62), which claimed that these school leadership trainings were not 'award-bearing' but "principals received attendance certificates" which met the criteria for principalship during that period of time. Moreover, Anthony & Hamdan Said (2010), declared that Malaysia was among some of the countries that did not mandate leadership preparation trainings, as a requirement for the appointment as a school principal. Furthermore, it was not till 1999 that the first national standard for headship (NPQH) was introduced in Malaysia, with the aim of equipping aspiring principals with competency skills for effective school leadership (NPQH - National Professional Qualification for Headship) (Anthony & Hamdan Said, 2010; IAB, 2013; Ibrahim Ahmad Bajunid, 2000). In addition

to this, the findings of the study in Anthony & Hamdan Said (2010), further revealed the disappointment expressed by the NPQH participants regarding the pace of this programme and the manner in which the facilitator's rushed through the syllabus in an attempt to complete the training programme within the constraint of time. This appeared to have a negative effect on their learning. Similarly, international studies such as (Chapman (2005); Darling-Hammond, LaPointe, Meyerson, and Orr (2007); Mitgang and Maeroff (2008) have also highlighted the same concerns that training programmes for school leaders are not adequately prepared and thus do not provide a supportive environment for effective school leadership. In comparison to this present study, two of the principals who were interviewed, also shared similar sentiments regarding how rushed and compact these courses were:

> *"These Course are the knowledge which we need, but it is like 3 days, 5 days... Input, input, input, input… all the facts"* **(Principal G)**

> *"But -- I don't find it so extraordinary ... Because everything was rushing - rushing - rushing – rushing ... it used to be 1 month ... Yeah they compact to 2 weeks"* **(Principal I)**

Principal S further informed that all the while, there were no prerequisite formal training programmes that principals had to undergo, prior to being appointed as a principal, adding that as of 2014, the NPQEL (National Professional Qualification for Educational Leaders.) had been made mandatory as one of the criteria required for principal appointment in Malaysian public schools:

> *"From this year* [2014] *NPQEL has been made compulsory, meaning that, one of the criteria to be Principal is that they have to have NPQEL when they apply. Otherwise, they won't be accepted"* **(Principal S)**

[1] *NPQEL:* National Professional Qualification for Educational Leaders.

According to IAB, (2013) and Perera et al. (2015), the NPQEL is currently the Malaysian pre-service principal leadership programme, made mandatory since 2014, for aspiring principals who will assume positions as public school principals, upon the successful completion of the NPQEL. Until 1999, Malaysia had no pre-service principal trainings in place, except for post-service short courses for principal professional development. Only recently, has there been an increased attention directed at principal professional development, as claimed in Anthony et al. (2015) where a provisional government allocation for education and training was prioritised on the agenda of the 10th Malaysian Plan. Taking into account the growing importance of professional preparatory training and development for school leaders, the Malaysian Education Blueprint, (2013) provided a professional growth plan for principals' strategic leadership and the NPQEL was restructured and implemented in line with these objectives.

5.5   Research Objective 5

- To determine the principals' leadership practices demonstrated in four of the sample high performing schools.

The findings of this research study culminates with the highlights of four high performing sample schools, that had participated in mixed methodology probes, based on a quantitative and qualitative research design. A discussion of the findings will be presented in two parts. Part 1 will showcase the triangulation between the survey, principal interview and focus group discussion, to highlight the school principal that emerged as the most transformational leader, based on the five transformational practices of exemplary leadership, which this present study was framed on:

- Model the Way
- Inspire a shared vision

- Challenge the Process

- Enable Others to act

- Encourage the Heart

Part 2 showcases the success stories of four high performing daily secondary schools, and highlights the features that account for their school excellence.

5.5.1   Part 1: Transformational Leadership Practices

The sub-sections that follow present the results that were obtained through the quantitative data analysis addressed in Research Question 5 (see Section 4.3.5 on pp. 151-154). These findings are presented as a graphical representation, to illustrate the most transformational school principal, in the context of this study.

The results indicated that School A ranked the highest Mean score for the following four exemplary leadership practices: Model the way; Inspire a shared vision; Enable others to act; and Encourage the heart. However, for the leadership practice 'Challenge the process', School G achieved the highest Mean score. The quantitative results were then triangulated with the mixed-methodologies used in this study, as described in Gigante & Firestone, (2008). Triangulation reinforced the external validity of the present study through the use of multiple data sources such as questionnaires, interviews and focus groups discussions, as described in Merriam, (1988).

5.5.1.1   Model the Way

A descriptive analysis of the results obtained through the survey, confirmed that School A emerged as the school with the highest Mean for the leadership practice, *'Model the Way'*.

> **Survey results for the leadership practice 'Model the way':**
>
> ***School A*** had the highest Mean score for the construct, ***'Model the way'*** *(M = 2.22, SD = 1.02)*. Refer to *Figure 5.2.*
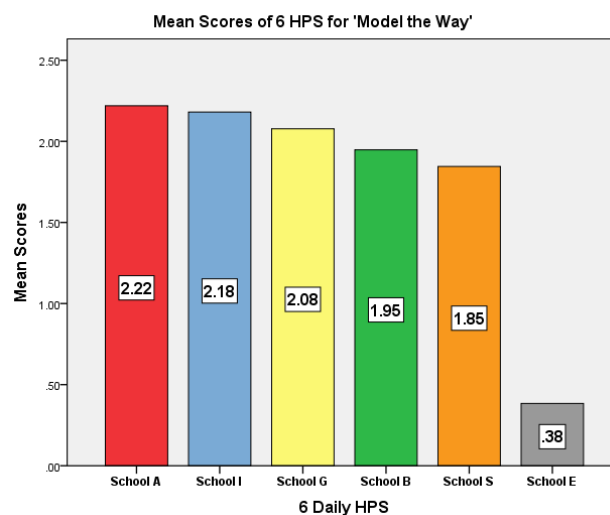
Figure 5.2: School A – Highest Mean for 'Model the Way'

A triangulation between the survey results of School A, the interview of Principal A and the focus group responses of School A, was used to establish the reasons as to why School A scored highest for the leadership practice, 'Model the way'.

Principal A leads by example and is seen in the front lines, spending a large part of the day, working with stakeholders in dealing with improving school efficiencies. The following is an extract taken from the qualitative findings of Principal A's interview:

"Even though it may be a small thing, but I teach them how to organise an event…"

"When it comes to the filing system, I also show at the beginning, how to do it. Then later I don't need to show again".

"I kept having meetings, constantly showing them how to do things and reverted back to the old style of management… the new Teachers also learnt along from me … This means I guide the Teachers".

"For my students it's also the same… I don't just leave the students to choose whatever they want to talk about. I guide them by setting 8 topics and I give them these topics very much earlier… If the children are left without being guided, they will be blur. So I provide the necessary information."

(Principal A)

In setting the direction, the teachers at School A, felt good about the guidance they received from Principal A, and about what their collective missions were. The teachers also grew to model after their principal, through the daily interpersonal guidance received from Principal A, and this is how the teachers developed their confidence to act independently, with the renewed sense of empowerment they experienced. The following is an extract from the focus group responses of School A:

"Even if any Principal comes, we already have a system in place. They may want to add on a few more things and if they do, we Teachers will just follow as we are told"

(Focus Group Responses of School A)

The triangulation of the three data sets indicated that Principal A was clear about her philosophy of school leadership and was consistent in setting directions and ensuring that the teachers and students adhered to the principles and standards that had been agreed upon. These findings implied that Principal A was indeed a role model, who was capable of communicating the necessary clarity and conciseness, instrumental for instilling the culture of excellence in School A. Principal A may also be viewed as a pillar of support

that guides her teachers and students, in their strife for school excellence. Hopkins, Stringfield, Harris, Stoll, and Mackay (2014) stressed that setting directions with clarity of goals and standards of professional practice are essential operational practices found in highly effective education systems. According to Nor Azni Abdul Aziz, Foo, Asimiran, and Aminuddin Hassan (2015), effective school leaders who are competent in leadership skills and knowledge, are capable of being role models for teachers. Consequently, effective leaders have the capability to develop the capacity for change among employees (Santhidran, Chandran, & Borromeo, 2013). This may suggest that since Malaysians are culturally in the habit of "obeying their leader" out of respect, this could imply that if Malaysian school leaders were to "model the way", teachers would more likely conform and model after their school leader (Rees, Hassard, Rees, & Johari, 2010).

5.5.1.2   Inspire a Shared Vision

The results to the quantitative findings of this present study, showed that 'Inspire a shared vision' was found to be the most dominant principal leadership practice, among the six sample HPS in this present study. According to Chopra and Fisher (2012), having a vision is the very essence of leadership and that a vision needs to be articulated clearly and forcefully on every occasion. The results obtained through the survey questionnaire, confirmed that School A emerged as the school with the highest Mean for the leadership practice, *'Inspire a Shared Vision'* (see Figure 5.3 on p. 259):

Survey results for the leadership practice 'Inspire a shared vision':

School A had the highest Mean score for the construct, *'Inspire a shared vision'* ($M = 4.63$, $SD = 1.14$). Refer to *Figure 5.3*.
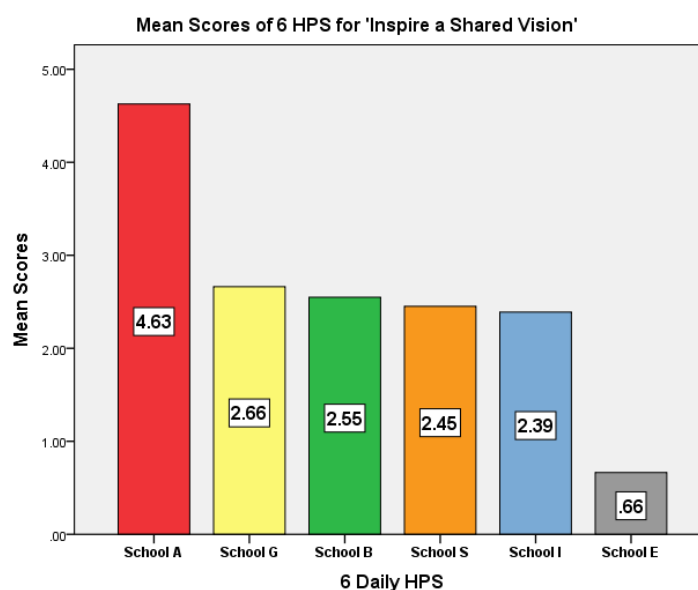
Figure 5.3: School A – Highest Mean for 'Inspire a Shared Vision'

In order to establish the reasons as to why School A scored highest for the leadership practice, 'Inspire a Shared Vision', a triangulation between the interview of Principal A and the focus group responses of School A, was carried out.

The interview responses suggested that Principal A had a well-defined vision carved out for School A and her leadership began with formulating school goals according to the school performance targets that had to be met. The added benefit that this principal had, was having been a teacher at School A previously, and so from day one, Principal A enlisted the teachers in a compelling image of what the future of School A should aspire to become. During the interview, Principal A revealed her intent to re-enact the previous school culture of School A. With this, Principal A began her leadership by building a consensus around the senior teachers who were already familiar with the school culture that surrounded the previous style of leadership. The following is an extract from Principal A's interview:

"So when I worked here I learnt the School culture. I wanted the same culture to be reinstated so I told the Teachers that they have to work really very hard"

"Because I introduced a model by dividing the students into 3 groups called, 'Formula 1, Highway and Jalan Kampung' …"

"So I drilled the 'old' Teachers by reminding them of how this School was run previously, saying, "you all know me and I know you… You know how I worked at that time and I know the way you worked at that time. So you have to back me up strongly."

"I got more than 20, so I wanted to revive the previous nostalgia of leadership… I told the teachers that since I am back, I want things to go back to how it used to be in those days… Like last time… together with me"

"We give a bit but they will do heaps more."
(Principal A)

The following focus group responses by the teachers, suggested that Principal A has the ability to inspire the teachers, and was reputed to have established a school-wide shared vision of commitment to high standards. According to Chopra and Fisher (2012), great leaders possess an attitude that is invariably upbeat, optimistic and courageous. Through motivation and by articulating an appealing vision, Principal A demonstrated the ability to energise and inspire her teachers, to the extent where they looked upon School A's vision as their own. This is how Principal A had garnered trust and support from her teachers, in realizing the school vision, based on high standards of school excellence. The following is an extract taken from the focus group responses of School A:

"The Principal will provide us with ideas that can help facilitate our Programmes. It is the Principals support that is very useful for the running of our Programmes."

"I feel that our Principal places a lot of trust on me as the Teacher-in-charge of the School Band's performances. The other area where she also displays full trust is when it involves financial transactions… the Principal's support can help

The triangulation of the three mixed-methods, described above, established that Principal A inculcated the sense of shared purpose in her teachers and was portrayed as a leader with a strong sense of determination for realizing their school vision. It is crucial that school leaders communicate a strong school vision and clearly defined goals (Roy, 2007). Hopkins et al. (2014) further established that a strong vision coupled with teacher capacity building, within an accountability framework, has shown an improvement in student achievements. In a local study, Ijaz Ahmad Tatlah et al., (2015, p. 48) accentuates the importance of the principal inspiring a shared vision where vision is viewed as "a powerful commitment to the future of a school".

5.5.1.3   Challenge the Process

Quantitative findings of 'Challenge the process'

A descriptive analysis of the results obtained through the survey, confirmed that School G emerged as the school with the highest Mean for the leadership practice, *'Challenge the process'*.

School G had the highest Mean score for the construct, *'Challenge the process',*
(M = 2.18, SD = 1.62). Refer to *Figure 5.4.*
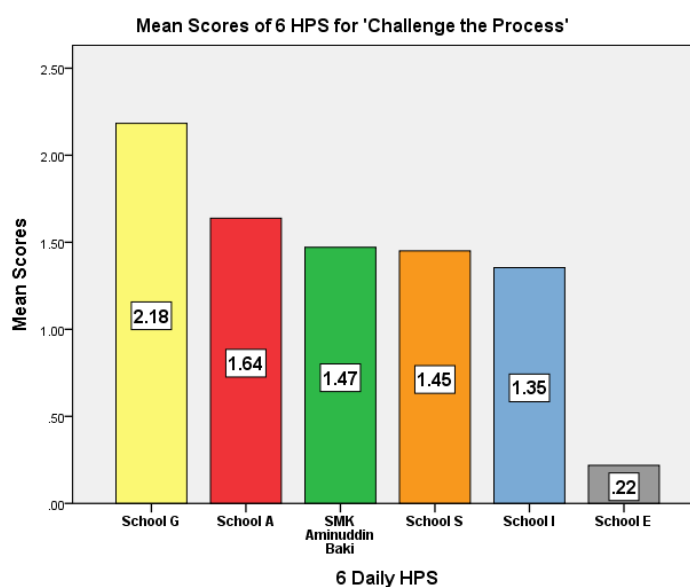
Figure 5.4: School G – Highest Mean for 'Challenge the Process'

A triangulation between the survey results of School G, the interview of Principal G and the focus group responses of School G, was used to establish the reasons as to why School G scored highest for the leadership practice, *'Challenge the Process'.* According to Chopra & Fisher (2012), great leaders are often risk takers, who refuse to accept defeat or the status quo. Instead they seize the opportunity and accept the challenge willingly.

Qualitative findings: Interview - Principal G:

Among the other daily secondary high performing schools, School G was viewed as a school that was bustling with various on-going 'business activities'. During school hours, teachers and students were actively seen engaged in the running of these business setups, as this 'entrepreneurship' school activity was made compulsory by Principal G, for all

students in School G to be involved in. During the interview, Principal G spoke about these business setups that were managed by the teachers and students, within the school premises. Principal G added that these entrepreneurial activities were part of the schools 'entrepreneurship' ethos which drove their school performance outcomes. The interview responses presented below, portrayed Principal G as a strong and confident leader who was charged with the challenges of developing School G, with the vitality and drive necessary to achieve the desired school outcomes.McNair (2009) affirmed that the leader's task is to applaud effort, while continuing to point to the ultimate goal. The following are extracts taken from Principal G's interview:

"Yes we are still in Band 2… I've been talking about this until I think Teachers and Students are thinking that I'm so obsessed about getting Band 1."

"All Schools are compulsory to have a School Cooperative. It's like a business activity, which is compulsory. … But here, because we want Entrepreneurship to be the Ethos of the School and we want as many students to be involved, so we operate these sites,… one bookshop in the School, we also have one 'kedai'[1] [grocery store] *in the school hostel. We also have our own Cafeteria, selling food, drinks and snacks. We also have a Cybercafe, we have a Fitness Centre, we are involved in Catering, in Tourism, in Agriculture and a lot of other business activities, which has generated profit for the School Co-op."*

"When I first came in, it … membership only a few. Now I have made it compulsory – the whole School are members of the School Co-op."
(Principal G)

[1]*Kedai:* grocery store.

All the effort that Principal G has put in to transform School G into a highly challenging school environment, in line with their school goals, has paid off well:

"Our School Co-op…last financial year, we touched RM180,000 profit."
(Principal G)

Principal G was also proud to reveal the comments and praises she had received from ex-students regarding her good work and that their successful careers and what they have learnt during their schooling years at School G, was owed to her leadership:

> *"My students who have left School, come back to tell me, "Teacher, keep doing what you have been doing … it is because what you have done in this School that we are where we are now".*
>
> *"It was not like they are all A+ students, but because of all this opportunities that they had and they managed to become leaders, wherever they go. They can coordinate, they can organise, they can be Group Rep… that kind of thing… So I'm happy la. I said, never mind. I'm obsessed with Band 1, is all because of the pressure. But, as a School, we are fine. We are happy"*
>
> **(Principal G)**

Qualitative findings - Focus Group Responses of School G:

The Teachers at School G spoke about the challenging school environment that Principal G was keen to preserve. Although stressful, the teachers perceived Principal G to be head strong and in control of the key aspects of school leadership, where their principal assumed enormous accountabilities for the overall performance of School G. The following is an extract taken from the Focus Group discussion at School G:

> *"Yes it's very challenging – sometimes feel stress la but once things done – all paperwork done – very happy. And one thing good, we are not scared, or phobia … we respect her… She will never say no. You come in, discuss. This is the good way lah. Easy to work with her. That is her strength. Her aura is such where people say that – She can convince people to work for her…Not everyone is the same".*
>
> **(Respondent G1)**

In the Malaysian high performing school environment, principals are compelled to respond to policy compliance demands and they have to find ways of performing within the accountability parameters (Shaharbi, 2010). Faced with the increased challenge of

ensuring that their students perform at a national standard, these principals are adopting a shared responsibility with teachers, for collaborative educational transformation. Lavigne & Bozack, (2015) described the complexities that could arise in highly challenging school environment: heavy workload, increased paperwork, and long hours. Various studies have also shown that the challenges and demands principals place on teachers can undermine their motivation (Day & Gu, 2009), lead to burnout (Dicke et al., 2015; Gavish and Friedman (2010); Van Droogenbroeck, Spruyt, & Vanroelen, 2014), and increase teacher attrition rate (Sanders, 2015; Skaalvik & Skaalvik, 2015). With this, the teachers in this study also seem to be at risk of burnout, while the principal appears to be faced with the dilemma of having to deal with system accountabilities, yet worry about motivating their teaching staff, in order to garner their support.

5.5.1.4   Enable Others to Act

A descriptive analysis of the results obtained through the survey, confirmed that School A emerged as the school with the highest Mean for the leadership practice, 'Enable others to act':

Survey results of the leadership practice 'Enable others to act':

School A had the highest Mean score for the construct, 'Enable others to act'
(M = 1.93, SD = 0.63) Refer to Figure 5.5.
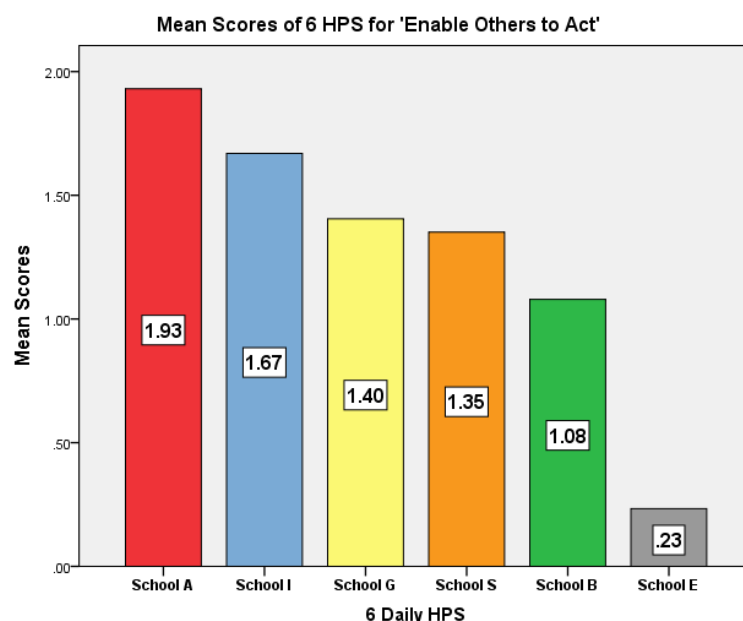
Figure 5.5: School A – Highest Mean for 'Enable Others to Act'

These findings concur with the findings reported in Posner, (2014a), where 'Enable Others to Act' was the leadership practice most frequently engaged, by the student leaders. Subsequesntly, a triangulation between the survey results of School A, the interview of Principal A and the focus group responses of School A, was used to establish the reasons as to why School A scored highest for the leadership practice, 'Enable others to act'.

Qualitative findings: Interview - Principal A

Principal A had created a cadre of teachers, who were committed to shared decision-making. Her leadership was seen to empower her teachers, in assuming professional responsibilities, for exercising autonomy in decision-making. The following interview responses showed that Principal A practiced 'enabling others to act' with her teacher teams. In doing so, it build their confidence and self-esteem as teachers felt empowered with the freedom of choice to make autonomous decisions, about matters concerning

School A, without having to seek her prior consent. The following are extracts from Principal A's interview:

> *"When I'm not around and my Senior Assistant also not around, but all my 'Guru Kanan[2]' can manage the School. They can represent me in various situations and they can make decisions."*
>
> *"If I have to go for a meeting at the Ministry or wherever, I don't need to call up the School because my 'PK[1]' is there. You can ask my PK … PK can make decisions. No problem. Unless she can't make a decision, then only call me … Meaning I 'distribute' to my teachers."*
>
> *"Let's say the meeting concerns the marching band's competition, I will ask the "Guru Kanan[2]" to go or the Band Teacher to attend. That fellow can make decision on behalf of me. They don't need to say, "I have to get permission from my Principal first"… you make a decision!"*
>
> *"Let's say during the meeting, this school was informed that they have to present a show. So that fellow can make decision…"* **(Principal A)**

[1]*PK:* Senior Assistant. [2]*Guru Kanan:* Senior Teacher.

Principal A is seen to possess the qualities of an outstanding leader, who has inspired her teams and is capable of releasing the human potential and possibilities that make them feel passionate about being part of the action (Ferguson, 2006).

Qualitative findings - Focus Group Responses of School A

The focus group respondents shared favourable views about Principal A being instrumental in building spirited teams, while promoting cooperative goals among the teachers. According to Chopra and Fisher (2012), great leadership unlocks people's potential to rise above the banality and strife of their own common existence. Principal A has been distributing her leadership and sustaining extraordinary efforts among her teachers, while making them feel highly competent and capable of achieving their desired

school outcomes. The following are extracts taken from the focus group discussion at School A:

> *"We all work as a team. The Principal handles the management side of things. We work together... The Principal does the monitoring but if the Teachers wish to organise any programme, we do it together."*
>
> *"Each of us know our own roles and responsibilities… Most of the Teachers in this School know their work and what to do… This culture has been this way for such a long time."*
>
> *"Management Meetings are fixed to be held once a month. But if there are other discussion needed we do arrange ad hoc meetings to deliberate over teacher's duties, so that everyone knows what to do and needn't be reminded."*
>
> *"Sometimes, there is no time for a meeting but if we get an instruction the day before, we act on it the following day".*
>
> *"We hold a meeting only once and when everyone has understood what needs to be done, action is taken immediately"*
>
> **(Focus Group Responses of School A)**

On the concept of 'enabling others to act', there appears to be some degree of overlap between transformational and distributed leadership practices, seen by the dynamics of principal-teacher interactions (Robinson, 2008). The integration of these two practices are evidenced by the extent to which principals have built collaborative team structures and promoted autonomous decision-making among their teachers and this has served their goals of educational excellence (Hopkins et al., 2014).

5.5.1.5   Encourage the Heart

A descriptive analysis of the results obtained through the survey, confirmed that School A emerged as the school with the highest Mean for the leadership practice, 'Encourage the heart':

*School A had the highest Mean score for the construct, 'Encourage
the heart'
(M = 3.21, SD = 0.99) Refer to Figure 5.6.*
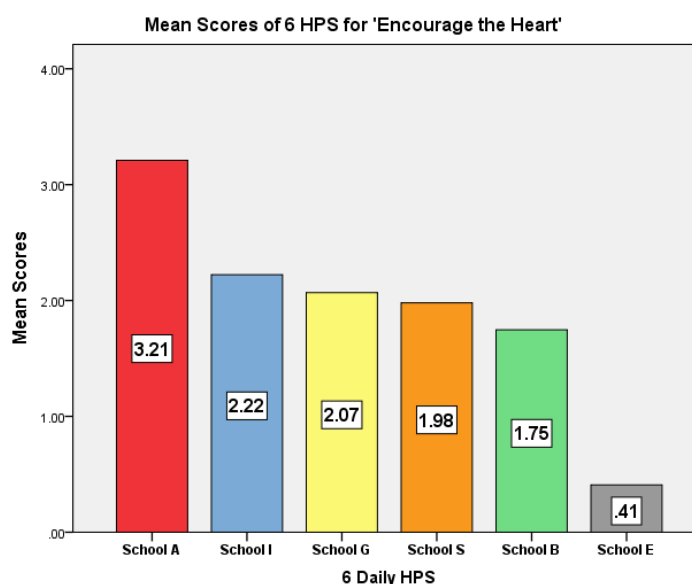
Figure 5.6: School A – Highest Mean for 'Encourage the Heart'

A triangulation between the survey results of School A, the interview of Principal A and the focus group responses of School A, was used to establish the reasons as to why School A scored highest for the leadership practice, 'Encourage the Heart'.

Qualitative findings: Interview - Principal A

Principal A appeared to have had a closely knit relationship with her teachers and students and was seen to recognise and acknowledge the contribution they have made towards School A's continued success, in sustaining high levels of student achievement. The following is an excerpt taken from Principal A's interview, where she proudly praised

the excellence achieved by her students. In appreciation, Principal A acknowledged their efforts and showed her appreciation by compensating the students travel costs:

> *"Look at my students who have been to Italy, Bangkok, Beijing and Nanchang for 12 days, you know… we take them all over the world. So this is more than a reward… Wherever they perform overseas... their travel costs are all paid for. They are rewarded already…"*
>
> **(Principal A)**

McNair (2009) pointed out that for continued good performance, we should encourage those who are doing well, and revisit off-target performances of those missing the mark, by telling them why the goals are important to achieve. As in School A, Principal A made it a point to acknowledge teachers good work and commend them for their high levels of commitment:

> *"I can't pay them anything extra because the school does not have additional funds to pay these sort of Teachers but the reward they get is knowing that their students have come out with straight A's"*
>
> **(Principal A)**

Principal A also claimed that she had a collegial and respectful relationship with her teachers. By being positive, encouraging and approachable, the teachers and students never hesitated in approaching her, out of sheer courtesy. This shows the relationship that Principal A had established with her staff and students:

> *"When I go to have my food, and when I'm seated, many Teachers start approaching me. Most people run off when they see their principal approaching"*
>
> **(Principal A)**

Qualitative findings - Focus Group Responses of School A:

Principal A had created a school climate that was conducive for teachers and students to achieve their full potential. In recognising their worth, the teachers remained encouraged and highly committed, as they continued to pursue their school goals. The following are focus group responses that show the teachers' commitment and dedication to School G as a result of the positive and healthy relationship that they have with Principal A:

> *"This involves a lot of commitment and dedication on the part of Teachers, where they have to wake up very early to come to school just to run the early morning classes… But eventually when we see the achievement and results of the students, it is most gratifying"*
> **(Respondent A1)**

Similarly, Respondent A5 expressed his true devotion for School A, with a sense of pride for the school and nation:

> *"I want to do my part and help this School excel in the area of its School Band and this will contribute towards the state and country"*
> **(Respondent A5)**

Respondent A3 further described the informal and easy-going relationship that teachers have with Principal A, which is portrayed as one that is encouraging and approachable:

> *"Free … free… Even at night, we can just sms her and she will respond. We don't need to make prior appointment with her. The Principals in this School has always been approachable"*
> **(Respondent A3)**

Hudson and Bird (2015, p. 11) described the kind of supportive relationships mentors and mentees have, when they care about each other personally as well as professionally. Personal attributes such as authenticity, gentleness, enthusiasm, patience, give and take, and a positive attitude, strengthens the emotional support and professionalism between

them. On the contrary, a lack of effective communication and emotional support can lead to "anxiety, insecurity and lack of confidence".

In Part 1 of this discussion the quantitative results of this study showed that School A had proven to have attained the highest Mean scores for the leadership practices, 'Model the way', 'Inspire a shared vision', 'Enable others to act' and 'Encourage the heart', and School G attained the highest Mean scores for 'Challenge the Process'. The discussion continues into Part 2, to feature the success stories of each of the Principals from Schools A, G, I and S.

5.5.2 Part 2: The Success Stories of 4 High Performing Principals

The following sub-sections present the exemplary features of School A, with a focus on the transformational leadership practices of Principal A.

5.5.2.1 Highlights of School A

The discussion that follows features the predominant leadership practices of Principal A, and shows how she had infused the school culture with her relentless drive in achieving school excellence. This is further substantiated by the personal sharing of Principal A's success story, which had led to her continued leadership at School A.

Support from Malaysian Education System

Principal A attributed part of her successful career to the Malaysian education system. She praised the system, for having achieved a quantum leap in her career, due to the

opportunities made available to her during her initial years as a secondary teacher. This formed the foundation of her teaching career, which later paved the way into school leadership:

> *"I have high praises for our system … When I joined Form 6, I was the top scorer for Economics… when I graduated in 1983, my option was Geography and Bahasa Malaysia…as a Teacher for Economics … my results rose and later I was offered the Excellent Teacher's Award… But I refused this Award because my specialisation was not in Economics. So I was then offered the Senior Assistant (Technic Vocational)… so since then I changed my option of Bahasa Malaysia. If you are a Secondary teacher, you can change your option. So that's my success, because by being a Senior Assistant (Technic Vocational), I can learn something from them"*
>
> **(Principal A)**

Lessons Learned from Ex-Principal

Principal A revealed that when she was first posted to School A as a Senior Teacher, she took the advice of her previous teaching colleague, and made a conscious effort to learn and absorb as much as she could from the ex-Principal of School A. This was how she gained first-hand knowledge and competence in effective school leadership:

> *"When I first came to this School, the Senior Assistant over here … told me…this is the place where you can learn a lot". So whatever the Principal told me to do, I did. I watched and studied her carefully, how she conducted Meetings, how the filing system was…"*
>
> *"So when I came to this School, as a Guru Kanan[1], I learnt how the previous Principal managed the School… how she conducted the Curriculum Meetings and how the Subject Expert Group run things… how the Principal managed the funds in this School… That Principal had a lot of trust in me. So she entrusted me with the files belonging to the Subject Expert Teachers. She said that I must check every single file whether or not they belong to the same Department as me. So I checked all files thoroughly. This is like, "learning by practice". I practice and I learn … Now I practice, then I learn. You do, you learn, you practice… all at once… from there I have learnt a lot. And I believe that when I became a Principal, I knew all the 3 areas, whether its Student Affairs, Co-curriculum or Academics."*
>
> **(Principal A)**

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[1]*Guru Kanan:* Senior Teacher.

Principal A attributed her leadership success to her formative years that had shaped and moulded her leadership as a high performing principal at School A. Principal A acknowledged that her style of leadership has to do with the knowledge and skills she acquired from her previous school principal, regarding school leadership and management. This had a profound impact on her leadership at School A:

> *"So when I first came here, my Principal instructed me to do various tasks. And as I performed the duties requested of my Principal, I always checked with her whether I was doing it correctly. So much so that I dare say that I am an expert at filing. I learnt that when you do filing, the earliest documents by date should be filed at the bottom... So who wants to teach you? Unless you practice yourself. That's why I am well versed in this area. The filing system in this school is very good. This I learnt from my ex Principal."*
>
> **(Principal A)**

Exposure to various leadership styles

At the interview, Principal A shared her thoughts and past experiences of how her exposure to various school types that differed in leadership styles, had informed her practice:

> *"Because if you want to learn, you have to learn from a good School. So I believe that no matter how small the School is, my aim is wherever I am placed, whether it is under the worst conditions, whether it is a big or small school… whether the school is in a village, there are new things to learn, which you have not learnt from other schools. This is one thing I really believe in. I have been exposed to so many types of schools, from boarding schools, day schools, urban schools and very remote village schools…so I know."*
>
> **(Principal A)**

Principal A also described how she benefitted from her exposure to various foreign school environments:

> *"I'm not saying that external Courses are the best, but … previously before the implementation of SBT[1] Principals were sent to foreign countries for 2 months to get international learning exposure. That was really good … I went to Monash*

and King's College. Then later when I had another opportunity to go to London, I made some school visits… I went on my own. I went to Birmingham… Scotland to see how they handle their students".

"When I went to Monash, Australia. I attended a Course at a School. I followed a mentor- shadowing programme with the Principal, then I visited several other Schools. I learnt new things about how schools abroad run their schools. So this is what I mean"

"Like in Australia, I went to various schools where the students were a selected lot. So I could make comparisons. I felt that I prefer the way schools are run in Australia. Because of the way 1 Principal ran her school."

"It's probably not the same as in Malaysia … Say they were looking out for a Lab Assistant. The current Lab Assistant was an Indonesian girl. So they place an advertisement online. Candidates are then called for an interview. I had a chance to sit in quietly through these interviews to see how they conduct and manage their interviews. There was the Principal, 2 Senior Assistants and the current Lab Assistant on the panel of interviewers. I asked the Principal why the current Lab Assistant was present for this interview and her answer was simple … because the current Lab Assistant needs to work with the newly appointed candidate. Therefore if she does not like whoever it is, I will reject that applicant. Why? Because this lady must like that one. Moreover this lady is at a better position to query the applicant concerning the lab. Probably the Principal does not have this knowledge. So this lady can stand in and ask relevant questions. This is 1 practice I really like."

(Principal A)

Strategic Vision for School A

Principal A had an ambitious and strategic vision carved out for School A. According to Chopra and Fisher (2012), great leaders have the fortitude and courage to dream and they remain resolute in pursuit of those dreams. When Principal A was asked about the future of School A, by the Deputy Minister of Education, Principal A articulated a compelling and evocative vision, which reflected her high ideals and a clear set of purpose that described her values, beliefs and strategic intent for the future aspirations of School A:

"Next plan? I want to make my school a "Magnetic School".
"You know how magnet attracts iron… Let's say as an example, its 1ˢᵗ of January 2015 and the Ministry announces to Parents that they are allowed to take their children to any schools that they like, end of the year and the Principal will have to accept you. I feel that for my school, the main gates may be shut, but from 12 midnight they are all queuing up. And instead of sleeping at home, they are sleeping around the main gate or the fence around the school…that's what I want"

"Magnetic School means that everyone wants to come… Everyone wants to come… Why do they want to come? – Because my magnet is so effective … meaning, effective school – that's my school – which attracts everyone to come to my school. Why would people want to come to my school when it is such an old school – since 1922. They should go to a new school that is about 1 or 2 years old. But why would they want to come to my school? Definitely there's something special about that school. That's why I put a big magnet up there. [Principal A points to the Magnet hung on the wall]. *That's why I want this school to become a magnetic school."*

"When _____ [YB, Deputy Minister of Education] *came for a briefing, I presented a slide on "What's next?"… I want to make School A as a Magnetic School. "Huh Magnetic School?" I said 'yes'. "Why Magnetic School?" YB, if 1 day, YB tells Parents that they are allowed to go to any schools on the first day of school, then all the Principals will accept all the students, I feel that my school will not have the capacity. So I will close my school gates and open it on the 1st of January, I feel that the Parents will be lined up for kilometres long or they are all clamouring to get in, the moment the gates open."*

(Principal A)

"This is the first time I have heard of a Magnetic School … Oh I like your words … I have never heard of this phrase" [laughs]"

[**Reply from YB Deputy Minister of Education**]

Mentoring and Coaching Outreach

School A was reputed with a strong culture of educational excellence in both academic as well as in their co-curricular niche areas. As a transformational leader, Principal A had also been actively engaged in sharing her best practices, by mobilizing her cohesive teacher teams to provide additional coaching and mentoring for students and teachers, which were petitioned by other schools. The following are the responses from the focus

group respondents regarding the mentoring programmes that School A had organised for their neighbouring schools, and those from other states:

> *"Academically too, our School has been the umbrella that helps other Schools in the surrounding areas"*
>
> **(Respondent A1)**
>
> **"**We have build a school network nationally where other schools do come over to participate in our Immersion Programme. They come from Pahang, Johore, Perak, KL, Kelantan… Aminuddin Baki has also come.**"*
>
> **(Respondent A2)**

> *"They are here for the Immersion Programme over 1 week. Teachers learn from our Teachers. Students too come and put up in our hostel. We also help our neighbouring Primary school that is situated just next to us. Their students come over for extra coaching in our School Hall. These students admire our School Hall and their UPSR[1] grades have shown a great improvement every year. There has been an impact on the A's scored and the number of passes they achieved."*
>
> **(Respondents A3 and A4)**

[1]*UPSR:* 'Primary School Assessment Test' or also known as, *'Ujian Penilaian Sekolah Rendah'*

> *"These students come in busloads so they arrange to have their meals in our canteen which they pay on their own."*
>
> *"But at times, the School will arrange for food when it comes to students or teachers that come from our neighbouring countries like Thailand. So our Hostel will take charge of arranging food for them. We also use funds for networking with schools"*
>
> **(Respondent A3)**

> *"80% of band members throughout the nation, come for free Workshops to train with us. We don't charge them anything but sometimes they give us a small token of appreciation. At the same time we have also helped to train a band from Singapore on 3 different occasions, and as a result they won the Singapore competition held in their country. When asked about their success, they named our School and told people that they had learnt from us."*
>
> **(Respondent A5)**

> *"Our principal has full trust on our capabilities and will give the go ahead for us to execute these programmes."*
>
> **(Respondent A1)**

Triangulation: Principal A's Interview and Focus Group Responses

The following discussion maps out some of the commonalities and differences drawn from Principal A's Interview and the Focus Group discussions. The triangulation between these 2 data sets, highlights the leadership practices of Principal A, in terms of her skill set, competence and empowerment, manifested within a high performing school environment.

Role of the Principal

Principal A was perceived as a school leader who was school-centred and teacher-led. Her leadership tapped upon the collaborative and collegial cultures exhibited by the teachers, to promote student achievement gains. During the interview, Principal A explicitly expressed that her leadership played an integral role in the school's achievement gains, adding that the principal of a school was the key contributing factor that had led to the performance outcomes of any school.

> *"I think number 1 is the leader… Number 1 is Principal…"*
> **(Principal A)**

The following two focus group respondents also implied that the principal played the functional role of facilitating school processes:

> *"The Principal will provide us with ideas that can help facilitate our Programmes. It is the Principals support that is very useful for the running of our Programmes."*
> **(Respondent A2)**

"When we succeed, and come across as confident to our Principal, she will support us…Strong support is needed for the successful implementation of our Programmes."

(Respondent A5)

However, Respondent A1 was of the opinion that parents and other stakeholders were the contributing factors that posit school excellence:

"All parties are involved, including their Parents. It's not solely by one party only. Everyone plays an important role."

(Respondent A1)

High Performing Achievements of School A

At the interview, Principal A was seen to proudly honour the outstanding academic results and awards achieved by School A and asserted that the student boarders in School A have achieved far better grades than the day school students:

"My school is a day school that is partially boarding…the local students can go back after school … we also have a group of student boarders who live in our student hostel. I have had this conversation with the Deputy Director of the Education District Department and he insists that there are no day schools where the student boarders produce better results than the day school students who go home daily. I argued with him that School A is 1 of them where the student boarders do much better than the daily students. He then asked me how do I do it? And I told him that he shouldn't make such a conclusion when my day School has evidence of higher achievement among student boarders"

(Principal A)

Teachers who participated in the focus group discussion, voiced their viewpoints about how School A had sustained excellent student achievements. Respondent A5 expressed that School A has been an excellent achieving school for several consecutive years:

> *"In our School, success has been a norm for several years now… We came out as world champions for these events [school band]"*
>
> **(Respondent A5)**

Respondent A4 and Respondent A5 felt that the academic school results and the school ethos were the two determining criteria of School A's success:

> *"Firstly it's due to the public examination results. We have the best results in the whole state of _____ for SPM and STPM [National Standardised Tests]. So the first factor is the GPS [Average School Grade] of the public exams. The second is the School Ethos"*
>
> **(Respondent A4)**

> *"When we rose to SBT [High Performing School status], ethos came into play. Ethos is important for maintaining our SBT [high performing] status."*
>
> **(Respondent A5)**

> *"In terms of percentage, 50% is academic while 30% is for Co-curriculum, 10% is for Ethos and 10% is for networking and collaborative ties. So since we have met all these criteria, that's why we got SBT status. This means that we are good in Academic, we are good in Co-curriculum, Ethos…For Ethos, we have got full marks because we have reached international level. Networking and Collaborative Ties too we have got full marks because of international achievements."*
>
> **(Respondent A4)**

Respondent A5 also disclosed some information about the school hiring foreign expertise to train their students. This was a practice commonly found among high performing schools, who hired foreign trainers to ensure that their students are professionally trained and are able to compete in international competition:

> *"As a High Performing School, we are like an umbrella. We are given funds to upgrade our standard. That's why we hire foreign experts to train our Band members to possess the necessary skills and experience required to compete and succeed internationally."*
>
> **(Respondent A5)**

As for Respondent A1, she felt that the financial status of the school was the criterion for determining whether this school can maintain its HPS status, and not the student's academic achievements:

> *"Another SBT[2] achievement is the financial status of this School -- It has to be satisfactory. If the financial aspect is not satisfactory, the Ministry wouldn't take into consideration other aspects like GPS[1] or any other criteria. So this is the first prerequisite to the SBT[2] status…We need to follow the stipulated procedure. All expenditure meant for the various school activities, must be transparent and within the allocated budget."*
>
> **(Respondent A1)**

[1]*GPS*: (Gred Purata Sekolah) Average School Grade. [2]*SBT*: Sekolah Berprestasi Tinggi;

Respondent A5 further added that the international awards received and the reputation gained by School A for the successes achieved by their school marching band, has facilitated the sponsorship process through the Education Ministry:

> *"Now with our international successes and good track record, we asked for sponsorship from the Education Ministry, the District Department, the State Minister ('Menteri Besar') and the Government of Malaysia. This is mainly due to 2 factors, trust and confidence that our Band can succeed, given the past track records."*
>
> **(Respondent A5)**

School A's Mission: 'Road' to Success

School A's mission towards academic success, was built upon the unique skills and abilities that Principal A had learnt to develop, as a transformational leader. She introduced a unique teaching and learning model, with the main intention of driving student excellence in School A. These were remedial classes to cater for students, with varying academic preparedness, and these classes were uniquely labelled according to road types: 'Formula 1', 'Highway' and 'Jalan Kampung' (Pathway):

> *"I introduced a model by dividing the students into 3 groups called, 'Formula 1, Highway and Jalan Kampung' (Pathway)… remedial classes…So 'Jalan Kampung' must come in the morning 6.30… because they don't perform … Weak performance according to specific subjects."*
>
> **(Principal A)**

Incidentally, the Anglo-Saxon root of the words, *lead, leader leadership* is *'laerd'*, which means path or road (Adair, 2010). With School A, the 'road to success', represented Principal A's creative effort in shaping the school culture and galvanising the teachers' collaborative effort towards ensuring excellence in student achievement. The focus group teacher respondents took turns to explain and clarify the meaning behind their unique 'pathway' slogan (*Pelajar Jalan Kampung*), as part of their special morning classes for their students:

> *"Regarding the classes "Pelajar Jalan Kampung", if you imagine, the man-made pathways found in villages, those roads are uneven, filled with humps and have lots of pot-holes. Cars have to ride very slowly. If it's the highway the roads are totally the opposite, where the tarred roads allow quicker, smooth drives. Even though you can drive fast on the highway, there is a speed limit of about 90 km per hr and so there are speed trap devices which monitor drivers' speed limit. These are for "Formula 1" drivers"*
>
> **(Respondent A3)**

"We have special morning Classes categorised this way, 'Pelajar Jalan Kampung', "Pelajar Highway' and 'Pelajar Formula 1'. The "Pelajar Jalan Kampung", go by the subjects that they are poor in. These classes are from 6.30 to 7.30 am for a period of 6 weeks before their actual exams"

(Respondent A2)

"But … good students depend on the subject too … We can't rate them according to the overall class performance because it depends on their subject knowledge, which differs from student to student… It doesn't mean that they are "highway" students, that they are good in all their subjects. As an example, they may be "highway" for Mathematics but they also could be "Jalan Kampung" for Physics."

(Respondent A4)

The following two teacher respondents added that School A has also arranged for extra evening and night classes, especially for students who require additional coaching:

"Here in this school, we organise programmes from the 3rd week of January. We begin with providing extra evening classes. This means that the Form 3's and 5's have to stay back from 2.45 to 5 pm every week until their exams begin. We also have extra classes organised for the weaker students who have failed certain subjects. During the School Holidays, we also arrange 'Kelas Tambahan Perancang' [Additional Planned Classes]."

(Respondent A4)

"In the evenings there are also extra "Kelas Kepong" classes arranged for Form 3 and "Kelas Sedar" for Form 5's. S for 'Stay back'; E for 'Extra class'; D for Discussion; A for Analysis; R for Retest. We also have night classes arranged for the hostel students and band students who need extra coaching to catch up with their lessons."

(Respondent A1)

Student Culture at School A

At the focus group discussion, the teacher respondents expressed what they felt about the student culture in School A. It appeared that student culture was a critical component of School A's success, which set the tone and context within which, the desired school goals were pursued. According to teacher respondents, they found the students to be generally highly ambitious, hardworking and very competitive.

"Our students have high ambitions. They are very ambitious." **(Respondent A2)**

"They are…"Practice make perfect"…They are highly competitive… They are competitive among themselves and among the students from other schools around here." **(Respondent A5)**

"Hardworking… They are competitive when it comes to competitions, academics, in anything that they involve themselves in. If they take part in any competition, they always want to win. They will work hard for that." **(Respondent A4)**

"Before entering they already have the attitude of wanting to succeed …. Highly Competitive" **(Respondent A2)**

The teacher respondents also elaborated about how conscientious these students were and how this led to their successful careers:

"In actual fact, most of them are very interested in furthering their education … Diploma then Degree … majority."

(Respondent A5)

"Even our Form 6 students will continue to pursue their degrees… some in University Malaya."

(Respondent A4)

"Here our students become doctors, engineers and various professional fields"

(Respondent A5)

"From their degree, they want to do their Masters … after that they want to pursue their PhD."

(Respondent A1)

World-Class Standard of Excellence

The idea of school effectiveness and success has been a long-standing notion with Principal A. Her strive for school excellence is in keeping with the school's vision for attaining global excellence:

"I came here in 2008 la. I kept telling myself that, "I haven't won, I haven't won, I haven't won, I haven't won … not even for Co-curriculum". Two days ago, at the 'State Teacher's Day' Commemoration Ceremony, all awards were bagged by us. The most prestigious award is the "Anugerah Perdana Sekolah Cemerlang". If you win 3 times successively, the trophy will be yours. Now, this is the 2ⁿᵈ trophy already. I have won this award for 5 successive years."

(Principal A)

"Initially there wasn't this competition then when it was first introduced, I won 3 annual competitions and the School won 1 trophy. This one is the second Cup. Every year we participate. I am very sure that our school will also win the "Anugerah Kokurikulum Antarabangsa" [International Co-curriculum] award for this year [2014]. Because this year, my students had won so many awards which they competed overseas, so I am confident that we will get this award too. I have 3 students who are Co-curriculum World Champions for Squash. My Marching Band are World Champions. No marching band in Malaysia has beaten them… they are World Champions. In 2011 they became World Champion. But this year we did not participate in the 'World Marching Band Competition' because it fell during the fasting month of Ramadhan. But

we have won others like, 'Malaysia World Band Champion'. In 2013, there were 16 competitions, and School A won 13 out of 16"

(Principal A)

"Our band is terrific. They are very good. We have a theme at all times. We participate in international competitions every 2 years… You can check us out on You Tube under, "_____ School Marching Band"

(Principal A)

"Last year we won 'Malaysia World Band' again. After that in 2012, we won the Sudlershire Award, which is the highest award given by the World Association Marching Show Band to the best band out of United States of America."

(Principal A)

"Actually our students are supposed to go to South Africa, but because of the Ebola outbreak over there, we didn't go. Otherwise we would have won again for sure."

(Principal A)

Focus group Respondent A5 perceived Principal A as being obsessed with the idea of winning and was determined for School A to produce world-class achievements:

"This Principal favours success … She likes to win. If we win, she's happy. That's why when we succeed, and come across as confident to our Principal, she will support us."

(Respondent A5)

Respondent A5 proudly claimed that School A was reputed for its international winnings and that the school marching band was the world champion for successive years:

"We have competed against Italy, Russia Australia, and also Thailand, Indonesia… and we have beat them all.… When we compare with international bands, in Shanghai, Beijing, and Italy, I would say that we are certainly at international level. Because firstly, we set our trainings according to international level. Our instruments are also of international quality. Our formation and the

songs we play are also international. Our trainer is also international. They are from Bangkok and Japan… As a SBT[1] school, we are given funds to upgrade our standard. That's why we hire foreign experts to train our Band members to possess the necessary skills and experience required to compete and succeed internationally… Our band are also known as champions for "best online", because our sound is under the category of best, synchronised music produced"

(Respondent A5)

SBT[1:] (*Sekolah Berprestasi Tinggi*) High performing school

The school band thus brought local fame to the state and when they had not taken part in one of the local competitions, the Director of the District Education Department made a special visit to School A, to enquire what had happened, from the Principal. Since the Principal was not around, the Band teacher-in-charge explained:

"In 2008 … we were questioned by the Ministry of Education and the District Office as to why we did not participate in this competition and represent the state… So I told the Director … we selected 2 international performances instead of the local one because the level is much higher. I explained the technical side of the preparation … the amount of time taken to rehearse and learn up the formation drill. Finally the Director understood and said, "Make sure you perform the best". His main concern is our success… We came out as world champions for these events and that's when the Director never questioned us since"

(Respondent A5)

5.5.2.2   Highlights of School G

The following sub-sections present the key features of School G, highlighting its achievements, as one of the high performing secondary day schools in this study.

Hand-holding Programme

School G had implemented a hand-holding programme, as a mission to help students with limited English proficiencies, and in need for extra academic assistance. This was a

school outreach programme, designed to reach out to students who had learning difficulties and provide student learning support, to meet their academic needs. In an effort to promote teaching and learning via outreach programmes, School G created the 'school adoption' awareness as part of their societal concerns for community service engagement. The following are the responses from the teacher focus group of School G:

> *"We have done a programme called the "hand-holding programme". We reached out to students from Schools which are not proficient in English – Primary Schools… because the students there are very weak in English. So we have adopted them… We've conducted programmes in our School during Saturdays …Using our School Bus, we take them here, we feed them, we teach them, we have activities for them, we have pre-test and post-test… and see whether how the UPSR results will be like. That's the little things we do to help our neighbouring Schools"*
>
> **(Focus Group responses from School G)**

Alumni – Towering Personalities

School G was known for its dynamic alumni who held key, influential positions, both domestically and abroad. During a school visit paid by the School Inspectorate and Quality Assurance Department (JNJK), the panel was interested to learn more about some of their notable alumni figures, who were once students at School G. This drew on the school's strong international linkages as well as their domestic connections, established through their distinguished alumni network:

> *"They wanted to know our Alumni – we had very strong Alumni. You know the UN Secretariat now __, and many big, big posts whether local or international, were our ex-girls. So we had a plus there…We are 130 years old now. So we have a very good history. Lots of Linkages, Networking and all that"*
>
> **(Principal G)**

Single Session School System

School G was originally a double session school, until Principal G revamped the schooling system and opted for a single session school system. This entailed thoughtful planning on the part of Principal G, as she was challenged as the very first principal to provide a workable and innovative solution for implementing a single session schooling system in School G. Although some teachers, remained divided about converting to a single session, Principal G's initiatives in this implementation, had met the approval of the State and District Education Departments, as it allowed for better timetable rescheduling, and classroom restructuring to make room for more classes to optimise classroom space and teacher manpower. The following is an excerpt from Principal G's interview, which provides a detailed account of the planning and implementation of the single school system at School G:

> *"In 2006 I was posted to this School, as a Principal… This is considered a big School, so when I came in, it was a double session School… This is a fully secondary – 2 sessions but we have converted it to single session… I am a former student of the School – yeah alumni. Since my time, it was a double session School, and I knew the problems of double session… the School hours are very restricted. We are limiting the School to doing activities because we have to make way for part of the morning session to leave to allow the afternoon session to come. They cannot overlap. Because if they overlap means there's no room. That's the reason we had double session."*

> *"To me … I see more positiveness if I have a single session school."*

> *"So when I came in July 2006, I was looking and talking to Teachers and all that, I do hear comments that hinders programmes, activities, trainings … Like for example, we have the School Brass Band and it is from the morning and afternoon. It's difficult to meet. I finish my studies in the afternoon I want to do the practice, the afternoon people are having their studies… That means we meet on Saturdays… we meet on Sundays la, when nobody has lessons. But I was thinking we can find a way out. Like after school activities, then it will be good."*

> *"The challenge is the rooms, the classes, because there was not enough classrooms… So what I did was, I looked around the School. The School had quite a number of special rooms ('Bilik Khas'[1]) Geography Room, Art Room, Language Room, Media Room, TV Room, all these things… These are quite big because this*

building was in the 50s, colonial kind, so there are classes which are big and I thought that these classes can be split into 2. So what I did was I converted all these Special Rooms, which are under-utilized, you know into 2 classes and split those big classes into 2 classes with collapsible doors… in case there is a need for a bigger place."

"So going through the whole School, we managed to come out with 14 Rooms… 2 will be floating classes la. Why should we deprive the whole School, just to accommodate these 2 classes, so finally everybody agreed. I mean, the whole team agreed."

"So we asked for approval from the State and District Education Departments and also we had to look at the Canteen… so we had to make extensions… So we took care of the infrastructure and we overcome the 2 Floating Classes… So now that we can manage without having to build another extra building, so the JPN[2] supported us."

"From my observation, if we do not provide all this, they do it anytime they like and Parents are complaining – We also cannot keep track and they might be bluffing their Parents, you know… So when we do this standardised thing, nobody complains la… But of course, Teachers complain a bit. So long! – until 3.30. I say, "Yeah, rather than you have all the funny, funny days … Now I'm providing you the time." And Thursday is the same as Tuesday and Friday we go back 12.30"

(Principal G)

---

[1]*Bilik Khas*: Special Rooms; [2]*JPN*: State Education Department.

International Linkages

As one who relished challenges, favoured recognition and aspired to expand her international linkages, Principal G had been the main organiser of an international student conference, held on a yearly basis. This event take months of preparation, and if it were not for her dedicated team of teachers and students, School G would not have earned their international acclaim and linkages with schools worldwide. During the interview, Principal G spoke enthusiastically about the international student conference which School G hosts every year, detailing every aspect that goes into the planning of this event, for the ultimate benefit of School G and the students:

"We have an International Student Conference… which we do every year since we became an SBT[1] …and this is the 5th year that we did it… we invite our partners from all the other countries and when they come to ____, we take care – hotel, food, everything… we charge about USD300 for everything… for 5 days and 4 nights in a 4 Star Hotel and inside that package, we have Heritage Tour… I have the students and the Teachers to accompany …, they are like Tourist Guides… they are looking forward every year, waiting for Conference time. It is a fun time for everyone you know."

"This is our pride… When I do this, the benefit for my students is really a lot, because they get to conduct the Heritage Tour… and the Students are the repertoire, they are the respondents, they are the chairperson. They conduct everything... we give them the opportunity."

(Principal G)

[1]*SBT*: High Performing School (*Sekolah Berprestasi Tinggi*)

With this competitive spirit, Principal G and her students have represented School G in international competitions and bagged awards for their school:

"We won the Commonwealth Education Good Practice Award…based in London, where Schools get to submit a good practice of the School. So what I did was, I submitted about the School Co-op, how I incorporated Entrepreneurship in the Classroom through the School Co-op…we were shortlisted from the whole world – 10 Countries were shortlisted. And for Malaysia, it was our Project. And I got to go to Mauritius to present this and end up getting 2nd place out of Australia, New Zealand and all the 10 Commonwealth Countries… No monetary award but it was just a Plaque. That time they had the Meeting for all the Commonwealth Education Ministers and they presented the award… I had to present in front of the judges and after that I got to present in the Schools where they invite us to travel around in Mauritius to share the idea."

(Principal G)

5.5.2.3   Highlights of School S

The following sub-sections showcase the prominent highlights of School S, featuring its outstanding achievements, as one of the high performing secondary day schools, in this study.

Stakeholder Engagement

Principal S attributed the success of School S to stakeholder engagement and collaboration among all teams - the teachers, students, parents, and the principal herself. The Parent-Teacher Association (PIBG) played an influential role, as volunteers in fund-raising school events, where all stakeholders engage actively in ensuring the success of their school events. During the interview, Principal S expressed that everyone plays a role in the success of a school:

> *"To me everybody takes part. As a Principal, I monitor and deliver accordingly, through Meetings and words of encouragement. A lot of work is carried out and handled by the Senior Assistants and the Teachers. The Teachers play the field. But Students also play their part. So do their Parents… Parents really do play a role in ensuring that Students do well… The Parents here are very focused on their children's education. That's why we have to remain at our best… So to me, everybody also takes part."*
>
> *"I feel no one person is more important. Everybody has an equal role. But I know that the School Head is supposed to be the most important just like the saying, "I've never seen a good School with a bad Principal". I'm not brave enough to make that statement, but I do know of good Schools that have dropped in their performance, after a different Principal had taken over the School… and vice versa."*
>
> **(Principal S)**

Pastoral Student Support

Principal S strongly encouraged pastoral care and support, to promote student learning. When asked about the key factors that influenced the students, Principal S was quick to acknowledge that her teachers had a big influence on the students, and that she encouraged her teachers to show more care and attention to their student's general welfare and to take on a more pastoral approach with students. Her response also seemed to suggest that, this could provide a classroom environment, conducive for student learning, and that it would enhance instructional interactions and promote teaching and learning:

> *"Teachers … especially the Form Teachers… they are the ones who are very close to the Students. In terms of personal contact with the students, Teachers should know them best... I always remind the Teachers that all Form Teachers are Discipline Teachers too… And all Teachers are Counsellors. Because during their Teacher Training days, they have been given training in aspects of counselling. So they should know… whatever happens, they should know."*
>
> **(Principal S)**

Beyond her leadership routines, Principal S has demonstrated her genuine concern for improving students learning needs, by creatively transforming two recreational areas in School S, into designated study areas for student use. These study areas were well received by the students, who were seen utilizing these study spots for doing their homework, while waiting for transport to head home after school. Here we see how Principal S takes a genuine interest in the welfare of her students, and extends her reach to the students by providing learning facilities that would greatly benefit the students of School S:

> *"When I first came here, I found that the students did not really have a place for them to study. Since these are girls, who come from good families and they have good results, I find that these girls will generally love to study. They don't play truant, they seriously like to study. And so I added additional studying spots for this purpose. Last year, I set up the 'Serambi Ilmu[1]' [a study area] at the front entrance of this School, where students are seen seated doing their own work… I also replaced the Orchid Walkway with table top enclosures for students to sit and study."*
>
> **(Principal S)**

[1] *Serambi Ilmu*: Study Area

Electronic Filing System for Schools

Principal S spoke about her keen interest in Information Technology (IT), and added that it largely contributed towards her successful leadership at School S. She strongly felt that being IT-savvy was one of her greatest assets, which had set her apart from other high

performing principals, where online processing of school administrative tasks and eFiling are concerned. Based on her competence in IT, Principal S has developed an eFiling software package, for the school's filing system:

> *"When I first became a Principal, I contacted JPN (State Education Department), and asked them about which filing system I should follow. Their response was that there was no system in place and I was asked to devise my own system for my school. So what I did was, I obtained information from neighbouring schools and re-created a filing system for this School."*
> *"I have organised Programmes for all Schools to use… A compilation of all our filing systems – it is the latest move towards eFiling… I feel that I like to make processes easy so that Schools can benefit."*
>
> **(Principal S)**

Principal S had successfully marketed her self-created computerised efiling system, to schools across the nation (see Figure 5.7 on p. 295):

> *This is suitable for school purposes – It provides users with the necessary information regarding electronic filing, such as labelling features, coding system, the naming system"*
>
> *"For School Finance, we are one of the pioneers in Malaysia, for eSPKW. This means that we no longer use Cashbooks. Everything is done online"*
>
> *"So the whole set consists of a CD, 5 books and a file that costs RM380… My creation caters well for our end-users …it is going to be used by all Schools in Malaysia"*
>
> **(Principal S)**

Principal S is portrayed as an innovative, vanguard leader. Her valuable contribution of electronic filing is viewed as a breakthrough for School S as well as for all schools across the nation. In this respect, her creative achievement is a considerable personal satisfaction, whose creative energies are wrapped around ideas, vital to the success of educational opportunities (Adair, 2010).

Figure 5.7: Principal S – Self-created eFiling system

5.5.2.4   Highlights of School I

The following sub-sections present the key features and achievements of School I, benchmarked as one of the high performing secondary day schools in this study.

Academic Excellence

Since the introuction of high performing schools in 2010, School I had reportedly attained an exemplary record of academic excellence, compared to the six sample schools of this study, by maintaining Band 1 and achieving the highest Composite Score (above 90%) across the 3-year benchmark (2011 – 2013).

Refer to Table 5.2 on the following page for the Composite Scores achieved by the six schools under study. These Composite Scores were obtained from BPSBPSK and verified by PADU (Education Performance and Delivery Unit) were cross-checked through a document analysis at the respective schools, during the data collection phase.

High Performing Sample Schools	Composite Score		
	2011	**2012**	**2013**
School S	88.09	88.77	90.12
School A	90.89	91.14	91.22
School G	87.56	88.23	88.80
School B	88.64	88.59	89.65
School E	91.05	92.08	91.16
School I	92.51	92.85	93.48

Figure 5.8 shows School I having achieved the top academic results among the nation's daily high performing secondary schools in Malaysia.
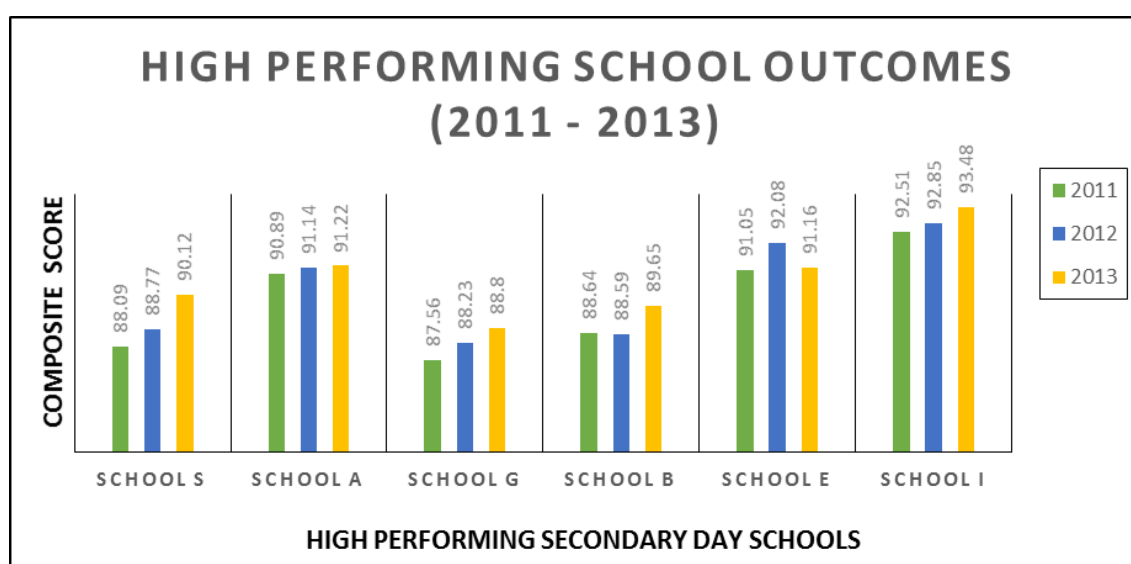
Figure 5.8: Composite Scores of HPS from 2011 to 2013

Teacher Culture

When Principal I was asked about the key success of School I, she acknowledged that the success of School I was mainly due to her cohesive teacher teams:

> *"Basically the main contribution was from the academics … Generally … they are okay. They know their work… Basically the teachers here … they're pretty good - so ... when we ... uh tell them, it got to be done … this way ... they follow"*
> **(Principal I)**

Principal I did not take all the credit for the academic success of School I, instead, she acknowledged her teachers support in her leadership of School I:

> *"So to say [laughs] that within one year I did a lot… not really also… basically maybe because I have ... a long background as a PK[1]… So I can fit in quite fast ... my teachers were with me."*
> **(Principal I)**

[1]*PK*: (*Penolong Kanan*) Senior Assistant

Convent Culture

Principal I drew upon the early days of School I, where she was a student herself, and when School I was under the Irish missionary management, headed by Catholic nuns. The historical 'convent school culture' still resonated in School I, because of the number of currently practicing senior teachers, who reign from this era. At the interview, Principal I elaborated on the 'convent culture' that was in practice during the time when she was a student in School I. Principal I's responses suggested that the leadership style of missionary school heads were more serious, target-oriented and allowed far less flexibility, compared to Asian school leadership:

> *"In the sixties, seventies ... the principal were nuns… they are Irish ... so they have a very - what you call - uh - western ... kind of management you know -- they mean business - you see… I mean they're very on time ... uh ... target - quite target orientated - I mean ... quite different from our Asian kind of thing ... we may say set tar [meant to say target] - set certain rules and reg [meant to say regulations] but we tend to bend".*

> *"They said, okay now rules must be rules. They don't bend it -- they say that kind of things ... So people [Teachers]... -- know where they stand ... they cannot play a fool [laughs] ... This means, __THIS__... I think it should be that way -- ... So when we ... really mean business ... then only achieve what we want."*
>
> *"Yes the culture - culture is here so the senior teachers will lead the junior... So ... whether you like it or not, those junior coming they have to ... learn ... you know the way the seniors have done"*
>
> **(Principal I)**

Since the convent culture does seem to exist in School I, and is manifested through some of the senior teachers, this could imply that goal setting and target accomplishing, may have been the reasons that contributed towards the best academic results that School I had achieved.

5.6   Summary of Chapter

Chapter 5 had presented the principal leadership practices and the individual accomplishments of Malaysia's high performing daily secondary schools, with a specific focus on Schools A, G, S, and I. The findings of this study were presented according to the research objectives that guided this study. The first half of this chapter highlighted the school that was ranked highest for each transformational leadership practice, as defined through the five exemplary practices of leadership (Model, Inspire, Challenge, Enable and Encourage). As it turned out, School A topped the list as the school that scored highest for four of these transformational leadership practices: Model, Inspire, Enable and Encourage) and School G scored highest for 'Challenge'. This implied that these two Principals (A and G) demonstrated the most frequent use of the transformational practices mentioned. Principal A and Principal G have supposedly demonstrated transformational leadership at their best. The findings of this study however indicated that all six principals

in this research had demonstrated various levels of transformational leadership, based on the five leadership practices model. They may have had different personalities and leadership approaches in operating within the HPS reform agenda, but they were all pivotal in executing micro-level transformational practices, in setting their school direction, enlisting staff in a shared vision, applying innovative strategies, empowering teams and building relationships, while leading high performing school systems. Under these conditions, the rest of this chapter highlighted each of the principals' outstanding achievements in relation to their individual high performing schools, drawing a focus on Schools A, G, S and I.

The following chapter is the final chapter of this thesis and it closes with a general summary of this study, the limitations, implications and recommendations for future research.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1 Summary of the Study

This research study had set out to explore the relationship between principal leadership practices and teacher collegiality, as perceived by teachers in a high performing daily, secondary school environment. The intent of the study was to explore this relationship as a contribution towards elevating the overall success of the nation's high performing daily, secondary schools. This chapter also proposes possible areas for further research and draws conclusions from this study.

This research study was an in-depth exploration of principal leadership practices and teacher collegiality in Malaysian high performing schools. The HPS programme, associated with excellent student learning outcomes, was implemented in 2010, in line with the objectives of the Malaysian Education Blueprint, (2013). It aimed at achieving exemplar school outcomes, stepping up the quality of principal leadership and establishing high performing school leaders in every Malaysian public school (IAB, 2014). This formed part of the MOE's key initiatives in improving the education system and transforming the country into a fully developed, knowledge-based economy by the year 2020. In this context, the GTP 2.0, the Malaysian Education Blueprint (2013 -2025), and most recently the 11th Malaysian Plan have it on their agendas to revamp the educational policies, in line with achieving school excellence, with the aim of improving the standard of the Malaysian education system.

A mixed methodology was used to gather data from principals and teachers in order to identify the principal leadership practices currently in use and the extent of teacher

collegiality experienced within each of their school environments. An in-depth analysis of the respondent's perceptions and experiences, provided a clearer understanding of how principals' leadership practices and teacher collegiality co-existed in these daily, secondary high performing schools. The intent of a mixed methods approach was to make sense of the dynamics behind the HPS educational agenda, from different data sets.

This study provides data that establishes a relationship between principal leadership practices and teacher collegiality, for the HPS cluster group of schools, and it serves as a point of reference for educators and policy-makers to discover ways of enhancing school effectiveness and evaluate the progress made into their HPS improvement plans.

The following sub-sections present the limitations of this study, followed by its implications for policy, school leaders and future research and ends with a conclusion section.

6.2 Limitations of the Study

These are the limitations of this study:

(i) In this study, six sample schools were selected out of the population of seven daily high performing secondary schools throughout Malaysia. The decision to include each of these seven schools as the sample of this study, was to allow for generalizability. However one principal in the state of Johor, was a newly appointed principal, and since the criteria for principal participation was a minimum of three academic school years, and the Teacher Focus Group, participation was confined to teachers who had a minimum of three working years under their present school principal. So, the Johor school with the newly

appointed principal was not eligible to participate in this research study, as it would invalidate the data. Two other sample schools opted to only participate in the survey and the principal's reasons for non-participation in the interviews, are highlighted in Appendix C5, p. 390. Therefore, generalizability of the findings beyond the sample is not possible although the findings are illustrative and indicative.

(ii)   The findings of this study is confined to the six sample schools that participated in this study. Therefore, the conclusions of this study regarding principal leadership practices and teacher collegiality, cannot be generalised to all 115 high performing schools throughout Malaysia, as the results would likely differ due to other variables and differences in the population that were not contained in the sample.

(iii)   The data from this study is based on the teachers' perceptions of their principal's practices and teacher collegiality in their respective schools. Although the Researcher had complied with ethical procedures during the data collection phase and a cover-note was attached to every questionnaire to remind respondents to elicit their sincere opinion during the survey, there may still be the possibility of inconsistent responses, which cannot be avoided.

(iv)   The bilingual questionnaires used in this study, were designed specifically in two languages (English and Malay), to accommodate the respondents' language preference in Malaysia. These questionnaires were also validated by three language experts (see Appendix C17, on pp. 422 – 424). However, it is

possible that some items may have different connotations and will be responded to differently.

(v)   While transcribing audio recorded interviews and focus group discussions into text, one of the limitations faced was trying to translate the Malay responses to English and also ensure that the exact meanings of these responses are retained. In this study, data was analysed according to the Researcher's interpretative framework and specific lines of empirical investigation, although inevitably any data can be subject to different interpretations.

6.3   Implications

This study has implications on the High Performing School Programe which was aimed to elevate academic excellence, foster student readiness for global competitiveness, nurture towering personalities among high performing students and transform the nation into a regional hub for high quality education by the year 2020. The outcome of this research has found that a relationship does exist between principal's transformational leadership practices and teacher collegiality, and that the implications of this study are threefold: implications for school leaders, policy and future research.

Implications for School Leaders

- Principals' practices reflected in the findings, indicate that principals of high performing daily secondary schools tend to foster an environment which is supportive of teacher collegiality. The implication for these principals is that

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one of the ways in which principals secure and sustain high performance is through developing teachers' capacity through professional collaboration.

- The research has found that school leaders who were vision-driven, and who continued to inspire, enthuse and energise teacher teams have a positive impact on teacher collegiality. Their ongoing support and continuous reinforcement of clearly defined goals, with teachers remaining focused on their core values, tended to boost collegiality among teachers. The implication for school leaders is that investing in teacher collegiality and supporting teacher collaboration is an important strategy for securing better student performance.

- The research found that school leaders who built relationships, developed camaraderie among the teachers, and praised and showed appreciation for a job well done, gave teachers a sense of pride, confidence and trust that promoted teacher collegiality among the staff. Consequently, the implication is that improving teachers' sense of pride and valuing them is a core responsibility of the school leader.

- Conversely, the research found that school leaders who imposed challenging demands on their teachers, such as having to cope with an increased workload, meet tight deadlines, and long working hours, adversely affected teacher collegiality and engendered a negative influence on teachers' collegial interactions. The implication for school leaders is to ensure that teachers are not over-pressurised so that they cannot perform.

- Although the broad literature shows that exemplar school leaders, are role models for teachers, this study did not explicitly find that the school leader, as a role model was critically important in terms of their practice.

- With the substantial body of research suggesting that 'enabling others to act' is part of distributed leadership, the empirical results in this study proved that enabling others to act did not have any significant relationship with teacher collegiality. The implication here is that the leadership role that fosters teacher collegiality is essentially one that creates trust and strong bonds among teachers.

Implications for Policy

The outcome of this research investigation is directed towards the High Performing School Programme, which falls under the purview of these MOE policymakers:

BPSBPSK -   Fully Residential and Excellence Schools Management Division

JPN   -   The State Education Departments.

JNJK   -   The School Inspectorate and Quality Assurance

PADU -   The Education Performance & Delivery Unit.

The findings have key messages that would further raise lines of inquiry for the MOE who will need to consider ways of stepping up the quality of education, raise awareness among school leaders and teachers, and strategize ways of securing better school outcomes. The Ministry of Education will also need to consider the importance of promoting principalship due to the lack of interest among teachers to become principals in the future, especially if more and more teachers were not

aspiring to become principals. To this end, the Ministry of Education will need to consider the possibility of a shortage of school leaders in the future, and strategize a career path that would encourage teachers to advance through their careers, in aspiration of embracing principalship. Consequently, the implications for the MOE in line with the Blueprint, is that the development of transformational leaders is likely to improve teacher performance and student outcomes.

Malaysia has been known for its highly centralised bureaucratic school practices which implicate 'top-down' leadership, and the findings of this study does indicate to the Ministry of Education that bureaucratic practices do exist in high performing daily secondary Malaysian schools. Policymakers need to be aware of bureaucratic practices that can limit the potential of working in teams, delegation, empowerment and collegiality, as pointed out in Yulk (2002) and Bush (2005).

Implications for future research

- Researchers now have another legitimate research instrument, to measure principal leadership practices using the Principal Practices Questionnaire (PPQ, 2014), that was developed specifically for this study. The PPQ was endorsed as a valid instrument because its internal consistency was determined reliable. Therefore, further research on investigating principals' leadership practices, would be valuable, particularly with a larger sample of principals.

- With the evolving trends in educational reform and a culture of continuous improvement, high performing school systems seem to fall under the increased pressure to sustain excellent outcomes. Evidence shows the concurrent

interplay of transformational and distributed leadership practices at work, as high performing school principals tend to rely heavily on their stakeholders, especially the teachers, to manoeuvre their schools towards their desired goals. More research work on high performing schools and systems would therefore be desirable.

- Another consideration concerning teacher collegiality is the press for accountability, performance and attainment of school goals. This may create a competitive environment, where teachers could feel hesitant and may detract from honest attempts of establishing teacher collegiality.

- The qualitative findings have implications on the national accreditation programme for principal preparation (NPQEL), as the prerequisite for aspiring school heads. Although the course structure of the NPQEL has recently been re-designed as a 5-month blended learning leadership programme, there are suggestions in the data that principals' practice is heavily shaped by other influences.

Based on the results of the current study, the following recommendations are offered for further research:

- Further research should be undertaken in various other school types, such as, fully residential schools, primary daily schools and vernacular primary schools, to determine whether or not the particular results concerning principal leadership practices and teacher collegiality, can be replicated and add rigour to the body of research.

- The findings of this study asks some important questions about principal preparation programmes (such as the NPQEL) and other professional development short courses for school leaders. Policymakers should review and conduct a critical analysis to evaluate the effectiveness and relevance of these preparatory pre-service leadership programmes, as a qualifier for the formal preparation of future school leaders.

6.4 Conclusion

Most school leaders develop their skillset over time and become more effective through direct experience and practice (Wolf, 2015). There are continually new challenges being faced by principals that demand new ways of thinking, confronting issues, replicating best practices and generating new initiatives to attain school excellence. Malaysia's school leadership and educational strength stems from the cumulative strength of the education system as a whole. As the system embarks upon the Blueprint's 3 Waves of educational reform, the timely emergence of the 11th Malaysian Plan (2016-2020) (11MP), earmarked by its six strategic thrusts and six game changers, will work in tandem, on the overarching goal of enriching the quality of education, improving school learning cultures and promoting academic success, across the full range of the achievements continuum. The following efforts would reaffirm the Government's commitment in providing an improved educational infrastructure through competency-based professional development programmes for teachers and school leaders:

- By embedding 'higher order thinking skills' as part of the school curriculum.

- By devolving exclusive rights to the State and District Education Departments (JPN and PPD) for executing school governance.

- By promoting virtual learning through the 1BestariNet VLE, and

- By developing skilled and knowledgeable talent to thrive in a globally competitive and dynamic environment.

The High Performing Schools programme, implemented in 2010, as Malaysia's cadre of internationally competitive schools, will further gain recognition as world-class schools that encourage the competitive spirit and excellence among students, to be able to compete at an international level and set an exemplar benchmark against the performance of schools within the system. The 'New Deals' tailored package of benefits, and the extended autonomy granted to high performing principals, will enable them the flexibility to innovate and sustain schools of excellence. This research has found that the leaders in the schools are both transformational and innovative. They are leaders who build community and foster teacher collegiality. Their practices are undoubtedly worth replicating more widely throughout Malaysia and beyond if all schools are to become high performing.

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LIST OF PUBLICATIONS AND PAPERS PRESENTED

ISI Publication – Co-Author (Perera, C. J.)

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ISI Publication – Co-Author (Perera, C. J.)

Jones, M., Adams, D., Tan, M., Vasu, M., **Perera, C. J.,** & Harris, A. (2015). *Challenge and Contradictions: Malaysian Principals' perceptions of their leadership practice*. (In-press). Asia Pacific Journal of Education (APJE). doi: 10.1080/02188791.2015.1056591.

Book Chapter – 1st Author

Perera, C. J., Donnie, A., & Vasu, M. (2015). *Principal Preparation and Professional Development in Malaysia: Exploring Key Influences and Current Practice*. In Harris, A. & Jones, M. (Eds.), Leading Futures: Global perspectives on educational leadership. (In-press) (pp. 190): SAGE Press. Refer to p. 345.

Conference Presentation

27th ICSEI International Conference held in Yogyakarta, Indonesia, on 3rd January 2014. Refer to p. 346.

Symposium Presenter

Leading Schools and System Improvement in Asia: A Cross Cultural Analysis.

Symposium Presenters: Alma Harris, Michelle Jones, **Corinne Jacqueline Perera**, Ng Pak Tee, Nicholas Pang, Isak Froumin, Bambang Sumintono.

Discussants: James Spillane, David Reynolds.

Refer to p. 347.

Paper Presenter

Teacher Professionalism and its Implications for Instructional Leadership and Student Discipline: A Study of Perceived Qualities on Teacher Professionalism in Two Secondary Schools (Selangor and Kuala Lumpur) in Malaysia. Presenters: Seloamoney Palaniandy and **Corinne Jacqueline Perera**. Refer to p. 348.

High-Performing Education Systems in Asia: Leadership Art meets Implementation Science

Alma Harris, Michelle S. Jones, Donnie Adams, Corinne Jacqueline Perera & Sailesh Sharma

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Authors: Corinne Jacqueline Perera, Donnie Adams & Vasu Muniandy.
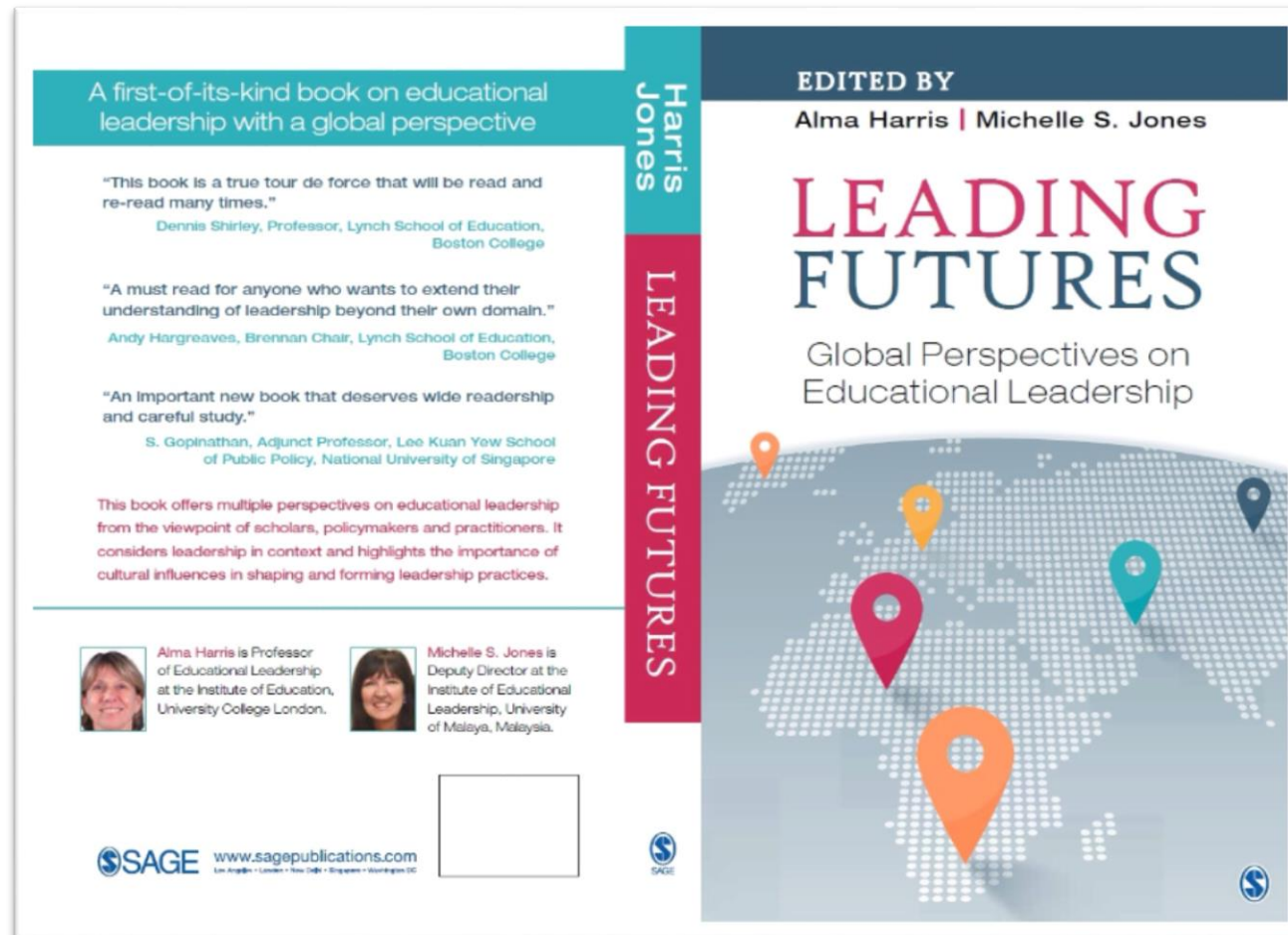
ICSEI

Certificate of Distinction

This is to certify that

Corinne Jacqueline Perera

has attended in the 27th ICSEI Conference hosted by Yogyakarta State University,
Yogyakarta - Indonesia on 2 - 7 January 2014 as a

participant

The President of ICSEI,

Prof. Alma Harris, Ph.D.

Chairperson of the Organizing Committee,

Prof. Suwarsih Madya, Ph.D.

Rector of Yogyakarta State University,

Prof. Dr. Rochmat Wahab, M.Pd., M.A.

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ICSEI

Certificate of Distinction

This is to certify that

Corinne Jacqueline Perera

has presented the paper entitled

School Leadership and Professional Development in Malaysia: Exploring Key Influences and Current Practice

in symposium *Leading School and System Improvement in Asia: A Cross Cultural Analysis*

in the 27th ICSEI Conference hosted by Yogyakarta State University,

Yogyakarta - Indonesia on 2 - 7 January 2014

The President of ICSEI,

Prof. Alma Harris, Ph.D.

Chairperson of the Organizing Committee,

Prof. Suwarsih Madya, Ph.D.

Rector of Yogyakarta State University,

Prof. Dr. Rochmat Wahab, M.Pd., M.A.

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INVITATION LETTER

Yogyakarta, November 18th , 2013

Ms. Corinne Jacqueline Perera
University of Malaya

Dear Ms. Corinne Jacqueline Perera,

Kindly refer to our notification letter in which you find our statement that your paper proposal entitled "Teacher Professionalism and its Implications for Instructional Leadership and Student Discipline: A Study of Perceived Qualities on Teacher Professionalism in Eight Secondary Schools in Kuala Lumpur, Malaysia" has been accepted to be presented in a paper session in the 27th ICSEI International Conference to be held in Yogyakarta, Indonesia, on 2-7 January 2014.

In this opportunity, the Organizing Committee invites you to present your paper in the conference following the conference schedule, which will be presented in the program book and uploaded in the ICSEI website.

In case you need to apply for your visa (look at the list of countries with visa on arrival), please go to the Indonesian Embassy, Consulate General or Consulate in your country and show this letter to the authority. Please visit our website (www.icsei.net/2014) for more information on your travel. Should you need further assistance, please do not hesitate to contact the Organizing Committee through conference@icsei.net.

I look forward to meeting you at the conference.

Sincerely yours,

Suwarsih Madya
Chair, Organizing Committee

Chapter 1 Appendices

A1: Article and Keyword Search Strategy

Article Search and Digital Browsing

The initial online search began with journal articles indexed by the 'The Institute for Scientific Information (ISI) Web of Science' database. For the subsequent literature searches, other journal articles were sourced from '*ISI'* (Institute for Scientific Information) Web of Science and various other refereed journals. Articles were retrieved mainly from the online subscribed databases provided by the University of Malaya Library, for student access. The University of Malaya's 'Interactive Library Portal', is password-enabled and is primarily for remote student access into their online journal subscribed databases. '*Google Scholar'* was the other digital browsing interface frequently used. Sourcing for information was not only confined to scholarly journal articles but was also sourced from educational reports, handbooks, book chapters, conference proceedings, and past theses, as it was fundamental for framing the research design of my thesis. Besides online journal search, specific journal articles that were not available on the subscribed databases, were obtained from the academic library of University of Malaya where journals were kept archived on the bookshelves of the bound Periodicals section. The following are among some of the popular peer-reviewed journals, where local research publications were found listed:

- Malaysian Online Journal of Educational Management (MOJEM)

- Malaysian Online Journal of Educational Technology (MOJET)

- The Malaysian Online Journal of Educational Science

- Procedia - Social and Behavioral Sciences

- Mediterranean Journal of Social Sciences

- Pengurusan Dan Kepimpinan Pendidikan (*Management and Educational Leadership*)

- Educational Management Administration & Leadership

- Asia Pacific Education Review (APER)

- The Asia-Pacific Education Researcher (TAPER)

- Asia Pacific Journal of Education (APJE)

Keyword Search Procedure

A keyword search on 'transformational leadership', through the online repository of the Malaysian EPRD library identified published dissertations available on this subject. It was discovered that there were 2 Bachelor dissertations, 14 Masters and 1 PhD thesis on the subject of transformational leadership. The EPRD repository, which archives a collection of dissertations and theses of the public civil service, had not contained records of the entire collection of dissertations and thesis published by individual public universities in Malaysia. I was thus compelled to conduct a similar search by reviewing the abstracts of dissertations and thesis of all Malaysian public universities to identify studies that exclusively focused on 'transformational leadership'. It was found that there were 37 unpublished doctoral studies that centered on transformational leadership, found among Malaysian public universities between the years 1999 and 2013. This list includes 8 from Universiti Putra Malaysia; 1 from Universiti Pertanian Malaysia; 6 from Universiti Sains Malaysia; 1 from Universiti Tun Hussein Onn Malaysia; 1 from Multimedia University; 2 from Universiti Teknologi Mara and 18 from Universiti Malaya .

Table 1.4: Doctoral Studies on Transformational Leadership in Malaysian Public Universities

NO	AUTHOR	YEAR	TITLE OF THESIS	PUBLIC UNIVERSITY
1	Taweesuk, Duangkrai	(2011)	Effects of transformational leadership of head coach and leadership substitute variables on assistant coach job satisfaction in Thailand.	Universiti Putra Malaysia.
2	Asgari, Ali	(2009)	Antecedents of Organizational Citizenship Behaviour of Human Resource Managers in the Public Sector.	Universiti Putra Malaysia.
3	Mohd Noordin, Norsidah	(2008)	Relationships between Emotional Intelligence, Leadership Behaviour and Organizational Commitment with Organizational Readiness for Change in a Malaysian Institute of Higher Learning.	Universiti Putra Malaysia.
4	Ghazali, Ruziah	(2007)	Determinants of Commitment to Change among Managers and the Mediating Role of Trust in Management in a Service Provider Organization.	Universiti Putra Malaysia.
5	Steven, Baptist Steven	(2006)	The Distinctive Creativity Endeavour Model For Creative Thinking, An Expansion Of The Osborn Parnes Creative Problem Solving Approach.	Universiti Putra Malaysia.
6	Teng, Lung Kiu	(2006)	Pengaruh Faktor Terpilih Terhadap Efikasi Kendiri Guru Sekolah Menengah di Negeri Sarawak.	Universiti Putra Malaysia.
7	Fook, Chan Yuen	(2004)	Effectiveness of School Leadership and Management Course For Headmasters.	Universiti Putra Malaysia.
8	Haron, Shireen	(2003)	The Relationship between Readiness and Facilitation of Self Directed Learning and Academic Achievement: A	Universiti Putra Malaysia.

NO	AUTHOR	YEAR	TITLE OF THESIS	PUBLIC UNIVERSITY
			Comparative Study of Web Based Distance Learning Models of Two Universities.	
9	Stevenson, William R.	(1999)	Transformational Leadership Among Retired Senior Military Officers in the Malaysian Corporate Sector.	Universiti Pertanian Malaysia.
10	Tabassi, Amin Akhavan	(2010)	Training, Motivation And Leadership In Human Resource Development Practices: The Case Of Construction Firms Of Iran.	Universiti Sains Malaysia.
11	Djamhuri, Ali	(2009)	A Case Study Of Governmental Accounting And Budgeting Reform At Local Authority In Indonesia	Universiti Sains Malaysia.
12	Mat, Norsiah	(2008)	Cross Functional New Product Development (NDP) Teams : Characteristics, Dynamics And NPD Performance	Universiti Sains Malaysia.
13	Cheah, Lee Hwa	(2008)	The Impact Of Principal's Transformational Democratic Leadership Style On Teachers' Job Satisfaction And Commitment.	Universiti Sains Malaysia.
14	Said, Ismail	(2008)	Parti Islam Sa-Malaysia: Kepimpinan Dan Perjuangan Dari Tahun 1951 Hingga 1970.	Universiti Sains Malaysia.
15	Lo, May Chiun	(2007)	Bases of power and influence tactics: a test of congruence hypotheses.	Universiti Sains Malaysia.
16	Spahat , Ghalip	(2011)	The role of learning organization in enhancing the implementation of National Dual Training System (NDTS) in Malaysia.	Universiti Tun Hussein Onn Malaysia.
17	Ooi, Thomas Wei Min	(2012)	Exploring the key determinants of a	Multimedia University.

NO	AUTHOR	YEAR	TITLE OF THESIS	PUBLIC UNIVERSITY
			successful organization transformation.	
18	Isa, Khairunesa	(2013)	Kesan komitmen pekerja terhadap hubungan antara tingkah laku kepimpinan dan keberkesanan organisasi.	Universiti Teknologi Malaysia.
19	Yunus, N. H.	(2011)	Employees' Organizational Citizenship Behaviour: Influence Of Leader's Emotional Intelligence And Moderating Effect Of Leader Member Exchange.	Universiti Teknologi Mara
20	Shah, Madiha	(2012)	Teacher collegiality and commitment in high and low achieving secondary schools in Islamabad, Pakistan.	Universiti Malaya.
21	Kaliani Sundaram, Veera Pandiyan	(2012)	Supply chain management practices, supply chain integration and supply chain performance: A study of electronics firms in Malaysia.	Universiti Malaya.
22	Moghavvemi, Sedigheh	(2012)	The roles of propensity to use and precipitating events on IS related innovation adoption behaviour by entrepreneurs.	Universiti Malaya.
23	Teh, Choon Jin	(2012)	Organisational citizenship behaviour in private institutions of higher education in Malaysia.	Universiti Malaya.
24	Yahya, Kamyabi	(2012)	Accounting function outsourcing among Iranian SMEs and its impact on firm performance.	Universiti Malaya.
25	Ciptono, Wakhid Slamet	(2011)	The implementation of Total Quality Management (TQM) in oil and gas industry in Indonesia.	Universiti Malaya.
26	Dezdar, Shahin	(2011)	Critical factors affecting enterprise resource planning implementation success.	Universiti Malaya.

NO	AUTHOR	YEAR	TITLE OF THESIS	PUBLIC UNIVERSITY
27	Eneng, Muslihah	(2011)	Persepsi guru tentang amalan pengurusan berasaskan sekolah, kecerdasan emosional dan kepimpinan instruksional pengetua sekolah agama menengah atas di Provinsi Banten Indonesia.	Universiti Malaya.
28	Lee, Kim Lian	(2011)	The determinants and outcomes of superiors' downward influence tactics and the mediating effects of subordinates' competence and role ambiguity	Universiti Malaya.
29	Maliza Delima, Kamarul Zaman	(2011)	Environmental ethical commitment of the business corporations in Malaysia.	Universiti Malaya.
30	Ong, Lin Dar	(2011)	Trust in co-workers as a mediator of co-workers' trustworthiness, social undermining behaviour, and job performance.	Universiti Malaya.
31	Penafort, Frances Mary	(2011)	Exploring the efficacy of integrated pest management technology and innovation diffusion in Malaysia: a case study approach.	Universiti Malaya.
32	Rohana, Ngah	(2011)	The relationship of intellectual capital, knowledge sharing and innovation on organizational performance of Malaysia's small and medium enterprises.	Universiti Malaya.
33	Rosslina, Ahmad Mokhtar	(2011)	Quality of work life orientation : antecedents and effects on organizational commitment in the Malaysian public service	Universiti Malaya.
34	Lin, Siew Fong	(2010)	Collaborative writing among ESL Diploma students: a case study.	Universiti Malaya.
35	Vasudevan,	(2010)	The implementation of school based teacher	Universiti Malaya.

NO	AUTHOR	YEAR	TITLE OF THESIS	PUBLIC UNIVERSITY
			evaluation practices in selected Malaysian national primary schools. Practices in selected Malaysian national primary schools.	
36	Wee, Yu Ghee	(2010)	Promoting organizational citizenship behaviour through high involvement human resource practices and organizational justice among hotel frontline employees in Malaysia: an attempt to reduce turnover intention.	Universiti Malaya.
37	Naimie, Zahra	(2009)	The impact of teaching style and learning style match and mismatch on EFL student achievement.	Universiti Malaya.

A2: Malaysian Educational Context

This Section provides a description of the historical evolution of Malaysia's education system, till present, detailing the historical forces that have shaped the many facets of school leadership. This Section also covers current issues concerning the roles of school principals and teachers, their career trajectories and the vital contribution of the MOE in shaping the educational landscape in Malaysia.

Tracing the historical development of education is important in this study as it attempts to provide an understanding of the evolutionary growth of Malaysian education through its formative years, when the country was experiencing far-reaching social and political changes. Moreover, it is important to understand the cultural dimensions within a multicultural country and the influence of its cultural orientation in Malaysian schools (Razak, Darmawan, & Keeves, 2010, p. 188).

Malayan Education during the Colonial Period

According to (United Nations Report, 2005, p. 74), the origins of Malaysian education had originated during the pre-Independence era. It has been documented that the present educational system in Malaysia was "inherited from the British" and that the education system during this time was "founded on British colonial educational policies", which catered to the local ethnic communities (Rahimah Ahmad, 1998, p. 463).

The British occupancy in Malaya during the colonial period 1786 to 1957, saw the establishment of a formalized school education in Malaya. In 1957, all Malay-medium primary schools were classified as national schools, while "English, Chinese and Tamil schools became national-type schools" (EPRD, 2008, p. 10). Subsequently, four vernacular school systems emerged – English-medium, Malay-medium, Chinese-medium and Tamil-medium. This led to the development of "four different types of primary schools using English, Malay, Chinese and Tamil vernacular languages" to suit the community's native languages. The vernacular system of education became closely associated with ethnic identity, particularly with the use of their 'mother-tongue' as the medium of instruction in these schools. Although they existed "side by side in the same political domain", the three main cultural groups, namely Malays, Chinese and Indians, maintained and preserved their "distinctive cultural and societal traditions", manifested by the "languages they spoke, codes of dress, customs, and value systems" (Razak et al., 2010, p. 188).

During the days of British-Malaya, the British rulers provided functional literacy to the different ethnic schools through rudimentary teachings of the 3 R's – **R**eading, 'w**R**iting' and 'a**R**ithmetic' (United Nations Report, 2005, p. 74), so as to preserve their

status quo and identify these ethnic groups with their various economic activities of the day (Loh, 1971, p. 40). Malays were occupied with agro-based occupations (Ratnavadivel, 2008, p. 234), Chinese were engaged in tin-mining and trading (Loh, 1971), while Indians provided labour in plantation estates, railways and as lower clerical civil servants (Loh, 1971, pp. 49-50; 166). During this time, both educational and occupational policies were segregated, and this denied the communities "access to educational opportunities of a more developed Western education", which resulted in the communities feeling marginalized (Seng, 1975, pp. 18; 29-31). As a result, the 'Central Advisory Committee' on education was set up in 1949 (United Nations Report, 2005, p. 74), to deal with these challenges and adversities, and to advice the government on educational policies (Ho, 2008) as cited in (Ibrahim Ahmad Bajunid, 2008, p. 95). Refer to Figure 6.1 for the Education Committee Reports of British-Malaya that collectively led to the legislation of the Education Act 1961:
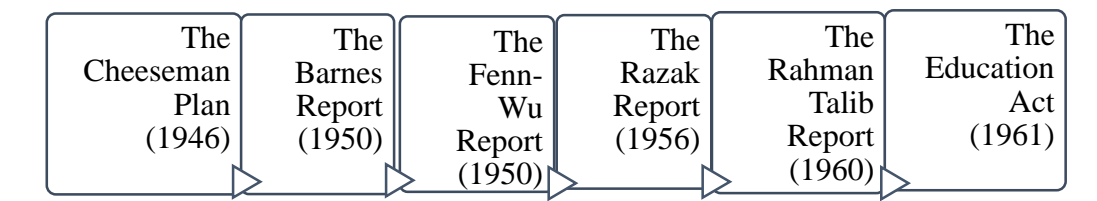
Figure 6.1: Education Committee Reports

The Cheeseman Plan, Barnes Report and Fenn-Wu Report were consolidation efforts during the British colonial rule to reconstruct the education system due to the damage caused by the Second World War and to integrate different streams of education curriculum. In 1956, a national education policy was devised and submitted in the form of the 'Razak Report', and this later formed the basis of the Education Ordinance of 1957 (Ibrahim Ahmad Bajunid, 2008, p. 117). The Razak Report catered towards individual school types that existed, with the intention of preserving the language and culture of the various communities (Razak et al., 2010).

The Razak Report recommended the following sanction:

"a national system of education acceptable to the people of the Federation as a whole which will satisfy their needs and promote their cultural, social, economic and political development as a nation, having regard to the intention to make Malay the national language of the country whilst preserving and sustaining the growth of the language and culture of other communities living in the country".

Source: (Razak Report, 1956, p. 27) Chapter XVIII, No 184.

Malaysian Education: Post Independence

After gaining Independence in 1957, the "laissez-faire legacy of the British" was abandoned in favour of the "politically dominant Malays and the East Malaysian indigenes", who are classified as 'bumiputera' (lit. Sons of the Soil). Constitutionally, bumiputera's enjoy certain economic privileges, and are allotted educational quotas, justified in part to improving their socio-economic standing and also as an attempt towards eradicating inter-ethnic economic disparities (Brown, 2007, pp. 319-322). This remains a politically sensitive issue on all fronts, heightened by its association with an offence committed under the Sedition Act, punishable by imprisonment. Summing up the politics of education, Brown, (2007)   points out that the "politics of decolonization" involves the "nascent nation, its erstwhile colonial masters and the inter-ethnic relations" (pp. 318-323).

During the first decade of the post-independence era, the provision of primary education was in accordance to the 'Karachi Declaration of 1960' (Hussein Ahmad, 2008) as cited in (Ibrahim Ahmad Bajunid, 2008, p. 35). Public education was inculcated with "a sense of Malaysian-ness and patriotism" (Brown, 2007, pp. 318-319). The "transition from English to Malay began in 1970" (Rahimah Ahmad, 1998; United Nations Report,

2005, p. 67), at the time when the medium of instruction in all national schools changed to Malay (lit. *Bahasa Malaysia*). The adoption of Malay as the main language of education, was a move towards "promoting a national identity" and to "provide the social mobility necessary for disadvantaged groups to improve their standing" (Brown, 2007, p. 324).

"as an ultimate national goal, that all these different types of schools would emphasize a common core curriculum and exert a major effort towards the teaching of the national language, Romanized Malay"

Source: (Loh, 1971, p. 235).

By 1971, Malay became the medium of instruction in all national schools and this led to a sharp decline in the levels of English proficiency, over the period of thirty years (Selvarajah Tharmalingam, 2012). It was not till 2003, when the policy to teach Mathematics and Science using English was implemented.

The educational landscape of Malaysia has undergone five decades of transformation, driven by the forces of "political and socio-cultural demand" (Hussein Ahmad, 2008; Ibrahim Ahmad Bajunid, 2008; Jainabee & Jamelaa, 2011). Since gaining Independence in 1957, Malaysian education has been subjected to reforms as a result of the five significant policies that took effect since its implementation:

   i. Education Ordinance of 1957;

   ii. Education Act of 1961;

   iii. Cabinet Committee Report on Education of 1979;

   iv. Education Act of 1996

   v. The policy of using English as the medium of instruction in the teaching of Science and Mathematics in schools 2003.

In the late 1960's, several steering committees were established under the MOE, to help set the parameters concerning policy-related educational research. It was the implementation of the Education Act, 1961 that led to the gradual transition from the British to the Malaysian-oriented curriculum and the Education Act, 1996 was a reiteration of the Education Act, 1961, with an additional inclusion of preschool and post-secondary education (Rahimah Ahmad, 1998).

School Governance

Since 2004, all primary and secondary school governance were placed under the purview of the MOE, (Hussein Ahmad, 2012). The MOE is responsible for all education-related matters in the country and is officially known in the national language as '*Kementerian Pelajaran Malaysia'* (KPM). Under Malaysian school governance, the decision-making power rests with the MOE, who is known for enforcing highly restricted levels of autonomy (World Bank, 2013, p. 2).

Educational Planning and Research Division (EPRD)

The Educational Planning and Research Division (EPRD), established in 1963, became the main planning and coordinating committee of the MOE. The EPRD is responsible for the formulation of educational standards and policies for Malaysian public schools and it holds a functional role in implementing educational policy guidelines. This means that the EPRD is responsible for all matters related to regulatory and institutional policies and is also the governing authority that monitors their online educational repository 'Educational Management Information System' (EMIS) (EPRD, 2008, p. 105). The task of collecting educational statistics from schools is assigned to the respective

State Education Departments (JPN), responsible for supervising and monitoring national education programmes.

School Inspectorate and Quality Assurance Department (JNJK)

The School Inspectorate was established in 1957 for direct report liaison with the Minister of Education. This department is responsible for carrying out various school inspections during their regular school visits. These include, normal inspection, full inspection, follow-up inspection, thematic and special inspection (EPRD, 2008, p. 113). Their other responsibilities include:

i. Providing professional guidance and advice to teachers and schools.

ii. Developing the National Education Standard to benchmark quality education.

iii. Ensuring that schools adhere to the education policies.

iv. Ensuring that the inspection guidelines for schools are implemented efficiently.

v. Ensuring that the Education Minister's Quality Award for the 'National Most Promising School' and the 'Excellent Teacher' Programme are fulfilled.

The Origin of Schools in Malaysia

The various school types that exist in Malaysia is due to the diverse religious, cultural and linguistic identities that prevail in this country *(*Hussein Ahmad, 2012, p. 42). The first form of communal schools that originated in the 1850's, were the *'sekolah pondok'* (lit. hut schools), *'sekolah surau'* (mosque schools) and the *'madrasah'* (advanced Islamic schools) (Hussein Ahmad, 2012, p. 15). This was the time in Malaysian history where people lived and studied religious teachings in huts, under the tutelage of *'uztaz'* (Islamic religious teachers) (NST, 2012). During the colonial period, these were the first

English-medium schools that adopted, using the curriculum of Grammar Schools in England:

> Penang Free School (1816)
>
> Malacca High School (1826)
>
> Singapore Free School (1834)
>
> Victoria Institution (1893)
>
> St. John's Institution (1893)
>
> Methodist Boy's School (1897)
>
> . Malay College Kuala Kangsar (1905)
>
> Source: (EPRD, 2008, p. 4)

These schools were managed and run by Christian missionaries, as part of their "missionary work in providing education for the people" (Rahimah Ahmad, 1998, p. 462). Since these schools mushroomed in the commercial colonies of the 'Straits Settlement' (Malacca, Singapore and Penang including Province Wellesley) they were open to selected children from Malay royalties and aristocrats (Hussein Ahmad, 2012, p. 15; Lim, 2008, p. 2). Refer to 'Straits Settlement of Malaya' in Figure 6.2:
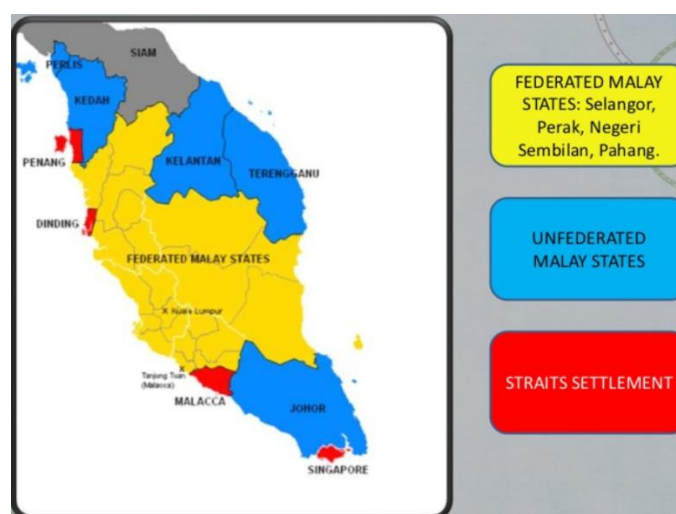
Figure 6.2: Straits Settlement of Malaya

Malaysian Education Structure

It has been reported that a "full course of schooling is eleven years" and the medium of instruction is '*Bahasa Malaysia*', (lit. *Malay*), the national language of this country. Public education in Malaysia is provided free for the school-age population between 6+ and 16+, with compulsory primary level education, introduced since 2003, as stipulated under the Education Act 1996 (United Nations, 2011, pp. 31, 33 ; United Nations Report, 2005, pp. 74-75). Primary education is provisioned for all children regardless of their ethnic group or religion (EPRD, 2008, p. 10). Primary school education is compulsory, as stipulated by the Education Act 1996 (MOE Website) (United Nations Report, 2005, p. 74) and primary students are required to sit for the UPSR (Primary School Assessment Test) or also known as, *'Ujian Penilaian Sekolah Rendah'* at the end of their sixth year. According to the Compulsory Education Act (Section 29A Education Act (Amendment) 2002), primary school education in Malaysia, is compulsory and that "a fine of RM5000.00 or jail for a period of not exceeding six months or both, can be imposed upon parents who fail to abide to this Act" (EPRD, 2008, p. 33). After the final year of primary education, students have the option of pursuing a secondary education in a secondary public school. However, secondary education is optional in Malaysia. According to (Ismail & Ghani Abdullah, 2011, p. 2), the following are the various categories of public schools offering a secondary education in Malaysia:

- Fully Residential Schools (SBP)
- Technical Secondary Schools (SMT)
- National Religious Secondary Schools (SMKA)
- Daily Secondary Schools
- Premier Schools
- Centennial Schools

- Schools in Putrajaya and Cyberjaya

- Special Model Schools

Source: (Ismail & Ghani Abdullah, 2011, p. 2)

Secondary education is divided into two levels:

- Lower secondary education includes Forms 1, 2 and 3.

- Upper secondary education includes Forms 4 and 5.

Source: (MOE, 2008, p. 19)

As of 2014, students were required to sit for the 'PT3' examination (*Pentaksiran Tingkatan Tiga*), after they had completed their lower secondary education, before proceeding to the upper secondary education. After completing the final year of Form 5, students will sit for the SPM examination, (Sijil Pelajaran Malaysia) formerly known as Malaysia Certificate of Education (MCE) or the vocational equivalent, Sijil Pelajaran Vokasional Malaysia (SPVM). This is the equivalent of the GCE O-Level examination. The results gained from these said examinations are entry requirements for selection into any of these post-secondary pursuits: Form 6, Matriculation, Diploma courses or Teacher Training. Students who undergo the 2-year, Form 6 programme, will sit for the Malaysian Higher School Certificate Examination (STPM), which is equivalent to the GCE A-level, or the Malaysia Higher Certificate for Religious Education (STAM), at the end of Form 6. Alternatively, these group of school leavers also have the 'leave-school' option to find employment in the job market (see Figure 6.3).
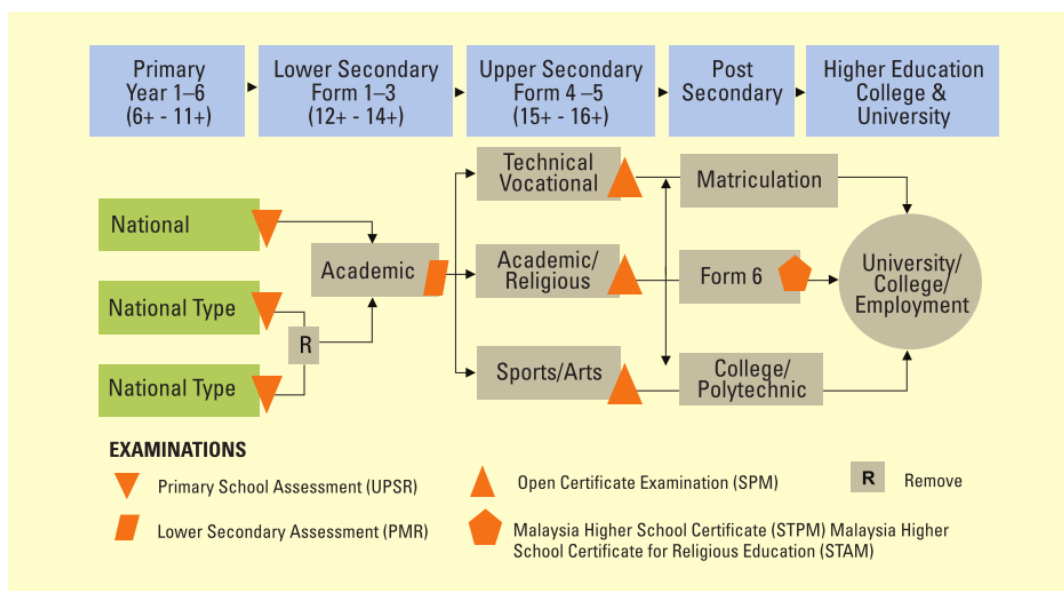
Figure 6.3: Education and Examination Structure
Source: (MOE, 2008, p. 18)

Presently, the Malaysian public school network is divided into various types of schools according to their curriculum, language, mission and quality. Table 1.5 shows the division of schools by levels, types and titles. Malay labels are enclosed within parentheses.

Table 1.5: Types of schools in the Malaysian public education system
Source: (Hazri Jamil, Yusof Petras, & Mohamed., p. 43)

Primary education	Secondary education	Special titles for schools
national primary school (sekolah kebangsaan)	national secondary school (sekolah menengah kebangsaan)	cluster school (sekolah kluster)
national Chinese primary school (sekolah jenis kebangsaan Cina)	national Chinese secondary school (sekolah jenis menengah Cina)	smart school (sekolah bestari)
national Tamil school (sekolah jenis kebangsaan Tamil)	technical secondary school (sekolah menengah teknik)	vision school (sekolah wawasan)
Islamic primary school (sekolah rendah agama)	fully residential school (sekolah berasrama penuh)	sports school (sekolah sukan)
complementary Islamic school (sekolah agama rakyat)	Islamic secondary school (sekolah menengah agama)	
junior science college (maktab rendah sains MARA)		
hut school (sekolah pondok)		

As at 31 December 2014, (KPM, 2014) reported a total of 10,154 government schools and government-aided schools in Malaysia, of which 7,760 are primary schools and 2,394

are secondary schools. According to (United Nations, 2011, p. 33), it is reported that the majority of Malaysian students attend public schools, as compared to private schools.

Principal of Secondary Schools

In the Malaysian school system, the school leader is regarded as the most important person who holds the highest authority in the hierarchy of school administration (Suraya & Yunus, 2012). The designations, 'Head' 'Headmaster' or 'Headmistress' (*'Pengetua'* in Malay) refers to the school leader of primary schools, while 'Principal' refers to the school leader of secondary schools (Ibrahim Ahmad Bajunid, 2000, p. 71). The general roles and responsibilities of Malaysian school principals are outlined in the '*Competency Standards for Malaysian School Principals*' and it is used as a benchmark for principals' competency rating (IAB, 2010; Mustamin & Yasin, 2012). Their roles have thus become more challenging, as they are expected to understand the nation's philosophy of education and be able to lead and manage schools effectively.

School Teachers

Teachers in the Malaysian public workforce, are viewed as the determinants of student achievement and the MOE strongly encourages teachers to engage in professional teacher development courses, which could foster their growth and develop their professional practices in curriculum delivery (Hazri Jamil, Nordin Abd Razak, Reena Raju, & Abdul Rashid Mohamed, 2011, p. 88).

Most secondary school teachers are predominantly "Master's or first-degree graduates" and they differ in terms of job grade and salary (Hazri Jamil et al., pp. 42-43). The MOE public service circular ('Pekeliling Perkhidmatan Bil. 40/2013'), effective 1st January

2014, outlines the new teaching service scheme of public school teachers, after displacing the following two circulars, dated 2002 and 2007 (MOE Circular, 2013, p. 7):

- 'Pekeliling Perkhidmatan Bil. 4/2002'
- 'Pekeliling Perkhidmatan Bil. 11/2007'

The MOE has recently introduced an improved teacher service scheme of remuneration and promotional opportunities based on the conditions listed below:

i. Teachers with a Diploma or equivalent qualifications, recognised by the MOE are qualified for DG 29. The job grades for diploma holders are in this range: DG 29, 32, 34, and 38 (see Table 1.6).

Table 1.6: Wages for teachers with Diploma Qualifications
Source: (MOE Circular, 2013)

Job Grade	Minimum Wage (RM)	Maximum Wage (RM)	Annual Incremental Rate (RM)
DG 29	1,589.00	5,137.00	145.00
DG 32	2,731.00	5,457.00	155.00
DG 34	3,397.00	5,797.00	165.00
DG 38	3,457.00	7,051.00	195.00

ii. Teachers with DG 29 are considered for promotion to DG 32, after having served at least eight years in Grade DG 29 and subjected to the approval of the Head of Department.

iii. Teachers with DG 32 are considered for promotion to DG 34, after having served at least eight years in Grade 32 and subjected to the approval of the Head of Department.

iv. Teachers with DG 34 are considered for promotion to DG 38, after having served at least five years in Grade 32 and subjected to the approval of the Head of Department.

v. Teachers with a Bachelor degree, Master's, Doctorate or equivalent qualifications in a related field and recognised by the MOE, are eligible to commence with DG 41. The job grades for the management and professional group fall in this job grade range: DG 41, 42, 44, 48, 52 and 54 (see Table 1.7).

Table 1.7: Scheme of Wages for management and professional education group
Source: (MOE Circular, 2013)

Job Grade	Minimum Wage (RM)	Maximum Wage (RM)	Annual Incremental Rate (RM)
DG 41	1,917.00	8,652.00	320.00
DG 42	1,917.00	8,652.00	290.00
DG 44	3,371.00	9,414.00	270.00
DG 48	4,922.00	10,560.00	250.00
DG 52	5,538.00	11,194.00	225.00
DG 54	5,840.00	11,864.00	225.00

vi. Teachers with DG 41 or 42 are considered for promotion to DG 44, after having served for at least eight years in Grade 41 or 42 and subjected to the approval of the Head of Department.

vii. Teachers with a DG 44 are considered for promotion to DG 48, after having served for at least eight years in Grade 44 and subjected to the approval of the Head of Department.

viii. Teachers with a DG 48 are considered for promotion to DG 52, after having served for at least six years in Grade 48 and subjected to the approval of the Head of Department.

ix. Teachers with a DG 52 are considered for promotion to DG 54, after having served for at least three years in Grade 52 and subjected to the approval of the Head of Department.

Teacher Training Programmes

The advent of formal schooling in Malaysia, coincided with the establishment of the first teacher training colleges, set up to cater for the needs of teachers:

i. The Singapore Malay Teachers College in Singapore – 1878.

ii. The Malay Women's Teachers College in Malacca – 1935.

iii. The Sultan Idris Teachers College in Tanjung Malim – 1923.

iv. Brinsford and Kirby Teaching Colleges in England – 1960s.

Source: (EPRD, 2008, pp. 5, 87; Ibrahim Ahmad Bajunid, 2000, pp. 49-50)

Teacher education in Malaysia was formulated in 1982. It was a main concern by the MOE to provide "pre-service as well as in-service training for teachers, in order to meet the needs of schools". Since 2004, the Ministry of Higher Education (MOHE) trained the secondary school teachers via government-funded universities and the MOE trained primary teachers via the Institute of Teacher Education. (Hazri Jamil et al., 2011, p. 88). Presently, teacher preparation programmes in Malaysia are run by 'Teacher Training Institutes' as well as public universities. Since 2007, Teacher Training Institutes trained primary school teachers, whereas local public universities trained secondary school teachers (Muhammad Faizal A. Ghani, 2013, pp. 55-56). There are currently 27 Teacher Training Institutes that provide a range of degree and diploma teacher training programmes (see Tables 1.11 and 1.12).

i. Bachelor degree in Education (B.Ed.)

ii. Integrated Bachelor degree with Education (B.Ed. TESL)

iii. The Teacher Training Programme for Excellent Students (Overseas) Programme

iv. Teaching of Foreign Language Overseas Link – Programme

v. Malaysian Diploma in Teaching Programme

vi. DPLI – Postgraduate Diploma in Teaching

vii. LPBS – School-based Teacher Training Mode

Source: (EPRD, 2008; Muhammad Faizal A. Ghani, 2013, p. 56).

School Awards

A system of awards have been provisioned for exemplary performance demonstrated by schools, in academic as well as in co-curricular activities. Some of these school awards include the "Excellent School Award" and the "Quantum Leap Award". Annual school awards such as the "Promising School Award" and the 'Minister of Education's Quality School Award', are given to the best excellent school and every staff member will receive RM500 each, as a monetary incentive (Muhammad Faizal A. Ghani, 2013, p. 60). These awards are benchmarked against the 'SKPM' scores (EPRD, 2008, p. 113; MOE, 2008, p. 88). There is also the 'National NILAM Award' presented to a Form 1 student or a student from Remove Class, for having read the highest number of books, annually (EPRD, 2008, p. 67).

Table 1.8: Courses offered by Institutes of Teacher Education in Malaysia
Source: (EPRD, 2008, p. 90)

No	Level	Programme	Duration	Target
1	Degree	B.Ed.(TESL) twinning programmes with local and foreign higher education institutions of higher education		School leavers with SPM leavers qualifications
		Bachelor of Education (International Languages) Programme	5.5 years	
		Teaching of a Foreign Language Overseas Link - Programme		
2	Post Graduate	Full Time Post Graduate Teacher Training Course for Primary and Secondary Teachers	1 years	First Degree Holders (minimum)
		Post Graduate Teacher Trainig Course for Primary School Teachers (school-based training mode)	1.5 years	
		Post Graduate j-QAF Teaches Training Course		
3	Diploma	Full Time Malaysian Teaching Diploma Course		School Leavers
		Malaysian Diploma in Teaching Course (using the School-based Training Mode)	3 years	Having SPM qualifications

HPS Awards

High Performing Schools have a separate package of benefits after these schools are conferred with the HPS status. Each school will receive an allocation of RM1.5mil over three years, with RM 700,000 in the first year, followed by RM 500,000 and RM 300,000 in the subsequent years. These financial allocations are provided by the MOE on an annual basis, as an incentive for school leaders to use these additional funds for human capital development, internationalisation, maintenance, minor renovation, and to purchase capital assets to help improve the quality of education in this country.

Table 1.9: Institutes of Teacher Education in Malaysia
Source: (EPRD, 2008, p. 88)
Adapted: Teacher Education Division, Ministry of Education Malaysia

No.	Teacher Education Institute (TEI)	State
1	Institut Perguruan Temenggong Ibrahim	Johor
2	Institut Perguruan Sultan Abdul Halim	Kedah
3	Institut Perguruan Kota Bharu	Kelantan
4	Institut Perguruan Perempuan Melayu Melaka	Melaka
5	Institut Perguruan Raja Melewar	Negeri Sembilan
6	Institut Perguruan Tengku Ampuan Afzan	Pahang
7	Institut Perguruan Ipoh	Perak
8	Institut Perguruan Persekutuan Pulau Pinang	Pulau Pinang
9	Institut Perguruan Gaya	Sabah
10	Institut Perguruan Tawau	Sabah
11	Institut Perguruan Kent	Sabah
12	Institut Perguruan Keningau	Sabah
13	Institut Perguruan Miri Sarawak	Sarawak
14	Institut Perguruan Rajang	Sarawak
15	Institut Perguruan Batu Lintang	Sarawak
16	Institut Perguruan Kuala Terengganu	Terengganu
17	Institut Perguruan Sultan Mizan	Terengganu
18	Institut Perguruan Bahasa-bahasa Antarabangsa	Kuala Lumpur
19	Institut Perguruan Islam	Selangor
20	Institut Perguruan Darulaman	Kedah
21	Institut Perguruan Bahasa Melayu Malaysia	Kuala Lumpur
22	Institut Perguruan Ilmu Khas	Kuala Lumpur
23	Institut Perguruan Teknik	Kuala Lumpur
24	Institut Perguruan Tuanku Bainun	Pulau Pinang
25	Institut Perguruan Tun Hussein Onn	Johor
26	Institut Perguruan Tun Abdul Razak	Sarawak
27	Institut Perguruan Perlis	Perlis

New Deals Charter for Principals

The 'New Deals Charter' for principals is a performance-based incentive programme introduced in 2012. It was originally implemented under the GTP 1.0 (PEMANDU, 2012, pp. 98, 110). The New Deals package has been tailored to encourage high performing principals to improve the performance of their schools by providing them with financial and career incentives. This programme is a primary driver to motivate principals and provide annual rewards for the "top performing and most improved schools", where

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principals receive RM7,500, the best 5% teachers receive RM1,800 and the rest of the 95% of teachers receive RM900 each (World Bank, 2013, p. 39). Outstanding school principals are also selected by the MOE and awarded with the appointment of 'Super Principal' and a raised job grade of 'DG54' or 'JUSA C'.

New Deals Teacher Career Package

The New Deals Teacher career package was introduced as one of the government's initiatives to recognise and promote teachers as the front-liners of the education system in this country (PEMANDU, 2012, p. 110). Teachers who demonstrate excellent performance, are rewarded through "a graded system of remuneration, inclusive of bonuses" (Hazri Jamil et al., 2011, p. 94). Other fringe benefits (quota-based posts), like the 'Excellent Teacher' award, is awarded by the MOE to selective teachers, who are at the job grade level of 'DG32, DG34, DG44, DG 48, DG52, DG54 or JUSA C' (MOE, 2014). Teachers' annual appraisal results are also considered for the 'Excellent Service' awards and teacher recipients will receive a RM1,000 cash prize and a certificate for excellent service (Muhammad Faizal A. Ghani, 2013, p. 61). The 'Innovative Teacher Award' is an acknowledgement of teachers' effort, in producing innovations that help to improve the teaching and learning processes in the classroom (EPRD, 2008, p. 96).

A3: PISA and TIMSS Scores for Malaysia (1999 – 2013)

International assessments like *PISA* (Programme for International Student Assessment) and *TIMSS* (Trends in International Mathematics and Science Study), are conducted periodically every 3 to 4 years (United Nations, 2011). PISA was developed by the Organization for Economic Cooperation and Development (OECD) with the primary intention of providing to governments of participating countries, international indicators of their student achievement and the "cumulative yield of education systems" (Ross & Genevois, 2006, p. 77). PISA assesses fifteen year-old students on their evaluation of their reading ability and proficiency in Mathematics and Science.

TIMSS is also an international assessment that plays an important role in providing cross-national Mathematics and Science comparisons, in testing the achievement of "students ages 9, 13 and those in their last year of secondary school" (Ross & Genevois, 2006, pp. 83, 149). In 1999, when Malaysia first participated in TIMSS, the average student score exceeded the international average score (MOE, 2013, pp. E-6; World Bank, 2013, p. 53). Subsequently, the World Bank, (2013, p. 65) reported a general decline in the TIMSS test scores among Malaysian students from 1999 to 2011 (see Figure 6.4). As for PISA scores, Malaysia stood in the "bottom one third of the average student score" for PISA 2009 (NST, 9 Sep 2012). In 2012, Malaysia faced yet another disappointing performance in all three components of PISA 2012 (Reading, Math and Science), when ranked below par among 65 countries and when compared to peer countries in Asia (see Figures 6.5 and 6.6).

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Figure 6.4: TIMSS Scores for Malaysia (1999 – 2013)
Source: World Bank, 2013, p. 65.
Adapted from: (TIMSS 1999, 2004, 2007, 2011);
MOE Quick Facts 2008 and (EPRD, 2013)

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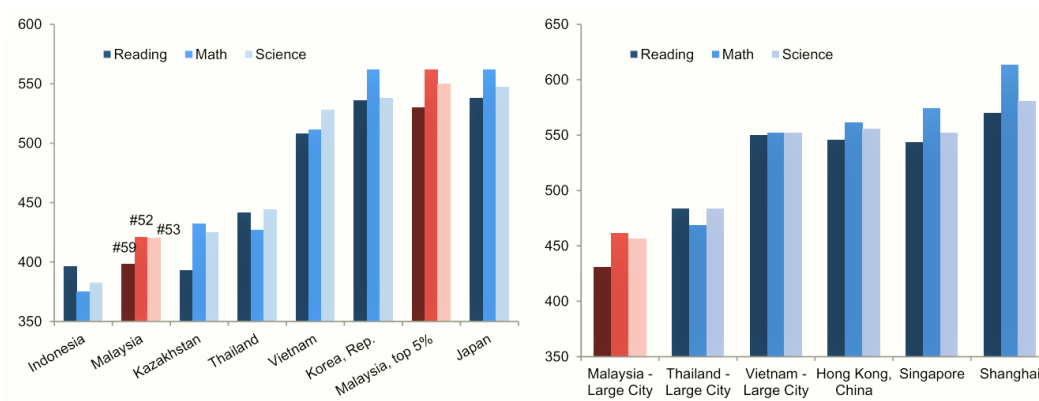
Figure 6.5   **Figure 6.6**
Figure 6.5: Malaysia's Mean Scores for PISA (2012)
Figure 6.6: PISA (2012) Scores - Malaysia among Asian Peer Countries
Source: World Bank, 2013.
Adapted from: OECD PISA, 2013 and World Bank

A4: Letter of Consent from JNJK

JEMAAH NAZIR DAN JAMINAN KUALITI
KEMENTERIAN PENDIDIKAN MALAYSIA
ARAS 3 - 5, BLOK E15
KOMPLEKS KERAJAAN PARCEL E
PUSAT PENTADBIRAN KERAJAAN PERSEKUTUAN
62604 PUTRAJAYA

Ruj Kami   KP/JNJK/1000/1/Jld 11/
Tarikh   10 Julai 2014

Corinne Jacqueline Perera
Institute Of Educational Leadership
University Of Malaya,
Level 11, Wisma R&D
Jln Pantai Baru,
59990 Kuala Lumpur

Puan,

Kebenaran Meneliti Dokumen di Pusat Sumber Jemaah Nazir Dan Jaminan Kualiti

Dengan hormatnya perkara di atas adalah dirujuk

2.   Adalah dimaklumkan maklumat yang dipohon oleh puan berkaitan Komposit Skor, Ranking Sekolah dan Band Sekolah tidak diurus dan disimpan oleh Jemaah Nazir dan Jaminan Kualiti (JNJK). Sehubungan itu, puan dipohon merujuk kepada pihak **PADU Corporation** bagi mendapatkan maklumat berkaitan untuk melengkapkan laporan penyelidikan puan.

3.   Selain itu, puan dipohon untuk menghubungi Bahagian Pengurusan Sekolah Berasrama Penuh dan Sekolah Kecemerlangan bagi mendapatkan maklumat berkaitan Sekolah Berprestasi Tinggi.

Sekian, terima kasih.

"BERKHIDMAT UNTUK NEGARA"

Saya yang menurut perintah.

(DATO HAJI MAHMUD BIN KARIM)
Ketua Nazir
Jemaah Nazir dan Jaminan Kualiti,
Kementerian Pendidikan Malaysia

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Chapter 2 Appendices

B1: Leadership and Management

	Leadership functions	Management functions
Creating an agenda	*Establishing direction:* Vision of the future, develop strategies for change to achieve goals	*Plans and budgets:* Decide action plans and timetables, allocate resources
Developing people	*Aligning people:* Communicate vision and strategy, influence creation of teams which accept validity of goals	*Organizing and staffing:* Decide structure and allocate staff, develop policies, procedures and monitoring
Execution	*Motivating and inspiring:* Energize people to overcome obstacles, satisfy human needs	*Controlling, problem solving:* Monitor results against plan and take corrective action
Outcomes	Produces positive and sometimes dramatic change	Produces order, consistency and predictability

Figure 2.1: Leadership and Management
Source: (Bolden, 2004, p. 6)
Adapted from: (Kotter, 2008)

B2: Principal Effect Theoretical Models (1980 – 1995)

Table 2.1: Principal Effect Studies (1980 – 1995)
(Adapted from (Hallinger & Heck, 1996b)

Theoretical Models	No of Articles	Publication Years
Direct-effects Model	13	1980 - 1994
Direct-effects with Antecedent	9	1982 - 1994
Mediated-effects Model	5	1982 - 1994
Mediated-effects with Antecedent	15	1984 - 1995
TOTAL	**42**	**15 Years**

B2: Direct-effects Model

Principal Leadership	⟶	Student Achievement
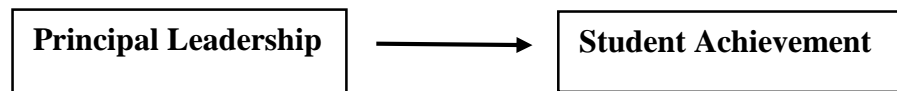
Figure 2.2: Direct-effects Model
Source: (Hallinger & Heck, 1996b, p. 16)

B2: Mediated-effects Model

Principal Leadership	⟶	Intervening Variables	⟶	Student Achievement
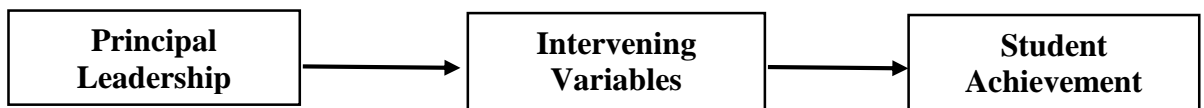
Figure 2.3: Mediated-effects Model
Source: Hallinger & Heck, 1996b, p. 16

B2: Mediated with Antecedent effects Model

Antecedent Variables	⟶	Principal Leadership	⟶	Intervening Variables	⟶	Student Achievement
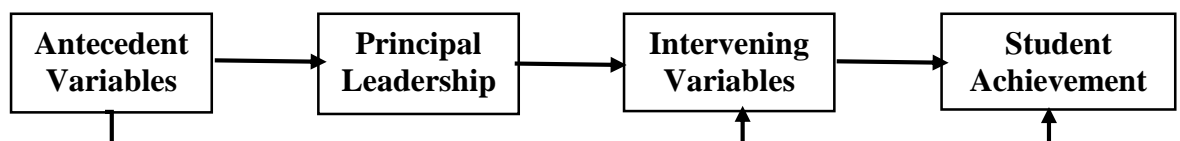
Figure 2.4: Mediated with Antecedent effects Model
Source: (Hallinger & Heck, 1996b, p. 16)

B2: Principal Effects Model on Achievement
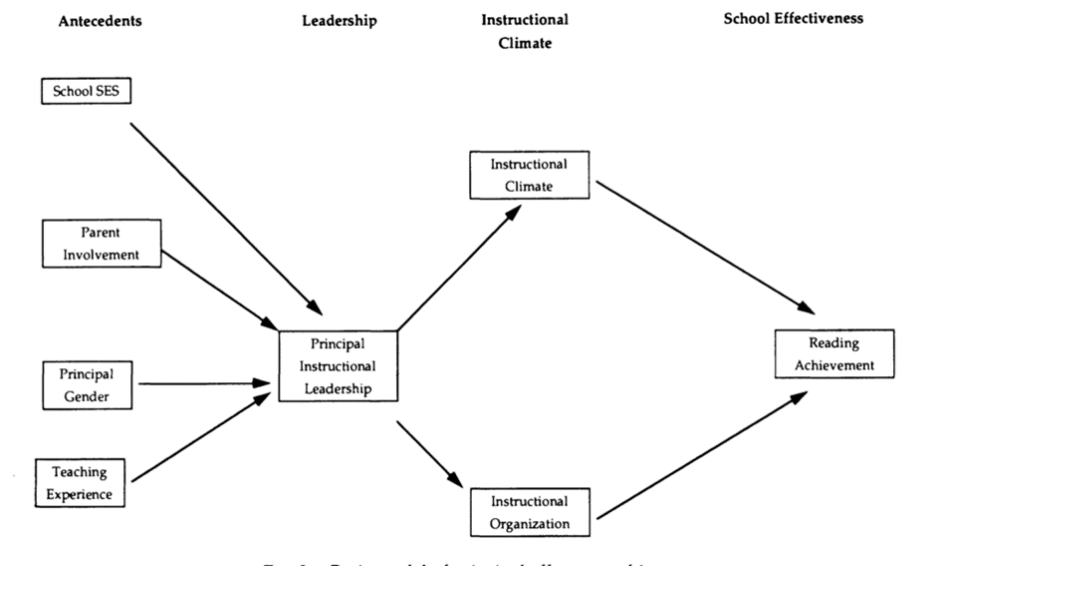
Figure 2.5: Theoretical Model of Principal Effects on Achievement
Source: (Hallinger et al., 1996, p. 532)

B3: Transformational Leadership: Bass vs Leithwood

Table 2.2: Bass Four versus Leithwood's Six Factors of Transformational Leadership
Adapted from Watts, (2009, p. 33)

The Four Common I's[a]	Leithwood's Six[b]
1. Idealized influence. Charismatic vision and behavior that inspires others to follow.	1. Building vision and goals.
2. Inspirational motivation. Capacity to motivate others to commit to the vision.	2. Providing intellectual stimulation.
	3. Offering individualized support.
3. Intellectual stimulation. Encouraging innovation and creativity.	4. Symbolizing professional practices and values.
4. Individualized consideration. Coaching to the specific needs of followers.	5. Demonstrating high performance expectations.
	6. Developing structures to foster participation in decisions.

[a]Barbuto, 2005; Hall, Johnson, Wysocki, & Kepner, 2002; Judge & Piccolo, 2004; Kelly, 2003; Simic, 1998. [b]Leithwood & Jantzi, 2000.

Chapter 3 Appendices

C1: Data Collection Time Log

Table 3.1: Time Log of Qualitative Data Collection

DATE	SCHOOL	DATA COLLECTION METHOD / TRANSCRIPTION
19 Aug 2014	School A	Interview (Principal)
19 Aug 2014	School A	Focus Group (Teachers)
20 Aug 2014	School G	Focus Group (Teachers)
21 Aug 2014	School S	Focus Group (Teachers)
21 Aug 2014	School S	Interview (Principal)
22 Aug 2014	School B	Appointment with Principal to request for school participation in this study.
22 Aug 2014	School E	Appointment with Principal to request for teachers participation in Survey, as Principal had declined to participate.
24 Aug 2014	School I	Interview (Principal)
24 Aug 2014	School I	Focus Group (Teachers)
25 Aug 2014	School S	Observation (School Assembly)
25 Aug 2014	School S	Class Observations
25 Aug 2014	School S	Discussion with Students
28 Aug 2014	School S	Observation (Teachers In-house Training)
28 Aug 2014	School S	Observation (Teachers Meeting)
28 Aug - 21 Sep	School I	Transcription (Principal): 1 hour 11 minutes 55 seconds
06 Sep 2014	School S	Observation (School Event showcasing Student Performances and Community involvement)
08 Sep 2014	School I	Survey (Teachers)
23 Sep 2014	School G	Interview (Principal)
23-29 Sep 2014	School I	Transcription (Focus Group) : 59 minutes 53 seconds
29 Sep – 02 Oct 2014	School G	Transcription (Focus Group) : 01 hour 08 minutes 43 seconds
01 Oct 2014	School E	Survey (Teachers)
02 Oct 2014	School G	Transcription (Teacher Interview) : 06 minutes 13 seconds

DATE	SCHOOL	DATA COLLECTION METHOD / TRANSCRIPTION
02 Oct 2014	School G	Transcription (Principal): 01 hour 19 minutes 06 seconds
03 – 06 Oct 2014	School S	Transcription (Principal): 01 hour 43 minutes 33 seconds
06 – 07 Oct 2014	School S	Transcription (Focus Group) : 01 hour 10 minutes 03 seconds
07 – 08 Oct 2014	School A	Transcription (Focus Group) : 01 hour 14 minutes 31 seconds
08 – 14 Oct 2014	School A	Transcription (Focus Group) : 01 hour 13 minutes 46 seconds
03 Nov 2014	School B	Interview (Principal)

C2: EPRD and JPN Approval Letters

BAHAGIAN PERANCANGAN DAN PENYELIDIKAN DASAR PENDIDIKAN
KEMENTERIAN PELAJARAN MALAYSIA
ARAS 1-4, BLOK E-8
KOMPLEKS KERAJAAN PARCEL E
PUSAT PENTADBIRAN KERAJAAN PERSEKUTUAN
62604 PUTRAJAYA.

Telefon : 03-88846591
Faks   : 03-88846579

Ruj. Kami   :   KP(BPPDP)603/5/JLD.06 (10)
Tarikh   :   17 Jun 2013

Corinne Jacqueline Perera
Level 11, Wisma R&D
Jalan Pantai Baru
59990 Kuala Lumpur

Tuan/Puan,

Kelulusan Untuk Menjalankan Kajian Di Sekolah, Institut Perguruan, Jabatan Pelajaran Negeri Dan Bahagian-Bahagian Di Bawah Kementerian Pelajaran Malaysia

Adalah saya dengan hormatnya diarah memaklumkan bahawa permohonan tuan /puan untuk menjalankan kajian bertajuk:

" **A Comparative Analysis Of Leadership Development In Southeast Asia** " diluluskan.

2.   Kelulusan ini adalah berdasarkan kepada cadangan penyelidikan dan instrumen kajian yang tuan/puan kemukakan ke Bahagian ini. **Kebenaran bagi menggunakan sampel kajian perlu diperolehi dari Ketua Bahagian/Pengarah Pelajaran Negeri yang berkenaan.**

3.   Sila tuan/puan kemukakan ke Bahagian ini senaskah laporan akhir kajian/laporan dalam bentuk elektronik berformat Pdf di dalam CD bersama naskah _hardcopy_ setelah selesai kelak. Tuan/Puan juga diingatkan supaya **mendapat kebenaran terlebih dahulu** daripada Bahagian ini sekiranya sebahagian atau sepenuhnya dapatan kajian tersebut hendak dibentangkan di mana-mana forum atau seminar atau diumumkan kepada media massa.

Sekian untuk makluman dan tindakan tuan/puan selanjutnya. Terima kasih.

"BERKHIDMAT UNTUK NEGARA"

Saya yang menurut perintah,

(DR. HJ. ZABANI BIN DARUS)
Ketua Sektor
Sektor Penyelidikan dan Penilaian
b.p. Pengarah
Bahagian Perancangan dan Penyelidikan Dasar Pendidikan
Kementerian Pelajaran Malaysia

Zul/surat kelulusan/13

6.3.22 C22: EPRD Approval for Thesis Title and School Research Visits

BAHAGIAN PERANCANGAN DAN PENYELIDIKAN DASAR PENDIDIKAN
KEMENTERIAN PENDIDIKAN MALAYSIA
ARAS 1-4, BLOK E-8
KOMPLEKS KERAJAAN PARCEL E
PUSAT PENTADBIRAN KERAJAAN PERSEKUTUAN
62604 PUTRAJAYA.

Telefon : 03-88846591
Faks : 03-88846579

Ruj. Kami : KP(BPPDP)603/5/JLD.14 (05)
Tarikh : 05 Februari 2015

Corinne Jacqueline Perera
No.12, Jalan PJS 5/10,
Taman Desaria,
46150 Petaling Jaya,
Selangor

Tuan/Puan,

Kelulusan Untuk Menjalankan Kajian Di Sekolah, Institut Pendidikan Guru, Jabatan Pendidikan Negeri Dan Bahagian-Bahagian Di Bawah Kementerian Pendidikan Malaysia

Adalah saya dengan hormatnya diarah memaklumkan bahawa permohonan tuan /puan untuk menjalankan kajian bertajuk:

" _Principal Leadership Practices And Teacher Collegiality In Malaysian High Performing Schools_" diluluskan.

2. Kelulusan ini adalah berdasarkan kepada cadangan penyelidikan dan instrumen kajian yang tuan/puan kemukakan ke Bahagian ini. **Kebenaran bagi menggunakan sampel kajian perlu diperolehi dari Ketua Bahagian/Pengarah Pendidikan Negeri yang berkenaan.**

3. Sila tuan/puan kemukakan ke Bahagian ini senaskah laporan akhir kajian/laporan dalam bentuk elektronik berformat Pdf di dalam CD bersama naskah _hardcopy_ setelah selesai kelak. Tuan/Puan juga diingatkan supaya mendapat kebenaran terlebih dahulu daripada Bahagian ini sekiranya sebahagian atau sepenuhnya dapatan kajian tersebut hendak dibentangkan di mana-mana forum atau seminar atau diumumkan kepada media massa.

Sekian untuk makluman dan tindakan tuan/puan selanjutnya. Terima kasih.

"BERKHIDMAT UNTUK NEGARA"

Saya yang menurut perintah,

(DR. HJ. ZABANI BIN DARUS)
Ketua Sektor
Sektor Penyelidikan dan Penilaian
b.p. Pengarah
Bahagian Perancangan dan Penyelidikan Dasar Pendidikan
Kementerian Pendidikan Malaysia

C2: Education State Departments (JPN) Approval Letters

JPN Kedah

JABATAN PENDIDIKAN NEGERI KEDAH DARUL AMAN
KOMPLEKS PENDIDIKAN, JALAN STADIUM
05604 ALOR SETAR
KEDAH DARUL AMAN

No. Telefon : 04-740 4000
No. Faks : 04-740 4342
Laman Web : www.jpn.moe.gov.my/jpnkedah

Ruj Kami : JPK03-07/3212 Jld16( )
Tarikh : Mac 2015

Corinne Jacqueline Perera
No 12, Jalan PJS 5/10
Taman Desaria
Off Jalan Kilang Lama
46150 Petaling Jaya
Selangor Darul Ehsan

Tuan/Puan,

Kebenaran Untuk Menjalankan Kajian/ Soal Selidik di Jabatan Pendidikan Negeri / Pejabat Pendidikan Daerah dan Sekolah – Sekolah di Negeri Kedah Darulaman

Saya dengan hormatnya diarah merujuk kepada perkara tersebut di atas.

2.   Dimaklumkan bahawa permohonan tuan/puan untuk menjalankan kajian yang bertajuk "Principal Leadership Practices And Teacher Collegiality In Malaysian High Performing Schools" telah *diluluskan*.

3.   Kelulusan ini adalah berdasarkan kepada apa yang terkandung di dalam cadangan penyelidikan yang tuan/puan kemukakan ke Kementerian Pendidikan Malaysia.Tuan/Puan dikehendaki mengemukakan senaskah laporan akhir kajian setelah selesai kelak dan diingatkan supaya mendapat kebenaran terlebih dahulu daripada Jabatan ini sekiranya sebahagian atau sepenuhnya dapatan kajian tersebut hendak dibentangkan di mana-mana forum, seminar atau diumumkan kepada media.

4.   Kebenaran ini adalah tertakluk kepada persetujuan Pengetua sekolah berkenaan dan adalah **sah sehingga 30 November 2015** sahaja.

Sekian, terima kasih.

" BERKHIDMAT UNTUK NEGARA "
" PENDIDIKAN CEMERLANG KEDAH TERBILANG "

Saya yang menurut perintah,

(SABRI BIN OSMAN)
Penolong Pengarah Kanan (Ketua Unit)
Unit Perhubungan dan Pendaftaran
Sektor Pengurusan Sekolah
b.p. Pengarah Pendidikan Negeri Kedah Darul Aman
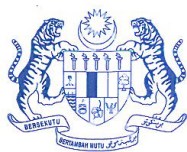
(ii)   JPN Johor

JABATAN PENDIDIKAN NEGERI JOHOR
~~JABATAN PELAJARAN JOHOR~~
JALAN TUN ABDUL RAZAK
80604 JOHOR BAHRU
JOHOR DARUL TA'ZIM

Telefon   : 07-2310000
Faks   : 07-2347132
Laman web : www.moe.gov.my/jpnjohor
Email   : jpn.johor@moe.gov.my

UNIT PERHUBUNGAN DAN PENDAFTARAN
NO. TEL : 07-2311470 NO. FAKS : 07-2380539

Rujukan Kami : JPNJ.PP(31)/100-5/3/2/Jld.5(12)
Tarikh   : 05 Mac 2015

Corinne Jacqueline Perea,
No. 12, Jalan PJS 5/10,
Taman Desaria,
46150Petaling Jaya,
Selangor.

Tuan,

Kebenaran Untuk Menjalankan Kajian Di Sekolah-Sekolah, Institut Perguruan, Jabatan Pendidikan Negeri Dan Bahagian-Bahagian Di Bawah Kementerian Pendidikan Malaysia.

Dengan hormatnya surat daripada KPM Bil: KP(BPPDP)603/5/JLD.14(05) bertarikh 05.02.2015 berkaitan permohonan adalah dirujuk.

2.   Sukacita dimaklumkan bahawa Jabatan ini tiada apa-apa halangan bagi membenarkan tuan menjalankan kajian ke sekolah-sekolah **Kerajaan dan Swasta Negeri Johor** bertajuk:

" **Principal Leadership Practices And Teacher Collegiality In Malaysia High Performing Schools** "

3.   Sehubungan dengan itu, tuan boleh berhubung terus dengan Pengetua / Guru Besar sekolah berkenaan bagi mendapatkan maklumat dan tindakan selanjutnya.

4.   Sila bawa surat ini semasa membuat kajian dan tuan/puan hendaklah kemukakan ke Jabatan ini senaskah laporan akhir kajian setelah selesai kelak.

Sekian, terima kasih.

" **BERKHIDMAT UNTUK NEGARA** "

Saya yang menurut perintah,

(AZHARI BIN SAMSURI)
Penolong Pendaftar Institusi Pendidikan dan Guru
Jabatan Pendidikan Negeri Johor
b.p. Ketua Pendaftar Institusi Pendidikan dan Guru
Kementerian Pendidikan Malaysia

6.3.23   C22: JPN Approval Letter for School Research Visit

(iii)   JPN Pulau Pinang

JABATAN PENDIDIKAN PULAU PINANG
JALAN BUKIT GAMBIR
11700 PULAU PINANG
Tel : 04-657 5500,   Faks : 04-658 2500
http://jpnpp.edu.my

KEMENTERIAN PENDIDIKAN MALAYSIA

"1 MALAYSIA : RAKYAT DIDAHULUKAN PENCAPAIAN DIUTAMAKAN."

Ruj Tuan :
Ruj Kami : JPNPP(PER) 1000-4/2 Jld.7 (41)
Tarikh   : 6 Mac 2015

Corinne Jacqueline Perera
No. 12, jalan PJS 5/10, Taman Desaria,
46150 Petaling Jaya, Selangor

Tuan/Puan,

KELULUSAN UNTUK MENJALANKAN KAJIAN DI SEKOLAH, INSTITUT PERGURUAN, JABATAN PENDIDIKAN NEGERI DAN BAHAGIAN – BAHAGIAN DI BAWAH KEMENTERIAN PENDIDIKAN MALAYSIA

Dengan hormatnya saya diarah merujuk perkara tersebut di atas.

2.   Surat kelulusan menjalankan kajian daripada Bahagian Perancangan Dan Penyelidikan Dasar Pendidikan, Kementerian Pendidikan Malaysia **Bil.KP(BPPDP)603/5/JLD.14(05)** bertarikh **5 Februari 2015** adalah dirujuk.

3.   Dengan ini dimaklumkan bahawa pihak Jabatan Pendidikan Pulau Pinang, tiada halangan untuk Tuan/Puan menjalankan penyelidikan di sekolah-sekolah negeri Pulau Pinang yang bertajuk:

"Principal Leadership Practices And Teacher Collegiality In Malaysian High Performing School" diluluskan.

4.   Walau bagaimanapun Tuan/Puan adalah tertakluk kepada syarat-syarat seperti berikut:
    4.1 Mendapat kebenaran dari Pengetua/Guru Besar sekolah berkenaan.
    4.2 Tidak mengganggu perjalanan, peraturan dan disiplin sekolah.
    4.3 Segala maklumat yang dikumpul adalah untuk tujuan akademik sahaja.
    4.4 Menghantar satu salinan laporan kajian ke Jabatan ini setelah selesai kajian.
    4.5 Sila kemukakan surat ini apabila berurusan dengan pihak sekolah.
    4.6 Surat ini berkuatkuasa sehingga **31 Disember 2015.**

Sekian, terima kasih.

"BERKHIDMAT UNTUK NEGARA"

Saya yang menurut perintah,

(ZURIDA BINTI MUSTAPHA)
Penolong Pendaftar Institusi Pendidikan
Jabatan Pendidikan Pulau Pinang
b.p Ketua Pendaftar Institusi Pendidikan
Kementerian Pendidikan Malaysia

6.3.23   C22: JPN Approval Letter for School Research Visit

(iv)   Wilayah Persekutuan Kuala Lumpur

JABATAN PENDIDIKAN
WILAYAH PERSEKUTUAN KUALA LUMPUR
PERSIARAN DUTA, OFF JALAN DUTA
50604 KUALA LUMPUR
MALAYSIA

Telefon: 03-6023 7777
Fax : 03-6023 6210
Portal: http://jpwpkl.moe.gov.my

Ruj.Kami   : JPNWP. 900-6/1/7 Jld./480
Tarikh   : 04 Mac 2015

Corinne Jacqueline Perera,
No. 12, Jalan PJS 5/10,
Taman Desaria,
Off Jalan Kelang Lama,
46150 Petaling Jaya, Selangor.

Tuan,

KEBENARAN UNTUK MENJALANKAN KAJIAN DI SEKOLAH-SEKOLAH, PEJABAT PENDIDIKAN WILAYAH DAN JABATAN PENDIDIKAN WILAYAH PERSEKUTUAN KUALA LUMPUR TAHUN 2015

Dengan segala hormatnya saya merujuk kepada perkara di atas. Surat tuan bertarikh 17 Februari 2015 dan surat kebenaran daripada Bahagian Perancangan dan Penyelidikan Dasar Pendidikan, Kementerian Pendidikan Malaysia bil. (05) dalam KP(BPPDP)603/5/JLD.14 bertarikh 05 Februari 2015 adalah berkaitan.

2.   Sukacita dimaklumkan bahawa permohonan tuan untuk menjalankan kajian bertajuk **"Principal Leadership Practices and Teacher Collegiality in Malaysian High Performing Schools"** diluluskan dan tuan adalah tertakluk di bawah syarat-syarat berikut:-

    2.1   Kelulusan ini adalah tertakluk kepada kandungan dalam cadangan penyelidikan yang telah diluluskan oleh Kementerian Pendidikan Malaysia.

    2.2   Sila kemukakan surat kebenaran ini ketika berurusan dengan pihak pengurusan/Pengetua/Guru Besar di Sektor/Pejabat Pendidikan Wilayah/sekolah berkenaan.

    2.3   Kelulusan ini hanya untuk sekolah-sekolah di bawah pentadbiran Jabatan Pendidikan Wilayah Persekutuan Kuala Lumpur sahaja.

    2.4   Tuan hendaklah mengemukakan senaskah hasil kajian kepada Jabatan ini sebaik sahaja ia siap sepenuhnya.

3.   Kebenaran ini adalah untuk tujuan dipohon sahaja dan luput selepas **31 Disember 2015**.

Sekian, terima kasih.

" BERKHIDMAT UNTUK NEGARA "

Saya yang menurut perintah,

(HANIFAH BINTI MAT YUSOFF)
Ketua Unit Perhubungan dan Pendaftaran,
Sektor Pengurusan Sekolah,
b.p. Pengarah Pendidikan,
Jabatan Pendidikan Wilayah Persekutuan Kuala Lumpur.

s.k.   -   Pengarah Pendidikan, Jabatan Pendidikan Wilayah Persekutuan Kuala Lumpur.
    -      Timbalan Pengarah Pendidikan, Pejabat Pendidikan Wilayah Bangsar dan Pudu, Kuala Lumpur.
    -      Timbalan Pengarah Pendidikan, Pejabat Pendidikan Wilayah Keramat, Kuala Lumpur.
    -      Timbalan Pengarah Pendidikan, Pejabat Pendidikan Wilayah Sentul, Kuala Lumpur.
    -      Ketua Sektor Pengurusan Sekolah, JPWPKL.

"GEMILANG DALAM KALANGAN YANG CEMERLANG"

QUALITY SYSTEM   STANDARDS MALAYSIA   QUALITY SYSTEM   IQNet
SIRIM   SIRIM

CERTIFIED TO ISO 9001:2008   CERTIFIED TO ISO 9001:2008
CERT.NO.: AR4166   CERT.NO.: AR4166

6.3.23 C22: JPN Approval Letter for School Research Visit

(v) JPN Selangor

JABATAN PENDIDIKAN SELANGOR
Jalan Jambu Bol 4/3E, Seksyen 4,
40604 SHAH ALAM
SELANGOR DARUL EHSAN,
MALAYSIA

Tel : 03 - 5518 6500
Faks : 03 - 5510 2133
Laman Web : http//jpnselangor.moe.gov.my

Rujukan Kami : JPNS.PPN 600-1/49 JLD.51(26)
Tarikh : 18/05/2015

CORINNE JACQUELINE PERERA
NO.12, JALAN PJS 5/10
TAMAN DESARIA
46150 PETALING JAYA
SELANGOR

Tuan,

PRINCIPAL LEADERSHIP PRACTICES AND TEACHER COLEGIALITY IN MALAYSIA HIGH PERFORMING SCHOOLS

Perkara di atas dengan segala hormatnya dirujuk.

2. Jabatan ini tiada halangan untuk pihak tuan menjalankan kajian/penyelidikan tersebut di sekolah-sekolah dalam Negeri Selangor seperti yang dinyatakan dalam surat permohonan.

3. Pihak tuan diingatkan agar mendapat persetujuan daripada Pengetua/Guru Besar supaya beliau dapat bekerjasama dan seterusnya memastikan bahawa penyelidikan dijalankan hanya bertujuan seperti yang dipohon. Kajian/Penyelidikan yang dijalankan juga tidak mengganggu perjalanan sekolah serta tiada sebarang unsur paksaan.

4. Tuan juga diminta menghantar senaskah hasil kajian ke Unit Perhubungan dan Pendaftaran Jabatan Pendidikan Selangor sebaik selesai penyelidikan/kajian.

Sekian, terima kasih.

"BERKHIDMAT UNTUK NEGARA"

Saya yang menurut perintah,

(HAJI MOHD SALLEH BIN MOHD KASSIM, S.I.S.)
Penolong Pendaftar Institusi Pendidikan dan Guru
Jabatan Pendidikan Selangor
b.p. Ketua Pendaftar Institusi Pendidikan dan Guru
Kementerian Pendidikan Malaysia

s.k. - Fail

" Jabatan Pendidikan Selangor Terbilang "

C3: Authorised Permission for use of LPI (2012) and TCS (2011)

Consent to use LPI, 2012

Notkin, Debbie – San Francisco dnotkin@wiley.com   8/23/2013

to

UM Staff <jacqueline@um.edu.my>

Dear Corine Perera:

This email represents official permission for you to use the LPI Self and Observer instruments in English to collect data for your research. You will need to purchase one copy of each instrument, which you may do through Amazon, through the Wiley website (http://as.wiley.com/WileyCDA/WileyTitle/productCd-1118182715.html) or through our sales representatives. Please let me know if you would like a sales representative to get in touch with you. You may then use the copies you buy for photocopying, and your research-- however, you may not distribute them in any other way. All photocopies must keep the copyright notice that is on our publications. Our only other request is that you supply us with a copy of your final paper when it is completed.

Thank you for your interest in the Leadership Practices Inventory.

Debbie Notkin
Contracts Manager

    Wiley
    One Montgomery Tower – Suite 1200
    San Francisco, CA 94104-4594
    www.wiley.com
    +1 415 782 3182

C3: Consent to use TCS, 2011
Requesting for Permission to use your Teacher Collegiality Instrument

FROM: Madiha Shah, PhD   21/4/2014   10:55 PM
TO: CORINNE JACQUELINE PERERA

Dear Corinne,

I am attaching the Teacher Collegiality Scale TCS and its scoring key with this email. You are most welcome to use it for your study purpose. The instrument is bilingual but as the research was done in Pakistan therefore it is in English and Urdu. You will have to translate it in Malay. Here is the link of the published article where you can find all the details how it was developed and validated.

http://www.macrothink.org/journal/index.php/ije/article/view/958

Best of Luck with your study.
Dr. Madiha Shah, PhD

C4: Sample Schools

Table 3.2: Sample High Performing Secondary Daily Schools

SCHOOL LOCALITY (STATE)	SCHOOL POPULATION	NO OF SCHOOLS PARTICIPATED	TEACHER RESPONDENTS
Johor	2	1	42
Selangor	2	2	55
Wilayah Persekutuan	1	1	58
Kedah	1	1	70
Penang	1	1	65
TOTAL	**7**	**6**	**290**

C5: Reasons for Non-Participation

Table 3.3: Principals Reasons for Non-participation in Present Study

SCHOOL LOCALITY (STATE)	TEACHER POPULATION	REASONS FOR NON PARTICIPATION
Johor	92	Newly appointed Principal in office. Short tenure of this Principal would invalidate the data. Survey responses would be invalid due to short tenure of the Principal.
Selangor	93	Interim status of Principal approaching retirement in the current year. Principal was not agreeable to an interview, but agreed to the voluntary participation of teachers to participate in the survey.
Kuala Lumpur	97	Principal was initially not keen for the school to participate in this research project because of too many survey requests made by other researchers and the busy schedule of having to attend frequent, ad hoc meetings with Ministry officials. Principal only agreed to the voluntary participation of teachers to participate in the survey.

C6: HPS Population in Malaysia as at 12 June 2014
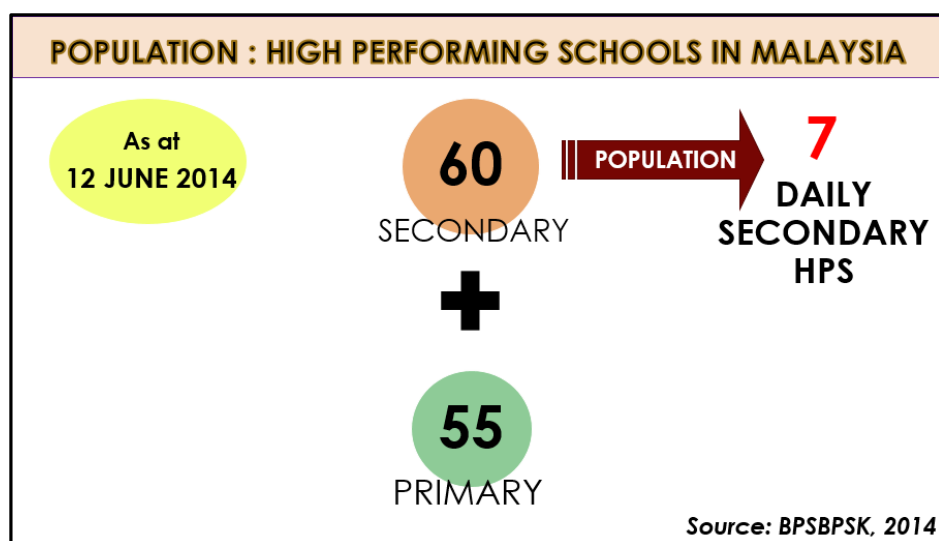
Figure 3.3: Population of High Performing Schools in Malaysia

C7: Quantitative Research Instruments

Table 3.4: Research Instruments for measuring dimensions of leadership Adapted from (Yavuz, 2010)

Name of Scale / Research Instrument	Year	Developers of Scale	Leadership Style / Dimensions	Cited in
Leader Behaviour Description Questionnaire (LBDQ)	1950s	J. Hemphill and A Coons	Leadership Behaviour	(Botha, 2013, p. 436)
The Managerial Grid	1964	Robert Blake and Jane Mouton	Leadership Behaviour	(Dawson & Andriopoulos, 2014, pp. 296-297)
Least Preferred Co-worker Questionnaire (LPC)	1967	Fred Fiedler	Contingency model of Situational Leadership	(Dawson & Andriopoulos, 2014, pp. 297-298)
Leader Participation Model (LPM)	1970s then revised in 1988	Victor Vroom and Philip Yetton	Participation in Decision-making based on the situation	(Dawson & Andriopoulos, 2014, pp. 300-302)
Principal Instructional Management Rating Scale (PIMRS)	1982	Philip Hallinger	Instructional Leadership	(Hallinger, P., 2011, p. 277)

Name of Scale / Research Instrument	Year	Developers of Scale	Leadership Style / Dimensions	Cited in
Hersey-Blanchard's Situational Leadership Model	1984	Hersey and Blanchard	Situational Leadership Theory	(Dawson & Andriopoulos, 2014)
Instructional Leadership Survey	1988	Valentine and Bowman	Instructional Leadership	(Yavuz, 2010, p. 2)
Authentic Leadership Questionnaire	1989	Luthan	Leadership Approaches	(Botha, 2013, p. 436)
Leadership Behavior Questionnaire (LBQ)	1990	Marshall Sashkin	Visionary Leadership	(Leithwood & Sun, 2012, p. 398)
Nature of School Leadership survey (NSL)	1994	Kenneth Leit hwood,	Transformational Leadership	(Ng, 2008, p. 3)
Charismatic Leadership Scale or Conger-Kanungo Scale (CKS)	1994	Conger, J. A. and Kanungo, R.N.	Charismatic Leadership	(Yavuz, 2010, p. 2)
Principals Transformational Leadership Questionnaire (PTLQ)	1994	Chong-Hee No	Transformational Leadership	(Leithwood & Sun, 2012, p. 398)
Multifactor Leadership Questionnaire (MLQ)	1995	Bernard M. Bass and Bruce J. Avolio	Laissez Faire Leadership, Transactional Leadership, Transformational Leadership	(Yavuz, 2010, p. 2)
Leadership Practices Inventory (LPI)	1995	James Kouzes and Barry Posner	Transformational Leadership	(Leithwood & Sun, 2012, p. 398)
Transformational Leadership Instrument	1998	John Wiley	Transformational Leadership	(Leithwood & Sun, 2012, p. 398)
Emotional Competence Inventory (ECI)	1998	Daniel Goleman	Authoritative Leadership	(Boyatzis, Goleman, & Rhee, 2000, p. 4)
Organizational Leadership Assessment (OLA)	1999	James Laub	Servant Leadership	(Laub et al., 1999, p. 3)
Empowering Leadership Questionnaire (ELQ)	2000	Josh A. Arnold, Sharon Arad, Jonathan A. Rhoades,	Transactional Leadership Transformational Leadership	(Yavuz, 2010, p. 2)

Name of Scale / Research Instrument	Year	Developers of Scale	Leadership Style / Dimensions	Cited in
		Fritz Drasgow		
Transformational Leadership	2000	Carless, S., Wearing A. Mann L.		(Yavuz, 2010, p. 2)
Nature of School Leadership survey (NSL)	2001 1994	Kenneth Leithwood, Robert Aitken, Doris Jantzi	Transformational Leadership	(Ng, 2008, p. 3)
Values-Based Leadership Scale (VBL)	2003	Garg and Krishnan	Transformational Leadership Values-Based Leadership	(Baloglu, 2012, p. 1377)
Servant Leadership	2008	Liden, R.C., Sandy J., Wayne,S.J., Zhao, H., Henderson, D.	Servant Leadership	(Yavuz, 2010, p. 2)
Distributed Leadership (DL) Inventory	2009	Hulpia, Devos, and Rosseel	Distributed Leadership	(Baloglu, 2012, p. 1377)

C8: Sampling Distribution
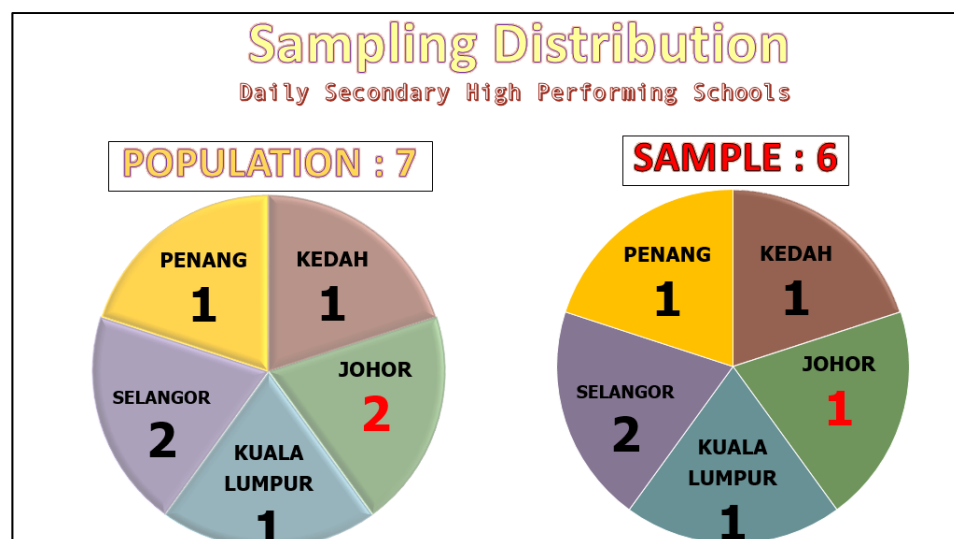
Figure 3.4: Sampling Distribution: 6 Daily Secondary High Performing Schools

INTERVIEW PROTOCOL
PROTOKOL TEMU BUAL

This interview is conducted to elicit the principal's self-opinion on their school leadership. Principals are requested to respond to every protocol item and elicit their sincere opinion about their leadership development, trainings and practices. Opinions and responses provided during this interview are strictly confidential, and will be used for the purpose of this academic research project only. This interview protocol has 2 Sections: Section A refers to the Principal Leadership Training and Experience and Section B refers to the Principal Leadership Practices.

Temu bual ini dijalankan untuk memperolehi pendapat kendiri pengetua mengenai kepimpinan mereka. Pengetua adalah diminta menjawab semua item protokol dan berikan pendapat mereka yang ikhlas tentang pembanguan kepimpinan, latihan kepimpinan dan amalan kendiri di sekolah mereka. Pendapat dan maklumat yang diterima dalam kajian ini adalah sulit dan akan digunakan untuk tujuan projek penyelidikan akademik sahaja. Protokol temu bual ini mempunyai 2 Bahagian: Bahagian A merujuk kepada Latihan Kepimpinan Pengetua dan Pengalamannya dan Bahagian B merujuk kepada Amalan Kepimpinan Pengetua.

INTERVIEW PROTOCOL FOR SCHOOL PRINCIPAL
PROTOKOL TEMU BUAL UNTUK PENGETUA SEKOLAH

SECTION A: PRINCIPAL LEADERSHIP TRAINING AND EXPERIENCE
BAHAGIAN B: LATIHAN KEPIMPINAN PENGETUA DAN PENGALAMAN

INSTRUCTION: This Section explores the type of leadership training experienced or is being experienced and its potential impact.

ARAHAN: Bahagian ini mengkaji jenis latihan kepimpinan yang diperolehi atau yang dilalui dan kesannya.

(1) **How were you prepared for your current leadership role (Eg: what was the main form of preparation?)**
Bagaimanakah anda disiapkan menjadi Pengetua sekarang ini? (Contoh: Nyatakan bentuk persediaan tersebut?)

(2) **In your view, was this preparation effective?**
Pada pendapat anda, adakah persediaan ini cukup berkesan?

(3) **What leadership development programme are you involved in currently? (Eg NPQEL or any other training programme)**
Nyatakan program pembangunan kepimpinan yang disertai oleh anda sekarang? (Contohnya, NPQEL atau mana-mana program latihan lain)

(4) **What are you hoping to gain from this programme?**
Apakah yang anda harapkan melalui program ini?

(5) **How will you assess the impact of this programme on your professional learning?**
Bagaimanakah anda menilai impak program ini dalam pembelajaran profesional?

SECTION B: PRINCIPAL LEADERSHIP PRACTICES
BAHAGIAN B: AMALAN KEPIMPINAN PENGETUA

(6) **What influences or drives your leadership practice? (What are the things that have shaped your particular leadership approach i.e. experiences, training, working with others.)**
Apakah yang mempengaruhi atau mendorong terhadap amalan kepimpinan anda? (Apakah perkara yang telah membentuk ciri kepimpinan anda? Contoh pengalaman, latihan, kerjasama dengan yang lain)

(7) **In your view, what are the characteristics of effective leadership?**
Pada pandangan anda, apakah ciri-ciri kepimpinan yang berkesan?

(8) **How would you describe the leadership practice at your institution? (For example is leadership top-down, shared, instructional, collaborative)**
Bagaimanakah anda menghuraikan amalan kepimpinan di institusi anda? (Contohnya: Kepimpinan secara 'Top-Down', 'Kebersamaan', 'Instruksional', 'Koloboratif')

(9) **Please provide any additional comments on the performance of your school or on your school leadership.**
Sila berikan komen tambahan mengenai prestasi sekolah anda ataupun kepimpinan pengetua di sekolah anda.

THANK YOU FOR YOUR KIND PARTICIPATION
TERIMA KASIIH DI ATAS KERJASAMA ANDA

FOCUS GROUP PROTOCOL
PROTOKOL KUMPULAN FOKUS

This Focus Group discussion is conducted to elicit the teachers' opinion on their principal leadership. Teachers are kindly invited to share your ideas regarding your experience teaching in this high performing school and about the principal leadership in this school. Since this interview is not being video recorded, each teacher respondent is requested to identify yourself at the start of the recording, for identification purposes.

Kumpulan Focus ini dijalankan untuk memperolehi pendapat guru-guru mengenai kepimpinan pengetua mereka. Guru-guru di dijemput memberi pendapat anda mengenai pengalaman mengajar di sekolah yang berprestasi tinggi ini dan pendapat mengenai kepimpinan pengetua di sekolah ini. Oleh kerana temu bual ini sedang dirakam, setiap responden guru diminta untuk mengenal pasti diri anda pada permulaan rakaman, untuk tujuan pengenalan.

FOCUS GROUP PROTOCOL FOR TEACHERS
PROTOKOL KUMPULAN FOKUS UNTUK GURU-GURU

---

(1) How long have you worked in this school?

Berapa lama anda bekerja di sekolah ini?

(2) Can you relate a bit about the student background and from what families do they mostly come from?

Bolehkah anda menerangkan sedikit tentang latar belakang pelajar dan keluarga mereka?

(3) How do think this school has achieved its high performing status?

Beri keterangan tentang bagaimana sekolah ini telah mencapai status berprestasi yang tinggi?

(4) How would you describe your principal's leadership practice at your school?

Bagaimanakah anda menghuraikan amalan kepimpinan pengetua di sekolah anda?

(5) What do you think is the Principal's contribution to the success of this school?

Pada pendapat anda, bagaimanakah Pengetua memberi sumbangan kepada kejayaan sekolah ini?

(6) How about the educational background of the teachers?

Bagaimana dengan latar belakang pendidikan guru?

(7) In your view, how will you describe the collegial relationship among the teachers in this school?

Pada pandangan anda, bagaimana anda menerangkan hubungan keserakan di kalangan guru-guru di sekolah ini?

(8) Is the success of this school in line with your expectations?

Adakah kejayaan sekolah ini sejajar dengan jangkaan anda?

(9) What do you think are the visions your principal has for this school?

Pada pendapat anda, apakah visi sekolah yang ditetapkan oleh pengetua sekolah ini?

(10) How do you describe the principal's relationship with the teachers in this school?

Bagaimana anda menghuraikan hubungan pengetua dengan guru-guru di sekolah ini?

Table 3.5: Transformational leadership practices measured by research instruments
Source: (Leithwood & Sun, 2012, p. 399)

Leadership Practice	MLQ[a]	NSL[b]	LPI[c]	LBQ[d]	PTLQ[e]
Transformational Aggregate	X	X	X	X	X
1. Setting Directions					
• Developing a widely shared vision for the school/ Inspirational motivation/Charisma	X	X	X	X	X
• Building consensus about school goals and priorities		X	X	X	X
• Holding high performance expectations		X	X		
2. Helping People					
• Providing individualized support/ consideration	X	X	X	X	X
• Providing intellectual stimulation/ Challenging the process	X	X	X		
• Modeling behavior/Idealized influence—attribute, behavior, or total/Symbolization	X	X	X		X
3. Redesigning the Organization					
• Strengthening school culture		X			
• Building collaborative structures/ Enabling others to act		X	X		
• Providing a community focus		X			
4. Managerial or Transactional Aggregate	X				
• Focus on instructional development					
• Contingent reward	X	X			
• Management by exception—active, passive, or total	X	X			
Laissez faire	X				

[a] Multifactor Leadership Questionnaire (e.g., Bass & Avolio, 1995)
[b] Nature of School Leadership survey (Leithwood, Aitken, & Jantzi, 2001)
[c] Leadership Practices Inventory (Kouzes & Posner, 1995)
[d] Leadership Behavior Questionnaire (Sashkin, 1990)
[e] Principal's Transformational Leadership Questionnaire (Chong-Hee No, 1994 in H

C11: Email Correspondence on 26 April 2014

Corinne Jacqueline Perera. jacqueline@um.edu.my   4/26/2014

To Barry, Jim, Ellen

I have been reading literature on transformational leadership since Barry pointed out that "The 5 Practices of Exemplary Leadership" stems from Transformational Leadership Theory. I would like to know which transformational leadership model is the LPI based upon? Does it model after Burns (1978), Bass (1985) or Leithwood (1994)? Please advice. TQ

Regards,
Jacqueline Perera

Barry Posner bposner@scu.edu   4/26/2014

To me, Jim, Ellen

Jacqueline,

Our framework can be considered among those associated with transformational leadership, of which the term is mostly derived from the original premises of James McGregor Burns. It did not, however, stem from anyone else's particular framework or is derivative of another leadership model.

Hope this helps and look forward to reading your study when it is complete. All the best,

Barry

C12: Email Correspondence on 28 November 2013

Corinne Jacqueline Perera. jacqueline@um.edu.my   11/28/2013

To Barry, Jim, Ellen

I also wish to ask you which Theory and Leadership Style did your Conceptual Framework (**The 5 Practices of Exemplary Leadership**) stem from? .....Transformational, Instructional or Distributed Leadership?? Looking forward to your response.

Thank you very much
Jacqueline Perera

Barry Posner bposner@scu.edu   11/28/2013

To me, Jim, Ellen

Transformational leadership.
You need a minimum of two observers per leader and more would be better.

QUESTIONNAIRE
SOAL SELIDIK

This survey is conducted to elicit practicing teacher's opinion on their school principal leadership and teacher collegiality. Teachers selected to participate in this survey are requested to respond to every questionnaire item and elicit their sincere opinion about their school principal and teachers. Opinions and responses given in this survey are strictly confidential, and will be used for the purpose of this academic research project only. This questionnaire has 3 Sections: Section A refers to the teacher demographic profile, Section B refers to the principal leadership practices and Section C refers to teacher collegiality.

Kajian ini dijalankan untuk memperolehi pendapat guru mengenai kepimpinan pengetua sekolah dan keserakanan guru di sekolah mereka. Guru yang dipilih untuk kajian ini, adalah diminta menjawab semua item soal selidik dan berikan pendapat mereka yang ikhlas tentang pengetua sekolah dan guru-guru. Pendapat dan maklumat yang diterima dalam kajian ini adalah sulit dan akan digunakan untuk tujuan projek penyelidikan akademik sahaja. Soal selidik ini mempunyai 3 Bahagian: Bahagian A merujuk kepada demografi guru, Bahagian B merujuk kepada amalan kepimpinan pengetua dan Bahagian C merujuk kepada keserakanan guru.

QUESTIONNAIRE FOR SCHOOL TEACHERS
SOAL SELIDIK UNTUK GURU SEKOLAH

SECTION A: TEACHERS DEMOGRAPHIC PROFILE
BAHAGIAN A: PROFIL DEMOGRAFI GURU

INSTRUCTION: Please respond to each item by marking *(√)* in the appropriate box and provide the required information where needed.

ARAHAN: Sila jawab setiap butiran dengan menandakan (√) di dalam kotak yang sesuai dan berikan maklumat yang diingini jika diperlukan.

1. **Gender /** *Jantina*

   Female / *Perempuan* ☐　　**Male /** *Lelaki* ☐

2. **Your age /** *Umur anda*

   < 30 years / *tahun* ☐

   30 – 39 ☐

   40 – 49 ☐

   50 and above / *dan ke atas* ☐

3. **Your ethnic identity /** *Identiti etnik anda :*

   Malay / *Melayu* ☐

   Chinese / *Cina* ☐

   Indian / *India* ☐

   Others (Specify) /
   Lain-lain (nyatakan) ☐ _____

4. **Your highest academic qualification /** *Kelayakan akademik tertinggi anda :*

   Diploma / *Diploma* ☐

   Bachelor Degree /
   Ijazah Sarjana Muda ☐

   Master Degree /
   Ijazah Sarjana ☐

   PhD /
   Ijazah Doktor Falsafah ☐

   Others (Specify) /
   Lain-lain (nyatakan) ☐ _____

5.   **Number of years working with your PRESENT SCHOOL PRINCIPAL /**
     Tempoh berkhidmat dengan PENGETUA di SEKOLAH anda SEKARANG :

     _____

6.   **Years of experience as a teacher /**
     Tempoh pengalaman sebagai seorang guru :

     < 1 year / *tahun*

     1 - 5

     6 – 10

     11 – 15

     16 – 20

     > 20

7.   **Number of Working Years in THIS SCHOOL /** *Tempoh berkhidmat di SEKOLAH INI :*

     < 1 year / *tahun*

     1 - 5

     6 – 10

     11 – 15

     16 – 20

     > 20

8.   **Your Job Grade in THIS SCHOOL /** *Gred Jawatan di SEKOLAH INI*

DG 29		**DG 41**	
DG 32		**DG 42**	
DG 34		**DG 44**	
DG 38		**DG 48**	
		DG 52	
		DG 54	

9.   **Have you undergone NPQH or NPQEL training? /**
     Pernahkah anda menjalani latihan NPQH atau NPQEL?

     Yes / *Ya*

     No / *Tidak*

10. **Would you like to be a school principal in the future? /**
Adakah anda ingin menjadi pengetua sekolah pada masa akan datang?

Yes / *Ya*

No / *Tidak*

SECTION B: PRINCIPAL LEADERSHIP PRACTICES
BAHAGIAN B: AMALAN KEPIMPINAN PENGETUA

INSTRUCTION: Please read each statement carefully and **TICK (√)** the box that best reflects your response based on the rating shown below.

*ARAHAN: Sila baca setiap kenyataan dengan teliti dan **TANDAKAN (√)** pada kotak yang berkenaan berdasarkan penarafan yang disarankan di bawah ini:*

RATING / *PENARAFAN*

STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
SANGAT TIDAK BERSETUJU	*TIDAK BERSETUJU*	*NEUTRAL*	*BERSETUJU*	*SANGAT BERSETUJU*

NO	MY PRINCIPAL / *PENGETUA SAYA*	STRONGLY DISAGREE *SANGAT TIDAK BERSETUJU* ←				STRONGLY AGREE *SANGAT BERSETUJU* →
1	Sets a personal example of what he / she expects from the teachers. *Menunujukkan peribadi yang beliau ingin guru-gurunya contohi.*					
2	Talks about future trends that will influence how our work gets done. *Berbincang mengenai trend/corak masa hadapan yang akan mempengaruhi cara kerja guru-guru.*					
3	Seeks out challenging opportunities that tests his / her own skills and abilities. *Sentiasa mencari cabaran yang boleh menguji kemahiran dan kebolehan dirinya sendiri.*					
4	Does not support and encourage collaboration among teachers. *Tidak menyokong dan menggalakkan kerjasama di kalangan guru.*					
5	Praises teachers for a job well done. *Memuji guru apabila melakukan kerja dengan baik.*					
6	Does not take the time to monitor teachers' performance. *Tidak meluangkan masa untuk memantau prestasi guru.*					
7	Describes a compelling image of what our future could be like. *Memberi gambaran yang jelas mengenai masa depan guru-guru.*					
8	Challenges teachers to be creative and innovative in delivering their work responsibilities. *Mencabar guru-guru untuk menjadi kreatif dan inovatif dalam melaksanakan tanggungjawab mereka.*					
9	Listens actively to different views/opinions from teachers. *Sentiasa giat mendengar perbezaan pandangan/pendapat guru-guru.*					
10	Makes it a point to let teachers know about his/her confidence in their abilities.					

NO	MY PRINCIPAL / *PENGETUA SAYA*	STRONGLY DISAGREE *SANGAT TIDAK BERSETUJU* ←				STRONGLY AGREE *SANGAT BERSETUJU* →
	Menunjukkan rasa yakin pada kebolehan dan kemampuan guru-guru.					
11	**Follows through on the promises and commitments he/she makes.**					
	Menepati janji dan komitmen yang telah dibuat.					
12	**Seeks cooperation from teachers in sharing their dreams of the future.**					
	Berusaha mendapatkan kerjasama guru-guru untuk berkongsi impian masa hadapan.					
13	**Looks for innovative ways to improve what teachers do.**					
	Mencari cara-cara inovatif untuk meningkatkan keupayaan guru-guru.					
14	**Treats teachers with dignity and respect.**					
	Memuliakan dan melayan guru-guru dengan penuh rasa hormat.					
15	**Makes sure that teachers are rewarded appropriately for their contributions to the success of projects.**					
	Memastikan guru yang menyumbang kepada kejayaan projek-projek sekolah diberi ganjaran yang sewajarnya.					
16	**Seeks for feedback on how his / her actions affect teacher's performance.**					
	Meminta maklum balas mengenai tindakannya yang mempengaruhi prestasi guru.					
17	**Shows teachers how their long-term interests can be achieved through a common vision.**					
	Menunjukkan kepada guru-guru bagaimana kepentingan jangka masa panjang mereka boleh dicapai melalui visi yang sejajar.					
18	**Asks "What can we learn?" when things do not go as expected.**					
	Bertanya, "Apakah yang boleh dipelajari?" jika sesuatu berlaku di luar jangkaan.					
19	**Supports the decisions made by the teachers.**					
	Menyokong keputusan yang dibuat oleh guru-guru.					
20	**Publicly recognizes teachers who exemplify commitment to shared values.**					
	Mengiktiraf secara terbuka guru-guru yang mencerminkan komitmen ke atas nilai-nilai yang dikongsi bersama.					
21	**Build consensus around a common set of values for running our school.**					
	Mendapatkan persetujuan sebulat suara daripada semua guru, mengenai nilai-nilai yang dikongsi bersama dalam menguruskan sekolah kami.					
22	**Paints the "big picture" of what we aspire to accomplish.**					
	Memberi "gambaran keseluruhan" mengenai aspirasi yang ingin kami capai.					
23	**Does not encourage teachers to set and achieve their goals.**					
	Tidak memberi galakan kepada guru-guru dalam menetapkan dan mencapai matlamat mereka.					
24	**Gives teachers a great deal of freedom in deciding how to do their work.**					
	Memberikan kebebasan sepenuhnya kepada guru-guru dalam menentukan bagaimana mereka melakukan kerja.					

NO	MY PRINCIPAL / *PENGETUA SAYA*	STRONGLY DISAGREE *SANGAT TIDAK BERSETUJU* ←						STRONGLY AGREE *SANGAT BERSETUJU* →
25	**Finds ways to celebrate accomplishments.** *Mendapatkan cara untuk meraikan pencapaian / kejayaan.*							
26	**Is not clear about the philosophy of school leadership.** *Tidak jelas tentang falsafah kepimpinan sekolah.*							
27	**Does not motivate teachers to understand the impact of their teaching on student achievement.** *Tidak memberi galakan/dorongan kepada guru-guru untuk memahami kesan pengajaran mereka terhadap pencapaian pelajar.*							
28	**Experiments and takes risks, even when there is a chance of failure.** *Sentiasa sedia mencuba dan mengambil risiko, walaupun berkemungkinan menghadapi kegagalan.*							
29	**Ensures that teachers learn new teaching skills.** *Memastikan guru-guru mempelajari kemahiran pengajaran yang baru.*							
30	**Does not show teachers any appreciation for their contributions towards the performance of this school.** *Tidak memberikan penghargaan terhadap guru di atas sumbangan mereka terhadap peningkatan prestasi sekolah ini.*							

SECTION C: TEACHER COLLEGIALITY
BAHAGIAN C: KESERAKANAN GURU

INSTRUCTION: **Please read each statement carefully and TICK (√) the box that best reflects your response based on the rating shown below.**

*ARAHAN: Sila baca setiap kenyataan dengan teliti dan **TANDAKAN (v)** pada kotak yang berkenaan berdasarkan penarafan yang disarankan di bawah ini:*

RATING / *PENARAFAN*

STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
SANGAT TIDAK SETUJU	*TIDAK SETUJU*	*AGAK TIDAK SETUJU*	*NEUTRAL*	*AGAK SETUJU*	*SETUJU*	*SANGAT SETUJU*

NO	TEACHERS IN THIS SCHOOL / *GURU-GURU DO SEKOLAH INI*	STRONGLY DISAGREE *SANGAT TIDAK BERSETUJU* ←						STRONGLY AGREE *SANGAT BERSETUJU* →
1	**Teachers provide strong social support for colleagues** *Guru memberikan sokongan sosial yang kuat untuk rakan sejawat.*							
2	**Teachers in this school do not respect the professional competence of their colleagues.** *Guru di sekolah ini tidak menghormati kecekapan profesional rakan sejawat mereka.*							
3	**Feedback received by the colleagues is considered and responded to appropriately.** *Maklum balas yang diterima oleh rakan sejawat dipertimbangkan dan dibalas dengan wajar.*							

4	**My colleagues and I collectively analyze our teaching practice.** *Saya dan rakan sejawat secara kolektif menganalisis amalan pengajaran kami.*							
5	**Teachers in this school often ask for suggestions to specific discipline problems.** *Guru-guru di sekolah ini sering membuat permintaan mengenai cadangan tentang masalah disiplin tertentu.*							
6	**Teachers in this school like to share what they have learned or want to learn.** *Guru di sekolah ini suka berkongsi tentang apa yang mereka telah belajar dan ingin belajar.*							
7	**Teachers in this school often lend and borrow materials like worksheets and lesson plans.** *Guru di sekolah ini sering memberi pinjaman dan meminjam bahan-bahan seperti lembaran kerja dan rancangan pelajaran.*							
8	**Professional interactions among teachers are cooperative and supportive.** *Interaksi profesional di kalangan guru-guru bersifat koperasi dan menyokong.*							
9	**We invite other teachers to observe our teaching.** *Kami menjemput guru-guru lain untuk meperhatikan pengajaran kami.*							
10	**Cooperation and collaboration exists across departments.** *Kerjasama dan kolaborasi wujud melintasi semua Jabatan.*							
11	**Teachers do not praise or criticize each other's teaching.** *Guru tidak memuji atau mengkritik cara pengajaran masing-masing.*							
12	**We discuss frequently about school improvement strategies.** *Kami sering membincang tentang strategi penambahbaikan sekolah.*							
13	**Most teachers in this school contribute actively to making decisions about curriculum.** *Kebanyakan guru di sekolah ini memberi sumbangan aktif untuk membuat keputusan mengenai kurikulum.*							
14	**We often share journal articles and educational books.** *Kami sering berkongsi artikel jurnal dan buku-buku pendidikan.*							

15	**There is a feeling of trust and confidence among staff members.** *Terdapat perasaan amanah dan kepercayaan diri di kalangan ahli-ahli staf.*							
16	**Teachers in this school mind being observed by their colleagues while teaching.** *Guru di sekolah ini keberatan bila diperhatikan oleh rakan sejawat mereka semasa mengajar.*							
17	**We jointly plan and prepare teaching strategies and procedures.** *Kami bersama-sama merancang dan menyediakan strategi dan prosedur pengajaran.*							
18	**We often argue over educational theories, philosophies, or approaches.** *Kami sering berhujah tentang teori-teori pendidikan, falsafah, atau pendekatan berkenaan pendidikan.*							
19	**We often teach each other informally.** *Kami sering mengajar satu sama lain secara tidak rasmi.*							
20	**I find time to work with my colleagues on curriculum during a regular work day.** *Saya meluangkan masa untuk bekerja dengan rakan sejawat mengenai kurikulum, semasa hari kerja biasa.*							
21	**I can count on most of my colleagues to help me out anywhere, anytime even though it may not be part of their official assignment.** *Saya boleh bergantung kepada kebanyakan rakan sejawat saya untuk membantu saya tanpa mengira tempat atau masa, walaupun ia bukan tugas rasmi mereka.*							

22	**We regularly observe one another teaching as a part of sharing and improving instructional strategies.** *Kami sentiasa memerhatikan cara mengajar antara satu sama lain, untuk berkongsi dan meningkatkan strategi instruksional.*								
23	**Majority of the teachers participate actively in meetings.** *Kebanyakan guru aktif melibatkan diri dalam mesyuarat.*								
24	**Teachers encourage each other to contribute ideas and suggestions.** *Guru menggalakkan satu sama lain untuk menyumbang idea dan cadangan.*								
25	**Teachers in this school enjoy teaching in teams.** *Guru di sekolah ini menikmati mengajar secara berpasukan.*								
26	**Teachers in this school jointly prepare their lesson plans.** *Guru di sekolah ini merancangkan pelajaran mereka bersama-sama.*								
27	**Teachers in this school hide their failures and mistakes.** *Guru di sekolah ini menyembunyikan kegagalan dan kesilapan mereka.*								
28	**Most of the teachers in this school are receptive to the presence of other professionals in their classrooms.** *Kebanyakan guru di sekolah ini sanggup menerima kehadiran profesional lain di dalam kelas mereka.*								
29	**We make collective agreements to test an idea or new approach in teaching.** *Kami membuat persetujuan kolektif untuk menguji idea atau cara baru terhadap pengajaran.*								
30	**We often ask each other about classroom management ideas and suggestions.** *Kami sering bertanya antara satu lain idea dan cadangan mengenai pengurusan bilik darjah.*								
31	**We feel part of a learning community which values shared responsibility for ongoing learning.** *Kami merasa sebagai sebahagian komuniti yang berkait dengan pembelajaran yang menghargai nilai tanggungjawab bersama untuk pembelajaran berterusan.*								
32	**Teachers in this school feel hesitant in asking for help on specific instructional problems.**								

	Guru di sekolah ini rasa teragak untuk meminta bantuan mengenai masalah instruksional yang tertentu.							
33	**Teachers consider their colleagues as their friends.**							
	Guru menganggap guru sejawat mereka sebagai rakan mereka.							
34	**I believe it to be beneficial for my teaching to be open with colleagues about my successes and challenges.**							
	Saya yakin bahawa bersikap terus terang dengan rakan sejawat mengenai kejayaan dan cabaran yang dialami akan membawa manfaat kepada pengajaran saya.							
35	**We jointly accredit new programmes and practices.**							
	Kami secara bersama mengakreditasi program dan amalan yang baru.							
36	**Teachers in this school do not feel comfortable about discussing their students' problems.**							
	Guru di sekolah ini tidak berasa selesa untuk membincangkan tentang masaalah pelajar mereka.							
37	**Teachers give demonstrations on how to use new models or strategies.**							
	Guru memberi demonstrasi mengenai cara menggunakan model atau strategi baru.							
38	**My colleagues and I share materials related to my subject teaching.**							
	Saya dan rakan sejawat berkongsi bahan-bahan berkaitan dengan subjek pengajaran saya.							

C14: Comparison between LPI (2012) and PPQ (2014)

Yellow Highlights: Text deliberately amended to suit the school context.
Blue Highlights: Refer to **6** Negative-worded Items (Items: 4, 6, 23, 26, 27, and 30).

ITEM NO.	LPI (2012)	PPQ (2014)
1	I set a personal example of what I expect **of others.**	I set a personal example of what I expect from the teachers.
2	I talk about future trends that will influence how our work gets done	----- **Unchanged** ----
3	I seek out challenging opportunities that tests my own skills and abilities.	----- **Unchanged** ----
4	I **develop cooperative relationships among the people work with.**	I do not support and encourage collaboration among teachers.
5	I praise **people** for a job well done.	I praise teachers for a job well done.
6	I **spend time and energy making certain that the people I work with adhere to the principles and standards we have agreed on.**	I do not set aside time to monitor teachers' performance.
7	I describe a compelling image of what our future could be like.	----- **Unchanged** ----
8	I challenge **people to try out new and innovative ways to do their work.**	I challenge teachers to be creative and innovative in delivering their work responsibilities.
9	I **actively listen to diverse points of view.**	I listen actively to different views/opinions from teachers.
10	I make it a point to let **people** know about **my** confidence in their abilities.	I make it a point to let teachers know about their confidence in their abilities.
11	I follow through on the promises and commitments that I make.	----- **Unchanged** ----
12	I **appeal to others to share an exciting dream** of the future.	I seek cooperation from teachers in sharing their dreams of the future.
13	I **search outside the formal boundaries of my organization for innovative ways** to improve what **we** do.	I look for innovative ways to improve what teachers do.
14	I treat **others** with dignity and respect.	I treat teachers with dignity and respect.

ITEM NO.	LPI (2012)	PPQ (2014)
15	I make sure that **people** are **creatively rewarded** to the success of **our** projects	I make sure that teachers are rewarded appropriately for their contributions to the success of projects.
16	I seek for feedback on how my actions affect **other people's** performance.	I seek for feedback on how my actions affect teachers' performance.
17	I show **others** how their long-term interests can be **realized by enlisting in** a common vision.	I show teachers how their long-term interests can be achieved through a common vision.
18	I ask "What can we learn?" when things do not go as expected.	----- Unchanged ----
19	I support the decisions **that people make on their own.**	I support the decisions made by the teachers.
20	**I publicly recognize people** who exemplify commitment to shared values.	I recognize teachers publicly who exemplify commitment to shared values.
21	I build consensus around a common set of values for running our **organization**	I build consensus around a common set of values for running our school.
22	I paint the "big picture" of what we aspire to accomplish.	----- Unchanged ----
23	**I make certain that we set achievable goals, make concrete plans and establish measurable milestones for the projects and programs that we work on.**	I do not encourage teachers to set and achieve their goals.
24	I give **people** a great deal of freedom **and choice** in deciding how to do their work.	I give teachers a great deal of freedom in deciding how to do their work.
25	I find ways to celebrate accomplishments.	----- Unchanged ----
26	**I am clear** about **my** philosophy of **leadership.**	I am not clear about the philosophy of school leadership.
27	**I speak with genuine conviction about the higher meaning and purpose of our work.**	I do not motivate teachers to understand the impact of their teaching on student achievement.
28	I experiment and takes risks, even when there is a chance of failure.	----- Unchanged ----

ITEM NO.	LPI (2012)	PPQ (2014)
29	I ensure that **people grow in their jobs by learning new skills and developing themselves.**	I ensure that <mark>teachers</mark> learn new teaching skills.
30	**I give the members of the team lots of appreciation and support for their contributions.**	I do not show teachers any appreciation for their contributions towards the performance of this school.

QUESTIONNAIRE
Leadership in Malaysia's Best Schools

Section 1: Personal Details of Headship

Name

Name of School / Institution

Gender - Please select: ☐ Male ☐ Female   Age ☐

Current Post

Is this your first posting in this position?   Yes ☐   No ☐

Length of service of current post ☐   Job Grade ☐

Main responsibilities of current post

Your highest attained qualifications and /or awards achieved

No	Qualifications / Awards	Awarding Body	Year

Your previous working experience

No	Job Post / Designation	Grade	Name of Institution	Year (From – To)

Please submit a copy of the following for further reference:

School Organizational Chart   ☐

School Layout Plan showing the School facilities, physical environment and built-up   ☐

Latest Newsletter, School Handbook or School Yearbook   ☐

Other References _____   ☐

Cont. Pilot Study Questionnaire (English Version)

Section 2: Leadership Training and Experience

This Section explores the type of leadership training experienced or is being experienced and its potential impact.

How were you prepared for your current leadership role e.g. what was the main form of preparation.

What leadership development programme are you involved in currently?

What are you hoping to gain from this programme?

How will you assess the impact of this programme on your professional learning?

Section 3: Leadership Practices

What influences or drives your leadership practice? (What are the things that have shaped your particular leadership approach i.e. experiences, training, working with others.)

In your view, what are the characteristics of effective leadership?

How would you describe the leadership practice at your institution? (For example is leadership top-down, shared, instructional, collaborative)

Cont. Pilot Study Questionnaire (English Version)

Section 4 : Demographics and School Performance

Number of Teaching Staff [   ]   Admin Staff [   ]   School Prefects [   ]

Ratio of Student Gender – No of Students: Male [   ]   Female [   ]

Total No. of Student Population	Malay	Iban	Bidayuh	Melanau	Other Bumiputera	Chinese	Indians	Other Races

Student Outcomes: Academic Achievements for PMR and SPM over the last 3 years:

No	Year	No of Students who scored Straight A's			Passing Rate		
		PMR	SPM	Other Exam :	PMR	SPM	Other Exam :
1							
2							
3							

Sporting Achievements (School, District, State, National)

No	Name of Sports Event			
	School Level	District Level	State Level	National Level
1				
2				
3				
4				

Cultural Involvement and Accomplishments (Art, Music, Drama etc):

No	Clubs	Society	Dance Troupe	Others
1				
2				
3				
4				

Cont. Pilot Study Questionnaire (English Version)

School Aims : Vision and Mission

Vision -

Mission -

Achievement of School Aims:

School Achievements over the past 3 years:

No	Date	Achievements: Awards / Competitions / etc	Recipient

Any other Comments you would like to make?

SOAL SELIDIK
Kepimpinan Sekolah Terbaik di Malaysia

Bahagian 1: Butir-butir Peribadi Kepimpinan Sekolah

Nama

Nama Sekolah / Institusi

Jantina – Sila tandakan (√) Lelaki Perempuan Umur

Jawatan Sekarang

Adakah ini jawatan pertama yang disandang sebagai Jawatan dalam Pentadbiran Sekolah?
Ya Tidak

Tempoh Jawatan sekarang Gred Jawatan

Tanggungjawab utama jawatan sekarang

Kelayakan tertinggi dan anugerah yang pernah diterima

No	Kelayakan / Anugerah	Organisasi	Tahun

Pengalaman kerja terdahulu

No	Jawatan	Gred	Nama Institusi	Tahun (Dari – Ke)

Sila hantar sesalinan maklumat berikut untuk rujukan:
- Carta Organisasi Carta
- Pelan Sekolah menunjukkan kemudahan sekolah, persekitaran fizikal dan keluasan sekolah
- Buletin, Buku Panduan Sekolah atau Majalah Sekolah terkini
- Rujukan Lain _____

Bahagian 2: Latihan Kepimpinan dan Pengalaman

Bahagian ini mengkaji jenis latihan kepimpinan yang diperolehi atau yang dilalui dan kesannya.

Bagaimanakah persediaan anda berkaitan dengan peranan kepimpinan?
Contoh: Apakah perkara utama yang disediakan?

Nyatakan program pembangunan kepimpinan yang di sertai oleh anda sekarang.

Apakah yang anda harapkan melalui program ini?

Bagaimanakah anda menilai impak program ini dalam pembelajaran profesional?

Bahagian 3: Ciri-ciri Kepimpinan yang diamalkan

Apakah yang mempengaruhi atau mendorong anda dalam mengamalkan ciri kepimpinan?
(Apakah perkara yang telah membantu anda dalam pembentukan ciri kepimpinan?
Contoh pengalaman, latihan, kerjasama, dengan yang lain)

Pada pandangan anda, apakah ciri-ciri kepimpinan yang berkesan?

Bagaimanakah anda gambarkan amalan kepimpinan di institusi anda?
(Contoh: Kepimpinan secara 'Top-Down', 'Shared', 'Instructional', 'Collaborative')

Cont. Pilot Study Questionnaire (Malay Version)

Bahagian 4: Demografi dan Pencapaian Sekolah

Nyatakan bilangan Kakitangan dan Pelajar di sekolah anda:

Guru [　　　]   Kakitangan Pentadbiran [　　　]   Pengawas Sekolah [　　　]

Nisbah Jantina Pelajar :   Lelaki [　　　]   Perempuan [　　　]

Jumlah Populasi Pelajar	Melayu	Iban	Bidayuh	Melanau	Bumiputera (Lain-lain)	Cina	India	Bangsa Lain

Pencapaian Pelajar: Pencapaian Akademik untuk peperiksaan PMR dan SPM bagi tempoh 3 tahun kebelakangan:

No	Tahun	Bilangan Pelajar yang mendapat semua 'A'			Peratus Kelulusan		
		PMR	SPM	Peperiksaan Lain: Sila nyatakan	PMR	SPM	Peperiksaan Lain:
1							
2							
3							

Pencapaian Sukan (Sekolah, Daerah, Negeri, Kebangsaan)

No	Nama Aktiviti Sukan			
	Peringkat Sekolah	Peringkat Daerah	Peringkat Negeri	Peringkat Kebangsaan
1				
2				
3				
4				

Penglibatan Kebudayaan dan Pencapaian (Seni, Muzik, Drama, dll.):

No	Kelab	Persatuan	Pasukan Tarian	Lain-lain
1				
2				
3				
4				

Cont. Pilot Study Questionnaire (Malay Version)

Sasaran Sekolah : Visi dan Misi Sekolah

Visi -

Misi -

Pencapaian Sasaran Sekolah:

Pencapaian Sekolah bagi tempoh 3 tahun kebelakangan:

No	Tarikh	Pencapaian: Anugerah / Pertandingan / dll.	Penerima

Sila nyatakan cadangan anda jika berkenaan

C17: Questionnaire Validation by 3 Language Experts

Language Expert (1)

Farah Hamdan
Head Unit
English Department
Institut Kemahiran MARA
Kuala Lumpur
06 August 2014

TO WHOM IT MAY CONCERN

Sir / Madam,

Validation of Research Instrument

Name of Researcher   :   Corinne Jacqueline Perera

Matrix No   :   YHA 120005

Research Instrument   :   Principal Practices Questionnaire, 2014

I have reviewed this research instrument and have provided the necessary comments and suggestions to the researcher for improving this questionnaire. For further verification, please contact the undersigned.

FARAH HAMDAN
Head Unit
English Department
Institut Kemahiran MARA
Kuala Lumpur
farahadli79@yahoo.com

6.3.2   C17 Questionnaire Validation by Language Expert (2)

Azman Bin Manap
Pengetua
MRSM
Sandakan
Sabah

07 August 2014

KEPADA SESIAPA BERKENAAN

Tuan / Puan

Pengesahan Instrumen Kajian

Pengkaji   :   Corinne Jacqueline Perera

No Matrik   :   YHA 120005

Instrumen Kajian :   (1)   Protokol Temu Bual: *PPD Protocol (2014)*
                                  (Principal Professional Development Protocol, 2014)

                          (2)   Soal Selidik: *TCS (2011)*
                                  (Teacher Collegiality Scale, 2011)

Saya telah menyemak instrument kajian tersebut dan telah memberi komen serta cadangan untuk pengkaji memperbaiki soal-selidiknya. Untuk pengesahan lanjut, sila hubungi yang bertandatangan di bawah.

AZMAN BIN MANAP
Pengetua
MRSM
Sandakan
Sabah
azmanmukah@gmail.com

6.3.2 C17 Questionnaire Validation by Language Expert (3)

Zuliana Mohd Zabidi

English Lecturer
Kolej Kemahiran Tinggi MARA
Petaling Jaya

06 Ogos 2014

KEPADA SESIAPA BERKENAAN

Tuan / Puan

Pengesahan Item Instrumen Kajian

Pengkaji	:	Corinne Jacqueline Perera
No Matrik	:	YHA 120005
Instrumen Kajian	:	Principal Practices Questionnaire, 2014

Saya telah menyemak instrument kajian ini dan telah memberi komen dan cadangan untuk pengkaji memperbaiki soal-selidiknya. Untuk pengesahan lanjut, sila hubungi yang bertandatangan di bawah.

ZULIANA MOHD ZABIDI

Pensyarah Bahasa Inggeris
Kolej Kemahiran Tinggi MARA
Petaling Jaya
taskaisah@yahoo.com

C18: Summary Statistics (Principal Leadership Practices)

Table 3.6: Summary Statistics (Principal Leadership Practices)

```
TABLE C:\Users\User\Desktop\PHD DATA\27 Nov 2014 ZOU897WS.TXTA Nov 27 15:29
201490_B ONLY
INPUT: 290 Person 30 Item REPORTED: 290 Person 30 Item 5 CATS WINSTEPS 3.73
--------------------------------------------------------------------

      SUMMARY OF 290 MEASURED Person
--------------------------------------------------------------------------
|           TOTAL                     MODEL        INFIT        OUTFIT    |
|           SCORE    COUNT   MEASURE   ERROR    MNSQ   ZSTD   MNSQ   ZSTD |
|------------------------------------------------------------------------|
| MEAN      115.3    29.9     1.66      .30     1.04   -.2    1.05   -.2  |
| S.D.       17.4     .3      1.39      .06      .79   2.3     .83   2.3  |
| MAX.      148.0    30.0     5.87      .73     8.19   9.9    8.88   9.9  |
| MIN.       62.0    27.0    -1.81      .23      .14  -5.4     .14  -5.5  |
|------------------------------------------------------------------------|
| REAL RMSE    .34 TRUE SD   1.35 SEPARATION 3.95 Person RELIABILITY .94  |
|MODEL RMSE    .30 TRUE SD   1.36 SEPARATION 4.51 Person RELIABILITY .95  |
| S.E. OF Person MEAN = .08                                              |
--------------------------------------------------------------------------
Person RAW SCORE-TO-MEASURE CORRELATION = .98
CRONBACH ALPHA (KR-20) Person RAW SCORE "TEST" RELIABILITY = .96

      SUMMARY OF 30 MEASURED Item
--------------------------------------------------------------------------
|           TOTAL                     MODEL        INFIT        OUTFIT    |
|           SCORE    COUNT   MEASURE   ERROR    MNSQ   ZSTD   MNSQ   ZSTD |
|------------------------------------------------------------------------|
| MEAN     1114.2   289.5      .00      .09     1.03   -.3    1.05   -.3  |
| S.D.       70.7     .7       .60      .00      .45   4.8     .50   4.8  |
| MAX.     1221.0   290.0     1.14      .10     2.15   9.9    2.41   9.9  |
| MIN.      971.0   288.0    -1.02      .08      .48  -7.6     .48  -7.6  |
|------------------------------------------------------------------------|
| REAL RMSE    .10 TRUE SD    .59 SEPARATION 5.80 Item  RELIABILITY .97   |
|MODEL RMSE    .09 TRUE SD    .59 SEPARATION 6.38 Item  RELIABILITY .98   |
| S.E. OF Item MEAN = .11                                                |
```

The Person-Item Map, in Figure 3.5 (p. 428) shown below is a pictorial representation of a typical variable map that displays the 'person' distribution on the left and item locations on the right. The variable map illustrates the 'person-item' distribution from the 'easiest items to agree' to the 'hardest items to agree' (Misran & Sahuri, 2013). The 'person's' are denoted by the symbols '#' and '.' and item numbers precede with the letter 'B' (to distinguish between the questionnaire items). Each '#' represents 3 'persons' and the '.' represents 1 to 2 'persons'. These measurement units are aligned on the measurement continuum (vertical dash line), where they are represented in logits. The upper cases 'M', 'S' and 'T' represent the 'Mean', 'one standard deviation' and 'two standard deviations' respectively.

According to (Alagumalai et al., 2005, p. 334), data fit of a Rasch-calibrated score, lies in the comparison between the person-item matrix. The raw scores of all persons and items are iterated until the convergence criterion is reached. The 'person ability' and 'item difficulty' are estimated on a logit scale and expressed in logits, as a unit of measurement common to both (Bond & Fox, 2007). The logit scale is displayed down the middle of the variable map. It is an interval scale with equal distances, with 'M' for persons and items representing the Mean. By default, the Mean has a logit value of 0. The Person measure distribution ranges from most able to least able. The highest logit values are located at the upper portion of the variable map, where positive logit estimates signify respondents who are considered more able, while items tend to be progressively more difficult. Alternatively, the lowest logit values are located at the lower portion of the variable map, where negative logit values lie. This is where lower item measures are viewed as items that are easier for the respondents to agree to, while the 'persons' with lower logit values,

426

are interpreted as person measures that tend to be more disagreeable and are harder to agree with the items (Boone et al., 2014, pp. 138, 161-162). According to (Stelmack et al., 2004) the Variable Map can also feature the capability of an instrument in distinguishing the level of conceptual understanding of the respondents as well as evaluate the measurement properties of the instrument.

```
C:\Users\User\Desktop\PHD DATA\27 Nov 14 ZOU897WS.TXTA Nov 27 15:29 201490_B ONLY
INPUT: 290 Person 30 Item REPORTED: 290 Person 30 Item 5 CATS WINSTEPS 3.73
--------------------------------------------------------------------------------

            Person - MAP - Item
               <more>|<rare>
    6                 +         ┌─────────────────────────┐
                    . |    ◄─── │  Person Most Agreeable   │
                      |         └─────────────────────────┘
                      |
                      |
                      |
    5                 +
                    # |
                    . |
                     T|
                    # |
                    . |
    4              .# +
                    # |
                    # |
                   .# |
                   .# |
                    . |
    3             .### S+
                  ##### |
                    ## |
                   .## |
            ########### |
                  #### |
    2            .#### +
                 .#### |
            ####### M|              ┌──────────────────────┐
                 .#### |    ─────── │  Person Mean = 1.66  │
                 .### |             └──────────────────────┘
                  .## |T B16
    1           ###### +  B9
                 .## |  B14
                  .# |S B15    B19    B21    B24
                 .### |  B18    B25    B28
                 .# S|
                   ## |  B20    B5     B7
    0             .# +M B11    B13    B17    B3    ┌─────────────────────┐
                  .# |  B6              ─────────  │  Item Mean = .00    │
                 .### |  B1     B23    B29         └─────────────────────┘
                   . |  B10    B12    B30    B8
                  ## |S B22
                  ## |  B26    B27        ┌───────────────────────────┐
   -1            . +  B2     B4    ◄───── │ Items that are most agreeable │
                 . T|T                    └───────────────────────────┘
                   . |
                   . |
                   # |
                   . |          ┌────────────────────────────┐
   -2             +     ◄─────── │  Person Most Disagreeable  │
               <less>|<frequ>    └────────────────────────────┘
EACH "#" IS 3. EACH "." IS 1 TO 2
```
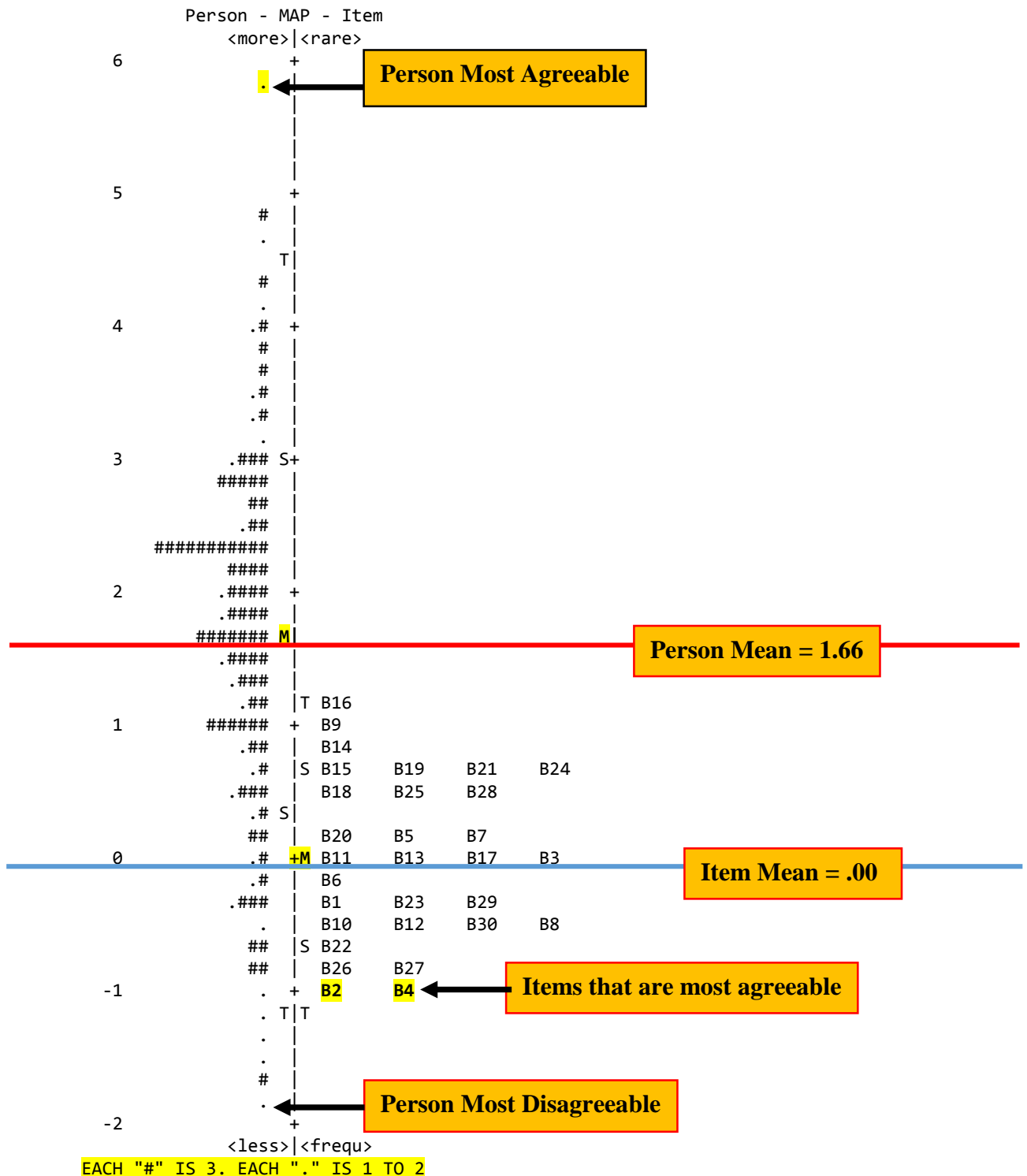
Figure 3.5: Variable Map (Principal Leadership Practices)

C20: Rating Partial Credit Scale (Principal Leadership Practices)

Table 3.7: Rating Partial Credit Scale (Principal Leadership Practice)

```
C:\Users\User\Desktop\PHD DATA\27 Nov 2014 ZOU897WS.TXTA Nov 27 15:29 201490_B ONLY
INPUT: 290 Person 30 Item REPORTED: 290 Person 30 Item  5 CATS  WINSTEPS 3.73
--------------------------------------------------------------------------------

SUMMARY OF CATEGORY STRUCTURE.  Model="R"
-------------------------------------------------------------------
|CATEGORY    OBSERVED|OBSVD SAMPLE|INFIT OUTFIT|| ANDRICH |CATEGORY|
|LABEL SCORE COUNT %|AVRGE EXPECT| MNSQ MNSQ  ||THRESHOLD| MEASURE|
|------------------+-----------+------------++---------+--------|
| 1   1    123   1|  -.37 -1.30|  1.97  3.05||  NONE   |( -3.63)| 1
| 2   2    509   6|  -.28  -.47|  1.26  1.46||  -2.32  |  -1.89 | 2
| 3   3   1992  23|   .50   .64|   .83   .82||  -1.29  |   -.29 | 3
| 4   4   3997  46|  1.77  1.82|   .90   .82||    .54  |   1.85 | 4
| 5   5   2064  24|  3.17  3.04|   .91   .91||   3.07  |(  4.22)| 5
|------------------+-----------+------------++---------+--------|
|MISSING      15   0| 1.82      |            ||         |        |
-------------------------------------------------------------------
OBSERVED AVERAGE is mean of measures in category. It is not a parameter estimate.
```

C21: Item Dimensionality (Principal Leadership Practices)

```
C:\Users\User\Desktop\PHD DATA\27 Nov ZOU897WS.TXTN Nov 27 15:29 2014290_B ONLY
INPUT: 290 Person 30 Item REPORTED: 290 Person 30 Item 5 CATS WINSTEPS 3.73
--------------------------------------------------------------------------------

    Table of STANDARDIZED RESIDUAL variance (in Eigenvalue units)
                                           -- Empirical --    Modeled
Total raw variance in observations    =    58.2 100.0%        100.0%
Raw variance explained by measures    =    28.2  48.4%         49.4%
  Raw variance explained by persons   =    16.5  28.3%         28.8%
  Raw Variance explained by items     =    11.7  20.2%         20.6%
Raw unexplained variance (total)      =    30.0  51.6% 100.0%  50.6%
Unexplned variance in 1st contrast =        4.9   8.5%  16.5%
Unexplned variance in 2nd contrast =        2.5   4.2%   8.2%
Unexplned variance in 3rd contrast =        2.2   3.7%   7.2%
Unexplned variance in 4th contrast =        1.8   3.1%   5.9%
Unexplned variance in 5th contrast =        1.5   2.6%   5.0%
```

C22: Summary Statistics (Teacher Collegiality)

Table 3.8: Summary Statistics (Teacher Collegiality)

```
TABLE: TEACHER COLLEGIALITY        ZOU477WS.TXT     Nov 27 2014   19:35 2014
INPUT: 290 Person 38 Item REPORTED: 290 Person 38 Item 7 CATS WINSTEPS 3.73
--------------------------------------------------------------------------------
       SUMMARY OF 290 MEASURED Person
--------------------------------------------------------------------------------
|          TOTAL                       MODEL         INFIT        OUTFIT       |
|          SCORE     COUNT    MEASURE   ERROR    MNSQ   ZSTD   MNSQ    ZSTD    |
|-----------------------------------------------------------------------------|
| MEAN     204.4     37.8       1.14     .18     1.21    .3    1.10     .0     |
| S.D.      27.0      1.5        .77     .04      .89   2.4     .76    2.3     |
| MAX.     257.0     38.0       3.90     .37     6.61   9.8    6.11    9.6     |
| MIN.     100.0     20.0      -1.09     .13      .31  -4.0     .30   -4.0     |
|-----------------------------------------------------------------------------|
| REAL RMSE    .23 TRUE SD    .73 SEPARATION 3.16 Person RELIABILITY .91       |
|MODEL RMSE    .19 TRUE SD    .75 SEPARATION 4.02 Person RELIABILITY .94       |
| S.E. OF Person MEAN = .05                                                    |
--------------------------------------------------------------------------------
Person RAW SCORE-TO-MEASURE CORRELATION = .92
CRONBACH ALPHA (KR-20) Person RAW SCORE "TEST" RELIABILITY = .95
       SUMMARY OF 38 MEASURED Item
--------------------------------------------------------------------------------
|          TOTAL                       MODEL         INFIT        OUTFIT       |
|          SCORE     COUNT    MEASURE   ERROR    MNSQ   ZSTD   MNSQ    ZSTD    |
|-----------------------------------------------------------------------------|
| MEAN    1559.8    288.6        .00     .06     1.03   -.8    1.10    -.7     |
| S.D.     158.1      .9         .57     .01      .62   4.7     .82    5.1     |
| MAX.    1803.0    290.0       1.54     .09     3.23   9.9    4.20    9.9     |
| MIN.    1052.0    287.0      -1.18     .05      .46  -7.3     .43   -8.0     |
|-----------------------------------------------------------------------------|
| REAL RMSE    .07 TRUE SD    .56 SEPARATION 8.06 Item   RELIABILITY .98       |
|MODEL RMSE    .06 TRUE SD    .57 SEPARATION 8.73 Item   RELIABILITY .99       |
| S.E. OF Item MEAN = .09                                                      |
--------------------------------------------------------------------------------
```

C23: Person-Item Variable Map (Teacher Collegiality)

```
TEACHER COLLEGIALITY      ZOU477WS.TXT      Nov 27 2014      19:35 2014
INPUT: 290 Person 38 Item REPORTED: 290 Person 38 Item 7 CATS WINSTEPS 3.73
-------------------------------------------------------------------------------

            Person - MAP - Item
               <more>|<rare>
     4              +
                 .  |           <--- Person Most Agreeable
                 .  |
                 .  |
                    |
                    |
     3           #  +
                 .  |
                .# T|
                 .  |
                 .  |
                ##  |
     2         .##  +
            ###### S|
      .############ |
            .##### |  C18     <--- Item that is most disagreeable (+1.54)
         ##########  |
        .####### M|T C16
     1  .######### +  C5      === Person Mean = 1.14 ===
          .#######  |
           .######  |   C11     C22     C27     C9
            ##### |S C14     C28     C32
          .##### S|   C26     C29
             ###  |   C23                      === Item Mean = .00 ===
     0       ###  +M C10     C17     C21     C25
          .###  |   C19     C20     C24     C3     C30     C37     C4
           # T|   C1      C13     C15     C2     C36     C8
              |S C12     C35     C6      C7
           .   |   C31
           .   |   C38
    -1         +  C34
             .  |T C33       <--- Item that is most agreeable (-1.18)
                |
                |              <--- Person Most Disagreeable
                |
                |
    -2          +
              <less>|<frequ>
EACH "#" IS 3. EACH "." IS 1 TO 2
```
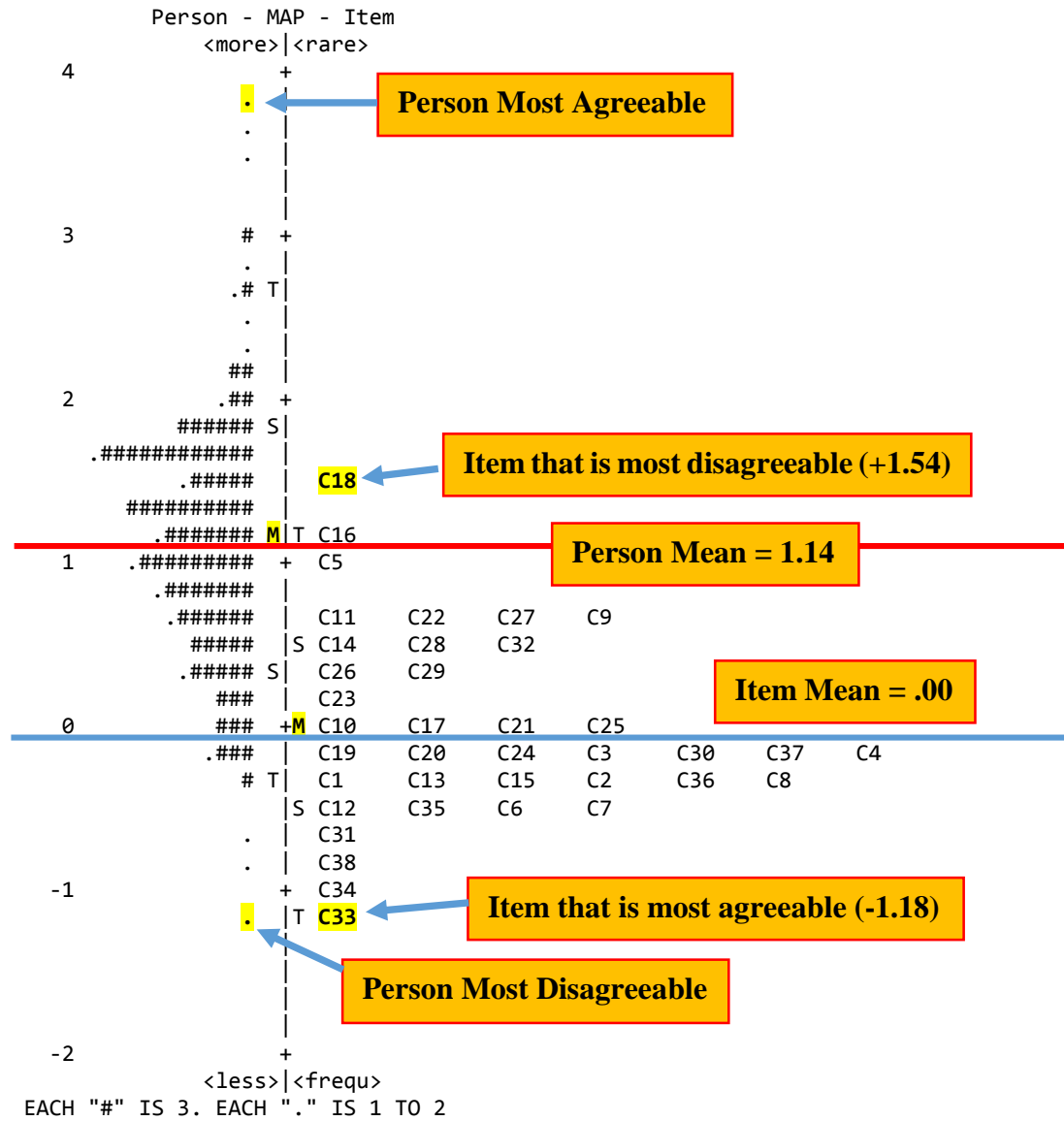
Figure 3.6: Variable Map (Teacher Collegiality)

C24: Item Dimensionality (Teacher Collegiality)

Table 3.9: Item Dimensionality (Teacher Collegiality)

```
TABLE 23.0 TEACHER COLLEGIALITY      ZOU477WS.TXT    Nov 27 2014    19:35 2014
  INPUT: 290 Person 38 Item  REPORTED: 290 Person  38 Item  7 CATS  WINSTEPS 3.73
 -----------------------------------------------------------------------------

      Table of STANDARDIZED RESIDUAL variance (in Eigenvalue units)
                                              -- Empirical --    Modeled
Total raw variance in observations      =     64.8 100.0%         100.0%
Raw variance explained by measures      =     26.8  41.3%          47.0%
  Raw variance explained by persons     =     10.6  16.4%          18.6%
  Raw Variance explained by items       =     16.2  24.9%          28.3%
Raw unexplained variance (total)        =     38.0  58.7% 100.0%   53.0%
Unexplned variance in 1st contrast =           5.7   8.7%  14.9%
Unexplned variance in 2nd contrast =           3.6   5.6%   9.5%
Unexplned variance in 3rd contrast =           2.5   3.8%   6.6%
Unexplned variance in 4th contrast =           2.0   3.1%   5.3%
Unexplned variance in 5th contrast =           1.7   2.6%   4.4%
```

C25: Dimensions of Principal Leadership Practices

Table 3.10: Dimensions of Principal Leadership Practices

Constructs	Dimensions of Principal Leadership Practices	Items	No. of Items	Negative Items
1	Model the Way	1, 6, 11, 16, 21, 26.	6	6, 26
2	Inspire a Shared Vision	2, 7, 12, 17, 22, 27.	6	27
3	Challenge the Process	3, 8, 13, 18, 23, 28.	6	23
4	Enable Others to Act	4, 9, 14, 19, 24, 29.	6	4
5	Encourage the Heart	5, 10, 15, 20, 25, 30	6	30

C26: Dimensions of Teacher Collegiality

Table 3.11: Dimensions of Teacher Collegiality

Constructs	Dimensions of Teacher Collegiality	Items	No of Items
1	Demonstrating mutual support and trust	1, 2, 8, 15, 21, 27, 33.	7
2	Observing one another teaching	3, 9, 16, 22, 28, 34.	6
3	Joint planning and assessment	4, 10, 11, 17, 23, 29, 35.	7
4	Sharing ideas and expertise	5, 12, 18, 24, 30, 36.	6
5	Teaching each other	6, 19, 25, 31, 37.	5
6	Developing curriculum together	13, 20, 26, 32.	4
7	Sharing resources	7, 14, 38.	3

C27: Assumption of Linearity
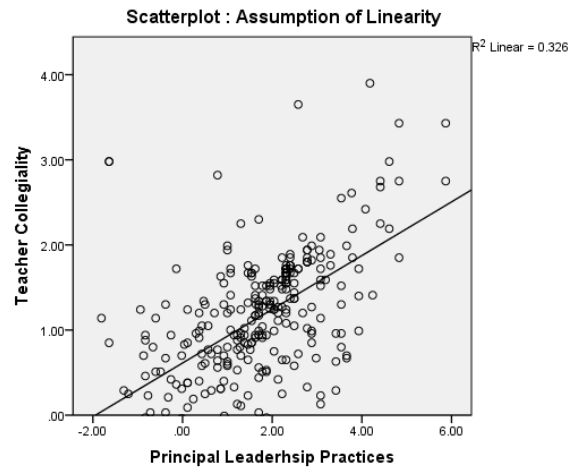
Figure 3.8: Scatterplot: Assumption of Linearity

C28: Homoscedasticity
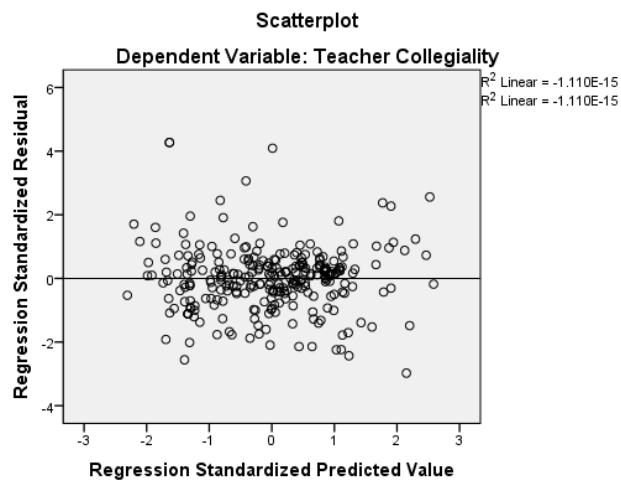
Figure 3.9 Scatterplot Homoscedasticity

C29: Histogram: Normality of Residuals
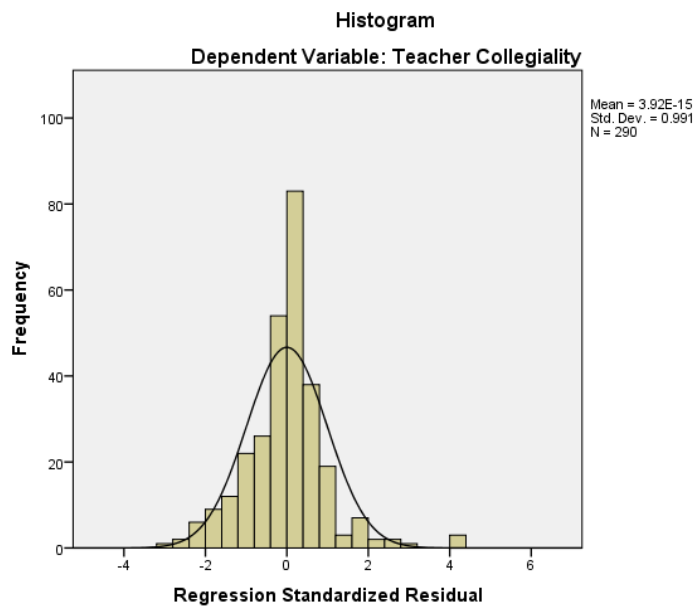
Figure 3.10: Histogram - Normality of Residuals

C30: Normal P-P Plot
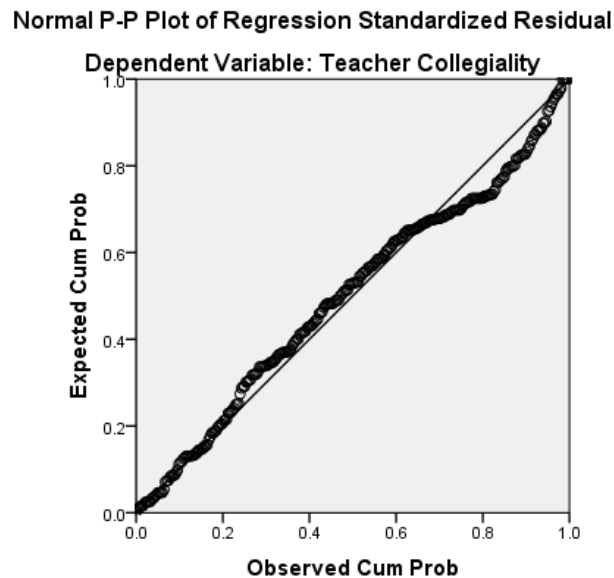
Figure 3.11: Normal P-P Plot

Chapter 4 Appendices

D1: Normality Tests

D1: Skewness and Kurtosis

Table 4.1: Skewness and Kurtosis

Descriptive Statistics:

Variables	Skewness		Kurtosis	
	Statistic	Standard Error	**Statistic**	Standard Error
Principal Leadership Practices	- 0.25	.14	.13	.29
Teacher Collegiality	.28	.14	.87	.29

D1: Histogram: Principal Leadership Practices
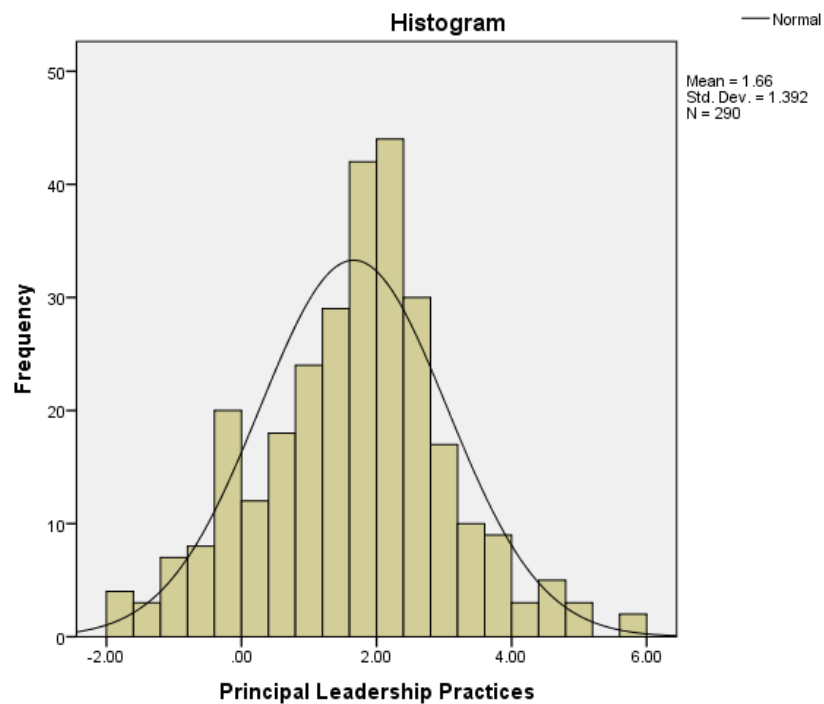
Figure 4.1: Normal Distribution: Principal Leadership Practices

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D1: Histogram: Teacher Collegiality
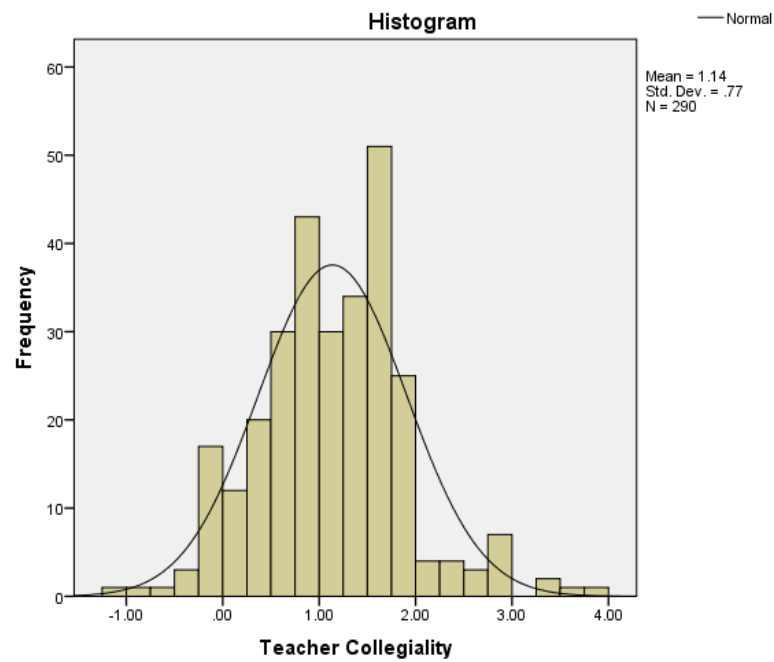
Figure 4.2: Normal Distribution: Teacher Collegiality

D1: Normal Q-Q Plots: Principal Leadership Practices
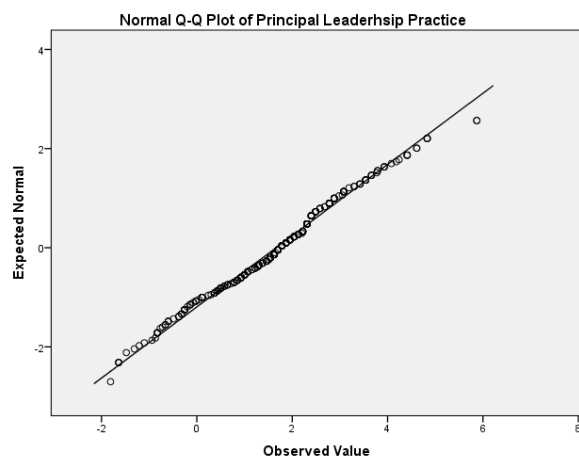
Figure 4.3: Q-Q Plots: (Principal Leadership Practices)

D1: Normal Q-Q Plots: Teacher Collegility

Normal Q-Q Plot of Teacher Collegiality
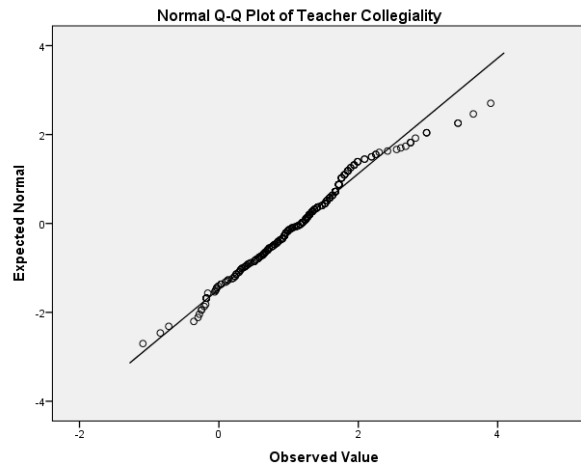
Figure 4.4: Q-Q Plots: (Teacher Collegiality)

D2: 1-Way Repeated Measures ANOVA (PLP)

D2: Table 4.3: 1-Way Repeated Measures ANOVA: Descriptive Statistics (Principal Leadership Practices)

Constructs of Principal Leadership Practices	Mean	Std. Deviation	N
Construct 1: Model the way	**1.9405**	1.80806	290
Construct 2: Inspire a Shared Vision	**2.8923**	2.40749	290
Construct 3: Challenge the Process	**1.5524**	1.52572	290
Construct 4: Enable Others to Act	**1.4060**	1.28145	290
Construct 5: Encourage the Heart	**2.1604**	2.12525	290

D2: Table 4.4: 1-Way Repeated Measures ANOVA: Multivariate Test (Principal Leadership Practices)

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	p-value	Partial Eta Squared
Constructs of Principal Leadership Practices	Pillai's Trace	.484	67.136[b]	4.000	286.000	.000	.484
	Wilks' Lambda	**.516**	**67.136[b]**	**4.000**	**286.000**	**.000**	**.484**
	Hotelling's Trace	.939	67.136[b]	4.000	286.000	.000	.484
	Roy's Largest Root	.939	67.136[b]	4.000	286.000	.000	.484

[a] Design: Intercept
Within Subjects Design: Constructs of Principal Leadership Practices
[b] Exact Statistic

D2: Table 4.5: 1-Way Repeated Measures ANOVA: Mauchly's Test of Sphericity (Principal Leadership Practices)

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon		
					Greenhouse-Geisser	**Huynh-Feldt**	Lower-bound
Constructs of Principal Leadership Practices	.631	**132.420**	**9**	**.000**	.790	**.799**	.250

D2: Table 4.6: 1-Way Repeated Measures ANOVA: Test of Within Subjects (Principal Leadership Practices)

Tests of Within-Subjects Effects

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Constructs of Principal Leadership Practices	Sphericity Assumed	399.669	4	99.917	117.938	.000	.290
	Greenhouse-Geisser	399.669	3.159	126.520	117.938	.000	.290
	Huynh-Feldt	399.669	**3.198**	124.978	**117.938**	**.000**	**.290**
	Lower-bound	399.669	1.000	399.669	117.938	.000	.290
Error (Constructs of Principal Leadership Practices)	Sphericity Assumed	979.368	1156	.847			
	Greenhouse-Geisser	979.368	912.934	1.073			
	Huynh-Feldt	979.368	**924.195**	1.060			
	Lower-bound	979.368	289.000	3.389			

D2: Table 4.7: 1-Way Repeated Measures ANOVA: Pairwise Comparisons (Principal Leadership Practices)

Constructs of Principal Leadership Practices (I)	Constructs of Principal Leadership Practices (J)	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
Inspire a Shared Vision	Model the way	.952*	.082	.000	.720	1.183
	Challenge the Process	1.340*	.092	.000	1.081	1.599
	Enable Others to Act	1.486*	.092	.000	1.226	1.747
	Encourage the Heart	.732*	.074	.000	.523	.941
Encourage the Heart	Model the way	.220*	.072	.025	.016	.424
	Challenge the Process	.608*	.082	.000	.375	.841
	Enable Others to Act	.754*	.076	.000	.540	.969
Model the way	Challenge the Process	.388*	.066	.000	.202	.574
	Enable Others to Act	.534*	.063	.000	.355	.714
Challenge the Process	**Enable Others to Act**	.146	.058	**.126**	-.019	.311

Based on estimated marginal means
* The mean difference is significant at the .05 level.
[b] Adjustment for multiple comparisons: Bonferroni.

D3: 1-Way Repeated Measures ANOVA (TC)

D3: Table 4.8: 1-Way Repeated Measures ANOVA: Descriptive Statistics (Teacher Collegiality)

Constructs of Teacher Collegiality	Mean	Std. Deviation	N
Construct 1: Mutual Support & Trust	1.8025	1.42992	290
Construct 2: Observing One another Teaching	1.0913	1.05057	290
Construct 3: Joint Planning & Assessment	1.3557	1.21415	290
Construct 4: Sharing Ideas & Expertise	.6819	.43149	290
Construct 5: Teaching Each Other	2.9806	2.32312	290
Construct 6: Developing Curriculum Together	1.4719	1.70102	290
Construct 7: Sharing Resources	2.8099	1.89398	290

D3: Table 4.9: 1-Way Repeated Measures ANOVA: Multivariate Test (Teacher Collegiality)

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Constructs of Teacher Collegiality	Pillai's Trace	.697	108.989[b]	6.000	284.000	.000	.697
	Wilks' Lambda	**.303**	**108.989[b]**	**6.000**	**284.000**	**.000**	**.697**
	Hotelling's Trace	2.303	108.989[b]	6.000	284.000	.000	.697
	Roy's Largest Root	2.303	108.989[b]	6.000	284.000	.000	.697

D3: Table 4.10: 1-Way Repeated Measures ANOVA: Mauchly's Test of Sphericity (Teacher Collegiality)

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square (χ^2)	df	Sig.	Epsilon		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Constructs of Teacher Collegiality	.151	**541.998**	20	**.000**	**.574**	.581	.167

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Constructs of Teacher Collegiality	Sphericity Assumed	1289.810	6	214.968	221.114	.000	.433
	Greenhouse-Geisser	1289.810	**3.442**	374.687	**221.114**	**.000**	**.433**
	Huynh-Feldt	1289.810	3.489	369.688	221.114	.000	.433
	Lower-bound	1289.810	1.000	1289.810	221.114	.000	.433
Error (Constructs of Teacher Collegiality)	Sphericity Assumed	1685.807	1734	.972			
	Greenhouse-Geisser	1685.807	**994.844**	1.695			
	Huynh-Feldt	1685.807	1008.297	1.672			
	Lower-bound	1685.807	289.000	5.833			

D3: Table 4.12: 1-Way Repeated Measures ANOVA: Pairwise Comparisons (TC)

Constructs of Teacher Collegiality (I)	Constructs of Teacher Collegiality (J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
Teaching Each Other	**Sharing Resources**	.171	.090	**1.000**	-.104	.445
	Mutual Support & Trust	1.178*	.097	.000	.880	1.476
	Developing Curriculum Together	1.509*	.081	.000	1.259	1.758
	Joint Planning & Assessment	1.625*	.088	.000	1.356	1.894
	Observing One another Teaching	1.889*	.107	.000	1.561	2.218
	Sharing Ideas & Expertise	2.299*	.122	.000	1.925	2.673
Sharing Resources	Mutual Support & Trust	1.007*	.082	.000	.755	1.260
	Developing Curriculum Together	1.338*	.084	.000	1.082	1.594
	Joint Planning & Assessment	1.454*	.074	.000	1.227	1.682
	Observing One another Teaching	1.719*	.086	.000	1.454	1.983
	Sharing Ideas & Expertise	2.128*	.099	.000	1.824	2.432
Mutual Support & Trust	Developing Curriculum Together	.331*	.082	.001	.080	.581
	Joint Planning & Assessment	.447*	.056	.000	.277	.617
	Observing One another Teaching	.711*	.060	.000	.529	.894
	Sharing Ideas & Expertise	1.121*	.072	.000	.900	1.341
Developing Curriculum Together	**Joint Planning & Assessment**	.116	.066	**1.000**	-.087	.320
	Observing One another Teaching	.381*	.082	.000	.129	.632
	Sharing Ideas & Expertise	.790*	.087	.000	.523	1.057
Joint Planning & Assessment	Observing One another Teaching	.264*	.050	.000	.112	.416
	Sharing Ideas & Expertise	.674*	.059	.000	.491	.856
Observing One another Teaching	Sharing Ideas & Expertise	.409*	.054	.000	.244	.574

Based on estimated marginal means. * The mean difference is significant at the .05 level. [b] Adjustment for multiple comparisons: Bonferroni.

D4: Multiple Linear Regression

D4: Table 4.13: Multiple Linear Regression: Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.614[a]	.378	.367	.61274	1.939

a. Predictors: (Constant) Principal Leadership Practices

D4: Table 4.14: Multiple Linear Regression: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	64.676	5	12.935	34.453	.000[b]
Residual	106.627	284	.375		
Total	171.303	289			

D4: Table 4.15: Multiple Linear Regression: Coefficients

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	.606	.057		10.599	.000	.493	.719					
Model	.024	.042	.057	.583	.560	-.058	.106	.509	.035	.027	.230	4.349
Inspire	.132	.033	.412	4.006	.000	.067	.196	.588	.231	.188	.207	4.822
Challenge	-.087	.042	-.172	-2.042	.042	-.170	-.003	.422	-.120	-.096	.310	3.224
Enable	-.015	.057	-.025	-.265	.792	-.128	.097	.495	-.016	-.012	.242	4.124
Encourage	.120	.038	.331	3.186	.002	.046	.194	.579	.186	.149	.203	4.922

a. Dependent Variable: Teacher Collegiality

D4: Table 4.16: Casewise Diagnostics[a]

Case Number	Std. Residual	Teacher Collegiality	Predicted Value	Residual
43	4.270	2.98	.3639	2.61611
47	4.270	2.98	.3639	2.61611
124	4.092	3.65	1.1427	2.50727
249	3.065	2.82	.9423	1.87774

a. Dependent Variable: Teacher Collegiality

D5: 1-Way ANOVA: Principal Leadership Practices

D5: Table 4.17: 1-Way ANOVA: Descriptives Statistics
(Principal Leadership Practices)

Constructs of Principal Leadership Practices	Sample High Performing Schools	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Model the Way	School I	42	2.1805	2.29263	.35376	1.4660	2.8949	-2.63	6.91
	School S	32	1.8450	2.36940	.41886	.9907	2.6993	-2.28	6.91
	School G	65	2.0772	1.61346	.20012	1.6774	2.4770	-1.29	6.91
	School E	23	.3839	1.72325	.35932	-.3613	1.1291	-1.94	5.52
	School A	70	**2.2190**	1.01531	.12135	1.9769	2.4611	-.28	6.91
	School B	58	1.9474	1.81159	.23787	1.4711	2.4237	-.96	6.91
	Total	290	1.9405	1.80806	.10617	1.7315	2.1495	-2.63	6.91
Inspire a Shared Vision	School I	42	2.3895	2.55924	.39490	1.5920	3.1870	-2.50	7.55
	School S	32	2.4513	2.69286	.47603	1.4804	3.4221	-1.92	7.55
	School G	65	2.6617	2.15208	.26693	2.1284	3.1950	-1.32	7.55
	School E	23	.6648	2.03660	.42466	-.2159	1.5455	-1.92	5.22
	School A	70	**4.6261**	1.14042	.13631	4.3542	4.8981	-.28	7.55
	School B	58	2.5490	2.48720	.32659	1.8950	3.2029	-1.92	7.55
	Total	290	2.8923	2.40749	.14137	2.6141	3.1706	-2.50	7.55
Challenge the Process	School I	42	1.3543	1.80359	.27830	.7922	1.9163	-1.85	6.19
	School S	32	1.4509	1.79612	.31751	.8034	2.0985	-2.09	3.97
	School G	65	2.1829	1.61842	.20074	1.7819	2.5839	-.71	6.19
	School E	23	.2183	1.28309	.26754	-.3366	.7731	-1.40	3.97
	School A	70	1.6379	.68884	.08233	1.4736	1.8021	-.46	3.33
	School B	58	1.4710	1.52819	.20066	1.0692	1.8729	-1.18	6.19
	Total	290	1.5524	1.52572	.08959	1.3760	1.7287	-2.09	6.19
Enable Others to Act	School I	42	1.6690	1.72271	.26582	1.1322	2.2059	-1.91	5.95
	School S	32	1.3513	1.50289	.26568	.8094	1.8931	-1.91	4.64
	School G	65	1.4049	1.08463	.13453	1.1362	1.6737	-.99	3.77
	School E	23	.2330	1.07799	.22478	-.2331	.6992	-1.91	3.19
	School A	70	**1.9304**	.63303	.07566	1.7795	2.0814	.54	3.77
	School B	58	1.0793	1.28607	.16887	.7412	1.4175	-1.91	3.77
	Total	290	1.4060	1.28145	.07525	1.2579	1.5541	-1.91	5.95
Encourage the Heart	School I	42	2.2224	2.40497	.37109	1.4729	2.9718	-2.24	7.35
	School S	32	1.9800	2.44179	.43165	1.0996	2.8604	-2.57	7.35
	School G	65	2.0674	1.86326	.23111	1.6057	2.5291	-1.90	5.99
	School E	23	.4078	2.09802	.43747	-.4994	1.3151	-3.30	5.99
	School A	70	**3.2097**	.98676	.11794	2.9744	3.4450	.45	7.35
	School B	58	1.7478	2.43431	.31964	1.1077	2.3878	-3.30	7.35
	Total	290	2.1604	2.12525	.12480	1.9147	2.4060	-3.30	7.35

D5: Table 4.18: Test of Homogeneity of Variances
(Principal Leadership Practices)

Constructs of Principal Leadership Practices	Levene Statistic	df1	df2	Sig.
Model the Way	9.090	5	284	.000
Inspire a Shared Vision	7.824	5	284	.000
Challenge the Process	9.076	5	284	.000
Enable Others to Act	10.279	5	284	.000
Encourage the Heart	12.088	5	284	.000

D5: Table 4.19: ANOVA (Principal Leadership Practices)

Constructs of Principal Leadership Practices		Sum of Squares	df	Mean Square	F	Sig.
Model the Way	Between Groups	65.086	5	13.017	**4.203**	**.001**
	Within Groups	879.673	284	3.097		
	Total	944.759	289			
Inspire a Shared Vision	Between Groups	351.692	5	70.338	**15.095**	**.000**
	Within Groups	1323.348	284	4.660		
	Total	1675.040	289			
Challenge the Process	Between Groups	69.653	5	13.931	**6.560**	**.000**
	Within Groups	603.088	284	2.124		
	Total	672.741	289			
Enable Others to Act	Between Groups	60.088	5	12.018	**8.234**	**.000**
	Within Groups	414.480	284	1.459		
	Total	474.568	289			
Encourage the Heart	Between Groups	159.360	5	31.872	**7.899**	**.000**
	Within Groups	1145.959	284	4.035		
	Total	1305.319	289			

D5: Table 4.20: Robust Tests of Equality of Means
(Principal Leadership Practices)

Constructs of Principal Leadership Practices		Statistic[a]	df1	df2	Sig.
Model the Way	Welch	**4.667**	5	98.717	.001
Inspire a Shared Vision	Welch	**27.704**	5	98.210	.000
Challenge the Process	Welch	**7.108**	5	97.203	.000
Enable Others to Act	Welch	**13.359**	5	98.209	.000
Encourage the Heart	Welch	**13.005**	5	96.846	.000

a. Asymptotically F distributed.

Tamhane

Dependent Variable	(I) School	(J) School	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Model the Way	**SCHOOL I**	SCHOOL S	.33548	.54826	1.000	-1.3302	2.0011
		SCHOOL G	.10325	.40644	1.000	-1.1307	1.3371
		SCHOOL E	**1.79656***	**.50424**	**.011**	**.2555**	**3.3377**
		SCHOOL A	-.03852	.37400	1.000	-1.1874	1.1104
		SCHOOL B	.23306	.42630	1.000	-1.0559	1.5220
	SCHOOL S	SCHOOL G	-.23223	.46421	1.000	-1.6662	1.2018
		SCHOOL E	1.46109	.55186	.148	-.2308	3.1529
		SCHOOL A	-.37400	.43608	.999	-1.7403	.9923
		SCHOOL B	-.10241	.48169	1.000	-1.5814	1.3766
	SCHOOL G	**SCHOOL E**	**1.69332***	**.41129**	**.003**	**.4053**	**2.9813**
		SCHOOL A	-.14177	.23404	1.000	-.8427	.5592
		SCHOOL B	.12982	.31086	1.000	-.7996	1.0593
	SCHOOL E	**SCHOOL A**	**-1.83509***	**.37926**	**.001**	**-3.0517**	**-.6185**
		SCHOOL B	**-1.56350***	**.43093**	**.011**	**-2.9003**	**-.2267**
	SCHOOL A	SCHOOL B	.27159	.26704	.996	-.5327	1.0758
Inspire a Shared Vision	**SCHOOL I**	SCHOOL S	-.06173	.61851	1.000	-1.9415	1.8181
		SCHOOL G	-.27217	.47665	1.000	-1.7125	1.1682
		SCHOOL E	1.72474	.57990	.064	-.0506	3.5001
		SCHOOL A	**-2.23662***	**.41776**	**.000**	**-3.5198**	**-.9534**
		SCHOOL B	-.15944	.51245	1.000	-1.7021	1.3832
	SCHOOL S	SCHOOL G	-.21044	.54577	1.000	-1.8865	1.4656
		SCHOOL E	1.78647	.63792	.102	-.1695	3.7424
		SCHOOL A	**-2.17489***	**.49517**	**.001**	**-3.7267**	**-.6231**
		SCHOOL B	-.09772	.57729	1.000	-1.8581	1.6626
	SCHOOL G	**SCHOOL E**	**1.99691***	**.50159**	**.004**	**.4370**	**3.5568**
		SCHOOL A	**-1.96445***	**.29972**	**.000**	**-2.8644**	**-1.0645**
		SCHOOL B	.11273	.42180	1.000	-1.1488	1.3742
	SCHOOL E	**SCHOOL A**	**-3.96136***	**.44600**	**.000**	**-5.3946**	**-2.5281**
		SCHOOL B	**-1.88418***	**.53572**	**.014**	**-3.5327**	**-.2357**
	SCHOOL A	**SCHOOL B**	**2.07718***	**.35389**	**.000**	**1.0078**	**3.1466**
Challenge the Process	SCHOOL I	SCHOOL S	-.09665	.42221	1.000	-1.3784	1.1851
		SCHOOL G	-.82864	.34314	.239	-1.8639	.2066
		SCHOOL E	1.13602	.38604	.068	-.0422	2.3143
		SCHOOL A	-.28357	.29022	.998	-1.1774	.6103
		SCHOOL B	-.11675	.34310	1.000	-1.1524	.9189
	SCHOOL S	SCHOOL G	-.73199	.37565	.581	-1.8804	.4164
		SCHOOL E	1.23268	.41520	.065	-.0402	2.5056
		SCHOOL A	-.18692	.32801	1.000	-1.2168	.8429
		SCHOOL B	-.02010	.37561	1.000	-1.1688	1.1286
	SCHOOL G	**SCHOOL E**	**1.96466***	**.33448**	**.000**	**.9347**	**2.9946**
		SCHOOL A	.54507	.21697	.189	-.1085	1.1986
		SCHOOL B	.71189	.28383	.184	-.1359	1.5597

	SCHOOL E	SCHOOL A	-1.41960*	.27992	.000	-2.3205	-.5187
		SCHOOL B	-1.25277*	.33443	.007	-2.2832	-.2223
	SCHOOL A	SCHOOL B	.16682	.21690	1.000	-.4888	.8224
Enable Others to Act	SCHOOL I	SCHOOL S	.31780	.37583	1.000	-.8210	1.4566
		SCHOOL G	.26412	.29793	.999	-.6430	1.1712
		SCHOOL E	1.43600*	.34812	.002	.3758	2.4962
		SCHOOL A	-.26138	.27638	.998	-1.1131	.5903
		SCHOOL B	.58974	.31492	.636	-.3638	1.5432
	SCHOOL S	SCHOOL G	-.05367	.29780	1.000	-.9717	.8643
		SCHOOL E	1.11821*	.34801	.033	.0513	2.1851
		SCHOOL A	-.57918	.27624	.483	-1.4450	.2866
		SCHOOL B	.27194	.31480	.999	-.6906	1.2345
	SCHOOL G	SCHOOL E	1.17188*	.26196	.001	.3549	1.9889
		SCHOOL A	-.52551*	.15435	.014	-.9883	-.0627
		SCHOOL B	.32561	.21591	.885	-.3203	.9715
	SCHOOL E	SCHOOL A	-1.69739*	.23717	.000	-2.4583	-.9365
		SCHOOL B	-.84627	.28114	.061	-1.7124	.0199
	SCHOOL A	SCHOOL B	.85112*	.18504	.000	.2926	1.4097
Encourage the Heart		SCHOOL S	.24238	.56924	1.000	-1.4864	1.9712
		SCHOOL G	.15500	.43718	1.000	-1.1688	1.4788
	SCHOOL I	SCHOOL E	1.81455*	.57366	.039	.0525	3.5766
		SCHOOL A	-.98733	.38939	.196	-2.1852	.2105
		SCHOOL B	.47462	.48978	.998	-.9988	1.9481
	SCHOOL S	SCHOOL G	-.08738	.48963	1.000	-1.5936	1.4189
		SCHOOL E	1.57217	.61457	.185	-.3150	3.4593
		SCHOOL A	-1.22971	.44747	.131	-2.6333	.1739
		SCHOOL B	.23224	.53712	1.000	-1.4013	1.8658
	SCHOOL G	SCHOOL E	1.65956*	.49476	.028	.1056	3.2135
		SCHOOL A	-1.14233*	.25946	.000	-1.9214	-.3632
		SCHOOL B	.31963	.39444	1.000	-.8618	1.5010
	SCHOOL E	SCHOOL A	-2.80189*	.45309	.000	-4.2658	-1.3380
		SCHOOL B	-1.33993	.54180	.228	-3.0116	.3318
	SCHOOL A	SCHOOL B	1.46196*	.34070	.001	.4305	2.4934

*. The mean difference is significant at the 0.05 level.

D5: Table 4.22: Tests of Between-Subjects Effects
(Principal Leadership Practices)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	**Partial Eta Squared**
Corrected Model	65.224[a]	5	13.045	7.484	.000	.116
Intercept	557.042	1	557.042	319.597	.000	.529
School	65.224	5	13.045	7.484	.000	**.116**
Error	494.998	284	1.743			
Total	1360.940	290				
Corrected Total	560.222	289				

a. R Squared = .116 (Adjusted R Squared = .101)

D6: 1-Way ANOVA: Teacher Collegiality

D6: Table 4.23: 1-Way ANOVA: Descriptives Statistics
(Teacher Collegiality)

Constructs of Teacher Collegiality	HPS Schools	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Mutual Support & Trust	School I	42	1.8943	1.93483	.29855	1.2913	2.4972	-2.28	6.66
	School S	32	1.5431	1.31656	.23274	1.0685	2.0178	-1.52	3.81
	School G	65	1.7191	1.53784	.19075	1.3380	2.1001	-.68	6.66
	School E	23	1.5752	1.33991	.27939	.9958	2.1546	.12	6.66
	School A	70	2.1786	.68450	.08181	2.0154	2.3418	.55	4.42
	School B	58	1.6088	1.59101	.20891	1.1905	2.0271	-1.22	6.66
	Total	290	1.8025	1.42992	.08397	1.6372	1.9677	-2.28	6.66
Observing One Another Teaching	School I	42	.9326	1.13963	.17585	.5775	1.2878	-2.00	4.22
	School S	32	1.2803	1.32803	.23476	.8015	1.7591	-.98	4.22
	School G	65	.9003	1.08232	.13425	.6321	1.1685	-.83	6.44
	School E	23	1.0591	.90116	.18790	.6694	1.4488	-.40	3.62
	School A	70	1.3030	.45021	.05381	1.1957	1.4103	.24	2.73
	School B	58	1.0731	1.30094	.17082	.7310	1.4152	-2.00	6.44
	Total	290	1.0913	1.05057	.06169	.9699	1.2127	-2.00	6.44
Joint Planning & Assessment	School I	42	1.2402	1.45738	.22488	.7861	1.6944	-1.14	5.43
	School S	32	1.3466	1.37631	.24330	.8504	1.8428	-.48	4.55
	School G	65	.8618	.95893	.11894	.6242	1.0995	-.93	3.46
	School E	23	.8448	.71380	.14884	.5361	1.1535	-.12	3.01
	School A	70	2.0751	.57694	.06896	1.9376	2.2127	.94	3.96
	School B	58	1.3321	1.50157	.19717	.9373	1.7269	-.71	6.75
	Total	290	1.3557	1.21415	.07130	1.2154	1.4960	-1.14	6.75
Sharing Ideas & Expertise	School I	42	.7300	.63452	.09791	.5323	.9277	-.23	2.78
	School S	32	.7134	.43773	.07738	.5556	.8713	.05	1.92
	School G	65	.5934	.45828	.05684	.4798	.7069	-.23	2.28
	School E	23	.5883	.30424	.06344	.4567	.7198	.14	1.07
	School A	70	.7879	.13582	.01623	.7555	.8202	.44	.92
	School B	58	.6383	.47524	.06240	.5133	.7632	-.23	1.64
	Total	290	.6819	.43149	.02534	.6321	.7318	-.23	2.78
Teaching Each Other	School I	42	2.5152	2.38137	.36745	1.7732	3.2573	-2.11	8.00
	School S	32	2.4463	2.15224	.38047	1.6703	3.2222	-2.11	8.00
	School G	65	2.0506	1.90906	.23679	1.5776	2.5237	-1.10	8.00
	School E	23	1.5283	1.38244	.28826	.9305	2.1261	-.87	4.09
	School A	70	5.1980	1.23930	.14813	4.9025	5.4935	.87	8.00
	School B	58	2.5545	2.38658	.31337	1.9270	3.1820	-.87	8.00
	Total	290	2.9806	2.32312	.13642	2.7121	3.2491	-2.11	8.00
Developing Curriculum Together	School I	42	1.1660	1.53638	.23707	.6872	1.6447	-1.74	5.06
	School S	32	1.0166	1.94311	.34350	.3160	1.7171	-1.32	6.49
	School G	65	.7789	1.48292	.18393	.4115	1.1464	-1.74	6.49
	School E	23	.7896	.99280	.20701	.3602	1.2189	-.42	3.09
	School A	70	2.9889	.84062	.10047	2.7884	3.1893	.74	6.49
	School B	58	1.1610	1.83547	.24101	.6784	1.6436	-.95	6.49
	Total	290	1.4719	1.70102	.09989	1.2753	1.6685	-1.74	6.49
Sharing Resources	School I	42	2.4262	2.22865	.34389	1.7317	3.1207	-2.80	7.45
	School S	32	2.5700	2.24068	.39610	1.7621	3.3779	-1.87	7.45
	School G	65	2.1675	1.67748	.20807	1.7519	2.5832	-.87	7.45
	School E	23	2.4591	1.73778	.36235	1.7077	3.2106	-.40	5.75
	School A	70	3.8646	.90397	.10804	3.6490	4.0801	1.23	5.75
	School B	58	2.8062	2.13146	.27987	2.2458	3.3666	-1.36	7.45
	Total	290	2.8099	1.89398	.11122	2.5910	3.0288	-2.80	7.45

D6: Table 4.24: Test of Homogeneity of Variances (Teacher Collegiality)

Constructs of Teacher Collegiality	Levene Statistic	df1	df2	Sig.
Mutual Support & Trust	8.753	5	284	.000
Observing One another Teaching	9.115	5	284	.000
Joint Planning & Assessment	8.372	5	284	.000
Sharing Ideas & Expertise	14.585	5	284	.000
Teaching Each Other	5.856	5	284	.000
Developing Curriculum Together	6.306	5	284	.000
Sharing Resources	7.204	5	284	.000

D6: Table 4.25: ANOVA (Teacher Collegiality)

Constructs of Teacher Collegiality	Sum of Squares	df	Mean Square	F	Sig.
Mutual Support & Trust	16.224	5	3.245	1.603	.159
	574.689	284	2.024		
	590.913	289			
Observing One another Teaching	7.752	5	1.550	1.415	.219
	311.214	284	1.096		
	318.966	289			
Joint Planning & Assessment	58.684	5	11.737	9.074	.000
	367.349	284	1.293		
	426.033	289			
Sharing Ideas & Expertise	1.736	5	.347	1.894	.095
	52.071	284	.183		
	53.808	289			
Teaching Each Other	477.675	5	95.535	25.075	.000
	1082.030	284	3.810		
	1559.705	289			
Developing Curriculum Together	219.175	5	43.835	20.176	.000
	617.038	284	2.173		
	836.212	289			
Sharing Resources	115.540	5	23.108	7.124	.000
	921.154	284	3.244		
	1036.694	289			

D6: Table 4.26: Robust Tests of Equality of Means (Teacher Collegiality)

Constructs of Teacher Collegiality		Statistic[a]	df1	df2	Sig.
Mutual Support & Trust	Welch	3.237	5	97.807	.010
Observing One another Teaching	Welch	2.368	5	96.184	.045
Joint Planning & Assessment	Welch	22.831	5	100.754	.000
Sharing Ideas & Expertise	Welch	4.460	5	93.662	.001
Teaching Each Other	Welch	46.691	5	103.232	.000
Developing Curriculum Together	Welch	40.490	5	102.079	.000
Sharing Resources	Welch	14.646	5	97.378	.000

a. Asymptotically F distributed.

D6: Table 4.27: Multiple Comparisons (Teacher Collegiality)

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Dependent Variable	(I) School	(J) School	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Mutual Support & Trust	School I	School S	.35116	.37855	.999	-.7956	1.4979
		School G	.17521	.35428	1.000	-.8969	1.2473
		School E	.31907	.40889	1.000	-.9282	1.5663
		School A	-.28429	.30956	.999	-1.2388	.6702
		School B	.28549	.36438	1.000	-.8152	1.3862
	School S	School I	-.35116	.37855	.999	-1.4979	.7956
		School G	-.17595	.30092	1.000	-1.0876	.7357
		School E	-.03209	.36363	1.000	-1.1535	1.0893
		School A	-.63545	.24670	.190	-1.4048	.1339
		School B	-.06567	.31275	1.000	-1.0115	.8802
	School G	School S	.17595	.30092	1.000	-.7357	1.0876
		School I	-.17521	.35428	1.000	-1.2473	.8969
		School E	.14386	.33829	1.000	-.9033	1.1910
		School A	-.45949	.20755	.361	-1.0843	.1653
		School B	.11028	.28289	1.000	-.7350	.9556
	School E	School S	.03209	.36363	1.000	-1.0893	1.1535
		School I	-.31907	.40889	1.000	-1.5663	.9282
		School G	-.14386	.33829	1.000	-1.1910	.9033
		School A	-.60335	.29112	.524	-1.5417	.3350
		School B	-.03358	.34886	1.000	-1.1086	1.0415
	School A	School S	.63545	.24670	.190	-.1339	1.4048
		School I	.28429	.30956	.999	-.6702	1.2388
		School G	.45949	.20755	.361	-.1653	1.0843
		School E	.60335	.29112	.524	-.3350	1.5417
		School B	.56978	.22436	.181	-.1089	1.2484
	School B	School S	.06567	.31275	1.000	-.8802	1.0115
		School I	-.28549	.36438	1.000	-1.3862	.8152
		School G	-.11028	.28289	1.000	-.9556	.7350
		School E	.03358	.34886	1.000	-1.0415	1.1086
		School A	-.56978	.22436	.181	-1.2484	.1089
Observing One another Teaching	School I	School S	-.34769	.29332	.984	-1.2414	.5460
		School G	.03231	.22123	1.000	-.6343	.6989
		School E	-.12651	.25735	1.000	-.9142	.6612
		School A	-.37038	.18390	.533	-.9364	.1957
		School B	-.14048	.24516	1.000	-.8769	.5959
	School S	School I	.34769	.29332	.984	-.5460	1.2414
		School G	.38000	.27044	.934	-.4499	1.2099
		School E	.22118	.30070	1.000	-.7008	1.1431
		School A	-.02269	.24085	1.000	-.7804	.7350
		School B	.20721	.29033	1.000	-.6763	1.0907
	School G	School S	-.38000	.27044	.934	-1.2099	.4499
		School I	-.03231	.22123	1.000	-.6989	.6343
		School E	-.15882	.23093	1.000	-.8718	.5542
		School A	-.40269	.14463	.095	-.8385	.0331
		School B	-.17280	.21726	1.000	-.8228	.4772
	School E	School S	-.22118	.30070	1.000	-1.1431	.7008
		School I	.12651	.25735	1.000	-.6612	.9142
		School G	.15882	.23093	1.000	-.5542	.8718
		School A	-.24387	.19546	.977	-.8743	.3866
		School B	-.01397	.25394	1.000	-.7893	.7614

	School A	School S	.02269	.24085	1.000	-.7350	.7804
		School I	.37038	.18390	.533	-.1957	.9364
		School G	.40269	.14463	.095	-.0331	.8385
		School E	.24387	.19546	.977	-.3866	.8743
		School B	.22990	.17910	.967	-.3134	.7732
	School B	School S	-.20721	.29033	1.000	-1.0907	.6763
		School I	.14048	.24516	1.000	-.5959	.8769
		School G	.17280	.21726	1.000	-.4772	.8228
		School E	.01397	.25394	1.000	-.7614	.7893
		School A	-.22990	.17910	.967	-.7732	.3134
Joint Planning & Assessment	**School I**	School S	-.10632	.33131	1.000	-1.1112	.8986
		School G	.37839	.25440	.899	-.3953	1.1521
		School E	.39546	.26967	.909	-.4254	1.2164
		School A	**-.83490***	**.23521**	**.013**	**-1.5589**	**-.1109**
		School B	-.09183	.29907	1.000	-.9913	.8077
	School S	School I	.10632	.33131	1.000	-.8986	1.1112
		School G	.48472	.27082	.714	-.3512	1.3206
		School E	.50178	.28521	.735	-.3760	1.3796
		School A	-.72858	.25288	.095	-1.5212	.0641
		School B	.01449	.31316	1.000	-.9353	.9642
	School G	School S	-.48472	.27082	.714	-1.3206	.3512
		School I	-.37839	.25440	.899	-1.1521	.3953
		School E	.01706	.19052	1.000	-.5677	.6018
		School A	**-1.21330***	**.13748**	**.000**	**-1.6253**	**-.8013**
		School B	-.47022	.23026	.490	-1.1618	.2214
	School E	School S	-.50178	.28521	.735	-1.3796	.3760
		School I	-.39546	.26967	.909	-1.2164	.4254
		School G	-.01706	.19052	1.000	-.6018	.5677
		School A	**-1.23036***	**.16404**	**.000**	**-1.7492**	**-.7116**
		School B	-.48729	.24704	.552	-1.2339	.2593
	School A	School S	.72858	.25288	.095	-.0641	1.5212
		School I	**.83490***	**.23521**	**.013**	**.1109**	**1.5589**
		School G	**1.21330***	**.13748**	**.000**	**.8013**	**1.6253**
		School E	**1.23036***	**.16404**	**.000**	**.7116**	**1.7492**
		School B	**.74307***	**.20888**	**.010**	**.1102**	**1.3759**
	School B	School S	-.01449	.31316	1.000	-.9642	.9353
		School I	.09183	.29907	1.000	-.8077	.9913
		School G	.47022	.23026	.490	-.2214	1.1618
		School E	.48729	.24704	.552	-.2593	1.2339
		School A	**-.74307***	**.20888**	**.010**	**-1.3759**	**-.1102**
Sharing Ideas & Expertise	School I	School S	.01656	.12480	1.000	-.3615	.3946
		School G	.13662	.11321	.981	-.2068	.4801
		School E	.14174	.11666	.980	-.2134	.4969
		School A	-.05786	.09925	1.000	-.3654	.2496
		School B	.09172	.11610	1.000	-.2598	.4432
	School S	School I	-.01656	.12480	1.000	-.3946	.3615
		School G	.12005	.09602	.974	-.1719	.4120
		School E	.12518	.10006	.974	-.1816	.4319
		School A	-.07442	.07907	.999	-.3234	.1746
		School B	.07516	.09941	1.000	-.2264	.3767
	School G	School S	-.12005	.09602	.974	-.4120	.1719
		School I	-.13662	.11321	.981	-.4801	.2068
		School E	.00512	.08518	1.000	-.2549	.2651
		School A	**-.19447***	**.05912**	**.023**	**-.3733**	**-.0157**
		School B	-.04489	.08441	1.000	-.2971	.2073
	School E	School S	-.12518	.10006	.974	-.4319	.1816

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		School I	-.14174	.11666	.980	-.4969	.2134
		School G	-.00512	.08518	1.000	-.2651	.2549
		School A	-.19960	.06548	.078	-.4115	.0123
		School B	-.05001	.08899	1.000	-.3209	.2208
	School A	School S	.07442	.07907	.999	-.1746	.3234
		School I	.05786	.09925	1.000	-.2496	.3654
		School G	**.19447***	**.05912**	**.023**	**.0157**	**.3733**
		School E	.19960	.06548	.078	-.0123	.4115
		School B	.14958	.06448	.300	-.0464	.3456
	School B	School S	-.07516	.09941	1.000	-.3767	.2264
		School I	-.09172	.11610	1.000	-.4432	.2598
		School G	.04489	.08441	1.000	-.2073	.2971
		School E	.05001	.08899	1.000	-.2208	.3209
		School A	-.14958	.06448	.300	-.3456	.0464
Teaching Each Other	**School I**	School S	.06899	.52894	1.000	-1.5344	1.6724
		School G	.46462	.43714	.994	-.8579	1.7872
		School E	.98698	.46703	.446	-.4344	2.4084
		School A	**-2.68276***	**.39618**	**.000**	**-3.8957**	**-1.4698**
		School B	-.03924	.48293	1.000	-1.4923	1.4138
	School S	School I	-.06899	.52894	1.000	-1.6724	1.5344
		School G	.39563	.44813	.999	-.9752	1.7664
		School E	.91799	.47733	.604	-.5461	2.3821
		School A	**-2.75175***	**.40828**	**.000**	**-4.0214**	**-1.4821**
		School B	-.10823	.49291	1.000	-1.6024	1.3859
	School G	School S	-.39563	.44813	.999	-1.7664	.9752
		School I	-.46462	.43714	.994	-1.7872	.8579
		School E	.52235	.37304	.936	-.6209	1.6656
		School A	**-3.14738***	**.27930**	**.000**	**-3.9835**	**-2.3112**
		School B	-.50387	.39277	.966	-1.6796	.6719
	School E	School S	-.91799	.47733	.604	-2.3821	.5461
		School I	-.98698	.46703	.446	-2.4084	.4344
		School G	-.52235	.37304	.936	-1.6656	.6209
		School A	**-3.66974***	**.32409**	**.000**	**-4.6891**	**-2.6504**
		School B	-1.02622	.42579	.246	-2.3181	.2657
	School A	**School S**	**2.75175***	**.40828**	**.000**	**1.4821**	**4.0214**
		School I	**2.68276***	**.39618**	**.000**	**1.4698**	**3.8957**
		School G	**3.14738***	**.27930**	**.000**	**2.3112**	**3.9835**
		School E	**3.66974***	**.32409**	**.000**	**2.6504**	**4.6891**
		School B	**2.64352***	**.34662**	**.000**	**1.5982**	**3.6888**
	School B	School S	.10823	.49291	1.000	-1.3859	1.6024
		School I	.03924	.48293	1.000	-1.4138	1.4923
		School G	.50387	.39277	.966	-.6719	1.6796
		School E	1.02622	.42579	.246	-.2657	2.3181
		School A	**-2.64352***	**.34662**	**.000**	**-3.6888**	**-1.5982**
Developing Curriculum Together	**School I**	School S	.14939	.41736	1.000	-1.1253	1.4240
		School G	.38703	.30006	.965	-.5167	1.2908
		School E	.37639	.31473	.982	-.5825	1.3353
		School A	**-1.82290***	**.25748**	**.000**	**-2.6103**	**-1.0355**
		School B	.00492	.33806	1.000	-1.0101	1.0200
	School S	School I	-.14939	.41736	1.000	-1.4240	1.1253
		School G	.23764	.38964	1.000	-.9610	1.4363
		School E	.22700	.40105	1.000	-1.0078	1.4618
		School A	**-1.97229***	**.35789**	**.000**	**-3.0934**	**-.8512**
		School B	-.14447	.41961	1.000	-1.4230	1.1341
	School G	School S	-.23764	.38964	1.000	-1.4363	.9610
		School I	-.38703	.30006	.965	-1.2908	.5167

	(I) School	(J) School	Mean Difference	Std. Error	Sig.	Lower Bound	Upper Bound
		School E	-.01064	.27692	1.000	-.8562	.8349
		School A	**-2.20993***	**.20959**	**.000**	**-2.8386**	**-1.5812**
		School B	-.38211	.30318	.971	-1.2895	.5253
	School E	School S	-.22700	.40105	1.000	-1.4618	1.0078
		School I	-.37639	.31473	.982	-1.3353	.5825
		School G	.01064	.27692	1.000	-.8349	.8562
		School A	**-2.19929***	**.23011**	**.000**	**-2.9253**	**-1.4733**
		School B	-.37147	.31771	.986	-1.3338	.5909
	School A	**School S**	**1.97229***	**.35789**	**.000**	**.8512**	**3.0934**
		School I	**1.82290***	**.25748**	**.000**	**1.0355**	**2.6103**
		School G	**2.20993***	**.20959**	**.000**	**1.5812**	**2.8386**
		School E	**2.19929***	**.23011**	**.000**	**1.4733**	**2.9253**
		School B	**1.82782***	**.26111**	**.000**	**1.0388**	**2.6169**
	School B	School S	.14447	.41961	1.000	-1.1341	1.4230
		School I	-.00492	.33806	1.000	-1.0200	1.0101
		School G	.38211	.30318	.971	-.5253	1.2895
		School E	.37147	.31771	.986	-.5909	1.3338
		School A	**-1.82782***	**.26111**	**.000**	**-2.6169**	**-1.0388**
Sharing Resources	**School I**	School S	-.14381	.52455	1.000	-1.7366	1.4489
		School G	.25865	.40193	1.000	-.9594	1.4767
		School E	-.03294	.49956	1.000	-1.5614	1.4955
		School A	**-1.43838***	**.36046**	**.003**	**-2.5474**	**-.3293**
		School B	-.38002	.44338	.999	-1.7152	.9551
	School S	School I	.14381	.52455	1.000	-1.4489	1.7366
		School G	.40246	.44742	.999	-.9749	1.7799
		School E	.11087	.53684	1.000	-1.5354	1.7572
		School A	**-1.29457***	**.41057**	**.048**	**-2.5825**	**-.0067**
		School B	-.23621	.48500	1.000	-1.7136	1.2412
	School G	School S	-.40246	.44742	.999	-1.7799	.9749
		School I	-.25865	.40193	1.000	-1.4767	.9594
		School E	-.29159	.41784	1.000	-1.5978	1.0146
		School A	**-1.69703***	**.23445**	**.000**	**-2.4008**	**-.9932**
		School B	-.63867	.34874	.662	-1.6828	.4055
	School E	School S	-.11087	.53684	1.000	-1.7572	1.5354
		School I	.03294	.49956	1.000	-1.4955	1.5614
		School G	.29159	.41784	1.000	-1.0146	1.5978
		School A	**-1.40544***	**.37812**	**.014**	**-2.6235**	**-.1873**
		School B	-.34708	.45785	1.000	-1.7557	1.0615
	School A	**School S**	**1.29457***	**.41057**	**.048**	**.0067**	**2.5825**
		School I	**1.43838***	**.36046**	**.003**	**.3293**	**2.5474**
		School G	**1.69703***	**.23445**	**.000**	**.9932**	**2.4008**
		School E	**1.40544***	**.37812**	**.014**	**.1873**	**2.6235**
		School B	**1.05836***	**.30001**	**.011**	**.1507**	**1.9660**
	School B	School S	.23621	.48500	1.000	-1.2412	1.7136
		School I	.38002	.44338	.999	-.9551	1.7152
		School G	.63867	.34874	.662	-.4055	1.6828
		School E	.34708	.45785	1.000	-1.0615	1.7557
		School A	**-1.05836***	**.30001**	**.011**	**-1.9660**	**-.1507**

* The mean difference is significant at the 0.05 level.

D6: Table 4.28: Tests of Between-Subjects Effects
(Teacher Collegiality)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	65.224[a]	5	13.045	7.484	.000	.116
Intercept	557.042	1	557.042	319.597	.000	.529
School	65.224	5	13.045	7.484	.000	**.116**
Error	494.998	284	1.743			
Total	1360.940	290				
Corrected Total	560.222	289				

a. R Squared = .116 (Adjusted R Squared = .101)

D7: Teachers Demographic Profile

i.   Gender

D7: Table 4.29: Independent T-Test: Group Statistics

Gender of Teacher Respondents

Gender	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Female	254	1.6235	1.41284	-1.390	.166
Male	35	1.9720	1.21409		

D7: Table 4.30: Independent Samples Test – Levene's Statistics

Gender of Teacher Respondents

	Levene's Test for Equality of Variances		T-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	**1.057**	**.305**	**-1.390**	**287**	**.166**	-.34854	.25076	-.84209	.14502

ii. Age

D7: Table 4.31: Descriptives

Age	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
< 30 years	45	1.3567	1.36137	.20294	.9477	1.7657	-1.31	5.87
30 - 39 years	83	1.5666	1.17180	.12862	1.3108	1.8225	-1.64	4.61
40 - 49 years	101	1.6261	1.57417	.15664	1.3154	1.9369	-1.64	5.87
50 and above	59	2.1281	1.29774	.16895	1.7899	2.4663	-1.81	4.83
Total	288	1.6697	1.39374	.08213	1.5081	1.8314	-1.81	5.87

D7: Table 4.32: Test of Homogeneity of Variances

Age of Teacher Respondents

Levene Statistic	df1	df2	Sig.
3.465	3	284	.017

D7: Table 4.33: Robust Test of Equality of Means

Age of Teacher Respondents

	Statistic[a]	df1	df2	Sig.
Welch	**3.452**	3	**134.356**	**.018**

a. Asymptotically F distributed.

D7: Table 4.34: Multiple Comparisons

Age of Teacher Respondents

Tamhane

(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
< 30 years	30 - 39 years	-.20996	.24027	.946	-.8582	.4383
	40 - 49 years	-.26947	.25636	.878	-.9580	.4191
	50 and above	-.77147*	.26406	**.026**	-1.4814	-.0615
30 - 39 years	40 - 49 years	-.05951	.20268	1.000	-.5987	.4797
	50 and above	-.56151	.21234	.055	-1.1298	.0068
40 - 49 years	50 and above	-.50200	.23039	.172	-1.1168	.1128

* The mean difference is significant at the 0.05 level.

D7: Table 4.35: Tests of Between-Subjects Effects - Partial Eta Squared

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	**Partial Eta Squared**
	Age of Teacher Respondents					
Corrected Model	17.883[a]	3	5.961	3.137	.026	.032
Intercept	729.540	1	729.540	383.953	.000	.575
Age	17.883	3	5.961	3.137	.026	**.032**
Error	539.622	284	1.900			
Total	1360.440	288				
Corrected Total	557.504	287				

a. R Squared = .032 (Adjusted R Squared = .022)

iii. Academic Qualifications

D7: Table 4.36: T-test: Group Statistics

Qualification	N	Mean	Std. Deviation	Std. Error Mean
	Academic Qualifications of Teacher Respondents			
Undergraduate	**259**	**1.6419**	**1.35736**	.08434
Postgraduate	**30**	**1.8710**	**1.68268**	.30721

D7: Table 4.37: Independent Samples T-test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
	Academic Qualifications of Teacher Respondents								
Equal variances assumed	**2.595**	.108	**.852**	**287**	**.395**	.22911	.26878	-.29993	.75815

iv. Working Years with Present Principal

D7: Table 4.38: T-test – Group Statistics

Working Years with Present Principal				
Teachers Working Years with Present Principal	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
≤ 10 working years with their Present Principal.	111	1.5350	1.32043	.12533
> 10 working years with their Present Principal.	107	1.8410	1.24106	.11998

D7: Table 4.39: Independent Samples Test

Working Years with Present Principal

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	**Sig.**	**t**	**df**	**Sig. (2-tailed)**	**Mean Difference**	**Std. Error Difference**	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	.521	.471	1.762	216	.079	.30607	.17370	-.03629	.64843

v. Teaching Experience

D7: Table 4.40: 1-Way ANOVA - Descriptives

Teaching Experience of Teacher Respondents								
Teaching Experience	**N**	**Mean**	**Std. Deviation**	**Std. Error**	95% Confidence Interval for Mean		**Minimum**	**Maximum**
					Lower Bound	Upper Bound		
< 1 year	5	2.3420	2.17283	.97172	-.3559	5.0399	.30	5.87
1 - 5 years	60	1.3018	1.28413	.16578	.9701	1.6336	-1.31	5.87
6 - 10 years	43	1.6642	1.32985	.20280	1.2549	2.0735	-1.64	4.24
11 - 15 years	45	1.4802	1.10521	.16475	1.1482	1.8123	-1.10	4.61
16 - 20 years	51	1.5316	1.55176	.21729	1.0951	1.9680	-1.48	4.83
> 20 years	86	2.0440	1.41683	.15278	1.7402	2.3477	-1.81	4.83
Total	290	1.6617	1.39229	.08176	1.5007	1.8226	-1.81	5.87

D7: Table 4.41: Test of Homogeneity of Variances

Teaching Experience of Teacher Respondents

Levene Statistic	df1	df2	Sig.
1.762	5	284	.121

D7: Table 4.42: ANOVA

Teaching Experience of Teacher Respondents

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	24.996	5	4.999	2.653	.023
Within Groups	535.226	284	1.885		
Total	560.222	289			

D7: Table 4.43: Multiple Comparisons

Teaching Experience of Teacher Respondents

Tukey HSD

(I) Years of Teaching Experience	(J) Years of Teaching Experience	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
< 1 year	1 - 5 years	1.04017	.63901	.581	-.7933	2.8737
	6 - 10 years	.67781	.64865	.902	-1.1833	2.5390
	11 - 15 years	.86178	.64715	.767	-.9951	2.7186
	16 - 20 years	.81043	.64333	.807	-1.0355	2.6563
	> 20 years	.29805	.63153	.997	-1.5140	2.1101
1 - 5 years	6 - 10 years	-.36235	.27430	.773	-1.1494	.4247
	11 - 15 years	-.17839	.27072	.986	-.9552	.5984
	16 - 20 years	-.22974	.26146	.951	-.9799	.5205
	> 20 years	-.74212*	.23092	.018	-1.4047	-.0795
6 - 10 years	11 - 15 years	.18396	.29276	.989	-.6560	1.0240
	16 - 20 years	.13262	.28422	.997	-.6829	.9481
	> 20 years	-.37977	.25640	.677	-1.1155	.3559
11 - 15 years	16 - 20 years	-.05135	.28077	1.000	-.8570	.7543
	> 20 years	-.56373	.25257	.226	-1.2884	.1610
16 - 20 years	> 20 years	-.51238	.24262	.284	-1.2085	.1838

* The mean difference is significant at the 0.05 level.

D7: Table 4.44: Tests of Between-Subjects Effects

Teaching Experience of Teacher Respondents

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	24.996[a]	5	4.999	2.653	.023	.045
Intercept	366.103	1	366.103	194.261	.000	.406
Years of Teaching Experience	24.996	**5**	4.999	**2.653**	**.023**	**.045**
Error	535.226	284	1.885			
Total	1360.940	290				
Corrected Total	560.222	289				

a. R Squared = .045 (Adjusted R Squared = .028)

vi. Working Years in Present School

D7: Table 4.45: Group Statistics

Working Years in Present School	N	Mean	Std. Deviation	Std. Error Mean
≤ 10 years	193	1.5385	1.38303	.09955
> 10 years	**97**	**1.9067**	**1.38525**	.14065

D7: Table 4.46: Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	**.056**	**.813**	**2.138**	**288**	**.033**	.36820	.17223	.02922	.70719

D7: Table 4.47: T-test Effect Size: Cohen *d* *

				Confidence Interval for Cohen's *d*	
t	**df**	**95% Confidence**	**Cohen *d***	**Lower**	**Higher**
2.137	192.168	0.95	**0.1538**	.02833	.70808

* The Cohen's *d* was calculated using a "noncentral t SPSS scripts, sav.file" reported in (Wuensch, 2006).

vii. DG Job Grade

D7: Table 4.48: Group Statistics

DG Job Grade of Teacher Respondents				
DG	**N**	**Mean**	**Std. Deviation**	Std. Error Mean
Below DG 48	**198**	**1.5275**	**1.26993**	.09025
DG 48 and above	**91**	**1.9444**	**1.60206**	.16794

D7: Table 4.49: Independent Samples Test

DG Job Grade of Teacher Respondents									
	Levene's Test for Equality of Variances		**t-test for Equality of Means**						
	F	**Sig.**	**t**	**df**	**Sig. (2-tailed)**	**Mean Difference**	**Std. Error Difference**	**95% Confidence Interval of the Difference**	
								Lower	**Upper**
Equal variances assumed	5.988	.015	2.381	287	.018	.41687	.17511	.07220	.76154
Equal variances not assumed			**2.187**	**144.001**	**.030**	**.41687**	**.19066**	**.04003**	**.79371**

t	df	95% Confidence	Cohen *d*	Confidence Interval for Cohen's *d*	
				Lower	Higher
2.187	144.001	0.95	**0.1816**	.04003	.79371

* The Cohen's *d* was calculated using a "noncentral t SPSS scripts, sav.file" reported in (Wuensch, 2006).

D8: Qualitative Analysis Software

D8: Table 4.51: Qualitative Data Analysis Computer Programmes
Adapted from: (Chua, 2012, p. 94)

Qualitative Data Analysis Computer Programmes	Web Links
ATLAS.ti	http://www.atlasti.com/demo.html
NVivo or Nudist	http://software.informer.com/getfree-nudist-vivo-software/
QDA Miner	http://www.kovcomp,co.uk/QDAMiner/qdambroc.html
Textanalyst	http://www.qualisresearch.com/Demo.htm
Ethnograph	http://www.transana.org/download/demo.htm

D9: Sample Transcript (Extract)

D9: Table 4.52: Sample Transcript

File: School I – Focus Group (5 Teachers)
Duration: 59 minutes 53 seconds
Date: 24 August 2014
Transcription: 23 - 29 September 2014
Speaker Identification: Interviewer 1 – I-1
Interviewer 2 – I-2
Respondent 1 – R1
Respondent 2 – R2
Respondent 3 – R3
Respondent 4 – R4
Respondent 5 – R5

Special Characters:
…, – An 'Ellipses' indicates brief or slight pauses in speech.
- – Hyphen is used to connect stuttered words or letters.
-- – Em Dash, double dash or a long dash is when a person trails off on a word (doesn't finish it), or changes their thoughts part way through a sentence. Also used to separate an interjected phrase or when a speaker switches direction in the middle of a sentence.

[ ]	– Unfamiliar terms or non-verbal communication are enclosed in brackets.
[pause]	– Lengthy pause
[unintelligible]	– Unable to make out the spoken words at all.
[inaudible]	– Unable to make out the spoken words at all.
[B-Roll]	– Off topic discussion.
[sic]	– Verbatim sentence that is not grammatically correct.
[Audio Gap]	– Extended break in audio.
Uh or Um	– Stutters
Uh-huh or Mm-hmm	– Minimal responses (positive)
Nuh-uh	– Minimal response (negative)
Italicize words	– Words that are emphasised by respondents
Pink Highlights	– Coding
Yellow Highlights	– For follow up with Respondents

Time Code	Speaker ID	Verbatim Spoken Material	Researcher's Reflections / Interpretation
00:00:00		[Beginning of recorded material] [B-Roll: Introductory remarks about the Research Project and the ethical compliance involved in this Focus Group Recording: Begin: 00:00:00; End: 00:02:33]	
00:02:33	**R1** **R2** **R3** **R4** **R5**	All 5 Respondents introduce themselves to the Intervers (R1) - Ms Lee Siew Kee [31 Teaching yrs] + 27 yrs in Present School (R2) – MK Lee [25 Teaching Yrs] + 22 Yrs in Present School. (R3) – (Geog & Social Sc Head) + 16 Yrs in Present School. (R4) - [22 Teaching Yrs] + 21 Yrs in Present School. (BM) (R5) – Pn Geetha [29 Teaching Yrs] + 22 Yrs in Present School. There are 5 Male Teachers in Infant Jesus Convent.	[B-Roll: Begin: 00:02:33; End: 00:04:16]
00:04:16	**I-1**	Background of the Students – Requirement to become a student in this School	
00:04:27	**R5**	Control School. Purely based on academic grades. Straight A's at UPSR. 5A's for SK or	

		7A's for SKJC or SKJT. When quota is filled, the candidates names are given to the respective schools by the PPD. For the remaining empty spaces, the student selection can be sourced from the 4 As; 1B within SK Schools and 6 As; 1B within the vernacular schools. Sometimes, the Principal has about 10% say for Student selection but the criteria is still based on the academic A's and B's obtained as well as students who excel in co-curriculum in either State or National level.	
00:05:34	**I-2**	What is the SES of this School? Low, Middle or High Income?	
00:05:41	**R5**	It's a mixture.	
00:05:43	**R2**	Few years ago, PPD set a student screening procedure whereby the extra criteria was that there was a Student interview. The following year. There was a Written Test. Entrance requirements are set by PPD. Sometimes PPD asks Schools to run either the Student Interview or the Written tests. Extra criteria enforced by PPD.	Extra criteria for entrance requirements – All A's, Student Interview and Written tests.
00:06:17	**R1**	A certain kind of autonomy that is given to the school but in reality this autonomy is not really practiced to a full extent. We actually have to follow what the PPD's guidelines are and *who they send in* …… The SBT's concept of full autonomy of 10% - they don't really practice it because the decision lies ALWAYS with the PPD.	*"Who they send in"* meaning the students sent by the PPD to respective schools.

D10: List of Codes

B1 Advocate Principles
B1 Commitment
B1 Create Progress
B1 Credible words and deeds
B1 Daily Routines
B1 High Standards
B1 Offer best explanations
B1 Provide Direction
B1 Pursue Goals
B1 Set Example
B2 Closely knit
B2 Common Vision
B2 Enthusiasm
B2 Envision Projected Goals
B2 Experience
B2 Foster Commitment
B2 Genuineness
B2 Inspire
B2 Make a Difference
B2 Motivation
B2 Positive
B2 Positive Language
B2 Shared Values
B3 Create Opportunities
B3 Experiment
B3 Innovative & Creative
B3 Learn from Mistakes
B3 Lifelong Learning
B3 Networking
B3 Open Communication
B3 Proactive
B3 Relish Challenges
B3 Risk Taker
B3 Stay Current
B4 Build Confidence
B4 Build Trust and Mutual Respect
B4 Collaboration and Teamwork
B4 Consider Needs and Interests of Others
B4 Develop Competence
B4 Empowerment
B4 Engaging Others in Decision-making
B4 Freedom of Choice
B4 Recognize people's individuality
B5 Caring and Courtesy
B5 Celebrate Accomplishments
B5 Dedication
B5 Holds High Expectations
B5 Motivate
B5 Personalised Recognition
B5 Promote sense of belonging
B5 Show Appreciation
CPD Experience

D10: Cont. List of Codes

```
CPD Knowledge
CPD NPQEL
CPD Principalship
CPD Training
Leadership - Style
Leadership - Transactional
MOE Accountability
MOE Admin
MOE Autonomy
MOE Bureaucracy
MOE Circulars
MOE Funding
MOE Management
MOE Politics
MOE SBT
PLP Approachable
PLP Courtesy
PLP Decision-making
PLP Empathy
PLP Flexibility
PLP Gazetted Meetings
PLP Organised & Disciplined
PLP Problem Solver
PLP Respect
PLP Sound Knowledge
PLP Support Teachers
PLP Trust
School Culture
School Culture - Academic Achievement
School Culture - Alumni
School Culture - Constraints
School Culture - Parents
School Culture - Rules
School Culture - SBT ANNEX
School Culture - SBT Busy
School Culture - SBT Day School
School Culture - School Uniqueness
School Culture - Student Culture
School Culture - Teacher Attrition
School Culture - Teacher Culture
School Culture - Teacher Qualifications
School Culture - Teachers (New)
TC1 Mutual Support & Trust
TC2 Observing 1 Another Teaching
TC3 Joint Planning & Assessment
TC4 Sharing Ideas & Expertise
TC5 Teaching Each Other
TC6 Developing Curriculum Together
TC7 Sharing Resources
Teacher Culture - Caring
Teacher Culture - Cordial
Teacher Culture - Experienced Senior Teachers
Teacher Culture - Hardworking
Teacher Culture - Humourous
Teacher Culture - Proactive
Teacher Culture - Teacher Engagement
Teacher Culture - Whatssap Communication
Teacher Culture - Work-Life Balance
```

D11: Teaching Years in School I

Table 4.53: Teaching Years in School I

	Frequency	Valid Percent	Cumulative Percent
< 1 year	10	19.2	19.2
1 - 5 years	13	25.0	44.2
6 - 10 years	**14**	**26.9**	71.2
11 - 15 years	**8**	**15.4**	86.5
16 - 20 years	**2**	**3.8**	90.4
> 20 years	**5**	**9.6**	100.0
Total	**52**	100.0	
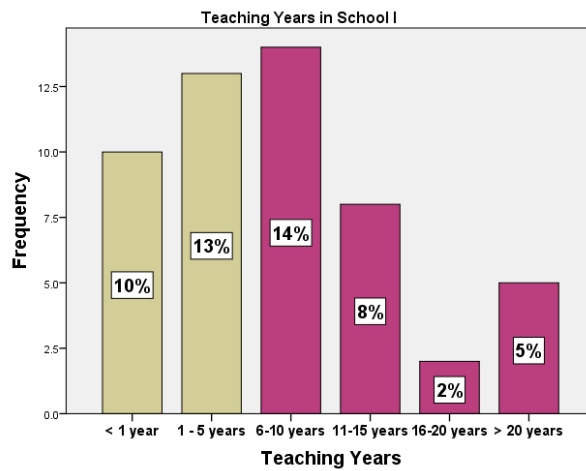
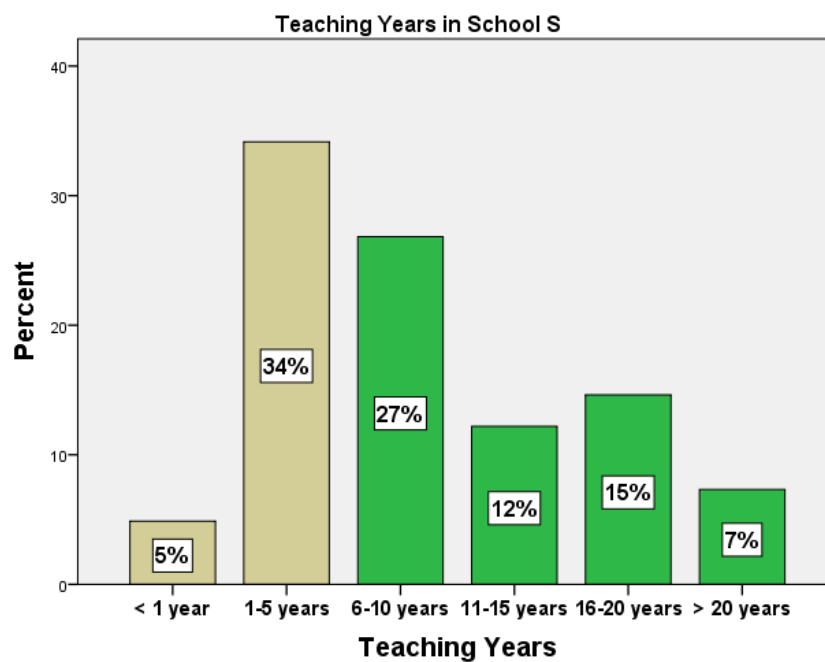**Figure 4.14: School I – Senior Teacher Population**

D12: Teaching Years in School S

Table 4.54: Teaching Years in School S

	Frequency	Valid Percent	Cumulative Percent
< 1 year	2	4.9	4.9
1 - 5 years	14	34.1	39.0
6 - 10 years	**11**	**26.8**	65.9
11 - 15 years	**5**	**12.2**	78.0
16 - 20 years	**6**	**14.6**	92.7
> 20 years	**3**	**7.3**	100.0
Total	**41**	100.0	

Figure 4.15: School S– Senior Teacher Population