# UNIVERSITY OF SOUTHERN QUEENSLAND

## Singaporean Teachers' Voices on Teacher and Teaching Quality

**A Dissertation submitted by**

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# Abstract

This thesis is the outcome of a doctoral research project that involved the interpretation of the perception of Singaporean primary school teachers, on quality teachers and quality teaching.

The aim of the study is to draw on personal experience as well as the lived experiences of others on what they perceive quality teachers and teaching are, the influences for their beliefs and their experiences or factors that have influenced the quality of their teaching.

Through the use of a qualitative research approach and employment of hermeneutic phenomenology in particular, the study lies within a view that knowledge is socially constructed and that learning is a socio-cognitive process where new knowledge is co-created through exploring understandings with others in a continual cycle of practice and reflection. Within this approach, the work of Van Manen has been drawn upon to reduce the multiple voices within the data down to the essence of the phenomenon in question, thus answering the over-arching research question: How do Singaporean teachers describe a quality teacher and quality teaching?

The data from nine ex-teachers who have taught in Singapore primary schools for at least 10 years was analysed for the lived experiences that each participant had with quality teachers and teaching. The nine participants involved are varied in the sense that five of them had retired after more than 30 years in the teaching service and four of them have resigned from the service after teaching for at least 10 years. All participants and schools involved are identified by pseudonyms to protect their identities. Data were collected through in-depth one-on-one semi-structured interviews with the Singaporean ex-teachers. Participants were selected using a combination of purposeful and convenience sampling techniques.

The findings of this research are substantial as they point the way to the authentic voices of the participants on what quality teachers and teaching really meant to them and not what is impressed upon them by the school or the Ministry of Education. The implications of the findings are discussed in terms of how teachers can be supported by administrators and policy-makers to become quality teachers and practise quality teaching.

# CERTIFICATION OF DISSERTATION

The work submitted in this dissertation is original, except as acknowledged in the text. The material herein has not been submitted, either in whole or in part, for any other award at this or any other university except where acknowledged.

27th February 2015

Signature of Candidate | Date

Signature of Principal Supervisor | Date

Signature of Associate Supervisor | Date

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## Abbreviations used

| | |
|---|---|
| AST | Academy of Singapore Teachers |
| CCA | Co-curricular activities |
| EPMS | Enhanced Performance Management System |
| GEP | Gifted Educational Programme |
| GPA | Grade Point Average |
| GRE | Graduate Record Examinations |
| HOD | Head of Department |
| IT | Information Technology |
| KPIs | Key Performance Indicators |
| MOE | Ministry of Education |
| NIE | National Institute of Education |
| NPCC | National Police Cadet Corp |
| PB | Performance bonus |
| PE | Physical Education |
| PSC | Public Service Commission |
| PSLE | Primary School Leaving Examination |
| RO | Reporting officer |
| SAT | Scholastic Assessment Test |
| SEM | School Excellence Model |
| SPE | School of Physical Education |
| TIMSS | Trends in International Mathematics and Science Study |
| TGM | Teacher Growth Model |
| TLLM | Teach Less, Learn More |
| TN | Teachers' Network |
| TSLN | Thinking School Learning Nation |
| TTC | Teachers' Training College |
| UK | United Kingdom |

# Chapter 1. Introduction

## 1.1. Chapter Overview

This chapter begins with an exploration of the proposition that the quality of education is dependent on the quality of the teachers. It is followed by a brief history of the development of the education system in Singapore since its independence and the genesis of this research in order for the readers to understand the context in which this research is undertaken. It then focuses on key elements of the research including: the genesis of the research; the generation of the research problem; the aim; researcher's position and research questions.

The significance of this research is then described followed by a description of the search for the research methodology. A brief organisational explanation of the thesis is then supplied. The chapter concludes with a summary and an overview of the thesis (Figure 1-1) in order for the readers to have a clear picture of the whole research project.

## 1.2. Teacher and teaching quality

Back in 1885, "teachers were trained in classrooms to perform the specific functions of instructions and control" (Robertson, 1996, p. 28). A century later, while still continuing with classroom instructions and control, teachers have become a body of people who are highly knowledgeable with regard to educational theory and practice and have become experts in their subject content. Teachers have won the right to be centrally involved in the determination and development of curriculum content, schooling practices and educational policy in general (Robertson, 1996). In 1983, the White Paper *Teaching Quality* by the Department of Education and Science in London described the teaching force as the major single determinant of the quality of education.

However, Harris (1994) felt that teachers were likely to have lost, in a single decade, most of the gains made in a single century. There were dramatic shifts happening outside of the classroom which were labelled by writers as hyper-liberalism, neo-conservation and economic rationalism, to name a few (Barlow & Robertson, 1994; Carlson, 1992; Harris, 1994; Panitch, 1994). Notions such as inputs, equity, centralized bureaucracy, mass education, seniority and unionization which defined post-world-war mass schooling have been replaced by a new language: outputs, performance, added-value, choice, markets, quality, competencies, excellence, flexibility, deregulation and school-business partnerships (Robertson, 1996).

In 2002, the topics of school teachers and their quality have become a focus of widespread policy debate. Thus, the Organization for Economic Cooperation and Development (OECD) launched a big project on "teacher policy" which drew in 25 countries and the findings were published in a volume called *Teachers Matter* (OECD, 2005). The OECD report summarized the vast research on determinants of student learning by saying that, though the largest variation in outcomes is attributable to social background and student abilities, the most important influence

"potentially open to policy influence" is the teaching, especially "teacher quality" (OECD, 2005, p. 26).

There is a widespread consensus. Other researchers argue in very similar terms: "apart from family background, it is good teachers who make the greatest difference to student outcomes from schooling" (Hayes, Mills, Christie & Lingard, 2006, p. 1). What is meant by a "good or quality teacher" has thus become a significant practical question. It is also important conceptually, since ideas about quality teaching are embedded in the design of educational institutions and ultimately affect curricula, educational technology and school reform.

Based on the notion that the quality of education is dependent on the quality of the teachers (McKinsey & Company Report, 2007), teachers are now made accountable for their students' achievements. It was noted by Kaplan and Owings (2002) that unless changes occur inside the classroom with improved teaching and learning, the goal of preparing students for self-sufficiency in the 21st century will fail. Cornu (2006) added that research in Europe confirmed teacher quality is significantly and positively correlated with pupil attainment and it is the most important within-school aspect explaining student performance (its effects are much larger than the effects of school organisation, leadership or financial conditions).

Similar Australian and international evidence-based research on educational effectiveness indicated that "what matters most is quality teachers and teaching, supported by strategic teacher professional development" and that "the quality of teaching and learning provision are by far the most salient influences on students' cognitive, affective and behavioural outcomes of schooling – regardless of their gender or backgrounds" (Rowe, 2003, p. 15). However, Hattie (2013) asserted that what "some" teachers do, matters (p. 22). He explained that there is no doubt nearly all teachers are effective (if it meant having positive achievement effects, $d>0.00$) but not all teachers are experts who have powerful effects and influence on student achievement.

I wonder how teachers would teach if students were not viewed as their consumers or the term that I have often heard, "customers". How would teacher and teaching quality be measured and what would teaching look and sound like? I am interested in seeking out the meaning of quality teachers and teaching from the Singapore teachers' perspectives through their lived experiences as students and teachers. Therefore it is necessary to be clear about what quality means in the Singapore context, where this study is done, as teacher appraisal is linked to teacher quality. Table 1-1 below shows an example of one set of rubrics currently used by the Ministry of Education in Singapore which illustrates the basis on which the quality of teachers and teaching are being judged. In Chapter 2 the conceptualisation of teacher and teaching quality is discussed further as this is central to this research study.

Table 1-1: Competencies of Quality Teachers (from Singapore Teachers' Work Review Form)

| Competency Clusters | Competencies and Definitions |
|---|---|
| **Individual Attributes** | **Professional Values and Ethics**<br>Upholds high standards of integrity, professionalism and expectations of behaviour as outlined in the Ethos of the Teaching Profession and Code of Professional Conduct for Educators<br><br>**Self-Management and Development**<br>Pursues self-development in order to maximise one's capacity to achieve individual goals and work plans<br><br>**Analytical Thinking and Intellectual Flexibility**<br>Sees the big picture, recognises how issues are linked and analyses issues logically to understand implications and generate possible solutions |
| **Professional Mastery** | **Student-Centric, Values-Driven Practice**<br>Delivers holistic education by adopting a student-centric approach and centring on values education in one's work<br><br>**Curriculum and Content**<br>Has knowledge and constantly updates one's understanding of the curriculum (including the co-curriculum) to improve teaching & learning<br><br>**Pedagogy and Instruction**<br>Demonstrates and applies pedagogical knowledge by leveraging a range of teaching models, instructional strategies, activities and resources to deliver effective and engaging lessons<br><br>**Assessment and Evaluation**<br>Obtains information on students' progress through various assessment modes to enhance learning, pedagogy, curriculum and educational policy |
| **Organisational Excellence** | **Visioning and Planning**<br>Has a clear sense of MOE's / the school's purpose and goals and contributes to long term strategic plans to achieve the vision<br><br>**Action Management and Implementation**<br>Develops action plans that organise resources, oneself and others to achieve work outcomes in a timely manner; monitors work progress and adapts work plans when necessary<br><br>**Culture Building and People Development**<br>Contributes to a culture that rallies towards a common vision with a focus on staff learning and staff well-being |

| | |
|---|---|
| **Effective Collaboration** | **Interpersonal Relationships and Skills**<br>Builds strong relationships and communicates effectively and persuasively with others, valuing their views and resolving differences amicably to achieve win-win outcomes<br><br>**Teamwork and Team-Building**<br>Displays a sense of team spirit by collaborating effectively with others, leveraging the strengths of team members and overcoming obstacles in achieving common goals<br><br>**Internal and External Partnerships**<br>Builds and sustains purposeful relationships with the fraternity, stakeholders and the larger community in working together to achieve a student-centric, values-driven education |

What counts as quality might vary between countries, for example, Australia and Singapore due to the different economic, cultural and political forces that have shaped the development of different systems. As the study was done in Singapore, the notion of teacher and teaching quality needs to be explained in the backdrop of the development of Singapore's education system to demonstrate the myriad changes of educational policies teachers are subjected to in order to sustain Singapore's economy. The Singapore government's history of changing educational directions, impact on what counts as quality teaching or quality teachers. Teachers are disillusioned as a result of the constant educational and economic policy changes.

## 1.3. The development of Singapore's education system since its independence.

In the late 1960s and 1970s, the Singapore government called on the people to sacrifice self-interest for the national interest. Important policies, especially in the field of education and manpower development, were quickly implemented (Goh, 1972). In 1965 and after, the link between education and economic development of Singapore was strongly emphasized where the government took the conventional path, developing new skills and work attitudes to accommodate new economic strategies (Lee, 1980). Although focusing on the economics of education, the role of education in socialisation and the nation-building process was not forgotten. The key condition for economic survival was national integration through a national education system. To attain these national objectives, the government recognised the necessity of providing every child with at least six years of education from the age of six without discrimination on the basis of race, language, gender, wealth or status (Clark, 1971).

Bilingualism became a key component in Singapore's education system. In 1960, the learning of a second language was made compulsory in all primary schools and in 1966, the policy was extended to all secondary schools. The decision on bilingualism was taken to achieve social cohesion in a largely pluralistic society. The English language was seen as a necessary tool in Singapore's effort to make the world its marketplace but the government was also concerned that the young could

become less attuned to their own cultures and not use their mother tongues. Thus, the bilingual policy was introduced to assure parents that their children would not grow up ignorant of their cultures. Singapore's bilingual policy is an East-West model that allows Singaporeans to attain competency in the use of the English language, the language of the West, and in the use of the Chinese language (or other indigenous languages, such as Tamil and Malay), the languages of the East. This approach is particularly useful for Singapore's business internationalisation strategy. The survival-driven system of education continued into the 1970s with the continual propagation of an industrial-oriented education to produce the manpower for industrial development (Gopinathan, 1999).

As many as seven different ministers were at the helm of educational changes and, at one stage, Singapore had three education ministers within a span of less than 15 months. There was no attempt to hear the views of teachers or parents before new policies were implemented. As pointed out by Lawrence Sia, a member in Parliament, "If only the gods at Kay Siang Road had genuinely discussed with the organisations representing teachers – the people who will have to implement the policy–before proposing any new schemes, many pitfalls could have been avoided" (Sia, 1976). Kay Siang Road was where the Ministry of Education was located before it relocated to its current premises in Buona Vista Road. The MOE often lost sight of the fact that they were dealing with children and people, instead of objects and objectives. It showed that there was a serious communication gap between the Ministry of Education and the schools. This lack of dialogue led to all kinds of interpretations of policy decisions; which led to 78 notifications being issued to schools in a short period of nine months at one point of time. The low status and morale of teachers was highly evident. Based on statistics provided by the Singapore Teachers' Union, resignation of teachers and principals in three years between 1973 and 1975 was 1.9 percent of the teaching force (Goh & Gopinathan, 2008). The statistics of Singapore teachers' turnover rate is not forthcoming now but based on my personal correspondence in 2011 with a Ministry of Education official, it was confidentially revealed that it was four percent.

In 1978, there was a new educational development to support Singapore's catch-up economic strategy. Working on the premise that senior civil servants and talented bureaucrats should assume major roles in decision making, spearheading changes, and managing large government enterprises, the government introduced a technocratic ethos in its education framework. A high-level reviewing committee, led by Dr Goh Keng Swee (the then deputy prime minister) and his team of systems engineers, reviewed the education system and totally overhauled it. What the then Prime Minister Lee Kuan Yew had entrusted Dr Goh Keng Swee to do was improve the education system that introduced not only flow charts, the redistribution of authority and the like, but the improvement of teaching within the classroom. This was the heart of the matter for the most vital ingredient in education is the quality of the teacher (Tan, 1979).

The report (popularly known as the Goh Report, 1979) brought to light the education wastage and the literacy level of the students. The success of an education system is often measured by the extent of education wastage. This exists in the form of failure to achieve the expected standards; premature school-leaving; repetition of grades and unemployable school leavers (Soon, 1988). The low English proficiency

also resulted in the overall low education standard. It is crucial that education wastage be minimised in a country like Singapore whose only natural resource is its people. Unlike today, it was not compulsory for Singaporean children to attend school in 1979. Although the Goh Keng Swee report introduced systems that could be implemented with ease, "what really is important is the quality of human in and out within that system and this cannot possibly be channelled or switched on and off as an electric appliance" (Tan, 1979, p. 16). Tan (1979) noted that teachers were disillusioned and their morale was low. Their sense of dedication which should be part of every true teacher had been almost lost. However, despite the low English proficiency and over-controlling teachers through administrative dictatorship, the adoption of the *Export-oriented Industrialisation* (EOI) strategy had enabled the country to enjoy full employment in the mid-1970s.

It was apparent to the political leaders that to sustain robust growth rates, the people must develop competencies in science and technology (Goh, 1972; Sen, 2013). The long time lag to develop technical and vocational skills made it difficult for the government to introduce measures to quickly close the technological gap. The problem was compounded by the severe shortage of local expertise in the field of science and technology who could contribute to the development of science and technical education in schools (Chiang, 1999). The government, by adopting an aggressive open-door policy to attract multi-national companies (MNCs) and foreign expertise into Singapore, provided the impetus for an industrial take-off and expectation that this would close the technological gap.

Although new governmental institutions were set up to deal with science and technology policy problems, quite often the measures recommended did not endure for long. Instead, there was a bewildering succession of ad hoc committees, councils and agencies, each of which sent out different signals and directions. The Ministry of Science and Technology was set up in 1968, but suffered from a shortage of high-level administrators to oversee a wide range of activities, from coordination of technical education to the promotion of research work (Straits Times, February 18, 1981, p. 32). Eventually, on April 1, 1981, 12 years after it was formed, the ministry was dissolved. According to Goh Chok Tong (the former prime minister and now Singapore's emeritus senior minister), "the defunct Ministry of Science and Technology had only a budget of $100,000 to disburse as research grants….We did not have a research and development policy until now, because research and development was not critical to our economic growth strategy in the last decade" (Straits Times, June 8, 1981, p. 1). Recognising the backwardness in the development of science and technology in the country, the Singapore government adopted developmental strategies designed to push the economy and society higher up the technological ladder in the 1980s,. With this vision, more educational changes were introduced to prepare the people for the second industrial revolution in the 1980s (Goh & Gopinathan, 2008).

In 1980, after two decades of intensive expansion of the manufacturing sector, it contributed 28 percent of Singapore's gross domestic product (GDP). However, countries in Southeast Asia began to compete effectively for foreign investments in low-skilled, labour-intensive industries so Singapore's previous comparative advantage in labour-intensive manufactured products was gradually being eroded (Dixon, 1991). The emphasis shifted to a strategy that could accelerate Singapore's transition from a "third-league," labour-intensive, industrialising country

to a "second-league", capital-intensive economy (Gopinathan, 1999). Thus, the Second Industrial Revolution was launched in 1981 to accelerate Singapore's transition to a more sophisticated technological base, thereby taking it out of competition with the lower-wage countries and lessening its reliance on labour expansion for economic growth. There were two main strategies of the restructuring programme: the continual task of attracting MNCs to invest in high-technology operations, and the promotion of science and technology, such as activities in research and development.

To provide a stock of basic education, skills, and attitudes required for industrialisation, the government revisited the education system to use it as a major vehicle in nation building, with the state acting as a strategic player not only in manpower planning, but also in the wider process of economic development (Low, Toh, & Soon, 1991). The ability of the state to successfully manage supply and demand of education and skills was and continues to be a major source of Singapore's competitive advantage.

After two decades of rapid expansion of educational opportunities for all young Singaporeans, during which universal primary and lower secondary education was achieved, the government decided to shift its focus from the fulfilment of mere quantitative demands to quality (Tharman, 2005a). The emphasis was on upgrading and providing quality education in order to support the drive toward sustainable development and reflect the economic restructuring strategies (Low, Toh, & Soon, 1991).

Aimed to reduce educational wastage, a New Education System (NES) was introduced in January 1979. The NES provided for three streams in both primary and secondary school, to allow pupils to progress at a pace more suited to their abilities (Gopinathan, 1999). Slower primary pupils were allowed up to eight years to complete primary education, while secondary pupils could take up to five years to acquire the General Certificate in Education (GCE) O level and a further three years for the advanced (A) level. A new lower-level secondary school leaving certificate, the GCE Normal (N) was introduced.

In manpower terms, the effect of the NES was to enable each pupil to go as far as possible in school, and thereby achieve the best possible educational take-off for training and employment (Low et al., 1991). By the early 1980s, the key features of the efficiency-driven education system were in place: a national curriculum with a stress on bilingualism and morality, civics, science, mathematics, and technical education.

These key features include regularly tracking student assessment regulated by the Ministry of Education's Research and Testing Division; curriculum materials to fit the school syllabuses and produced by the Curriculum Development Institute of Singapore; clear lines of progression to the university, polytechnics, and vocational institutes; and, by 1984, a systematic and year-long professional training for principals and heads of departments (Gopinathan, 1999). Primary streaming (at primary three) and secondary streaming (at secondary two) began in 1979 and 1980, respectively, and second language was made compulsory for university entrance from 1980.

On the whole, the NES saw improvements in academic results (Koo, 2007; MOE, 2012c). The success in reducing educational wastage provided Singapore

with an educated workforce able to cope with the demands of a rapidly expanding economy. However, within the education system, there were still teething problems. The strictly top-down approach in planning, disseminating, and enforcing educational changes was a clear reflection of the Singapore government's paternalistic style of rule. In the process, it produced three unhealthy trends. First, it generated the "yes-man" syndrome and the acceptance of change without question by those below. Second, it inculcated an over-reliance on the top leaders for direction. Third, it nurtured a spoon-feeding culture. The end result was an education service that lacked autonomy and initiative and had a general sense of detachment from the policy makers (Goh & Gopinathan, 2008).

Within schools, teachers and children alike were accustomed to bureaucratically designated and rigid curriculum. The double-session system (school functioning two separate sessions in a day) imposed constraints on schools by restricting the availability of physical facilities and imposing severe inconveniences on teachers (Goh & Gopinathan, 2008). Not surprisingly, even by the mid-1980s, principals and teachers alike suffered from low morale and lacked the deep commitment to implement effectively the changes emanating from the top. Teachers also had to endure poor social status, ineffective supervision and guidance, and bleak promotion prospects, especially non-graduate teachers (Goh & Gopinathan, 2008). With the appointment of Tony Tan Keng Yam as minister of education in 1985, the pressing problems in the education system were tackled with great vigour. The guiding philosophy for Singapore's education system in the 1980s was explicitly expressed by the former banker who answered the call of duty to serve in the cabinet:

> I would say that our education system in the 1980s should be guided by three considerations: Firstly, preparing the child for work in a Singapore which is rapidly becoming a modern centre for brain services and technological industries. This means that he will need to have a sound knowledge of English. Secondly, sufficient knowledge of his mother-tongue needs to be equipped so that he will retain a link with his cultural origins. This is the rationale for our policy on bilingualism. Thirdly, inculcating in the child an awareness of the necessity of moral and traditional values so that he will grow up to be a responsible adult, conscious of his obligations to himself, his family, his neighbours and his nation. (Business Times, July 8, 1980)

From 1985 to 1991, a series of educational changes were introduced that reduced wastage, increased flexibility within the school systems, gave greater autonomy to schools, and provided greater access to higher education. All pupils leaving the primary school system were placed in the appropriate secondary school courses that would match their learning pace, ability, and inclinations. A gifted education program was started in 1985, English was made the main medium of instruction in all schools, a pastoral care program was started in 1987, and all secondary schools were to have only single sessions starting in 1989 (MOE, 2012d). Changes were also made to tackle the issue of the shortage of teachers. In the words of Tony Tan, (as cited in Lee, 2008, p. 26) "The basic solution to the problem of attracting high-quality people to join the teaching profession is to pay them sufficiently". Training programmes at the then Institute of Education were

revamped, and full-time training for non-graduate and graduate trainee teachers was started in July 1980.

In the mid-1980s, Singapore launched its National Information Technology (IT) Plan, which marked the development of a "wired" nation. Although measures were introduced in schools to promote computer literacy, the buy-in was slow, and it was not until the IT Master Plan of 1997 that strong and concerted efforts were made.

Globalisation, powered by rapid technological advances, has redefined the competitive framework of nations, including that of Singapore. In the new economic era, national wealth is increasingly determined by discovery and application of new and marketable ideas and technological advances (Lee, 2012). The transition to a knowledge-based economy (KBE) shifts the emphasis of value away from production toward innovation and creativity. For Singapore and Singaporeans, the faster the Singapore economy changed, the harder it was for the citizens to be confident of their skills and employability. In short, the new economy carried a steep price: more frenzied lives; less security; more economic and social stratification; and the loss of time and energy for family, friendships, community and self (Reich, 2001).

These trends required Singapore's education system and structure to be redefined and realigned to meet the challenges of the new century. Stakeholders, especially the parents and the community at large, became actively engaged. Singapore and its education system entered into an ability-driven phase to meet the demands of the KBE.

From 1995 to date, efficiency and ability-driven education have been producing "positive" outcomes. Singapore's youth performed exceptionally well in Trends in International Mathematics and Science Study (TIMSS) (Commonwealth Advisory Bureau, 2012). While Asian values were cited as success factors, the Singapore policy of streaming students according to academic abilities helped teachers to be more focused in their teaching. The pupils also benefited from major changes to the mathematics syllabus in 1990 and from the 1985 shift in the method of teaching science that placed more emphasis on thinking skills and understanding of concepts, rather than on rote mastery of content (Goh & Gopinathan, 2006).

In June 1997, there was a shift in the strategic paradigm, from an efficiency-driven education to an ability-driven one, encapsulated in the vision "Thinking Schools, Learning Nation" (TSLN) (MOE, 2014). "The vision of TSLN hinges on the premise that, devoid of natural resources, the future sustainability and wealth of the small city-state depends on the capacity of its people to learn–and to learn continuously throughout their lives" (Lee, 2008, p. 30). Based on the argument made by the politicians in Singapore, the decision to make a radical shift toward ability-driven education in the late 1990s was timely and imperative. Undoubtedly, for nations to survive and prosper in the 21st century, the quality of education would be a critical factor for success and would differentiate the wealth of nations (Lee, 2008).

This led me to wonder if quality teaching is about producing students to become productive workers to fuel the economy or to educate them to become responsible human beings. For example, Jardine, Clifford and Friesen (2006) similarly asked what would happen if we imagined children, not as consumers and producers of constructed products of our own making, but as inhabitants in a world

that is more abundant than what we make of it? This question partly contributed to the genesis of this research.

## 1.4. Genesis of this research

Doing research, like most things people do, is related to their own biography (Silverman, 2011). The genesis of doing this research is based on my own experience as a student and a teacher in Singapore. It would be inappropriate to reduce this thesis to my personal experience but I feel that I should reveal something about my past and the impetus for doing this research. It is necessary for the readers of this thesis to have an idea of my experiences so that they may be aware of my thoughts and feelings, which may influence my worldview and my interpretation. Here, I encourage the readers to trust the tale and not the teller and to make their own judgements.

### 1.4.1. Researcher as student

I am a product of the Singapore education system. I grew up thinking the sole purpose of education was for me to get a job as a doctor, which was what my father always wished I would become. Almost my whole life was spent in educational institutions either as a student or a teacher. Prior to formal schooling, I learned the English language from my best friend who is Indian and two years my senior. At the age of six, my mother sent me to a kindergarten in a nearby mosque. After one week, I refused to go as I was getting bored with learning the alphabet and numbers zero to ten which I was already familiar with. At the age of seven, I started my formal education journey in Telok Kurau East School. I enjoyed going to school as that meant my grandmother could not make me cook as she usually did.

My attendance record was perfect. I do not understand why I was so obsessed about having perfect attendance. I was only absent once in six years because my mother did not wake me up one day thinking it was a school holiday as it was the second day of the Eid Celebration. Again in secondary school, I was absent for only one day in four years to attend my father's funeral. When I was in junior college, I was never absent so when it was stated in my report that I was absent for 2 days, I went storming to the general office demanding them to set the record straight. They could not understand why it was so important for me to have full attendance and refused to change my record saying that it did not make any difference. But like Sue Heck (the character from the American Sitcom entitled, "The Middle"), it really bothered me a lot. My obsession of having perfect attendance continued even during my working life which actually made me less empathetic towards the reasons given for absenteeism. This attribute of mine has been a factor influencing my career advancement decisions which will be revealed later in this thesis.

Throughout my primary school years, I never brought home my homework. I would do it in school and when I got home, I would play outside with my friends until it got dark. I was always ranked in the top ten of the class of forty but never first in class except during my last year in primary school. That was the year that I would like to go back to if I had a second chance in life. During that year, I had to go through the most important Primary School Leaving Examination (PSLE) but I was constantly called out from my classroom to practise playing the accordion.

I was in the school's instrumental band and was assigned for the first time to play the accordion. Prior to that, I was playing the recorder. The school band was participating in an inter-school competition so it was top priority for the school that year. With the hard work put in, we won the gold medal. Since I was missing class, I decided to join a group-tuition twice a week at one of my classmate's house. Our tutor was his uncle who was paralysed and wheel-chair bound after he fell off a local fruit (rambutan) tree. He used to teach us to solve algebraic equations that even my school teacher could not solve. He pinched me at my abdomen whenever I could not solve a problem. Miraculously, I scored 98 out of 100 for my Mathematics written examination that year and was not only top of my class but the whole school. I was the only one in my primary school to get into a secondary school of my choice which was and still is a prestigious school for high-flyers. It is Tanjong Katong Girls' School. I have always wondered what had made me perform academically well that year, despite not attending class most of the time.

My academic excellence plummeted in secondary school. I was a "big fish in a small pond" in primary school. In secondary school, I became an average student. My mathematics teacher in secondary one was going on like a bullet train and "talking to the blackboard" while teaching. I guess she must be thinking that we were all brilliant girls and would be able to understand what she was teaching. That year, my self-esteem fell for I had failed my strongest subject for the first time in my life. My mathematics score was 28 out of 100. In secondary two, I was getting anxious as I needed to pass my mathematics to get into the science stream the following year. I studied into the wee hours of the night and barely managed to get into the science stream in secondary three. In secondary three, I had to take double mathematics i.e. elementary and advanced mathematics. I was finally able to pass my elementary mathematics but had difficulty understanding advanced mathematics. I just could not understand what my teacher was teaching and I failed despite having private tuition on that subject. I was determined to pass the advanced mathematics subject.

My parents did not push my brother nor I when it came to studying. I was self-driven but my brother was not really interested in good grades. I wondered whether motivation had anything to do with obtaining good grades in school as I know for a fact that my brother was more intelligent than me but failed miserably academically. However, he was able to excel in things which interested him. For example, he was able to fix any model airplane, car, ship or computer just by looking at the manuals which I certainly could not. He even taught himself to knit and crochet cardigans, sweaters, shawls and beanies and loved reading novels. I, on the other hand, preferred to read non-fiction books. He was artistic but I am not. I recalled him telling me that he had the opportunities but not the drive but I had the drive but not the opportunities. He also said that with my drive and his opportunities, I could be a very wealthy person.

At the age of fifteen, I was working as a private tutor teaching mathematics to a ten year old girl for five dollars per hour. I also worked after school at my mother's canteen in a navy camp. On top of that, I was involved in a few co-curricular after school activities. I was the school's hockey captain, a member of the St John's Brigade, the Language Development Society (LDDS), the martial art Taekwondo and Air Rifle Club. I was always multi-tasking whereas my brother was

more focussed and concentrated on his scouting activities only. With all the extra-curricular activities to occupy my time, I was academically an average student with average marks in secondary school. I was also participating in a lot of co-curricular activities when I was in primary school but was still an excellent student. I just could not face the idea that I had become an average student. My self-esteem was shattered.

Before the final Cambridge or GCE 'O' level exams, all graduating students had to sit for the school's preliminary exams. The aggregate for this preliminary exam would determine whether I could be admitted either to a junior college or a pre-university centre in January of the following year, before even getting the Cambridge exams results which were due to be released in March. My father passed away on 14th August that year and my preliminary examination was in September. My results for the preliminary examinations were good enough for just a pre-university centre but not a junior college. Pre-university centres offer three year courses whereas junior colleges offer the same courses for two years.

I had three months from September to December of that year to catch up before taking the GCE Ordinary Level examination. I stopped all my co-curricular activities and even stopped helping my mother at the canteen. I had to get away to concentrate on my studies. I stayed at my aunt's place and sat down at a study desk and opened my thick, red, advanced mathematics textbook and started reading every page. I attempted every exercise and self-checked the answers at the back of the book to see whether I had done them correctly. My confidence was boosted every time I managed to solve a mathematics problem.

The other contributing factor to my boost of confidence was the effectiveness of my secondary four elementary mathematics teacher. She was very patient and made sure she did not move on until we understood her explanations. At the same time, I heard that the brain is the most receptive when one is in a relaxed state just before sleep. Therefore, I recorded myself reading the biology textbook and before going to sleep, I would playback what I had read.

When my ordinary level GCE examinations results were released in March the following year, I was pleasantly surprised that I passed my advanced mathematics and aced my biology. I obtained a B+ for all my other five subjects. I managed to gain admission to a junior college after my results were released in March although I had lost about three months of junior college life.

There I met one of my primary school classmates who did not manage to get to his first choice secondary school which was a prestigious all boys school for high flyers. He had to settle for his second choice school which happened to be my second choice school too. He was a big fish in a small pond and he flourished from a timid and quiet boy to a confident, eloquent teenager. To illustrate how quiet he was, I did not realise that we had been classmates for six years in primary school until he told me when we met in college. I only noticed him in my classroom when we were in the final year in primary school because he was sitting next to me. Now he is a medical doctor in Singapore, the profession that my father wanted me to have. Sometimes I wonder what would have happened to me had I been admitted to my second choice school. Would I have flourished too?

In junior college, I was in the "pure science" stream where I studied biology, chemistry, physics, advanced mathematics as well as English and Malay languages. I was still hoping to fulfil my father's wish for me to become a doctor although he

was no longer around. I was again participating in co-curricular activities such as netball and St John's Brigade and was even "forced" to take up Malay Dance to represent the college in the Youth Festival Competition. Having to earn my own pocket money, I again worked as a private tutor this time earning 25 dollars per hour. It was during this time that the Malay self-help organisation called MENDAKI was formed and I was requested to render my service as a tutor to needy students for eight dollars per hour. I was hesitant to volunteer but my mother encouraged me to help the Malay community.

During my time in junior college, I became convinced of the power of an effective teacher. I was able to experience first-hand how I was progressing well in my mathematics until my teacher was promoted to become a principal. My class was assigned a new mathematics teacher. His teaching method was so ineffective to me that my mathematics results headed south. After close to two years in the junior college, I took the Cambridge Advanced Level Examination but my results were not good enough for admission to the only university in Singapore then.

### 1.4.2. Researcher as teacher

I decided to join teaching because I was getting paid while undergoing teacher training and it was the only profession with three months' vacation in a year. I was hoping to travel during school vacations and the tenure was much longer, up to the age of 55 years, at that point in time. Although my intention of becoming a teacher was less than noble and based on my own wants, I soldiered on even though half of my vacations were taken away to train students for track and field championships. I was also thirsty for knowledge and constantly attending professional development courses during my vacations, beyond the recommended 100 hours a year.

I was offered a leadership position on several occasions by several principals but I rejected them all for I felt I would not make a good leader due to my less than empathetic nature towards absenteeism. I also felt that my teaching skills were not good enough to give me the right to judge other teachers' teaching. I have always aspired to become a quality teacher but sometimes I doubted what that really meant. I was teaching for 28 years in seven different schools under 13 different principals and the one slogan that was common among all the principals was that a quality teacher was one who could help students improve in their academic results. Imagine my stress level when teaching a class of high flyers, where the only way their academic results could go is down or status quo. This emphasis on academic results is contrary to the current desired outcomes of primary school education in Singapore.

Nowhere in the list of outcomes is there a mention of academic excellence, yet it is the outcome emphasized by all 13 school principals with whom I have worked. Perhaps it is implied that academic excellence is a by-product of all the listed desired outcomes. The list below shows the desired outcomes of education at the end of primary school in Singapore (MOE, 2012b).

- be able to distinguish right from wrong
- know their strengths and areas for growth
- be able to cooperate, share and care for others
- have a lively curiosity about things

- be able to think for and express themselves confidently
- take pride in their work
- have healthy habits and an awareness of the arts
- know and love Singapore

My experiences as a student and as a teacher in a system that constantly emphasises quality, impacted on my approach to both identifying the focus of the research as well as generating research questions. As I have always been bombarded with different views of what quality means in the Singapore education system, I have decided to research on how other primary school teachers describe quality teachers and teaching.

## 1.5. Generation of the research problem and questions

According to Kerlinger and Lee (2000), the identification of the research problem is "the most difficult and important part of the whole [research] process" (p. 15). Leedy and Ormrod (2005) similarly suggested that the research problem "is the axis around which the whole research effort revolves" and the "heart of every research project is the problem" (p. 49).

I have almost fallen into the trap of taking on an impossibly large research problem. For instance, besides finding out teachers' perception of quality teachers and teaching, I would also like to find out what makes teachers tick as well as the negative and positive aspects of their teaching and personal lives. However, I realised that such a task is beyond the scope of a single researcher with limited time and resources.

Therefore, in attempting to narrow my focus and conduct a manageable research project, I decided to look at a problem which I feel is neither addressed by previous researchers nor the Ministry of Education in Singapore. Also, it relates to my education journey as a student and a teacher. The problem is the dire lack of information of what Singaporean teachers themselves think makes a difference to the quality of their teaching. Is there a tension between what the researchers are saying about quality teachers and teaching in general and in Singapore, in particular, and what the teachers themselves perceive as quality teachers and quality teaching?

Through my own research, I have come to realise the vast literature on teacher and teaching quality. However, currently there are few, if any, studies concerning the perceptions of teachers in Singapore on the factors contributing to improving teacher or teaching quality. There is a related, mainly quantitative research done by Luke, Freebody, Shun and Gopinathan (2005) which concludes that "what counts as education is made and remade each day by teachers and students in classrooms" (p. 25).

Teachers are the people who gently close the classroom doors and perform the teaching act (Hattie, 2003). They are the people who put into place the end effects of so many policies, who interpret these policies and who are alone with students during their time in school. Yet the voices from teachers, especially in Singapore are often silent. Barth (2001) explained, "I can think of no other profession in which the voices of its members are mute in discussions about its reform" (p. 62). In this study, I explore teaching in Singapore's primary schools.

The asking of "What are quality teachers and teaching" resonates within me. I look to reveal what this phenomena exposes about the teachers' perception of quality. It is what calls me to my question: **How do Singaporean teachers describe a quality teacher and quality teaching?**

## 1.6. Aim of the research

The overarching aim of this research is to give teachers in Singapore a voice to express what they really think quality teachers and quality teaching are, to better understand the formation of their beliefs and the experiences and factors that enhance or inhibit quality teaching and learning. They are the ones who will ultimately have to implement the policies cascaded down from the top. What teachers are thinking is really important in terms of developing a robust research evidence-based educational practice. Being a teacher in the Singapore education system myself, I strongly feel that there is a lesson to be learnt from teachers regarding quality teachers and teaching.

## 1.7. Researcher's position and research questions

While working in Singapore, I had colleagues with varied personalities and aspirations. Some were very positive while others were cynical, embittered and pessimistic. As a researcher who has been a teacher, I am particularly cognizant of possible tensions between my own history and the histories of my participants (Clandinin & Connelly, 1996). Monitoring my own subjectivity or the effects of self is essential in my research (Glesne, 2011). This involves reconstructing my own history, exploring how that viewpoint may differ from others who are a part of that history, and being conscious of how my own autobiographical narrative emphasizes a particular perspective.

I do not claim to be objective, as my life experiences shape my own stories, lenses and interests. My decision to conduct this study relates directly to my own teaching experiences therefore identifying and analysing my own teaching experiences and stories is essential. By understanding my autobiographical relationship to the research topic and methodology adopted, I recognise my bias. Asking my participants to share their life stories requires trust on their part, openness on mine and respect between us. My choice to write in first person as opposed to third person is linked to my relationship with the study and the methodology that I have chosen.

Thus the purpose of the research comprises three specific objectives. The first is to explore how teachers describe quality teachers and teaching based on their lived experiences. It makes sense to hear the teachers' voices because they are in the forefront of education.

The main research question (RQ1) addresses this aim.

RQ1: How do Singaporean teachers describe a quality teacher and quality teaching?

Firstly, apart from being a Singaporean, I chose Singapore as it is a small city state which is often mentioned as having one of the best education systems. This claim is benchmarked based on Singapore's standings in the international TIMSS and PISA scores as well as the McKinsey (2007) and Grattan Institute (2012) reports. According to Ben Jensen (Grattan's School Education Program Director) in a

question and answer session for the Grattan Institute report (2012), "we have been 'Finlanded' to death in education" (Video recording). He agreed that Finland has been the top of PISA and there is a lot everyone can learn from Finland but there has been a lot of international educational research done in Finland and Canada but relatively less in East Asia. He emphasised that the "how" questions are very important to ask because Australia needs to get the "how" right. Apparently, the four top performing cities in Asia, namely Hong Kong, Seoul, Singapore and Shanghai have addressed the issues of how to implement a successful education system. My only concern is that the Grattan Institute report was based on the input of the bureaucrats rather than the teachers.

Secondly, I chose to hear the Singapore teachers' voices on quality teachers and teaching because I feel that it is their voices that are most important as they are the implementers of curriculum and educational policies, yet their voices are hardly sought after by researchers and policy-makers. Teachers are like "soldiers battling in the frontline" yet the "general's" voice is sought after. Most of the sharing of Singapore's success stories are based on teacher training and the feedback loop among the MOE, NIE and schools (Jensen, 2012) on improving teachers to improve teaching, which is often related by the MOE officials and bureaucrats. Here, it seems that teachers are given a voice but their voices are only focussed on practice or practical knowledge (Goodson, 1994). Back in 1990, Lawn asserted that teaching has had its area of moral and professional judgement severely reduced. He argued that teachers have moved from moral responsibility particularly with regard to curricular matters to a narrow technical competence. More than two decades later, Lawn's (1990) argument is still as valid as when he first wrote about it.

> Teaching is to be reduced to "skills", attending planning meetings, supervising others, preparing courses and reviewing the curriculum. It is to be "managed" to be more "effective". In effect the intention is to depoliticize teaching and to turn the teacher into an educational worker. Curriculum responsibility now means supervising competencies. (p. 389)

I feel that Lawn's assertions can be applied to Singapore's context. There is no known research on Singapore teachers' voices on quality teachers and teaching. Most literature regarding quality education, teachers and teaching in Singapore to date has looked at the issues from the policy makers' or researchers' perspectives. For example, Chong (2014) explored theoretical issues and ideas in assessing the quality preparation of teachers in the Singapore context; Chong, Low and Goh (2011) established a baseline understanding of pre-service teachers' perceptions about teaching before they embarked on the initial teacher preparation programme and explored the changes in their perceptions (if any) at the point of graduation from the programme. Data was collected in the form of an entry and exit survey.

Gopinathan, Ho and Tan (1999) focused on the major trends characterising teacher education and teaching in Singapore; Ng (2008a) discussed a new educational initiative in Singapore that called teachers to "teach less" so that students might "learn more". That is in line with the national vision of "Thinking Schools, Learning Nation" (TSLN).

There are similar studies on teachers' voices that may drive policies elsewhere in the world. For example Gratch (2001) presented the stories of three beginning teachers told throughout the first year of teaching, focusing on what each

teacher describes as the most important events and experiences. These stories are part of a larger study of beginning teacher socialisation which aims at answering two big questions: What does it mean to be a teacher? And, how does a teacher become a teacher? Analysis of the three narratives explores these questions and provides useful insight for teacher educators in terms of improving the socialisation experiences of beginning teachers. Examining the commonalties and differences in the three teachers' experiences increases understanding about how internal and external forces impact the self-concept of teachers and the choices made about teaching practice.

Kelchtermans and Ballet's (2002) study also focussed on beginning teachers' experiences of their job situation and the meaning they gave to it through narratively reconstructing their career experiences. Parkay, Stanford and Gougeon (2010) featured teachers' voices as agents of change by bringing in the voices of experienced teachers, many of them are winners of the National Teachers of the Year award to focus on how teachers can affect change in the classroom and the community for the benefit of their students. Valli (1997), emphasised reflective teaching and the importance of teacher inquiry in order to counteract a more limited interest in teachers' behaviour without considering what is going on in their minds and hearts.

There is a dearth of literature on these topics from the Singaporean teachers' perspectives. We do not know what Singaporean teachers think makes a difference to the quality of their teaching. What kind of experiences and/or professional learning opportunities influence their teaching? Basically, what experiences in Singaporean teachers' careers have contributed to the quality of their teaching?

This could be due to teachers not being encouraged to participate in external surveys or research regarding their professional lives, without the written consent from the MOE, which, based on my previous experience, is unobtainable. I cannot back this claim with a source of reference but it is based on my personal experience of trying to get MOE's consent to recruit teachers for my master's thesis regarding Singapore primary school teachers' perception of their work lives. I was not granted that access even though I was a teacher myself. My suspicion is confirmed when my principal reminded the teachers in my school that they were not to participate in any form of research without written consent from the MOE, knowing that I was embarking on my PhD journey and researching teachers' lived experiences. Teachers in Singapore are often "discouraged" from participating in research on "controversial" or "sensitive" issues. However, teachers are often allowed or even "forced" to participate in surveys conducted by the MOE or their affiliates. As previously discovered by Casey (1992), the teachers' voices had been silenced.

> By systematically failing to record the voices of ordinary teachers, the literature on educators' careers actually silences them. Methodologically, this means that even while investigating an issue where decision-making is paramount, researchers speculate on teachers' motivations, or at best, survey them with a set of forced-choice options. Theoretically, what emerges is an instrumental view of teachers, one in which they are reduced to objects which can be manipulated for particular ends. Politically, the results are educational policies

> constructed around institutionally convenient systems of rewards and punishments, rather than in congruence with teachers' desires to create significance in their lives. (Casey, 1992, p. 188)

I chose primary school participants as my experience would relate most closely to this group. My understanding of their context would help build trust, rapport and facilitate open and in-depth interviews. It was easier for me to understand and interpret exactly what the participants were talking about because I understood the context it was coming from. Furthermore, I had established trust from a wide network of friends and colleagues to recruit as my research participants.

The second specific objective of this research is to explore the formation of teachers' belief systems because it may influence their practice and therefore in order to make changes in the quality of teaching practices, one will have to understand where teachers are coming from. Research question two (RQ2) addresses this objective.

RQ2: What has influenced the formation of those beliefs that they have?

The third specific objective is to understand what Singapore teachers think made a difference to the quality of their teaching. It is assumed that what teachers say can be considered a proxy for what they do. It is also useful to know what kinds of experiences and professional learning opportunities have contributed to the quality of their teaching and what are the mediators that enhance or inhibit quality teaching. Research question 3 (RQ3) addresses this objective.

RQ3. What experiences or factors, according to Singapore ex-teachers, have influenced the quality of their teaching?

To know the factors and experiences that enhance or inhibit quality teaching has its implications for current teachers in general and school administrators, in particular. The knowledge of what enhances quality teaching would logically imply that the school administrators should provide the support needed to make sure teachers are provided with the enhancing factors or experiences. Conversely, what teachers think is inhibiting their teaching should be totally removed or minimised, although it may not be possible to totally remove inhibitors to quality teaching.

## 1.8. Search for research methodology

With the research purpose and questions established, the next question was how to conduct this research. I saw a need to focus on the whole of quality teaching as well as its constituent parts. As I conceptualised the research process, I realised this would involve checking if the traits of quality teachers and quality teaching are common among teachers and to find out what or who has influenced the formation of their beliefs. To draw it all together, I would need to know the factors or experiences that teachers feel enhance or inhibit their ability to do quality teaching.

Hermeneutic phenomenology is a methodology with potential to help me find the answers to my research questions. Hermeneutic phenomenology has its traditions within the philosophical work of Husserl (1982), whom some call the father of phenomenology (Rutt, 2006), and that of Sartre (2012) and Merleau-Ponty (2006), along with the hermeneutical perspectives of Heidegger (1994, 1996) and Gadamer (1975, 1976).

To plan my research approach, I read much of the work of Van Manen and other phenomenological researchers such as Grumet (1983) and Bourke (2007). In particular it was the following explanations given by Van Manen (2003) that resonated with what I aimed to achieve:

> Human science… studies "persons", or beings that have the "consciousness" and that "act purposefully" in and on the world of creating objects of "meaning" that are "expressions" of how human beings exist in the world (p. 4) and phenomenology asks for the very nature of a phenomenon for that which makes a some-"thing" what it is. (p. 10)

Hermeneutic phenomenology can be seen as both a philosophy and a method (Van Manen, 2003). Hermeneutics itself has a long tradition within theological studies and later came to cover the theory of understanding and interpretation of communication, social philosophy and the concept of existence (Dilthey, Makkreel, & Rodi, 1996; Gadamer, 1975; Heidegger, 1996). Van Manen speaks of hermeneutic phenomenology as being the interpretation of all aspects of lived experience and when he refers to phenomenology, it does in fact mean hermeneutic pheneomenology (Van Manen, 2003). I have adopted this approach throughout this thesis using the full name only when wishing to emphasise the interpretive aspects of the data or findings.

Van Manen (2003) sees phenomenology as being how one orients to lived experience, and hermeneutics as how one interprets the texts of life. Phenomenology reflects on words and thoughts to shed light on human experiences. Van Manen (2003) explained that phenomenology "attempts to gain insightful descriptions of the way we experience the world pre-reflectively, without taxonomizing, classifying, or abstracting it. . . it offers us the possibility of plausible insights that bring us in more direct contact with the world" (p. 9). He identified six "research activities" to advance/characterize a phenomenological study:

1. turning to a phenomenon which seriously interests us and commits us to the world;
2. investigating experience as we live it rather than as we conceptualize it;
3. reflecting on the essential themes which characterize the phenomenon;
4. describing the phenomenon through the art of writing and rewriting;
5. maintaining a strong and oriented pedagogical relation to the phenomenon;
6. balancing the research context by considering parts and the whole (pp. 30-31).

The flow of the "research activities" is channelled by Van Manen's (2003) concept of phenomenological reduction to "essence" followed by applying the knowledge gained into other contexts. Gadamer (1960/2006) conceptualizes the iterative process through which a new understanding of a whole reality is developed by means of exploring the details of existence, as a hermeneutic circle. This movement back and forth between the parts and the whole helped me see the necessity for re-visioning teaching and learning. For neither the whole of teaching nor any individual part can be understood without reference to the other. By focusing on the lived experience of the participating teachers, this study has sought to develop through the three research questions: (a) a substantive theory to account for the teachers' perception of quality teachers and teaching; (b) an understanding,

from the perspectives of the participants, of the influences behind the formation of their beliefs and the experiences or factors that have influenced the quality of their teaching.

## 1.9. Significance of the study

This study is done so as to assure that the teacher's voice is heard, heard loudly, heard articulately (Goodson, 1991). Due to the unavailability of current literature on the authentic views of teachers from Singapore, the findings of this study may enable school administrators and policy makers to realise if there is a link or disconnect between what they think quality teachers and teaching are compared to the teachers' perceptions.

For example, it is of no use if teachers go through professional development if they are going to turn around and revert to their own pedagogies once they go back to their classrooms. Teachers may present the perfect lessons with the latest pedagogies when they are being observed or evaluated but only their students will be able to tell what is actually happening in classrooms. It is significant to know what is going on in the teacher's mind as they are the main contributors to students' achievements. With the significance of the research discussed, the overview of the thesis follows.

## 1.10. Overview of the Thesis

In this chapter, I have articulated the genesis of my research and pre-understandings of these phenomena as they have revealed themselves to me. In the hermeneutic tradition, I wrote my way to understanding the phenomena of quality teachers and teaching. I shared my journey being educated and as an educator; I shone light on the myriad folds of the phenomena. Finally, I conclude this chapter with an overview of the thesis structure.

Chapter two explores the current literature which is relevant to consider in relation to teacher and teaching quality. Firstly, the concept of quality education from various perspectives is explored broadly in order to establish what constitutes quality education. This is followed by exploring the different definitions of quality teachers and teaching and how professional development, teacher collaboration, teacher appraisal and performance-based pay affects quality teaching. Various traits are then discussed which are associated with the qualities of effective teachers. The chapter then goes on to detail the importance of teachers' belief systems, teachers' morale and the mediators that enhance or inhibit quality teaching and learning. The chapter finally concludes with an overview of the literature review.

Chapter three explores the research methodology. This chapter begins with the justification for the mode and general design of the research, particularly why a social constructivist worldview is adopted. The chapter also includes the overview and specifics of the research design including the choice of data collection method, the rationale for the selection and development of participants, the ethical issues that arose, development of research questions, research tools and analytical methods. The next section reviews the stages of data analysis; interpretation of essence using qualitative hermeneutic phenomenology and the trustworthiness and validity of the study. The chapter concludes with the limitations of the study's method as well as a summary.

Chapter four presents an exploration of the data findings. In this chapter I code the emerging themes from the interview transcripts and identify the essence of the participants' stories in relation to the research questions:

- How do Singaporean teachers describe quality teachers and quality teaching?
- What has influenced the formation of those beliefs that they have?
- What factors or experiences, according to Singapore teachers, have influenced the quality of their teaching?

Chapter five focuses on my interpretation of the data within a theoretical frame. The participants' perceptions of quality teachers and teaching are compared to existing literature to see whether they are similar or contradictory and to suggest possible reasons behind any contradictions or similarities. Following that, the influences to the participants' professional and personal belief systems are identified. What the participants felt were the contributing factors that enhance or inhibit quality teaching are discussed before the study's contributions to knowledge and chapter summary are presented.

Chapter six explores the conclusions and implications of the research. It begins by asking whether the broad objectives of the research have been achieved. This discussion is followed by a review of the significance of the research and its contribution to the literature. As is the case in hermeneutic phenomenological studies, the implications of the substantive theory to teachers are discussed. Limitations of the research findings are acknowledged and a series of eight recommendations are put forward. Possible directions for future research are presented before finally concluding with a summary of the chapter and thesis as well as a brief personal reflection of my experience as a novice researcher.

## 1.11. Summary

Chapter one provided the identification of the research problem and background context of the problem. The research questions and objectives were explicitly stated along with the researcher's position in the study. The organization of the thesis was then detailed. The figure below is a summary of the thesis. Chapter two will present a review of literature relevant to the research questions.

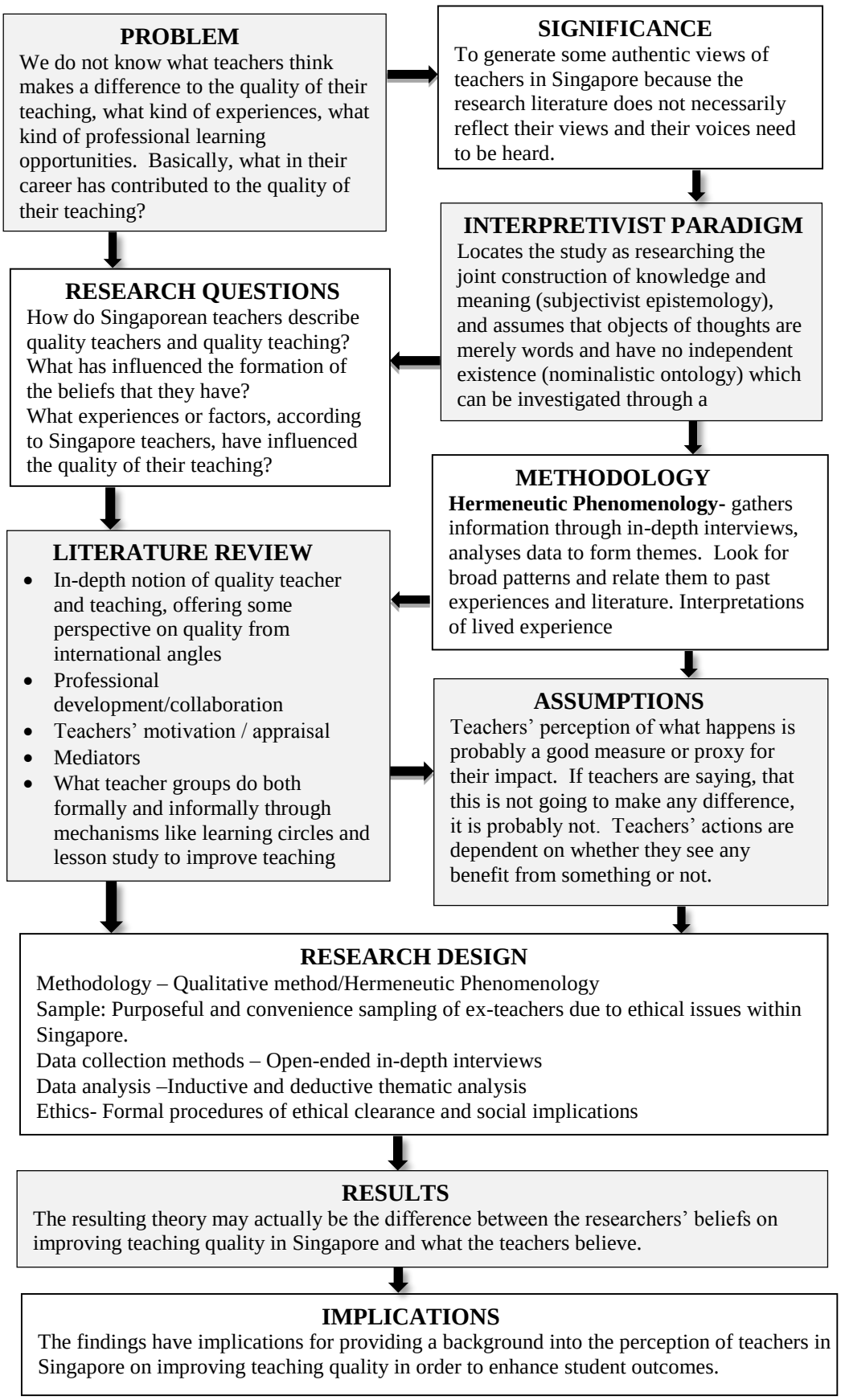


**Figure 1-1: Summary of thesis**

# Chapter 2. Literature review

In chapter one, I set out to examine my own interest in the phenomena of quality teachers and quality teaching from Singapore teachers' perspectives. As such, I provided a brief history of the development of the education system in Singapore since its independence in 1965 and examples of my own lived experiences as both a student and an educator, to illuminate aspects of quality teaching and learning. In this chapter, I explored the past and current literature on quality teachers and quality teaching and its implications in more depth, as an instrument of organizing Singapore's educational system to what it is now. I also explored literature on teachers' beliefs systems and the impact of these on teaching and learning. Finally, the mediators that enhanced or inhibited teachers' ability to do quality teaching will be listed and discussed.

## 2.1. Teacher quality and teaching quality

Debates about educational quality are not new. They have been going on for decades but the focus has changed over time. Instead of focussing on school structures, school planning, school leadership, change management and school effectiveness, the current focus is on teacher quality, underpinned by research which quantifies how much of a student's performance can be attributed to the quality of his/her teacher.

As a former teacher, I was interested to study the lived experience of teachers in Singapore, teaching under the MOE as a moderator. In order to open up the experiences of being quality teachers and practising quality teaching, I used my personal experience, as well as that of others, to illuminate these phenomena. I traced etymological sources and drew from the literature on quality teachers and teaching, to unfold what is inside teaching, as it is lived in today's public schools.

For instance, research done by Hattie (2003), which synthesised an extensive amount of relevant evidence-based research, has identified and estimated the major sources of explained variance, in students' achievement outcomes. In summary, Hattie (2003) showed that:

- 50 percent of the variance is due to the student himself/herself
- 30 percent is due to the teacher
- Between 5 percent and 10 percent is due to home and peer factors
- Between 5 percent and 10 percent is due to school and principal factors.

Hattie (2003) acknowledged that it was what students brought to the table that predicted achievement more than any other variable. However, he went on to say that in relation to teachers "it is what teachers know, do and care about which is very powerful in this learning equation" (p. 2) and recommended that education systems "should focus on the greatest source of variance that can make the difference—the teacher" (p. 3). In his synthesis of over 500 000 studies of the effects of class size, the curriculum, the finances, the school size, the buildings, the school climate, the teachers, the home, bureaucratic control and peer effects on student achievement, it could be shown that almost all things done in the name of education had a positive effect on achievement (Hattie, 1992, 1993a, 1993b; Hattie & Timperley, 2007). Hattie

(2003) asserted that there was a need to identify those attributes that had a marked and meaningful effect on student learning – not just a positive (greater than zero) effect. He concluded that "it is excellence in teachers that make the greatest differences, not just teachers" (p. 4). This was echoed by Rothstein (2004) who implied that good teaching was not enough when he said, "Good teachers, high expectations, standards, accountability and inspiration are not enough (p. 5)". Hattie (2003) called for more studies on excellent teachers and their powerful influences on student learning.

This study is my attempt at finding some answers to what it meant to be an excellent or quality teacher and quality teaching. Extensive research had been done on excellent teachers and teaching but similar research had not been done from the Singapore teachers' perspective based on their lived experiences. Thus, this research was timely and would add a different lens to the same phenomena. It would also fit well with Creswell's (2012) notion of exploiting an understudied area and searching for emergent theory. Therefore, a conceptual framework was more appropriate than a theoretical one (Rocco & Plakhotnik, 2009).

The conceptual framework acts as an organiser for the flow of my literature review. It allowed the readers to see a visual representation of my thought process.

## 2.2. Conceptual framework

The figure 2-1 below is an encapsulation of my conceptual framework.

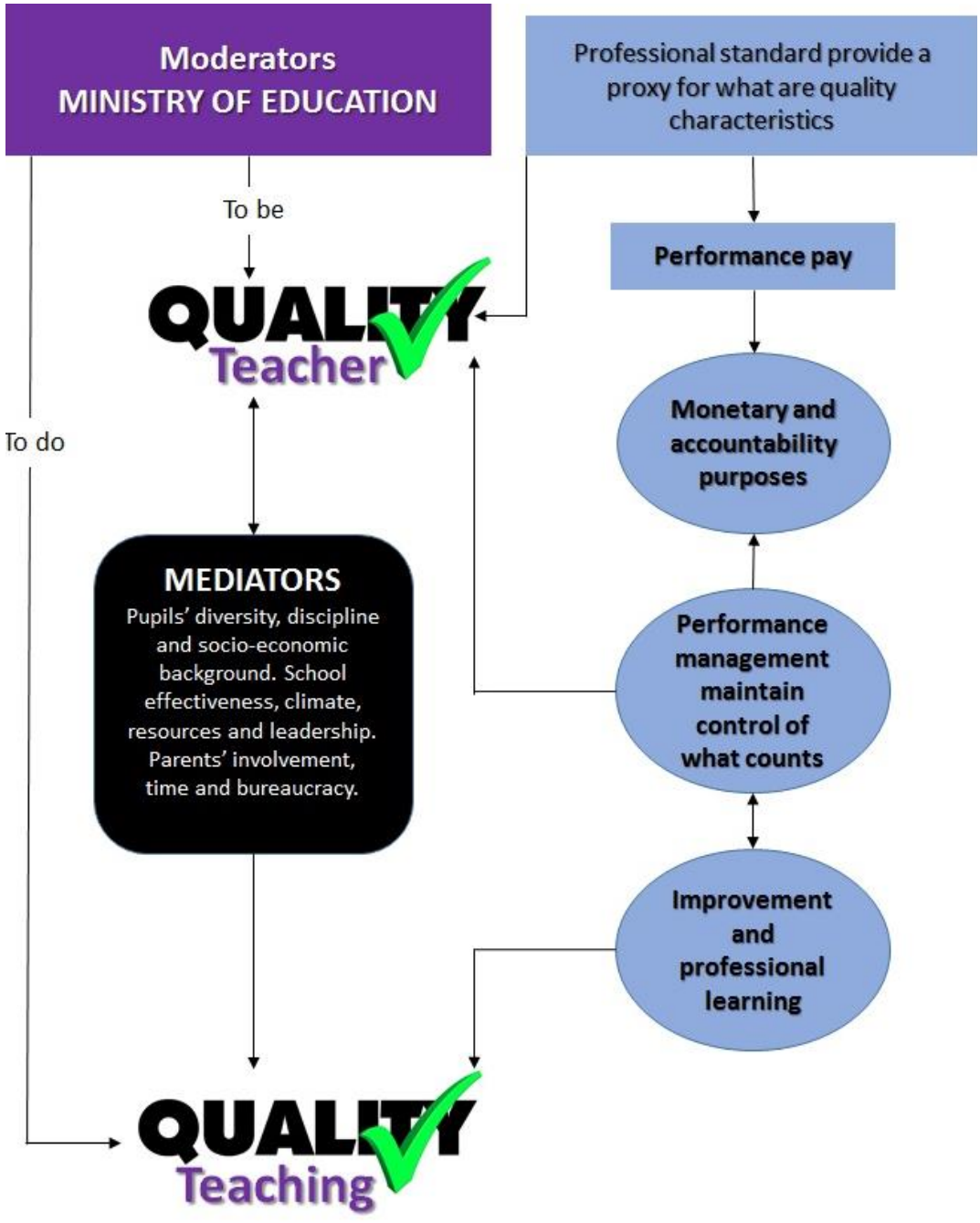


**Figure 2-1: Conceptual framework**

In the Singapore education system, where the moderator is the Ministry of Education, teachers are made accountable for their teaching and quality of their students' outcomes. Often quality teachers and quality teaching are used interchangeably. However, there is a difference between a quality teacher and quality teaching. A quality teacher is the entity and quality teaching is the practice. The knowledge and skills used by quality teachers are many and varied (Knowles, Plake, Robinson, & Mitchell, 2001). A quality teacher is often expected to do quality teaching.

However, the school and community forces that shape teachers' practices and student learning are numerous and important. Successful teaching depends on many factors, including the level of instructional resources available, staffing levels, continuing professional development, and support from administrators and parents (Johnson, 1990). Thus, schools play an important role in promoting teaching quality. If schools are not well organized and supportive, it is possible that even good teachers will not be successful (Raudenbush, Rowan, & Cheong, 1992).

The term "quality" is context related. Defining teacher quality—the knowledge, skills, abilities, and dispositions of teachers is no simple task because the criteria for doing so vary from person to person, from one country to another, and from one era to the next.

## 2.3. Past definitions of teacher quality

First and foremost, teaching is a cultural activity and notions of teacher quality have changed over time as society has shifted its values and concerns. Moreover, different individuals and groups can hold very different ideas about teacher quality at any given time. A review of past definitions of teacher quality can provide a context for understanding contemporary definitions.

### 2.3.1. Teachers should have high moral character

One popular criterion for teacher quality has traditionally been high moral character. Teachers were often expected to personify virtue by being good role models for students and to represent the highest standards of social propriety. This view of teacher quality was especially widespread in the early 1900s. To illustrate the importance of moral character in teaching, Waller (1932, as cited in Knowles et al., 2001), provided this contract that teachers in one community were expected to sign:

- I promise to take a vital interest in all phases of Sunday-school work, donating of my time, service, and money without stint for the uplift and benefit of the community.
- I promise to abstain from all dancing, immodest dressing and any other conduct unbecoming of a teacher and a lady.
- I promise not to go out with any young men except insofar as it may be necessary to stimulate Sunday-school work.
- I promise not to fall in love, to become engaged, or secretly married.
- I promise not to encourage or tolerate the least familiarity on the part of any of my boy pupils.

- I promise to remember that I owe a duty to the townspeople who are paying my wages, that I owe respect to the school board and the superintendent that hired me, and that I shall consider myself at all times the willing servant of the school board and the townspeople (pp. 20-21).

Although this contract is quite dated and is more applicable to a nun, the notion that virtue is important is still widely discussed and books are written about ethics and moral behaviour in contemporary teaching (Noddings, 2013; Tom, 1984; Van Manen, 1991).

Virtue is not "taught" but "caught" or "picked-up" by interacting with those who seemingly possess it. These assumptions were incredibly common in the moral education and moral development literature, ranging from philosophical claims (see Campbell, 1997, 2003; Fenstermacher, 1990, 1992, 2001, 2002; Goodlad, Soder, & Sirotnik, 1990; Hansen, 1993, 1998, 2001a, 2001b; Noddings, 2002, 2013; Sockett, 1993; Strike, 1990; Strike & Soltis, 1992; Tom, 1984) to more practice-based claims (see Bennett, 1988, 1992, 1995; Benninga, 1993: Benninga, Berkowitz, Kuehn, & Smith, 2003; DeRoche & Williams, 1998; Elias & Haynes, 2008; Lickona, 1991; Ryan & Bohlin, 1999; Wynne & Ryan, 1997).

Scholars working from a social or behavioural science perspective had made claims of a relationship between the moral character of a teacher and the moral development of a student. These claims were based on quantitative or survey-based research (see Hartshorne & May, 1928-1930; May, 1971; Peck & Havighurst, 1960), ethnographic approach research (see Jackson, Boostrom, & Hansen, 1993) or research based on combined philosophical and empirical modes of inquiry (see Campbell, 2003; Richardson & Fenstermacher, 2001). Although these scholars came to different conclusions (and arrived at these conclusions in different ways), the relationship between the moral character of a teacher and the moral development of a student was at or near the forefront of each study.

The notion that teachers needed to be morally good because they inescapably influenced the moral development of the children in their charge was sometimes challenged by scholars who believed that the ultimate public concern should be on teachers' actual job performance, not morality (Shivers, 2004). Many teachers had been dismissed for some alleged form of harm to the students resulting from purely legal actions away from work. For instance, an elementary school teacher was fired for being unmarried and pregnant because the school claimed the teacher's "immorality" would unduly harm the school children whom she was educating (Shivers, 2004). Thus teachers could be seen as transmitters of not only educational but cultural values too.

### 2.3.2. Teachers as transmitters of cultural and educational values

Another definition of teacher quality emphasized a broader range of personality and character traits such as curiosity, enthusiasm, and compassion. In the decades immediately following World War II, interest in teachers' personality traits was widespread (Adorno, Frenkel-Brunswick, Levinson, & Sanford, 1950; McGee,

1955). Researchers working during this period generally assumed that gains in student achievement were *not* good indicators of teacher quality because they represented far too narrow a range of outcomes. It was assumed that, in addition to fostering student learning, teachers served as moral role models and that they instilled a variety of social values in their students. Consequently, when researchers tried to evaluate their measures of teachers' personal qualities, they usually looked for evidence of a relationship to observed practices or to principals' ratings of teachers, rather than evidence of a relationship to student achievement (Getzels & Jackson, 1963).

### 2.3.3. Teachers competencies in teaching prescribed curricula

Yet another definition of teacher quality focused on teachers' skills rather than their morality or personality traits. This approach to teacher quality focused on observing teachers in their classrooms, at first to see how well they were implementing specific curricula and later to document specific teaching practices that seemed to be associated with gains in students' test scores (Brophy & Good, 1986). This latter body of work focused on discrete practices such as questioning and lesson pacing which came to be known as "process-product" research, since it sought relationships between classroom processes and the product of gains in student achievement. This movement marked the first time that student achievement became a widely accepted criterion for teacher quality. The goal of this research was to identify specific behaviours that other teachers could emulate. Researchers focused on such skills as question asking, lesson pacing, and clarity in explanations. However, scholars and politicians tended to focus more on the distribution of education resources than on questions of teacher quality (Knowles et al., 2001).

## 2.4. Current definitions of teacher quality

It had been suggested that the quality of the teacher was an important factor in explaining differences in student successes in a school (Hattie, 2003; Wayne & Youngs, 2003). Today's definition of teacher quality differs from the past by acknowledging the diversity of the student population in a way not previously done. The definitions of teacher quality now are less concerned with teachers' character traits or technical proficiency and more concerned with teachers' ability to engage students in rigorous, meaningful activities that foster academic learning for all students (Knowles et al., 2001). Thus, current traits of quality teachers are standards based and define the knowledge, skills and dispositions that teachers should demonstrate.

However, Goldhaber (2002) noted that "the teachers' characteristics that we can measure – experience, education level, certification status, and so on – only explain three percent of the difference in student achievement that are attributable to their teachers' influence" (Goldhaber, 2002, p. 57). The other 97 percent was attributable to intangible aspects of teacher quality such as enthusiasm and skill in conveying knowledge (Goldhaber, Brewer, & Anderson, 1999). Therefore, it is imperative that these intangible aspects of teacher quality be discussed in detail as contrary to the earlier definitions of teacher quality, great teaching seemed to have

less to do with teachers' knowledge and skills than with their attitude toward their students, their subject, and their work (Orlando, 2014).

## 2.5. Traits of Quality teachers

An excellent teacher made an observable difference, but what was not clear was what made an excellent teacher (Goldhaber, 2002; Hattie, 2003). "Only when we dependably identify excellence, and study excellence, can we provide the goalposts to aim for" (Hattie, 2003, p.5). Quality teachers were sometimes used interchangeably with effective teachers and were reasonably consistent in most studies (Seldin, 2006). Generally, teacher effectiveness had been characterized in terms of specific teaching skills (e.g., Kemp & Hall, 1992; Taylor et al., 1999) used in raising student achievement (for example, Aaronson, Barrow, & Sander, 2007; Clotfelter, Ladd, & Vigdor, 2007; Harris & Sass, 2006; Nye, Konstantopoulos, & Hedges, 2004; Rivkin, Hanushek, & Kain, 2005; Rockoff, 2004; Sanders & Rivers, 1996). Effective teachers were also well-prepared for class, demonstrating comprehensive subject knowledge (Stronge, 2007).

When Çermik (2011) asked 109 final-year trainee teachers in the Primary Education Department at Pamukkale University, Turkey, for their opinions on what made an ideal primary school teacher and the reasoning behind those views, she found that the trainees based their definition on 6 themes of ethical and humanistic values; teaching skills; cultural and scientific knowledge; personal qualities; interaction with society, environment, and parents; and self-values. The figure below shows the percentages of the themes, in terms of how often each theme was mentioned in the questionnaires.

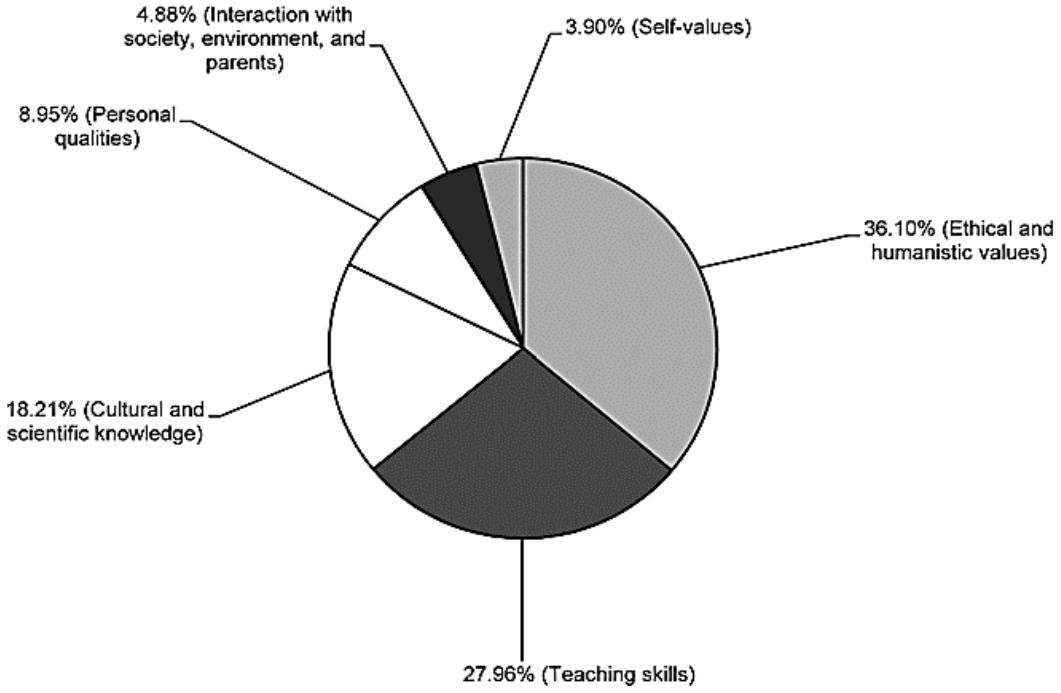


**Figure 2-2: Percentages of the themes for an ideal teacher (Çermik, 2011, p. 1117)**

It is interesting to note that trainee teachers placed the greatest emphasis on ethical and humanistic values ahead of teaching skills. This is in line with Batten and Girling-Butcher's (1981) claim that when students were asked about their best teachers, the common attributes were teachers who built relationships with students.

In another study done in Israel by Arnon and Reichel (2007), two images of teachers were seen by students of education: the ideal teacher and their own self-image as teachers. The participants comprised a total of 89 trainee and beginning teachers, who, while teaching, were completing their academic degrees at teachers' colleges. Data were collected by means of a questionnaire that included open-ended questions which were analysed qualitatively. It was found that there were two important categories in terms of perceptions about an ideal teacher; the first was personal characteristics and the second was knowledge of the subject and how to teach it. Both groups of participants similarly attributed great importance to the personal qualities of the ideal teacher, but there was a difference in their perception of the importance of knowledge: the beginning teachers attributed great importance to knowledge and perceived it as a quality similar in importance to personal characteristics, while the trainee teachers, who had not begun their teaching careers, attributed less importance to knowledge as a characteristic of the ideal teacher. The teacher as a person who promoted social goals, was not mentioned at all (Arnon & Reichel, 2007). The findings of this research are interesting to take note of for further discussion.

Similarly, Minor, Onwuegbuzie, Witcher and James (2002) conducted a study with 134 pre-service teachers at South Georgia University in order to ascertain their views about the characteristics of a good teacher. Seven major characteristics were derived from their study: "student- centred, effective classroom and behaviour manager, competent instructor, ethical, enthusiastic about teaching, knowledgeable about subject, and professional" (p. 116).

The traits of a quality teacher from the perspectives of beginning and pre-service teachers mentioned above showed some similarities to the traits of a quality teacher from the perspectives of five scholars mentioned below. Although this list is certainly not all-inclusive, I had picked up similar traits discussed by more than one of them. Three out of the five researchers mentioned that quality teachers should show respect to their students (Orlando, 2014; T. Thomas, 2011; Weimer, 2013). Haskvitz (2002) and Weimer (2013) postulated that quality teachers should encourage students' independence while others felt that quality teachers should guide learning through classroom interactions (Hattie, 2012), create a sense of belonging in the classroom (Orlando, 2014) as well as provide a warm environment that allowed their students to make mistakes (T. Thomas, 2011). Enthusiasm was a trait that Orlando (2014), Thomas (2011) and Weimer (2013) agreed quality teachers possessed. Traits that stood out among four of the researchers were teachers' high expectations of their students, their effective teaching and monitoring skills.

**Table 2-1: List of traits of quality teachers from different researchers**

Traits of quality teachers from different researchers' perspectives

| Haskvitz (2002) | Hattie (2012) | Orlando (2014) | T. Thomas (2011) | Weimer (2013) |
|---|---|---|---|---|
| | | respect students | kind and show respect. | respect for their students; empathetic |
| create independence | guide learning through classroom interactions | creates a sense of belonging in the classroom | provide a warm environment and allow their students to make mistakes. | encourage students' independence; learning for understanding |
| good communicators, good sense of humour | attend to affective attributes | warm, accessible, enthusiastic and caring | have enthusiasm for their subject matter | display enthusiasm, desire to share |
| set high standards for their students, unaccepting of false excuses | influence student outcomes | sets high expectations for all students | have high expectations | sustain high expectations of students |
| proficient in offering students a diverse array of avenues to pursue excellence | make lessons uniquely their own | a skilled leader; effective and provide students opportunity to assume leadership roles | show not tell, positive | ability to transform and extend knowledge |
| competent in subject matter, flexible | possess knowledge that is integrated | can "shift-gears"/flexible | engage their students. | modify their teaching strategies |
| lifelong learners | can identify essential representatio ns of their subject | collaborates with colleagues | learn from their students | good learners, share ideas with their colleagues, reflective |
| provide accurate assessment and feedback | monitor learning and provide feedback | Assess teaching, maintains professionalism | humble, patient, smile | set clear goals, appropriate assessment, high-quality feedback |

Haskvitz (2002) argued that there were eleven traits to quality teachers. According to him, high-quality teachers were lifelong learners, good communicators, competent in their subject matter, quick to provide accurate assessment and feedback of student work, flexible and proficient in offering students a diverse array of avenues to pursue excellence and unaccepting of false excuses for poor results. They also set high standards for their students, created independence and entertained a good sense of humour. They understood what a child needed then and in the future and provided continuity and diversity so that the students were not bored but challenged.

Similarly, Hattie (2012) who had conducted the biggest ever evidence-based research project in education and spent more than 15 years synthesizing over 50,000 studies related to achievement in school-aged students, identified five major dimensions of good quality teachers. According to him, quality teachers could identify essential representations of their subject, guide learning through classroom interactions, monitor learning and provide feedback, attend to affective attributes and influence student outcomes. Hattie (2012) elaborated that quality teachers possessed knowledge that was integrated, in that they combined new subject matter content knowledge with prior knowledge; could relate current lesson content to other subjects in the curriculum and made lessons uniquely their own by changing, combining and adding to them according to their students' needs and their own goals. These lists are not exhaustive but the more pertinent traits are discussed in detail below.

### 2.5.1. Respectful teacher creating a sense of belonging

Students often do not like to make mistakes because they fear a negative response from peers. Quality teachers created classrooms in which errors were welcomed (Hattie, 2012). They fostered students' self-esteem, motivation, civic responsibility, and respect for others by respecting their students and valuing each student's ideas and opinions (Orlando, 2014; Weimer, 2013). They recognised the value and worth of each student and tried to understand their students as well as their perspectives (T. Thomas, 2011).

The best climate for learning was one in which there was respect and trust, where students felt a sense of belonging (Hattie, 2012). Winkley (1996) postulated that teachers who created a continuing, positive sense of self-worth within the students would lead them to greater openness and willingness to engage in interaction. Conversely, Leal (2002) noted that negative affect tended to produce a reaction stimulating protection and defence causing students to withdraw and shut down. Thus, being respectful of their students is a trait that quality teachers should possess. Apart from being respectful, quality teachers should also have high expectations of the students whom they teach.

### 2.5.2. Teachers with high expectations

Most educators recognized the importance of high expectations. The idea that teachers' expectation affected how well students learned had been well documented (Hattie, 2003; Lemov, 2010). A teacher's expectations, either high or low

expectations, became a self-fulfilling prophecy. Students performed in ways that teachers expected (Ferguson, 2002). Quality teachers acted on the belief that all students could learn and develop and used curricula that encouraged students to see, question, and interpret ideas (Haskvitz, 2002). This was apparent in Blackburn's (2013a, p. 14) words, "Having high expectations starts with the decision that every student you teach has the potential to be the best, no matter what". Blackburn also noted that creating a classroom where high expectations permeated the culture was more challenging. The key was recognizing that "high expectations" is both a belief about student capability and specific actions undertaken to make those beliefs a reality (Graham & Weiner, 1996).

Quality teachers not only had high expectations, but set the right expectations for each student (Blackburn, 2013a; Bransford, Brown, & Cocking, 1999; Orlando, 2014; Weimer, 2013). Teachers' beliefs in their own abilities to promote learning also had a profound impact on student achievement (Armor et al., 1976). When teachers had high expectations for students and provided tasks that were engaging and of high interest, students built self-esteem, increased confidence and improved academic performance (Brophy, 2013). Student confidence was critical because it was linked to student's willingness to tackle challenging learning activities (Hattie, 2003).

Essential to a culture of high expectations was providing students with high levels of support. To merely increase expectations without helping students achieve success almost always led to frustration and failure (Williamson & Blackburn, 2013). Support included scaffolding within lessons by using graphic organizers and chunking information, incorporating motivational elements in the lesson, identifying strategic knowledge in the lesson, and having a plan to provide students with appropriate assessments and high quality feedback (Blackburn, 2013a, 2013b; Hattie, 2003). Another trait of a quality teacher was his/her ability to provide appropriate assessments and high quality feedback.

### 2.5.3. Teachers who provides appropriate assessments and high quality feedback

According to Palmer (2010), the way teachers diagnosed their students' condition would determine the kind of remedy they offered. Therefore, quality teachers regularly gathered information to know who was not understanding and saw student progress as feedback about the effects they were having on learning (Hattie, 2012). They used a variety of formal and informal measures to monitor and assess their pupils' mastery of a concept or skill (Orlando, 2014).

Quality teachers had a sense of how each student was doing in the classes that they taught (Hattie, 2003). When a student was having difficulty, the teacher targeted the knowledge or skill that was troubling the student, and provided remediation as necessary to fill in that gap (T. Thomas, 2011). Quality teachers also communicated with all parties such as parents and instructional teams who had vested interest in monitoring the student's progress (Cheng & Tsui, 1999).

Although monitoring of student progress and potential need not be solely the responsibility of the teacher, a quality teacher facilitated students' understanding of how to assess their own performance, thus assisting them in metacognition

(Haskvitz, 2002). As ultimate accountability lay with each teacher, documenting a student's progress and performance needed to be accomplished (Cheng & Tsui, 1999). A quality teacher who had observed and worked with a student had a sense of the potential that student possessed, encouraged the student to excel and provided the push to motivate the student to make a sustained effort when needed (Stronge, 2007). In order to do that, a teacher needed to be flexible.

### 2.5.4. Flexible teacher

Quality teachers were flexible as they used diverse resources to plan and structure engaging learning opportunities; monitor student progress formatively, adapting instruction as needed; and evaluated learning using multiple sources of evidence (Haskvitz, 2002; Hattie, 2003). To ensure that all students do learn, teachers should understand how the developmental levels of their students affected learning and how classroom instruction should be modified to reflect students' needs. Teachers should also understand and modify instruction to incorporate learning opportunities for students with learning disabilities; visual and perceptual disabilities; and speech, physical and mental challenges (Knowles et al., 2001).

According to Christenbury (2010), "good teaching comes not from following a recipe, but from consistently putting student needs first" (p. 47). She elaborated that teachers should alter, adjust, and change their instruction depending on who was in the classroom and the extent to which those students were achieving. Once teachers could fully integrate their efforts to improve teaching with school context and students' needs, they could look more confidently to a future in which all students experience success (Christenbury, 2010).

### 2.5.5. Knowledgeable and skilled teacher

Another important trait a quality teacher should possess was depth of subject matter knowledge. Teachers should know the substance and structure of the disciplines they taught. According to Day (2004), "Classroom teachers are expected to be knowledgeable and skilled practitioners, accountable for raising standards of achievement of all students in ways that would stimulate pupils' interests in learning" (p. 13). Teachers should be able to translate difficult substantive ideas into terms that students could understand, to diagnose students' understandings and misunderstandings, and to develop explanations, examples and representations, including learning activities that were appropriate for students' levels of understanding (Pehkonen, 1992).

For example, knowledgeable and skilled teachers would employ systematic teaching procedures (Hattie, 2003; Kemp & Hall, 1992) and spend more time working with small groups throughout the day (Taylor, Pearson, Clark, & Walpole, 1999). They knew how to introduce new content knowledge in a way that integrated it with students' prior knowledge, they could relate the current lesson to other subject areas, and they could adapt the lessons according to students' needs. Because of how they viewed their approach to teaching, they had a greater stock of strategies to help students and they were better able to predict when students would make errors and responded when they did. They sought out evidence of who had not learned, who was not making progress, and they problem solved and adapted their teaching in response (Hattie, 2012).

Skilled teachers also needed to "stretch" students to encourage deep rather than surface learning. "Surface learning is more about the content (knowing the ideas and doing what is needed to gain a passing grade), and deep learning more about understanding (relating and extending ideas, and an intention to understand and impose meaning)" (Hattie, 2003, p. 9).

Research done by Bransford, Brown and Cocking (1999) demonstrated the importance of teachers' pedagogical content knowledge. It contradicted the view that a good teacher could teach anything. Outstanding teachers had a strong grasp of learning theory and general pedagogical principles but a distinguishing feature was their expert application of such principles to the peculiarities of their subject or learning area. A high level of pedagogical content knowledge enabled teachers to draw on their deep knowledge, to improvise, to make connections to other areas of learning and to current local and global issues and to constantly challenge and extend student learning. Teachers' deep knowledge helped build the deep knowledge of their students (Bransford et al., 1999). This research supported a co-constructivist model of learning and teaching. Students did not construct their knowledge and skills in isolation from the teaching and learning context. Learning was a partnership between students and their teachers who demonstrated a willingness to explain materials and helped students with their work (Sizemore, 1981).

However, even the most well-intentioned and knowledgeable teachers sometimes lacked the skills to keep students on track. Motivation, both intrinsic and extrinsic, was a key factor in the success of students at all stages of their education, and teachers could play a pivotal role in providing and encouraging that motivation in their students (Darling-Hammond, Strobel, & Martin, 2003).

### 2.5.6. Teacher as motivator

The best lessons, books, and materials in the world would not get students excited about learning and willing to work hard if they were not motivated (Darling-Hammond et al., 2003). All students were motivated differently and teachers needed time and a lot of effort to learn to get a classroom full of students enthusiastic about learning, working hard, and pushing themselves to excel (Orlando, 2014; T. Thomas, 2011; Weimer, 2013). Blackburn and Armstrong (2011) described two components of motivation – value and success. Students were more motivated when they saw the value of learning. For example, a Mathematics teacher might ask students to sum up the total amount of money they spent for lunch.

Researchers had documented the critical link between students' beliefs about their abilities, their goals for learning and their engagement in school (Elliot & McGregor, 2001; Kaplan, Middleton, Urdan, & Midgley, 2002). The "motivation to learn" was measured by the degree to which students were committed to thinking through problems and working through challenges to master a concept or gain a new skill (Pintrich, 2000; Wolters, 2004). That went beyond student enjoyment of an activity, as students must persist through obstacles.

Researchers also had identified classroom practices that promoted students' motivation and engagement (Kaplan et al., 2002; Patrick, Ryan, & Kaplan, 2007; Skinner, Furrer, Marchand, & Kinderman, 2008). Specifically, students were more likely to feel motivated and engaged in learning in classrooms where teachers focused on understanding over getting the right answer; encouraged effort and

improvement over displays of competence and related warmly to students and communicated commitment to their learning (T. Thomas, 2011).

Teachers could motivate students in various ways. Firstly, teachers could motivate students through their personality (Weimer, 2013). Students were able to see through a teacher's actions, recognizing those actions as genuine or fake (Eggleton, 1992). Although a teacher's personality was of great importance in motivating students, teachers could also elicit students' desires to learn by a variety of teaching techniques (Haskvitz, 2002).

Research showed that teachers could use humour to motivate their students (Haskvitz, 2002). "The main value of humour in the classroom lies in its use to stimulate, illustrate, motivate, and ease tensions" (Hunsaker, 1988, p. 285). However, the perception that motivational teaching had to be entertaining was not necessarily accurate (Hattie, 2003). Teachers must be comfortable with themselves as well as with the tasks they were using in their lessons (Palardy & Palardy, 1987) as students preferred to see their teachers as real human beings (Weaver, Richard, & Cotrell, 1987).

It had been found that teachers who motivated students had high expectations of them (Haskvitz, 2002; Mathews, 1988; Orlando, 2014; T. Thomas, 2011). Vasquez (1988) indicated that "high expectations are communicated to the student through different types of cues, verbal or nonverbal, and the student's performance is consequently affected" (p. 244). Vasquez emphasized that students are affected by the high expectations of a teacher even if the students lacked affinity for that teacher. Meece, Anderman and Anderman (2006) reported a link between expectations and motivation. Students' intrinsic motivation was evident when they desired to learn simply because it interests them or they recognized the importance of learning. Extrinsic motivation was a response to either incentives (points, prizes) or disincentives (threats, punishments). Intrinsic motivation had a greater impact on student learning than extrinsic motivation (Deci, Koestner, & Ryan, 2001).

Stipek (2001) similarly postulated that working on a task for intrinsic reasons rather than extrinsic influences was more enjoyable for students and it facilitated learning and achievement. Learning and intrinsic motivation were mutually reinforcing; intrinsic motivation facilitates learning, and when students acquired new skills and observed their own growth, they felt more successful and their intrinsic desire to learn increased (Stipek, 2001). This implied that when students experienced success, they were also motivated.

Glasser (1989) indicated that the primary prerequisite to a solid, motivational routine was an identifiable standard of quality. When this quality was attained and explained to the students, they would work hard to maintain it. Teachers could determine a standard of quality and expect students to meet that standard (Haskvitz, 2002; Orlando, 2014). When teachers set a sufficiently high standard with clearly specified ways of attaining that standard, students would begin to have more success in meeting high expectations (Hattie, 2003).

Also important to any learning experience was the interaction between the teacher and students. Brown (1988) emphasized the following statements repeatedly: "Teaching is interaction that facilitates learning. If you can't interact with them, you can't teach them" (p. 10). One of the reasons many teachers could not interact with students was that they had not developed respect for their students (T. Thomas, 2011).

Motivation was a combination of many different aspects that comprised a part of teachers' pedagogical knowledge (Hattie, 2003). The quality of a learning experience lay in a teacher's ability to create that quality (Orlando, 2014). "The owner of the future will be the person who is the owner of his or her own human resources, and human resources are the product of high quality in education" (Meek, 1989, p. 47). If teachers were going to produce quality students, it would require the use of all the potential effectiveness within each individual teacher (Orlando, 2014). "Human beings learn best by example and by doing; if our students see us doing, it is possible that they may do more themselves" (Jantzen, 1988, p. 33). Thus, one of the traits of a quality teacher was effective teaching (Orlando, 2014).

### 2.5.7. Effective teachers

Students' achievements were often summarized in test scores, whereas teachers' effectiveness were reflected in their contributions to those test scores (Drury & Doran, 2003; Hershberg, Simon, & Lea-Kruger, 2004; Kupermintz, 2002). However, effective teachers also exerted positive influences on student outcomes that were not confined to improving test scores (Hattie, 2012). There were other ways of identifying effective teachers that might be less commonly used and more challenging to measure. They involved teachers indirectly contributing to improve students' academic, attitudinal and social achievements such as regular attendance (Hattie, 2012), on-time promotion to the next grade, on-time graduation, self-efficacy, cooperative behaviour (Stronge, 2007), conceptual understandings, multiple learning strategies, risk taking in their learning, respect for themselves and others, and students' development into active citizens (Hattie, 2012). They motivated students, admitted their mistakes and corrected them immediately, communicated high expectations consistently and were sincerely interested in the subject matter and in teaching it (Stronge, 2007).

Effective teachers also had what amounted to "eyes in the back of their head" and moved quickly to resolve minor classroom management issues before they became more serious (Kounin, 1996). Kounin had coined the term "withitness" to describe this key characteristic of effective teachers. However, "there is no definitive recipe, no immutable formula, no simple list of do's and don'ts to ensure effective teaching" (Christenbury, 2010, p. 48). It took a perfect blend of several attributes to create a truly effective teacher who could have a lasting impact on virtually every student as no single attribute guaranteed teacher effectiveness (Meador, 2014).

It is interesting to note that the way teacher effectiveness is defined is important because "what is measured is a reflection of what is valued, and as a corollary, what is measured is valued" (Goe, Bell, & Little, 2008, p. 4). In other words, the definitions of teacher effectiveness nominate and shape what needs to be measured. This phenomenon is akin to the shifting of goalposts. Goe et al. (2008) added that if policy conversations were around standardized tests, the significant outcomes could be narrowed to those that could be measured with standardized tests scores. The focus shifted to classrooms and documenting effective interactions among teachers and their students when policy conversations concerned their interactions. When the conversations focused on teacher quality, the likely discussion would be improving teachers' scores on measures of knowledge or on

signals of that knowledge such as certification. Particular practices or approaches to teaching would become the focus when classroom processes were discussed (Goe et al., 2008).

Thus, there is no universally accepted method for estimating teacher effectiveness. Teaching effectiveness should be recognized as more than the efforts and attributes of an individual teacher (Bransford, Brown, & Cocking, 1999). When teachers felt good about their work, student achievement rose (Black, 2001). Many instruments of estimating teacher effectiveness were not validated or were poorly developed (Donaldson & Peske, 2010). Those instruments did not measure the intangible attributes necessary for classroom success. Effective teachers shared not only quantifiable and tangible traits, but also several intangible personality traits that, together, determined their impact in the classroom (Betts, Zau, & Rice, 2003)

Effective teachers should also exercise emotional objectivity (Marzano, Gaddy, Foseid, Foseid, & Marzano, 2005). It means teachers have to behave in an emotionally objective way even when they do not feel emotionally objective. Therefore, they should be able to address disciplinary infractions without becoming emotionally involved or personalizing students' actions and understand the importance of keeping their cool in the classroom. Effective teachers also knew how to connect with their students and demonstrated that they cared about every student as an individual (Orlando, 2014).

### 2.5.8. Caring teacher

Showing that teachers cared profoundly provided precisely the right climate in which students learnt most effectively (Straughan, 1988). Literature on factors in education that had a great impact on students' motivation, learning, and achievement had increasingly documented the importance of caring and supportive student-teacher relationships (Davis, 2003; Zakrzewski, 2012). "Student perceptions of whether the teacher cares for them have meaningful effects on their performance and behaviour" (Vasquez, 1988, p. 248). What matters most in today's schools is a measure of how students and teachers can create a context for cultivating care (Orlando, 2014). Care was not a matter of looking after someone or sympathizing with another (Noddings, 2005). Noddings also reiterated that care must be reciprocated, and it was the responsibility of the teacher, in large part, to cultivate an environment that supported such an egalitarian context.

In order to care about a student, a teacher must judge the relationship to be important (Muller, Katz, & Dance, 1999). Caring within teaching could be understood in a range of ways: caring as commitment, caring as relatedness, caring as physical care, caring as expressing affection, such as giving a cuddle, caring as parenting and caring as mothering. Vogt (2002) suggested that those definitions of caring within teaching could be placed along a continuum. Caring understood as mothering at one end of the continuum was distinctly associated with traditional Western notions of femininities whereas caring as commitment was non-gender-specific. Vogt's findings showed no significant difference between gender when it came to caring as mothering and caring as relatedness. However, interpretations of caring as mothering, parenting and giving a cuddle were rejected by some teachers because they regarded them as undermining teachers' professionalism (Vogt, 2002). There could also be possible complications with child protection policies and

litigation that also undermined the physical connectedness between teacher and student.

Scholars such as Noddings (1988) and Goldstein (1999) conceptualized caring as a process; that is, something teachers did rather than something they felt. They argued caring was an ethic, or a moral value, that teachers communicated to students through their selection of curriculum, their planning of a lesson, their establishment of classroom norms, and their interactions with students.

Davis (2006) asserted that beyond teaching content, caring teachers viewed schooling as serving either a liberating or marginalizing function. Davis emphasized that caring teachers identified the ways in which society and schools maintained existing social structures and incorporated in their lesson plans ways for students to identify these inequities, engaged in social critique, and worked for change. Caring teachers were oriented towards advocacy for all of their students, regardless of their cultural and economic background (Davis, 2006). Teachers who showed care by getting to know their students and the lives they lived; actively listening to students and asking for feedback could transform the school experience especially for students who faced difficulties in life (Zakrzewski, 2012).

Noddings (2005) argued that time was needed for real caring relationships to develop, not only through the taught curriculum but through the normal conversations and interactions which took place between teachers and students. Sometimes these might be lengthy conversations but at other times they might be simple interactions that affirmed and recognized students as valued people. Such "off-task" interactions were more likely to enhance liking and feeling of community than purely task-related engagement thus their importance should not be underestimated (Klein cited in Clark, 1996; Watson & Ashton, 1995) as they motivated and reassured students (Rudduck, Chaplain, & Wallace, 1996).

To be caring is to be willing to critically evaluate what and for whom one actively cares. Doing so entailed being reflective of whether there was a match or mismatch between the things one cared about and the needs of one's students (Zakrzewski, 2012). Teachers needed to reflect on their own experiences with care as they often unconsciously cared for others the way they had been cared for thus making assumptions about their students' backgrounds based on their own childhoods which might not necessarily have been appropriate to their students' needs (Zakrzewski, 2012).

Ethic of care could also be interpreted as negative for teaching: the orientation towards ethic of care of many teachers had been identified as a factor contributing to destructive feelings of guilt (Hargreaves & Tucker, 1991). It was found that teachers who cared more might be more proned to feeling emotional exhaustion, to becoming burnt out and to leaving the field (Sutton & Wheatley, 2003). For example, teachers at the beginning of their careers often found caring and maintaining order to be problematic opposites (Weinstein, 1998), although most primary school teachers gave reasons related to caring as motivation for becoming a teacher (Book & Freeman, 1986). An attitude of care in teaching and learning emerged through profound empathy in one-to-one relationships (Cooper, 2002).

## 2.5.9. Empathetic teacher

Empathetic teachers were revealed as highly moral individuals who attached themselves mentally and emotionally to their students and generated similar responses in return (Cooper, 2002). In effect they were modelling and evoking morality in their personal interactions with students and colleagues (Bottery, 1990). There was much well-documented research which revealed the importance of empathy in the formation of moral values in children (Hoffman & Saltzstein, 1967; Rogers, 1975). Morality was linked to empathy and the emotional closeness and understanding of others (Noddings, 1986). Quality teachers understood how students' personal and family backgrounds shaped their talents and perspectives (Knowles et al., 2001). This is especially important because today's students come from varied cultural backgrounds.

Empathetic teachers modelled and facilitated an empathic ambience for learning and development (Kozéki & Berghammer, 1992). The increasingly mechanistic approach of the prescribed and extensive curriculum in recent years, appeared to act as a powerful factor in limiting the ability of teachers to employ their empathy to best effect, in meeting the needs of their students (Best, 2003). It was surprising that rich holistic findings of previous international psychological research into learning (Aspy, 1972; Purkey, 1970; Rogers, 1975) and also developments in neuroscience about the significance of affect (Damasio, 1994, 1999; Goleman, 1995) were often ignored when teaching and learning was discussed, and when considering quality teachers and teaching.

Human relationships were central to a positive learning atmosphere and were the source of the higher levels of intellect (Vygotsky, 1978). Based on Vygotsky's zone of proximal development (1978), the teacher's task was very complex as it involved not only cognitive support but also affective assessment and emotional scaffolding. Vygotsky warned that if teachers were unable to assess and scaffold emotional as well as cognitive development, the student might flounder around in internal confusion. Therefore, direction, support and intervention were vital to move students on at sufficient pace, to help motivate and encourage them in their tasks and thinking. In order for teachers to be emotionally involved and motivate students, they needed to be passionate about teaching (Vallerand, 2008).

## 2.5.10. Passionate teacher

A simple dictionary definition described passion as a type of motivation that included extreme energy and emotion and might be associated with spirituality (Merriam Webster Collegiate Dictionary, 2008). The French philosopher and educator Foucault described passion as the ability to move one to a new state making it valuable in its potential for motivation in learning (Foucault, 1996). The generated definition of passion from quantitative empirical work done by Carbonneau, Vallerand, Fernet and Guay (2008) was "a strong inclination or desire towards an activity (eg. one's job) that one likes (or even loves) and finds important and in which one invests time and energy" (p. 978).

It bothered Hattie (2012) that passion, although obvious, was a difficult notion to measure. He stressed that passionate teachers had major impacts on students. This point was illustrated by a well-known study of the students of over 3,000 teachers (The Measures of Effective Teaching Project sponsored by the Gates

Foundation), where students overwhelmingly stated that the teachers of classes with the most student achievement gains were the teachers with the most passion, as defined by seven adjectives starting with 'C' – teachers who cared, controlled, clarified, challenged, captivated, conferred and consolidated (Kane & Staiger, 2012).

Other researchers also claimed that passion mattered especially in teaching because of its motivational and emotional properties (Carbonneau et al., 2008; Neumann, 2006; Patrick, Hisley, & Kempler, 2000; Vallerand, 2008). Motivationally, it drove people to action (Vallerand, 2008). It might be internally or externally motivated, based upon the driver (Vallerand & Ratelle, 2002). Internally motivated passion was associated with intrinsic motivation (Martin, 2005; Vallerand, 2008). When teachers were intrinsically motivated, teaching was done because it was valued and there was an effortlessness to doing it, which made improving teaching more seamless and more likely (Csikszentmihalyi & Csikzentmihalyi, 1988). A passionate teacher often showed enthusiasm which increased student attention thus improving learning (Patrick, Hisley, & Kempler, 2000). Barth (2001) reminded teachers not to lose passion: "What is needed is an invitation to practitioners to bring a spirit of creativity and invention into the schoolhouse. What is needed is a sense of heart" (p. 5).

Concepts were better remembered from a passionate and enthusiastic teacher and intense emotions improved memory for central details. Students who perceived their teacher as passionate and excited about a subject might become intrinsically motivated. It would also be plausible for students to "catch passion" through a concept called an "emotional contagion" (Hatfield, Cacioppo, & Rapson, 1993). Research on memory content demonstrated that emotional stimuli were better remembered than unemotional stimuli (Sutton & Wheatley, 2003).

The positive quality of passion also known as a positive learning spiral might also have a role in expanding learning and overall well-being (Fredrickson, 2001). A teacher with positive passion might create a positive learning spiral where thoughts were expanded and lifted, which increased learning potential. Therefore, once learning germinated and expanded within the learner's mind, it had an upward effect "spiralling" to higher and expanded learning.

Thus far empirical research had focused primarily on identification of teacher passion (Carbonneau et al., 2008; Neumann, 2006) and on passion-burnout (Hargreaves, 1997; Blackmore, 2004). It was clear passion did exist. It was documented that passionate teachers believed their students were not only motivated by but learned more from passionate teaching (Carbonneau et al., 2008). It was also found from a study by Patrick et al. (2000) that students' learning was influenced positively by teachers exhibiting qualities associated with passion through nonverbal and verbal enthusiasm. In another study, Selder and Paustian (1989) found that enthusiastic teachers improved learner memory as students found the enthusiastic teachers to be better and more credible teachers. This might be due to research on memory content demonstrating that emotional stimuli were better remembered than unemotional stimuli (Sutton & Wheatley, 2003).

Hargreaves (1997) wrote, "Pedagogical changes fail, when they do not engage the passions of the classroom" (p. 18). Thus understanding how passion was exemplified in teaching and how it was perceived by students helped researchers to better comprehend its role in learning (Carbonneau et al., 2008; Day, 2004; Fried,

1995; Nias, 1989; Vallerand, 2008). Having established that passion was a trait quality teachers should possess in order to teach effectively, it was also imperative that teachers possessed integrity as good teaching could not be reduced to technique and passion alone (Palmer, 2010).

### 2.5.11. Integrity

The word "integrity" stemmed from the Latin adjective *integer* meaning "intact, whole" (OED Online, 2014). In this context, integrity is the inner sense of "wholeness" deriving from qualities such as honesty and consistency of character. Integrity could be regarded as the opposite of hypocrisy (Lucaites, Condit, & Caudill, 1999), in that it regarded internal consistency as a virtue, and suggested that parties holding apparently conflicting values should account for the discrepancy or alter their beliefs.

As such, one might judge that others "have integrity" to the extent that they acted according to the values, beliefs and principles they claimed to hold. Carter (1997) wrote that integrity required three steps: "*discerning* what is right and what is wrong; *acting* on what you have discerned, even at personal cost; and *saying openly* that you are acting on your understanding of right from wrong" (p. 7). He regarded integrity as being distinct from honesty. Honesty meant being trustworthy, loyal, fair and sincere.

Integrity is also sometimes commonly used in reference to a single "absolute" morality rather than in reference to the assumptions of the value system in question. In an absolute context, the word "integrity" conveyed no meaning between people with differing definitions of absolute morality, and became nothing more than a vague assertion of perceived political correctness or popularity, similar to using terms such as "good" or "ethical" in a moralistic context. Integrity was an internal state of being that guided teachers to make morally wise choices. In contrast "morality and ethics are externally imposed values consensually acknowledged by societal standards to be for the common good" (Killinger, 2010, p. 3). "The question of whether teachers have integrity rests upon the evaluation of each teacher. Integrity is a personal choice, an uncompromising and predictably consistent commitment to honour moral, ethical, spiritual and artistic values and principles" (Killinger, 2010, p. 12).

Rand (1964) considered that integrity "does not consist of loyalty to one's subjective whims, but of loyalty to rational principles" (p. 69). The concept of integrity implied wholeness, a comprehensive corpus of beliefs, often referred to as a worldview. This concept of wholeness emphasized honesty and authenticity, requiring that teachers acted at all times in accordance with their chosen worldview (Rand, 1964). Integrity stemmed from teachers' belief systems and therefore it was not easily observed or measured. There were many instances in teachers' professional lives when integrity was assumed such as when dealing with school funds, during marking exercises and handling examination papers. The first corporate value that every teacher in Singapore had to abide with was "Integrity our foundation" (MOE, 2014). Without integrity teachers would be asked to leave the teaching profession.

Having covered the present and past definitions as well as traits of a quality teacher, it is logical to find out what is quality teaching as the implied aim of a quality teacher is to do quality teaching. Although some researchers had observed a

relationship between educational success and quality teaching (Hopkins & Stern, 1996; Stronge & Tucker, 2000; Tucker & Stronge, 2005; Wenglinsky, 2002), choosing appropriate indicators to assess quality was and still is problematic and defining teaching quality was also as problematic as defining the traits of quality teachers.

## 2.5.12. Definitions of quality teaching

The definition of quality teaching depended on the meaning one chose to give to the concept of "quality". It is a multi-layered and complex concept. According to Biggs (2001), "quality" could be defined as an outcome, a property, or a process. Thus, the phrase "quality teaching" had been given several definitions which are discussed below. Crowther (2011), Hargreaves and Fullan (2012) as well as Tam (2001) also noted there were many ways to define quality in education because definitions of quality were stakeholder relative and Hattie (2012) concurred with them, that all stakeholders held their own view of what quality teaching, quality teacher and quality education meant to them.

Harvey and Green (1993) distinguished three definitions of quality in the context of universities that could help us to understand what quality teaching might be in schools. They were the concepts of quality as "value for money", as "fitness for purpose" and as "transforming". There was no consensus on whether these three definitions of quality mentioned by Harvey and Green had equal value.

Quality as value for money, in the educational context denoted an institution that satisfied the demands of public accountability where the students performed academically or holistically well, for example. The introduction of the United Kingdom's Quality Assurance Agency quality system was based upon the definition of "quality as value for money". As a consequence, many British teachers complained of increased managerialism, bureaucracy, and intrusion (Newton, 2000). Cartwright (2007), also reported that external evaluations which generally relied on the definition of quality as "value for money" often raised frustration on the part of teachers. It is interesting to note that although this concept of quality as "value for money" caused great unhappiness among teachers, it is still being used today.

Quality as fit for purpose was restricted to the purpose of the schools, of getting students to learn effectively and to accredit that they have learned to publicly recognizable standards (Biggs, 2001). Similarly, Sayed (1997) asserted "fitness for purpose" approaches defined quality in terms of the production of goods or services to fulfil perceived needs or to conform to specific criteria in their production. However, Franklin (1992) and Scott (1998) argued that the definition of quality as "fitness for purpose" derived from consumerism and standardisation could in fact undermine the "quality" of teaching. Sayed (1997) described it as consumer-oriented or producer-oriented approaches to quality. Sayed critiqued this paradigm as providing only partial definitions of quality, where "partial" meant both incomplete and also relying on the judgement of only part of society.

Quality as transforming was exhibited when "quality teaching transforms students' perceptions of their world and the way they go about applying their knowledge to real world problems" (Biggs, 2001, p. 222). Teachers' conceptions of their roles and the culture of the school were also transformed (Biggs, 2001).

Chitty (2002), identified three educational goals namely human fulfilment, preparation for the world of work and contributing to social progress and social change as the approaches to education quality. Barrett, Chawla-Duggan, Lowe, Nikel, & Ukpo (2006), on the other hand, had identified five key dimensions of quality: effectiveness, efficiency, equality, relevance and sustainability. Those five dimensions could serve as a basis for analysing the quality of educational innovations aimed at any aspect of the education system (e.g. policy changes, national administration, local administration, classroom interventions).
The table 2-2 on the next page summarises the perspectives of educational quality from different scholars.

**Table 2-2: Different perspectives of quality**

| Scholars | Quality as | | |
|---|---|---|---|
| Biggs (2001) | An outcome | A property | A process |
| Harvey & Green, (1993) | Value for money | Fitness for purpose | Transforming |
| Sayed (1997) | Value for money | Fitness for purpose | Efficiency/Excellence |
| Chitty (2002) | Human fulfilment | Preparation for the world of work | An essential element of social progress and social change |
| Barrett et al. (2006) | Equality | Relevance, sustainability | Effectiveness, efficiency |

Evidence had shown that "the biggest effects on student learning occur when teachers become learners of their own teaching" (Hattie, 2013, p. 22). Thus, teachers, especially in Singapore are strongly encouraged and constantly reminded to improve the quality of their teaching by continuously sharpening their skills through professional development.

## 2.6. Professional Development

Professional development had the potential to change teachers' beliefs about their individual and collective efficacy. Both types of efficacy were important to teachers' persistence, drive and success (Zimmerman, 1995). A strong sense of efficacy also influenced teachers' expectations, attributions and goals (Day, 1999). It made a difference in teacher motivation, which in turn affected how well their students achieved (Bandura, 1997; Goddard, Hoy, & Woolfolk Hoy, 2000).

Schools could manage the quality of the majority of teachers at their school by providing professional development or other avenues to develop the instructional

skills of their teaching staff (Hattie, 2013). Research had suggested that teachers could improve substantially as they acquired more experience and expertise, particularly in their first few years of teaching (Rockoff, 2004). Developing the skills of the teachers at a school through professional development might be both the most viable and the most effective option for schools looking to improve the quality of their teaching force. Teacher development was considered likely to be an important part of teacher quality in all schools (Lankford, Loeb, & Wyckoff, 2002).

Teacher professional development and continuing education were widely accepted to span a teacher's entire career (McIntyre & Byrd, 1998). Professional development had helped teachers develop the content knowledge and skills they needed to succeed in their classrooms (Vrasidas & Glass, 2004). As content areas, teaching approaches and pedagogies changed and developed, teachers had to develop and grow over the course of their careers. According to Fullan (2007), professional development was "the sum total of formal and informal learning experiences throughout one's career" (p. 326).

Professional development or learning had taken various forms. It could be collective or individual development, continuing education, in-service education, group work, team curriculum development, peer collaboration and peer support (Fullan, 2007). Sometimes professional learning was what happened when teachers attended a conference, workshop or curriculum day presentation. Sometimes it happened when a teacher sat down with a colleague to plan a lesson or discuss a student's work. Professional learning could be promoted through a casual piece of advice from a colleague and one's own reading and through attendance at an international conference and exposure to the ideas of a globally-recognised educational expert. Professional learning could be concerned with promoting professional awareness such as briefing on a new policy initiative, with developing teaching competencies in the form of a demonstration lesson and with embedding and refining new through lesson observations and feedback (Cole, 2012). Those programs enabled teachers to receive and act on continual feedback on how to better teach students (Fuchs & Fuchs 1985, 1986; Gates Foundation, 2010; Hattie, 2012; Jacob & Lefgren, 2008; OECD, 2013; Rockoff & Speroni, 2010).

High performing education systems around the world had intensive professional development programs in schools (OECD, 2010). Those programs include:

- Teacher mentoring and coaching that was intensive and involved regular classroom observation and feedback (Rockoff, 2008; Smith & Ingersoll, 2004). Effective mentoring and coaching helped teachers diagnose their students' learning needs, developed classroom management skills and pedagogy specific to their subjects (Barber & Mourshed, 2007; OECD, 2010).
- Lesson and grade groups, in which teachers worked together to plan lessons, examined student progress, and discussed alternative approaches. Teachers improved by observing each other's classrooms, identifying and solving problems as they arose, and jointly improving each student's learning (Bolam, McMahon, Stoll, Thomas, & Wallace, 2005; Elmore, 2007). Working and learning together also helped to develop leadership skills and

prevent stress and burnout (OECD, 2009; Phillips, 2003; Sargent & Hannum, 2009).

- Research groups of teachers identified a research topic (how to introduce a new pedagogy, for example) and analysed the evidence of what worked and what did not.

Teachers then trialled the practices that were shown to work and evaluated their impact on students. If their impact was positive, they became part of learning and teaching across the school (Jensen, 2012). The process helped teachers to evaluate their own teaching, and to discover how they should change their teaching to benefit students (Christianakis, 2010). Vrasidas and Glass (2004) found that

> teachers, like students, learn best when they are actively engaged in meaningful activities; when they collaborate with peers, exchange ideas, provide and receive peer feedback; when they reflect critically on what they are doing; when they work on real-world, challenging, authentic activities; when their work is constantly evaluated and when they are intrinsically motivated. (p. 2)

On a similar note, Cohen and Hill (2000) indicated that professional learning was more likely to improve student learning outcomes if it increased teachers' understanding of the content they taught, how students learnt the content and how to represent and convey the content in meaningful ways. Effective professional development programs drew teachers into an analysis of their current practice in relation to professional standards for good practice. Ingvarson, Meiers and Beavis (2005) postulated that the level of school support had substantial, though indirect effects on the extent to which program outcomes were achieved. These assertions echoed the many years of studies done and evidence analysed of what works in professional development for teachers (CUREE Limited, 2008).

Over the years, schools had struggled to provide professional learning that actually produced better outcomes for students (OECD, 2009). Teacher development regularly ignored one of the great truths of schooling: the best professional development teachers could receive was to directly help them teach their students (AITSL, 2014). Although many school systems knew that and, more recently, had tried to implement good programs in schools (Cole, 2012), the results had generally not been good. A big stumbling block was the failure to provide the necessary time for effective professional learning programs (Elmore, 2007). Not allocating enough time made any professional learning program–however well intentioned–a poor one. The conclusion that stood out was that professional development was more likely to be successful when it involved collaboration between staff sustained over time, and that effective mentoring and coaching was important to professional development.

### 2.6.1. Teacher Collaboration

Yet another attribute which was seldom even considered as a component of teacher quality, but nevertheless important given the increased emphasis on collaboration between general education teachers and those who focused on working with students with special needs (for example, Abbott, Walton, Tapia, & Greenwood, 1999; Bauer, Johnson, & Sapona, 2004; Pugach, 2005) was that quality teachers "collaborate with other teachers, administrators, parents, and education professionals

to ensure student success, particularly the success of students with special needs and those at high risk for failure" (Goe, Bell, & Little, 2008, p. 8).

Recently, in Singapore, there was a concerted effort to encourage teachers to collaborate. Teacher collaboration could be interpreted as a group of teachers sharing and critically interrogating their practice in an ongoing, reflective, collaborative, inclusive, learning-oriented, growth-promoting way (Mitchell & Sackney, 2011; Toole & Louis, 2002); operating as a collective enterprise (King & Newmann, 2001). This phenomenon is commonly termed professional learning communities (PLCs). Good professional learning programs ensured that teachers spent much more of their time in active professional collaboration that had a positive impact on teaching and learning (Hord, 1997).

Seashore, Anderson and Riedel (2003) elaborated:

> By using the term professional learning community, we signify our interest not only in discrete acts of teacher sharing, but in the establishment of a school-wide culture that makes collaboration expected, inclusive, genuine, ongoing and focused on critically examining practice to improve student outcomes. …The hypothesis is that what teachers do together outside the classroom can be as important as what they do inside in affecting school restructuring, teachers' professional development and student learning. (p. 3)

Collaborations among teachers came in the form of deprivatising classroom practice through peer observations; joint construction of classroom and assessment tasks; developing shared norms and understanding of what needed to improve; flexibility to form and reform self-selected groups to address new student learning challenges and forming professional community (Louis & Gordon, 2006). Central to the notion of professional community was an ethic of interpersonal caring permeating the life of teachers, students and school leaders (Hargreaves & Giles, 2003; Louis, Kruse, & Bryk, 1995).

Flexible schools that used collaborative problem-solving strategies and which promoted greater teacher affiliation with the school raised teacher morale (Macmillan, 1999). In the more flexible schools, teachers believed they could contribute to positive school change and that their ideas would be sought after and used (Macmillan, 1999). Research evidence showed that when teachers worked together on a sustained basis, the collaborative and sustained continuing professional development (CPD) was linked to positive effects on students' learning, motivation and outcomes (CUREE Limited, 2008).

However, it was a mistake to assume that all collaboration among teachers was good (Hargreaves, 2003). Hargreaves did not deny the existence of micro-politics, but conflicts were managed more effectively in some PLCs. "Professional learning communities demand that teachers develop grown-up norms in a grown-up profession – where difference, debate and disagreement are viewed as the foundation stones of improvement" (Hargreaves, 2003, p. 163).

Active collaboration, in which teachers learnt from each other through team teaching, joint research projects and classroom observation and feedback had a positive impact on students (Little, 2002). Collaboration that concentrated on administrative issues did not (Clement & Vandenberghe, 2000; Rosenholtz, 1989).

Unfortunately, most teachers spent too little time on active collaboration and too much time on administration and coordination (OECD, 2009).

Achinstein (2002) concluded from case studies of two urban, public middle schools, that when teachers enacted collaborative reforms in the name of community, what emerged was often conflict. The policy and practice enacted from research on community often did not capture those conflicts, instead offering a simplified and overly optimistic vision of collaborative reforms. Nevertheless, in Singapore, two recent initiatives provided platforms for teachers to work in collaboration namely the Learning Circle and Lesson Study.

### 2.6.2. Learning Circle

A learning circle was a teacher-initiated classroom investigation. It comprised four to ten teachers who came together with a facilitator to collaboratively identify and solve common problems, challenge assumptions and address real classroom concerns. It was in line with Darling-Hammond's (1998, p. 8) conclusion that "professional development also means providing occasions for teachers to reflect critically on their practice and to fashion new knowledge and beliefs about content, pedagogy and learners". Thus it focused on the professional development of the individual teacher and the participants decided what to work on.

The learning circle process aimed to provide teachers with a strategy to reposition themselves as learners in their own classroom and to help them start on a journey of knowing who they were (Tang, 2001). "Teaching has to become a learning profession; teachers will have to learn in different ways and reconstruct themselves as advanced specialist practitioners of learning with their pupils as their apprentices" (Tripp, 2002, p. 4).

Learning circle participants were introduced to processes of dialogue and the twin concepts of "co-learner" and "critical friend" (Costa & Kallick, 1993). These concepts were taught to participants in order to create the environment of trust and mutual respect essential to genuine dialogue. Co-learners meant that everyone, regardless of their professional status and varied experiences could meet others on the same platform and recognized each other's expertise. A critical friend was seen as a trusted person who asked provocative questions, provided data to be examined through another lens and offered critique of a person's work as a friend. "A critical friend takes the time to fully understand the context of the work presented and the outcomes that the person or group is working toward. The friend is an advocate for the success of that work" (Costa & Kallick, 1993, p. 49).

The purpose of creating a good environment for dialogue was to encourage and enable participants to take risks by surfacing their assumptions, clarifying their mental models, expounding their personal theories, experimenting with new ideas and practices and sharing their successes and problems (Bolam et al, 2005; Elmore, 2007). Those were all essential for learning circles to be an effective strategy for teachers to share their knowledge, skills, expertise and to identify and articulate their tacit knowledge. It had been established earlier that one of the benchmarks of quality teachers in Singapore was their contribution to their colleagues and the school and the Learning Circle offered a platform for teachers to collaborate and contribute their expertise in teaching.

### 2.6.3. Lesson Study

Lesson Study, on the other hand, was a process in which groups of teachers reviewed their lessons and how to improve them, in part through analysis of student errors, thus providing not only a tool for continuous improvement but one of the most effective mechanisms for teachers' self-reflection (Schleicher, 2011). Teachers worked together to research teaching materials, developed lesson plans and practised teaching lessons. Underlying the practice of Lesson Study was the idea that teachers could best learn from and improve their practice by seeing other teachers teach (Isoda, 2007).

There was also an expectation that teachers who had developed deep understanding of and skill in subject matter pedagogy should be encouraged to share their knowledge and experience with colleagues. In fact, Morse (2000) suggested that collaboration was an educational reform imperative through this statement:

> Educators will recognize they are not alone in searching for new modes of human exchange. The fact is, this quest for a new way of human exchange is endemic in the social order…Rejecting collaboration is not an option. (p. xi)

Both learning circle and lesson study were forms of professional development and collaboration among teachers that might serve to improve teaching and thus student outcomes. However, there might be a tension between teacher collaboration and teacher appraisal. Especially in Singapore, where individual teachers were often held accountable for the academic results of their students and appraised yearly, teacher collaboration might be compromised.

## 2.7. Teacher Appraisal

Teaching was and still is a profession difficult to assess. Dickson, Pollock and Troy (1995) pointed out that "education may be unique in the sense that it is difficult for the customer to assess the quality and relevance of the service" (p. 63). That notion was supported by the fact that quality teaching initiatives were diverse both in nature and in function (Hernard & Leprince-Ringuet, 2008). Some sprung from a top-down initiative, others started at a grass-roots level; some were centred on pedagogical methods, others on quality environments in schools; some concerned only a couple of teachers, others the whole school; some promoted teamwork while others focused on improving the learning environment of the student.

As an outcome of increasing accountability pressures, it had been acknowledged that teacher effectiveness might be the single most important school-based factor in improving student achievement (Goe, Bell, & Little, 2008; Rivkin, Hanushek, & Kain, 2005; Rockoff, 2004). However, which aspects of teaching mattered most and how to measure them was less understood (Darling-Hammond, 2000; Hanushek & Rivkin, 2010; Ingvarson & Rowe, 2008; Nye et al., 2004; Rockoff, 2004). "Most claims for 'findings' are derived from econometric research – especially from those studies that merely employ conceptualisations and proxy 'measures' of quality in terms of teachers' qualifications, experience, and students' academic outcomes" (Ingvarson & Rowe, 2008, p. 1). Those forms of measurement that relied mostly on aggregated data, typically failed to conceptualise and 'measure' teacher quality in terms of what teachers should know and be able to do (Haycock,

2004). The lack of measurement, distributional and structural properties of the data for response and explanatory variables frequently yielded misleading interpretations of findings for both policy and practice (Ingvarson & Rowe, 2008).

In the Singapore context, the performance management system maintained control over what counted as quality teachers and quality teaching. Teachers were made accountable for the quality of their teaching through classroom observation; their students' outcomes (both academic and character development); and, professional development of self and others as well as contributions to organisational development.

Pinar (2012) explained that under a performance management and accountability model for education, teachers struggled between the possibilities in education and the other forces weighing on them. He encouraged teachers to claim their space to teach. "Without reclaiming our academic-intellectual freedom—we cannot teach. Without intellectual freedom, education ends; students are indoctrinated, forced to learn what the test-makers declare to be important" (Pinar, 2012, p. 10). Teachers were instructed to "learn the system" and "conform to the style". How, with the focus of the enhanced performance management system that maintained control of what counted, did school teachers dare to help students create, imagine and explore? Thus, the style under EPMS potentially limited possibilities for teachers and these questions arose as to the effectiveness of this accountability method in appraising quality:

- What is the Singapore government's expected outcome for implementing or engaging in the process of ranking teachers?
- What is it that they are hoping to achieve?
- Is there underlying research that has shown that the appraisal process will make a difference to the quality of teaching or to the quality of teachers?

Although the answers to these questions were pertinent to be able to understand the underlying reasons behind the appraisal system of teachers, they were not within the scope of this study. Nevertheless, how the appraisal system was implemented would be unpacked to provide the contextual background for the current study.

According to Schleicher (2011, p. 40), teacher appraisal was advancing from checking whether teachers were doing their job to helping them improve. Singapore, for example, paid a great deal of attention to the development of teachers through the conceptualization and implementation of a performance management system called Enhanced Performance Management System (EPMS) which was fully implemented in 2005.

EPMS was part of the career and recognition system under the "Education Service Professional Development and Career Plan" (Edu-Pac) for teachers to develop their potential to the fullest (Teo, 2001). The structure had three components: a career path, recognition through monetary rewards, and an evaluation system. Edu-Pac took cognizance that teachers had different aspirations and provided for three career tracks for teachers in Singapore: the **Teaching Track** that allowed teachers to remain in the classroom and advance to a new pinnacle level of a Master Teacher; the **Leadership Track** that provided opportunity for teachers to take on leadership positions in schools and the Ministry's headquarters and the **Senior Specialist Track** where teachers joined Ministry's headquarters and became

a strong core of specialists with deep knowledge and skills in specific areas in education that would break new ground and keep Singapore at the leading edge (Teo, 2001). The overall purpose of the EPMS was human capacity building for a resilient education system. The premise and purpose of enhanced performance management system could be summarised in the figure below.


**Figure 2-3: Premise and Purpose of EPMS (Lee, n.d.)**

EPMS offered the staff in schools greater clarity of tasks and job functions and the competencies required. It was supposed to offer greater objectivity of measurement of performance that led towards equity, effectiveness and efficiency. Research by Kelly, Ang, Chong and Hu (2008) indicated that primary school teachers in Singapore had more positive attitudes towards appraisal if criteria were controllable, clear and fair. According to the Centre for Teaching Quality (2007), individual teachers should be held responsible for moving specific students forward from where they started. Although target goals were important, they should not be arbitrary. It was also suggested by the Centre for Teaching Quality (2007) that the measurement of teacher performance needed to focus on the starting line, not just the finish line.

Teachers who reported greater trust in their appraiser and more positive assessment of their appraiser's credibility reported more cooperativeness amongst teachers in their school (Kelly et al., 2008) as the individual teacher could not bear the responsibility of his/her students' achievements alone. Carter (2009) critiqued the image of the "teacher-as-saint" (p. 86). The public, he contended, expected teachers to work miracles and blamed them when the miracles somehow did not materialize. In an online forum on teacher effectiveness, Walsh (2010) pointed out that those "superstar" teachers were relatively rare. And although good teaching was integral to student success, it could not by itself supersede the many other factors that contributed to educational success or failure.

Several studies argued that the focus on greater teacher accountability and high stakes student testing had forced teachers to follow a "drill and kill" curriculum (Jerald, 2006, p. 1). The constant and increasing pressure on teachers had made testing and accountability a primary cause of teachers' discomfort (Darling–Hammond & Sykes, 2003). Teachers reported being unhappy teaching in schools that had been designated as failing (Figlio, 2001).

Yet, teachers in Australia said they would receive no recognition if they improved the quality of their teaching or were more innovative in the classroom (OECD, 2009). They reported that appraisal of their work had little impact on their teaching and was largely just an administrative exercise. Moreover feedback to improve teaching was often poor (OECD, 2009). It is yet to be seen if Australia will adopt the performance-based pay system for its teachers. Fullan (2007) had concluded that effective schools establish professionally collaborative cultures and argued that attention should shift from focusing on individuals (e.g. merit pay, career ladders, etc.) to developing schools as professional learning communities (PLCs).

### 2.7.1. Performance-based pay

In Singapore, with teacher appraisal came performance-based pay. Performance-based pay implied "rewarding something other than credentials and years of experience, both of which have been shown to be poor indicators of teachers' effectiveness" (OECD, 2012, p. 6). The performance management system maintained control over what counted as quality teachers and quality teaching. In order for teachers to be deemed a quality teacher by the system, they needed to be competent in four main areas. Table 1-1 in the previous chapter had illustrated the four competency clusters and 13 competencies that were key in enabling teachers to achieve a good ranking in order to be rewarded in the form of an annual performance bonus.

The one key component of Singapore's evaluation system was a measure of student growth in performance on state standardized assessments. However, there were many teachers who did not teach in a tested subject or grade, for example music and physical education (Kane, Taylor, Tyler, & Wooten, 2011) thus complicating the evaluation process further. In thinking about strategies for measuring teacher effectiveness for purposes of recognizing and rewarding teachers, as well as informing teacher education and professional development programs, it was important to consider both the availability and accuracy of particular measures and the potential incentive effects of their use (Prince, Schuermann, Guthrie, Witham, Milanowski, & Thorn, 2009). For any high stakes purpose associated with personnel decision making or compensation, multiple measures should be used, as all measures gave a partial picture of teacher performance and were subject to error.

Thus, there were arguments for and against performance-based pay. Empirical analyses on the effects of performance-related pay had not generally been conclusive due to difficulty of assessing how performance was measured, what it was and what the scale of the rewards was (OECD, 2012). If teachers met the objective as stated by others, taught the content prescribed by others, would they become a homogenized mass of instructors, void of any personal differences? What did it do to teachers when they knew they had not sparked learning for their students, but had taught the content approved by the administration? To capsize homogenization in teaching, Darling-Hammond (2007) asked, "What would we need to do to graduate

all of our students with the ability to apply knowledge to complex problems, communicate and collaborate effectively and find and manage information?" (p. 13). From the question, Darling-Hammond was implying that teachers had the ability to teach students to apply what they have learnt to solve real life problems.

However, Fenstermacher and Richardson (2005) noted that although it was logical to infer that teaching produced learning and what teachers did determined whether students learnt, it did not make much sense to think of successful teaching arising solely from the actions of a single teacher. "Learning does not arise solely on the basis of teacher activity. Success at learning requires a combination of circumstances well beyond the actions of a teacher" (Fenstermacher & Richardson, 2005, pp. 190-191). Many other factors influenced student gains beyond teachers' efforts, including school resources and policies that shaped the conditions of learning (class sizes, availability of specialists, administrative actions), materials that were available and the teaching strategies that were possible, home situations that could affect students' ability to attend school and focus productively on school work at school and at home and the prior education of students.

Nevertheless, based on the fact that about half of OECD countries including Singapore reward teacher performance, policy makers of these countries saw a positive relationship between performance-based pay and student outcomes. In some countries, outstanding teaching performance was a criterion for decisions on a teacher's position on the base salary scale. However, in Singapore as well as the Czech Republic, Denmark, England, Estonia, Finland, Mexico, the Netherlands, Norway, Poland and the Slovak Republic, outstanding teaching performance was used as a criterion for deciding supplemental incidental payments that were paid annually (OECD, 2012).

Studies of the impact of performance-based pay revealed no consistent relationship between average student performance in a country and the use of performance-based pay schemes. It was found that in countries with comparatively low teachers' salaries (less than 15% above GDP per capita), student performance tended to be better when performance-based pay systems were in place, while in countries where teachers were relatively well-paid (more than 15% above GDP per capita), the opposite was true. The maximum salary for a lower secondary teacher in Singapore was twice the GDP per capita (NCEE, 2012) thus suggesting that the performance-based salary system in Singapore might be counter-productive (Malcomson, 1999).

Kingdon and Teal (2007) found that in India – after accounting for student ability, parental background and the resources available – private schools got significantly better academic results by relating pay to achievement; government schools did not. As the majority of schools in Singapore were government-run, it might be that performance-based pay was not serving its function there. There was also ample evidence showing that most teachers joined the service not for the money but they were driven by their passion and the calling to make a difference in their students' lives making monetary incentives or public tributes unnecessary (Acker, 1999).

The argument against performance-based pay was strengthened with the fact that teachers impacted on student learning, both inside and outside of the classroom and that might be hard to quantify (Rivkin, Hanushek, & Kain, 2005). Teachers have

traditionally complained that principals could not explain why they gave a bonus to one teacher but not another (Murnane, Singer, Willett, Kemple, & Olsen, 2009). It was also argued that teacher characteristics were poor predictors of student achievement (Goe, 2007; Goldhaber & Hansen, 2010). However, value-added measures were considered better predictors of student achievement than were observable teacher characteristics (Braun, Chudowsky, & Koenig, 2010; Goldhaber & Hansen, 2010). Value-added measures of teacher "effects" varied for a given teacher from year to year, class to class and subject to subject. They were influenced by the effects of students' prior year teachers as well as other student variables. Therefore, the system should be designed to operate so that teachers were not penalized for teaching the students who had the greatest educational needs. Incentives should operate to recognise and reward quality and effective teachers who worked with challenging students. This required sensitivity to student and classroom characteristics in an evaluation system that did not undermine teachers' beliefs in their teaching efficacy.

## 2.8. Teachers' beliefs system on teaching and learning

A belief is an acceptance by the mind that something is true or real, often underpinned by an emotional or spiritual sense of certainty (OED Online, 2014). Beliefs operated as a filter through which new information was viewed, evaluated and acted upon (Pajares, 1992). Hattie (2013, p. 22) argued that "teachers' beliefs and commitments are the greatest influences on student achievement over which we have some control".

In a study done by Alexander, Murphy, Guan and Murphy (1998) in Singapore and United States, on teachers' and students' understandings of knowledge (from prior experience and formal instruction in school) and beliefs, both teachers and students suggested that "there are those objective dimensions of one's understanding (knowledge) that are factual in nature and learned in school but of limited importance or value. In contrast, there are those personal beliefs that may be unproven or even questioned in schools and society, but which are nonetheless true and which serve as the guiding forces in one's life" (Alexander, Murphy, Guan, & Murphy, 1998, p. 114). Beliefs were similar to attitudes and knowledge in as much as they originated from personal experience. Much scholarly debate attempted to determine just how beliefs, attitudes, and knowledge differed. Although it was difficult to distinguish attitudes from beliefs, it was implied that beliefs had a motivational component and played a role in driving behaviour (Graham & Weiner, 1996; Pajares, 1992).

Teachers held beliefs that informed their practice but might be in conflict with their physical and social realities. Teachers could not assume an understanding of another person's decision-making even when they shared a knowledge base (Alexander, et al., 1998). Therefore, teachers had to dig deeper to try to uncover the beliefs, the personal tenets that drove their own, their colleagues' and their students' behaviour. The need to understand teachers' beliefs was important for this study as teachers' actions were based on their underlying belief system.

Teachers' beliefs about the role of education could filter down and impact their epistemological beliefs. These included "beliefs about the nature of knowledge

and the processes of knowing" (Hofer & Pintrich, 1997, p. 117). They included beliefs about what criteria should be used to determine the validity and value of different types of knowledge and who could be the source of knowledge. Was it the teacher, society as a collective, or some singular, external authority?

Whatever teachers believed would ultimately impact favourably or otherwise on the way they taught (Davis & Andrzejewski, 2009). It had been argued that teachers held beliefs about themselves such as who they were in relation to curriculum, colleagues, and students; perceived strengths and weaknesses; values; self-efficacy; and matters about which they felt responsible. Teachers' beliefs about who they were as instructors might be different from their beliefs about themselves as classroom managers or content experts (Davis & Andrzejewski, 2009).

### 2.8.1. The Impact of teachers' beliefs on teaching and learning

Teacher beliefs were critical in periods of innovation and curriculum change (Keys, 2005, 2007; Van Driel, Bulte, & Verloop, 2007). There was growing consensus that educational innovations would not succeed if the emphasis was limited to developing specific skills, without taking into account teachers' beliefs, intentions and attitudes (Tobin & McRobbie, 1996).

Teachers' beliefs were a form of subjective reality (Williams & Burden, 1997). Their beliefs guided their decision-making, behaviour, and interactions with students and, in turn, created an objective reality in the classroom, what students experienced as real and true. Teachers' beliefs shaped their planning and curricular decisions, in effect determining what should be taught and what path instruction should follow (Williams & Burden, 1997). Therefore teachers' beliefs were not always a reflection of accepted notions in the field.

Turner, Christensen and Meyer (2009) noted that teachers' beliefs about learning appeared to rely on a great deal of visible, behavioural evidence rather than on assessment of student meaning-making. Nuthall (2004) argued that for teachers to understand the relation between teaching and learning, they must understand how instruction, management and assessment influenced student experience and behaviour; how the sociocultural context (classroom instruction, interpersonal relationships, and intrapersonal factors) influenced teaching and learning; how individual students made sense of their classroom experiences.

Teachers' beliefs about learning included those related to how people learnt and what it meant to have learnt (Hofer & Pintrich, 1997). For example, teachers who had essentialist views of education were likely to believe that only certain kinds of knowledge were valid. They, therefore, were likely to focus their efforts on having students learnt those kinds of knowledge. Similarly, epistemological beliefs impacted teachers' understandings of what it meant to teach and how teaching was best accomplished. For example, teachers who adopted a more behaviourist perspective about learning were likely to enact instructional techniques such as direct instruction, founded on the notions that teachers knew and students learnt when teachers gave them knowledge (Skinner, 1976).

Alternatively, teachers who adopted a constructivist perspective believed the self could be a valid source of knowing and were likely to structure their classrooms

in ways that emphasized students' contribution to the learning process (Holt-Reynolds, 2000). These teachers tended to believe that teachers and students knew and learnt together and that learning happened best through dialogue and shared interaction (Barron, 2003).

Teachers' beliefs about academic content, particularly with regard to status, stability, sequence, and scope, shaped their practice (Stodolsky & Grossman, 1995). These beliefs informed the concepts teachers emphasized, the way they ordered and organized material, the student understandings and misunderstandings they anticipated, and their instructional and assessment decisions.

Teachers' beliefs about their students involved what it meant to be a student, how students should relate to teachers, and the impact of student differences on classroom practice and culture (Ryan & Deci, 2000). In order for students to assume responsibility for their own learning they must feel autonomous, competent and connected to their classmates and teachers (Reeve, 2006).

According to Pianta (1999) all students needed to experience close relationships with their teachers. However, Davis (2003) suggested that teachers might regard this need as varying with students' development or social group. It was found that teacher behaviours appeared to be associated with teacher expectancy effects (Rosenthal, 1973). These were "climate", whether the teacher was warm and encouraging to the pupil; "feedback", whether the teacher offered evaluative comments on the pupil's ongoing performance; "input" that is how much the teacher tried to teach the child and "output" that is the number of opportunities the teacher gave the child to respond (Hall, Rosenthal, Archer, Di Matteo, & Rogers, 2001, p. 163).

Beliefs created meaning for teachers because they helped teachers make sense of what they experienced in the classroom. Generally, teachers set goals and standards based on their beliefs in the abilities of their students. The literature on teachers' beliefs suggested teachers might simultaneously hold beliefs that were inconsistent, in conflict, and even contradictory and still saw themselves as a teacher. For example, the way teachers interacted with problem students might vary depending on their beliefs. When teachers believed the source of behaviour problems was a lack of competence as opposed to an attempt to usurp control in the class, they tended to respond with more caring and were more likely to help those students achieve competence (Brophy & Good, 1970; Rohrkemper & Corno, 1988). Clashes between teachers' and students' beliefs might have negative instructional and interpersonal consequences (Blackburn, 2004; Irvine, 2003).

Teachers were likely to be the most effective when their beliefs were aligned with each other and with the field (Korthagen, 2004). Beliefs were intimately tied with teachers' sense of self (be it their personal identities or their teaching identities). This included teachers' beliefs on their efficacy or capabilities. Teachers with high assurance in their capabilities approached difficult tasks as challenges to be mastered rather than as threats to be avoided (Bandura, 1994). Such an efficacious outlook fostered intrinsic interest and deep engrossment in activities. Teachers would set themselves challenging goals and maintain strong commitment to them. They heightened and sustainede their efforts in the face of failure. These teachers quickly recovered their sense of efficacy after failures or setbacks and attributed them to insufficient effort or deficient knowledge and skills which were acquirable. They approached threatening situations with assurance that they could

exercise control over them. Such an efficacious outlook produced personal accomplishments, reduces stress and lowered vulnerability to depression (Bandura, 1994).

On the other hand, teachers who lacked self-efficacy tended to feel threatened in the face of information that challenged their beliefs, such as policy inducement to reform, to modify/include new populations of students, or to innovate with new technologies (Fecho, 2001; Gregoire, 2003) and might dismiss them as being theoretical, unworkable, or even simply wrong (Kennedy, 1997). While there is little research on teacher beliefs and their links to practice in Singapore, what is available is highly informative. An early study noted that teachers' curriculum beliefs were diverse and weak, and were aligned to the beliefs held by school authorities (Yeoh, Lam, & Foong, 1994). They also noted an unresolved tension between actual practices of preparing students for examinations and teacher-centred pedagogy and the ideal of co-operative and child-centred inquiry learning. This emphasis on teacher-centred practices and student achievement was confirmed by subsequent studies (see Chew, Ng, Lee, & D'Rozario, 1997; Gopinathan, Leo, Myers, Sharpe, Stoll, & Mortimore, 2000).

Deng and Gopinathan (2003) noted that many Singapore teachers viewed knowledge as static and learning as entailing the acquisition, memorization, regurgitation and application of knowledge. Research in Singapore showed "a very tight coupling between the high stakes summative assessment system and classroom instruction" (Hogan & Gopinathan, 2008, p. 370). There was limited evidence of formative assessment, interdisciplinary work, differentiated instruction and classroom enquiry, although the situation had recently improved with MOE's support for action research. A later quantitative study revealed a general consistency in teacher beliefs about pedagogies, knowledge and learning and that teachers believed and practised both teacher-oriented and learner-centred pedagogies and assessment methods (Jacobson, So, Teo, Lee, & Pathak, 2008).

Finally, teachers' beliefs led to teachers' morale. Literature in the field of teacher education often suggested that the ideal conditions for belief and morale change included bringing pre-existing beliefs to consciousness, creating conditions in which pre-existing beliefs broke down, helping teachers to judge conflicts as challenging rather than threatening and providing teachers with the necessary time to reflect on their beliefs and reconcile them with the field and their current teaching context (Davis, 2006; Gregoire, 2003).

## 2.9. Teacher morale/satisfaction

Morale had been thought of as a feeling, a state of mind, a mental attitude and an emotional attitude (Mendel, 1987). When a healthy school environment existed and teacher morale was high, they tended to feel good about each other and felt a sense of accomplishment from their jobs (Hoy & Miskel, 1987). Where morale was high, schools showed an increase in student achievement and positive effect on pupil attitudes (Ellenburg, 1972). Raising teacher morale level was not only making teaching more pleasant for teachers, but also learning more pleasant for the students. It created an environment that was more conducive to teaching and learning (Miller, 1983).

Satisfaction and dissatisfaction in teachers' work affected their performance. Thus identification of teachers' job satisfaction level was essential. Teachers needed to be able to keep the freshness and spark that frequently marked a novice in the field, while at the same time embedding freshness in wisdom and thoughtfulness (Berman, 1987). When teachers' sense of self-determination, resilience and purpose were supported by friends and family, teachers related to students in a qualitatively different manner (Maehr, Midgley, & Urdan, 1992; Mansfield, Beltman, & Price, 2014)

The conceptual domain of teacher's job satisfaction was broad, because it included all characteristics of the job itself and the work environment, which teachers might find rewarding, fulfilling, and satisfying, or frustrating and unsatisfying (Snipes, Oswald, LaTour, & Armenakis, 2005). Because of their relative isolation from other adults, teachers had little opportunity to share their successes with colleagues and administrators. This results in greater reliance on student responsiveness for teachers' professional satisfaction (Goodwin, 1987). The evaluation of teaching satisfaction involved not only measuring the affective state of teachers but cognitive and judgmental processes as well (Ho & Au, 2006; Locke, 1976).

Research had shown that low teaching satisfaction was the result of work stress resulting in psychological distress and low self-esteem (Day, 2008; Ho & Au, 2006; Stenlund, 1995). Chronic stress would result in burnout (Cunningham, 1983). Teachers under stress often experienced feelings of exhaustion, irritability and tension (Dunham, 1984). In short, the morale of teachers could have far-reaching implications for student learning, the health of the organization, and the health of the teacher (Mendel, 1987). Poor morale might lead to burnout.

### 2.9.1. Teacher fatigue/burnout

Scholars defined teacher burnout as a condition caused by depersonalization, exhaustion and a diminished sense of accomplishment (Schwab, Jackson, & Schuler, 1986). A psychological model of how stress led to burnout described it as a syndrome resulting from teachers' inability to protect themselves against threats to their self-esteem and well-being (Kyriacou & Sutcliffe, 1978). In this model, teachers' coping mechanisms were activated to deal with demands. When those coping mechanisms failed to stem the demands, then stress increased and threatened the teachers' mental and physical well-being ultimately leading to teachers quitting or burning out. While work appeared as a major source of stress for working people, it was found that teachers appeared to experience more stress through work than non-teachers (Cox & Brockley, 1984). In-depth studies had established a clear linkage between prolonged stress and burnout (Blasé 1986).

Haberman (1995) used a behavioural definition of burnout and defined it as a condition in which teachers remained as paid employees but stopped functioning as professionals. They went through the motions of teaching with no emotional commitment to the task and no sense of efficacy. They had come to believe that what they could do would make no significant difference in the lives of their students and saw no reason to continue caring or expending any serious effort. They had become detached job-holders who felt neither responsible nor accountable for students' behaviour, learning, or anything else. Their only goal was to do the minimum required to remain employed (Haberman, 1995).

Teacher burnout was regarded as a serious problem. For those suffering from it, burnout might dramatically reduce their quality of life, and might also have negative effects on both family and working life. Teachers' burnout could affect their job performance by decreasing the quality of teaching, which in turn influenced children's academic achievement (Blandford, 2000).

A study done by Naylor and Malcolmson (2001) in British Columbia on teachers' workload and stress found that secondary English teachers worked more than 53 hours a week while school classes were in session. This included preparation and marking which together account for more than 19 hours of an average teacher's work week. The teachers also reported that their workload levels had increased in recent years and showed their dissatisfaction in areas such as organization of preparation time, lack of administrative support, onerous compliance measures and much tougher emotional conditions than they expected to face, particularly in economically depressed areas (Marshall, 2013). As a result, teachers adjusted their teaching methods to cope with workload pressure rather than pedagogical factors (Marshall, 2013).

Low salaries as a cause of stress was also frequently expressed by teachers. It was found that many teachers in British Columbia had to supplement their income by working during the summer holidays due to receiving lower salaries relative to other professionals coupled with the high cost of living (Naylor & Schaefer, 2002). Teachers who moonlighted worked 10 or more hours per week and believed that extra jobs took a toll on their energy and morale (Henderson & Henderson, 1997). Thus the health of the teachers was compromised as a result of prolonged stress (Dinham & Scott, 2000; Drago et al., 1999, Naylor, 2001a, 2001b; Schaefer, 2001a, 2001b).

Another study conducted by Smith and Goh (2003) on the prevalence of burnout in secondary school physical education teachers in Singapore found the bureaucratic dimension to be the source most related to burnout. Surprisingly, excessive paper work and lack of time were cited as factors contributing to burnout by physical education teachers whose subject required little grading (Smith & Goh, 2003). The lack of administrative support was also frequently cited as a critical condition of work that caused stress among teachers (Tapper, 1995).

West and West (1989) asserted that some stress was inevitable and might be beneficial. However, they cautioned, especially for teachers, that too much stress, depending on individuals, might be a predictor of poor teacher performance, absenteeism and teacher turnover. This was true in teaching where teacher effort and enthusiasm had a positive impact on student learning. Teachers valued ethical and humanistic views more than teaching skills (Çermik, 2011). Therefore, when teachers were provided with what they needed to remain inspired and enthusiastic in the classroom, students as well as teachers would be the beneficiaries (West & West, 1989).

So far, factors about the teachers that impacted on what they did and therefore the capacity to demonstrate quality teaching (or be a quality teacher) had been discussed. In the following section, it is established that teachers' morale or

efficacy could be influenced by mediators. Mediators here refer to factors that either hinder or help a teacher to do quality teaching.

## 2.10. Mediating factors in Singapore

Although in other jurisdictions the monitoring of teachers and teaching might be moderated and monitored by bodies independent of government, in Singapore's case, the Ministry of Education (MOE) which is run by the government is the sole moderator responsible for all teachers in Singapore's state education system.

There were two approaches which determined what was considered to be quality teaching in Singapore according to an official stance. There were the professional standards that acted as a proxy for what quality characteristics were (illustrated in Figure 2-1) and the performance management strategies that maintained control of what really counted as quality. This applied to the Singapore context and was not necessarily the case everywhere else.

In order for quality teachers to translate who they were into their practice, their performance and the quality of their teaching were mediated by the conditions in which they were teaching (Jessee, Mchazime, Dowd, Winicki, Harris, & Schubert, 2003). If teachers were in a school that did not value the things that were valued by the system, which in this case was the Ministry of Education, they could not be judged as doing quality teaching because the school's values and the Ministry's values were different. In other words, it did not matter how good they were as teachers, if the school as a mediator had policies that did not allow the teachers to express the quality of their teaching, they were not going to be capable of doing quality teaching. Therefore teachers needed to claim their space to teach the way they saw fit. Teachers were instructed to "learn the system" and "conform to the style". The style under the Singapore education system potentially limited possibilities for teachers.

Quality teachers needed support for their tasks in schools in order to create a quality learning environment. Mediators were external causes which were assumed to exist independent of teacher perceptions that could act as a barrier or an enhancement for quality teaching. These included students' diversity (Ruddell, 2005); student discipline (Dunham, 1977; Friedman, 1995); students' social economic status (Bornstein & Bradley, 2014); school climate (Cohen, 2006; Young, 1978); school resources (Brissie, Hoover-Dempsey, & Bassler, 1988; Buckley, Schneider, & Yi, 2004; Rudd & Wiseman, 1962); school leadership (Leithwood, Patten, & Jantzi, 2010); parents' involvement (Pomerantz, Moorman, & Litwack, 2007); unreasonable time demands (Lortie, 1975) and bureaucracy (Smith & Meier, 1994).

### 2.10.1. Student diversity

Ruddell (2005) pointed out that more and more schools consisted of students representing diverse needs. Diversity could broadly include race/ethnicity, home language, social class, disability and cultural background. Students also differed in gender (Greb, 1999). Some had disabilities and some were gifted or talented in one or more areas.

In the classroom, diversity might manifest itself in many other ways. Classrooms nowadays faced many challenges on several fronts and dealing with

classroom diversity was certainly one of them. Students might differ in motivation, learning style, learning strategies, aptitude, cultural background, social economic states and past learning experience (Dunn & Dunn, 1993). Gunzenhauser (1996) noted that on the cognitive plane, students ranged in intellectual capacity, process capacity, and learning orientation. Along the emotional/behaviour plane, students could differ in the degree of maturity, conformity, self-esteem, and motivation. When extending further to the social plane, the differences might include various social dimensions such as family issues or social engagement preferences. These and other differences could have important implications for instruction, curriculum as well as school policies and practices (Dunn & Dunn, 1993). Teachers had to work through all those diversities to strike a common ground in order to teach effectively.

While the accountability movement had certainly made teachers more directly accountable for their effectiveness, any reading of the total literature must inevitably conclude that the preponderance of studies still pointed to lack of discipline and classroom management as the primary cause that affected teaching quality.

### 2.10.2. Student discipline

Student discipline was another mediator that influenced quality teaching. Discipline was defined as "teaching responsibility rather than simply demanding obedience" from the students (Curwin, Mendler, & Mendler, 2008, p. 2). Teachers needed flexibility to use their judgement as there were no one size fits all solutions.

There were two independent reasons why ensuring student discipline in classrooms was important. Firstly, the primary aim of schooling was to prepare students to take their place in society as responsible citizens (Rothstein-Fisch & Trumbull, 2008). Secondly, without satisfactory levels of student discipline, the best planned and potentially most engaging lessons might fail to have the desired impact. It might only require a small number of students to misbehave and they became sufficiently distracting to other students and frustrating to teachers that the most carefully planned lesson failed to promote effective learning among the students (Barton, Coley, & Wenglinsky, 1998).

As teachers and students shared the same space, time, goals and needs and spent most of the day communicating with each other, they could not afford to be antagonistic. If things got bad enough, they had the power to ruin one another's lives. "Regardless of how their relationship goes, teachers and students never forget each other" (Curwin, Mendler, & Mendler, 2008, p. 10). Good discipline was not about making the lives of teachers easier but about doing what was best for students so that they would be able to make good, healthy choices.

Maintaining student discipline in the classroom was found to be a major stressor for teachers (Borg, Riding & Falzon, 1991; Blasé, 1986; Coates & Thoresen, 1976; DeRobbio & Iwanicki, 1996; Faber, 1991; Friedman, 1991, 1995; Friesen & Williamson, 1985; Gonzalez, 1997; Kyriacou, 1987; Lowell & Gallup, 2002; Mykletun, 1984). "School is a battleground for too many participants, a place where major confrontations and minor skirmishes occur daily" (Curwin, Mendler, & Mendler, 2008, p. 10). Teachers who left the service were emotionally and physically exhausted from struggling against resisting students for six hours every day.

It had been discussed that while subject matter and pedagogy were absolutely necessary, they were not sufficient conditions for being effective in schools. Knowing what and how to teach only became relevant after the teacher had connected and established a positive relationship with the students (Hughes, Cavell, & Willson, 2001). Many who gave advice on how to solve the teacher shortage in urban schools frequently asserted that "these" children needed to be taught by the "best and the brightest". However, the typical criteria used to define "the best and the brightest" identified teachers who were precisely those most likely to quit and fail in urban schools. The majority of teachers who left the service early were individuals with higher I.Q.s, GPAs, and standardized test scores than those who stayed; more have also had academic majors (Darling–Hammond & Sclan, 1996).

This was a result of the unrealistic expectations of beginning teachers that led them to believe that they could work in schools with involved parents, well-behaved students, small classes and supportive administrations. This disconnect between new teacher education graduates and the needs of the schools serving diverse children was demonstrated by the number of "fully qualified" graduates who took jobs and by how long they lasted. Only 58 percent of the newly certified graduates in United States even took teaching jobs and of those who taught, 50 percent left in five years or less. (Yasin, 1999).

When there was a disconnect between the teachers and their students, then no mentoring, coaching, workshop, class on discipline and classroom management or class offering more subject matter content could provide the teacher with the ability to control children s/he did not genuinely respect and cared about. This disconnect most commonly occured between teachers and diverse students in urban poverty (Haberman & Post, 1998).

### 2.10.3. Students' Social Economic Status (SES)

Where did it leave teachers when social assets were unevenly distributed? Increasingly, researchers examined educational processes, including academic achievement, in relation to socioeconomic background (Bornstein & Bradley, 2014; Brooks-Gunn & Duncan, 1997; McLoyd, 1998). Students' social class origins were likely to have a profound effect on attitudes and behaviours in school (Rothstein, 2004).

> Sociologists define social class, or socioeconomic status (SES), in terms of an individual's income, occupation, education, and prestige in society. These factors tend to go together, so SES is most often measured as a combination of the individual's income and years of education, because these are most easily quantified. (Slavin, 2012, pp. 99-100)

The effects of a quality teacher were much larger in low socioeconomic than in high socioeconomic schools or as Nye et al. (2004) commented "in low-SES schools, it matters more *which* teacher a child receives than it does in high-SES schools" (p. 254). Students from working-class or lower-class backgrounds were less likely than middle-class students to enter school knowing how to count, to name letters or to name colours (McLoyd, 1998). They were less likely to perform well in school than children from middle-class homes (Natriello, 2002; Sirin, 2003).

I wonder, what becomes of teachers when constant and pervasive issues such as homelessness, poverty and speaking English as a second language, are seen to have less impact on student achievement than the instruction in the classroom students receive only five hours a day, forty weeks a year? Although research suggested that socioeconomic status was strongly related to cognitive skills and accounted for more of the variation in cognitive scores than any other factor, issues around poverty were omitted from the ongoing dialogue around school improvement (Lee & Burkham, 2002). Berlinger (2008) noted the relationship between poverty and school achievement:

> The relationship between poverty and school achievement is well known. In fact it has been found to be stronger, by far, than the relationship between cigarette smoking and disease. But although we have taken the latter seriously, passing laws and creating tax policies to reduce smoking, we have done little or nothing about the relationship between poverty and achievement. Expecting achievement to rise while poverty rates stay the same or worse is foolhardy. (p. 252)

Who did teachers become inside schools serving students with high levels of poverty when they were expected to bridge the achievement gap, as measured by the school and state assessments? Rogers (2011) argued that ascribing failure solely to the beliefs and practices of educators failed to acknowledge that inadequate and unequal conditions in schools shaped teachers' work and students' learning. Thus, Gerstl-Pepin (2006) suggested that it was important for policymakers to acknowledge and value the challenges faced by teachers and staff who served children from families lacking proper healthcare, affordable and quality early childhood education, nutrition, literacy, safety and minimum wages.

Nevertheless, there were success stories where working-class and lower-class parents did an outstanding job of supporting their children's success in school and many working-class and lower-class students achieved at a very high level (U.S. Census Bureau, 2001). Similar success stories were common in Singapore as Singaporean students in primary schools did not need to pay school fees, while students at secondary and pre-university levels paid subsidised school fees (MOE, 2012a). Singapore's government spending on education made up about 20 percent of the annual national budget which was second only to the spending on defence (Singapore Budget, 2013) although it was only three percent of total Gross Domestic Product (GDP).

Similarly, in Australia, research showed there was no correlation between how much parents had to pay and the quality of the education their children were likely to receive (Gillespie, 2014). The Australian government spent around five percent of total GDP on education (World Bank, 2014). This was to ensure every child got compulsory education to the age of 17 years (Australian Bureau of Statistics, 2012).

### 2.10.4. School effectiveness

The majority of research on school effectiveness was based on the common view of the schooling process. The view held that all aspects of student outcomes

such as academic achievement, transfer rates and dropout rates were equally important (Rumberger & Palardy, 2005). However, it wass believed that one of the most widely used indicators of school effectiveness in many studies was academic achievement (Lee & Smith, 1995, 1997; Lee, Smith, & Croninger, 1997). Research on school effectiveness sought to understand why some schools were more effective than others in terms of student outcomes. It was found that it was primarily through the quality of teaching that "effective" schools made a difference (Hill & Rowe, 1996, 1998; Rowe & Hill, 1998; Rowe, Hill, & Holmes-Smith, 1995).

According to Rowe (2004), schools (per se) were not "effective" but teachers could be and that there was no such "thing" as an "effective school" but only to the extent that they had effective teachers and teaching. Thus, more effective teaching was the key to improving school education (Rivkin, Hanushek, & Kain, 2005; Hanushek, Kain, O'Brien, & Rivkin, 2005; Rockoff, 2004) and improving teacher effectiveness outweighed the impact of any other school education programme or policy in improving student performance (Aaronson et al., 2007; Leigh & Ryan, 2011). A student with a great teacher could achieve in half a year what a student with a poor teacher could achieve in a full year (Leigh, 2010). Great and poor teachers were defined as those in the top and bottom 10% of the distribution of effective teachers respectively. And because the impact of highly effective teaching was cumulative, relatively modest increases in effectiveness could make a big difference to student learning (Jordan, Mendro, & Weerasinghe, 1997; Sanders & Rivers, 1996).

Similarly, the OECD Teaching and Learning Internal Survey (TALIS) identified key aspects of teaching that had been shown to improve learning. They included:

- Teachers' content knowledge.
- Teachers' pedagogical knowledge, both of general principles and those specific to their subject.
- Teaching practices that focus on clear and well-structured lessons supported by effective classroom management.
- Teaching practices that emphasise individualised instruction.
- A commitment to higher-order problem solving, deep analysis of content, and activities requiring advanced thinking skills and deductive reasoning.
- Active professional collaboration that has a direct impact on learning and teaching. Key elements include classroom observations, team teaching and constructive feedback.

Therefore it was important for schools to ensure that classroom time was actually used for effective teaching and learning which depended on teachers' classroom management skills as well as classroom and school climate (Harris & Chrispeels, 2006; Hopkins, 2005; Lee, Williams, & Lo, 2006).

## 2.10.5. School climate

Research by Freiberg (1998), Heck (2000) and Goddard et al. (2000) showed that school climate was directly associated with student achievement and that an atmosphere of trust, shared vision and openness created positive school climate conditions. Although there was not one commonly accepted definition for school climate, the vast majority of researchers and scholars suggested that school climate

essentially reflected subjective experience in school (Cohen, 2006; Finnan, Schnepel, & Anderson, 2003; Ghaith, 2003; Kerr, Ireland, Lopes, Craig, & Cleaver, 2004). Little was known, however, about how these climates emerged in some schools and not others.

School climate promoted or acted as a barrier to the students' ability to learn. If students felt safe, cared for, appropriately supported and lovingly "pushed" to learn, academic achievement should increase (Kerr, Ireland, Lopes, Craig, & Cleaver, 2004). Positive school climate promoted cooperative learning, group cohesion, respect and mutual trust or a climate for learning (Finnan, Schnepel, & Anderson, 2003; Ghaith, 2003). In addition, a series of studies had shown that school climate was directly related to academic achievement (Freiberg, 1999; Good & Weinstein, 1986; Griffith, 1995; Rutter, 1983). Freiberg (1998) noted, "the interaction of various school and classroom climate factors can create a fabric of support that enables all members of the school community to teach and learn at optimum levels" (p. 22).

However, traditional, depersonalised and rigid bureaucratically administered schools resulted in low teacher commitment and job satisfaction. Depersonalisation could be defined as a school climate in which teachers perceived that their individual voices had no impact and that even their existence was unnoticed. For example, with automated telephoning for substitutes it was not uncommon for no adult in a school building to know, or particularly cared, that a teacher was absent on a given day (Konert, 1997). Thus, a positive school climate needed to be established in schools and it usually stemmed from adequate and relevant resources.

### 2.10.6. School resources

Teachers were charged with an endless and unavailing task. Darling-Hammond (2004) pointed out that the onus of responsibility for student achievement was on teachers; however, the state was not held responsible for providing adequate resources to help teachers meet the goal.

My research drew me to seek understanding of the experience for teachers with the burden of accountability for students' achievement in the hollowness of limited resources.

Casey (1993) explained that in a place of residence, "We are empowered to discover novel features of built structures or to create such features ourselves by rearranging the materials already present in a given residence" (p. 117). The thought of rearranging "materials already present in a given residence" conjured memories of the numerous times my colleagues and I had to design and produce manipulative teaching aids that would otherwise be too expensive to purchase commercially. As Lumsden (1988) noted, teachers often had to spend their own money for supplies and equipment they regarded as necessary.

The use of concrete manipulatives empowered the students to discover the world within the classroom in a full and tactile manner. I am reminded of Greene's (2001) assertion that "The way a teacher responds to the development of a classroom situation depends a great deal upon that teacher's sense of teaching as both project and process" (p. 84).

School resources also included manpower, buildings and facilities (Buckley et al., 2004; Rudd & Wiseman, 1962) as well as salary considerations (Gritz &

Theobold, 1996; Tye & O'Brien, 2002) and administrative support (Tapper, 1995). Tapper (1995) cited the need for administrative support as a critical condition of work. She elaborated that lack of administrative support was a category that included but was not limited to the following teacher perceptions: principals were "not supportive" if they did not handle discipline to the teachers' liking; did not understand the instructional programmes the teachers were trying to offer; did not provide the time and resources the teachers believed necessary; did not value teachers' opinions or involved them sufficiently in decision making; did not support them in disputes with parents; or failed to listen to their problems and suggestions.

Tapper (1995) continued that in urban schools, teachers also used "lack of administrative support" as jargon to signify their beliefs that the principal had engaged in "dumping", or had "dumped" on them. This meant that they believed the principal had assigned too many students with discipline problems, with special needs, those lacking in basic skills, or even too many male students to their classrooms.

The quality of school buildings could affect the quality of teaching. It was concluded that there were positive psychological and physiological effects of daylight on student achievement (Benya, 2001; Lemasters, 1999). Teachers believed that thermal comfort in classrooms affected not only the quality of their teaching and student achievement but their morale (Lackney, 1999; Lowe, 1990). Indoor air quality also affected teachers and students. Studies of poor indoor air quality had developed the concept of "sick building syndrome" which caused asthma and respiratory problems among teachers and students thus losing considerable school time (Buckley et al., 2004). Noise was another factor that seemed to cause discomfort and lowered efficiency more so for teachers than for students (Lucas, 1981). A bigger school size was also a cause of teachers' concern (Green–Reese, Johnson, & Campbell, 1991). Studies had shown that teachers might be willing to take lower salaries for smaller classes or other conditions of work (Hanushek & Lugue, 2000; Murnane & Olsen, 1989). In short, many teachers were leaving the teaching service due to different reasons causing human resource concerns.

#### 2.10.6.1. High turnover of teachers

Lack of quality staff due to high turnover was a common concern in many countries, including Singapore. The average length of a teaching career in the United States, in 2001, was 11 years (Stephens, 2001). One quarter of all beginning teachers left teaching within four years (Benner, 2000). The length of an urban teaching career was even less, since 50 percent of beginners left in five years or less (Rowan, Correnti, & Miller, 2002).

The reasons for high teacher turnover in Singapore were not found in current literature but was aptly summarised in an open letter written by an anonymous senior teacher (Anonymous, 2014), who had been teaching in Singapore for 10 years. As a teacher who used to teach in Singapore myself, I could vouch for the validity of the points surfaced in the letter. The reasons given might highlight why teachers were leaving MOE:

- Disciplinary issues in secondary schools today, in particular, neighbourhood schools have gotten out of hand such that teachers cannot discipline students

without being given good faith. This has caused a lot of my young teachers to leave MOE.

- Unfair allocation of classes. Some schools designate an unfair mix of all challenging classes to teachers. These teachers suffer emotionally because of this. Burnout is common in MOE schools because of overwork. The ministry thinks that since teachers are willing to do more; therefore they ought to be overtaxed more. The situation has denigrated to such a low that many teachers fall ill and take on medical leave to recover and regather their strengths.
- Principals say there is protected time; however HODs and Principals call teachers back to work during protected when it's meant for recuperation. Teachers have problems getting rest when they need to as these protected times are not practised but given lip service during term and inter-semesters. Many colleagues come to work at 7 am and leave school at 5.30 pm and still continue marking. There is no equitable delegation of work among teachers and MOE system doesn't capture this.
- Teachers are often discouraged to do their Masters or further studies by their principals and vice-principals and this professional development is looked down upon as "one's own personal time"; even though teachers are developing themselves. There is no support among principals. Many of my teachers had to fight to do their Professional Development Continuum Model (PDCM) module. The PCDM offer pathways along which teachers can systematically upgrade their professional knowledge and practices. MOE human resource says one things but principals does another tack. So, many teachers in MOE forgo pursuing their masters as there is no genuine, sincere and real support. In fact, attending other low-key courses is more encouraged.
- The appraisal system in MOE schools called the EPMS is another part of the system that is tearing the fraternity apart. The systems pits teachers against each other within the same substantive grade and this is a cause of concern among teachers. The MyForum page (intranet for teachers) is a testimony to MOE teachers' grievances but the ministry continues to turn a blind eye to the unhappiness on the ground.
- Unfair appraisal, resulting from a spouse and wife being in the same ranking panel of the School Management Committee. This sows discord and unfairness among teachers who under their charge and being appraised. MOE needs to relocate one of their spouse to prevent this unfairness. This is common as many teachers find their mates in the fraternity over time.
- Impossible and unreasonable marking time and marking workload during mid-year and end of year marking causes teachers to resign and suffer 3 weeks of continuous marking to clear hundreds of essays and teachers teach more than one subjects and the marking time is unreasonable and this is education we are talking about here (Anonymous, 2014).

I believe that most, if not all the issues identified, could be resolved with good school leadership. School leadership had been shown to impact on each of the above mediating variables as well as directly on quality teaching.

## 2.10.7. School leadership

School leadership might impact on teacher and teaching quality, as successful leaders improved learning in their schools in many ways (Leithwood, Patten, & Jantzi, 2010). The role of the principal was to remove barriers to success. In Singapore, school leaders were considered vital to school transformation (Ng, 2008b). Leaders were expected to innovate continuously, to get the best from their staff and school. They should be committed to working collaboratively with their staff to make needed changes and become advocates for changing instruction. They needed to lead the conversation with their staff. Most of all, they should be comfortable challenging long-standing beliefs and norms about schooling. They focused intently on student learning and made every program, policy and practice at their school convey to students that they were expected to achieve at very high levels and that they would be successful. Since 2000, an executive education program for principals had helped achieve these goals (Ng, 2008b).

Leadership development started early in the careers of Singapore's educators. Extensive teacher appraisal and feedback was required to identify potential leaders. Leaders therefore did not self-select, but rather were nominated by the Ministry in discussion with schools and principals. Before undertaking specific education and training, potential leaders were put through extensive interviews and assessments to assess their leadership capabilities (Jensen, 2012).

Once in their positions, principals were continuously challenged to improve their personal leadership skills and increase the dynamism of the school education sector (Ng, 2008b). For example, principals were rotated through different schools every five to eight years, since that was the time period in which they were considered to have a maximum impact on a school.

According to Robinson (2007), principals who led and actively participated in professional learning and development had the largest impact on student outcomes. The principals' involvement could be in formal contexts such as staff meetings and professional development sessions and informal contexts such as discussions about specific teaching problems. There were several explanations for the power of leadership of continuing professional development (CPD), emphasising the fact that leaders who promoted and participated in teachers' professional learning had a focus on teaching and learning, learnt more about what teachers were up against, and then gave them more support in making changes required to embed their learning in their daily practice. That could translate to providing necessary teaching resources, rearranging timetables and freeing up time from teaching, and having a deeper appreciation of the stages and duration of the change process (Leithwood, Patten, & Jantzi, 2010).

There was also evidence to suggest that interpersonal relationships between principals and their teachers influenced school professional attitudes that defined the broader school climate (Price, 2012). A principal's ability to create a positive school climate and culture could affect teacher morale and self-esteem (Adams, 1992). Principals could strengthen teacher morale by actively standing behind teachers. Effective principals served as guardians of teachers' instructional time, assisted teachers with student discipline matters, allowed teachers to develop discipline codes and supported teachers' authority in enforcing policy (Blasé & Kirby, 2009). In

other words, teachers wanted a principal who was tough and would stand in their corner no matter what (Voight, 2010).

The effect of leadership on student learning outcomes was also mediated by school conditions such as goals, structure, people and school culture. Although there was emphasis on improving teachers' instruction quality, it was by no means the only influence on student achievement. It was found that engaging the school productively with parents might well produced larger effects on student learning in the short run than marginal improvements to levels of instruction (Barnett & McCormick, 2004).

### 2.10.8. Parents' involvement

Casey (1993) reminded us that built places were, "extensions of our bodies" (p. 120). Teachers found themselves in the built place of the schoolhouse alongside their students. In that space, they navigated the juxtaposition of dwelling for students between school and family. What became of teachers as a result of living amidst the tension of dwelling-as-residing between school and family?

Although students spent much of their waking hours inside school houses living with teachers, they spent only about eight percent of the year in schools, which meant that regardless of the quality of teacher, a supportive home environment was essential to excellent learning (Haskvitz, 2002). The positive impacts of parent involvement on students' achievement were seen across all levels – elementary, middle, and high school, although school activities to develop and maintain partnerships with families declined with each grade level and dropped dramatically at the transition to middle grades (Epstein & Connors, 1992).

According to Bornstein (as cited in Bornstein & Bradley, 2014), parenting was pleasures, privileges, profits, frustrations, fears and failures, all rolled into one. Despite the teachers' major influences in the students' lives, it was found that parents' behavioural involvement enhanced students' achievement because it fostered students' motivation and engagement in school (Pomerantz, Moorman, & Litwack, 2007). The earlier in a child's educational process parent involvement began, the more powerful the effects and the most effective forms of parent involvement were those which engaged parents in working directly with their children on learning activities at home (Cotton & Wikelund, 1989).

Students wanted their families to be more knowledgeable partners about schooling and were willing to take active roles in assisting communications between home and school (Epstein, 1995). When schools encouraged children to practise reading at home with parents, the children made significant gains in reading achievement compared to those who only practised at school (Tizard, Schofield, & Hewison, 1982). When parents came to school regularly, it reinforced the view in the child's mind that school and home were connected and that school was an integral part of the whole family's life (Steinberg, 2001). Parents, who read to their children, had books available, took trips, guided TV watching and provided stimulating experiences, contributed to student achievement (Sattes, 1985).

The most consistent predictors of children's academic achievement and social adjustment were parent expectations of the child's academic attainment and

satisfaction with their child's education at school (Reynolds, Weissberg, & Kasprow, 1992; Sirin & Rogers-Sirin, 2004). Parents of high-achieving students were found to set higher standards for their children's educational activities than parents of low-achieving students (Clark, 1990). This phenomenon was true regardless of the students' social economic status (Redd, Brooks, & McGarvey, 2001; Scott-Jones, 1984).

It is interesting to note that rural teachers perceived there was too much parental contact while urban teachers felt the lack of parental involvement (Abel & Sewell, 1999). There were many styles of parental involvement, based on different parenting styles from authoritarian to hands-off. According to Mayseless, Scharf, and Sholt (2003), authoritarian parenting was described as "demanding, using power-assertive practices and being low in responsiveness" (p. 428). Authoritarian parenting had been considered ineffective. However, Steinberg (2001) described authoritative parenting practices as demanding, warm, and involved. Such responsiveness appeared to protect adolescents from early initiation of problem behaviour and facilitated development of school engagement, academic performance and future social competence (Steinberg, 2001).

It was apparent that research findings on parents' involvement were varied and there was a need for more empirical research to understand fully the relationship of parents' involvement to their children's academic engagement and achievement in schools. What was clear was that time was needed by both parents and teachers to be involved in their children's education.

### 2.10.9. Time

Lack of time was one of the most common complaints parents and teachers had (Fullan & Miles, 1992; Gandara, 1999; Kruse, Louis, & Byrk, 1995; Little, 1987). A number of studies had explored teachers' interpretations of time (Cambone, 1995; Collinson & Cook, 2001; Palmer, 2010), that is, what teachers meant when they said, "I do not have enough time". Teaching in Singapore was engulfed in the measurement of quality; therefore, we must ask, what did that signify for teachers? What does the future become if teachers spent time conducting and preparing tests in all subjects every year for students in primary three through six? It left one to wonder, what was *not* being done in that time? What future was not being prepared for, when teachers were currently administering tests related to the dictates of quality (Selwyn, 2007)? These were pertinent questions that needed answers.

With few exceptions (Cambone, 1995; Campbell, 1985; Hargreaves, 1990; Rosenholtz, 1989), time was presented as a single factor rather than as a multi-faceted and complex concept. Understanding what teachers meant when they said "I do not have enough time" was a critical first step in creating more appropriate and worthwhile time for learning and change (Cambone, 1995).

Numerous articles had been written to suggest strategies for changing school schedules and practices in order to find time for teachers to participate in school improvement efforts (Canaday & Rettig, 1995; Donahoe, 1993; National Educational Commission on Time and Learning, 1994; Raywid, 1993; Watts & Castle, 1993). Most of the proposed strategies for finding time fitted within five broad categories namely freed-up time; rescheduled or restructured time; common time; better use of time and purchased time. Teachers needed time to deliberate with their colleagues;

to sit down and plan together; to tell stories about what had worked with their students; to share ideas; to discuss team teaching and to collaborate (Hamel, 2000).

According to Epstein and Becker (1982), many teachers commented on the amount of time needed to prepare projects, workshops and/or directions for parents to use and supervise at home. They added that teachers often questioned if the time they put in was worth the trouble without knowing the likely effects of their efforts. Based on my experience, one possible contributor to teachers' lack of time was their involvement with bureaucracy or administrative issues.

### 2.10.10. Bureaucracy

"In any attempt to improve education, teachers are central" (Frymier, 1987, p. 9). However, teachers had little say in what happened in schools outside their own classrooms. Although teachers were expected to be in complete control of students, content, teaching strategies and evaluation in the classroom, decisions on the overall operation of the school were outside their realm of influence. Most teachers had no say in who was hired, in setting their own schedules or those of other teachers, or in selection of administrators (Frymier, 1986). According to Chubb and Moe (1991), bureaucracy led to poor performance on the part of public schools. Smith and Meier (1994), on the other hand, argued that bureaucracy was an adaptation to poor performance, that when schools recognised their failures, they often took actions that generated more bureaucracy, at least in the short run.

Some teachers were unable to cope with the debilitating problems faced by their students and the negative conditions of work in dysfunctional bureaucracies so they took their failures as a sign of personal inadequacies. These teachers might leave teaching due to idealistic reasons (Miech & Elder, 1996). Miech and Elder's explanation for the departure of idealists was that because they were deeply committed to serving children, they were more easily frustrated by the working conditions in dysfunctional school bureaucracies, which prevented them from doing what they deemed best in the teaching of their students.

In order to discuss the issue of bureaucracy, quality teachers and teaching from the Singapore teachers' perspectives, it is logical to have a better understanding of what constitutes quality education in the Singapore context. Therefore, a brief description of the primary school education system in Singapore is given in the following section so that the ensuing discussion could be better appreciated in context.

## 2.11. Background context of Singapore primary school education system

The education system in Singapore (MOE, 2012c) was structured in such a way that it catered to the varying abilities and interests of students so as to help them maximise their potential. English was the medium of instruction for all subjects except for mother tongue languages. The six-year compulsory primary education commenced when a child was six to seven years old. The pupils first went through a four-year foundation stage (lower primary level) and then through a two-year orientation stage (upper primary level). In the foundation stage, the pupils were

provided with a good foundation in English, Mathematics, and Mother Tongue (any of Chinese, Malay, or Tamil). They began studying Science at primary three. At the end of primary four, mainstream students were streamed into different academic abilities or learning strands based on their performance in a national written examination which included multiple choice and open-ended questions. Each stream comprised students of comparable abilities or attainments, and that was believed to be useful in ensuring that all students in a given stream would learn at a pace that suited them.

Currently, upper primary students were being channelled into three streams: EM1, EM2, and EM3. Those who scored at least 85 percent in all the three subjects covered in the national streaming examination (Mathematics, English, and Mother Tongue) were directed to EM1 stream; those who scored at least 50% in any two of the three subjects covered were directed to EM2 stream; and those who did not qualify in the requirements for the first two streams were directed to EM3 stream. Parents had the final decision regarding the stream in which their children would be assigned, but certain minimum requirements at the end of primary five must be met in order to remain in a given stream. It could be inferred that, in general, EM1 and EM2 students demonstrated above-average and average academic abilities respectively. Both streams of students followed the same curriculum; the only difference was that EM1 students took an additional Higher Mother Tongue subject.

Intellectually gifted students, on the other hand, were selected at the end of primary three (MOE, 2012d). First, the pupils took a screening test comprising English Language and Mathematics. Following that, the top 3,000 pupils who took the screening test sat for a selection test covering English Language, Mathematics and General Reasoning Ability. The top one percent (about 500) of this cohort was invited to join the gifted education programme (GEP), which was characterised by highly individualised and enriched curricula. Currently, there are nine primary schools in Singapore that offered GEP. The Singapore education system was basically driven by academic results. Therefore, there were many initiatives and programmes that the MOE had introduced to produce learning outcomes beyond the mastery of content.

### 2.11.1. Initiatives and programmes

Goh (1997), in his capacity as Prime Minister of Singapore, introduced the "Thinking Schools, Learning Nation" (TSLN) vision (MOE, 2014). The focus was on the "thinking" teacher which was a major shift for Singapore whose idea of improving the quality of its education was to adopt a more "teacher-proof curriculum" approach (Tripp, 2004). Thus, in late 1997, the MOE established the Teachers" Network (TN) in order to develop "interactive professionalism" (Fullan & Hargreaves, 1991) by enabling teachers and schools to move away from a competencies-based training approach to teacher professional development. It was assumed that excellent professional development would provide teachers with opportunities to think like experts in making instructional decisions, structuring learning activities and employing strong pedagogical strategies under authentic circumstances. In 2012, a new model for teachers' professional development named The Teacher Growth Model (TGM) was launched by Mr Heng Swee Keat, Minister for Education at the 6$^{th}$ Teachers" Conference organised by the Academy of Singapore Teachers (AST).

The TGM was a professional development model which encouraged Singapore teachers to engage in continual learning and become student-centric professionals who took ownership of their own professional growth. It also recognised the need for teachers to be equipped with the relevant knowledge and skills to be able to develop students holistically. The model was developed by the AST in consultation with educators of diverse profiles from across the ministry coming together to envision the learning needs of the 21st century Singapore teacher.

The professional development of teachers had an impact on the quality of teaching and learning. The TGM encouraged teachers to pursue their development through multiple modes of learning, including going for training, mentoring, research-based practice, networking and experiential learning. The Minister for Education stated that by encouraging teachers to learn together, the Teacher Growth Model would promote greater synergy and coherence across different professional departments and schools (MOE, 2012e). Professional development of teachers was necessary for the survival of Singapore's results-driven economy which in turn translated to results-driven education.

### 2.11.2. Results-driven education

It had been discussed earlier that Singapore's education system was results-driven to satisfy the policy of meritocracy. Therefore, Singaporeans were caught up in the "rat-race for paper chase" in order to be "successful". What was the lived experience for teachers as they struggled inside a schoolhouse by forces outside of it? What meaning did teachers create for themselves as they understood their role, as determined under results-driven education which might be unrealistic?

> Imagine a federal law that declared that 100 percent of all citizens must have adequate health care in twelve years or sanctions will be imposed on doctors and hospitals. Or all crime must be eliminated in twelve years or the local police department will face privatization. (Karp, 2004, p. 60)

What was it like for teachers as they sought to embrace the teaching of children in a heartfelt manner, while additionally being pressured to meet the needs of the school and state assessments? Schools were spending more time on reading and mathematics, while cutting back on other subjects including art and music (Cavanaugh, 2006). As schools came to the attention of the state authorities for having poor test scores, the tension between performance and practice played out as teachers were asked to use the so-called "best practices" and to infuse interventions into their teaching (Chapman, 2007). The interventions caused a narrowing both of the curricula and instructional practices.

> Teachers must use best practices, meaning content is aligned with national and state standards and teaching methods—now called interventions—that are "scientifically proven" to be effective, cost efficient and "able to be applied and duplicated, and scaled-up" for wide use. This nicely echoes the idea that ready-made solutions for transmitting knowledge are out there, and that teachers are not much more than technicians who should use them. (Chapman, 2007, p. 26)

Results-driven education inculcated a false sense of self-worth (Deresiewicz, 2008). It involved numerical rankings such as Scholastic Assessment Test (SAT), Grade Point Average (GPA) or Graduate Record Examinations (GRE). Students learnt to think of themselves in terms of those numbers. The numbers came to signify not only their fate, but their identity and their values. Deresiewicz (2008) said that what those tests really measured was students' ability to take tests, but even if they measured something real, it was only a small slice of the real. The problem began when students were encouraged to forget this truth, when academic excellence became excellence in some absolute sense (Deresiewicz, 2008).

Perhaps the most adverse unintended consequence of results-driven education was that it created incentives for schools to rid themselves of students who were not doing well, producing higher scores at the expense of vulnerable students' education (Darling-Hammond, 2004, p. 16). The approved notion of success created pressure for teachers to narrow instruction to cover tested concepts (Cavanaugh, 2006). As a consequence of knowing what was "tested" material, teachers let go and released the teaching and learning of non-tested material. Aronson (2007) noted:

> Because the demands of preparation for the state exam are so overwhelming, many teachers can feel pressure to forego their best instructional activities just to get through the curriculum. Planning periods and department meetings are often dedicated to analysing student data to predict performance on the high-stakes exam and developing test wiseness. (p. 67)

Results-driven education often involved motivating individuals to do the best they could. Teachers were asked to re-create an image of success driven by the standardized test scores (Jardine et al., 2006). Implicit was the idea that through a fierce competition for educational resources followed by material rewards, human talents might be developed to their potential (C. Tan, 2008). According to Hyde (as cited in Jardine et al., 2006, p. 9), "The way we treat a thing can sometimes change its nature".

As the famous saying goes, "the grass always looks greener on the other side". This metaphor aptly applied when teachers from East Asia complained there was too much rote-learning, uniformity and standardisation and too little emphasis on creativity, diversity and problem-solving. They attributed this attitude to the fierce competition for scarce places in elite schools and universities. Teachers in the east wished to emulate the school system in the West.

On the other hand, their counterparts in the West looked in the reverse direction to these same East Asian countries and wondered what they could learn from the superior academic results of East Asian students on International Achievement Tests in Mathematics and Science (Jensen, 2012). According to Ferguson (2014), based on the most recent PISA scores, American students were characterised as being asleep at the wheel and in need of a major wake-up call. She advised that instead of shaming public schools, they would have to analyse gaps of all kinds, such as culture, resources, leadership, teacher training and national sentiment; not just achievement.

It is interesting to note that one year prior to the 1997 launch of the TSLN paradigm in Singapore, the National Commission on Teaching and America's Future summarised its challenge to the American public. The Commission argued that

"without a sustained commitment to teachers' learning and school redesign, the goal of dramatically enhancing school performance for all of America's children will remain unfulfilled" (Darling-Hammond, 1997, p. 1). Drawing on a wide range of findings and examples of best practices from many European and Asian countries, the Commission proposed a comprehensive set of recommendations that covered the entire continuum of teacher development. These proposals were intended to put the nation on a path to serious, long-term improvements in teaching and learning (Darling-Hammond, 1997). They included:

- Linking standards for teachers to standards for students by setting standards for teacher education, licensing and advanced certification of accomplished veteran teachers.
- Reinventing teacher preparation and professional development so that teachers would have continuous access to the latest knowledge about teaching and learning.
- Overhauling teacher recruitment and putting qualified teachers in every classroom.
- Encouraging and rewarding knowledge and skill.
- Creating schools that are organised for student and teacher success (p. 3-5).

All the above proposals had also been implemented in Singapore (McKinsey & Company, 2007). In what ways did the nature of teaching change under Singapore's results-driven education? This brought me to teachers testing their students beyond the syllabus in order to have the competitive edge.

### 2.11.3. Over-testing

Measuring achievement through a test is not new. Porter (2002) found that pupils made more academic gains when instruction was effectively connected to assessment. The Singapore education system which had been governed by the notion of meritocracy since its inception as a nation state in 1965 (Lee, 2000; Mauzy & Milne, 2002; J. Tan, 2008) declared a positive relationship between standardized tests and learning. As a result of that, tests that were designed for the purposes of achievement trends, school accountability, school funding and certification of student proficiency levels, were also used for purposes of shaping curricula and forming instructional practices (Shepard, 2000). Teachers were faced with the forces reconciling the intent of testing and the reality inside classrooms. Shepard (2000) posited that "the purpose of assessment in classrooms must also be changed fundamentally so it is used to help students learn and improve instruction, not just to rank students or to certify the end products of learning" (p. 31).

If students were viewed by teachers, as "end products of learning" (Shepard 2000, p. 31), the possibility arose, then, that teaching became something not *from* the heart of teachers but out of duty *by* the teachers.

> Is it possible that the test scores will rise, but at a cost that unfortunately will not be factored into the equation. The discussion has gone so far off track that the unquestionably

> valuable concept of standards has been divorced from all that goes into building the kind of school culture that leads naturally to the attainment of those standards. . . does the attempt to remediate a problem cause a greater problem than the one we were originally trying to solve? (Barth, 2001, p. 92)

What would a lived experience of teaching look like if it were measured by successes of the heart, void of test anxiety? "Anxiety leaves us hanging because it induces the slipping away of beings as a whole" (Heidegger, 1993a, p. 101). The heightened awareness of self as a whole resided in teachers amidst test anxiety. Who did teachers become when they slipped away from themselves as teachers in an education system which was highly competitive and skewed towards elitism (C. Tan, 2008; J. Tan, 2008; K. P. Tan, 2008)? A possible consequence of this elitist strand were teachers testing their students beyond their cognitive maturity to separate the average from the "elite or the gifted".

The gifted learner was characterized by an ability to rapidly acquire new content, advanced reasoning, higher maturity than age peers, and heightened awareness of their surroundings and feelings (Diezmann, Watters, & Fox, 2001). In school, the gifted child usually undertook unnecessary practice of content, as they achieved mastery sooner than their "non-gifted" peers did (Diezmann & Watters, 2006).

In Singapore's Gifted Education Programme (GEP), the top one percent of nine-year-olds were identified and tracked into a special and separate academic route in order to develop them with intellectual rigour, humane values and creativity and to prepare them for responsible leadership and service to country and society (MOE, 2012d). Due to the competitive nature of the Singapore schooling system in general, teachers would sometimes over-test or teach to the test, based on the belief that high expectations and setting of goals would result in educational success (Anyon, 2005; Selwyn, 2007).

Based on my experience of studying and teaching in Singapore, I realised that students were constantly subjected to "practice or mock test". In these test sessions, teachers were asked to create situations whereby students were able to hone their test-taking skills. The goal of these sessions was to increase test-scores through, experiencing as closely as possible, the same type of conditions students would experience during the administration of the school and state exams. Students were assigned to "testing groups" and asked to report to "testing rooms". Similar to the "test-drive" of a car, teachers were then asked to use those sessions to evaluate the performance of their students and reliability of their results. What was the experience of teaching in a classroom where the test drive was emphasized over the understanding of content and engagement of wonder?

The possible repercussions of those practices were disillusionment and resistance among the average Singaporean (K. P. Tan, 2008). Teachers pushing the students beyond their cognitive ability or maturity could potentially create a destructive academic and emotional environment (Berger, 2006). "Test scores are not synonymous with achievement. Although tests are often viewed as precise and very objective, they are imperfect and incomplete measures of learning" (Chudowsky, Chudowsky & Kober, 2007, p. 13). Test scores could go up over time without actually indicating that students had learned more as several researchers had observed a "bump" in scores in the first few years after a test had been introduced, as

students and teachers became more familiar with its format and general content (Hamilton, 2003; Koretz, 2005; Linn, Graue, & Sanders, 1990). Popham (2006) asserted that tests varied in their instructional sensitivity – in other words, how well they detected improvements due to better teaching. However, tests were still widely used to draw inferences about student learning in most education system, including Singapore.

What became of teachers when the public was lulled into a belief that test scores and achievement were the same? Heidegger (1972) explained: "Teaching is more difficult than learning because what teaching calls for is this; to let learn. The real teacher, in fact, lets nothing else be learned – than learning" (p. 15). What space was created for teachers "to let learn" under Singapore education system? If teachers were not able to "let learn", who did they become?

Gadamer (1960/2006) reminded us that "Man becomes what he is through what he does and how he behaves" (p. 311). Paraphrasing Gadamer, who did teachers become through what they did in classrooms, coloured by over-testing? Who did teachers become in the classroom when the classrooms were defined through the narrow lens of test results? Subsequently, who did they *not* become; what dreams were deferred? These were questions that needed deep reflections from teachers.

What was revealed about teaching when creativity and thoughtfulness were relegated to the sidelines as the test-scores dictated the essence of the classroom? Teaching to the test might be "successful teaching" as described by Fenstermacher and Richardson (2005); however, that did not necessarily correlate with "good teaching". They wrote, "Good teaching is grounded in the task sense of teaching, while successful teaching is grounded in the achievement sense of the term" (p. 189). What became of teachers when they were to focus on *successful* rather than *good* teaching? Consequently, what meaning did teachers bring to their worlds? The answers to these questions might shed light to effective teaching.

Teachers were only as effective as the systems in which they worked (Blasé & Kirby, 2009). Because many of the conditions which determined teacher effectiveness lay outside of their control and because a high level of continual alertness was required, teaching was stressful and might affect teachers' effectiveness with students (Blasé, 1982). It was however worth noting that as teachers became more effective, they were less concerned with testing. In studies of star teachers serving Latino children in Houston, Texas and African American children in Buffalo, New York, teachers identified as effective with diverse children did not focus or limit their teaching to preparing their students for tests. It had been contended that just because it was possible to evaluate teachers' effectiveness by matching teachers to their students' test scores did not mean that was the only way to evaluate teacher effectiveness (Campbell, Kyriakides, Muijs, & Robinson, 2003; Popham, 2006). The star teachers mentioned above were able to follow best practice rather than drill and kill and still had children whose test scores improved markedly (Haberman, 1999).

Over-testing students had created unhappiness "in the ground" which spurred the Singapore's leaders to form a committee chaired by Ms Grace Fu, who was the Senior Minister of State, Ministry of National Development and Ministry of Education to review primary education and to find ways to enhance it (MOE Press

Release, October 15, 2008). The Primary Education Review and Implementation (PERI) committee comprised representatives from the public and private sector, including educators, academia, parents, and industry representatives, to solicit a range of views and inputs in recommending tentative movement for greater educational equity for all students.

The committee had published its recommendations in 2009 for a more holistic and egalitarian system and schools were implementing them. Although progress was made by way of getting feedback from different stakeholders, there was still insufficient research done on quality teaching from the Singapore teachers' perspective, thus bringing me back to my research problem of what do teachers really perceive quality teachers and quality teaching to be.

## 2.12. Singapore teachers' quality standard

Quality was a complex multifaceted personal construct, reflecting the views on learning that the teacher and the learner (and other stakeholders) used and that depended on the specific local context of teacher and learner (Hargreaves, 2000; Helsby, 2000). The importance of quality teachers to improve student outcomes had been discussed extensively (Betts, Zau, & Rice, 2003; Darling–Hammond, 2000; Ferguson, 2014; Goe, 2007; Jensen, 2012; McKinsey & Company, 2007; Rowe, 2003). Selecting and hiring the right teachers was thus important.

The winning strategy that Singapore had implemented in getting quality teachers was having a single, state-wide selection process of teachers that was managed jointly by the Ministry of Education (MOE) and the National Institute for Education (NIE). Teachers were recruited from the top 30 percent of each year's graduate cohort. Only one in eight applicants was accepted to become a teacher (NCEE, 2012). Successful applicants were paid as civil servants during their initial teacher education. That was expensive. Yet high retention rates during the course and in the early careers of teaching created significant savings, and also helped to improve the standard of applicants to the course (McKinsey & Company, 2007).

The system placed a strong emphasis on the academic achievement of candidates, their communication skills, and their motivation for teaching (Jensen, 2012). However, Hanushek, Kain, O'Brien and Rivken (2005), found that there was little to no relationship between teacher qualifications and instructional quality. They argued that hiring highly qualified teachers was simply a regulatory necessity—it did not automatically guarantee high-quality instruction.

In Singapore, NIE strived to develop teachers into effective instructors by putting in place systems and targeted support to ensure that every child was able to benefit from excellent instruction (Jensen, 2012). For example, a focus on learning in Singapore, had led the NIE to cut subjects such as history and philosophy of education and curriculum and assessment design, from their undergraduate teacher education syllabus. Feedback from teachers, principals and the Ministry of Education showed that these subjects were not leading to sufficient increases in students' learning. NIE then focused more on subjects emphasising practical classroom teaching (OECD, 2009).

## 2.13. Reflection of quality teaching in Singapore

The Singapore education system had achieved many enviable results, especially in the area of Mathematics and Science, as evidenced by the Trends in International Mathematics and Science Study (TIMSS) results (Commonwealth Advisory Bureau, 2012). Although teaching quality enhanced learning outcomes, it was not just defined by test scores (Schleicher, 2011). The Singapore education system was known for its high resource commitment, academic rigour, down-to-earth direct teaching by the teachers and repeated practice by the students. However, despite the "success", the then education minister, Tharman Shanmugaratnam had acknowledged that while the system had achieved "quantity", the students might not be adequately engaged in the learning process. They became passive learners, driven externally to perform but not necessarily inspired. The "quality" breakthrough therefore had two key aspects. The teachers had to review the core of education and the students had to become engaged learners—interested and proactive agents in the learning process (Ng, 2008a).

### 2.13.1. Teach Less, Learn More (TLLM)

In 2004, the MOE launched the "Teach Less, Learn More" (TLLM) initiative where education in Singapore was transformed from learning by quantity to quality. TLLM was significant in its call to improve the quality of interaction between teachers and learners—with less emphasis on rote learning, repetitive test and a "one-size-fits-all" type of instruction, and more on experiential discovery, engaged learning, differentiated teaching, lifelong skills and the building of character (Tharman, 2005a). This idea was echoed by the National Education Association (2007):

> The idea that every child learns at the same rate, at the same time is one that no parent should accept as accurate! Experience with children will tell you that this is not true. In our school system, we are working feverishly to develop pacing guides to regulate what is taught every day. We are setting up our children and our teachers for failure. This law is being used as an excuse not to teach children from where they are. This law, with its dependency on standardized tests, doesn't accomplish what politicians tell you it does. (p. 3)

In Singapore, the teacher was at the heart of TLLM. Gadamer (1960/2006) asserted, "A word has a mysterious connection with what it 'images'; it belongs to its being" (p. 416). What images of education were formed when teachers were thought to "teach less"? Did the notion of *teach less, learn more* open up the idea that teachers were impeding the learning of the students? "Language is not merely a tool of communication in which thoughts are put into words, nor is it merely a bearer of representational knowledge. Language is a way that humans live humanly in this world" (p. 181).

Noting the importance of language, Heidegger (1993b) reminded us, "Those who think and those who create with words are the guardians of this home" (p. 217). What did it signify for teachers when the policy makers who

constructed the law were the guardians of the home inside the schoolhouse, rather than the teachers who resided inside the classrooms? "The sheer fact that something is written down gives it special authority" (Gadamer, 1960/2006, p. 274). The written word authorized that teachers had to teach less in order for students to learn more. This language moved education from quantity to quality accessed and opened the space for tension between teachers as knowledge providers and teachers as facilitators. Naming was almost always a deliberate process. Aoki (2005a) noted:

> Language is not merely a tool of communication in which thoughts are put into words, nor is it merely a bearer of representational knowledge. Language is a way that humans live humanly in this world. (p. 181)

In what ways did teachers live humanly in the world under TLLM? The way teachers acted, lived and resided in classrooms was altered under TLLM. The goal of TLLM was to provide quality teaching but what did that mean for the lived experience of teachers? TLLM was not a call for "teacher to do less". It was a call to educators to teach better, to engage the students and prepare them for life, rather than to teach for tests and examinations (Tharman, 2005a).

Tharman (2005b), announced that the focus of TLLM would be on the quality of learning, quality of co-curricular activities (CCA) and community engagements and the quality of the whole school experience that the student went through. More "white space" (MOE, 2005) was provided in the curriculum to give schools and teachers the room to introduce their own programmes, to practise quality teaching, to reflect more, to have more time for preparing lessons and to give students themselves the room to exercise initiative and to shape their own learning. The TLLM initiative aimed to touch the hearts and engage the minds of the learners. It aimed to reach into the core of education, that is, why teachers taught, what they taught and how they taught (Tharman, 2005a). In response to the TLLM model of teaching, teachers were explicitly reminded to adapt their teaching strategies thus invoking quality teaching.

## 2.14. Summary

Although numerous studies had already been done on the topics of quality education, teachers and teaching, they were not definitive (Wilson, 2011) as there were conflicting opinions and findings. It had, however, been established that developing high-quality teachers required a multipronged approach. Promising teachers needed to be recruited, retained and rewarded while teachers who did not improve needed to be dismissed through EPMS. There was a need to invest in systems of professional development that effectively improved the practice of experienced teachers and their working conditions, which were fundamentally tied to school climate as well as factors that enhanced or inhibited students' academic outcomes.

I embarked on a research topic that had already been exhaustively discussed simply because I discovered the lived experience of Singapore teachers, those who were to carry out the mandates within the classroom, was missing from much of the literature. This phenomenological exploration lent a philosophic voice to teachers

teaching in Singapore, in order to penetrate into deeper layers of meaning as their experiences were uncovered.

In chapter three, I explore phenomenology as a research methodology, including the philosophic framework of hermeneutic phenomenology, through which I conducted my research into Singapore teachers' perceptions and experiences with quality teachers and teaching.

# Chapter 3. Methodology and Research Design

This chapter presents the methodology for this research. Methodology provides the philosophical groundwork for methods. It begins with the justification for the selection of the methodology and general design of the research. Following the justifications, the ontological and epistemological stances, the particulars of the design, including the ethical issues of the research process, selection of participants, the tools for the research, the process of data collection, the type of data obtained (qualitative) and the method of analysis used to answer the three research questions are discussed. The final section addresses issues of trustworthiness and acknowledgements of limitations.

## 3.1. Justification for the methodology of the research

Various research methodologies exist with different and sometimes competing epistemological and ontological positions. Greenwood and Levin (2000) noted that there are wide variances in the kinds of social science practised in universities, namely "quantitative, qualitative, mixed method, positivist, constructivist, postmodernist and poststructuralist" (p. 92) while Meyrick (2006) noted that often there is a "polemic debate, pitting quantitative research against qualitative" (p. 801) and refers to a 'disciplinary tribalism' within the arena of qualitative research.

Eisner (1992) and Pring (2000) were critical of the extreme positions some researchers took arguing against such a 'false dualism'. Creswell (2014) described a middle ground and advocated a pragmatic worldview while Hammersley (1996) believed that selection between qualitative and quantitative approaches "requires judgment according to the situation and purpose, rather than judgment based on a commitment to one or another competing philosophical view of the world" (p.164).

Qualitative research, rather than quantitative, according to Creswell (2013), is more appropriate when the study requires a complex, detailed understanding of a phenomenon and when that level of detail can only be established by interviewing or observing people in their natural environment and when the voices and stories of the participants need to be heard. A qualitative methodology is also consistent with the constructivist theory, which provides the theoretical framework for this research to understand teacher experiences of quality teaching and the meaning that they create from those experiences. In qualitative research, claims of knowledge are based upon constructivist perspectives of individual experiences (Creswell, 2014) and there is no objective truth out there waiting to be discovered. Meaning or an understanding is not discovered but constructed (Crotty, 1998). Ontological and epistemological issues in that case are difficult to separate as "talk of the construction of meaning is to talk of the construction of meaningful reality" (Crotty, 1998, p. 10).

Quantitative methodologies, on the other hand, which rely on statistical analyses, are better suited for describing the correlation between variables but will fail to capture the voices, stories, and lived experiences of the participants involved in this study (Graziano & Raulin, 2007). Furthermore, qualitative researchers seek to understand a phenomenon by focusing on the total picture rather than breaking it

down into variables. The goal is a holistic picture and depth of understanding, rather than a numeric analysis of data (Ary, Jacobs, Razavieh, & Sorensen, 2006, p. 31). I believe that in this educational research, where what is sought is an understanding as opposed to facts, a qualitative approach, rather than a quantitative approach, is more appropriate for understanding the essence of the participants' experiences and to identify those influences and beliefs, which affect those experiences. In other words, the descriptive data from the point of view of the participant is the goal.

There has been numerous research using both quantitative and qualitative approaches and articles on how quality teachers and teaching contribute to student achievement (Ary, Jacob, Razavieh, & Sorensen, 2006; Hanushek, 2005; Harris & Sass, 2007; Hill, Rowan, & Ball, 2005; Nye, Konstantopoulos, & Hedges, 2004; Rivkin, Hanushek, & Kain, 2005; Sawchuk, 2011). These studies explore quality teaching from the researchers' points of view.

However, what appears to be missing in the research and what motivates this study is experienced teachers' perspectives on quality teachers and teaching. Ellis and Levy (2008) proposed that scholarly research starts with the identification of a tightly focused, literature supported problem followed by research questions. As mentioned in Section 1.7 of Chapter 1, the research questions for this study are:

- How do Singaporean teachers describe quality teachers and quality teaching?
- What has influenced the formation of those beliefs that they have?
- What factors or experiences, according to Singapore teachers, have influenced the quality of their teaching?

In what ways will the questions of quality teachers and quality teaching in Singapore be investigated? To investigate means "to inquire systematically". It derives from the Latin *invest* meaning to "track" or "trace out" (OED Online, 2014). The methodology of study is "only a way of investigating certain kinds of questions" (Van Manen, 2005, p. 1). It is within the methodology, then, that I investigate questions. It is essentially, the steps that will be taken in order to derive trustworthy and valid answers to the research questions (Borrego, Douglas, & Amelink, 2009; Creswell, 2012; Hicks & Turner, 1999; Leedy & Ormrod, 2005; Sekaran, 2003), the research intention and context (Creswell, 2012), the nature of the research (Johnson & Christensen, 2014), the theoretical and methodological framework from which the research emerges (Cohen & Crabtree, 2008) and by acknowledging the perspectives of the research participants (Alvesson & Skoldberg, 2009).

A research methodology is "the general approach the researcher takes in carrying out the research project" whereas the research tools are "a specific mechanism or strategy the researcher uses to collect, manipulate, or interpret data" (Leedy & Ormrod, 2005, p. 14). For research to be valid (quantitative) or trustworthy (qualitative), the aims, objectives and appropriate methods need to be stated clearly and the sampling techniques and rationale for their use need to be made clear to the reader (Patton, 2002).

All researchers have different beliefs and ways of viewing and interacting within their surroundings. This research took place in real world settings and I, as the researcher did not try to manipulate the phenomenon of interest (Denzin & Lincoln, 2003; Wilson, 2002). I took on Denzin and Lincoln's (2005) ultimate

participatory interpreter role, an observer who explores in depth the life-world of which the participants and I were a part.

As outlined in the literature review in Chapter 2, this doctoral research involves the social sciences, an educational paradigm as well as developing a detailed view of the meaning of a phenomenon or concepts for individuals (Creswell, 2014). Johnson and Christensen (2014) describe such research as idiographic that is investigating individuals in personal, in-depth detail to achieve a unique understanding of them.

"Social research, in simplest terms, involves a dialogue between ideas and evidence. Ideas help social researchers make sense of evidence, and researchers use evidence to extend, revise and test ideas" (Ragin, 1994, p. 55). Due to the lack of prior research specifically done on how teachers in Singapore perceive what quality teachers and quality teaching are and the influences for the formation of their beliefs, this doctoral research begins with broad ideas about possible influences of the teachers' beliefs on the phenomenon. These ideas arise, as many do, from "everyday life" (Ragin, 1994, p. 59), specifically, conversations about the findings of prior research on quality teachers and teaching.

The combination of all of the above aims and considerations leads to the conclusion that a qualitative mode as described in Creswell (2014) is the optimum strategy of inquiry for this study. It is an accepted form of research for educational disciplines and suits the constructivist paradigm or worldview. The general aim of this qualitative research is to study phenomena in terms of the meaning teachers bring to them (Denzin & Lincoln, 2002). Qualitative research is predominantly inductive with the researcher generating meaning from the data collection (Creswell, 2014). The qualitative researcher uses complex reasoning that is multifaceted, iterative, and simultaneous (Creswell, 2013). In keeping with the study's subjectivist epistemology (Bogden & Biklen, 2007), this study does not endeavour to offer single answers to complex questions regarding quality teachers and teaching. Instead, it seeks to express what quality teachers and quality teaching are, from multiple perspectives.

## 3.2. Overview of the design

According to Cohen, Manion and Morrison (2011) "research is concerned with understanding the world and that it is informed by how we view our world(s), what we take understanding to be, and what we see as the purposes of our understanding" (p. 3). A well-developed research design should reflect this and before commencing, I, as the researcher, need to clarify and acknowledge my underpinning assumptions and aims, as well as demonstrating how these impact the study.

According to Creswell (2014), research design involves the intersection of philosophy, strategies of inquiry and specific methods. This research is underpinned by an interpretivist/constructivist paradigm with nominalistic ontology and subjectivist epistemology (Patton, 2002) which supports the notion that there are many truths and realities. Reality, truth, knowledge and perceptions of quality would all be viewed in this study as constructed by the individual in a unique and experience-based process (Crotty, 1998).

Individually created reality is seen to be complicated by a dependence on the constructions of memory. Memory is not viewed as an objective chronological replay of past events and experiences but is a reconstruction influenced by both past and present events (Clandinin, 2007). Bruner (1991) described this process as one's capacity to turn around on the past and alter the present in its light or to alter the past in the light of the present and that neither the past nor the present stays fixed. What is remembered and how it is remembered is revealed in what is chosen to be told and becomes the reality for the individual at that moment (Crotty, 1998).

Each individual constructs layers of meaning and knowledge from the uniquely remembered experiences of the past and present and only the individuals can reveal explicitly or tacitly the meaning of those memories. Therefore, different people have different perceptions, needs and experiences. Creswell's writing on the philosophy of research (2014) suggests four worldviews that afford different orientations about the world and the nature of research (as opposed to Teddlie & Tashakkori (2009) who only identified three). The key difference in Creswell's conception is that he sees critical/cultural research as a distinct worldview from constructivism.

Constructivism assumes that individuals seek an understanding of the world in which they live and work. People develop subjective meanings from their experiences and so the goal of research is to rely as much as possible on the participants' views of the situation being studied (Cresswell, 2014; Lincoln & Guba, 1994). In this worldview, meanings are constructed by human beings as a way to engage with the world they are interpreting, thus constructivist researchers tend to use open-ended questions so that participants can share their views (Lincoln & Guba, 1994).

Humans engage with their world and make sense of it based on their own historical and social perspectives and meaning is always social, coming from interaction with the human community (Andrews, 2012; Schwandt, 2000). The nature of this topic shows strong alignment with the social constructivism world view. With regard to social constructivism, Creswell (2014) stated that meanings are formed through interaction with others. Social constructivism has its origins in sociology and emerged over thirty years ago (Andrews, 2012). Also referred to as interpretivism, social constructivism has been associated with the post-modern era in qualitative research (Andrews, 2012).

Some researchers suggest that language predates concepts and allows an individual to structure the way their world is experienced (Andrews, 2012). Language is the vehicle for both the expression as well as shaping of the memories which make up a created reality and so the study of language in phenomenology is an important tool for uncovering the personal meaning of experiences, the construction of knowledge and the recognition of quality (Clandinin & Connelly, 2000).

Phenomenology "offers us the possibility of plausible insights that bring us in more direct contact with the world" (Van Manen, 2003, p. 9). Phenomenology reflects on words and thoughts to shed light on human experiences. Van Manen (2003) explains that phenomenology "attempts to gain insightful descriptions of the way we experience the world pre-reflectively, without taxonomizing, classifying, or abstracting it. . . it offers us the possibility of plausible insights that bring us in more direct contact with the world" (p. 9).

Phenomenology embraces the world as we live it, but in the process, invites us to change the way we live. Our taken-for granted notions of self-understanding, reflection, and practical competence are all reconceived in phenomenological inquiry. This self-understanding is a result of our own understanding of self in the world. Too often, as Gadamer (1960/2006) noted, we are only vaguely aware of things in the margin or periphery of attention, while we are only implicitly aware of the wider horizon of things in the world around us.

> The horizon is the range of vision that includes everything that can be seen from a particular vantage point. A person who has no horizon does not see far enough and hence over-values what is nearest to him. On the other hand, "to have a horizon" means not being limited to what is nearby but being able to see beyond it. (Gadamer, 1960/2006, p. 301)

Phenomenology is not a methodology that seeks to report results and data in the conventional sense. Van Manen (2005) noted, "we explain nature, but human life we must understand" (p. 4). This understanding of human life broadens the horizon of research beyond empirical data. A phenomenological study opens up the horizon of understanding that is not quantifiable. Sartre (1965/1993) provided guidance to a path looking beyond quantifiable data: ". . . human reality is not an accumulation of facts" (p. 200).

In fact, Van Manen (2005) reminded us that "it is not at all surprising that wonder is the central methodological feature of phenomenological inquiry. . . Phenomenology not only finds its starting point in wonder, it must induce wonder" (p. 5). As wonder opens up reflection, the reflection itself draws one into the phenomenon. The arousal of wonder, my curiosity about what quality teachers and teaching are, and the presence of the questions draw me toward phenomenology.

Through a phenomenological study of quality teachers and teaching in Singapore, I hope to reveal to the readers, the pedagogical implications of the law inside classrooms. Perhaps a phenomenological text is ultimately successful only to the extent that we, its readers, feel addressed by it "in the totality or unity of our being" (Van Manen, 2007, p. 26). To do this, hermeneutics contributes to broadening the horizon. As an inquiry process, phenomenology is also closely related to hermeneutic phenomenology as it is attentive to the philosophies underpinning both hermeneutics and phenomenology (Van Manen, 2003). The etymological foundation of hermeneutics comes from the Greek *hermeneutikos*, meaning skilled in interpreting or making clear (*OED Online*, 2014). In Greek mythology, Hermes is the messenger god who serves as the interpreter between Zeus and mortals.

Thus, hermeneutics simply means "interpretation". Denzin & Lincoln (2005) argued that hermeneutic philosophy focuses on the problem of interpretation. They added that all research is interpretive; they are guided by the researchers' sets of beliefs and feelings about the world (Denzin, 2001). However, more than simply interpreting, hermeneutic phenomenology is a research methodology aimed at producing rich textual descriptions of the experiencing of selected phenomena in the life-world of individuals, which are able to connect with the experience of all of us collectively (Hoepfl, 1997). From identification of the experience of phenomena, a deeper understanding of the meaning of that experience is sought. This occurs

through increasingly deeper and layered reflection by the use of descriptive language (Smith, 1997). Most scholars adopt Schleiermacher's hermeneutical canons, "where a singular event is understood by reference to whatever it is part of…" (Polkinghorne, 1983, p. 221), and the analyst moves back and forth between individual elements of the text and the whole text in many cycles, called the "hermeneutic spiral" (Tesch, 2013, p. 68).

According to Reason and Rowan (1981), hermeneutic researchers include in their considerations the historical context which every experience is part of. It is this notion of historical context that also draws me to hermeneutics. The hermeneutic process brings what is beyond human understanding into a form that can be grasped (Huebner, 1999b) and the researcher is to have a personal connection to the phenomenon. "The most basic of all hermeneutic preconditions remains one's own fore-understanding, which comes from being concerned with the same subject" (Gadamer, 1960/2006, p. 294). My concern for the whatness, of quality teachers and teaching, comes from my roots in public education since 1984. "A phenomenology that is sensitive to the life-world explores how our everyday involvements with our world are enriched by knowing as in-being" (Van Manen, 2007, p. 13). My everyday involvement in teaching draws me to this phenomenon not as an empty slate, but through my knowing as a teacher. As a consequence, I desire to extend the horizon of understanding of quality teachers and quality teaching in the Singapore context.

The hermeneutic interpretive process will reveal meanings of quality teachers and teaching, not merely the situations of the classroom. There is a propensity to dwell in the space of teaching, but not in the spirit of it, perhaps due to "our desire to 'fix' the world into stable and known practices and expressions" (Huebner, 1999b, p. 267). As a consequence of seeking to fix understanding to known practices and expressions, insight regarding quality teachers and teaching in Singapore is brought forward through a discussion of the state and stasis of education, rather than to teaching itself. However, what can be brought forward when the hermeneutic process moves us beyond the space of teaching? Opening the lived experience of quality teachers and teaching in Singapore through the hermeneutical process, I seek to make unfamiliar what is taken for granted, and bring new comprehensibility to the lived experience of it.

Hermeneutic phenomenology presents an opening to reveal and trace out what teachers in Singapore perceive as quality teachers and teaching. Once traced out, what understandings will be brought forward to fill the spaces? What remembrance of teaching will be revealed? Even as my experience enables me to bring something to this study, the interpretative aspect of hermeneutic phenomenology enables me to take something away as I dig deeper into who I am as a teacher and better understand the phenomenon of quality teaching in today's primary schools. As Aoki (2005a) noted:

> Hermeneutic conversation is a dialectic of questions and answers that in their interpretive turnings are attempts to move to deeper ontological realms of meanings. Successful hermeneutic conversations lead conversationalist, human beings as they are, toward questions concerning who they are. (pp. 180-181)

Aoki reminded us that hermeneutics phenomenology is "a critical quest for what it means to be human" (p. 183). Likewise, Heidegger explains that the everyday "speaks" to us, suggesting who and what we are as human beings (as cited in Pinar, Reynolds, Slattery, & Taubman, 2002, p. 421). The hermeneutic process allows me to become the author of this subject and, "in writing, the author puts in symbolic form what he or she is capable of seeing" (Van Manen, 2003, p. 130). It may be helpful to remind ourselves that the word "author", from the Old French *autor*, meaning "father" commonly came to be understood as "one who sets forth written statements" (OED Online, 2014). Van Manen (2003) noted that "writing, true writing, is authoring, the exercise of authority" (p. 130). As a teacher myself, hermeneutic phenomenology enables the hearing of teaching, not through my ears alone, but within my being.

### 3.2.1. Teacher being

Huebner (1999a) contended that "human life is never fixed but is always emergent as the past and future become horizons of a present" (p. 137). Where are those horizons for teachers today? What horizon of the present is emerging for teachers? To Smith (1991), the hermeneutical task is not a technical one, solved by logic but a human struggle to find out what makes it possible for them to speak, think and act in the way they do. Hermeneutic phenomenology is one methodology which opens the space to ask what ways do teachers think and act as a consequence of teaching in Singapore where their qualities are assessed through the EPMS?

Conversations including "data-driven decision making", "performance management", and "covering syllabus" have become so prevalent in the teacher's being, it is almost impossible to imagine a lived experience void of such conversations. According to Sartre (1965/1993), teachers are given little room to ask what they think even though they are in the habit of putting the basic question to young people who are thinking of writing, "do you have anything to say?" (p. 319). Ellsworth (1997) advised, "Teaching is not normalizable. . . this is what saves it from being a skill or a technology" (p. 193). Gadamer (1960/2006) asserted that our language tells us who we are now, who we were once and who we hope to become. Who do we hope to become as teachers, under a system that measures teacher quality and teaching through students' knowledge, measured by standardized exams?

The questions above may be answered through hermeneutic philosophy that focuses on interpretation (Denzin & Lincoln, 2005), guided by the researchers' sets of beliefs and feelings about the world. My aim is to make interpretive practices concrete in order for others to engage with the understandings that emerge (Denzin & Lincoln, 2002). Thus, hermeneutic phenomenology serves me well in the exploration of the lived experience of teachers. It opens up the lived experience of why "*a* way to do, has become *the* way to do, indifferent to differences in the lived world of teachers and students" (Aoki, 2005b, p. 368). It reveals the experience of teachers, those closest to teaching, the ones most unheard and unnoticed in the dialogue around teaching and learning.

In conducting this hermeneutic phenomenological study, I follow Van Manen's (2003) six components of action sensitive pedagogy: turning to the nature of lived experience, investigating experience as we live it, hermeneutic phenomenological reflection, hermeneutic phenomenological writing, maintaining a

strong and oriented relation and balancing the research context by considering parts and whole, guiding me toward a deeper understanding of the meaning of the teachers' experiences. Thus, the nature of the hermeneutic phenomenological approach and the nature of what I am aiming to capture are well-aligned. My interest is not what happened so much as what meaning people made of what happened.

### 3.2.2. Choice of data collection method

The choice of data collection method needs to be consistent with the aims of hermeneutic phenomenology to find out what the study set out to investigate (Kvale, 1994). Methods must allow the collection of quality data (Kleinsasser, 2010; LeCompte, 2000). In order to explore and gather narratives (or stories) of lived experiences and to develop a conversational relationship with the participant about the meaning of an experience, interviews were the most appropriate way to collect the data. Interviews are not repositories of objective facts but are mutually constructed social events out of which data is generated (Collins, 1998). They are conversational in nature (Van Manen, 2003). Interviews also allow participants to share their stories in their own words. Stories frame cultures and make life meaningful within cultures. "It is the quality of meaningfulness, rather than factual truthfulness that gives the story credibility. The hearers of the story believe that it is true because it is meaningful, rather than it is meaningful because it is true" (Doan & Parry, 1994, p. 2).

For this study, in-depth semi-structured interviews with teachers in Singapore were used as the data gathering method. This approach provided data enabling the research questions in this study to be explored. This format provides the advantages of both structured and unstructured interviews. Semi-structured interviews provide greater breadth or richness in data compared with structured interviews, and allow participants freedom to respond to questions and probes, and to narrate their experiences without being tied down to specific answers (Meadows & Morse, 2001). The advantage of this approach over unstructured interviews is the ability to compare across interviews because some of the questions are standard (Minichiello, Aroni, & Hays, 2008).

Although there is an interview plan, the intention is for the conversations to also be flexible. There should be room for follow up questions, responses that refer back to participants' stories for clarification as well as opportunities to build rapport. Comfortable rapport between each participant and me is critical for my inquiry design. Asking participants to share their experiences and their stories requires a great deal of trust and respect for all involved (Clandinin & Connelly, 2000; Fetterman, 1998; Glesne, 2011).

The emphasis for me as an interviewer was not to have preconceived notions of what I planned to hear from the participants. My goal was to investigate what I could learn from their stories about quality teachers and teaching. Qualitative researchers generally agreed that interview questions needed to be open-ended and framed using every day and common language (Creswell, 2013; Elliot, 2005; Glesne, 2011; Merriam, 2009; Sunstein & Chiseri-Strater, 2007).

### 3.2.3. Participants

Qualitative researchers are interested in and sample for meaning, frequently working with small samples of participants nested in their context and studied intensely and in depth (Holloway & Wheeler, 2013; Huberman & Miles, 2002; Morse, 2007; Richards & Morse, 2012; Sandelowski 1991, 1995; Tesch, 2013). This study is concerned with meaning and not making generalised hypothesis statements in a positivist empirical sense (Crouch & Mckenzie, 2006; Denzin & Lincoln, 2005; Lincoln & Guba, 1985; Patton, 2002; Sandelowski 1991, 1995) but an in-depth understanding of what has impacted the perceptions of teachers of quality teachers and teaching in Singapore.

### 3.2.4. Rationale for selection of research participants

The focus of this study requires participants who have lived experience and are willing to talk about their experience but diverse enough from one another to enhance possibilities of rich and unique stories (Polkinghorne, 1988; Van Manen, 2003). My target group was primary school teachers because as a primary school teacher myself, I have a wide network of friends and colleagues teaching in primary schools. I am also able to relate better with primary school teachers whom I have previously worked with or have come in contact with before, as trust has to have been established.

### 3.2.5. Ethical issues and considerations

Ethics concerns how people act. The ethical position adopted for this study was strongly informed by Bassey (1999) who advocated respect for democracy, respect for truth, and respect for persons. Trustworthiness is "significant" and researchers must "be truthful in data collection, analysis and the reporting of findings" (p. 74), a position that was conscientiously practised throughout this study. In the pursuit of knowledge, the rights of those being studied had been adhered to.

My attempt to get ethical clearance for my research was not without its challenges. Initially, I sought out teachers for this study through email correspondence to thirty primary school teachers whom I had worked with in seven different schools, asking if any were interested in participating in this study. I did not supervise or evaluate any of the teachers. Twenty teachers expressed an interest in participating. I reviewed the list of potential participants and cross-checked this list against my criteria for selection, which included a balance of teachers and heads of department with a minimum of ten years of teaching to ensure they had knowledge of teaching prior to EPMS. Additionally, I worked to achieve both a racial and gender balance among the teachers.

Unfortunately, I was not able to receive ethical clearance to interview current teachers unless I had clearance from the Ministry of Education (MOE) in Singapore and/or the principals of the schools the teachers are currently teaching in. This was due to the fact that the ethics committee felt that there was potential harm that can befall the participants if their identities were compromised. I was advised that current teachers are not allowed to participate in any research project that involves their professional or personal lives without the permission of the MOE. I

have yet to find the actual documents to support this claim but based on my past experience of asking permission from the MOE to conduct similar research for my master's dissertation, I know first-hand that it is unlikely that anyone in the MOE will even respond to my request. Everyone in the system does not want to take the responsibility of approving my potentially "controversial" research project.

My suspicion was confirmed when the principal of the school I was teaching in before I started my PhD journey informed all the teachers in my school of the fact that they were not allowed to participate in any research or survey without written consent from the MOE. Undeterred by this minor setback, I decided to approach teachers who had nothing to lose by speaking their mind. Over the course of 28 years, I had the pleasure of working with many teachers, some of whom had retired or resigned from the teaching service in Singapore. Given their length and currency of experience, I felt that their inputs would be just as current as the teachers who were still in the service and in hindsight, I was more confident of getting blunt honesty from them.

When collecting data, I ensured that the interviewees appreciated what the research was about, its purposes, and that their answers and stories would be treated confidentially (Bryman, 2001). Voluntary consent was secured prior to the interview and every effort was made to safeguard the anonymity and confidentiality of the participants by using pseudonyms for their names, locations and schools throughout the research from data entry onwards to ensure that no unnecessary harm was caused to the participants during or after the interview process.

Approval was finally gained to conduct the research inquiry from the University of Southern Queensland Human Research Ethics Committee (HREC) after I made amendments to recruit ex-teachers as my participants. As my interviews are retrospective, I do not foresee a difference between current and ex-teachers views on quality teachers and teaching. Therefore, I refer to the participants as teachers and not ex-teachers as most of them are still actively serving as adjunct relief teachers.

In Chapter Four, I will introduce each participant; however, for now I provide a brief overview of the study's participants. All have been employees of a primary school in Singapore and worked as teachers prior to and since the introduction of EPMS. Five of the participants are men and four are women. Five identify as Malay and four as Chinese. Five are retired school teachers and four are teachers who have resigned from the teaching service. Prior to our first conversation, I met individually with each potential candidate and reviewed the approval letter, invitation to participate and the informed consent form with them (see Appendices A to C).

### 3.2.6. Research participants

As mentioned in the above section on ethical issues, I was not able to recruit current teachers as my research participants. Therefore, my primary population switched to ex-primary school teachers in Singapore. The teachers were selected from the population parameter of those who have just retired or resigned within the year.

People participate in qualitative studies because they have direct and personal knowledge of a phenomenon and they want to communicate that (Sandelowski, 1995). This is a purposeful and convenient sample of ex-teachers who were selected because they meet both experiential fit (they are experts who have undergone the

experience of interest) (Richards & Morse, 2012) and were willing to be interviewed and participate in the study. This strategy provided direct access to the specific location and group of potential participants I am interested in.

To know when no further interviews would potentially provide a new or unique insight is impossible. While prepared to recruit and interview as many participants as needed, I realised that nine participants were sufficient to generate some commonalities among the participants as well as provide the opportunities for in depth reviews and clarifications. Furthermore, qualitative research is very labour intensive so analysing a large sample could be time consuming and often simply impractical. At the same time, after nine interviews, I was not generating new insights. Therefore, it becomes counter-productive and the new information discovered does not necessarily add anything to the overall story (Corbin & Strauss, 2008).

For qualitative research, one occurrence of the data is potentially as useful as many in understanding the idea behind the topic (Ritchie, Lewis, & Elam, 2003). That is in line with Patton's (2002) assertion that the "validity, meaningfulness and insights of qualitative inquiry have more to do with the information richness of the cases selected and the analytical capabilities of the researcher than with sample size" (p. 245). These methods of sampling are also consistent with interpretive paradigm research (Llewellyn, Sullivan, & Minichiello, 1999).

### 3.2.7. Limitations of sampling methods

I am cognizant there are limitations to the non-probability sampling methods I have chosen to use. While convenience sampling is considered a weakness in quantitative empirical studies, and even some qualitative researchers have argued against its use (Patton, 2002), there are situations in which convenience samples are an acceptable way to proceed (for example, when studying populations that are difficult to access or for populations and phenomenon that have not been studied previously) (Phua, 2004; Weiss, 1995). These are both factors considered in this study. Current teachers in Singapore are often a difficult-to-access population thus the change in participants to ex-teachers. Further, this topic has not been studied previously, especially in the Singapore context.

While the findings of the research may provide "a springboard for further research or allow links to be forged with existing findings in the area" (Bryman & Bell, 2007, p. 198) they will have limitations in terms of generalizability. Also, a weakness of these sampling techniques is that they can limit the diversity of the participants (Taylor & Bogdan, 1984). However, there is diversity to be acknowledged among the participants. For example, although they are similar in that they were primary school teachers who have left the teaching service within the year when the data was collected, they vary in age, gender and experience. All participants have assumed both teaching and leadership roles (e.g. as HODs or vice principal) except for two. All participants have worked in more than two schools and some of them have worked in government as well as government-aided schools (usually called mission schools). All the retired participants will still be working when their services are required as relief teachers. These attributes demonstrate that the participants are similar but diverse.

### 3.2.8. Addressing the research questions

To address the first research question in my hermeneutic phenomenological study regarding teachers' perceptions about quality teachers and teaching, I applied the interpretive framework of social constructivism by using semi-structured individual interviews and asking research participants similar open-ended questions but I asked further probing questions as required (Creswell, 2014). The use of open-ended questions was to give the participants the opportunity to respond with their individual stories.

This approach also allowed the research participants to fully and freely describe their own experiences with quality teachers and quality teaching. A couple of questions from the interview guide that specifically addressed the first research question was "Could you tell me stories about quality teachers?" and "What is the difference between quality teacher and quality teaching?" These questions potentially address the perception of the participants on quality teachers. By getting them to tell me stories about quality teachers, I could elicit their perceptions of the traits of a quality teacher and quality teaching.

To address Research Question 2 and 3, I added new questions to the interview protocol to elicit the teachers' perceptions of their beliefs that have contributed to their ideas about quality teachers and teaching and the factors or experiences that they thought enhances or inhibits quality teaching.

As the interviews were semi-structured, there were questions and ideas that emerged beyond the boundaries of the original conceptual framework. Examples of questions that were not initially considered by me are:

1. What are the differences between teaching before the implementation of performance bonus and after its implementation?
2. If you were the Minister of Education, what would you change in the education system?

In answering the question on the implementation of performance bonus, I could assess the impact of performance bonus on teaching and teacher behaviour in general. The following question allowed for free expression on the part of the participants to tell their story in a hypothetical manner. By relating what they would change in the education system if they were the Minister of Education, I could indirectly draw out the issues that are bothering them in the education system. This is possible with the use of neutral probes to give participants the opportunity to illustrate their answers with additional stories or to provide evidence for particular conclusions they draw. Examples of neutral probes which provided that opportunity for the participants were statements such as: "Tell me more about that," "What happened then?" and "What was that like for you?"

A more comprehensive list of interview questions is as follows:

1. What is your definition of quality in education?
2. What is the difference between a quality **teacher** and quality **teaching**?
3. Can you tell me stories of quality teachers and quality teaching?
4. What has influenced the choice of your stories and the beliefs that you have?
5. Were there any experiences that you went through that have influenced the quality of your teaching?
6. Are there any factors that enhance or inhibit teachers in carrying out quality teaching?
7. How do you assess a quality teacher or quality teaching?

8. Why did you join teaching?
9. Why did you resign from teaching?
10. How does the Singapore education system compare with other countries?
11. What are the differences between teaching before and after the implementation of performance bonus?
12. If you were the Minister of Education, what would you change in the system?

### 3.2.9. Interview protocol

I met individually with nine ex-teachers in person in Singapore to conduct the interviews or conversations as I was seeking depth rather than breadth in data collection. Each of them was interviewed once in a setting that was conducive, convenient and mutually agreed upon, namely their homes or mine. The interviews began with a description of the study and signing of a consent form. They were asked to confirm that they understood and were willing to proceed. The conversations which last approximately 60 minutes were recorded using an iPhone voice recorder. These recordings were immediately backed up onto a password-secured laptop and subsequently personally transcribed. The transcripts to the conversations are mostly verbatim. Irrelevant words or interjections that interrupted the flow of meaning and therefore its integrity were deleted. This could be construed as interpreting the recordings from my own perspective but the "lived experience" and sense of "being" presented is not trivialised by incidental interjections irrelevant to the conversation at hand.

After each conversation, general analysis began using the recording and continued until the start of the next conversation. All participants were identified by pseudonyms that were used to label interviews. Any proper names in the text (for example, names of teachers, principals, or institutions) were extracted and/or changed to neutral terms (for example "my colleague" instead of the individual's proper name). A key aspect of my role as a phenomenological researcher is to acknowledge that there are always multiple stories happening at any one time hence I made a concerted effort to attend to my participants' perspectives and stories during our conversations.

The conversations took on a hermeneutic aspect. They were not a linear discussion, a collective piecing together of individual experiences, nor did they follow prescribed questions, but rather an understanding of the phenomenon as it unfolded through a "backwardly-reaching leaping ahead" (Anton, 2001, p. 104).

After each conversation, I provided a copy of the transcription to each participant for checking of their accuracy and for further addition or deletion. Often the transcription enabled participants a place to build upon for subsequent reflections which they shared via email. Email was also used to ask further questions to clarify meanings behind certain statements and also on themes that were not discussed in the initial conversations.

### 3.2.10. Data analysis

This section discusses the data obtained to answer the three research questions, and indicates how they are analysed. Data analysis is "an intellectual

struggle with an enormous amount of raw data in order to produce a meaningful and trustworthy conclusion" (Bassey, 1999, p. 84) or a detailed description of the setting and individuals which is followed by analysis of the data for themes or issues (Creswell, 2014).

Van Manen (2003) explained that themes brought forward in a phenomenological study may be understood as the structure of the experience. Bringing forward the words from my conversations and reflecting on essential themes brings out possibilities for understanding quality teachers and teaching in Singapore. Gadamer (1960/2006) remarked that "thanks to the verbal nature of all interpretation, every interpretation includes the possibility of a relationship with others" (p. 399). Reflecting on the essential themes brought me to new places of understanding which were perhaps, hidden:

> The joy of recognition is rather the joy of knowing more than is already familiar. In recognition, what we know emerges, if illuminated, from all the contingent and variable circumstances that condition it; it is grasped in its essence. It is known as something. (Gadamer 1960/2006, p. 113)

By opening up more than was already recognized, I uncovered an essence of teaching through questioning and reflecting on the language brought forward by the teachers. I strived to "give shape to the shapeless" of quality teaching under EPMS (Van Manen, 2003, p. 88). Bachelard (1994) explained that "concepts are drawers in which knowledge may be classified" (p. 74). However, it was essential through thematizing not to break down the essence of the reflections to the extent that I "do away with the individuality of knowledge that has been experienced" (p. 74). With careful attention to individuality of knowledge, I attempted to expand the understanding of quality teachers and teaching in its essential elements of the experience.

Van Manen (2003) noted that thematizing reveals hidden layers of meaning:

> The meaning or essence of a phenomenon is never simple or one-dimensional. In order to come to grips with the structure of meaning of the text, it is helpful to think of the phenomenon described in the text as approachable in terms of meaning units, structures of meaning, or themes. (p. 78)

Revealing the themes of the lived experience was not a technical process of counting, categorizing or colour coding. In order to bring the significant themes forward, I engaged with my own thoughts as well as the meanings brought forward by the teachers, and came to an understanding greater than my own reflections in isolation. As Van Manen (2003) explained, articulating themes was not a skill or a cognitive process that could be described, then practised. He suggested that themes came about in a desire to make sense of a phenomenon, a willingness to be open to understanding an experience, and through a process of insightful invention, discovery and disclosure.

Through this research, I strived to reveal the essence of quality teachers and teaching, leaving the familiar notions I had about it, behind. In my conversations with teachers, their words brought about an awareness and connectedness whereby the phenomena revealed themselves. As Gadamer (1960/2006) said:

> In order to be able to ask, one must want to know, and that means knowing that one does not know. . .The path of all knowledge leads through the question. To ask a question means to bring into the open. . .The sense of every question is realized in passing through this state of indeterminacy, in which it becomes an open question. (1960/2006, p. 363)

Through the questions the phenomena came into focus. I moved beyond my own understanding of quality teachers and teaching in Singapore and brought forward the significance of these phenomena through the stories shared by the participants in this study. Van Manen (2003) told us to listen to conversations as a whole, attending to the main significance of what is being said. As I listened, I stayed alert for possibilities of error in my interpretation of significance, either because of my own fore-meanings or because of misunderstanding the personal situations of my participants. Next, I searched for phrases and stories that revealed something central about quality teachers and teaching amidst EPMS. It was here, within and around the phrases and stories, where I moved from awareness of the whole to attention to the parts. I looked closely at details asking what is revealed in the words used, or in the way the voices sounded as they spoke. Finally, I explored commonalities or ways of naming the experience that occurred in more than one conversation, or repeatedly, within the same conversation.

At the same time, Van Manen (2003) suggested we attend to the resonance between what we hear in our conversations, and things we have read or experienced ourselves. I listened for related meaning in the words of philosophers, poets, novelists and others. This opened the horizon of the phenomenon and enabled me to cast a wider gaze on it.

Gadamer (1960/2006) understood hermeneutics as a process of co-creation between the researcher and participant, in which the very production of meaning occurs through a circle of readings, reflective writing and interpretations. Through this process, the search is toward understanding of the experience from particular philosophical perspectives as well as the horizons of participants and researcher. Hermeneutic research demands self-reflexivity, an ongoing conversation about the experience while simultaneously living in the moment, actively constructing interpretations of the experience and questioning how those interpretations come about (Hertz, 1997). The use of a reflective journal is one way in which a hermeneutic circle could be engaged, moving back and forth between the parts and the whole of the text (Heidegger, 1993c). Writing forces an individual into a reflective attitude in which one writes in a deeply collective way (Van Manen, 2003).

The interpretive process continues until a moment in time where one has reached sensible meanings of the experience, free from inner contradictions (Kvale, 1996). However, Caputo (1988) cautiously noted that coming to a place of understanding and meaning is tentative and always changing in the hermeneutic endeavour. It is therefore necessary to account for one's position and trace one's movement throughout the research process using a hermeneutic circle.

The acts of gathering data, analysing and interpreting are not really separate activities that occur in a linear sequence. Each is related to the other and at times occur simultaneously (Kvale, 1994; Sandelowski, 1995; Van Manen, 2003). Analysis is the process of breaking data up or down to render it able to be interpreted

(Sandelowski, 1995). The process of analysis allowed the data to be organised in a way that made interpretation possible. The circular nature of the process of interpretation meant any separation of the process of interpretation from analysis was artificial and only for the purpose to make the process by which data was transformed transparent to the reader. The understanding uncovered was not just that of the everyday view of the phenomenon but a renewed look at what made the phenomenon what it was. That represented a revelation of a deeper comprehension of the phenomenon itself (Allen & Jensen, 1990).

It had previously been acknowledged that a universally existent understanding could not be achieved as any interpretation was a construction. It was not a thing that existed in its own right (Crotty, 1998; Van Manen, 2003). In line with the metaphor of the hermeneutic circle, the interpretation reached would be open to re-interpretation and was dialectical in nature (Annells, 1996).

A preliminary analysis of the data was conducted simultaneously with the transcribing of interviews. Excerpts from the interviews as well as notes and interpretations were entered into a database using Microsoft Excel as each transcription was done. Preliminary descriptive codes were then assigned as the data was amassed so that a tentative theoretical model could be contemplated. It ensured that I remained close to the words of the respondents and was not distant from the data (Gibbs, 2002).

When all nine interviews had been transcribed, the data was then more carefully scrutinised, considered and analysed utilising Microsoft Excel. A good quality analysis relied on good analytic work by a careful human researcher (Gibbs, 2002). The analysis required careful reading and re-reading of the data, breaking it down into segments and using open coding to identify the different themes or issues that appeared. In this case, the transcripts were read through repeatedly and sifted to allow the creation of a conceptual map of predominant story lines (LeCompte, 2000).

As new data was acquired through the continued process of interviews, through immersion in the data, new categories were created as demanded and some categories collapsed into broader descriptors (Burnard, 1991). Categories only earned their way into construction by virtue of their fit with and faithfulness to the data (Sandelowski, 1995). Data were grouped together that illuminated those categories whereas unusable fillers found in the interviews were removed (Burnard, 1991). A holistic approach to the analysis of data was chosen as the text was viewed as alive. If a more reductionist approach were used, there were risks of strangling the data thus losing their vitality (Steeves, 1994; Thorne, Kirkham, & MacDonald-Emes, 1997).

The analysis occurred in many cycles beginning first with a process of total immersion in the data by reading each individual interview multiple times. After the first several readings, and with each subsequent reading, the data was reduced and further reduced to categories with themes and subthemes emerging from constant comparative analysis (Lincoln & Guba, 1985). Table 3-4 displays the themes and subthemes identified. I then used themes and subthemes from individual interviews to track themes and patterns across cases. At the same time, I conducted within-case comparisons on each theme within each participant's account. This within- and across-case strategy allowed me to view the whole and the individual at the same time and thus ultimately to identify salient themes as well as significant and representative stories across cases (Ayres, Kavanaugh, & Knafl, 2003).

The participants gave meanings to their stories. As narrating was a creative act, participants chose the details, events, characters, and perspectives for the stories they told about their lives. As a researcher, I had to interpret the participants' stories and decisions and invest them with further meaning (Sandelowski, 1991). The rigorous process of reflection and reinterpretation enabled me to track thematic variation as well as commonality across cases without stripping away the individual context (Ayres et al., 2003). The integration of those analyses led to identifying the significance of past experiences (positive and negative) related to the participants' teaching lives.

I also used the more theoretical approach where I coded for a specific research question (Guest, MacQueen, & Namey, 2011). That involved a template in the form of codes from a codebook to be applied as a means of organizing text for subsequent interpretation (Boyatzis, 1998). For this study, the codebook was based on a preliminary scanning of the text (Crabtree & Miller, 1999).

Although it was presented as a linear, step-by-step procedure, the research analysis was an iterative and reflexive process (Guest, et al., 2011). This interactivity applied throughout the process of qualitative inquiry which Teddlie and Tashakkori (2009) described as the overarching principle of "goodness". The data collection and analysis stages in this study were undertaken concurrently, and I reread the previous stages of the process before undertaking further analysis to ensure that the developing themes were grounded in the original data (Boyatzis, 1998). The primary objective for data collection was to represent the subjective viewpoints of participants who shared their experiences and perceptions of quality teachers and quality teaching during narrative interviews.

### 3.2.11. Summarizing data and identifying themes

The process of paraphrasing or summarizing each piece of data entered information "into your unconscious, as well as consciously processing the information" (Boyatzis, 1998, p. 45). It was imperative to read, write and re-read in order to produce meaning in hermeneutic strategy (Allen, 1995). The selected passages of interest and relevance were first reviewed to identify a preliminary list of topics and issues raised by the participants, which were then indexed and collated across the interview data sets (Crabtree & Miller, 1999). The issues and topics were then clustered into preliminary domains, which were later confirmed during the coding and clustering process.

Themes in phenomenological research are different than in other situations. As explained by Van Manen (2003), the themes brought me to the experience, provided a shape to the experience and helped formulate the context of the phenomenon. The phenomenological quality of a theme included a "needfulness or desire to make sense" of the phenomenon (Van Manen, p. 88). The themes were not the phenomenon itself, but rather entryways into understanding the phenomenon; "metaphorically speaking they are more like knots in the webs of our experience" (p. 90).

Uncovering and isolating thematic aspects of a phenomenon generally take three approaches. They are the holistic or sententious approach in which phrases capture the fundamental meaning of the text as a whole; the selective reading approach in which essential statements and phrases about the phenomenon are

revealed; and the detailed or line-by-line approach in which a detailed reading of each sentence or sentence cluster seeks to reveal what is being described about the phenomenon (Van Manen, 2003). I used all these approaches as I examined the stories of my participants. It is important to note that a content analysis is not the aim of this thematic data analysis, and, consequently, a single comment is considered as important as those that are repeated by others within the study.

The transcripts, having previously been entered into an Excel Spreadsheet, were coded by matching segments of text selected as representative of the code. Analysis of the text at this stage was guided by the pertinent topics and issues that were identified in the selected passages of interest and relevance. In other words, I examined individual stories looking for overall meaning of the text. Those were further reduced by labelling and indexing them into specific domains (Spradley, 1979). Those domains were general categories, or clusters, of inquiry representing a similar focus or trait and were based on gaining an understanding of what the participants had experienced in terms of the phenomenon and what the contexts or situations were, which had typically influenced or affected the participants' experiences (Patton, 2002).

During the coding of transcripts, inductive codes were assigned to segments of data that described a new theme observed in the text (Boyatzis, 1998). Those additional codes were either separated from the predetermined codes or they expanded a code from the manual (Crabtree & Miller, 1999). , I used a line-by-line approach when the text resisted my attempts to understand it and finally, I grouped these statements into holistic statements of themes that synthesized the details into the fullest possible description. This drew attention to significant utterance that suggested particular aspects of the phenomenon. I shared with the participants my insights about themes I developed, during the research process.

## 3.2.12. Interpretation of data

As the researcher, my role was to listen carefully to participants' views and interpret the findings based on the participants' background and experiences (Creswell, 2014). As established in the opening chapter, my experience of working as an educator for over 28 years in Singapore, in a teaching capacity enables me to speak about the context with "some authority" (Crossley & Watson, 2003, p. 26), having considerable insider knowledge of teaching in seven primary schools.

There was a double hermeneutic or dual interpretation process at play. As stated by Smith and Osborn (2003), "the participants are trying to make sense of their world; the researcher is trying to make sense of the participants trying to make sense of their world" (p. 51). Those processes were necessary in order to make sense of that other personal world through a process of interpretative activity. Access to the participant's experience depended on my own conceptions. "This introspection and acknowledgement of biases, values or interests typifies qualitative research today. The personal-self became inseparable from the researcher-self" (Smith & Osborn, 2003, p. 182).

My interpretation of the participants' experiences revealed a significant amount of information regarding the phenomenon (quality teaching) and also offered new insight to the overall study. Applying the social constructivism framework was the most useful approach in gaining access to the views and nuances that influenced the individual worlds of my research participants.

## 3.3. Trustworthiness

Having a high degree of validity and reliability is vital to any research to help establish trustworthiness and therefore it is something that all qualitative researchers must concern themselves with (Huberman & Miles, 2002; Seale & Silverman, 1997). Validity in research is the measure of how accurately the research methodology and techniques and ultimately the findings match the situation or phenomenon under investigation. Reliability demonstrates the degree to which the methodology and techniques used in a study "will yield similar data from similar respondents over time" (Cohen, Manion & Morrison, 2011, p. 146).

Validity in qualitative research is not a commodity that can be purchased with techniques (Brinberg & McGrath, 1986). Understanding is a more elemental notion for qualitative research than validity (Wolcott, 1990). Traditional conceptions of validity, techniques, and typologies as standards for judging the importance and value of a study does not resonate with those of understanding and purpose as keys for evaluating qualitative research. Therefore, a dilemma was presented to me in trying to establish the validity of a hermeneutic phenomenological analysis. Narrative interviews are also often criticized for their lack of validity and reliability, although they allow researchers to retain the holistic and meaningful characteristics of real-life events (Yin, 2009). Traditional applications of reliability standards should not apply to phenomenological study (Riessman, 2002). It is the challenge that Sandelowski (1991) referred to as "the inherently contradictory project of making something scientific out of everything biographical" (p. 161) and Ayres and Poirier (1996) called attempting to "make science out of stories" (p. 164).

I support and will reflect the model of Maxwell (2002) for understanding validity within this qualitative research realm and for addressing threats to validity or trustworthiness in the analyses for this study. Further, I support and will reflect my belief in the positions stated by Sandelowski and Barroso (2002) and Ayres and Poirier (1996) regarding the importance of reader response in assessing the value and quality of qualitative reports. Maxwell provided dimensions of validity (descriptive, interpretive, and theoretical) that are not so much a typology or criteria for establishing the completeness or exactness of any results as they are a guide or checklist for attempting to address potential threats to validity.

### 3.3.1. Descriptive validity

Descriptive validity refers to the factual accuracy of the account itself (Maxwell, 2002). As applied in this case to a hermeneutic phenomenological analysis, I had reflected word-for-word the exact statements of the participants in constructing the final analysis. No word was distorted or changed except in cases where a proper name was used by the participants, in which case a pseudonym was substituted for the proper name and the omission of 'emms', 'aahs' and grammatical errors.

Descriptive validity also includes avoiding the error of omission of critical elements of the account (Maxwell, 2002). Again, in this study, the participants words were the focus of the analysis, and the statements were reflected almost verbatim until the points on a particular topic were concluded.

### 3.3.2. Interpretive validity

Interpretive validity is concerned with meaning. In this study, the concern was the meaning that the participants' accounts and stories had for them and that it was more a reflection of the participants' perspective than the researcher's perspective (Maxwell, 2002). I attempted to reflect as often as possible specific statements in which the participants indicated that something was, from their perspective, significant to their decision on quality teaching. In phenomenological analysis, my interpretation and engagement with the participants was an important part of the process. I attempted to remain true to each participant's views and voice.

### 3.3.3. Theoretical validity

Theoretical validity refers to an account's validity as a theory of a phenomenon. It refers to the validity of the concepts applied to the phenomenon as well as the relationships among them (Maxwell, 2002). The rigorous iterative analytic process used (in this case, both within-case and across-case analyses and the hermeneutic spiral), inherently prevented any threats to errors in theoretical validity. The chosen analytic method of phenomenological analysis minimized threats to theoretical validity.

### 3.3.4. Reader response

The qualitative research report is a dynamic vehicle that mediates between the reader and me, rather than as a factual account (Sandelowski & Barroso, 2002). It is more suitable to treat my interpretations as tools designed to persuade readers of the merits of my study than as mirror reflections of it. Reader response theory is applied to support the significance of the qualitative report. Reader response theory holds that the merit of the work is apparent in the reader's response to it. It views the text as the vehicle for meaning; yet meaning only occurs when the text interacts with the mind of the reader (Ayres & Poirier, 1996). Reader-response theory represents a scholarly rebellion against the strictures of positivism. "From reader response theory, we rebel against the idea of one right answer, and we understand that there can be multiple valid interpretations" (Ayres & Poirier, p. 167).

The understandings and perceptions revealed in the narrative on the day of the original data collection evolved and changed for both the participant and I with the passage of time, which is also termed the fluidity of narratives (Sandelowski, 1993; Iser, 1980). Further, the practice of over-reading did privilege me as the final interpretation emerged in my mind. I had earned the special privilege of holding all of the participants' stories, the research literature, and the knowledge to fuse them together.

The construction of meaning is never finalized, because readers will themselves respond to it from their own contexts and in that response will give meaning and worth to the work. As the study is conducted transparently and responsibly and is faithful to the methods and data, the final interpretation must be accepted as one but perhaps not the only valid interpretation (Ayres & Poirier, 1996).

To that end, I have fully described the methods by which the interpretations were produced through hermeneutic phenomenological analysis. Specifically, I have made representations visible and presented processes in full clarity.

## 3.4. Limitations of the study's method

Limitations occur for all studies. As mentioned earlier, I had difficulty accessing practising teachers in Singapore. Therefore, I had to rely on only one source of data collection, in the form of a single interview with each participant. This technique is well-suited to the nature of the study but limited in terms of the multiple sources of data such as observations of practice, field-notes etc. that can enhance trustworthiness in qualitative studies. Furthermore, because of the nature of a doctoral study, the data is coded and themes identified in the data by one person and the analysis then discussed with a supervisor. This process allows for consistency in the method but fails to provide multiple perspectives from a variety of people with differing expertise. I feel that the interpretation of quality teachers and teaching may be the phenomena, which in this case are influenced by my own set of beliefs and values regarding them, as I am a researcher who had undergone similar experiences as the participants. Hermeneutic phenomenological research aims to study how human phenomenon are experienced in consciousness, in cognitive and perceptual acts (Wilson, 2002) and the selection of this approach is a key indicator as to the world view that I hold as the researcher (Van Manen, 2003).

## 3.5. Summary

In this chapter I provided a detailed account of the research design, methodology and methods that I employed in this research. A qualitative approach was adopted because it closely aligns and therefore best suited to the purpose of the investigation and sympathetic with the subjectivist epistemology. In-depth semi-structured interviews were conducted with nine ex-teachers, in order to elicit thick, rich description and my role as researcher being an interpreter.

I made use of themes to get to the perceptions of quality teachers and quality teaching in Singapore schools. As I reflected on the teachers' experiences, I looked for themes in the lived language to help me "get at the notion" and "give shape to the shapeless" (Van Manen, 2003, p. 88). Themes allowed me to make meaning of the phenomenon through the creation of a structure to the experience. The transcriptions of conversations helped me to discover themes and essential elements of the lived experience of Singapore teachers.

I called upon the existential philosophies of Heidegger, Gadamer and Sartre. My methodology is grounded in van Manen's structure for conducting hermeneutic phenomenological research as I researched the questions: **How do Singaporean teachers describe quality teachers and quality teaching?** In the following chapter, I will introduce the individuals who participated in this study and describe the themes that emerged from our conversations.

# Chapter 4. Identifying Themes

With the transcripts of our 10 hours of conversations, I poured over the words and looked at my notes to make meaning of them. Through a backward-reaching into the conversations, I leaned ahead into the phenomena of quality teachers and quality teaching. I recognized that through the process of the study, the participants related their perceptions and beliefs on quality teachers and quality teaching in Singapore. Our conversations were candid and informal, and occasionally peppered with nostalgic stories spelling out the lived experience of teaching before the introduction of EPMS. Through our conversations, the participants revealed something more than words. Burch (1990) explained, "Phenomenology . . . seeks to discover an underlying truth ordinarily concealed or distorted in that realm, a truth in terms of which the essential meaning of the practical has itself to be determined" (p. 131).

In this chapter, the essence is identified from the participants' stories through basic themes of hermeneutic phenomenology (Van Manen, 2003) in order to answer the three main research questions namely:

(1) How do Singaporean teachers describe quality teachers and quality teaching?
(2) What has influenced the formation of those beliefs that they have?
(3) What factors or experiences, according to Singapore teachers, have influenced the quality of their teaching?

Hermeneutic phenomenology is chosen because as opposed to transcendental phenomenology which is purely descriptive, it is interpretive. All description is always already interpretation (Heidegger, 1996). As meanings are not given directly to us, we should therefore make a hermeneutic detour through the symbolic apparatus of the culture. Human meanings are mediated through myth, religion, art and language and the various uses of language such as storytelling ultimately returns to the question of the meaning of being, the self and self-identity (Ricoeur, 1981).

Hermeneutic analysis attempts to represent a view of reality via systematically working through text to identify topics that are progressively integrated into higher order themes, via processes of de-contextualization and re-contextualization. It focuses purely upon meaning, promotes a discursive interpretation since individual codes can cross-reference multiple themes (Van Manen, 2003).

There were four main themes that emerged from the research. They were arranged in the following order for discussion: (1) quality/holistic education, (2) quality teachers, (3) quality teaching and (4) teacher motivation. Within these four main themes, there were first level subthemes as shown in the table below.

**Table 4-1: Main Themes with First Level Subthemes**

| Main Themes | First Level Subthemes |
|---|---|
| **Quality/Holistic Education** | Comparing with other countries |
| **Quality teachers** | Traits of Quality teachers<br>Measure of Quality teachers<br>Influence for beliefs<br>Experiences for improvement<br>Ranking of teachers |
| **Quality teaching** | Measure of quality teaching<br>Inhibiting factors<br>Enhancing factors |
| **Teacher motivation** | Why join teaching?<br>Why leave teaching?<br>Work-life balance |

## 4.1. Analytic process

In order to prepare the data for analysis, I personally transcribed the interview into text and formatted the document so the margin could be used for identifying individual bits of data. I also assigned line numbers as identifiers for cross referencing. An inductive approach to thematic analysis allowed themes to emerge from the data, rather than searching for pre-defined themes (Patton, 2002). During my first reading, I made notes of major issues as they came to mind in order to acquire a sense of the various topics embedded in the data.

Then I reread and examined the text closely, line by line, to facilitate a micro analysis of the data. This also promoted open coding which identified any new information by de-contextualizing bits of data embedded within the primary material (Corbin & Strauss, 2008).

Following that, I sorted items of interest into proto-themes. This was where themes began to emerge by organizing items relating to similar topics into categories. At this stage I kept the themes as simple as possible to ensure flexibility in the categorization process whereby any re-ordering of the clusters of categories could help create and re-define the initial themes (Patton, 2002).

I then re-examined the text carefully for relevant incidents of data for each proto-theme. This process of trawling back through the data is also called axial coding (Miles, Huberman, & Saldana, 2013). It involved re-contextualization whereby any data was then considered in terms of the categories developed through that analysis. Taking each theme separately and re-examining the original data for information relating to that theme is a vital stage in the analytic process because

human perception is selective and the relevance of data can be easily overlooked. Furthermore, pieces of data previously assigned to a theme may in fact be contradictory.

The name, definition and supporting data were then re-examined for the final construction of each theme, using all the material relating to it. This stage of re-contextualization focused more closely upon the underlying meaning of each theme. Finally the name of each theme was finalized, its description written and illustrated with a few quotations from the original text to help communicate its meaning to the reader.

## 4.2. Participants' Backgrounds

Before proceeding with the interpretation of data, the participants of this study are introduced. In order to protect their identities, pseudonyms are used to replace participants' names and the names of the schools that they used to work in. This is necessary because although the retired teachers have left the service, they are still contributing their services as relief teachers to schools as and when their teaching services are required.

### 4.2.1. Henry

Henry is recently retired after teaching for forty years. He was in the Army before joining the teaching profession. He has taught in mission and government schools and has assumed the roles of head of department (HOD), in several of them. He, as well as the other four retired teachers, have enjoyed teaching. He believes that teaching is not a job but a profession. He enjoyed school so much that he went to school early every morning and watered the plants in the school grounds, which he had personally planted. He believed that he was growing and nurturing the children and he must give them the environment of curiosity. He has a strong character and is not afraid to voice his opinions and beliefs to school leaders and higher authorities. I have worked with Henry as a colleague and as his subordinate. Henry is a dedicated teacher and his contributions are invaluable.

### 4.2.2. Tarim

Tarim is also retired after teaching for 41 years. Throughout his career he has climbed up the ladder from a teacher, to a head of department, to a vice-principal and back full circle to a teacher again. He is one person who believes in integrity to the degree that he was willing to take risks in his career for what he believed in. He does not waiver in his belief that if there is no discipline, there will not be any learning. He was a strong disciplinarian who was able to not only instill self-discipline to his class but to the whole school when he was the vice-principal of a primary school. As a teacher, he was always willing to share his "secret" to success with anyone who was willing to listen. After retirement he continues volunteering his services as a counsellor in the Singapore Anti-Narcotics Association (SANA) and as a tutor in MENDAKI, a self-help group to assist under-privileged and under-achieving Malay students. He assists the member-of-parliament in his constituency weekly during the meet-the-people sessions and is in-charge of the kindergarten as well as interviewing

and identifying residents who are in need of financial assistance. With so many things "on his plate" he still finds time to help retrenched workers find new jobs.

### 4.2.3. Mahmud

Mahmud is talented and it is no surprise that his first career was one of an entertainer. He is retired with 40 years of service in education. Currently, he is still rendering his service as an adjunct teacher. He always has the children's welfare at heart. His altruistic nature is noted through his constant volunteer work as he offers to teach failing students after school hours. He does not believe in competing with the other teachers so that he can be ranked higher. He believes that his students are the ones who have the right to write his testimonial as he is working for them and no one else. He is very vocal and frank to the point of almost losing his job for what he believes in. He was adamant not to accept leadership positions such as head of department or vice-principal, even though the school leaders "twisted his arm", for he was passionate about teaching and being with the pupils. He challenged the school superintendent to dismiss him for wanting to be just a teacher. He goes beyond the school to help the community by organizing self-help groups to assist student who are lagging behind in their studies. Currently, he is still doing it.

### 4.2.4. Carrie

The fourth retired teacher is Carrie who has served as a teacher for 45 years and is still going strong. She was like a "fire-fighter", the person her principal turned to when he desperately needed a class of struggling students to improve their grades. She gained this reputation five years into her teaching career. Back then, she was tasked to teach three primary one pupils who had been transferred from another school. They had failed for the second time and she was tasked to guide them to pass their exams. She accepted the challenge and all three were successful at the end of that year. From then on, she was given "difficult" classes to teach. Currently, she is contracted to teach in a primary school, still doing what she loves.

### 4.2.5. Emily

The final retired teacher is Emily who was "married" to the school for 39 years although she also has a loving family at home. She not only spent school hours in school but volunteered her time for the pupils after school hours, during weekends and school holidays! She is a self-proclaimed workaholic. She was promoted to a head of department. She is always improving her knowledge by going for in-service courses. She believes in life-long learning. Since her retirement, she has gone for summer courses at a university in London to learn the things she did not have time to learn while teaching. Her thirst for knowledge sees her participating in numerous free on-line courses, that she finds interesting, one of which is Global History of Architecture.

### 4.2.6. Brady

The sixth participant is Brady who had been teaching for thirteen years before he decided to "call it a day". Being a high-flyer, he was promoted to become a head

of department early in his career. Before long, he was promoted again to the senior education officer salary scale. In the Ministry's eyes, he had a high potential to climb the leadership ladder. He professed that the teaching life had grown more unattractive and he was having more work and less time for his young family. He felt that the school had lots of programmes other than teaching and that spelt more work for the teachers.

### 4.2.7. Ramlee

The seventh participant is Ramlee who resigned after rendering his services for 11 years in the teaching profession. Although he has resigned, he feels that, in his heart, he is still a teacher because he is still learning. He believes that to become a good teacher, he has to lead by example, by learning, unlearning and relearning. He left the teaching service because he aspires to look for more knowledge outside the system. He wants to experience "living the hard way, taking the hard knocks". He admits that although he has physically resigned from MOE, he can never resign from teaching and learning.

### 4.2.8. Lily

The eighth participant is Lily, another high-flyer who resigned after ten years in the teaching service. She was promoted to become a subject head after just five years in the teaching service. She was a very committed and ambitious teacher who enjoyed teaching. She was disappointed that once she was promoted, she had to undertake more administration work and less teaching. She felt that although there was the teaching track to strive for, the opportunities there were far and few in-between. However, the opportunities in the leadership track were relatively more abundant. Thus, her dilemma was that she "could not have her cake and eat it". She loved teaching and strived for promotion but there was a trade-off, for to be promoted meant less teaching and more administrative duties.

### 4.2.9. Norma

The final participant is Norma who had been teaching in primary schools for 25 years before resigning. She was a very capable teacher who had been promoted to become a head of department. She was not satisfied with the new role she had to undertake as she felt stifled and not herself having to conform to a lot of rules and regulations. As a result of that, she requested to step down from the HOD position, prior to resigning. Even after stepping down as a head of department, she was still tasked to perform administrative duties that were usually assigned to teachers who were heading a department. Norma accepted the extra duties for fear of being "branded' uncooperative and losing her performance bonus.

After introducing the participants, it is timely to discuss the concepts of quality and holistic education.

## 4.3. Quality/holistic education

The theme holistic education was added to quality education as some of the participants referred to these two terms interchangeably. Quality education has many

definitions, testifying to the complexity and multifaceted nature of the concept. According to Sayed (1997), the concept of quality in education is elusive and frequently used but never defined. The terms efficiency, effectiveness, equity and quality have often been used synonymously (Adams, 1993). Quality education is usually defined as 'outputs, outcomes, process or inputs" (Adams, 1993, p. 4). It can be summarized as the "need for more relevance, for greater equity of access and outcome and for proper observance of individual rights" (EFA Global Monitoring Report, 2005, p. 30) and what is learned (and how learning occurs) is as important as access to education (Pigozzi, 2006, p. 41). Quality education includes learners who are healthy, well-nourished and ready to participate and learn and supported in learning by their families and communities (Barrett, Chawla-Duggan, Lowe, Nikel, & Ukpo, 2006).

Holistic education is a philosophy of education based on the premise that each person finds identity, meaning, and purpose in life through connections to the community, to the natural world, and to humanitarian values such as compassion and peace. Holistic education aims to call forth from people an intrinsic reverence for life and a passionate love of learning (Miller, 2006).

In essence, the retired participants saw quality education as the teacher's responsibility. Henry stated that, "As a teacher, most of the time you must know how the children learn". To him, a teacher has not taught anything if the students have not learnt. Henry equated quality education to students' learning by saying "Quality education is when a child understands and knows how to apply the knowledge s/he has learnt". According to Henry, Singapore does not have natural resources such as oil or gold so her people are her only resource. Thus, he believes that the government of Singapore spares neither efforts nor resources in educating its people. Henry affirmed that "every school, be it private or government has quality teachers as well as state-of-the-art physical and information technology resources".

On the topic of holistic education, Henry stated that holistic is a school-wide programme and how one plans the programme. He elaborated that "it is not up to the individual teacher to think of a holistic programme. The Ministry has a holistic programme but it must be filtered down to the school leaders who will take it up. Every subject has its holistic programme". Henry felt that the subject teachers could do their part by devising their own individual holistic programme by infusing various skills together as they are teaching. However, Henry acknowledged that because of the constraints of the curriculum and the time allocated to teach certain skills, most teachers would actually concentrate on the core concepts which have to be taught prior to infusion.

Henry's sentiment about the overcrowded curriculum as well as the time taken for different pedagogical approaches was echoed by another retired teacher Emily who felt that "if you cramp so many things into the curriculum, you will not have time to finish them or time to experiment". Emily recalled being taught that when teaching Physical Education, the students needed to be given time to explore and not just being told specifically what to do. Emily believed that teachers knew what was best for their students but if they had so many other things to do, they had to prioritize. She confessed that "holistic education is very wishful thinking, in a way". How could there be holistic education if teachers are encouraged not to teach art, social studies, physical education and music because they are not "tested subjects".

Emily felt "holistic education can only happen if there is a balance and the other subjects' loads are reduced". Emily also commented that Singapore students are very good academically and ranked highly at things that are measurable like English, Maths and Science but when it comes to identifying what they see and explaining what they do, they cannot do them because they are not exposed to nature. Emily summarized quality education as teaching students how to be responsible and adding value to their lives by enhancing their perspectives in life beyond passing exams. Emily strongly believed that "passing exams is just a small component of one's life and as long as one lives, it is worth learning". In other words, quality education is the passion for life-long learning.

Tarim elaborated that "quality education is when pupils are educated holistically in the sense that what they do in school should allow them to be able to speak up and face challenges in the outside world". He noted that although the children were sometimes made aware of the challenges that they could find outside, they were normally not critical enough when faced with challenges. Tarim felt that "unlike students in international schools who are more outspoken, Singaporean students are taught to "toe the line" most of the time". Tarim cited an example of a child who came back from overseas and was enrolled in a local school. During a Science lesson, the child asked his teacher a few questions which were critical regarding the facts that were taught for that day. Instead of catering to the child's enquiry, the teacher "thumbed him down" (showed disapproval) and as a result the child rebelled and refused to go to local schools.

Mahmud had a similar view about quality education. He believes that "quality education is something that must benefit the student and prepare them for the future". It did not mean the teaching must be very good or the teacher must do a lot of work. Mahmud felt that as long as the teacher could impart knowledge and the students could make use of it in a proactive and positive manner which could help them in the future, he would regard that as quality education.

Carrie, on the other hand, established that holistic education is basically when a child excels both academically and non-academically. They can excel in art and craft, drama, wushu (a Chinese form of martial art) or sports. As long as the child can develop in his or her niche, that to her is holistic education. She felt that Singapore is approaching holistic education especially since Direct School Admission (DSA) is no longer based on academic results but the child has to excel in other areas like character development and personality.

The participants who resigned from the service had defined quality education in a slightly different way. Brady defined quality education as pupils getting to learn what they really need to learn and teachers knowing what to teach. According to Brady, "quality may not be consistent. Even within a school, there may be differences in quality because every school does not have a group of homogeneous teachers. The Singapore society is very much result-driven so good results will be the main focus". Therefore, Brady felt that although teachers want to teach and motivate pupils in non-academic areas, they still tend to focus on the academic subjects especially in primary school because the teachers are the ones who will help pupils move on to the secondary schools.

Norma defined quality education as making sure the pupils are very well-grounded in their basic foundation, for example, the four operations in Mathematics.

She also touched on holistic programmes which were not just subject-based but programmes like aesthetics, sports as well as character development which was a more wholesome approach but the issue was those programmes were partly run by teachers themselves whom she felt were already overtaxed. Lily, on the other hand summed up that quality education should comprise care, passion and love for the children. She asserted that everything else should be based on these three traits.

The participants implied that quality/holistic education should be able to allow the students to apply what they have learnt beyond the boundary of the classroom. Participants were asked to compare the Singapore education system to those of other countries and they came up with some insightful observation and opinions. This question was formed out of the participants' stories that touched on their understanding of other education systems.

### 4.3.1. Comparing with other countries

Brady felt that learning for students in Australia is less stressful as compared to students in Singapore. He heard that the students in Australia were happier. They have smaller classes and teacher aides who assist the teachers. This assumption was based on a couple of students under his tutelage. Those students were not doing very well in their schools in Singapore. They were in the tail end classes and one of them, a 14 year old girl was in the school of arts. She was in secondary two and was struggling in Mathematics and was totally not "on par" with the mainstream students. When their family migrated to Australia, the boy who was in a primary school could cope very well and the girl was even offered a scholarship. Brady also knew Australian teachers and got to know what they did there. He believed the main difference between Australia and Singapore was that Singapore teachers just had too much to do. Singapore teachers had less time to prepare, less time to build on the quality because they wanted everything. Brady rationalized this by explaining:

> I suppose in Australia, I'm not sure but this is what I've heard. When it's time off, it's time off. Then they are given the space to really develop their private time. Over the last three years, especially when I was a HOD, I worked late in the night. There were just too many things to do, day in, day out, weekends included.

Emily, on the other hand, compared Singapore to the United States and UK. She admitted, "we are good but I don't think we are the best". Emily felt that most of Singaporeans' achievements can be measured. However, she pointed out that there are a lot of immeasurable things. Emily explained it this way, "If we compare our kind of innovativeness with those in the Silicon Valley in California or in the IT Hub in Cambridge or whatever it is, I don't think we have reached that level of being innovative".

Emily noted that pupils are trained to pass, to do a lot of assessments and teachers to set very difficult questions. She empathised with the pupils who must have had a hard time. Emily related her experiences by saying:

> I look at my nephew and nieces. I know how tough it is for them. For some of the questions I had to think very hard, yet they are only in primary two and primary three levels. I feel so sorry for them. And they do a lot of things. There is no point learning about flowers and trees and what they can do; but

> when the children see the actual thing, they cannot identify them because there are no practical lessons. It's all on paper in the assessment books.

Carrie however, thought Singapore's education is the best in the world. She felt that no child is neglected, no matter what ability the child has, s/he is being catered to, from the lowest rung to the most intelligent. Carrie pointed out that there are special needs schools with special needs teachers and explained:

> We have gifted programme, we have direct entry. We have everything. Every child is being catered to, even our vocational schools. They are just like colleges and I think there are a lot of comments about Singapore educational system being so stressful that children can't take it, but I don't think so. To me if a child can take the stress and the challenge, I think it's good for him for life skill. I think Singapore's education system is very, very good. Otherwise, I won't be teaching for so many years. And I've been teaching for forty-five years. I see the progress, the changes and every change is for the better.

Tarim felt that Singapore's system is good in the sense that it caters to the needs of the country. He believed that some countries just come up with education policies to address the political and racial needs. According to Tarim, Singapore's education system is skewed more towards progress so all the changes in the educational policies in the sixties were geared towards progress and industrial needs of the country. Tarim added that there was once an economic report that stated Singapore was the only country where most of the workers were unskilled and could not pass primary six level examinations (PSLE). Therefore the government changed the system from PSLE towards streaming exams so that students were streamed into technical and academic paths which resulted in the normal technical, normal academic and express streams. In that way, no child was deprived of secondary education. Even those students who could not get into normal technical stream were sent to schools that could cater to their needs such as Northlight and Pathlight schools.

Lily felt that every society, every school, every country have their own push and pull factors. They have their own struggles with the administration. She cited that the United States of America's No Child Left Behind policy created a "huge, big mess" in American schools. Even in Australia, Lily figured teachers have to spend a lot of time documenting their children's portfolio. Lily went on to explain, "I mean that is just a system. I don't know about other countries but I feel we are definitely overworked. Maybe not underpaid but definitely overworked".

Lily elaborated that the TIMSS studies showed that most of the top scorers were from East Asian cultures. Lily explained why she felt that East Asian cultures, like Singapore put a lot of emphasis on examinations:

> For example in China, long, long time ago, the Imperial Emperor would make everyone sit for an exam so it's embedded in our culture that we need to study hard. Even our Chinese nursery rhymes tell us to study hard because it's in our culture.

Although Singapore's education system is perceived to be stressful for the teachers and students, Henry stated that Singapore is sharing its education system with Malaysian states of Sabah and Sarawak as well as Thailand and the United States of America. He added that these countries want Singapore's textbooks and system but Singapore is also looking at other systems and how they are faring. According to Henry, every three years there is something new being introduced by a new Education Minister in Singapore. He elaborated by saying, "Singapore is not keeping still. Even though Singapore is the leader in many areas, it is still changing and modifying its system".

Norma agreed that there are constant changes being implemented in the Singapore education system but admitted she had no experience teaching in other countries. However, Norma had heard of accounts given by her colleague who had worked in another country. Apparently Norma's colleague who taught overseas related that every class had art and physical education lessons every day. The syllabus in the school that Norma's colleague worked in did not include as many topics as in Singapore schools. Norma related, "What Singapore students were doing in Mathematics at primary six which is equivalent to 12 year olds, the other country's students were doing in secondary two which is equivalent to 14 year olds". Although Singapore students were ahead, Norma felt that not all of them were mature enough to reach the cognitive level to be able to grasp some Mathematical concepts. As a teacher in Singapore, Norma believed all teachers were really pressed to teach concepts which were really beyond the students' capabilities and level of understanding: "It's not because they are slow but they have just not reached the cognitive level to be able to grasp the concepts we are teaching".

## 4.4. Quality teachers

Some might think that being a quality teacher and doing quality teaching are synonymous. However, the two are different. The teacher is an entity and teaching is a practice. A quality teacher does not always produce quality teaching. Quality is also a complex multifaceted personal construct, reflecting the views on learning that the teacher and the learner (and other stakeholders) use and that depend on the specific local context of teacher and learner (Darling–Hammond, 2000). Thus what could the traits of quality teachers be in the context of Singapore?

### 4.4.1. Traits of quality teachers

Based on the participants' stories about teachers whom they felt left an unforgettable impression on them, I managed to tease out the traits of what to them, were quality teachers.

#### 4.4.1.1. Motivator

Brady described quality teachers as those who would spend time preparing for lessons and who during the lessons, would think of many different ways to help pupils learn, not just the usual pencil and pen, doing worksheets and so on. They would try many ways to get pupils interested. In his own words Brady related:

> Well, I would say that a quality teacher will help to motivate the pupils. It's hard to say whether the teacher has quality or

> not, but to have an impression of the teacher is probably because the teacher has done something that is close to your heart, or helped you make decisions. So, it gives me the idea that at the end of the day, it is not what you have taught the pupils. The main job of a quality teacher, if you put it that way, would be the one who can stay connected with the students.

Tarim felt that teachers not only needed to teach well but they must know how to understand and motivate their students. When teachers are with their students, they must be able to empathise. Tarim stated that "even the fingers of the hand are not of the same size" so he felt that students in a class of 40 who came from different home background and different economic status needed different forms of motivation. Therefore, the teachers' ways of motivating those students needed to be different and the teachers needed to be understanding.

Ramlee thought quality teachers were those who actually went beyond just the grades and be the ones who "want to step up beyond what they do in the classroom". He went on to explain that quality teachers taught beyond the textbooks and enjoyed what they were doing by stating, "If somebody is able to step up and entice the students to learn more and want them to pursue more, I think that would be something that's beyond teaching and that is quality".

Lily felt that since there is a lot of content around and everywhere to be found on the internet, students do not have to depend on teachers for knowledge as they can find things on their own. Therefore it is imperative that teachers are able to motivate students to seek information and knowledge. Lily also believed that if students are properly motivated, they will look for information on their own and strive for success.

Carrie said that if teachers are passionate about teaching, it is just natural that they want to motivate others. She emphasized that teachers do not work alone. Often they will have to work in a team and they will have to motivate others to agree with their ideas. Carrie felt that it is important in class too where teachers have to motivate students to buy into their ideas.

Emily emphasized that if teachers have a passion for learning, they would pass on that passion to their students and people around them: "If teachers are motivated, they will pass on their motivation for learning to others".

Henry stated that being a motivator is one trait that a quality teacher should have, although not the major trait. Firstly, teachers should have their content knowledge and teaching methodologies. Henry acknowledged that in classes of 30 students, the teachers cannot possibly motivate everybody. Teachers may be able to motivate ten students a day but not all in one sitting. Therefore Henry suggested that the teachers' teaching methodologies must apply to various students' needs. He added that one teaching methodology could not be applied to the whole class because students learn differently.

Norma recognised that being a motivator is definitely one of the traits of a quality teacher. As a teacher, one is not just supposed to teach but to motivate the students to "achieve their level best". Norma added that teachers also have to understand their students' needs and concerns so as to be able to teach them better and develop the students in a "wholesome manner".

Mahmud felt that teachers do not need to motivate students explicitly. Teachers just need to lead by example for students to emulate. Apart from being a motivator, teachers also need to be effective.

#### 4.4.1.2. Effectiveness

Brady believed that effectiveness is one of the traits of a quality teacher. To him, effective teachers are able to impart knowledge regardless of their paper qualifications and the students are able to learn.

To Henry, a quality teacher is an effective teacher. There is no teaching if there is no learning. Henry went on to elaborate:

> You look good teaching. A teacher may be like an actor on a stage. Students just laugh and enjoy the learning but after all that, they do not know how to apply whatever they have learnt. Then, no learning has taken place.

Henry preferred the words "effective teaching" to quality teaching. Having taught for 40 years, Henry felt no one class was the same. No one lesson was the same. Even though Henry could have taught the same lesson to a few different classes, he found that it changed according to the abilities of the students and also the responses of the students. And Henry noticed that it varied from day to day and the times of the day. He pitched his teaching to the ability of the students. When Henry was teaching, he often watched his students' expressions. He explained that he could see in his students' eyes whether they really understood him or otherwise. He continued by saying:

> An effective teacher has to look at the children most of the time and get feedback. Teaching is not just teaching alone but teaching is constant feedback from the children. And with that, you can become a better teacher.

Norma echoed Henry's sentiments that teaching had to be done effectively. Norma stated that if there was teaching, there should be learning. She continued that in order to check if learning has taken place, the students should be able to approach a question in an innovative and creative way. Norma further explained by saying, "The students should be able to apply and not learn by rote and regurgitate the facts learnt. For example, effective maths teachers would teach students until they are able to solve interesting non-standard mathematical questions in the most effective way". Norma felt that pupils' as well as parents' feedback are also important for effective teaching. She recognised teachers can learn and improve their skills if they are willing to listen to feedback from their stakeholders.

Emily believed that effectiveness is shown if teachers see their students change for the better or the students widen their scope of learning. She felt that teachers could be considered effective through their students' results but she cautioned that exams were just a small component of learning: "Exams are important but they are not the sole criteria for teaching. There are a lot of intangibles such as behaviour and values of life which cannot be easily measured".

Tarim questioned what the use of having a teacher in a class was if his/her teaching was not effective. He insisted by saying, "The teacher must ensure that the students learn. Teaching and learning must be there".

Carrie felt that teachers have to be effective not only academically but in disciplining, motivating and guiding students, in gaining students' confidence and other areas. She noted that some teachers may be effective in one area but not another. Therefore, Carrie felt that teachers need to teach holistically. Every day, to Carrie, was a learning journey: "A teacher may be effective one day in his/her method but ineffective the next day as the world goes round and changes so effectiveness depends on the cohort of students too".

Lily believed that effectiveness in classroom management, organisational skills and child psychology are important because no matter how much students want to learn, if the teachers do not possess effective strategies in managing a class, the students cannot really learn very much.

Mahmud commented that some teachers are very efficient, doing the right things but some are effective, doing things right. Apart from being effective, Mahmud believed that empathy is one of the most important traits of a quality teacher. Empathy has to be in every good teacher.

#### 4.4.1.3. Empathy

Tarim defined quality teachers by their attitudes and behaviours toward their profession. He believed that teachers need to understand their students' problems and be aware that not all students come from the same background. Therefore teachers should understand how to attend to each one of their students and understand their functions and their abilities. Tarim felt that "a good teacher could see through the students".

Emily stated that with empathy, teachers can foresee what their students can appreciate or achieve. She added that some of the students are underachievers and explained, "It is not for the lack of intelligence but the students may have some problems. If teachers could put themselves in their students' shoes and empathise, they could help the students better".

Henry believed that most teachers had empathy because if they loved children and had passion for teaching, empathy would always be there. He felt that teachers who rushed through the syllabus did not exercise empathy.

Carrie felt that teachers needed to have empathy or they would not be able to stay in the teaching profession. She lamented that parents these days are quick to take the easy route of divorce to resolve their differences as opposed to parents during her days who persevered in their marriage for the sake of their children. Carrie related, "Students whose parents are divorced may suffer emotionally and may not have any one to turn to except the teachers so teachers in these cases need to have empathy".

Brady strongly believed that teachers had to be in the learners' shoes so that they knew the right way to deliver their messages to impart a skill or knowledge. He also believed that if there was no empathy, the teacher would deliver the lesson in the "old traditional chalk and talk way" where there was only a one way communication, that was the teacher talked and the students listened.

Lily felt that empathy is one of the traits of quality teachers but she felt that unless the teachers have gone through similar experiences as their students, for example, death or divorce of parents, they could try their very best to understand but they could not fully empathise with the students. Lily noticed that teachers in Singapore were sometimes too bogged down with work and there were too many children in class for them to be able to feel for every single child. If they did, Lily felt teachers would not be able to function well as they would be emotionally affected.

Norma admitted that in the current situation, there are a lot of students without proper parental guidance. If a teacher is able to empathise with the students' situation and shows care and concern, the students will be better learners.

#### 4.4.1.4. Giving

Emily believed that all professionals, except for some who worked only for the money were givers rather than takers. She also believed that quality teachers were willing to share their knowledge. She elaborated on her point by saying, "If the teachers are very well qualified but not willing to impart their knowledge, it cannot be equated to quality teaching. All teachers who have the knowledge and are very well qualified or well-trained would be a better teacher if they are willing to give their best".

Emily recalled when she was teaching, she loved taking her students out of school to give them the opportunities to have hands-on experiences and do Science experiments. She admitted having to single-handedly do everything without anyone's help other than the financial support given by the school. However, Emily felt good when she knew that her students loved what she was doing. She overheard her students saying, "This teacher is very good, always taking us out". Emily explained further about her feelings:

> I had no day off. Imagine if I had to teach in the afternoon, I took them out in the morning. So it's a whole day kind of thing for me. It's not just half day teaching, so I'm doing double job. I am so willing to do that. I'm very happy to do that.

Henry also commented that teaching is a giving profession. He recalled teachers giving their love, their time, their knowledge and sometimes even their money to feed hungry students or pay for their supplementary fees. His sentiment was echoed by Tarim who felt that a teacher must be ready to give time to students especially those with social and emotional problems.

Carrie felt that although teaching is a giving profession, as a human being she sometimes needed to take as well. To her, taking was in the form of her students giving her the work that she assigned them and changing their behaviour for the better.

Brady defined being giving as being dedicated. He felt that good teachers have to sacrifice their time and trade off opportunities for economic progress as monetary return is not the main goal of teaching. Teachers' satisfaction should be derived from having seen that the learners are able to do what have been set by them or what both teachers and learners have set out to achieve. Brady went on to say, "Monetary results should be secondary or else teachers should be working in the corporate world instead of schools".

Lily echoed that teaching is a giving profession. She felt that one cannot really teach without giving and elaborated by saying, "Teachers give their time, energy and knowledge so if one is not a giving person, then teaching is not the profession to choose".

Norma asserted that giving could be translated in a few ways. It could be leniency, charity or generosity. However, Norma strongly believed that giving was being able to "love the students unconditionally".

#### 4.4.1.5. Integrity

"Integrity our foundation" is one of the Ministry's corporate values (MOE, 2014). Emily had displayed integrity by refusing to budge for what she believed in. She recalled an incident when the mother of a student Emily was teaching came to her to request that Emily changed his result because he had failed his Maths test by only one mark. The mother begged Emily to rig the scores in order to make her son pass. The mother did not understand that it was one percent of all the tests, it was not just one mark. Emily felt sorry for her but it was against her principle so she did not do it. Emily related the incident:

> The parent may think that I am very wicked not to give even one mark to help her son to pass but I said it does not help your son in that way. He has to work hard for it. It is just mid-term. He has to work hard to pass the next time. I was quite adamant about it. Then I found her very sad and tearing. I felt sorry for her but it is against my principle. There are times when the parents will look at us like we are very wicked, not helping the child to pass. A red mark is such an eye sore to them. I mean it's permanent in the child's record book. To them the child is scarred for life having a red mark. We have to make a stand somehow. That is how I felt about the whole thing, about teaching.

Mahmud recalled how a Physical Education lecturer taught his class a lesson on integrity which he thought was very effective and remained in Mahmud's mind until the present day. He related that while he was undergoing teachers' training, his class had to undergo Physical Education assessments which included high jump. He had a colleague who could not clear the lowest bar. Everyone knew he could not jump not for lack of ability but lack of confidence. He had cleared everything except the high jump so Mahmud thought the lecturer could just clear his colleague if he wanted to, but he did not. Mahmud spoke fondly of his lecturer by relating the incident:

> He just could not clear so the lecturer taught him the way slowly until he could clear the bar. The lecturer then said to him that he had really passed. Here we see quality teaching. Number one, he was patient. Number two, he did not want to sacrifice integrity. Everybody was happy because he really passed. So that was a good experience. Up to now I can still

> remember this person. I think he has passed away. He was one of the best P.E. teachers.

Henry felt that a quality teacher should display integrity by being fair with their praises to every pupil and not taking sides. Tarim too felt that a teacher needed to possess integrity. Teachers must not only be seen as working but they have to know "their positions in society". Tarim felt that it is useless having teachers who are very good in school but after working hours they indulge in activities that are "unbecoming of teachers" such as patronising places like casinos or brothels. Tarim stated that it is one of the Ministry's requirements that teachers do not go those such places.

Carrie echoed that integrity is very important especially in Singapore. Teachers cannot go wrong with that or they will be out of a job. Carrie reminded that teachers have to "toe the line" especially when dealing with money matters. They have to be honest and spend school's money only for the purpose of the students.

Lily believed that especially in Singapore where every mark is important, teachers need to have integrity in their marking so that students are properly assessed. She defined integrity as being truthful to others and to yourselves and being honest when no one is looking. She elaborated by saying:

> In Singapore where teachers are ranked partly by the results of their students, are the teachers going to push their students' grade from a B to an A so that they can look better? That boils down to integrity which I think is a very important trait of a quality teacher.

Norma declared that in the classrooms, teachers are their own bosses. Nobody actually knows what teachers are doing in their classrooms except of course, the students. Norma strongly believed that teachers needed to have integrity otherwise the education system would be ineffective and a failure. She reflected that "a teacher with no integrity is not a teacher at all".

#### 4.4.1.6. Passion

Carrie established that there has to be a quality teacher before there is quality teaching. She thought they go "hand in hand". Carrie felt a teacher has to be passionate in order to make a lesson interesting and get good results:

> A teacher must be passionate, then he or she will think into how to have good results, how to make the lesson interesting. Of course you must love teaching. As a new teacher, definitely there will be frustrations and discouragement. But if you are passionate about your job, you will stay on and take all the challenges in your stride. Whatever challenges you have, so long as you are able to overcome them, I think that makes a quality teacher.

Norma reiterated that besides being very good at pedagogy, a quality teacher needed to be passionate, have compassion for the students and really care for them.

As Lily put it, "quality teacher means the teacher herself is a loving and passionate person".

Henry stated that "teaching is a calling, not a job". With passion, teachers can go far and view problems as challenges for them to overcome.

Tarim felt that teachers should have passion for teaching, otherwise they may get burnt out within a few years. He figured, that may be the reason why some young teachers resign after teaching for three to five years. He also felt they should have passion for learning to constantly upgrade themselves.

Emily believed that in every job, one needed to have passion otherwise one would be "hopping from one job to another".

Brady pointed out that when teachers are teaching a particular skill or knowledge, they need to be passionate about it because Brady believed the passion can actually influence the learner. He explained by saying:

> If the teacher is eager about teaching a particular knowledge, then the students would also be influenced by the teacher's passion and would want to learn too. Teaching is different from reading. It involves a human relationship, so teachers have to give out everything, including their passion, so as to help the learners feel the need to learn.

#### 4.4.1.7. Character

Lily asserted that quality teachers need to have character. According to her it is not easy to be a good teacher as one really has to put in one's heart the love for one's students. She felt that quality teachers and quality teaching are rather distinct when she said:

> I won't say we are all quality people because we have quality accreditation or we have a quality degree because you can have a principal who goes to prostitutes. And he might be the top 1% of the cohort, so he might be a quality student or a quality scholar but he may not be a quality teacher. Maybe that principal had quality teaching. That's why he could be a principal. But he didn't have the moral values. So the question is if it's a quality teacher or quality teaching that you're looking for. If the end point is quality teaching, then you may have a whole school of people with no morals, no passion or uprightness in their hearts.

Emily felt that character boils down to one's belief in the goodness of all human beings. She added that everyone should portray good character but since teachers are role models to students, they should portray themselves as having a high standard of character. To Emily, a teacher should value meritocracy, show kindness and empathy and the true measure of good character is time. Time will tell if a person cheats or is dishonest.

Henry stated that a teacher with character needs to have the moral courage to speak up for what is right even if it is against their superiors. Tarim concurred and emphasized that students are looking up to their teachers as their mentors so a teacher needs to have good character for the pupils to emulate.

Carrie felt that teachers who stay away from school without valid reasons lack integrity and therefore should not stay on in the teaching profession. According to her, to be successful in teaching, teachers needed to be conscientious: "If teachers have a character that is unbecoming they will not have teamwork and the students ultimately suffer".

Brady believed that character is a fairly general term. However, he felt that the positive characters that are needed in teaching and learning are resilience, the eagerness to improve and having an inquisitive mind. He asserted that "ideally, in education, teachers should display characters that are neutral with no religious affiliations. It should be moral character that could be applied to all denominations".

Norma stated that teaching is not just a job but a profession. She asserted that in order to become good educators, teachers have to have good character for the students to emulate. Tarim similarly asserted that teachers have to have good character as students are looking up to them to set a good example.

### 4.4.2. Measures of a quality teacher

Ramlee stated that there is a problem in terms of measuring what a quality teacher is. However he pointed out that quality can be measured indirectly when students are willing to go home and tell their parents what they have learnt at school and it was because of their teacher. Ramlee also believed that it is shown when students have actually improved themselves and when the parents sometimes go to school to offer positive feedback to the teacher. That would mean that the knowledge has been transferred from the school to the home. Ramlee felt that what separates a good quality teacher from a mediocre one is that "a quality teacher can identify a child's gift and try to attend to the child as who the child is and not try to put the child into a structure which is defined by the system and the syllabus".

Tarim believed that quality teachers are those who spend more time with their students, not only to cover syllabus but to get quality results. He recalled his own teacher who was asked to transfer to another school because he was promoted. Tarim and his classmates, not knowing the reason for their beloved teacher's transfer petitioned to the principal to have him back. Tarim's principal was surprised at their gesture and had to explain the actual reason for their teacher's transfer but it took a few months before the students could settle down.

Norma believed that teachers can be considered quality teachers if there was value-added which meant their pupils have improved. Norma explained that it could be a small progression. She added, "Whatever it is, as long as there's some progress in terms of studies as well as character, I suppose that teacher can be considered a quality teacher".

Lily thought that a quality teacher would have passion and go the extra mile when she said, "She does things way beyond her expectation. I think her actions will show. Quality teaching may not mean quality teacher. However, a quality teacher will show quality teaching". Lily felt that teachers should be assessed holistically just as they are expected to assess the pupils holistically.

Henry found that it was difficult to measure the morality of a teacher. He felt that many people would judge the character of teachers by the clothes that they wear,

how they present themselves or how they talk to people. According to Henry, "It is very subjective".

Brady felt that, at the end of the day, the best measure of a quality teacher should be based on what the teacher was able to produce rather than what qualities the teacher had. He gave an example that in the universities, there may be very qualified professors who have content knowledge but they may not be good teachers. They may lack communication skills or empathy and may not be as effective as a less qualified primary school teacher. According to Brady, a quality teacher is one who is able to produce good quality students. He defined quality students not as those who end up becoming ministers but those who are resilient, able to think independently and are successful in whatever they do.

### 4.4.3. Ranking of teachers

In Singapore teachers are ranked against each other annually. Brady felt it was not appropriate to rank teachers due to its subjective nature. He stressed that the purpose of EPMS is to give a more structured work review and it is a good system to help develop an education officer. What Brady felt is inappropriate is the ranking of teachers. EPMS, he felt, if used for development and not for appraisal would be ideal because quality teaching is very subjective. Brady often wondered how one could tell whether a teacher is good or otherwise. Is it by looking at students' results or at the character that the students have learnt from the teacher or to see whether the student is happy? Brady acknowledged that the Ministry wanted to motivate teachers to work harder or work smarter to achieve the outcomes, while identifying those teachers who do not perform and strive to develop them. Brady felt that although the intention is developmental, the nature of education is still subjective, unlike a private corporation where the yardstick can be clear cut for example the sales figure. If results are used as the yardstick for education, then Brady felt everyone would prefer to adopt smart students. Brady emphasized his point by saying:

> So it's very difficult, what is their yardstick? Are we talking about the jump in the improvement or are we talking about maybe pupils who become better citizens or change in terms of their character, just too many factors. What are you going to use as a yardstick? Even in EPMS, we have all these areas. You have to take care of the academic, you have to take care of their character, you have to take care of the communication with parents, CCA and so on. At the end of the day, it is not easy to put everything into consideration and rank teachers. It is still going to be quite subjective where it is an impression of an overall effectiveness as a teacher.

Ramlee gave an analogy about ranking of teachers which I felt summarised his beliefs:

> Even if you put carrots in front of a donkey, the donkey could never ever win the horse in racing. If you are a horse, a good stallion, then you will run. You can always win the race ahead of the donkey.

However, Ramlee felt that ranking can be a double-edged sword. It can be justified when it is used to help teachers who deserve it because of what they have done for the school and what is reported correctly. Ramlee elaborated:

> Even the heads only have their eyes and their ears so that is going to limit what they see of their supervisee or their jobholders. I would say some monetary value may entice people to work hard to be recognized but how do we separate between those who are genuine quality teachers and those who are just there because of the good money?

Emily reminisced that teachers were paid according to seniority before the introduction of performance bonus. The principal was only paid 75 dollars more than the teachers. That was the reason why very few teachers wanted to become principals. For Emily, there was no difference. She worked because she liked it and she wanted to make a difference to some students' lives. She did not deny that financially it helped being a teacher. She had a good salary and was able to afford the luxury of travelling during the holidays.

With the introduction of the ranking system, Emily felt that there were ugly scenes around. Emily related that she came across a very senior teacher who was so disappointed that she did not get her performance bonus. The senior teacher approached Emily who was acting as a chief invigilator to sign a letter stating that she had performed extra duty as a PSLE invigilator, to give proof that she was working hard. Emily explained:

> I didn't want to jeopardize her prospect of getting a performance bonus. I don't want to jeopardize my prospect because I was the head of department. I must be very careful so I just wrote down that she was one of our invigilators, that's all. It's neutral. She was just doing her job there, that's it. She collected commendation letters from a few other people and she went to see a member of parliament over the issue of why she didn't qualify to get a performance bonus. She was so angry over it. That cost a lot of unhappiness.

Emily continued that all schools had to rank the bottom five percent of the staff to become a D-grader. Emily went on to explain:

> Whether you have a whole lot of very good teachers or not, you still have to reserve five percent at the bottom, ranking is like that. So you can be in the best school and the worst school, you still have bottom five percent. It is relative. It is better to be in a school where they have more rotten eggs, then you'll be safe, like a big fish in a small pond. That's why I say it's never fair. In a way, it's to put teachers on their toes. I'm not very sure whether they will improve. If they are rotten, no matter what you do, they will still be rotten. Some of them never wake up. But of course, some are treated unfairly because they are being prejudiced. There is always politics when it comes to ranking.

On the topic of politics, Emily added that although there was no ranking before the year 2000, there were still office politics. Teachers did not like to teach a "lousy" class. They were always vying for the easier

classes to teach. If teachers knew how to be in the good books of the senior teachers who were planning the time-table then, they would always get the better classes.

Carrie recalled that teachers were happier when there was no performance bonus and they were paid according to seniority. She could sense that teachers were richer and better in the sense that mentally they were better and more relaxed. Carrie noticed that teachers then were not being pressured and she felt there were less problems with sick leave compared to the present moment where teachers are more pressured. Back then it was based on the teacher's conscience.

However, Carrie realised that everything had its pros and cons. Although performance bonus was not important to her, she acknowledged that some teachers worked for the money. Carrie also felt it was just natural and there was nothing wrong with that. Money might motivate teachers to teach better. In that way it can be good. Some teachers may not feel motivated or pressured to do better if there is no performance bonus. Carrie was very unhappy about the fact that some of the key personnel actually threatened the teachers under their care by saying:

> If you don't do well, I'm going to give you a D-grade. D-grade means no bonus. I think there's very unhealthy. Instead of guiding, you're just threatening and some teachers are really at a loss of what to do. They actually need to be guided. If you tell me I'm not good, fair enough. Tell me how I can improve? In what area can I improve? And what other tips can you give me so that they can help me up my grade?

Tarim also stated that there are pros and cons to ranking of teachers. It is good in a sense that teachers are recognised and appreciated for what they have done. However, because of its subjectivity, it must be done fairly. The staff who are responsible for the ranking process are the key personnel and the school leaders. Tarim felt that the teachers who are ranked lowest among the school staff should be informed beforehand to give them a chance to get a neutral person to assess them and improve before the year ended.

Norma noted that there were a lot of differences in teachers' attitudes before and after the implementation of teacher ranking and performance bonus. According to her, after the implementation of performance bonus, teachers tended to be very conscious of what their colleagues were doing and most of them would want to match up with whatever the others were doing. It had become a "rat race" where the "super ambitious" teachers wanted to be ahead of the others and the rest would force themselves to keep up with those ambitious teachers because they did not want to be ranked the lowest. Quoting Norma:

> It's like there's no end to it. Things keep on escalating because the better ones who want to stay ahead will tend to do a lot, lot more and the rest will try their very, very best to catch up. Sometimes certain things are created or done so that they could shine better than the rest, whereas in my opinion, those things that they have come up with are actually unnecessary to make

> teaching better or to provide quality teaching to the children. I can safely say that most teachers are doing it for the pay packet more than for the benefit of the children. So this is what I see in comparison to before.

Norma also noted that in the past, before the introduction of performance bonus, she could see how passionate teachers were. When they had new ideas or new programmes, they would have the students in mind. They were not thinking so much about how much more performance bonus they were going to get. They were passionate in teaching or in implementing new programmes that would benefit the students. On the other hand, Norma also pointed out the disadvantage of not having performance bonus when she said:

> And of course, there's always a disadvantage because some teachers who are laid-back would remain laid-back. I'm talking about in the past. But now, the laid-back teachers are more or less given the wake-up call to start thinking seriously of what and how they should contribute into the service. So that's the difference.

Norma added that the school environment had become unconducive whereby sometimes teachers tended to resort to "back-stabbing, name-blemishing" or sometimes being "recruited to spy on others" as well. She felt the key personnel may find it a bit easier to do the ranking process if they had some inside information of what was going on in the staff room. Norma could understand the daunting task undertaken by the key personnel to actually line all the 80 teachers up in order of who has done better and who has done the worst:

> I suppose the key personnel have a bit of a headache who to put first and who to put last and whoever that comes in between these two. It's a daunting task. So in order to execute that part, they need feedback from everybody, not just the HODs, from friends and whatever. In that sense, there's a lot of cloak and dagger thing going around in the staff room.

Norma felt the down side of getting feedback from everybody is that human relationships and collegiality may be compromised. She confessed that on some occasions she did things because she did not want to be at the tail end. She would do the minimum in order to stay afloat in the performance-based (PB) ranking. She would do things that she personally thought were meaningless in order not to be ticked off as being uncooperative. Furthermore, Norma noticed that everybody was looking out for the slightest mistake to pinpoint. They claimed to be looking out for teachers' strengths but in reality Norma felt they were actually looking out for teachers' weaknesses, like the analogy of the black spot on the white board. Teachers only had to make one "major" mistake and their whole year of good work would be irrelevant. Not only their PB but their yearly increment would also be affected much like a "snowball" effect. Norma believed teachers were ranked from the bottom up instead of from the top down which she felt would have been less pessimistic:

> I think it's fairer if the ranking process is done from the top to the bottom. You sieve out, identify those A-graders, B-graders

> or C+ graders. Identify them first and then if there's nobody who should be given a D, then nobody should be given a D. If you're a D-grader once, the chance of you being a D-grader the second round is very high. They don't take you on a clean slate in January. It's going to be very difficult for that teacher to actually climb out of the D grade. This is the trend that I could see, the tendency for the person to get D again.

Lily stated that the schools and principals are ranked against one another. The principals have to be responsible for the quality of the schools they are leading. They have to ensure that their schools have certain good qualities and most of the time the qualities are measured by the number of awards they received. Although intangibles cannot always be assessed, reports can be read, awards can be seen and plaques can be appreciated. Lily added, "So we are in a way giving up the intangibles for the tangibles. In my opinion, that's not right".

Lily believed that the Enhanced Performance Management System (EPMS) helps the management to assess the teachers holistically so it gives a framework to see how holistic the teacher is. The teachers can be assessed by CCAs, by their class work, classroom management or by their other duties. She felt that was the intention of the schools to assess the teachers holistically not just in one area, but other areas as well. It would give a good framework for the teachers to know how to assess themselves and for the reporting officers to assess their staff. Lily went on to elaborate:

> I feel if we assess everything by results, then there is no need for EPMS because the final figure is your "sales target". I feel like if you can bring the sales in, then you're a good teacher which is what some schools in China do. They pay bonus by your classroom results. The better your results, the more bonus you get, nothing else. I don't care whether you coerce the kid or you call the parents a hundred times, you get the results, you get the bonus.

Mahmud was one teacher who was not bothered about the ranking system. He declared that he was ranked second last or last but it did not matter. His class had 100 percent passes. He was a Cooperating teacher (CT) and his cadet teacher was awarded a distinction. It did not bother Mahmud when he was given a D grade. The following year, he was chairman of 16 schools and he came up with an interactive CD rom but he was still ranked a D-grader. Mahmud admitted that he figured why he got a D grade but he did not bother to ask to confirm his suspicion. He did not care how he was ranked. To Mahmud, only his students had the rights to write his testimonials and nobody else. Mahmud related:

> But my friends say, Why Mahmud? You are so good. You worked with 16 schools. They look up to us as mentors because I shared, because I'm quite good at IT, so I shared. We did an interactive CD rom. When we had the launch, who came? The Deputy Director launched it. The CD rom is still in use.

### 4.4.4. Influences for beliefs

From the participants' stories, I teased out what they felt were important factors that made them remember some of their teachers whom they felt had left an indelible imprint in their lives. Thus, I concluded that the participants' beliefs on quality teachers were influenced by their own experiences with their own teachers when they were students themselves.

#### 4.4.4.1. Relationship with teachers

Seven out of the nine participants touched on their relationships with their own teachers as the factor that had influenced them in their professional lives. Brady recalled that although he had many teachers in the past, some of those whom he could remember were those teachers who actually communicated with him more often. Brady felt they tried to understand him and gave him certain guidelines outside the textbooks by saying:

> I feel connected and remember them. If you're talking about learning contents and so on, well as a student we probably can pick it up from anywhere. Besides, what the teacher can explain clearly, usually as a student you revise and do research and get information from elsewhere. Teachers are not merely the people who disseminate information.

Ramlee's recollection about his teachers also showed the impact of personal relationship. He recalled a female teacher in his primary school who knew each and every student well. He confessed that he was not a high achiever but his teacher was there to listen. She was there to guide and she did not compare her students against each other. Ramlee felt she cared a lot for all her students:

> She manages the class as it is, as who the students are. She knows who the good ones are, who can get good grades, good marks. For those like myself who are average, she will still attend to us without any comparison, without trying to tell us that you must do well like this, you must do well like that, because of this and that but she accepts us as a class, all the students as a whole. Then she uses our strength to support us with the right words, the right encouragement.

Back in his secondary school, Ramlee had a male teacher who was in charge of the National Police Cadet Corp (NPCC) and track and field training. Ramlee could not recall ever hearing that teacher shout, scream or "downplay" his students. That NPCC teacher used to give life examples and encouragement that made a teenager like Ramlee think of the reasons for his own actions in life. Ramlee further related his experience with another quality teacher who happened to have taught me as well in the past. I agree with him totally about this particular teacher. This particular teacher, despite being a "celebrity" due to his accomplishment in Sports was very humble and he made his lessons interesting because of his experience:

> We listen to him because he goes straight to the point with his explanation and reasoning instead of telling us you must do

> this, you must do that but he explains clearly and the way he talks to us, as young adults, not like some students but as young adults. He explains life and is friendly, very friendly with us.

Tarim also touched on relationship when he said, "I remember when I was in primary school, I had a teacher who was very dedicated in the sense that his approach to students was very good that all the pupils were responsive and looking forward to his lesson".

Emily believed that despite the qualifications, human touch is the most important factor. She recalled how her primary two teacher used to encourage her class to do well by inviting the top five pupils in the class to her house for a party. Emily admitted the generosity of her teacher in inviting the pupils to her house had left a good impression on Emily that she could remember it even after retirement:

> I felt so good. She lived in a big bungalow and she fetched us. We went to her house and we climbed the trees and created havoc in her house but she didn't mind. She was such a nice and fantastic teacher. Those were the teachers who were very generous who went to the extent of inviting you to their houses.

Emily also believed that encouragement is an important factor in human relationships. She related how this factor influenced her beliefs about quality teachers. Emily professed to having problems writing as it was not her greatest strength. Emily had a teacher who was very good at sizing her pupils up in terms of the amount of encouragement to give:

> I wasn't a very good writer but she would analyse the sentences and give a tick to the sentence that was very well composed and give you encouraging remarks. And I felt that this type of teacher, the one who can encourage the students stays on in your mind the most and you will not give up because you have teachers like that. It's the same thing with principals. I remember after giving an assembly talk in the school, this particular principal wrote in my record book, "Very good assembly talk." He was the only principal who did that after all my years of teaching. He would write and sometimes he would put a note. You feel very proud and feel that your effort is not wasted. So I think it is very human. All human beings need encouragement.

Emily went on relating about two teachers who had the welfare of their students at heart. Emily professed coming from a poor family and her teachers knew it. One particular teacher helped Emily by applying for financial assistance to help pay for her supplementary fees. Another teacher would pool resources among a group of teachers and gave pocket money to students who were not rich. That was the beginning of the pocket-money fund. That was long before the Straits Times newspaper had the same scheme. Emily still remembered those teachers.

Carrie's beliefs were also influenced by good relationships with her teachers. She also cited her teacher who had invited the whole class to her house for a tea party. Carrie felt that really motivated her as a child. Carrie was also excited when

her whole class was again invited to their teacher's wedding in a church. Carrie believed that teachers needed to inject personal touches in order to motivate their students.

Norma talked about welfare as an influential factor. She related how her Economics teacher in Junior College took the trouble to know more about his students' welfare. Norma felt that complimented his quality teaching by showing care and concern for his students. She also claimed that her teacher was very friendly and approachable.

Lily admitted that, to a certain extent, relationships with her teachers had influenced her beliefs as a teacher herself. Lily recalled having teachers back in secondary school who had high expectations of her. They helped her beyond the classroom and during their own time, which she appreciated. Lily's teachers' actions had influenced her to follow suit and Lily often helped her own students beyond the call of duty.

#### 4.4.4.2. Effective teachers

Henry's beliefs were influenced by teachers who taught him effective ways to learn, especially his History teacher. To Henry, History is something that one learnt through facts and at times it is difficult to remember all the facts and the dates. Henry's History teacher came up with a systematic way to teach the system to the students so that they would be able to remember the dates and link it to the events. It was in the form of a story or a storyline. Henry had friends who had problems understanding what their teacher had been teaching because they could not remember the facts or the time sequence. Then confusion would set in. Henry's effective teacher was able to tie all the timeline and the stories together to make students remember. Henry could also recall another one of his teachers who brought an apple to link it to rotation of the Earth around its axis which Henry thought was very effective.

Emily recalled an effective teacher who taught her when she was a student in primary school. Emily felt he was among the best teachers because he really gave of his best especially when teaching Science. He would take his class down to the school compound to do bark rubbings:

> In those days, we didn't have all the Science apparatus. We brought our bottles, our plates, our candles and then we did experiments to show how much the air takes up the space in the glass jar. Those were all kitchen stuff actually. That teacher had put in a lot of effort despite all the handicaps during that time which was thirty over years ago. You know it was fantastic. He was the only one who did it in the whole school. That kind of dedication is fantastic.

Carrie remembered her own teacher who made his lessons so interesting and lively that she was always looking forward to his lessons. Her teacher eventually went on to become a principal. She had many teachers whom she looked up to who later assumed leadership positions. They were effective as they were able to solve problems and conduct their lessons well. She noted they were able to organise programmes well and be responsible for whatever they organised to see that everything ran smoothly.

Tarim recalled his own primary five class teacher who later became his principal when Tarim became a teacher himself. Tarim said that his ex-teacher cum principal was effective in the sense that he was able to motivate Tarim to go further in his career. When Tarim refused to take on challenging tasks or leadership positions, Tarim's principal called him to his office and gave him the advice that changed Tarim's mind:

> It's up to you whether you want to become the hunter or the fox. If you choose to become the fox, then you will be hunted all your life. If you become the hunter, it doesn't mean you are a killer but you are the one who will be hunting for talent and effective teachers or inefficient teachers for you to develop.

Norma remembered her Economics teacher in junior college who left a lasting impression on her even though that teacher left the service just half a year after teaching. Norma thought that teacher was great because she was very passionate about the topic itself and she could relate to her pupils very well in the form of open discussion during class. Norma felt there was two way communication between the teacher and the students:

> It's not just one way and this was about thirty years ago, so I thought that was really cool. I don't really see that very much in our current teachers who are too busy with other stuff besides just teaching.

Brady recalled that in the past he had many teachers who were effective in their teaching pedagogies and he picked up something good from each of them. Lily, on the other hand, recalled having a very effective band instructor back when she was in secondary school who used very indirect ways to motivate his students. Her instructor knew that Lily was sensitive as she came from an all girls' primary school and being an adolescent, she was not keen on listening to direct instructions. Lily's instructor managed to give instructions in effective ways that she was able to remember them even after she left school. One of his pieces of advice was doing something well the first time so that Lily did not need to do the same thing over and over again and waste her precious time.

### 4.4.5. Experiences for improvement

When participants were asked to relate what experiences had made them better teachers, Brady related that it was the numerous courses that he had attended. He stated that beginning teachers should get senior teachers as their mentors but in reality, everyone had limited time to work on including mentoring, so new teachers had to pick up skills themselves:

> Most of the time, I guess as teachers, we learn over time through experience. The longer you're there, the more classes or the more specialization you do, the more confident you are in delivering a good lesson.

According to Henry, he picked up experiences along the way. There was no one main experience that influenced Henry. Henry looked for various good teachers from whom he could pick up their skills:

> Observe them in their teaching and learn from them. I have through my years, some teachers whom I admire a lot. He made his own teaching aids, he didn't buy them. He stayed back after school. I see him cutting cardboards and all that sort of things. I was actually wondering what he was doing. And he was actually doing it, having fun with the kids, making all the teaching aids, devising how the children learn. When he was doing it, he asked children questions and see whether they understand it or not.

Henry concluded that "an effective teacher is one who goes into the minds of the kids to understand how they learn and devise various methods". Henry felt it did not matter whether it was playing with their hands or playing with materials, as long as it helped the student in understanding. Henry felt that particular teacher was wonderful because he was doing what he could, for the students. So far, Henry had been to eight different schools. He had been to a village school where he had literally lived in. Henry had also taught in a boys' school, a mission school and a gifted programme school:

> I was actually observing how they conducted the gifted programmes. It is through all these programmes that I learn. You go to a mission school, they have a different emphasis entirely. They do things quite differently from the government schools.

Tarim had a similar view in that he learned from his former teachers. Tarim added that the teachers must be good in class and that motivation itself was not enough. There were some things that teachers could not learn in teacher training college. They needed to learn from their experience with their own teachers. Tarim related that he was lucky to have some teachers who were good in the sense that they really went all out to help their students to get good results. In fact the results were so good that the school was made a model school of the district. Tarim's former teachers had impacted his beliefs. Whenever there was a challenge, Tarim would always take it. He always attended courses in order to improve.

Emily related her experiences that she felt had influenced her as a young teacher right up to retirement. Emily started off as a relief teacher in January before actual training started in June. She was given a "difficult" class of forty-five students because no qualified teacher in the school dared to take that class and it was "dumped" to somebody unqualified like her. The students whom she had to teach had been failing previously except for a couple of students:

> I remember my first PE lesson with them. The moment I took them down to the field, they just ran for life helter-skelter. I couldn't find them. It took me quite a while to gather them back. That was how my first PE lesson with that class went and my teaching experience. I wasn't afraid. In those days, I felt very good to be able to start work. We started work that

> way. You get a job, you're very happy. I never felt sorry for myself. I never felt ashamed of myself. I had to tackle the class for almost six months.

Emily went on to say that although she started teaching after getting her 'O' level results, she was given a lot of opportunities to improve herself so she undertook a few diploma courses such as diploma in teaching of PE, diploma in teaching of English and diploma in running a department. After obtaining three diplomas, Emily felt that she had not reached her full potential. She decided to enrol in an open university which she felt had helped her improve a lot:

> There is a lot of things that you can learn along the way. It does help because I am more confident of what I know and what I don't know. I have so many years of experience. I had a very rich life.

Carrie embarked on a phonics course as that was the skill she had to master in order to teach slow learners to read effectively. Throughout Carrie's career, she attended courses, sometimes out of her own interest or otherwise sent by the school. Carrie also shared ideas in Teachers' Network. Carrie's philosophy was that whatever courses she attended, she would take the ideas that she thought benefitted her most:

> No course is not good. Definitely there'll be some value in the courses that I attend. It may be a little mundane course that I attend but I will take the gist of it and then I say, this is what I'm going to learn today.

Norma attended courses on content upgrading so that she would be kept up to date with the latest teaching methodologies as well as any changes in the syllabus. She disclosed that the courses were usually planned for the teachers but once she had attended them or in the midst of attending, she realized how important it was to keep abreast with the latest trends, techniques and ways of doing things, as certain things were becoming obsolete. By attending such courses, Norma knew that she was supposed to keep up to date and current.

Lily declared that she was motivated to learn from other excellent teachers who had made a great impact on their students' learning. She acknowledged that she needed to be humble and asked to observe those excellent teachers at work in their classrooms. Teachers being busy, might not have the time to go for many courses but Lily thought observations did help.

## 4.5. Quality teaching

Norma regarded quality teaching as just a methodology. Tarim felt that teachers could learn to deliver quality teaching through reading, workshops, friends or courses. Brady, on the other hand realised quality teaching could probably be the programme itself: "We may not need the teacher but then with a good programme, maybe anyone can just click the button and implement the programme. Then you will get what you want, the outcome".

Ramlee gathered that quality teaching has always been defined by some quantifying figures, measures and numbers. That notion had been imposed but Ramlee felt it was all based on text book teaching which he did not think was fair to the students. He concluded that quality teaching differed from the quality teacher.

Emily felt that innate talent coupled with proper training will result in quality teaching. Emily reiterated that some people were very talented, for example in singing. If they had that kind of raw talent but they were not really well trained, they could still provide very good teaching. However, training would enhance one's teaching and help the teacher to be more qualified:

> For my example, I love to play outdoor games but I can't be teaching the correct way if I am not well-trained as a physical education teacher. Because of my training, it helps me to be a better teacher. So I can give better quality teaching.

Carrie remembered her supervisor telling her that quality teaching was when the whole class was paying attention to the teacher conducting a lesson. He asserted that it was not impossible for all students' eyes to be focussed on the teacher. Carrie believed that "quality teaching is when the lesson is interesting, there's result and there is learning done. And this must come from a person who is passionate and who wants to teach". Carrie went on to share her observations and experiences as a teacher for about 45 years. She admitted there were challenges and obstacles along the way. Carrie recalled the first challenge she had after five years of teaching. She was tasked to take on three students who had failed primary one for the second time and if they failed the third time, they would have to leave school. She felt it was really a great obstacle because they had been through two years of primary one education and yet they could not make it and she had to help them pass. She had no choice but to accept the challenge and finally, all three of them passed. That was Carrie's first challenge and subsequently there was recognition. She was assigned to teach Science to all the quality or "cream" classes in the school she was teaching in. Carrie was not given one but three levels to teach. Carrie attributed her successes not solely to her strategies or teaching but the fact that she worked hand-in-hand with the class teachers to make it work.

Tarim defined quality teaching as having an objective and target for a lesson and at the end of the lesson the teacher has to ensure that at least 75 percent of the students learnt something from that lesson. If it was lower than 75 percent, the lesson would not have been effective.

Lily believed quality teaching was when a teacher's lesson objectives were achieved. Lily added that teachers should not focus just on academics but they should also teach students about life and morals.

### 4.5.1. Measure of quality teaching

Brady noted that "teaching is something that is quite subjective". It could be measured by giving a test but it would only be testing one aspect of the outcome. Brady asserted that in order to measure quality teaching, one had to look at the whole package, how pupils behaved, how pupils thought and so on:

> It is very hard to say because education is something that although we want to measure, the measurement is not totally accurate in terms of telling us the effectiveness of our teaching.

> It's difficult. Not that we cannot. We can approximate but again we cannot say that because I have good results, then I'm doing good quality teaching.

Carrie asserted that quality teaching is mainly reflected in the results at the end of the year. In Singapore, in the school that Carrie was teaching especially, they had target figures in terms of quality and quantity. At the end of the year, teachers had to measure against their actual results. If there were improvements in both quality and quantity of passes, that would show quality teaching. Quality teaching could also be measured when the students seemed to be eager to learn from the teachers:

> For example, when I say, today we are going to do group work and they cheer, that means they like it. That means the group work that I introduce to the children is working. I think result is one thing but the eagerness for the students to learn is another. If the students come to your class, very eager to learn and want to learn and pay attention to your lessons, that to me is quality teaching.

Carrie continued that not all things were tangible. For her, quality teaching was not when the students in a very good class did very well but when students in an average-ability class improved in their grades:

> To me, that's quality teaching; an eagerness to learn more and more. It's hard to measure but you can sense it, you can feel it. So if you want facts and figures then you have to take the actual examination results.

Ramlee declared that the measure of quality teaching was just short term, based on academic results. Through his observation, anyone who put in hard work could get the results. The teachers were not tutors. In fact, he noted some of the good students had private tutors to help them at home. Ramlee believed that was the reason why they got the good results:

> It's just a result of numbers but that number does not equate the student to be a good person and a good humanitarian who wants to help the society, who wants to achieve more for himself or herself. I would say there is that challenge to measure those kind of attributes but not in the short term. It is a long term measure. You see a spark. You see some students who can play music, who play well, who sing well and later on in their lives, they pursue their music. Then they become successful musicians or they write music scores. That will be a long term measure.

Ramlee felt that teachers who teach "tail end" classes should be recognised too. He admitted there was no way of getting good academic results but the teacher who persevered with the students, who put in time with the students to see the students spark in other ways should be at par with those teachers who achieved academic results in good classes. And if

that came in the form of extra money, at least those teachers teaching the "tail end" classes would feel recognized. Ramlee added, "It's too bad that in this society, everything seems to be measured not only by numbers but also by money, by quantity of cash that is given to you at the end of the year".

Speaking from a head of department's (HOD) perspective, Tarim related that part of his job scope was to supervise, develop and nurture young teachers. Tarim confirmed that the school leaders did not only look at the results of the students but they talked to other teachers about a particular teacher's character, habits and what s/he did in school with the students while in class. From the feedback the school leaders got, they separated teachers according to their abilities. Should there be any below average teachers, it was the HOD's job to counsel, and develop them. Tarim admitted that if any teacher among his supervisees received a D grade, he would have failed as a group leader. Tarim went on to explain that when school leaders assessed teachers for performance, they did not only consider the results:

> We see how the teachers perform in their work, their attitude towards work. Well, I can easily say for myself personally, I can see who are the D-graders and the A, B or C grade teachers. I know. From one look I can see who they are through experience.

Henry believed quality teaching could be measured by the end product, the learning that had taken place. He revealed that the simplest way to find out if there was understanding was to get feedback from the students through oral questioning. Henry added that if teachers wanted to find out whether their students could apply what they had learnt, they could devise a test or a project for the students to apply the knowledge that had been taught.

Emily had a similar perception to Henry. She believed that quality teaching could be measured by comparing the results of her students with other students who were not taught by her. She cited an example:

> If you are P.E. trained, you teach your batch of students in a particular manner. Then you compare with another class where the teacher is not trained in the teaching of P.E. in the correct manner. You can see the difference, it is very obvious.

Emily also related that previously, although teachers were not graded, the principal would know if their classes had failures in a particular subject. She felt it was a social pressure. The parents of the students would compare their children's results with the students from the same level.

Norma stated that the measure of quality teaching was when the students were able to apply what they had learnt creatively and be able to progress to become an independent learner. In other words, quality teaching was measured when the students were willing to go beyond the classroom to learn more about the subject matter.

Lily asserted that key personnel had to analyse and evaluate what they were measuring in teachers. She admitted that it was possible to measure quality teaching from the students' academic results and book checks but was baffled how it could be possible to measure the intangibles such as character development.

## 4.5.2. Inhibiting factors

The participants brought forth several factors that they felt inhibited quality teaching. Below are the factors identified and discussed.

### 4.5.2.1. Results driven

According to Brady, teachers were made accountable for the results they produced. He supposed what created stress among teachers in Singapore was that they knew that the system was very academic-driven and it was taken for granted that teachers would head towards the academics. Yet the Ministry also wanted to emphasize the non-academic aspects. Brady felt that teachers had limited amount of time to focus on both, therefore one of them tended to be sacrificed:

> I mean teachers have to work on their trade-off to juggle. You do a lot of academic stuff and then you do a little bit of the non-academic. Here, I'm talking about maybe creating programmes, events and so on to get pupils to be exposed to other things outside the textbooks and the exams. But well, we want to have both, we want to show that the school has lots of programmes other than teaching them the four basic subjects. Then it spells more work for the teachers.

Lily felt that teachers were "drowning" the students with worksheets in the hope of improving their results. She believed that the students were not being properly guided through the worksheets and teachers spent a lot of time screaming at them because the worksheets were not done properly. However, Lily felt the teachers did not understand why the students were not doing the worksheets:

> Did they ask the students why is it they cannot complete them? I understand it is quite difficult to ask forty children, each one at a time, why didn't you do it? Why didn't you finish? But did we take the time to understand the student? Is there any other problem that's causing it? If book checks are the only way to check on the teachers' work, then it's a very myopic way.

Emily acknowledged that being result driven was an inhibiting factor to quality teaching. She felt that teachers would focus on only one aspect of education that was the results and worked for it forgetting about the other aspects or the big picture of education. In hindsight she confessed that being result-orientated was not totally bad but it depended on whether it was misused. According to Emily, some teachers tried to achieve results by all means including cheating or asking students to study the narrow aspects of a subject only to pass which were often forgotten after a test. To Emily, those students were the ones who would not continue learning after school. She believed that the Ministry of Education and society were to be blamed for having the result-driven mentality. Emily cited that the tuition centres in Singapore were thriving because the Ministry focused so much on results that the parents would follow suit to get the results. Good teachers according to Emily, had

to strike a balance. They should not totally ignore the results but not at the expense of other learning. They had to widen the scope of students' learning.

Norma agreed that in some ways, being result driven was inhibiting to quality teaching. The teachers were pressured to complete the syllabus in a specified time so that the students were able to sit for a common exam that was given to all students, regardless of their abilities.

Carrie recognised that the schools were run for some sort of results and being result- orientated was good in the sense that it challenged the teachers but over doing it was counter-productive. Carrie felt that sometimes teachers should be given the autonomy to make their own decisions and be given the freedom of speech. She thought that the situation in Singapore was very much controlled but she admitted there were two sides to it. The positive side was that there are many young teachers and being young, they might not be able to make the correct decisions if given too much freedom.

Tarim believed that being result-driven was not an inhibiting factor to quality teaching. On the contrary, he declared it was an enhancing factor because Singapore does not have natural resources so she needed "quality" people. He stated that Singapore is not a country whereby the students could take their own time to learn. This is probably because Singapore has a limited amount of time to produce a certain number of workers to fill the job gap.

#### 4.5.2.2. Lack of time

Brady asserted that teachers had to be given the time and freedom to carry out their pedagogies. According to Brady, time was always the issue:

> It's always time that hinders quality because somehow in the Singapore system, producing results is taken for granted. And then you are judged or you are given the appraisal according to work that is beyond teaching so people tend to spend more time on that because of this fact.

Brady's feeling was echoed by Henry who stated the only setback he could think of was that teachers were short of time. Henry felt the expectations the school leaders had on teachers were getting higher and the competition was tough because every teacher was out to improve themselves. The Ministry had problems thinking of positions to upgrade the teachers. So they thought of senior teacher, master teacher, coordinators, HODs and senior head of departments. According to Henry, the MOE had to think of something for the teachers because when teachers upgraded themselves, the educational service was constantly upgrading itself too. There would be increase in pay, stature and position and all these in a way might lead to a "rat race" for the teachers looking for qualifications instead of going back to the basics of classroom teaching. Henry did not deny that there were some teachers who believed in the basics of classroom teaching. They believed they had to be very good classroom teachers and they did not want to do any other thing. They did not want to join the leadership programme. They just wanted to basically be effective teachers. However Henry pointed out that in Singapore schools, due to the enhanced performance management system, if teachers only did good teaching and nothing else, they might get a D grade:

> Now a 'D' grade to them is okay if you just want to be a teacher and be an effective teacher. To these teachers they felt it is okay but somehow the stigma of being a 'D' grader brings the person back. Because too long a 'D', you may be advised, and after that, you may not get your promotion. That's bad, so everybody has to do that extra and this extra somehow will be at the expense of teaching and learning. If they have to do that extra, then something has to give. So those who can juggle between the extra and teaching and learning, well, I believe there are a few who can juggle but not many can do that.

Emily also touched on time constraint. She agreed that teachers were constrained by Key Performance Indicators (KPIs) where they had to show academic results. Emily believed that all teachers faced the problem of having to finish the syllabus. She added that teachers had to rush through as that was the requirement, otherwise there would be queries from parents and the Ministry for the reasons why the teachers did not complete the syllabus:

> You disadvantage your students. Those are the things and when we rush through, we don't really do a very good job because of the time constraint. I see a lot of my colleagues having the same problem. They had a hard time completing the syllabus especially for the core subjects such as English, Maths and Science and even the Mother Tongue, so what do they do? They always "steal" time from Art subjects, from their PE lesson to complete all those. There are always two sides to the coin. First of all, it shows the syllabus is too heavy. They have to complete and so they overlook certain aspects of the syllabus which are not weighted. No weightage on their results so they sacrifice subjects like Music, PE, Art and all those.

Emily remembered the time when the Ministry decided to change the curriculum to reduce the contents by 30 percent but she noted that it was easier said than done as they added more programmes. Emily related that the MOE created extra white space but cramped with other overlapping things:

> It's a lot of time management. Even for the students, if you have so many co-curricular activities (CCAs), very tough on the child. If this child is not super bright, you cramp with so many things, it's very difficult for the child to achieve the best in whatever he or she does.

Carrie echoed that due to time constraint and the fact that the roles of teachers in Singapore were too varied, they could not actually concentrate on giving quality in particular areas:

> You need a lot of concerted effort so I may be teaching Math, Science and English. I have three areas to cover so it's not easy to do very well in Math, to do very well in Science, to do very well in English. Frankly speaking, if I'm tasked these three

> major subjects to teach, it'll be to the best of my ability. Time constraint and I think that the syllabus is too varied and very challenging, especially Math.

Norma established that teachers' time was taken to prepare events such as competitions and celebrations as well as other administrative paperwork such as minutes of meetings. Time was needed to disseminate circulars to parents, for example, consent forms and notification. Time was taken to handle errant students' discipline, behavioural problems and homework. Time was also taken handling difficult parents and any other non-teaching related matters. Other duties were definitely a hindrance because teachers' time was very limited yet they had to use quite a bit of their time doing other things besides teaching, for example, they had to do research work. Norma went on to relate:

> No doubt, doing action research would benefit teachers as a whole, but I don't see the point of having everybody doing it. Maybe we should just get those who are interested to do it and focus on it and share with the rest. People like me, who are not interested in research work, can just be left alone to do the actual teaching in the front line.

Lily suggested that school leaders should look into off-loading certain things from the teachers, for example, paperwork such as report writing and processes such as school excellence model (SEM). Lily felt there were so many different tiers of awards in MOE's master plan that were eventually cascaded to the teachers. The more awards that MOE churned out, the more the teachers had to write reports and the less time they had to spend their personal or quality time with their students and children.

Tarim disagreed that teachers lacked the time to do quality teaching. He asserted that teachers should prioritise. Tarim suggested that teachers should not take too much time teaching certain simpler topics but use the extra time teaching the more difficult topics. He gave examples of teachers who finished all their work in school and spent at least two hours doing their administrative work or marking so that when they got home, they just attended to their families, except once in a while when they had extra assignments, but that according to Tarim, did not occur often.

#### 4.5.2.3. Red tape

Carrie disliked being talked down to and felt that her hands were tied by the large amount of red tape. She related that teachers had to go through too much red tape before they could carry out their ideas:

> The things they throw back to you is that, you must follow the syllabus. You have to complete your syllabus. So there's less opportunity for us to explore and showcase the way we're going to do it or the things we want to do. I suppose life is like that. There's so many hierarchies that you have to overcome before you can be free.

On the other hand, Carrie admitted that it was neither ideal for teachers to be given too much freedom nor to be too restricted:

> In a way we are actually not so open yet, but I can see that things are improving. Let's hope the day will come when we can actually have free and easy policies. But ultimately, you still have to conform and be controlled by the syllabus. Unfortunately, it has always been repeated that results are important. That's the thing that sometimes is very tiring to say, that every time it's based on results, results, results, results.

Lily asserted that everywhere in the world there would be a push and pull between the bureaucracy and the teachers. She claimed that the administrators always had something against teaching and it could be in the form of paper work, red tape and endless report writing. Lily acknowledged that documentations as part of her accountability to parents were necessary but paperwork to accredit the school such as championing efforts resulting in improved school health (CHERISH) awards, benchmarking your ICT practices for excellence in schools (BY(i)TEs) score and school excellence model (SEM), all added up. The schools might think it was just one more task but all those different things added up and almost every subject in school had an award to achieve.

To Lily, it was just walking the wrong way. If teachers did not have administrative duties, they would be ranked lower. For the present structure the progression for the teaching track was just three; senior teacher, master teacher 1 and master teacher 2. Lily wondered how many more master teacher levels there would be. On the other hand, from the administration track, a teacher could be a subject head, a HOD, a vice-principal, a principal or a superintendent. There was a very "long ladder" for teachers to climb the leadership track but there was not much opportunity in the teaching track. Lily felt that she was "forced" to take up a leadership role in order to be promoted.

Norma also felt that it was not a good idea to force good quality teachers to take up leadership roles in order to be promoted. Norma was a Maths HOD before she stepped down. The reasons she stepped down were because of the extra responsibilities and having to conform to such a lot of rules and regulations. Norma felt she could not be herself when she said:

> I know they do also need teachers to take up leadership roles so maybe there shouldn't be any forcing. It should be getting the teachers to really specify exactly what they want to do in order to upgrade their career, whether to go into mastery track or leadership track. So unfortunately there's a limited number of those offered to go to master teacher track compared to leadership track. The number is really very few because there are more demands for teachers to fill up the leadership track. Just imagine in school, you have one principal, two vice-principals and like ten HODs, another five subject heads, another five level heads, another three coordinators and whatever. So those are all under leadership track whereas for senior teachers, for a school of a hundred, we usually have about four senior teachers and that's about it in comparison to about twenty holding leadership posts.

Mahmud gave a very light-hearted recount of the time he was "coerced" to accept a leadership role. When he was asked to become a HOD, Mahmud had to argue with the principal and the officer from the promotion board because he did not want to take up the position. Mahmud just wanted to become a good teacher:

> So when they said they could force me, I said, cannot. Then they said, what if we charge you with insubordination? I said, you go ahead. Then, the next day, if I'm sacked, very good. Next day, very big front page news, "A teacher was sacked because he wanted to be a teacher". That looks good, right? And the promotion officer laughed. Then I asked him one question. Is it a crime to be a good teacher? I want to be a good teacher. Let me be a teacher until I retire. Now I have fulfilled that.

Brady admitted that although it hardly happened, there were red tape issues when teachers had ideas that required the support of the principal, heads of department or other colleagues. Due to school priority or lack of resources, there might be a problem for the teachers to carry out their ideas.

Emily agreed that red tape was everywhere. It depended on how teachers coped with it. Emily felt that if the red tape advantaged only a few, then it was bad. For example, on the subject of pupils' entries to schools, there had been questions about why certain people were allowed entry to certain schools. If the criteria was genuine and fair, then it was alright. Where quality teaching was concerned, Emily felt that red tape was not a factor that inhibited it.

Tarim also stated that red tape was not an inhibiting factor to quality teaching. He asserted that teachers were allowed to initiate anything, provided they came to discuss it with the school leaders to show them the benefits of their initiatives. Tarim reinforced that the school leaders needed to be involved when it came to budgeting and responsibilities because if anything happened in the school without the knowledge of the principal, the blame ultimately would be borne by the principal.

#### 4.5.2.4. Over-testing

Over-testing in this context was testing students beyond their grade level. It meant students were usually tested on something that had not been explicitly taught in class that needed higher order thinking or application. Emily confirmed that teachers set difficult test questions in order to challenge the students. She lamented over the ways she was taught and learnt mathematics during her secondary school days. She was taught the theory, how to use the principles and apply them to solve mathematical problems. Emily felt she did not fully understand them and had no love for Maths:

> I'm just okay in Maths but I worked very hard and every day I must do one paper. I had no time for other things. It was very tough, very pressurized and I worked very hard, especially in Advanced Maths. I was not fantastically good but I happened to be in the "A" class and did Advanced Maths. I struggled "like mad" to pass. I passed because I worked very hard, not

> because I was very good. I never had love for Advanced Maths and to this day I don't understand all the differentiation and whatever nonsense I did long ago. It's not useful to me.

Brady also confirmed that testing beyond the students' capabilities was happening in Singapore where even adults could not solve some of the primary school maths test items. It all boiled down to performance and what was set by the National Assessment Board. Brady added that during the mathematics primary school leaving examinations, there were always bound to be a few very difficult, high quality questions that were beyond the students' capabilities. Therefore the teachers would pitch their teaching and testing to that standard so that they would not lag behind in the ranking of schools. Teachers felt that if their students could clear their own schools' tests, then they should have no problem excelling in the national examinations. Brady acknowledged that was the culture in Singapore which was why parents sent their children for private tuition.

Tarim argued that only a few questions in a given test were pitched at a higher standard to differentiate the As from the A-stars.

Norma agreed that students were usually tested according to the syllabus but certain topics were really beyond the students' cognitive level, for example, topics on fractions that were supposed to be tested on 12 year olds were given to 10 year olds. That could be considered as over-testing and it might affect quality teaching.

Lily admitted that it was prevalent that teachers did over-test students as they benchmarked their tests to the ultimate PSLE which often tested students beyond their cognitive level. As a result, it cascaded down the levels because teachers knew that every student had to go through PSLE and every school had to be accountable for their PSLE results. Lily believed that teachers always began with the end in mind. If the end point was 120 percent of what the students had learnt, then it meant teachers had to also test 120 percent for the other levels, in order to achieve the ultimate goal. Lily declared that it was a structural problem cascaded from the Ministry of Education and the schools and teachers just had to comply.

#### 4.5.2.5. Fatigue

Norma declared that fatigue was one factor that affected quality teaching. If a teacher were to have a lesson at 3.30 in the afternoon, Norma felt both the teacher as well as the students would be very tired:

> So during this last hour, definitely I would not be able to do proper teaching so it's just merely getting the children to finish up their homework and I would do one-on-one teaching. So if you talk about quality teaching being compromised, I suppose as a class, yes but individually it's quite alright because the students get individual attention, but no classroom teaching.

Mahmud believed that teachers got tired due to too many distractions. He elaborated by saying:

> In a school, I'm doing something, yet I have to do this, I have to do that. Distraction. Teachers get very tired. Once they are tired, they cannot perform. If a teacher is given a chance to

> teach, to really teach, I tell you, they'll all be good teachers because they are focussed. Now what is the teacher's focus? My EPMS is coming. What have I got to do? I look at the other person. Hey, the other person is like this. I can be last because we are ranked.

Emily agreed that most teachers felt a sense of fatigue. They were overloaded with a lot of paper work, tests and administrative work. Emily recalled since the time before she retired, there had been talk about reducing the curriculum. Less was supposed to be better but there was still a lot of paper work piled on for the teachers. She has friends who are still in the teaching service who are mentally and physically tired and wish they can get out and retire early.

Brady assumed that teachers who were single and had no other commitments would definitely have more energy to commit their time to their teaching profession. As established earlier, teaching is a giving profession which called for teachers to often work beyond the call of duty. Therefore it ultimately demanded more time and energy from them. Brady reminded us that if a teacher had a young family, s/he would definitely have to prioritise between work and family and most of the time fatigue set in.

Lily felt that the way teachers were ranked could be the cause of teachers' fatigue. A teacher is given a D grade for meeting expectations and a C grade for working above expectations. Given the ranking system the sky was the limit to what a teacher could do. Lily felt that sometimes teachers just did not know where to draw the line between their personal and work lives:

> There's always more that teachers can do and sometimes there's always more that's expected of them. Sometimes teachers do not really know when to stop giving, motivating and inspiring that it affects their family and personal lives. For example I used to work from 7 am to 7 pm and still lugged work home to finish. Fatigue could happen to any profession.

Ramlee believed that a quality teacher would always be prepared. He felt the teacher should always plan and prepare for good lessons for the week. Thus, the students would not be short-changed in learning when the teacher felt tired. Ramlee admitted that fatigue would usually set in for many able-bodied people when work commenced. Through work experience, good teachers should foresee and recognise the sinking feeling of fatigue and before it consumed them, they should be able to react and develop measures to ensure that teaching was not affected. Thus, Ramlee felt that good teachers should have several plans and teaching strategies so their students would always benefit either in their presence or absence as fatigue was only temporary.

However, Ramlee noticed there were still many teachers who succumbed to fatigue easily due to their own personal responses and behaviour. He believed they allowed fatigue to overcome them and did not pre-empt to plan and react positively, such as making "lemonade out of lemons".

#### 4.5.2.6. Lack of encouragement

Ramlee related how he disliked leaders who were quick to compare teachers. He felt that if principals wanted to encourage teachers to do better, there were certain ways they could do it. The principals could support the strengths of teachers and be able to spot teachers who have difficulties in teaching and instead of just leaving those teachers in the dark, to give them some guidance by providing senior teachers or teachers who are teaching in the same level and are willing to be the mentors to the teachers who are struggling in their teaching. Ramlee continued by saying:

> I think the word that I want to hear more is encouragement. The principal could probably say, this teacher has done this, why don't we share what this person has done and the rest can also pick up. I would not function well with a principal who is dictating, who is more like a general commanding, because in that sense, he or she wouldn't listen, wouldn't want to open up to ideas that teachers or the jobholders can offer.

Ramlee went on to say that some of the principals were good because they had attended courses. He assumed those principals had studied from those thick books but might not have life experiences. Ramlee saw most of the principals as just good administrators when he said:

> That's what their roles are, to administer teachers to do this and do that but seldom do I see the principal or the leader want to try and do something which is different, but which is good for the school.

Henry had a similar opinion about some principals. He related that his earlier principals were those who just wanted to make the schools run but not improving them as they would only be in one school for a maximum of six years. However, Henry believed the newer batch of principals was different. He noted that the newer batch of principals knew that there were a lot of promotions along the way and the superintendent was supposed to rank them so every principal had to show some kind of improvement. Henry related his experience by saying:

> The trouble with many principals; new broom sweeps clean. They throw out the old system and they come up with their own system that they think will work with this school. The trouble is that this school and the culture of the other schools are different. So, you cannot bring the system from that school into this new school that you are going to, because there are different cultures and culture doesn't evolve overnight.

Emily admitted that she did not need people to encourage her. She did what she thought was right. However if the school leaders were encouraging, Emily would feel appreciated. As long as the leaders did not disturb her, Emily was very happy. She was self-motivated. Emily worked doubly hard when the principal was not around to see it. Emily related that when one of the principals whom she was

working with went overseas for three months, the whole school was in chaos but she was the only one conscientiously working doubly hard.

Brady believed that it was human nature for a person to do more when encouraged but teachers should have a different type of intrinsic motivation. Teachers' motivation should be looking toward the product, such as the success of the students, regardless of the people around them telling them that they were doing a good job or otherwise because that, according to Brady was irrelevant. Although encouragement could be a plus point, Brady felt that teachers should not crave for encouragement from an external party as compared to other careers.

Norma admitted that as a teacher who was expected to do a lot in a short time, she sometimes needed encouragement such as a "pat on the back" especially from the key personnel, to motivate her to do quality teaching.

Lily believed teachers could not really depend on other teachers for encouragement. The onus was on teachers to find their own circle of friends beyond teaching to get encouragement. Lily stated that if teachers just work for the money, then they would not need encouragement. On the other hand, in order to be "giving" teachers and go beyond the call of duty, great strength and courage were needed so Lily felt teachers needed encouragement for sustainability.

#### 4.5.2.7. Lack of training

Tarim felt that the teachers in Singapore were not trained to face outspoken pupils who would challenge the facts and teachers should understand that in recent times children are exposed to real facts through the internet. Tarim believed that "texts shouldn't come from only the teachers. Teachers should accept other answers or other information that the children might bring up to them".

Emily asserted that the teachers should seek out the training that they needed themselves by applying for courses or seeking someone to help them. She felt she had always been given a lot of training to the point of being over-trained. She was always asking for more training and going for them. Being a primary school teacher, Emily had to teach many different subjects so she had to read up or at least observe how to teach certain skills especially physical education. She used to conduct workshops and courses for the teachers in her school because physical education involved skills that not everyone could master as it had many components. Emily stated that a lot of teachers waited for a directive to go for training. They did not seek training by themselves.

Henry acknowledged that every teacher had limited time for themselves, families and their children and they had limited time to cover the syllabus. Henry related that when young teachers started teaching, they were full of enthusiasm and were willing to try new things until they met up with resistance. Young teachers should align what they wanted to do with the schools' needs. Most of the time, according to Henry, young teachers did not know the schools' needs, how to get started, whom to approach to help them along. Many of these young teachers had no mentors to guide them. Everyone was too busy. When Henry went back for relief teaching in a new school, there was no one to even guide him to show where the toilets or changing rooms were. Henry was looking for the vice-principal (VP) for help but the VP was too busy to even sit with him. So after one month, Henry left. Henry felt that the teachers were all overloaded and that was not the way to do things.

Norma established that lack of training was definitely an inhibiting factor to quality teaching especially with the changes in the education system with new resources, such as ICT. If teachers were not well-trained in those areas, they would be lagging behind and the students would definitely lose out.

Lily asserted that it all boiled down to time. She felt teachers sometimes did not have sufficient time to go for training. Lily related that she did not even have sufficient time to sleep, let alone go for training. She affirmed that even if teachers had the time to go for training, there would be no difference made if the system remained the same, if it required 120 percent of the teachers' time. Lily believed the structural problem was still there. She felt that teachers' stress needed to be alleviated before they were able to process and see things in a different perspective. Lily reiterated that if teachers did not even have time to rest, how were they expected to benefit from training?

Ramlee asserted that all teachers in Singapore underwent MOE training for certification, and it looked good to mount and frame their certificates on the wall. Ramlee stated, "For a good teacher, having the certificate would be an added bonus, a stamp of legitimacy that the good teacher is more than qualified". However, Ramlee admitted that in-service training was necessary, especially since teaching in Singapore schools was fast evolving. Ramlee believed that training would equip teachers with the tools to teach better. On the other hand, he felt that teachers would not improve if they did not want to, regardless of training.

#### 4.5.2.8. Lack of discipline

According to Tarim, one of the inhibiting factors for quality teaching was pupils' lack of discipline. He strongly believed that if there was no discipline, there would not be any learning. He asserted that "a class that is not disciplined will affect even the good students sooner or later". Tarim could not understand how a teacher could teach when the class was disruptive and he felt that discipline was imperative for learning to take place. Tarim strongly believed that the teachers must not deprive the good students a chance of improving and learning.

Norma confirmed that if there was no discipline, there would be no quality learning taking place. She felt that behavioural issues had to be tackled before quality teaching could take place.

Henry noticed that in every class that he went to, there was bound to be one or two students who had discipline problems. He did not see lack of discipline as an inhibiting factor to quality teaching. Henry felt it was up to the teachers to win the students over.

> Honestly speaking, if the class can sit there and listen to you, something is wrong with the kids. There will be one or two who will jump up and down and challenge you. That's where the challenge comes in. Remember the book, "Dare to teach"? Not many people dare to walk into the classrooms with students jumping around (Henry).

Lily admitted that lack of discipline in the classroom was sometimes due to the teachers' lack of classroom management skills. Some teachers were not effective and did not know how to manage their students. Lily questioned why the same

students who misbehaved in one class could behave in another. She blamed it on the teachers who did not have proper systems of behavioural management in their classrooms.

Ramlee strongly believed that discipline was required to achieve success in many areas, such as work life, sports, business and having a family. He felt that most students were distracted or did not have clear directions to what they wanted to achieve. Ramlee differentiated lack of discipline from malicious intent. He did not view students as criminals. Ironically, Ramlee felt there were teachers who viewed lack of discipline as a criminal act which deserved mandatory punishment. He assumed such teachers' teaching might be affected by some students' lack of discipline, thus disadvantaging the other students of the same class. A good teacher, according to Ramlee would identify the root causes of the discipline issues and addressed them. "A good teacher will always have the welfare of the students at heart".

#### 4.5.2.9. Risk taking

Ramlee related that most of the teachers were not risk takers, not even calculated risk takers. They preferred to wait for orders, particularly orders from the top handed down before doing something.

Henry found that some schools did not allow teachers to deviate too much from the policies. He stated that the Ministry's guidelines that came out ultimately became orders and if teachers deviated from those guidelines, they would be "black-listed". According to Henry, "As teachers are civil-servants, there are compliance requirements to adhere to. If they are policies, teachers cannot argue because the policy makers have already talked about them and the policies are 'cast in stone'". Henry believed teachers could not change a policy until someone at the top changed the policy. Teachers should either comply or "ship out". However, teachers had some leeway in the ways they taught in class.

Emily admitted that civil servants had to be "yes men". They had an "iron rice bowl". "Iron rice bowl" is a Chinese idiom referring to the system of guaranteed lifetime employment in state enterprises. Therefore teachers, being civil servants, should not be taking risks.

Brady established that it was not necessary for teachers to be risk-takers as it was not in the nature of their job. He felt that if teachers wanted to take risks, they should be in a different profession.

Norma believed teachers who were fearful of trying out new initiatives were not going to be able to do more with their students. If teachers were not willing to take the risk of changing their teaching styles, Norma felt there would not be improvement in their students. Some risk taking was necessary for quality teaching. Teachers could not afford to be static.

Lily felt teachers were not risk takers because they did not have time to process things. She believed that there were "too many things on the teachers' plate".

### 4.5.3. Enhancing factors

Just as there were inhibiting factors, so too, were there enhancing factors to quality teaching which are discussed below.

#### 4.5.3.1. Teachers' educational background/ professional development

Norma acknowledged that professional development courses or workshops for teachers were enhancing factors. Brady similarly stated that the educational background or experiences of the teachers were very important.

> As much as you can say anyone can be a teacher, you need experience to be a good teacher. Definitely your mindset has to be different. You have to know the content; you have to master the knowledge and the pedagogy in order to be a quality teacher (Brady).

Henry concurred that teachers' professional development was important for quality teaching to take place. He declared that in Singapore, teachers had been told from the very beginning that they could continue their education. They could go for their master degree and they could go for constant courses with pay. Henry added that teachers could even go for a bachelor degree if they wanted to. The Singapore government had a mission for education which was "thinking schools, learning nation" (MOE, 2014). Henry reminded us, "Every teacher must improve themselves. A teacher cannot remain stagnant. There are numerous courses offered for teaching methodologies, content knowledge and building up competencies that the teachers are spoilt for choice".

Henry went on to say that the Ministry of Education was trying its best in its leadership role. They came up with the GROW Package so that teachers could grow in terms of pedagogy and professional development. According to Henry, the Ministry of Education had set up a very detailed plan to ensure that all school leaders provided their teachers with a professional development plan. Henry also revealed that the MOE actually tracked the teachers from year one all the way to their retirement. That was why teachers were measured for potential and performance. If teachers had high potential and performance, their EPMS score would go up too. The school leaders needed to have professional development plans for all teachers. Henry added that the heads of departments, as reporting officers, had to sit with the teachers to plan their professional development. If things were not done well, the school leaders and the heads of departments had to explain to the Ministry. Every four years, a team from the MOE would come to appraise the school to see whether there was a structure in place, a system running well or a professional development plan for the staff.

Lily stated that training was imperative for teachers. She believed that teachers needed to go back to being students themselves. Lily felt that teachers should not be upgrading their skills for personal glory but for the sake of the child as every child mattered.

> Everything you do should be for the child, for the students not the other way because I want to advance in my career. I mould the kid in a way that will help me advance in my career. If we do that, then there's no point being a teacher (Lily).

Brady noted that teachers with more knowledge of a subject matter would find teaching "a breeze" because they would need less preparation time as compared to teachers who were not so well-versed and they would also be able to communicate better.

Ramlee established that educational background was the basic criteria for teaching simply because teachers needed the prior knowledge to teach content and they needed to learn new knowledge to develop new content. The fact that trainee teachers had to go through rigorous courses at NIE was part of professional development, equipping would-be teachers with the necessary tools. Thus, Ramlee reinforced that educational background complimented professional development in enhancing quality teaching.

The hind side to those developmental tracks according to Ramlee, was the possibility of narrow knowledge development. Teachers might apply the knowledge through regurgitating what was learnt. Ramlee believed that only good teachers would be able to digest the knowledge and develop a broad base application for teaching. Teachers with a global view would apply and maximize the new knowledge content for the benefit of their students.

#### 4.5.3.2. Envisioning/Renewal

Henry believed that the envisioning workshops that were organised for teachers were to consolidate what they had done and to plan for the following years. He felt that the staff retreat that was organised by his school in the middle of the year was a form of renewal, the coming together of teachers to share and build on successes and their belief system.

> We pat ourselves once a while on the back and say we have done well. And from here, where do we move on? It is a constant renewal and if the staff sees it as another day that they have wasted, then I would say, it is really wasted. And I can say teaching can be a terrible job for them. I use the word "job". It's not a profession anymore. It is a job and they drag their feet to school (Henry).

Emily confirmed that it was good for teachers to refresh themselves by taking a break from teaching to attend courses. She herself had attended three diploma courses and admitted she felt better qualified. Emily stated, "I'm happier as a teacher. A happy teacher will get happy students, not annoying teachers with annoying students. Then you end up with annoying principal and vice-principal. They will harass everybody in school".

Norma believed that teachers needed to rest or attend teachers' work attachment (TWA) or go for professional development leave (PDL). Then they would come back recharged.

Brady declared that since teaching was a demanding profession, teachers needed to be recharged. He felt that teachers needed to know the overall direction of the school but a school should not be run like a corporate company. It would be ideal if teachers could come on board and be aligned with the school's vision, but in reality Brady felt that teachers would walk back to their classrooms and switch back to their teaching roles. He figured teachers would not go back to the classroom and think that the school needed to be number one so they must teach extra hard.

According to Brady, unlike in a corporate world where people are tied to dollars and cents and follow a structure so that the company will achieve its targets and survive, teachers had their own pride and stance on their roles as teachers.

Lily admitted that it helped in the beginning of the year for teachers to have the big picture in mind of the goals and vision of the organisation as a whole. However, she questioned whether it was possible to monitor if the vision and goals were cascaded and practiced in the individual classrooms.

Ramlee had attended envisioning workshops where the focus was for teachers to reignite their spark in teaching. He felt that as teachers were adults and had a lot of experiences in life, habits were developed which could support the statement "you can't teach an old dog new tricks". Ramlee proposed a study to measure the relevance of such workshops to reaffirm the passion for teaching.

#### 4.5.3.3. Collaboration

According to Norma, teachers' sharing to discuss teaching methodology, teaching materials and support staff was an enhancing factor to quality teaching. Norma observed that teachers tried their very best to work together but whether they were sincere, it was not easy to say. Norma supposed most of the teachers cooperated because they just wanted to get the work done so that they would not be seen as being uncooperative:

> For example, I have done my part. Okay, you cannot say I don't do my part. I have done my part which is true and that's it. So I cannot say whether it has been done passionately or otherwise.

Carrie related that she had always reminded teachers to work together. Carrie reminded teachers not to take on all the tasks themselves. If teachers had common tasks, it made sense to take turns to share out the work and strategies. For Science experiments, Carrie proposed the Science teachers took turns to prepare the apparatus for each other in the same level to utilise.

> We share our resources and never, ever revamp the wheel. Whatever resources you have, you keep them and then if there is a need for new ideas, look into what you have and enhance them. That's what I always do and whenever I do any kind of resources, I always think of how else I can expand this resource, in what other areas so this way, it makes my work easier (Carrie).

According to Henry, "no man is an island". For teachers to be able to understand their students, they would have to collaborate with the previous years' teachers and with the parents. Teachers' teaching methods had to change accordingly to the classes they were teaching. Individually, teachers' knowledge and teaching methodologies were limited. That was the reason why Lesson Study was introduced where a whole group of teachers planned a lesson together, designed resources and observed each other teach and provided feedback. As practitioners they gained from each other. That was how collaboration helped enhance teaching.

Even the Ministry had a collaboration website because MOE knew that teachers individually could not create all the teaching aids that they required.

Emily noted that schools within a cluster collaborated by organising workshops for each other and shared resources such as exam papers.

Brady acknowledged that collaboration could help teachers share their workload and learn from each other. If teachers were learning from each other there was no need to take a top-down approach. Therefore, teachers took ownership and were more satisfied.

Lily established that teaching was a private enterprise where teachers worked "within the four walls" with their students. Unless teachers intentionally set time to collaborate and practise reflective practices, they would not know what the other teachers were doing. Collaboration, according to Lily was needed for teachers to share knowledge and teaching practices.

Ramlee believed teacher collaboration was one of the most effective tools because it harnessed teachers' knowledge and real lifetime experiences. During the collaboration, the teachers would share their actual lesson plans or activities. Those were valuable resources for teachers to share and use. Ramlee felt that a good teacher would adopt them and apply accordingly in teaching.

## 4.6. Teacher motivation

I believed in order to know what motivated teachers to stay in the teaching profession, it was useful to know what made them decide to join teaching in the first place.

### 4.6.1. Why join teaching?

Interestingly, six of the participants joined teaching for similar reasons and that was to find a job. According to Henry, during the late 1970s, there were not many jobs available. However, he admitted that after getting the teaching job, he began to love it. Henry recalled that he literally lived in the first school he was sent to where he struck a rapport with the students and the villagers around the school. Henry also enjoyed his relationship with his colleagues and found every day was different and interesting. Henry went on to clarify:

> Some people find it boring. I call it a challenge so it is actually very individualized. How do you actually look at it? What do you want from life itself? Many of us are inward looking but if we could actually be outward looking and see the world as it is, the world is full of people, very interesting people. Even the children, every one of them, is a different individual. And you have to know every one of them.

Mahmud confessed that he joined teaching reluctantly but he never regretted it. He started as a musician working in a nightclub. At that time Mahmud was earning about $800 a month which was considered high compared to a teacher's last drawn pay of only $950. He was performing in the American Club and British bases. He realised that he did not really enjoy seeing people drunk every night. In 1965, there was a big recruitment of civil servants because Singapore became an independent state and the government was newly formed. Mahmud applied for a job

as a court interpreter as he happened to be bilingual and court interpreters were highly paid. He admitted that teaching was last in his job seeking list as he was not interested in being a teacher at all. However, he was offered the teaching position first.

Mahmud had to go for an interview but he was still waiting for the interpreting job. His mother was really happy that he was shortlisted for the teaching job. Mahmud went for the interview and was successful. One week after signing the bond with teacher training college (TTC), Mahmud received a letter of offer for the interpreter job. Mahmud wanted to withdraw from TTC but was told that he needed to pay $1000 which at that time was a lot of money. Mahmud became a teacher in his own village where everyone knew him so he found it easy to work. He recalled, "I was teaching in a primary school. Somehow I looked at their faces and I liked teaching. I don't know why but I came to like teaching".

Emily related that when she was young, she did not have an ambition. She had to look for a job for economic reasons and the opportunity to become a teacher was presented to her by her own teacher after she had completed her "O' level examinations. Most of Emily's classmates also joined the teaching profession because it was convenient. Emily's first love was to join the army. She was a very physical person so she thought of joining the police force. However, she weighed her prospects and felt that teaching was a better job.

Emily recalled that in those days, people looked up to teaching as a very noble job. Not everybody could become a teacher. Emily loved what she did and along the way, she learnt to love teaching. Emily was so grateful to her father for providing her with education.

> We didn't come from a very well educated family who wanted their children to become lawyers or doctors and then groom them all the way. To get education was already something near impossible during my time, especially for girls. We really thank our father who was not rich but still sent us to school. There were a lot of parents who didn't send their children, especially girls, to school during my time (Emily).

Norma had a similar reason for becoming a teacher and that was to secure a job.

> Initially when I joined teaching it was just to secure a job, that's about it but over the years, I've developed a passion for teaching and since I've already learnt the ropes and beginning to see the benefits of being a teacher, I kind of stick to it (Norma).

According to Carrie teaching was not her first choice job either. She entered the teaching profession based on her father's desire. Although Carrie underwent teacher training, she admitted it was not easy in the beginning, especially with no experience. However, she learnt on the job. Carrie admitted that no one strategy worked for everybody. Sometimes teachers had to individualize their lessons to cater for the various skills. Carrie admitted that she never gave up. She had to understand

the children's weaknesses and work with them. After the challenges, the passion sank in and Carrie continued teaching for forty-five years.

Brady is yet another participant who joined teaching because he could not find a job. He thought he could spend a few years contributing back to the society. He did not have teaching as his long term career goal. He felt that he had the potential to do other things and teaching was just a stepping stone for him to serve his time while waiting for better opportunities to come. He had not regretted being a teacher but felt that the biggest push factor was that he wanted more time to spend with his young family.

Lily admitted that she joined teaching because she liked children and she did not like a desk bound job. She started relief teaching and found children curious and appreciative. Lily believed it was easier to deal with children than adults. She liked to see the sparks in the children's eyes especially when they performed on stage or when the children improved in their exams.

Ramlee joined teaching because he wanted to share with the students the wonders of sports and physical activities and how sports could benefit them. Ramlee wanted to be involved in the students' physical and mental development towards health and sports. He participated in races and sporting events, so as to "walk the talk". Ramlee confessed that he did not want to be like "those who can't do, teach"!

### 4.6.2. Why leave teaching?

The reasons given by the four participants for their resignations from the teaching profession were varied yet there were some similarities. Brady attributed it to aspiration to move on to do something else. He admitted that even if he had no intention to move on to a new job, he felt his teaching life had grown more unattractive as he had more work. Brady declared that he was just promoted on the day he resigned. He knew of the promotion much earlier. However his plan to resign was already in his pipeline. Brady elaborated that there was just too much work, too many areas to take care of. He believed there would not be quality because teachers just wanted to make sure they could cover the syllabus. Teachers could not really complain much about quality anymore because there was just too much to do. Brady noted that teachers believed it was sufficient so long as they were able to academically prepare students for their exams. He felt that as much as teachers wanted to go deeper, time did not allow them to do that. Teachers had so many projects that they just "touch and go" at certain times. Brady supposed many teachers resigned not just because of the system. It could be school specific, such as in his school, teachers had less teaching periods but they also had more work such as relief teaching to cover teachers who were absent. Brady felt his main reason for moving on was not due to the school system which he believed could be changed but the educational system in Singapore, which to him, was too macro.

> So the reason why I quit is that I would rather do less and do better. I am stuck in a situation where I want to do better but I just have limited time. And when you can't produce really excellent work, you will be deemed as ineffective. Actually it is not true. It's just that when I just have a family, I would want the time to stay at home and have time for my kids. I can excel in work and compared to the rest of my peers, I can still do well

> because I work extra hard and late in the night every day. I can still produce results but I will lose my family life. So at the end of the day, I suppose those teachers who quit would probably relook into their priorities and choose according to what they want (Brady).

The reason why Lily left teaching was rather similar to Brady's. Lily would rather spend time with her own child because she felt she was solely responsible for her child's education at least for the first five years. Lily admitted that she did not want to be a principal so if she stayed longer in the teaching service, her obvious route was to be a vice-principal and principal which meant a lot more paperwork that Lily did not like because it meant taking her away from her students. She realised that even senior teachers were assigned a lot of paperwork.

Lily felt that as an educator herself, it was important for her to educate her own child and not sub-contract or delegate her child's education to somebody else or to the school. Lily would rather spend her child's formative years with her. Lily was in the process of opening a childcare centre for her own child's sake. Lily intended to enrol her child at the centre with her so that she could monitor the way her child was learning. Lily believed that zero to five are the best years for the child's learning as the brain formation was the most rapid.

> I want to spend these five years with my child but I also believe that every child should have the opportunity to grow during this time frame because we are always at the end of it. The primary school teacher always gets them after that five years and then we're trying to beef them up to PSLE. It's too late. We should beef them up here, not for exams but maybe train them, grow them and help them develop in this time frame. That's why I've given up my job to do this (Lily).

Norma decided to "call it a day" after 25 years in the service simply because she could not keep up with too many changes and new requirements in KPIs.

Ramlee admitted that although he has resigned, he still felt that he was a teacher because he was learning. To him, in order to be a good teacher, one had to learn, unlearn and relearn. When Ramlee left the service, he actually wanted to look for more knowledge outside the system, outside the Ministry and "live the hard way, taking the hard knocks". With that, he could unlearn, relearn and reflect on his previous knowledge and apply them to his new working environment. Ramlee declared that although he had physically resigned from the Ministry, he could never resign from teaching and learning. Ramlee was willing to take the risk of either a pay cut or pay rise. According to Ramlee, some teachers took on the work attachment for three months or two weeks in external organisations to broaden their outlook and experience but by the end of it, it was just paper work. Teachers were attached to some companies or associations. They then wrote down what had been done and submitted reports to their principals. Ramlee agreed that they might take the good ideas from the external organisations that they were attached to but in that short span of time, Ramlee was sceptical whether the experience could actually transform teachers in a positive way and make them better teachers. Ramlee often questioned himself:

> That is the thing that I cannot answer but I ask myself, does that actually make you a better teacher? You have that experience between a month and three months for that work attachment but does that make you a better teacher?

Ramlee realised that after leaving the teaching profession for about seven months, he was learning new things outside the Ministry. Ramlee was no longer handling children but adults with different kinds of unrestricted opinions, different behaviours and emotional outbursts. Ramlee had to put what he had done as a teacher for ten years to the test to implore and explore all methods and ways to handle his current job environment. There were challenges. Ramlee was actually outside his comfort zone when he said:

> I guess, being a teacher, that's what I want to impart to the students. I want them to try. I want them to feel the challenges so if I can't experience that, how would I then tell the kids, look I've done this and then this is what my experience is. I just don't want to come to the point when the students come and tell me. Hey teacher, you're bluffing, you didn't do this before. You only study from books. But isn't that the truth? The teachers that we know of are just pencil pushers who just write things down and then they are comfortable teaching English, Maths and Science, but what else? So I am putting that experience on my back. If I want to come back to teaching for example, I can still come back, but with more experiences, more batteries to carry (meaning more recharged) and more things to experience.

### 4.6.3. Work-life balance

On the topic of work-life balance, there are again similarities and differences of opinions among the participants. Brady brought his work home even after leaving school at about five-thirty or six in the evenings. It had affected his work-life balance but he did not blame schools because he felt it was just the demand of being a teacher in Singapore where his job was no longer just to teach. He had to do a lot of planning and implementing of programmes from planning an extra camp or enrichment for Mathematics to organizing a flea market for pupils to sell stuff. Brady had to do almost everything.

> Well, sad to say, based on my observation and not to be generalized, people who can work smart may not be producing quality or they may just find short cuts and so on. And people who work hard and really want to produce good quality work may be pressurizing themselves and because they don't work smart by cutting corners, they will get stressed and burnt out. There is a trade-off so it depends on which way you want (Brady).

Emily sacrificed time with her own children for the sake of her students. She had a live-in maid to take care of her children. She really enjoyed working. When

Emily was still teaching, she was in charge of gymnastics. On Saturday afternoons, she spent extra time taking her students out for gymnastics training. It was usually a whole Saturday afternoon. It took a lot of energy on Emily's part and took her away from her family but she was so set on doing her job well that she did not mind spending the time away from home.

Lily gave an example of the teachers teaching in the school opposite her flat. She related that they often work until nine or ten o'clock in the night. During the night, they had camps, activities and parents' talk. Lily believed the teachers had to put in a lot of energy to be able to arrive in school at seven in the morning and leave at ten in the night. The school is opened on Saturdays too so Lily questioned their work-life balance. "What kind of balance is there if all their waking hours are either in school or doing school work"?

Lily also recalled her own experiences when she was still in the teaching service. She had spent mornings teaching and the whole afternoon in meetings and report writing and she did not mark a single worksheet until she got home at seven in the evening. "I'm just marking at night. I don't even have time to prepare my lesson so how much quality is there if I perpetuate this"?

Norma realized that since many schools were running single sessions, the time spent in school was as good as a whole day, unlike in the past. She agreed that although the class started at eight in the morning, teachers had to be in school by half past seven to prepare before the first period. Some teachers provided extra supplementary classes or helped the students but those extra hours worked were sometimes not factored in. And the timetable stretched all the way to two in the afternoon after which teachers had supplementary classes. So on a typical day, Norma would actually start teaching at half past seven and "knocked off" at four in the afternoon so it was really very taxing for her.

Ramlee added that if one defined teaching as a full time job, the break would never be enough. Ramlee had seen teachers going back to school even during holiday breaks. Teachers also brought their workload home and Ramlee wondered whether it would disrupt their family or spouses' lives. Sometimes teachers forgot what a break was and they felt that bringing home work and marking was not work. Some of the teachers enjoyed doing that.

Ramlee continued that some teachers were "married" to their work but he figured there were two plausible explanations. "Is it because they have to finish their work at home because they do not know how to manage their time or is it because they want to be away from the school so that they can give good quality marking in composition, for example"?

Carrie felt that teachers were alright and managing well although they had to sacrifice a bit of their sleeping time. Teachers had confided with Carrie that they worked until the wee hours of the morning. Carrie supposed that would be alright for younger teachers but not for the older ones. Carrie noted that the teaching force in Singapore was very young. She felt that teachers could withstand the pressure and reap the rewards of teaching. Carrie expressed her feelings about the rewards of being a teacher:

> Once you see your children do well, I think that counts more than performance bonus. Money is not everything. We teachers are rewarded in many, many other ways. Seldom do

> we hear teachers' children being neglected so in a way our bonus is that as teachers we can guide our own children better. To me that is the greatest bonus. Actually, by and large teachers' own children are doing reasonably well in life. So don't you think that's the greatest performance bonus you can get?

Tarim had a different opinion to the rest of the participants. He felt that in comparison to those working in an office from nine to five, teachers' work finished at half past one in the afternoon. He suggested that the excess time should be used for marking or teaching extra hours after school.

When Henry was still teaching, he would be the first one in school, even before the security guards arrived. He would do his work and be in the school hall as the students came in because he was in charge of school discipline. However, he would tell everyone that he had to leave the school at half past three or four in the afternoon unless there was a meeting as he did not want to be caught in a traffic jam while driving home.

## 4.7. Summary

In this chapter, I have extracted the common themes that resonated from the participants' stories and narrations about quality teachers and teaching in Singapore as well as their beliefs and experiences. In the next chapter I shall attempt to interpret my findings in relation to current literature as well as my own personal experiences as an insider to the Singapore education system having been a primary school teacher myself for 28 years.

# Chapter 5. Interpretation

"Do we have it?" "Are we doing it?' " What can we do to improve it?" Teachers in Singapore, as well as the teachers in my study reflect on these questions regularly. The "it" implies quality teachers or quality teaching, the phenomena required to avoid increasingly stringent sanctions brought about by higher teacher accountability (Murnane & Papay, 2010). As a result of the sanctions embedded in enhanced performance management system (EPMS), the discourse and vernacular of educational practice, has also shifted. Greene (1973) reminded us, "The teacher who wishes to be more than a functionary cannot escape the value problem or the difficult matter of moral choice" (p. 181). Amidst the moral choice of trying to escape a functionary role, who do teachers become? An alternative to the current focus on quality which is mainly based on academic excellence would be a focus down into the "body" of education: the teachers, communities and students at the genesis of learning.

In an attempt to open up the lived experience of teaching in Singapore, beyond the suppositional, I journeyed into "the heart of things" (Van Manen, 2007, p. 1). My fascination with the meaning of quality teaching permeated me, and transformed my understanding of what it means to be a quality teacher. In Chapter four, reflecting on the words from the participants, I was able to provide a "careful exploration of densely textured moments which point beyond the immediacy of the context in which they occur" (Polakow, as cited by Pinar et al., 2002, p. 407). Chapter four of the thesis presented the themes that emerged from my semi-structured interviews with nine teachers in Singapore regarding quality teachers and teaching.

Now in Chapter Five, in what way will I make sense of the whole? The reader must join me on this journey to find his/her own sense of meaning in this study. As Grundy (1991) explains, "The right of each subject to determine meaning to the extent of his/her capacity is an important principle to be safeguarded" (p. 68). This is an important aspect of a hermeneutic study because, "We cannot fully understand any given situation unless we apply it to ourselves" (Grundy, 1991, p. 15). During my conversations with the participants of this study, the notion of quality in teaching is evident. In this chapter, data that relates to the emerging themes will be discussed and interpreted within a theoretical frame. I seek to bring the parts of the whole together. According to Van Manen (2007), "Phenomenology is a project of sober reflection on the lived experience of human existence–sober, in the sense that reflecting on experience must be thoughtful, and as much as possible, free from theoretical, prejudicial and suppositional intoxications" (p. 1).

In this chapter, I seek also to reveal the phenomena of quality teachers and quality teaching to illuminate the tension between teaching as a means to an end of measurable academic results as opposed to teaching, as being in learning, when I address my over-arching phenomenological question: **How do Singapore teachers describe quality teachers and quality teaching?**

This chapter has been organised into five sections. In Section one, I have attempted to answer the main overarching question, that is, how do Singaporean teachers describe quality teachers and quality teaching? In Section two, the second

research question, what has influenced the formation of those beliefs that they have, will be revealed and Section three will unpack the third research question regarding the factors or experiences, according to Singapore teachers, that have influenced the quality of their teaching. Section four presents contributions to knowledge and Section five provides a brief summary for the chapter.

## 5.1. Research question 1

There are themes that emerged from the interviews which are related to quality teachers and teaching. I distil the themes to draw out the essence of what the participants were saying based on my own experience as a student for 14 years, as well as a primary school teacher in the Singapore education system for 28 years, against current literature.

### 5.1.1. Definition of quality education

It has been established earlier that quality is a complex multifaceted personal construct, reflecting the views on learning that the teacher and the learner (and other stakeholders) use and that depends on the specific local context of teacher and learner (Darling–Hammond, 2000; Hargreaves, 2000; Helsby, 2000). According to Biggs (2001), "quality" could be defined as an outcome, a property, or a process. Thus the word "quality" has been given several definitions because definitions of quality are stakeholder relative and all stakeholders hold their own view of what quality teaching, quality teacher and quality education mean to them (Crowther, 2011; Hargreaves & Fullan, 2012; Hattie, 2012; Tam, 2001).

The McKinsey report (2007) stated that the quality of an education system cannot exceed the quality of its teachers; the only way to improve *outcomes* is to improve instruction and the only way for the system to reach the highest *performance* is to raise the *standard* of every student. The research participants' definitions of quality education seem to vary slightly from one another. Although the participants concur that the quality of education is dependent on the quality of the teachers, the words that are most contentious are "outcomes, performance and standard". These three words are open to differing interpretations. What kind of outcomes, performance and standard are we talking about? The Singapore school system is so often compared favourably to other western countries for its high-flying results in international test scores. But it is interesting that this is what Singapore – which is tightly controlled by the national government – says it is striving to produce in its public schools:

> The person who is schooled in the Singapore Education system embodies the Desired Outcomes of Education. He has a good sense of self-awareness, a sound moral compass, and the necessary skills and knowledge to take on challenges of the future. He is responsible to his family, community and nation. He appreciates the beauty of the world around him, possesses a healthy mind and body, and has a zest for life. In sum, he is:

* a **confident person** who has a strong sense of right and wrong, is adaptable and resilient, knows himself, is discerning in judgment, thinks independently and critically, and communicates effectively;

* a **self-directed learner** who takes responsibility for his own learning, who questions, reflects and perseveres in the pursuit of learning;
* an **active contributor** who is able to work effectively in teams, exercises initiative, takes calculated risks, is innovative and strives for excellence; and,
* a **concerned citizen** who is rooted to Singapore, has a strong civic consciousness, is informed, and takes an active role in bettering the lives of others around him.

(MOE, 2010, http://www.moe.gov.sg/education/desired-outcomes/)

All the participants, including myself, feel that the most important outcome that the schools in Singapore want to achieve is academic excellence and teachers are underpinned by a structure of accountability. The national testing practices have been introduced to ensure teachers teach the right stuff, concentrate on the right set of processes (those to pass pencil and paper tests), and then use the best set of teaching activities to maximise this narrow form of achievement (i.e., lots of worksheets of mock multiple choice exams).

Yet ironically, the Ministry of Education's desired outcomes of education have not even one mention of academic excellence in them. The specific desired outcomes of education in Singapore are listed by level as follows:

At the end of **primary school**, students should:

*be able to distinguish right from wrong
*know their strengths and areas for growth
*be able to cooperate, share and care for others
*have a lively curiosity about things
*be able to think for and express themselves confidently
*take pride in their work
*have healthy habits and an awareness of the arts
*know and love Singapore

At the end of **secondary** school, students should:

*have moral integrity
*believe in their abilities and be able to adapt to change
*be able to work in teams and show empathy for others
*be creative and have an inquiring mind
*be able to appreciate diverse views and communicate effectively
*take responsibility for their own learning
*enjoy physical activities and appreciate the arts
*believe in Singapore and understand what matters to Singapore

At the end of **postsecondary** school, students should:

*have moral courage to stand up for what is right
*be resilient in the face of adversity
*be able to collaborate across cultures and be socially responsible
*be innovative and enterprising
*be able to think critically and communicate persuasively
*be purposeful in pursuit of excellence
*pursue a healthy lifestyle and have an appreciation for aesthetics
*be proud to be Singaporeans and understand Singapore in relation to the world

I personally do not know if Singapore actually produces the kind of students described in these desired outcomes. It is interesting to note that the participants of this study rarely, if ever, mentioned these outcomes as priorities. The stated message of the desired outcomes of education in Singapore is at odds with the perceived and enacted message in schools where the policies are to be implemented and where they matter most. Teachers are constantly bombarded with conflicting messages from the MOE and the school leaders. For example, "standing up for what is right" may be for everything else in Singapore except for freedom of speech which does not seem so desirable to an authoritarian government as compared to the more liberal West.

In my opinion, Singapore's education goal is more akin to President Obama's blueprint for education reform that is every student should graduate from high school ready for college and a career. Every student should have meaningful opportunities to choose from upon graduation from high school (U.S. Department of Education, 2011).

Although the definitions of quality education vary among the participants, there is a common thread among the retired participants, in that it requires students to be educated holistically and be able to apply the knowledge learnt to face future challenges in life. The participants who have resigned defined quality education based on teachers' abilities to teach with care, passion and love and making sure students learn what has been taught. This is in line with literature that states the Ministry of Education (MOE) and the National Institute for Education (NIE) develop their teachers into effective instructors and put in place systems and target support to ensure that every child is able to benefit from excellent instruction (NCEE, 2012).

Although the participants agree that education needs to be holistic, they admit that it is difficult to measure quality education, teaching and teachers as they are very subjective. In an attempt to objectify teaching and learning, the living dimension of teachers is forgotten. "In their striving to attain a finished blueprint of the world, the sciences had become frightfully estranged from our direct human experience" (Abram, 1996, p. 41). When compared to other countries, the Singapore education system seems to produce top scorers in international tests such as TIMSS and PISA. However, there are opinions that suggest Singapore students have too much on their plates thus lacking innovative capabilities to think outside the box. The students are just trained to fill the economic purposes of Singapore, thus, politicizing education. It has been ingrained in the psyche of Singaporeans that to excel academically is the way to a brighter future.

This study's participants' responses in 2014 contradict the "Teach Less, Learn More" (TLLM) initiative launched in 2004, where education in Singapore is supposed to transform from learning by quantity to quality. The Singapore's former minister of education back in 2004, Mr Tharman Shanmugaratnam, announced that the focus would be on the quality of learning, quality of CCA and community engagements and the quality of the whole school experience that the students go through. The Minister advocated that more "white space" be provided in the curriculum to give schools and teachers the room to introduce their own programmes, to inject more quality into teaching, to reflect more, to have more time for preparing lessons and to give students themselves the room to exercise initiative and to shape their own learning. It aimed to touch the hearts and engage the minds of the learners (Tharman, 2005b).

There is no doubt the Minister had the best of intentions for the education system. However, since the schools and teachers are ranked mainly on academic results, the "white space" provided in reality is piled with more strategies for academic excellence so that teachers feel they are "back to square one". The participants admit that the Ministry takes away part of the curriculum but the schools pile on more programmes for the teachers that they do not have the time intended to reflect or innovate. As one of the participants (Lily) commented, holistic education is just "wishful thinking".

### 5.1.2. Comparison of Singapore's educational system with other countries

All, except one participant, made comparison between the education system in Singapore and other countries. Although a couple of the participants felt that the Singapore system is the best in the world, catering for the needs of the students and the country, seven research participants felt that Singapore students and teachers are under great stress. The stress, according to the participants, is due to the numerous amount of school work, testing and co-curricular activities that the students and teachers in Singapore have to endure. This phenomenon has been attributed to the East Asian cultures which give great emphasis to examinations, competition and meritocracy (J. Tan, 2008).

However, as rightfully pointed out by one of the participants (Henry), countries such as Malaysia, Thailand and the United States of America are learning from Singapore and trying to adopt Singapore's textbooks and system, despite the fact that, similar to the American educational system, Singapore students, families and teachers are removed from making impactful pedagogical decisions (Meier & Wood, 2004). Even Australia is trying to catch up and learn from the best school systems in East Asia (Jensen, 2012).

The irony is that there is a disconnect between some of the participants' perception of Singapore students being unable to innovate and only being good with regurgitating facts and their high TIMSS and PISA scores. Apparently, the questions in TIMSS and PISA tests need higher order thinking skills (Jensen, 2012) which cannot be solved through rote learning. Thus, researchers are interested to find out how quality teachers are trained and quality teaching implemented in these East Asian countries namely China, Hong Kong and Singapore.

### 5.1.3. Definition of quality teacher

All participants' viewpoints show alignment with a number of researchers (Betts, Zau & Rice, 2003; Darling–Hammond, 2000; Goe, 2007; Kaplan & Owings, 2002) who argue that teacher quality is the most important school-related factor influencing student achievement. However, all the participants agree there is no single definition of a quality teacher but there are some traits that they feel a quality teacher should possess which will be discussed below.

### 5.1.3.1. Measures/traits of quality teacher

In Singapore, quality teachers are benchmarked against key competencies including the role of the teachers in the academic and character development of their students, the pedagogic initiatives and innovations teachers have developed, the professional development they have undertaken, their contribution to their colleagues and the school as well as their relationship to community organizations and parents. The participants feel there is a problem in terms of measuring what a quality teacher is because of its subjectivity. However, the participants do agree with some of the traits of a quality teacher which are in line with Haskvitz's (2002) and Hattie's (2012) description of the traits to quality teachers. According to them, high-quality teachers are lifelong learners, good communicators, set high standards for their students, create independence, competent in their subject matter, entertaining with a good sense of humour, quick to provide accurate assessment and feedback of student work, flexible, proficient in offering students a diverse array of avenues to pursue excellence and unaccepting of false excuses. Quality teachers understand what a child needs now and in the future and provide continuity and diversity so that the students are not bored but challenged. Although not as exhaustive, the participants did come up with traits of quality teachers that have similar qualities and virtues as those mentioned by Haskvitz (2002) and Hattie (2012). One of those traits, in no particular order, is the teacher as a motivator.

### 5.1.3.2. Motivator

According to participants in this study, the trait of being a motivator is seen as more crucial for teachers to possess than imparting knowledge. This notion is in line with the idea that the best materials and resources would not be able to excite students to learn unless they are motivated (Darling-Hammond, Strobel & Martin, 2003). Since students are motivated when they see the value of learning, teachers have to understand their students' individual needs and what motivates them.

Students in this digital age are able to seek knowledge from the internet but quality teachers will be able to entice and motivate their students to seek information and knowledge on their own to achieve their level best. This is in line with Stronge's (2007) assertion that an effective teacher encourages the student to excel and provides the push to motivate the student to make a sustained effort when the need arises.

The participants emphasized that teachers also need to motivate other teachers to work as a team and to buy into their ideas while having the virtue of patience. They agree that if teachers are motivated, they will pass on their motivation for learning to others. Teachers do not need to motivate students explicitly but lead by example for students to emulate. Teachers are also supposed to have high expectations of their students' capabilities and motivate them to do their best and develop in a ""wholesome manner"".

Brophy (1987) and Wittrock (1978) made similar conclusions that teachers could be active agents within the educational environment and be capable of stimulating the development of student motivation toward learning through various forms of modelling, communication of expectations, direct instruction or socialization. The participants believe that apart from being a motivator, teachers need to be effective in whatever they do (Seldin, 2006).

### 5.1.3.3. Effectiveness

The participants of this study took a philosophical view of effectiveness adopting what Goe et al. (2008) acknowledged as the elusive nature of teacher effectiveness because what is measured is a reflection of what is valued and what is measured, is valued. The participants equate effective teaching with students' learning. They agreed that there is no teaching if there is no learning taking place. Lessons have to be tailored to the abilities and responses of the students. Effective teachers can gauge their students' understanding by looking at their students' eyes, facial expression and body language for instant feedback. Stronge's (2007) expectations of effective teachers seemed to be echoed by the participants in that effective teachers have a sense of how each student is doing in the classes that they teach. They use a variety of formal and informal measures to monitor and assess their pupils' mastery of a concept or skill. When a student is having difficulty, the teacher targets the knowledge or skill that is troubling the student, and provides remediation as necessary to fill that gap. One of the participants commented that effectiveness is shown if teachers see their students change for the better or the students widen their scope of learning. Another participant quoted some teachers are very efficient, doing the right things but some are effective, doing things right. Another trait that the participants felt a quality teacher should have is empathy.

### 5.1.3.4. Empathy

Putting themselves in the shoes of their students is what the participants thought teachers should be able to do in order to exercise empathy for their students. This is in line with the research findings by Cooper (2002) where an attitude of care in teaching and learning emerges through profound empathy in one-to-one relationships. It is interesting to note that all the participants either talked about empathising with students' learning problems or family problems. One of the participants rightly pointed out that unless teachers have undergone similar experiences as their students, it is not easy for them to fully empathise with the students. I for one, being blessed with good health most of my life, sometimes finds it hard to empathise with someone who is chronically ill.

The participants of the study also acknowledged the premise that teachers in Singapore are sometimes too bogged down with work and there are too many children in class for them to be able to feel for every single child. This sentiment is similar to the findings by Best (2003), who postulated that the increasingly mechanistic approach of the prescribed and extensive curriculum in recent years appeared to act as powerful factors in limiting the ability of the teacher to employ their empathy to best effect in meeting the needs of their students.

One of the participants felt that teachers have to somehow detach themselves from getting too emotionally involved so that they would be able to function well without being emotionally affected. Not unlike social workers or counsellors, teachers too need to learn how to detach their personal lives from their professional ones. Having said that, I feel that teachers who are truly passionate, will find the time and means to exercise empathy.

### 5.1.3.5. Passion

Passion matters especially in teaching because of its motivational and emotional properties (Carbonneau et al., 2008; Neumann, 2006; Patrick, Hisley, & Kempler, 2000; Vallerand, 2004). The participants have similar views that besides being very good at pedagogy, a quality teacher needs to be passionate, have compassion for the students and really care for them. With passion, teachers can go far and view problems as challenges for them to overcome. Passion can actually influence the learner. Motivationally, it drives people to action (Vallerand, 2008). The participants believe that enthusiasm that comes from a passionate teacher is contagious which Hatfield, Cacioppo and Rapson, (1993) termed "emotional contagion".

Research on memory content demonstrates that emotional stimuli are better remembered than unemotional stimuli (Heuer & Reisber, 1992; Sutton & Wheatley, 2003). Carbonneau et al. (2008) documented that passionate teachers believe their students are not only motivated but learn more from passionate teaching. It was also found in a study by Patrick et al. (2000) that students' learning is influenced positively by teachers exhibiting qualities associated with passion through non-verbal and verbal enthusiasm. The participants admitted that without passion, teachers will not last long in the profession. They believed that could be one of the reasons why many young teachers resign after serving their bond of three years. In order to survive in the teaching profession, teachers need to serve their students unconditionally and give of their very best. Apart from caring for and serving their students, teachers need to care for themselves too (Ben-Ze'ev, 2000); to create healthy intellectual and interpersonal boundaries and to identify sources of support for when the task of caring for students is beyond their resources.

### 5.1.3.6. Giving/Altruism

As the conversations unfolded for this study, I was humbled by how some of the participants view their roles in teaching. As I listened to their stories, I discovered that often the participants put their students before self thus demonstrating altruistic tendencies. Although there were many teachers' attributes relating to quality teachers and quality teaching discussed in the literature review, teachers' altruistic attribute was not one of them. However, the importance of teachers' altruistic nature emerged from my data when all participants in this study cited working beyond the call of duty. There are literature on altruistic acts shown by teachers but they are not directly related to quality teachers and teaching. Therefore, I have not discussed this particular trait in Chapter 2 but will discuss it here.

According to literature, altruism is a concept used for identifying individuals who are self-sacrificing and directing their concern toward others. Myers (1993) defined altruism as helping others without any expectations or external awards. Relevant literature suggest the following as altruistic behaviours: donating (Den Ouden & Russell, 1997; Lefcourt & Shepherd, 1995, Litvack-Miller, McDougall & Romney, 1997; Schroeder, Penner, Dovidio, & Piliavin, 1995; Switzer, Dew, Butterworth, Simmons, & Schimmel, 1997), helping in emergency (Bierhoff, Klein, & Kramp, 1991; Burnstein, Crandall, & Kitayama, 1994), helping every day (Burnstein, Crandall, & Kitayama, 1994), volunteering (Omoto & Snyder, 1995,

Penner & Finkelstein, 1998; Unger & Thumuluri, 1997), just and responsible socially (Bierhoff, Klein, & Kramp, 1991; Omoto & Snyder, 1995; Unger & Thumuluri, 1997) and sacrificing (Rushton, Chrisjohn, & Fekken, 1981).

Helpful or altruistic behaviour exists when the intention to do a particular person a favour is present and when the helpers act of their own free will and not as part of their duties resulting from professional role commitments (Bierhoff, 1991). Such ethical and moral dimensions of teachers' lives distinguish committed teachers who "educate" and whose work are connected to their whole lives, from those who "teach", for whom teaching is a job rather than a vocation (Day, 2004, p. 16). Hansen (1995, 1999, 2001a) saw teachers' work as a moral and personal commitment, a calling that has to do with cultivating students' minds and spirits.

Altruism and its motives seem to permeate the teaching profession itself (Sinclair, 2008). Scott and Dinham (1999) stated that the strongest motivational factors for teachers are altruism, commitment and personal improvement. Mateer (1993) addressed the question of how large a role altruism plays, in the lives of teachers. Her study focused solely on elementary school teachers. From a series of qualitative interviews, Mateer concluded that the teachers she studied were overwhelmingly concerned with the needs of their students, and they were willing to address those needs, being focused on intrinsic rewards, not material extrinsic rewards. Similarly, Chong and Low (2009) concluded that teachers' motivations were primarily altruistic so extrinsic motivators were unlikely to dramatically impact on teachers' recruitment or retention rates. Mateer (1993) identified three characteristics that are signs of altruistic behaviour and measured the importance of these three characteristics in teachers. The three areas are: perceiving the need of another person, being motivated by empathy to address the need, and addressing the need without an expected reward.

However, a longitudinal study done in Milwaukee by National Teacher Corps that spanned 10 years from 1963 to 1972 showed the notion of altruism to be problematic. This was the largest, longest study ever done in teacher education involving approximately 100,000 idealistic young, white college graduates with high GPAs who were prepared nationally for urban teaching (Haberman, 2005). They set out to "find" themselves by "saving" diverse children in poverty and with special needs. However, when they actually encountered the realities of how teachers had to struggle against their school bureaucracies in order to serve children, over 95 percent of them quit in five years or less (Corwin, 1973). Those who left had an unselfish regard as well but lacked the depth of conviction found in teachers who stayed (NCES, 1996). Teachers who stayed express an altruistic purpose and deep personal obligation to serve their students.

The fact that all nine participants in this study mentioned altruistic attributes when discussing quality teachers is interesting. Why is being altruistic an important attribute for Singaporean teachers? This is a significant contribution to knowledge that teachers in this study feel that in order to become a quality teacher and do quality teaching, they need to be selfless for the sake of the students. All nine participants had similar ideas to Myers (1993) and Scott and Dinham (1999) that teaching is a giving profession and quality teachers would be those who work without regard for any expectations or external awards.

There is some evidence showing the participants' altruistic qualities. For example, all of the participants gave of either their own time and/or money to assist their students. Some of them buy breakfast for their students, who come to school hungry, which is what Den Ouden and Russell (1997) referred to as an altruistic behaviour in the form of donating; while others give of their time to provide extra coaching and class excursions for the benefit of their students. That is similar to what Bierhoff et al. (1991) meant when the teachers act of their own free will and not as part of their duties resulting from professional role commitments.

Being a teacher, according to all the participants whom I interviewed, does not end at the bell. They foster relationships with their students outside of their class time and beyond the scope of their teaching subjects. For example, Mahmud and Tarim volunteer their time after school and on weekends to work with struggling students. Their teaching style is unusual and novel. They will supply a buffet of differentiated worksheets and allow the students to choose whichever they felt comfortable doing. Meanwhile, Mahmud and Tarim and a team of volunteers are at hand to help students out when they face a challenging exercise which they have difficulty in solving. This strategy is to boost the students' confidence and improve their self-esteem as they usually do not know the feeling of being academically successful in school. Mahmud and Tarim's intervention programme is successful as all the students under their charge managed to pass their mathematics subject during PSLE. Mahmud and Tarim not only provide free remedial lessons but free snacks from their own pockets, as they know some of the students come to school without breakfast.

It is interesting to note that even in Singapore where the mentality of its people is on competing and being the best, there are teachers who are genuinely concerned with the need of another unrelated human being, being motivated by empathy to address the need, and addressing the need without an expected reward which was what Mateer (1993) discovered as well. However, one of the participants (Carrie) admitted that teachers do expect something in return from their students and that is, for the students to do the school work assigned to them diligently. I believe every teacher does expect the same from their students which to me, does not make them less altruistic. I concur with Norma's belief that giving is being able to "love the students unconditionally". That would be the true test of altruism. It can be implied that an altruistic person has good moral character.

#### 5.1.3.7. Character

In sharing their experiences, participants linked good character to one's belief in the goodness of all human beings. According to one participant (Brady), ideally in education, teachers should display characters that are neutral with no religious affiliations. It should be moral character that could be applied to all denominations. This is important in a secular and multi-racial state such as Singapore. Teachers need to possess good character as students are looking up to them to set good examples. Researchers (see Campbell, 1997, 2003; Fenstermacher, 1990, 1992, 2001, 2002; Goodlad, Soder, & Sirotnik, 1990; Hansen, 1993, 1998, 2001a, 2001b; Noddings & Shore, 1984; Noddings, 2002; Sockett, 1993; Strike, 1990; Strike & Soltis, 1992; Tom, 1984) also felt that virtue of moral character is not taught but "caught" or "picked-up" by interacting with those who seemingly possessed it. All

the traits discussed so far are observable but the one trait that is imperative for every teacher to possess which is not easily observed is integrity.

#### 5.1.3.8. Integrity

As mentioned earlier, one of the corporate values for teachers in Singapore is "Integrity our foundation" (MOE, 2014). Integrity is one of the most important traits any teacher should have. According to the participants, teachers could easily lose their jobs if their integrity is found to be compromised, especially when handling school funds and marking exam papers. According to Killinger (2010), integrity is a personal choice, an uncompromising and predictably consistent commitment to honour moral, ethical, spiritual and artistic values and principles. The participants touched on being fair to every student, from the way teachers mark students' work to the praise they give without favouritism. Integrity is being honest when no one is looking. Integrity encompasses quality teaching.

### 5.1.4. Definition of quality teaching

The definition of quality teaching depends on the meaning one chooses to give to the concept of "quality". Researchers and the participants alike have given several definitions to the phrase "quality teaching". Some participants regard quality teaching as just a methodology that can be quantified by some figures, measures, and numbers and Biggs (2001) interestingly defined "quality" similarly as an outcome, a property, or a process.

One of the participants believes that teachers should not focus just on academics but teach students about life and morals. This belief will fit in with one of Harvey and Green's (1993) concepts of quality that is quality as "transforming" as it is linked to the improvement and development of processes of change. As discussed in Chapter 2, Harvey and Green (1993) distinguished three definitions of quality, namely quality as "value for money", as "fitness for purpose" and as "transforming".

In the Singapore context where the majority of schools are government owned public institutions and where the teachers are all trained by the same National Institute of Education, the concept of quality as "value for money" does not really apply as students pay the same school fees in all public schools. However, the fact that teachers in Singapore are ranked and rewarded based on the quality of their teaching lends itself to the concept of value for money, for the better the teachers, the more performance bonuses they will receive. It has been found that evaluations which generally relied on the definition of quality as "value for money" often raised frustration on the part of teachers (Cartwright, 2007).

I feel that the concept of quality as "fitness for purpose" is apt to describe what the participants believe quality teaching entails as there was some mention of quality teaching equating to students achieving the learning objectives of a lesson. As pointed out by Weimer (2013), "Less often do we confront ourselves with the fact that when little or no learning results from teaching, teaching serves little or no purpose" (p. 116).

It was argued by Franklin (1992) and Scott (1998) however, that the definition of quality as "fitness for purpose" could undermine the "quality" of teaching. Teachers could be teaching to the test with no regard for the students'

holistic development. According to the participants of this study, this is happening in Singapore schools.

### 5.1.5. Measures of quality teaching

Teaching is one of the professions that is difficult to assess (Dickson, Pollock, & Troy, 1995). Quality teaching initiatives are diverse both in nature and in function. These assumptions are demonstrated by the participants' variety of feedback regarding the topic of measuring quality teaching. All participants admitted that it is a subjective endeavour.

They disclosed frustration for the lack of recognition that learning does not always proceed along a single dimension, such that it can be easily measured on an assessment. As I reflect on the simplistic, incomplete and rigid nature of the tests designed to quantify learning, I suggest a pedagogy that enables a gaze on the unique, embracing the fact that learning occurs differently for different children, and at times, in the most unexpected moments in the day. The participants' voices brought me to this place of considering such a pedagogy as they revealed the heavily structured, constraining nature of the current focus.

Although some participants were not truly convinced of the effectiveness of measuring quality teaching in Singapore, the one common denominator that all the participants felt they were assessed on was the academic results of their students. The participants who used to hold leadership positions, which was six out of nine of them, attempted to justify that other intangible factors are also taken into consideration when measuring quality teaching such as teachers' character, habits and effort. Teachers in Singapore are thus assessed annually through the review system called Enhance Performance Management System, which simply means the appraisal and ranking of teachers for the purpose of distributing performance bonuses.

#### 5.1.5.1. Annual ranking of teachers

I believe that there are always arguments for and against every idea. Firstly, with appraisal and ranking, teachers are rewarded on something other than credentials and years of experience, both of which have been shown to be poor indicators of teachers' effectiveness. Secondly, the effects of performance-related pay have not generally been conclusive due to difficulty of assessing how performance is measured, what it is and what the scale of the rewards is (OECD, 2012).

The participants who held leadership positions stressed that EPMS is a good system to help develop teachers but felt it is inappropriate when used to rank teachers against one another, due to its subjective nature. The participants acknowledged that the Ministry's intention is to motivate teachers to work harder or smarter to achieve good student outcomes, while identifying and developing those teachers who do not perform as effectively as their colleagues. However, the participants differed on the negative effects of its implementation on teachers' morale and collegiality. They felt there were just too many factors to use as a yardstick. This is compounded by the assumption that learning does not arise solely on the basis of teacher activity, thus it follows that success at learning requires a combination of circumstances well beyond the actions of a teacher (Fenstermacher & Richardson, 2005). One of the participants

compared EPMS to a double-edged sword. It could be justified when it is used to help teachers who deserve it but could also be used negatively for teachers to spy and backstab their colleagues in order to outshine them.

The participants who were in the teaching service before the implementation of EPMS and performance-based bonuses acknowledged that EPMS has its merit in that it may motivate teachers to work harder thus producing better student outcomes. However, studies (NCEE, 2012) revealed no relationship between average student performance and the use of performance-based pay schemes in countries where teachers are relatively well-paid (more than 15% above GDP per capita) which is the case for Singapore teachers. The participants' views were in line with Malcolmson (1999) who felt that performance-based salary systems may be counter-productive.

The participants admitted to office politics being more apparent as teachers tend to compete instead of cooperate. Even when teachers seemed to be cooperating, it was unclear what their intentions were. Are they genuinely sharing all their skills and knowledge with other teachers thus losing their edge or are they holding back their "trump card"? It seems contradictory to be competing while cooperating or collaborating. Regardless whether teachers sincerely share their strategies or genuinely cooperate with each other, I feel the students ultimately will be better off. It is the same concept used in business: the more competition, the better it is for the customers. It would have made more sense to me if the performance bonus is shared evenly with all teachers in a school instead of individually. It would encourage cooperation from every member of staff in the school thus enhancing collegiality as well as a concerted effort to boost students' outcomes.

## 5.2. Research question 2

The second section of this chapter attempts to shed light on the second research question, that is, what has influenced the formation of those beliefs that the participants have? It was found that the participants held different beliefs about the purpose of schooling. Some participants' beliefs are rooted in a holistic perspective wherein the purpose of education is to help all children reach their full potential in every facet of their lives. Other participants' beliefs are rooted in more essentialist models that position schools as places in which students acquire knowledge critical to becoming productive members of society. Still others believe schooling should envision a new society, help students become lifelong learners, or enhance the students' individuality.

Fundamentally, teachers' beliefs shape their professional practice. Teachers' beliefs exist on many levels from global to personal and serve as overarching frameworks for understanding and engaging with the world. They can be thought of as guiding principles teachers hold to be true, that serve as lenses through which new experiences can be understood. Most of the participants cited that their beliefs were influenced by their own teachers. Teachers' beliefs may be formed without evidence and sometimes in the face of contradictory evidence. However, they are a part of teachers' identities (Davis & Andrzejewski, 2009).

### 5.2.1. Teachers' identities and beliefs

Forming a teaching identity is a complex and culturally-based process, which occurs within a specific context, time and place within multiple learning institutions (Danielewicz, 2001). The process of becoming a teacher develops from the teacher's understanding and construction of personal knowledge, construction of self and identity development (Connelly & Clandinin, 1999). It has been indicated that although teachers' professional identity formation is quite personal, professional development programmes and mentoring can make a difference to it (Alsup, 2005; Brouwer & Korthagen, 2005).

All the participants in this study have emphasized that they were intrinsically driven to stay in the teaching profession although initially most of them were extrinsically motivated to join teaching in order to secure a job. This phenomenon is contradictory to what Chong, Low and Goh (2011) found in their longitudinal studies involving pre-service teachers in Singapore which claimed that beginning teachers were intrinsically motivated to join teaching through their beliefs in the value of teaching. They also attributed the sustainability of this intrinsic value to the quality of the crop of students with the right attitude towards teaching and the rigour of the admission criteria in helping to select the right candidates.

However, while intrinsic beliefs remain durable, the reality of the classroom impacts one's sense of efficacy as a teacher, since efficacy is not gauged purely by how well the teacher does in the classroom. This in turn affects teachers' sense of identity (Valli, 1997). There has been much research done on the importance of adequately preparing student teachers to deal with the realities of school culture so that the early years of teaching can be turned into a positive experience where teachers are enabled to grow and develop their skills (Gratch, 2001; Kelchtermans & Ballet, 2002). The first years of teaching are the "survival stage""of teacher development (Kane & Russell, 2003) in a "profession that eats its young" (Halford, 1998, p. 33).

In Singapore, teachers are recruited via a few avenues. Some start as contract teachers working in schools before undergoing teacher training in NIE while others undergo training in NIE before working in schools. Even professionals from other fields, such as law and engineering, are recruited and provided with training if they wanted to switch to the teaching profession. Although beginning teachers in Singapore are given a relatively lighter workload for the first year of teaching, they often find the many demands of teaching paralysing to the point that they are unable to transfer to the classroom the skills they learned during teacher education (Bezzina, 2006). As a result, many beginning teachers become disillusioned, frustrated, lost, and start doubting their career choice and choose even to leave the teaching profession early (Delgado, 1999).

From my participants' stories, I gather that disillusionment and frustrations of teachers are not confined to the beginning teachers but involve teachers who are considered "veterans" in the field. This could be due to the fact that school cultures keep changing with new leaderships and policy changes and even the seasoned teachers are finding it a challenge to do what they truly believe in. "Beliefs are thought of as psychologically held understandings, premises or propositions about the world that are thought to be true"" (Richardson, 1996, p. 104). Beliefs, and their influence, tend to be unexamined by teachers because many are implicit, unarticulated or unconscious. Literature suggests failing to examine beliefs can have

negative consequences as they guide practice and priorities, determine what is ignored, influence decision making, and shape what types of interactions are valued (Alexander, Murphy, Guan, & Murphy, 1998; Lortie, 1975; Pajares, 1992).

The participants recalled their own teachers who had influenced their professional belief systems. It was the personal relationships and connections that most participants had with their teachers that remained vivid in their minds and that had become their guiding principles in their teaching lives. This is in line with Lortie's (1975) contention that many beliefs teachers hold about teaching originate from personal experiences as students and that teachers usually teach the way they have been taught. However, some of the participants' beliefs are derived from other personal experiences such as family traditions and values, social encounters, community participation, teacher preparation, observing teachers, professional development and scholarly literature.

The participants remembered fondly their teachers who took the time to connect with them on an individual level. Teachers who helped students on a one-on-one basis often leave a more permanent impact on the students. I personally found praise to have the same impact on students. For example, I can still remember my primary two teacher who praised me when I was eight years old because I could spell the word "medicine" and my primary six teacher who wrote "It has been a pleasure having you in the class" in my journal. I have no idea where that journal is now but those words are stuck in my mind to this very day. All participants have been influenced by at least one teacher in their schooling or teaching life who directly or indirectly influenced their beliefs and practice. Participants related their teachers as being good listeners, good communicators, caring, understanding, motivating, interesting, passionate, responsible, concerned, humble, dedicated, generous, friendly, approachable, selfless and effective.

## 5.3. Research question 3

The third section of this chapter will focus on answering the third research question which is "What factors or experiences, according to Singapore teachers, have influenced the quality of their teaching?" I am focussing on both, positive and negative experiences or factors. There are numerous factors or mediators in teachers' professional or even personal lives that could enhance or inhibit the quality of their teaching.

### 5.3.1. Factors that enhance quality teaching

Firstly, I shall discuss the factors, experiences or mediators that according to the participants have enhanced the quality of their teaching and link them to relevant literature. It is not surprising that most of the participants cited professional development as the main factor that lead to the improvement in their teaching skills. Professional development denotes teachers becoming the learners. The following section discusses how teachers as learners are part of the whole in relation to the parts of teaching and learning.

#### 5.3.1.1. Professional development

Several researchers acknowledged the importance of professional development for improving the quality of the teaching force (Fullan, 2007; Lankford, Loeb, & Wyckoff, 2002; McIntyre & Byrd, 1998; Vrasidas & Glass, 2004; Wenglinsky, 2000). In Singapore, each teacher is expected to undergo 100 hours of professional development yearly. Teachers are free to choose the courses that are relevant for them but sometimes they are strongly encouraged to attend some core courses. Throughout the conversations, the participants noted that the dominant aspect of professional development is focused on core courses involving teaching pedagogies. Whichever the case may be, the participants felt they picked up relevant knowledge when attending professional development sessions. They also acknowledged the great value of observing fellow experienced teachers teach in order to pick up authentic teaching pedagogies and classroom management techniques. The MOE and educational researchers agree that the professional development of teachers has an impact on the quality of teaching and learning. The Teacher Growth Model (TGM) was introduced to encourage teachers to learn together and from one another in order to develop multiple modes of learning, including going for training, mentoring, research-based practice, networking and experiential learning (MOE, 2012e).

When students see teachers learning, they might be positively affected. According to Greene (1978), "The young are most likely to be stirred to learn when they are challenged by teachers who themselves are learning, who are breaking with what they have too easily taken for granted, who are creating their own moral lives" (p. 51).

#### 5.3.1.2. Envisioning exercise

Every school in Singapore organises envisioning or renewal workshops at least once a year in order for teachers to share and build on successes and their belief system. The participants gave their own take on what those workshops meant to them. Although the participants felt it was a good idea for teachers to have the big picture of the goals and vision of their schools and to be recharged, the caveat is whether it is possible to monitor if the vision and goals are cascaded and practiced in the individual classrooms. Very often teachers attend PD courses and workshops but do not apply what they have learnt in their classroom. This could be due to the fact that the PD courses are conducted outside the classroom so that such teachers do not see its authenticity or application to a real classroom situation.

#### 5.3.1.3. Teacher collaboration

Although the participants agreed with the views of researchers (CUREE, 2008) that teacher collaboration is linked to positive effects on students' learning, motivation and outcomes, it is not easy to tell if teachers are doing it sincerely or passionately as the idea of collaboration among teachers conflicts directly with the ranking of teachers. This idea is similar to what Achinstein (2002) postulated and that is conflict often emerges when teachers enact collaborative reforms in the name of community.

## 5.3.2. Factors that inhibit quality teaching

This study found that there seems to be more factors that work against rather than for quality teaching. The task of teaching is daunting with teachers having to make numerous decisions daily. A quality teacher should be one who is able to turn challenges into learning opportunities. The factors that will be discussed below are examples of how the same factor can be interpreted both as an enhancing as well as an inhibiting factor, depending on individual teacher's belief system.

### 5.3.2.1. Result-driven

A number of participants felt there is a gap between the desired outcome of education mapped out by the Ministry of Education and the desired outcomes at the school levels. On the one hand, teachers are told that students should be taught right from wrong and all the politically correct, non-academic values and virtues. On the other hand, teachers are made accountable for the academic results they produce. Teachers have a limited amount of time to focus on both. Therefore, there is often a trade-off where the non-academic programmes tend to be sacrificed. Teachers often need to meet the objective as stated by others, teach the content prescribed by others and as a consequence become a homogenized mass of instructors, void of any personal differences.

Some participants are concerned that teachers would focus only on the academic results and work for it forgetting about the other aspects or the big picture of education. Such a focus moves discussions away from effective instruction. Forte (2010) contended that questions are generally asked whether the percentage of students at a particular school who scored in or above the proficient level reach the target for the year and does not address whether a school is "effective in supporting student learning and progress at an appropriate rate in the school" or "becoming more effective in supporting student learning and progress over time" (p. 77).

There are teachers who would try to achieve results in a short span of time by all means, including cheating or asking students to study the narrow aspects of a subject, only to pass but forgotten after a test. This is attributed to the mentality of the society that believes success in life comes with academic excellence, which has been the case in the meritocratic Singapore system. There is however a shift in the Ministry's stance recently to stop ranking schools in order to defuse competitiveness and the "me" mentality but it is difficult to change the psyche of the Singaporean society who is used to being competitive in order to reach the top.

Heidegger (1993d) reminded us to keep our eyes fixed firmly on the true relation between teacher and student. What relationships can exist between teachers and students if the teachers see students as a test score? As teachers focus on test scores, the gaze moves away from the student, to the data points on computer spreadsheets. What relation should exist between the teacher and students? In what ways should that relation be more than the quantitative results provided through assessment?

There is one participant who acknowledged the benefits of being result-driven as according to him, Singapore, having no natural resources needs "quality"

people in order to remain competitive economically. Singapore does not have the luxury of time to produce workers to fill the job gap in order to boost its economy. It is found that the rate of talent loss in Singapore is one of the highest in the world on a per capita basis (Lee Kuan Yew cited in Ng, 2008a). This could be due to the fact that Singapore is ranked the top most costly city for expatriates as well as citizens to live in (The Economist Intelligence Unit, 2014). According to the late Minister Mentor Lee Kuan Yew, Singapore cannot depend on its own local pool of talent to "punch above its weight" (Mokhtar, 2011). These days the government of Singapore is importing its talent from overseas to counteract the brain drain of educated Singaporeans to other developed countries. However, Singapore is still unable to attract talent at a rate greater than the outflow of its own talent, thus resulting in a net outflow. The impact of brain drain not only affects the Singapore economy but more importantly national security. This security problem is aggravated with a declining birth rate and as citizens leave the country, the number of citizens remaining that Singapore can rely on for the defence against external threats will decrease. The fact that foreign talent attracted are not required to undergo compulsory military conscription does not help this. It is precisely for these reasons that the desired outcomes of education emphasize on knowing and loving Singapore; believing in Singapore and understanding what matters to Singapore as well as being proud to be Singaporeans and understanding Singapore in relation to the world.

#### 5.3.2.2. Lack of time

What participants of this research meant by lack of time is the time needed for teaching which is often robbed by other non-teaching duties. Most (8 out of 9) participants felt that the quality of teaching in Singapore is hampered by teachers having too much on their plate to be able to perform their teaching duties effectively. The factor of insufficient time is not unique to the Singapore context but is a generic complaint that is echoed by teachers around the world (Cambone, 1995; Fullan & Miles, 1992; Gandara, 1999; Kruse, Louis, & Byrk, 1995; Little, 1987). This situation is worsened when teachers are frowned upon and penalised if all they want to do is to teach well and not participate in other programmes. With the pressure of being stigmatised or queried by parents and the Ministry, teachers tend to rush through the syllabus, thus disadvantaging their students. As teachers often find it difficult to complete the syllabus for the core subjects such as English language, Mathematics and Science, they tend to sacrifice their Art, Music and Physical Education lessons as these subjects are non-examinable. All, except one participant, felt distracted by paperwork. The lone participant felt that teachers should know how to prioritise and use their non-contact time with the students to do their administrative duties. According to this particular participant, teachers should work smart and not just work hard in order to have a life, other than teaching.

#### 5.3.2.3. Red tape/Bureaucracy

The participants interpreted red tape in different ways. Some participants felt their hands were tied in terms of carrying out their ideas outside their classrooms. All ideas required the support of the principal, heads of department or other colleagues. Due to school priority or lack of resources, there might be a problem for the teachers to carry out their ideas. I remember having to wait for two years before

I was allowed to start a video club in one of the schools I was teaching in. One of the participants felt that red tape is necessary as ultimately any blame would be borne by the principal. However, Dalton, Fawcett and West-Burnham (2001) found that process driven decision-making that is compliant with centralised policy cannot lead to significant school improvement and that educational innovation relies on creativity in decision-making.

Other participants described red tape as having to do endless paper work and unnecessary report writing which teachers perform begrudgingly as they feel threatened of being ranked lower if they do not "toe the line". This is aggravated by their slim prospects of being promoted through the teaching track as compared to the leadership track. I feel there is some truth in Chubb and Moe's (1991) statement that bureaucracy leads to poor performance in public schools and Smith and Meir's (1994) argument that bureaucracy is an adaptation to poor performance. These arguments are especially relevant in a society such as Singapore where performance in competitive examinations is still a major determinant of educational and social mobility. Competition in Singapore leads some schools to focus narrowly on outcomes that are relevant for public ranking and that may be useful for attracting students and parents.

Heightened interschool competition and rivalry may work against promoting choice and diversity. Even though an External Review Team (1997) commissioned by the Education Ministry has heavily criticized the detrimental aspects of the practice of school-ranking exercises, the Education Ministry has refused to consider scrapping them until the year 2012 when the present Education Minister Heng Swee Keat announced a string of reforms to the education system aimed at getting schools and parents to look beyond grades.

#### 5.3.2.4. Testing beyond capability

All participants acknowledged there are certain questions in all standardized test that are pitched to differentiate the elites from the average. This is due to Singapore's belief in meritocracy (Lee, 2000; Mauzy & Milne, 2002; J. Tan, 2008) and the gifted programme. As a result the system is highly competitive and elitist (C. Tan, 2008; J. Tan, 2008; K.P. Tan, 2008). While some participants felt that it is necessary to challenge students with higher order thinking questions, others felt that certain topics were really beyond the students' cognitive level. Teachers tend to over-test as they benchmark their tests to the ultimate Primary School Leaving Exams which often tests students beyond their cognitive level. Coupled with the ranking of teachers based on students' results, most teachers will pitch their teaching and testing to the elitist standard so as not to lag behind as every student has to go through PSLE and every school has to be accountable for their results. The problem is thus structural, cascaded from the MOE to the schools and teachers. Berger (2006) warned that pushing the students to the limit can potentially create a destructive academic and emotional environment.

#### 5.3.2.5. Teacher burnout

Although different reasons are given to the cause of teacher burnout, fatigue is one of the main reasons all participants agree on. The cause for fatigue is mainly

due to excessive workload. Teachers often have to work long hours to prepare lesson plans, set tests and examination papers, mark assignments, provide supplementary and remedial lessons, attend various committee meetings and professional development courses, initiate action research, take charge of co-curricular activities and various celebrations throughout the year, meet parents, counsel students, perform recess or road-crossing duties, write reports and relieve absent teachers. This list is not exhaustive.

Even physical education teachers whose subject requires less marking are not spared excessive paper work (Smith & Goh, 2003). For example, when I was a teaching in Singapore, I often spent 11 hours a day in school. I would arrive in school at 7 am and leave at 6 pm. My working hours were similar to the teachers in the study done by Naylor and Malcolmson (2001) who worked 53 hours a week. Apart from performing the normal duties, I was tasked to revamp the school website and produce video footage of all the different functions in the school. In retrospect, I wonder how I managed to survive through all that work without falling ill. I was lucky to defy the odds, as according to researchers, prolonged stress will be detrimental to teachers' health (Dinham & Scott, 2000; Drago et al., 1999, Naylor, 2001a, 2001b; Schaefer, 2001a, 2001b). Apart from working in schools, many teachers, including myself when I first started teaching, have to supplement our income by providing private tuition after school or during the weekends and school holidays. Although Singapore teachers are relatively higher paid than their counterparts in other neighbouring countries, teachers working double jobs are common in countries with high cost of living such as Singapore and British Columbia (Naylor & Schaefer, 2002) where teachers' incomes are relatively lower than other professionals.

What I found in common on the reasons the four participants had resigned with the literature (Miech & Elder, 1996) is that they leave the service because they are deeply committed to serving children and frustrated by the working conditions in dysfunctional school bureaucracies which prevents them from doing their best for their students as well as their own children. However, I feel that teachers who leave have less of a negative impact on schools and students than those who burn out but remain in teaching. It has long been established that burnouts who remain use significantly less task oriented behaviour (i.e. less hands-on, active learning), and provide fewer positive reinforcements to their students (Koon, 1971). They also have negative effects on student performance (Young, 1978).

#### 5.3.2.6. Lack of encouragement from leaders

The participants had mixed opinions regarding the need for encouragement from school leaders in order to support quality teaching although research shows that successful leaders improve learning in their schools in many ways (Leithwood, Patten, & Jantzi, 2010). Some teachers needed a "pat on the back", others needed support from mentors. It has been suggested that interpersonal relationships between principals and their teachers influence school professional attitudes that define the broader school climate (Price, 2012). There are others who are not perturbed by the lack of encouragement. They are intrinsically motivated and are not craving for moral support from the school leaders. I personally was not at all affected by leaders who did not offer any encouragement but trusted and respected my professional

judgement in teaching. However, I was very affected by leaders who were narrow-minded and tried to impose their views on the way I should be teaching my class.

#### 5.3.2.7. Lack of training

Teachers are encouraged to upgrade and sharpen their skills throughout their teaching career. However, the demand for testing sometimes distracts resources from classroom teaching and professional development focused on improving pedagogy (Valli, 2008). This emphasizes simplified solutions to the complexity of teaching and learning.

“”One of the participants felt that teachers in Singapore lack the training to become a facilitator of knowledge instead of the bearer of information. This is due to the fact that in this digital age, students are exposed to a lot of information which the teachers need to constantly update to remain current. Teachers in Singapore need to encourage students to challenge the facts presented in class instead of “thumbing students down” and viewing students’ challenges as an insult to their authority (Tarim). Teachers need to be honest with the students that they do not know everything.

#### 5.3.2.8. Student discipline

All participants including myself agree that student discipline is imperative for quality teaching and learning to take place (Barton, Coley, & Wenglinsky, 1998) although research found that maintaining student discipline in the classroom is a major stressor for teachers (Blasé, 1986; Borg, Riding & Falzon, 1991; Coates & Thoresen, 1976; DeRobbio & Iwanicki, 1996; Faber, 1991; Friedman, 1991, 1995; Friesen & Williamson, 1985; Kyriacou, 1987; Lowell & Gallup, 2002; Mykletun, 1984). We also concur with Curwin, Mendler and Mendler (2008) that students’ discipline is the teachers’ responsibility and a test of their classroom management skills. This is evident when the same students under similar conditions can behave in one class but not another: for example, a class that is deemed too large to work with by one teacher can be managed by another; time demands that one teacher finds impossible to meet are met by another; and most confounding of all, students considered disruptive by some teachers are engaged and hard working in the classrooms of other teachers. One of the participants feels that it would be unnatural to have all the students in a class sitting quietly and listening to the teacher.

#### 5.3.2.9. Risk adverse

Apart from taking certain risks in the way they teach, all participants felt that teachers in Singapore are not and should not be risk takers. According to them, it is not in the nature of a teacher’s job to be taking risks outside their classrooms and teachers already have insufficient time to do a wide range of duties. However, Dalton and Read (2001) postulated that teachers and school leaders must feel confident to take risks in their decision-making for sustainable change to occur in schools. In a study conducted by Trimmer (2011) it was found that more experienced principals and teachers will tend to engage in risk-taking behaviour more frequently.

The same cannot be applied to Singapore where teachers and teaching are highly regulated from having only one teacher training institution to having national curriculum and testing. However, back in 1988, the Singapore government relaxed its control of all schools and has allowed several well-established schools to take some risk by becoming "independent". The Education Ministry gave these schools autonomy and flexibility in recruitment, deployment and reward of staff, finance, management, and the curriculum, while continuing to enjoy substantial government financial support. They are to serve as role models for other schools in improving the quality of education.

## 5.4. Contribution to knowledge

While writing this thesis, the main question that is always at the back of my mind is my contribution to knowledge, for without this contribution, the research serves no purpose but to regurgitate common knowledge. The findings of this study contribute to broadening our knowledge about quality teachers and quality teaching from the Singapore teachers' perspective. In the following subsections, the contribution this study has made to conceptual, methodological and theoretical knowledge are addressed.

### 5.4.1. Contributions to conceptual knowledge

In Chapter 1, I posed that little is known about what teachers in Singapore perceive as quality teaching and quality teachers. As a researcher taking an interpretivist stance, it is challenging for me to explore ex-teachers' construction of quality teachers and teaching and the internal processes they were using to become quality teachers and do quality teaching.

I encouraged participants to talk about the traits and measures of quality teachers as well as the measures of quality teaching and challenged them to spell out the difference between quality teachers and quality teaching. Lee, Smith and Croninger (1997) viewed quality teaching in terms of student outcomes. It is beyond the scope of this study to explore student outcomes. Nevertheless, the participants were openly invited to articulate what they felt and believed the outcomes of quality teaching were which helped me inform my first research question. They were encouraged to point out the inhibiting and enhancing factors to quality teaching which contributed to answer my third research question, but interestingly, there was discourse in the sense that the same factors were viewed by some as inhibiting but enhancing to others. The second research question was the most challenging to elicit from the participants as they could not pinpoint a specific influence to the formation of their beliefs on quality teachers and quality teaching. However, through their stories, it could be inferred that most of the participants' beliefs were influenced directly or indirectly by their own teachers.

### 5.4.2. Contributions to methodological knowledge

This thesis adds valuable new insights into the use of hermeneutic phenomenology as an educational research tool to encourage and facilitate the articulation of the teachers' voices (Abawi, 2012; Elbaz, 1983; Hart, 1998; Woodward, 2011). It significantly raises the profile of this approach as being a

thorough and insightful means of conducting educational research. In the past, the use of a hermeneutic phenomenological research approach has been well utilised in the fields of medicine and nursing (Ajjawi & Higgs, 2007; Bottorff, 1991; Oiler, 1982); the arts (Annells, 1996; Gadamer, 1976); information technology (Dourish, 2003; Winograd & Flores, 1986); the social sciences (Dagenais, 1972); human science (Moustakas, 1994); and psychology (Giorgi & Giorgi, 2008), rather than in the field of education. The more I worked with this approach, the more I became aware of its innate power to contribute knowledge to the field.

From my search of existing literature, it appears that this research is the first qualitative study of how ex-primary school teachers from Singapore perceive quality teachers and teaching. Therefore this research provides the initial opportunity to explore what teachers themselves have to say about what they truly believe in and not based on what administrators or policy makers want them to believe. Hence, their honest, in-depth and varied responses to the concept of quality teachers and teaching provided me the opportunity for deep exploration.

The participants all seemed to have their own ideas of what the outcomes of education should be and what, in reality is happening in schools, that are inhibiting the attainment of those outcomes. This can be evidenced in the semi-structured interviews where snippets of interviews were reported in Chapter Four.

### 5.4.3. Contribution to theoretical knowledge

This research is unique in that it explores what a specific career group perceives or interprets as quality teachers and teaching. The interpretation of participants' responses enables the development of an explanatory framework. The framework essentially aligns with constructivism theory where knowledge is seen to be a compilation of human-made constructions. The imparting and meaning making of this theoretical knowledge is limited by the lens through which I approached the research and from the experiential knowledge and trust that I shared with the interviewees.

## 5.5. Summary

In this five section chapter, the emerging themes were explored through a theoretical lens. Section one discussed the participants' perception of quality teachers and teaching where comparisons were made to existing literature. Section two outlined the influences to the participants' professional and personal belief systems. Section three outlined an exploratory framework for what the participants felt were the contributing factors that enhanced or inhibited quality teaching. Section four presented contribution to knowledge and Section five provided a summary for the chapter.

In the following and final chapter, consideration is given to the degree to which all the aims of this research were achieved, to the significance of the study, to the implications arising from the findings, both for teachers and policy makers, to issues of trustworthiness and limitations and lastly, to future directions.

# Chapter 6. Conclusion

Chapter five explored the emerging themes through a theoretical lens. This final chapter will begin with reference to the purpose or objectives of the research and will determine if these have been attained. This will be followed by a review of the significance of the findings and their contribution to the literature. I will then follow with a discussion of potential implications for teachers and policy makers. The strengths and limitations of the research will be acknowledged and possible directions for future research will be presented, after which I will evaluate the substantive theory and put forward a series of recommendations. Finally, this thesis ends with concluding remarks followed by a reflection on my experiences as a hermeneutic researcher.

## 6.1. Achievements of research objectives

The overarching aim of this study was to develop a deeper understanding of the Singapore primary school teachers' perceptions and perspectives of what a quality teacher and quality teaching are. This was to be achieved by answering three specific research questions:

1. How do Singaporean teachers describe quality teachers and quality teaching?
2. What has influenced the formation of the beliefs that they have?
3. What experiences or factors, according to Singapore teachers, have influenced the quality of their teaching?

The first question is answered through stories. For example, when I asked the participants to describe their favourite teacher, a response was often readily available. Usually, after a short pause as time was rewound, a rich description of funny stories, individual nurturance or meaningful learning, followed. They said, "My P.E. lecturer taught me a lesson on integrity," or "He was among the best teachers because he really gave of his best especially when teaching Science," and from a struggling writer, "I wasn't a very good writer but she would analyse the sentences and give a tick to the sentence that was very well composed and give you encouraging remarks". I am amazed how the teacher and the learning are connected in the memory. The memory in the participants' minds did not separate teacher from content and pedagogy. The participants' responses confirmed Aoki's (2005c) theory that the measure of good teacher is in the immeasurable.

The participants were sharing what Aoki (2005c, p. 197) explained as "the mystery of what teaching essentially is". In order to look for "the mystery of what teaching essentially is", a gaze into the participants' own experiences as students and teachers would lead to a deeper understanding of teaching and learning at the classroom level where it really matters in influencing the quality of current teachers' teaching practice.

A second objective was to find out what has influenced the formation of the participants' beliefs. In identifying the essence of what was revealed, I believe I have achieved the second objective of this study through understanding the participants' beliefs on education, teachers and teaching. The findings indicated that

participating teachers' beliefs were mostly influenced by their own teachers. Teachers' beliefs also form part of their identities.

The final objective was achieved through the emergence of 12 factors that the participants felt could enhance or inhibit the quality of their teaching. It is interesting to note that the same factor could pose as an enhancing as well as an inhibiting factor, depending on how the participants viewed them.

## 6.2. Significance of Study

As is the case with hermeneutic phenomenology, the broad purpose of this study is to access a phenomenon that is often subconscious and provide a means of interpreting participants' experiences of personal learning journeys (Smith, 1997). My study is driven by the goal of ascertaining the attributes of quality teachers and teaching – because if the location of these goal posts can be discovered and the height of the bar of the goal posts can be understood, then there is a basis for developing appropriate professional development (Hattie, 2003), the basis for teacher education programmes, to highlight that which truly makes the difference. This is to recognise that the teaching profession truly does have recognisable qualities which can be identified in defensible ways and the basis for a renewed focus on the success of teachers to make a difference in students' lives.

It appears that while the topics on quality teachers and teaching have been explored in a range of work contexts, no such research has been undertaken using Singaporean teachers, as participants. Therefore, this research is significant as it provides an avenue for Singaporean primary school ex-teachers' voices regarding quality teachers and quality teaching to be heard. The participants' perceptions could resonate with current school teachers whose voices I aspire to hear but due to ethical issues, cannot. As teachers are the backbone of education, an understanding of their views, beliefs, challenges and motivation has the potential to benefit students, teachers, administrators and policy makers.

I agree that "educators' language has been alienated from lived experience to such a degree that the art of hearing profound messages and calls, uttered in the midst of our teaching, has been lost" (Pinar et al., 2002, p. 422). The findings of the research as presented, discussed and interpreted in Chapters 4 and 5 have finally retrieved and resurrected what the tradition has suppressed over a long history. Singapore teachers are finally given a voice, although through those who have recently left the service. The reasons for that was elaborated in Section 1.7. Similar prior research only involved teachers in other countries (for example, Aoki, 2005c).

From a theoretical point of view, current teachers could take a lesson from the stories related by the participants of this study who had years of experience as teachers and heads of departments. It is hoped that the participants' experiences could inspire current teachers to identify the relative power of the teacher and to reflect on the qualities of excellence among themselves, as teachers in Singapore.

## 6.3. Implications of the findings

An important implication of this study's findings may be to dispel the firmly held belief that assessment, data, streaming of students and ranking of teachers are appropriate and worthwhile. The current belief is that learning counts as such if it is quantifiable. If it is not quantifiable, it is not learning. Many of the teachers in

Singapore have worked only under this high stakes testing model and it has formed part of their belief system. As a result, questioning this notion is difficult. By questioning the education system in Singapore, the participants in this study disclose that they would be considered non-compliant. This creates disharmony for them, with administrators in school, the MOE and within themselves. As a result, I call for open discussion and understanding of varied beliefs about teaching and learning. It is time to expose or unmask teaching and learning from the rigidity of the testing and ranking culture. Shifting the mindset around testing and ranking culture to other thinking might be possible if teaching beyond objectives and assessments is encouraged and documented.

### 6.3.1. Implications for teachers

In general, this study can assist in the development of practice and praxis for individual teachers. Teachers need ready access to research, the time to read it, and willingness to challenge their own thinking in order to improve their own understandings and overcome their misconceptions about quality teaching. According to Strawser (2009, p. 59), "We must realize that there are experiences of learning that transcend traditional assessment practices". Therefore, one pedagogical implication for teachers in Singapore is to guide learning through understanding rather than using tests to drive instruction. Teachers should teach beyond standardized assessments and nurture learning within classrooms.

The participants revealed that they are always mindful of having to "cover the syllabus" in a specified time frame. With this notion of "cover", I reflect on the participants' use of "coverage" to prepare students for tests or move through the syllabus. "Coverage does not necessarily equal learning, something most teachers recognize" (Weimer, 2013, p. 115). Through the notion of covering syllabus, a false sense of security may be created and the coverage may obscure the world inside the classroom from the reality outside of it. The meaning of content and understanding of a subject may be buried in an attempt to prepare students for tests when material is covered. Test-security may bury or overwhelm learning itself.

As participants shared the pressure to "cover" syllabus, I would draw upon Weimer's (2013) statement that, "learner-centred teachers opt for those instructional strategies that promote deep and lasting learning" (p. 123) and offer a call to "discover" instead. What would mathematics, reading, science and art look like if teachers worked to unveil and reveal these subjects with students rather than cover them?

In the place of discovery, teachers and students alike could look beyond the materials provided to places neither comprehended before the journey. Through a pedagogy that responds to the unique, discovery opens to new possibilities. As Jardine et al. (2006) reflected, too often the syllabus is seen as something to be variously submitted to, followed, taught, covered, committed to memory, shoved in a drawer, or accounted for in great detail in the practice of teaching young children. However, a look beyond the syllabus-as-coverage reveals a wider horizon.

> If we begin by "entrusting ourselves" to the great abundance with children to become full of deep ancestral relations, full of old wisdoms and places for new insight, full of rich, rigorous,

> real work, instead of time-filling "school work", full of discipline and care and attention to things, then the curriculum as bare-boned in the curriculum guides will be spontaneously, pleasurable and (comparatively) easily "covered". (Jardine et al., 2006, p. 227)

Jardine (2006) asserted that, "curriculum topics entrusted to teachers and students in schools don't need to be simply covered. They can be loved, cherished and experienced" (p. xxvi). Teachers should be willing to cover less in order to ensure that students remember more and know how to apply what they know (Weimer, 2013).

Jardine, Clifford and Friesen (2008) wrote:

> Each task faced in the classroom is precisely not an isolated fragment which must be quickly covered and then dropped in order to get on to the next bit. Rather, classroom and curriculum topics, conversations and events are treated as ways in to the whole of the living inheritances that have been handed to teachers and students in schools. One is never "doing" an isolated fragment, but always "doing" the whole living field from a particular locale. (p. 12)

Classroom and syllabus topics should be seen as related rather than isolated from each other. In doing so, teachers may be able to move beyond a survival mode of covering the syllabus to one that enables them to thrive. What becomes of teaching if the focus is on "how" students learn rather than "what" they learn? How might a focus on thriving open up deep understanding within classrooms? The aspects of "understanding driving learning" and "teachers as learners" stand out as poignant parts of focus in visioning the whole of teaching.

Teachers have "to break with the mechanical life, to overcome their own submergence in the habitual" (Greene, 1978, p. 46). The mechanical life includes teaching in a way that states objectives and outcomes and is often solely evaluated through school or state assessments. Such submergence in the habitual obscures the learning horizon. As Jardine et al. (2006) noted, "Many schools have lost a good, fertile and intellectually sound and vibrant understanding of the topics. . . Most topics have been stripped down to easily manageable and assessable and monitorable surface features" (p.143). To this end, I challenge teachers to invite children into the deep mysteries of learning so that understanding may flourish.

Many of these teachers have graduated into a system where teachers are held accountable for students' academic outcomes. To this end, changing the focus on a unique way of teaching will require more than a change in policy. As noted by Jardine et al. (2006), "Children do not simply *change*; they *develop*" (p. 79). Likewise, teachers will not simply change. It will take deep and focused work with teachers to teach in a way unknown to them. Rather than data chats, instructional conversations might be considered around teaching and learning. Consideration could be given to collaborative planning for units of study where both teachers and students see themselves as an important part of the teaching and learning. It is difficult to make room for ideas and concepts different from what teachers already know. The challenge with respect to casting a focus on something other than data

and the testing culture is that it calls for a suspension of current belief and accepting something new.

Levin (2003) reflected on the difficulty of understanding that which is different from what we presently know. It is time to move beyond what teachers know to that which they do not. Everything teachers know, their strongly held beliefs, creates the lens through which they see and experience the world. Beliefs frame the focus of their gaze. This can serve them well and is important. However, holding uncompromisingly onto their beliefs limits their ability to observe things differently and learn important lessons. At times it is easy to hold onto beliefs to the detriment of a deeper understanding or wider gaze on the horizon.

With this in mind, I call for an approach to education reform which takes teachers outside the margin of what they already believe and to envision a syllabus of discovery. Discovery may be encouraged through collaborative planning time. Within a language of discovery, it may be possible for students and teachers alike to find passion and meaning within the syllabus. It is possible that within a syllabus of discovery, failure is seen as an opening to new learning rather than a mandate on limits not reached. Often more learning rests beyond the margins than within them. In some situations, true learning is discovering that solutions may lie outside the margins of one's current understanding. Teachers might teach children the value of learning beyond the margins. In order to do this, there must be flexibility in the current belief systems and a suspension of disbelief in alternate thinking. Thus, if teachers entrust themselves to a syllabus of discovery, the notion of syllabus in abundance will thrive.

It is what teachers believe, know, do and care about which is very powerful in students' learning process. Current teachers may be having the same values and beliefs as portrayed by the participants in this study and may either reinforce what they have been practising so far or modify them depending on what resonate with their own beliefs. They may be motivated to do what they truly feel a teacher has to do; to educate students and not what the policy-makers want them to achieve which are very often politically and economically inclined.

### 6.3.2. Implications for policy makers/schools

In order to focus on teacher and teaching quality, education policy makers may need to look into issues around teacher work environment, autonomy, creativity and pay because the most impactful thing in education is effective teaching. Policy makers may also need to rethink the whole of education with a focus on student understanding rather than on standardized test scores to provide a richer framework for teaching. This focus on student understanding may develop a capacity to serve all students.

> When a student knows something, he or she can bring it forth on demand–tell us the knowledge or demonstrate the skill. Understanding goes beyond knowing. Understanding is a matter of being able to do a variety of thought-provoking things with a topic, such as explaining, finding evidence and examples, generalizing, applying, analogizing, and representing the topic in new ways. (Blythe, 1998, p. 12)

Focusing on understanding may nurture the why and how of learning which may spark a further wondering about the world. Rather than focusing learning on a pre-determined set of correct answers as is the case in standardized assessments, teaching and learning may focus on the abundant ways to envision and live curricula within classroom settings.

> Understanding is not, in fact, understanding better, either in the sense of superior knowledge of the subject because of clearer ideas or in the sense of fundamental superiority of conscious over unconscious production. It is enough to say that we understand in a different way, if we understand at all. (Gadamer, 1960/2006, p. 296)

Likewise, development of understanding is a continuous process, not one with a predetermined end in mind. Although there are breakthroughs and epiphanies as understanding is developed, understanding does not have a specified end.

> As we develop understanding, virtually no one reaches a point where he or she understands everything there is to understand about a particular topic: there are always more and more complex tasks to be completed, more and more applications and connections to be explored. (Blythe, 1998, p. 13)

This is similar to Gadamer's (1960/2006) notions of understanding. "Not just occasionally, but always, the meaning of a text goes beyond its author. That is why understanding is not merely a reproductive but always a productive activity as well" (p. 296). As Greene (1973) explained:

> Teaching happens when a person begins learning (on his [sic] own) how to do certain things. . . teaching happens when a student begins to understand what he is doing, when he becomes capable of giving reasons and seeing connections within his experience, when he recognizes the errors he or someone else is making and can propose what should be done to set things straight. (p. 172)

Teachers must be provided opportunity to learn beyond the tests and resulting data if they are to nurture learning for understanding within their classrooms. Teachers may be nurtured to have conversations about effective teaching practices and receive support in content areas where they may need additional learning themselves. School administrators should assist teachers with challenging lessons rather than be seen as evaluators blaming them for student failure. They may nurture a knowing beyond the belief in data by monitoring teaching through classroom observations which do not focus myopically on test data. This may help formulate ideas rather than ideologies and nurture effective teaching practice rather than adherence to policy. In doing so, there may be a transformation of space and time within classrooms for teachers and students alike.

Schools may change themselves by breaking away from the testing culture. Sleeter (as cited by Pinar et al., 2002) declared, "Schools should concentrate on changing themselves, developing the capacity to serve all students, instead of consistently trying to change the nature of the students" (p. 333).

## 6.4. Trustworthiness

The preceding implications are only relevant if they are based on trustworthy data. Thus the question is how trustworthy are the findings of this research? Prior to considering future directions and closing reflections, the strengths and limitations of this doctoral research are examined.

### 6.4.1. Strengths

Firstly, the design as detailed in Chapter 3 was carried through the entire research process and the research tools were developed based on considerable literature research as indicated in the Chapter 1 and 3. This research utilised a systematic hermeneutic phenomenological process of inquiry in qualitative mode. It aimed to reveal and trace out what teachers in Singapore perceive as quality teachers and teaching. It was recognised from the outset that this study is placed within the constructivist/interpretivist paradigm (Denzin & Lincoln, 2005) and reality, truth, knowledge and perceptions of quality are all viewed as constructed by the individual in a unique and experience-based process. This qualitative research is predominantly inductive with the researcher generating meaning from the data collection (Creswell, 2014). The processes by which the qualitative data were reduced to themes and essence were in accordance with the recommendations of Van Manen (2003) and Creswell (2014). Data was appropriately analysed using inductive and deductive thematic analysis (Van Manen, 2003).

### 6.4.2. Limitations

There are some unavoidable limitations to all research projects. This doctoral study is no exception. Information collected in this study is of a self-report nature that depended on the subject areas being queried and may be prone to some inaccuracy as a result of less accurate recall, lack of information or discomfort with self-disclosure. There may be social desirability bias as participants may answer in a way to portray themselves in a good light. Participants may not respond truthfully, either because they forget pertinent details; may be too embarrassed to reveal private details or because they wish to present themselves in a socially acceptable manner.

Additionally, the subjective nature of knowledge production may have caused concerns with the individualistic conclusion, since the results were more likely to be biased by my personal viewpoints. "All field work done by a single field-worker invites the question; why should we believe it?" (Bosk, 2008, p. 167). This quote is valid in questioning the believability of my findings.

This is compounded by the non-probability sampling method that I have chosen. A sample size of only nine interviewees is small. I would have preferred to interview more participants had I not found that there was no new information generated. Necessary ethical requirements limiting my research volunteers meant that I could not select current teachers who might have given a slightly different perspective to teachers who have left the service.

The generalizability of findings may not extrapolate to other people or other settings as the findings focus on experiences that are unique to the participants and

their setting: the city state of Singapore. Findings can therefore not be used as the basis for theoretical constructs or for policy decisions.

## 6.5. Conclusions and Recommendations

As with much research, the findings are often not conclusive. This research is no exception. There are many questions that need answers and thus open up new pathways to further research. Might teachers use assessment results to identify areas of weakness and strength at individual student levels? Could a focus on individual student growth as well as progress over time enhance the understanding of successful and effective teaching practices? How might ongoing feedback throughout units of study from peers, teachers and student self-evaluations be used to highlight gaps in knowledge and areas of strength? Likewise, if learning goals are relevant and clearly articulated, might gaps in understanding between individuals and across groups of students narrow? In what ways could this cultivate greater understanding or create an unexpected view of teaching and learning? What social action might be valued through looking at students as human agents in the teaching process rather than producers of test scores? Huebner (1999c) asked, "Who in this culture speaks for children and youth? For the most part, they remain essentially voiceless" (p. 443). Likewise, who speaks for the teachers?

Reflecting on the interpretation of ranking teachers as brought forward from the participants in this study, how might it be possible to acknowledge the humanness of teaching and learning? Moving beyond the outcomes of teaching into the humanness of it may open up the horizon of effective teaching and learning. Accountability systems such as those under EPMS shift the emphasis from "student needs to student performance and from what the school does for the student to what the student does for the school" (Apple, 2006, p. 64). Teachers and students must be brought out of the abyss of the testing culture to a place of human recognition. Greene (1995) suggested, "To see things or people big, one must resist viewing other human beings as mere objects or chess pieces and view them in their integrity and peculiarity instead" (p. 10).

Researchers should think seriously about conducting research beyond the outcomes. Research on teaching within classrooms needs to be done using language of nurturance and growth, providing teachers the opportunity to innovate, as well as incentivize working in challenging schools, beyond the algorithmic data of tests. In that way, the focus of education may become about learning itself and not one-dimensional test scores. However, in order to shift the focus, teachers and students need to be recognised as humans and not data points.

Aoki (2005c) used the idea of a black box to explain the interest in outcomes of teaching, rather than in the understanding of teaching itself.

> In this view of teaching, what I resent is the way in which, by ignoring the lives of teachers and students, they are cast into nothingness. That which I consider to be most vital is devitalized into non-existent darkness. For me, the black box reflects a frightening ignorance of so-called educational assessors and researchers, who, as assessors and researchers, are forgetful that they are not merely researchers, but educational researchers. They forget the adjective. And by

> being forgetful, they deny the humanness that lies at the core of what education is. (p. 188)

There are several ways education could be approached with nurturance and care.

> To care we have to know the cared-for. Time spent in building relations of care and trust are vital to teaching. When those relations are established, everything else goes better, and the teacher has a chance at helping the student to find meaning in what is being taught. (Nichols & Berliner, 2007, p. 74)

In order to revive a teachers' vigour and strength, a policy may be used to support teachers rather than be used as a punitive measure. One suggestion is rather than blame teachers for failing students, the schools may invite the best, most dedicated and creative teachers to work in classes where the challenges create a burning desire to unlock the possibilities and potential found in their pupils. MOE may develop systems that encompass innovation within the curriculum and pedagogical practices. For example, MOE may provide teachers the opportunity to teach a meaningful curriculum that flows quickly in the direction necessitated by classroom circumstances and events, rather than a script.

In that way, teachers would be able to freely respond to students' needs and recognise that students are different from each other. What is unique about teaching and learning when taught through a script or pre-determined curriculum? Rather than following a prescription for teaching, I propose for teaching toward the unique. In doing so, teachers would be encouraged to walk outside prescribed boxes, revealing a curriculum of discovery. In the space of the unplanned, tremendous learning and cooperation flow. Thus, students thrive and become more aware of the world (Gadamer, 1960/2006). Children enjoy breaking away from the scripts inside classrooms to the unscripted outside.

According to one of the participants, students do not decline the opportunity for play and excursions outside the classroom. As children play, a fundamental part of how children learn is revealed. This may help teachers envision learning inside classrooms and see the importance of students not writing inside books and within the margins on classroom assignments and tests. This may nurture an understanding of learning through play, devoid of tests. The notions of play may help integrate the pieces of a school day into the whole of understanding rather than parcelling school into mathematics, English language, science and physical education and offering music and art as "specials" once a week. Playful pedagogy could also be considered in teacher professional development so that teachers could partake in a notion of play that may open thinking to a radically new way of being. Unlike the daily or unit objectives within classrooms, play is as Gadamer (1960/2006) explained, without a set goal. This is not to imply that play is without effort or rules. In fact, through play there is release of strain, and the rigidity of life is let go. "Games involving the enactment of imitation are perfect opportunities to teach our children, in the most concrete way possible, namely, through their body of feeling, the morally fundamental meaning of kinship and community" (Levin, 2003, p. 240).

The notions around play may refocus the gaze on non-linear aspects of learning rather than prescribing learning. Children's questions, confusions and deep

understandings do not always follow the linear path curriculum guides expect. In playing outside the boxes of standardized tests teachers may open the door to a curriculum of discovery.

An alternative to the current focus on a testing would be a focus down into the "body" of education. Some of the participants in this study reveal that Singapore's current education system misses that which rests at the "body" of education: the teachers, students and communities at the genesis of teaching and learning. As Abram (1996) explained, "By linguistically defining the surrounding world as a determinate set of objects, we cut our conscious, speaking selves off from the spontaneous life of our sensing bodies" (p. 56). By defining teaching through academic results, we cut our conscious awareness and bodily engagement from teaching itself.

In an attempt to objectify teaching and learning, the living dimension of teachers is forgotten. "In their striving to attain a finished blueprint of the world, the sciences had become frightfully estranged from our direct human experience" (Abram, 1996, p. 41). For example, Meier and Wood (2004) noted that children, families and teachers are removed from making impactful pedagogical decisions. The participants in this study reveal the need to re-focus at the foundation of educational policy: the teachers themselves, and the communities that create their dwellings with students and away from the current top down hierarchy. Here is where teaching begins, forms and transforms.

Students in Singapore come from diverse background and culture but as soon as they enter schools, they become "students who are handed the menu, not the feast of real learning" (Clifford & Friesen, 2008, p. 93). Might time be provided so that teachers may build relations of care and trust without testing? In what ways could relationships build on care and trust to nurture meaning in the curriculum? Therefore, in what way could the curriculum be a place for students to find a home for understanding and learning? Van Manen and Levering (1996) reminded us:

> From the children's point of view, the curriculum is indeed like a race track that they all must run. The fastest and most effective runners win the race, but, of course, children do not all enter the race equally equipped and at the same starting point. Therefore, many experience failure and rejection. (p. 161)

Instead of putting students on a race track, and asking them to run, Jardine et al. (2008) reminded us that "children develop most fully as passionate learners when they–like all of us–are allowed to claim fully their own experience of the world" (p. 21). The participants exposed the need to enable students to develop holistically.

> When the educational system is bent on "raising" children by "keeping their instincts and active tendencies repressed," then what it generates are generations of adults "educated not into responsibility for the significance and graceful use of the bodily powers, but into an enforced duty not to give them free play". The consequence of this approach are, unfortunately, all too visible. (Levin, 2003, p. 228)

Likewise, Cushman (2003) reminded us, "We know instinctively that teachers, as with physicians and attorneys, perform best when they not only know their material well but notice and respond sensitively to the people they serve" (p. xii). According to Levin (2003), "Teachers must be experienced and indeed skilful at creating around their charges an atmosphere of trust and care, conducive to the opening up of bodily dimensions of feelings" (p. 246). Teachers might attend to and scaffold students' unique learning, providing opportunities for students to engage in deep, complex thinking, employ strategies that are unorthodox and nonlinear, and to explore ideas that are new and even radical. Moreover, these opportunities should exist in an environment that is positive, upbeat, and provides for experimentation with learning. As part of accepting the invitation to work with failing students, consideration could be given to provide teachers a ranking system that is not based on students' academic results. To take it one step further, just as ranking of schools has been abolished in Singapore, so too should ranking of teachers in order to encourage collegiality and collaboration. Might this be the new focus that the participants in this study saw a need for?

When schools become obsessed with test results, they narrow the focus of what teachers do in classrooms and limit their ability to serve the broader needs of children and their communities (Karp, 2004, p. 57). Increasing teachers' administrative duties, co-curricular activities and organisation of school events might distract them from their main role. Perhaps, these administrative duties might be outsourced to agencies so as to free up teachers' time to concentrate on quality teaching. Might we also encourage teachers to actively pursue work-life balance and not encourage them to work during the school holidays? The Ministry of Education's current mandate that schools be closed during the weekends except when permission is sought in advance might be applied to the school holidays too.

Teachers' professional development might be improved and be made more authentic if it is classroom-based and longitudinal. Teacher mentors' teaching duties might be off-loaded so that they might be able to support other teachers in their classrooms. Similar to the Australian system, teachers in Singapore might be allocated student-free days to attend professional development or meetings, instead of attending them after school hours, on Saturdays or during the school holidays.

The school administrators might support teachers by providing them with the tools necessary to engage in productive reflection and teachers who keep themselves fit and healthy might be rewarded and recognised for their effort. Likewise, students must be recognized beyond test scores, and their ideas must be given the opportunity to overflow the banks and carry the learning to new and unexpected places. In moving students out of the abyss, might they become the focus of education rather than a product of it?

Amidst such a shift, consideration must be given to the policy as written to practice in the classroom. Aoki (2005d) named this the "zone of between". On the one hand, teachers dwell amidst the "curriculum as planned", written by others creating a "fiction of sameness", while on the other, they dwell amidst the "curriculum as lived", acknowledging the diversity of children and interests inside (p. 161). Dwelling between these two places creates tension. In reflecting on how teachers live amidst the tensionality of the curriculum-as-planned and the curriculum-as-lived, how might such tensionality be acknowledged? Might this

enable conversations in schools to move beyond "data chats" and the streaming of students? Through such an acknowledgement, might teachers give voice to necessary changes in educational policy?

Greene (1973) explained, "If the schools continued to treat knowledge as something to be doled out, if they continued working mainly for the command of certain symbols, people would become mere appendages to the machines they operated" (p. 100). Although the "machines they operated" were literally machines in factories in the past, people are just as likely to become appendages to the machines of today. Recalling Grundy (1991) in applying this study to myself, I feel there is great hope for a world beyond the ranking of teachers and teaching as brought forward by the participants. However, to move in this direction and transform, the focus of education will have to move away from the test and focus on the whole in relation to the parts, with a deliberate nurturance of the unique within teaching.

## 6.6. Future directions

The nature of any research endeavour is that in searching for the answers to the research questions the researcher usually uncovers more questions. Rather than using students' test results to blame and punish teachers, could test results be used to look at schools with an eye toward innovation in teaching and learning that is sparked accordingly? Might we define exceptional schools as those making innovative growth with student learning, a uniqueness, not necessarily those meeting the academic targets of PSLE?

Researching teaching within these classrooms will bring the focus from the hierarchy of policy to where the deliberate re-focus should and could be in teaching. Such research might look at ways teachers are effective in supporting understanding and knowing, rather than rating teachers by the number of students scoring at or above proficiency on a standardized test. R. Thomas (2011) challenged the use of data-driven schools and demands for knowledge driven schools. He noted meaningful use of data being more than a view of test scores, "Data analysis is not about the numbers. It is all about improving instruction" (p. 36). However, such research should not just create a generative list or a reproducible list of qualities and character traits. It must lead to a deeper understanding of teaching and learning at the classroom level.

Based on the limitation of hearing from only the perspectives of ex-primary school teachers, it would add further insights into the concept of quality teachers and teaching to undertake a similar study with participants who are teaching in secondary schools. Secondary school teachers may have different perceptions of quality teaching.

Other avenues worthy of exploration could be to seek students' voices regarding quality teachers and teaching. This would offer teachers valuable feedback regarding their impact on students.

As all the participants in the study were teachers prior to EPMS, I had not considered teachers who have known nothing other than teaching under EPMS.

What must be considered in an attempt to re-focus the gaze for educators whose only knowing has been the current one?

## 6.7. Concluding remarks

While keeping the limitations in mind, the study presented findings that deepened our understanding of certain aspects of quality teachers and quality teaching in the Singapore context based on ex-teachers' beliefs and experiences while suggesting directions for reviewing educational practices. The open-ended questions asked invite the participants to provide answers in their own words and although these type of questions are more difficult to analyse, they produce more in-depth responses and delve into what the participant actually thinks, rather than being restricted by categories.

My research sought to find out how Singaporean teachers describe quality teachers and quality teaching and my findings showed some commonalities and differences in opinions among participants themselves as well as among educational researchers. There seemed to be conflicting messages that teachers get regarding the desired outcomes of education in Singapore. While it is not written in black and white by the policy-makers in the MOE, that academic excellence is one of the desired outcomes of education, teachers are constantly reminded in schools that their primary purpose is to help their students achieve academic excellence.

### 6.7.1. Researcher's personal reflections

This thesis opened with personal reflections upon my background and career that led to the interest and desire to explore this topic. Due to the choices that I have made in life and my experiences as a Science student and teacher living most of my life in Singapore, where everything that mattered needed to be measured in some numerical form, I now realise that I have been partial towards positivism. I was always dismissing the social sciences as being unimportant as the data cannot be measured quantitatively. Even in my previous research that studied the perception of Singapore primary school teachers on their work lives, I used mixed methodology as I was under the impression that whatever I found out, needed to be generalizable to the wider population.

It was only when I became interested in understanding the perceptions of the participants in my study that I realised the errors of my earlier biases. What I wanted to understand could not be achieved through processes of measurement or analysis of hard data. I have read many examples of phenomenological writing and pushed my understanding of philosophy. This hermeneutic phenomenological research has modified my perception of teaching, and given significance and meaning that influences my decisions as a teacher.

It took me quite a lot of reflection and advice from my supervisors before I realised that I needed to adopt a new paradigm that would enable me to see the world through a different lens. For opening the blinkers that had been covering my eyes, I owe my gratitude to them.

Reflecting on experiences of the participants in this study, I ask myself, how can we act justly in re-focusing the gaze from teacher accountability? In this study, I

advocate a change in education policy which will prepare Singapore's children for the future, as members in an increasingly interdependent global world?

# References


Aaronson, D., Barrow, L., & Sander, W. (2007). Teachers and student achievement in the Chicago public high schools. *Journal of Labour Economics, 25*(1), 95–135.

Abawi, L. (2012). *Ah-ha! A CCLUE: Identifying the essence and significance of a contextually specific meaning system in three Australian schools engaged in on-going school improvement* (Unpublished doctoral dissertation). University of Southern Queensland, Toowoomba.

Abbott, M., Walton, C., Tapia, Y., & Greenwood, C.R. (1999). Research to practice: A "blueprint" for closing the gap in local schools. *Exceptional Children, 65,* 339–352.

Abel, M. H., & Sewell, J. (1999). Stress and burnout in rural and urban secondary school teachers. *The Journal of Educational Research*, *92*(5), 287–293.

Abram, D. (1996). *The spell of the sensuous*. New York: Random House.

Achinstein, B. (2002). Conflict amid community: The micropolitics of teacher collaboration. *The Teachers College Record*, *104*(3), 421–455.

Acker, S. (1999). *The realities of teachers' work: never a dull moment*. London: Cassell.

Adams, C. F. (1992). "Finding psychic rewards in today's schools": A rebuttal. *The Clearing House*, *65*(6), 343–347.

Adams, D. (1993). Defining educational quality. *Improving Educational Quality Project Publication, 1*: *Biennial Report*. Arlington, VA: Institute for International Research.

Adorno, T.W., Frenkel-Brunswik, E., Levinson, D., & Sanford, R.N. (1950). *The authoritarian personality*. New York: Harper and Brothers.

AITSL (2014). *The essential guide to professional learning: Evaluation*. Retrieved July 11, 2014, from http://www.aitsl.edu.au/docs/default-source/professional-growth-resources/professional-learning-resources/essential_guide_evaluation.pdf

Ajjawi, R., & Higgs, J. (2007). Using hermeneutic phenomenology to investigate how experienced practitioners learn to communicate clinical reasoning. *The Qualitative Report, 12*(4), 612–638.

Alexander, P. A., Murphy, P. K., Guan, J., & Murphy, P. A. (1998). How students and teachers in Singapore and the United States conceptualize knowledge and beliefs: Positioning learning within epistemological frameworks. *Learning and Instruction*, *8*, 97–116.

Allen, D. G. (1995). Hermeneutics: philosophical traditions and nursing practice research. *Nursing Science Quarterly*, *8*(4), 174–182.

Allen, M. N., & Jensen, L. (1990). Hermeneutical inquiry meaning and scope. *Western Journal of Nursing Research*, *12*(2), 241–253.

Alsup, J. (2005). *Teacher identity discourses: Negotiating personal and professional spaces*. UK: Lawrence Erlbaum Associates, Inc.

Alvesson, M., & Skoldberg, K. (2009). *Reflexive methodology: New vistas for qualitative research* (2nd ed.). London: SAGE publications.

Andrews, T. (2012). What is social constructionism? *The Grounded Theory Review*, *11*(1), 39–46.

Annells, M. (1996). Hermeneutic phenomenology: Philosophical perspectives and current use in nursing research. *Journal of Advanced Nursing*, *23*(4), 705–713.

Anonymous (2014). Senior teacher shares with us why so many teachers are leaving MOE. Retrieved July 12, 2014, from http://therealsingapore.com/content/senior-teacher-shares-us-why-so-many-teachers-are-leaving-moe

Anton, C. (2001). *Self and authenticity.* Albany: State University of New York Press.

Anyon, J. (2005). What "counts" as educational policy? Notes toward a new paradigm. *Harvard Educational Review, 75*(1), 65–88.

Aoki, T. (2005a). Layered understandings of orientations in social studies program evaluations. In W. F. Pinar & R. L. Irwin (Eds.), *Curriculum in a new key: The collected works of Ted T. Aoki* (pp.167–186). Mahwah, NJ: Lawrence Erlbaum. (Original work published 1986).

Aoki, T. (2005b). Sonare and videre: A story, three echoes and a lingering note. In W. F. Pinar & R. L. Irwin (Eds.), *Curriculum in a new key: The collected works of Ted T. Aoki* (pp. 368–376). Mahwah, NJ: Lawrence Erlbaum. (Original work published 1990).

Aoki, T. (2005c). Layered voices of teaching: The uncannily correct and elusively true. In W. F. Pinar & R. L. Irwin (Eds.), *Curriculum in a new key: The collected works of Ted T. Aoki* (pp. 187-197). Mahwah, NJ: Lawrence Erlbaum. (Original work published 1992).

Aoki, T. (2005d). Teaching as indwelling between two curriculum worlds. In W. F. Pinar & R. L. Irwin (Eds.), *Curriculum in a new key: The collected works of Ted T. Aoki* (pp. 159-165). Mahwah, NJ: Lawrence Erlbaum. (Original work published 1986)

Apple, M. (2006). *Educating the "right" way.* New York: Routledge.

Arnon, S., & Reichel, N. (2007). Who is the ideal teacher? Am I? Similarity and difference in perception of students of education regarding the qualities of a good teacher and of their own qualities as teachers. *Teachers and Teaching*, *13*(5), 441–464.

Aronson, I. (2007). *Negotiating the terrain of high-stakes accountability in science teaching*. Retrieved July, 14, 2014, from http://drum.lib.umd.edu/bitstream/1903/7665/1/umi-umd-4940.pdf

Armor, D., Conroy-Oseguera, P., Cox, M., King, N., McDonnell, L., Pascal, A., Pauly, E., & Zellman, G. (1976). *Analysis of the school preferred reading*

*program in selected Los Angeles minority schools.* (Report No. R-2007-LAUSD). Santa Monica, CA: Rand Corporation.

Ary, D., Jacobs, L. C., Razavieh, A., & Sorensen, C. (2006). *Introduction to research in education* (7th ed.). Belmonte, CA: Thomson Wadsworth.

Aspy, D. (1972). *Towards a technology for humanising education*. Champaign, IL: Illinois Research Press.

Australian Bureau of Statistics (2012). Education and training: Primary and secondary education. Retrieved August 9, 2012, from http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1301.0~2012~Main%20Features~Primary%20and%20secondary%20education~105

Ayres, L., Kavanaugh, K., & Knafl, K. A. (2003). Within-case and across-case approaches to qualitative data analysis. *Qualitative Health Research, 13*(6), 871–883.

Ayres, L., & Poirier, S. (1996). Virtual text and the growth of meaning in qualitative analysis. *Research in Nursing & Health, 19*, 163–169.

Bachelard, G. (1994). *The poetics of space.* Boston: Beacon Press.

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behaviour* (Vol. 4, pp. 71-81). New York: Academic Press.

Bandura, A. (1997). *Self–efficacy: The exercise of control*. New York: W. H. Freeman.

Barber, M., & Mourshed, M. (2007). *How the world's best-performing schools systems come out on top*. McKinsey & Company.

Barlow, M., & Robertson, H. (1994). *Class warfare: The assault on Canada's schools.* Toronto: Key Porter Books.

Barnett, K., & McCormick, J. (2004). Leadership and individual principal–teacher relationships in schools. *Educational Administration Quarterly, 40*(3), 406–434.

Barrett, A. M., Chawla-Duggan, R., Lowe, J., Nikel, J., & Ukpo, E. (2006). The concept of quality in education: A review of the "international" literature on the concept of quality in education. *England: EdQual*.

Barron, B. (2003). When smart groups fail. *Journal of the Learning Sciences, 12*(3), 307–359.

Barth, R. (2001). *Learning by heart.* San Francisco: Wiley and Sons.

Barton, P. E., Coley, R. J., & Wenglinsky, H. (1998). *Order in the classroom: Violence, discipline, and student achievement*. Educational Testing Service.

Batten, M., & Girling-Butcher, S. (1981). *Perceptions of the quality of school life: A case study of schools and students*. (No. ACER-RM-13). Hawthorn, Victoria, Australia: Australian Council for Educational Research.

Bassey, M. (1999). *Case study research in educational settings*. Buckingham, England: Open University.

Bauer, A. M., Johnson, L. J., & Sapona, R. H. (2004). Reflections on 20 years of preparing special education teachers. *Exceptionality, 12*(4), 239–246.

Benner, A. D. (2000). *The cost of teacher turnover.* Austin, Texas: Texas Center for Educational Research.

Bennett, W. (1988). *Our children and our country: Improving America's schools and affirming the common culture*. New York: Simon and Schuster.

Bennett, W. (1992). *The de–valuing of America: The fight for our culture and our children.* New York: Summit Books.

Bennett, W. (1995). *The moral compass: Stories for a life's journey*. New York: Simon and Schuster.

Benninga, J. S. (1993). Moral and character education in the elementary school: An introduction. In J. S. Benninga (Ed.), *Moral, character, and civic education in the elementary school*. New York: Teachers College Press.

Benninga, J. S., Berkowitz, M.W., Kuehn, P., & Smith, K. (2003). The relationship of character education implementation and academic achievement in elementary schools. *Journal of Research in Character Education, 1*(1), 19–32.

Benya, J. R. (2001). Lighting for schools. Washington, D.C: National Clearinghouse for Educational Facilities.

Ben–Ze'ev, A. (2000). *The subtlety of emotions*. Cambridge, MA: MIT Press.

Berger, S.L. (2006) *College planning for gifted students: Choosing and getting into the right college* (3rd ed.). USA: Prufrock Press Inc.

Berlinger. D. C. (2008). Letter to the President. *Journal of Teacher Education, 59*(3), 252–256

Berman, L. M. (1987). The teacher as decision maker. *Teacher Renewal: Professional Issues, Personal Choices*, 202.

Berry, B. (2004). *Making good on what matters most: A review of teaching at risk: A call to action (the report of The Teaching Commission).* Chapel Hill, NC: Southeast Centre for Teaching Quality.

Best, R. (2003). *Struggling with the spiritual in education*. Paper presented to the Tenth International Conference Education, Spirituality and the Whole Child Conference. University of Surrey, Roehampton.

Betts, J. R., Zau, A., & Rice, L. (2003). *Determinants of student achievement: New evidence from San Diego* (pp. 1–5821). San Francisco: Public Policy Institute of California.

Bezzina, C. (2006). Views from the trenches: Beginning teachers' perceptions about their professional development. *Journal of In–Service Education 32*(2), 411–430.

Bierhoff, H. W. (1991). Attribution of responsibility and helpfulness. In L. Montada & H. W. Bierhoff (Eds.), *Altruism in social systems* (pp. 106–129). Toronto: Hogrefe & Huber Publishers.

Bierhoff, H. W., Klein, R., & Kramp, P. (1991). Evidence for the altruistic personality from data on accident research. *Journal of Personality, 59* (2), 263–280.

Biggs, J. (2001). The reflective institution: assuring and enhancing the quality of teaching and learning. *Higher Education, 41*(3), 221–238.

Blackburn, B. R. (2013a). *Rigor is not a four-letter word* (2nd ed.). Larchmont, NY: Eye on Education.

Blackburn, B. R. (2013b). *Rigor made easy: Getting started*. New York, NY: Routledge.

Blackburn, B. & Armstrong, A. (2011). *Motivation: It's all about me*. Momentum, Feb/Mar 2011. Retrieved August 8, 2014, from http://web-01.canyons.edu/faculty/kemplera/info/traditional/engl96/assign-test/articles/motivation.pdf

Blackburn, M. (2004). Understanding agency beyond school sanctioned activities. *Theory into Practice, 43*, 102–110.

Blackmore, J. (2004). Leading as emotional management work in high risk times: The counterintuitive impulses of permativity and passion. *School, Leadership and Management, 24*(4).

Black, S. (January, 2001). When teachers feel good about their work student achievement rises. *American School Board Journal.*

Blandford, S. (2000). *Managing Professional Development in Schools*. London: Routledge.

Blasé, J. J. (1982). A socio-psychological grounded theory of teacher stress and burnout. *Educational Research Journal, 18*(4), 93–113.

Blasé, J. J. (1986). A qualitative analysis of sources of teacher stress: Consequences for performance. *American Educational Research Journal, 23*(1), 23–40.

Blasé, J. J., & Kirby, P. C. (2009). *Bringing out the best in teachers: What effective principals do* (3rd ed.). Corwin Press.

Blythe, T. (1998). *The teaching for understanding guide*. San Francisco: Wiley and Sons.

Bogden, R.C., & Biklen, S.K. (2007). *Qualitative research for education: An introduction to theories and methods*. (5th ed.). Boston, Mass: Pearson A & B.

Bolam, R., McMahon, A., Stoll, L., Thomas, S., & Wallace, M. (2005). *Creating and sustaining effective professional learning communities*. Retrieved July 11, 2014, from http://www.educationscotland.gov.uk/Images/Creating%20and%20Sustaining%20PLCs_tcm4-631034.pdf

Book, C. L., & Freeman, D. J. (1986). Differences in entry characteristics of elementary and secondary teacher candidates. *Journal of Teacher Education, 37*, 47–51.

Borg, M. G., Riding, R. J., & Falzon, J. M. (1991). Stress in Teaching: A study of Occupational stress and its determinants, job satisfaction and career commitment among primary schoolteachers. *Educational Psychology, 11*(1), 59–75.

Bornstein, M. H., & Bradley, R. H. (Eds.). (2014). *Socioeconomic status, parenting, and child development*. New York, NY: Routledge.

Borrego, M., Douglas, E. P., & Amelink, C. T. (2009). Quantitative, qualitative, and mixed research methods in engineering education. *Journal of Engineering Education, 98*(1), 53–66.

Bosk, C. L. (2008). *What would you do?: Juggling bioethics and ethnography*. London: University of Chicago Press.

Bottorff, J. L. (1991). Nursing: A practical science of caring. *Advances in Nursing Science, 14*(1), 26–39.

Bottery, M. (1990). *The morality of the school*. London: Cassell.

Bourke, P. E. (2007). Inclusive education research and phenomenology. In *Proceedings Australian Association for Research in Education: Research impacts: Proving or improving?* Fremantle, Western Australian. Retrieved from http://eprints.qut.edu.au/12225/1/12225.pdf.

Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Thousand Oaks, CA: SAGE publications.

Bransford, J. D., Brown, A. L., & Cocking, R. R. (1999). *How people learn: Brain, mind, experience, and school*. Washington, D.C.: National Academy Press.

Braun, H., Chudowsky, N., & Koenig, J. (Eds.). (2010). *Getting value out of value-added: Report of a workshop*. Washington, DC: National Academies Press.

Brinberg, D. & McGrath, J. (1986). *Validity and the research process*. Beverly Hills, CA: SAGE publications.

Brissie, J. S., Hoover-Dempsey, K. V., & Bassler, O. C. (1988). Individual and situational contributors to teacher burnout. *Journal of Educational Research, 82*, 106–112.

Brooks–Gunn, J., & Duncan, G. J. (1997). The effects of poverty on children. *The future of children, 7*(2), 55–71.

Brophy, J. E. (1987). Synthesis of research on strategies for motivating students to learn. *Educational Leadership,* 40–48.

Brophy, J. E. (2013). *Motivation students to learn* (3rd ed.). New York: Taylor Francis.

Brophy, J. E., & Good, T. L. (1970). Teachers' communication of differential expectations for children's classroom performance: Some behavioural data. *Journal of Educational Psychology, 61,* 365–374.

Brophy, J. E., & Good, T.L. (1986). Teacher behaviour and student achievement. In M.C. Wittrock (Ed.), *Handbook of research on teaching* (pp. 328–375). New York: MacMillan.

Brouwer, N., & Korthagen, F. (2005). Can teacher education make a difference? *American Educational Research Journal, 42,* 153–224.

Brown, T. J. (1988). *High impact teaching: Strategies for educating minority youth*. Lanham, MD: University Press of America.

Bruner, J. (1991). The narrative construction of reality. *Critical inquiry*, *18*(1), 1–21.

Bryman, A. (2001). *Social Research Methods.* Oxford, UK: Oxford University.

Bryman, A. & Bell, E. (2007). *Business Research Methods.* New York: Oxford University.

Buckley, J., Schneider, M., & Yi, S. (2004). *The effects of school facility quality on teacher retention in urban settings*. National Clearinghouse for Educational Facilities.

Burch, R. (1990). Phenomenology, lived experience: Taking a measure of the topic. *Phenomenology+Pedagogy*, *8*, 130–160.

Burnard, P. (1991). A method of analysing interview transcripts in qualitative research. *Nurse Education Today*, *11*(6), 461–466.

Burnstein, E., Crandall, C., & Kitayama, S. (1994). Some neo–Darwinian decision rules for altruism: Weighing cues for inclusive fitness as a function of the biological importance of the decision. *Journal of Personality and Social Psychology*, *67*, 773–789.

Cambone, J. (1995). Time for teachers in school restructuring. *Teachers College Record*, *96*(3), 512–543.

Campbell, E. (1997). Connecting the ethics of teaching and moral education. *Journal of Teacher Education, 48*(4), 255–263.

Campbell, E. (2003). *The ethical teacher.* Berkshire, England: Open University Press.

Campbell, R. J. (1985). *Developing the primary school curriculum*. London: Holt, Rinehart and Winston.

Campbell, R. J., Kyriakides, L., Muijs, R. D., & Robinson, W. (2003). Differential teacher effectiveness: Towards a model for research and teacher appraisal. *Oxford Review of Education, 29*(3), 347–362.

Campbell, R. J., Kyriakides, L., Muijs, R. D., & Robinson, W. (2004). Differentiated teacher effectiveness: Framing the concept. In R. J. Campbell (Ed.), *Assessing teacher effectiveness: Developing a differentiated model* (pp. 3–11). New York: Routledge.

Canaday, R., & Rettig, M. (1995). The power of innovative scheduling. *Educational Leadership, 53*(3), 4–10.

Caputo, J. D. (1988). *Radical hermeneutics: Repetition, deconstruction, and the hermeneutic project*. USA: Indiana University Press.

Carbonneau, N., Vallerand R.J., Fernet, C., & Guay, F., (2008). The role of passion for teaching in intrapersonal and interpersonal outcomes. *Journal of Educational Psychology, 100*(4), 977–987.

Carlson, D. (1992). *Teachers and crisis: Urban school reform and teachers' work culture*. New York: Routledge.

Carter, C. (2009, October). Priest, prostitute, plumber? The construction of teachers as saints. *English Education, 42*(1), 61–90.

Carter, S. L. (1997). *Integrity*. New York, NY: Harper Perennial.

Cartwright, M. (2007). The rhetoric and reality of "quality" in higher education. An investigation into staff perceptions of quality in post-1992 universities. *Quality Assurance in Education, 15*(3), 287–301.

Casey, K. (1992). Why do progressive women activists leave teaching? Theory, methodology and politics in life history research. In I. F. Goodson (Ed.), *Studying teachers' lives* (pp. 187-208). London: Routledge.

Casey, E. S. (1993). *Getting back into place: Toward a renewed understanding of the place-world*. Bloomington: Indiana University Press.

Cavanaugh, S. (2006). Electives getting the boot. It depends on where and what. *Education Week, 25*(32), 7.

Centre for Teaching Quality (2007). *Performance–pay for teachers: Designing a system that students deserve*. Retrieved December 3, 2012, from http://www.teachingquality.org/pdfs/TSreport.pdf

Çermik, H. (2011). The ideal primary school teacher. *Social Behaviour and Personality, 39*(8), 1113–1126.

Chapman, L. (2007). An update on No Child Left Behind and national trends in education. *Arts Education Policy Review, 109*(1), 25–36.

Cheng, Y. C., & Tsui, K. T. (1999). Multimodels of teacher effectiveness: Implications for research. *The Journal of Educational Research, 92*(3), 141–150.

Chew, J., Ng, M., Lee, C. K. E., & D'Rozario, V. (1997, November). *Primary teachers' classroom practices in Singapore: Preliminary findings.* Paper presented at the annual conference of the Educational Research Association of Singapore, Singapore.

Chiang C. F. (1999). Education: New directions. In G. L. Ooi, & R. S. Rajan, (Eds.), *Singapore: The year in review 1998* (pp. 65–76). Singapore: Times Academic Press.

Chitty, C. (2002). *Understanding schools and schooling*. London: Routledge Falmer.

Chong, S. (2014). Academic quality management in teacher education: a Singapore perspective. *Quality Assurance in Education, 22*(1), 53–64.

Chong, S., & Low, E. L. (2009). Why I want to teach and how I feel about teaching - formation of teacher identity from pre-service to the beginning teacher phase. *Educational Research Policy and Practice, 8*, 59–72.

Chong, S., Low, E. L., & Goh, K. C. (2011). Developing student teachers' professional identities: An exploratory study. *International Education Studies, 4*(1), 30–38.

Christenbury, L. (2010). The flexible teacher. *Educational Leadership, 68*(4), 46–50.

Christianakis, M. (2010). Collaborative research and teacher education. *Issues in Teacher Education, 19*(2), 109–125.

Chubb, J. E., & Moe, T. M. (1991). Politics, markets and America's schools. *British Journal of Sociology of Education, 12*(3), 381–396.

Chudowsky, N., Chudowsky, V., & Kober, N. (2007). Answering the Question that Matters Most: Has Student Achievement Increased since No Child Left Behind? *Center on Education Policy*. Retrieved 18 July, 2014, from http://files.eric.ed.gov/fulltext/ED520272.pdf

Clandinin, D.J. (Ed.). (2007). *Handbook of narrative inquiry: Mapping a methodology*. Thousand Oaks, CA: SAGE publications.

Clandinin, D.J., & Connelly, F.M. (1996). Teacher's professional knowledge landscapes: Teacher stories - stories of teachers - school stories - stories of schools. *Educational Researcher, 25*(3), 24–30.

Clandinin, D.J., & Connelly, F.M. (2000). *Narrative Inquiry: Experience and story in qualitative research.* San Francisco: Jossey–Bass.

Clark, D. H. (1971). Manpower Planning in Singapore. *Malayan Economic Review, 16* (2), 20–28.

Clark, D. H. (1996). *Schools as learning communities: Transforming education*. London: Cassell.

Clark, R.M. (1990). Why disadvantaged children succeed. *Public Welfare, 7*, 85–105.

Clement, M., & Vandenberghe, R. (2000). Teachers' professional development: a solitary or collegial (ad) venture? *Teaching and Teacher Education, 16*(1), 81–101.

Clifford, P., & Friesen, S. (2008). Hard fun: Teaching and learning for the 21st century. In D. Jardine, P. Clifford, & S. Friesen, *Back to the basics of teaching and learning: Thinking the world together* (pp. 89-110). Mahwah: NJ: Lawrence Erlbaum.

Clotfelter, C. T., Ladd, H. F., & Vigdor, J. L. (2007). Teacher credentials and student achievement: Longitudinal analysis with student fixed effects. *Economics of Education Review, 26*(6), 673–682.

Coates, T., & Thoresen, C. E. (1976). Teacher anxiety: A review with recommendations. *Review of Educational Research, 46*, 169–184.

Cohen, D., & Hill, H. (2000). Instructional policy and classroom performance: The mathematics reform in California. *Teachers College Record, 102*(2), 294–343.

Cohen, D. J., & Crabtree, B. F. (2008). Evaluative criteria for qualitative research in health care: Controversies and recommendations. *Annals of Family Medicine, 6*(4), 331–339.

Cohen, J. (2006). Social, emotional, ethical and academic education: Creating a climate for learning, participation in democracy and well-being. *Harvard Educational Review*, *76*(2), 201–237.

Cohen, L., Manion, L., & Morrison, K. (2011). *Research methods in education* (7th ed.). New York, NY: Routledge.

Cole, P. (2012). *Linking effective professional learning with effective teaching practice.* Retrieved July 11, 2014, from http://www.aitsl.edu.au/docs/default-source/default-document-library/linking_effective_professional_learning_with_effective_teaching_practice_-_cole

Collins, P. H. (1998). *Fighting words: Black women and the search for justice.* Minneapolis, MN: University of Minnesota Press.

Collinson, V., & Cook, T. F. (2001). "I don't have enough time"–Teachers' interpretations of time as a key to learning and school change. *Journal of Educational Administration*, *39*(3), 266–281.

Commonwealth Advisory Bureau (2012, August). *Policy briefing: Issues before education ministers at Mauritius*. Retrieved June 4, 2014, from https://camfed.org/media/uploads/files/policy_briefing.pdf

Connelly, F. M. & Clandinin, D. J. (Eds.). (1999). *Shaping a professional identity: Stories of educational practice*. New York: Teachers College Press.

Cooper, B. (2002). *Teachers as moral models? The role of empathy in teacher/pupil relationships*. (Unpublished doctoral thesis). Leeds Metropolitan University, Leeds, UK.

Corbin, J. M., & Strass, A. L. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Thousand Oaks, CA: SAGE publications.

Cornu, B. (2006). Teacher training: the context of the knowledge society and lifelong learning, the European dimension and the main trends in France. *Modernization of Study Programmes in Teachers' Education in an International Context*, 26–36.

Corwin, R.G. (1973). *Organizational reform and organizational survival: The teacher corps as an instrument of educational change*. New York: Wiley.

Costa, A., & Kallick, B. (1993). Through the lens of a critical friend. *Educational Leadership, 51*(2), 49–51.

Cotton, K., & Wikelund, K. R. (1989). Parent involvement in education. *School Improvement Research Series, 6.*

Cox, T., & Brockley, T. (1984). The experience and effects of stress in teachers. *British Educational Research Journal, 10,* 84.

Crabtree, B., & Miller, W. (1999). A template approach to text analysis: Developing and using codebooks. In B. Crabtree & W. Miller (Eds.), *Doing qualitative research* (pp. 163–177.) Newbury Park, CA: SAGE publications.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). New Jersey: Pearson Education.

Creswell, J. W. (2013). *Qualitative inquiry and research design: choosing among five approaches* (3rd ed.). Thousand Oaks, CA: SAGE publications.

Creswell, J.W. (2014). *Research design: qualitative, quantitative and mixed method approaches* (4th ed.). Thousand Oaks, CA: SAGE publications.

Crotty, M. (1998). *The foundations of social research*: *Meaning and perspective in the research process.* St Leonards, NSW: Allen & Unwin.

Crossley, M. & Watson, K. (2003). *Comparative and international research in education.* London: Routledge Falmer.

Crouch, M., & McKenzie, H. (2006). The logic of small samples in interview based qualitative research. *Social Science Information, 45*(4), 483–499.

Crowther, F. (2011). *From school improvement to sustained capacity: The parallel leadership pathway*. Thousand Oaks, CA: Corwin Press.

Csikszentmihalyi, M., & Csikszentmihalyi, I.S. (1988). *Optimal experience: Psychological studies of flow in consciousness*. Cambridge: UK: Cambridge University Press.

Cunningham, W. G. (1983). Teacher burnout–solution for the 1980's: A review of the literature. *Urban Review, 15*, 37–51.

CUREE Limited (2008). Mentoring and coaching–a central role in CPD. *Centre for the Use of Research & Evidence in Education*. Retrieved March 14, 2012, from http://www.curee.co.uk/mentoring–and–coaching.

Curwin, R., Mendler, A., & Mendler B. (2008). *Discipline with dignity: New challenges, new solutions* (3rd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

Cushman, K. (2003). *Fires in the bathroom: Advice for teachers from high school students.* New York: The New Press.

Dagenais, J. J. (1972). The structuralist model man the source or man the product? *In Models of man* (pp. 123–140). Springer Netherlands.

Dalton, I., Fawcett, R., & West–Burnham, J. (Eds.). (2001). *Schools for the 21st century: Developing best practice, school leadership and management.* London: Pearson Education.

Dalton, I., & Read, J. (2001). Staying alive: The price of school improvement. In I. Dalton, R. Fawcett, & J. West–Burnham (Eds.), *Schools for the 21st century: Developing best practice, school leadership and management.* London: Pearson Education.

Damasio, A. (1994). *Descartes' error*. London: Macmillan.

Damasio, A. (1999). *The feeling of what happens: Body, emotion and the making of consciousness*. London: Vintage.

Danielewicz, J. (2001). *Teaching selves: Identity, pedagogy, and teacher education*. Albany, NY: State University of New York Press.

Darling-Hammond, L. (1997). *Doing what matters most: Investing in quality teaching.* New York: The National Commission on Teaching and America's Future.

Darling-Hammond, L. (1998). Teachers and teaching: Testing policy hypotheses from a National Commission Report. *Educational Researcher 27*(1), 5–15.

Darling-Hammond, L. (2000). Futures of teaching in American Education. *Journal of Educational Change, 1*(4), 353– 373.

Darling-Hammond, L. (2004). From 'separate but equal' to "No Child Left Behind": The collision of new standards and old inequalities. In D. Meier, A. Kohn, L. Darling-Hammond, T. Sizer & G. Wood (Eds.), *Many children left behind: How the No Child Left Behind Act is damaging our children and our schools* (pp. 3–32). Boston, MA: Beacon Press.

Darling-Hammond, L. (2007). Building a system for powerful teaching and learning. *Building a 21st Century US Education System*, 65–74.

Darling-Hammond, L., & Sclan, E. M. (1996). Who teaches and why: Dilemma of building a profession for twenty–first century schools. In J. Sikula (Ed.), *Handbook of research on teacher education* (2nd ed., pp. 67–101). New York: Macmillan.

Darling-Hammond, L., Strobel, K., & Martin, D. (2003). Expectations for Success: Motivation for Learning. *The Learning Classroom: Theory into Practice Course Guide*, 205–211.

Darling-Hammond, L., & Sykes, G. (2003). *Wanted: A national manpower policy for education*. Education Commission of the States.

Darling-Hammond, L., & Youngs, P. (2002). Defining "highly qualified teachers": What does "scientifically–based research" tell us? *Educational Researcher, 31*(9), 13–25.

Davis, E. A. (2006). Characterizing productive reflection among pre–service elementary teachers. *Teaching and Teacher Education, 22*, 281–301.

Davis, H. A. (2003). Conceptualizing the role and influence of student–teacher relationships on children's social and cognitive development. *Educational Psychologist, 38(4)*, 207–234.

Davis, H., & Andrzejewski, C. (2009). *Teacher beliefs.* Retrieved April 8, 2014, from http://www.education.com/reference/article/teacher–beliefs/

Day, C. (1999). *Developing teachers: The challenges of lifelong learning*. London: Falmer Press.

Day, C. (2004). *A passion for teaching.* London: Routledge Falmer.

Day, C. (2008). Committed for life? Variations in teachers' work, lives and effectiveness. *Journal of Educational Change, 9*(3), 243–260.

Deci, E. L., Koestner, R., & Ryan, R. M. (2001). Extrinsic rewards and intrinsic motivation in education: Reconsidered once again. *Review of educational research, 71*(1), 1–27.

Delgado, M. (1999). Lifesaving 101: How a veteran teacher can help a beginner. *Educational Leadership, 56*(8), 27–29.

Deng, Z. Y. & Gopinathan, S. (2003). Continuity and change in conceptual orientations for teacher preparation in Singapore: Challenging teacher preparation as training. *Asia-Pacific Journal of Teacher Education, 31*(1), 51–65.

Den Ouden, M. D., & Russell, G. W. (1997). Sympathy and altruism in response to disasters: A Dutch and Canadian comparison. *Social Behaviour and Personality, 25* (3) 241–248.

Denzin, N. K. (Ed.). (2001). *Interpretive interactionism*. (2nd ed.). Thousand Oaks, CA: SAGE publications.

Denzin, N. K., & Lincoln, Y. S. (2002). *The qualitative inquiry reader.* Thousand Oaks, CA: SAGE publications.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2003). *Collecting and interpreting qualitative materials*. (2nd ed.). Thousand Oaks, CA: SAGE publications.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2005). *Handbook of qualitative research* (3rd ed.). Thousand Oaks, CA: SAGE publications.

Deresiewicz, W. (2008). The disadvantages of an elite education. The American Scholar. Retrieved March 25, 2014, from http://theamericanscholar.org/the–disadvantages–of–an–elite–education/#.UzFZrKJrtnk

DeRobbio, R. A., & Iwanicki, E. F. (1996). *Factors accounting for burnout among secondary school teachers.* Paper presented at the Annual conference of the American Educational Research Association. New York.

DeRoche, E., & Williams, M. (1998). *Educating hearts and minds: A comprehensive character education program*. Thousand Oaks, CA: Corwin Press.

Dickson, K. D., Pollock, A., & Troy, J. (1995). Perceptions of the value of quality assessment in Scottish higher education. *Assessment and Evaluation in Higher Education, 20*(1), 59–66.

Diezmann, C. M., & Watters, J. J. (2006). Balancing opportunities for learning and practicing for gifted students. *Curriculum Matters, 5*(1), 3–5.

Diezmann, C. M., Watters, J. J., & Fox, K. (2001). Early entry to school in Australia: Rhetoric, research and reality. *Australasian Journal for Gifted Education, 10*(2), 5–18.

Dilthey, W., Makkreel, R. A., & Rodi, F. (1996). *Hermeneutics and the Study of History* (Vol. 4). Princeton, NJ: Princeton University Press.

Dinham, S., & Scott, C. (2000). *Teachers' work and the growing influence of societal expectations and pressures*. Paper presented at the American Educational Research Association. New Orleans. April 24–28. Retrieved March 26, 2014, from http://files.eric.ed.gov/fulltext/ED446068.pdf

Dixon, C. (1991). *South East Asia in the World Economy*. Cambridge, UK: Cambridge University Press.

Doan, R. E. & Parry, A. (1994). *Story re–visions*. New York: The Guilford Press.

Donahoe, T. (1993). Finding the way: structure, time, and culture in school improvement. *Phi Delta Kappan, 75*(4), 298–305.

Donaldson, M. L., & Peske, H. G. (2010, March). *Supporting effective teaching through teacher evaluation: A study of teacher evaluation in five charter schools.* Washington DC: Center for American Progress.

Dourish, P. (2003). The appropriation of interactive technologies: Some lessons from placeless documents. *Computer Supported Cooperative Work (CSCW), 12*(4), 465–490.

Drago, R.T., Caplan, D., Contanza, T., Brubraker, D. Cloud. N., Harris, R., Kashian, R., & Riggs, T. L. (1999, April). New etimates of working time for elementary school teachers. *Monthly Labour Review*.

Drury, D., & Doran, H. (2003). The value of value-added analysis. Policy research brief. *National School Boards Association, January, 3*(1).

Dunham, J. (1977). The effects of disruptive behaviour on teachers. *Educational Review, 19*(3), 181–187.

Dunham, J. (1984). *Stress in teaching*. London: Croom Helm.

Dunn, R. S., & Dunn, K. (1993). *Teaching secondary students through their individual learning styles: practical approaches for grades 7–12*.Boston: Allyn and Bacon.

EFA Global Monitoring Report (2005). *Understanding education quality* (pp. 27–37). Retrieved from http://www.unesco.org/education/gmr_download/chapter1.pdf

Eggleton, P. J. (1992). Motivation: A key to effective teaching. *The Mathematics Educator, 3,* 9–14.

Eisner, E.W. (1992). Are all causal claims positivistic? A reply to Francis Shagg. *Educational Researcher, 21*(5), 8–9.

Elbaz, F. (1983). *Teacher thinking: A study of practical knowledge*. London: Croom Helm.

Elias, M. J., & Haynes, N. M. (2008). Social competence, social support, and academic achievement in minority, low–income, urban elementary school children. *School Psychology Quarterly, 23*(4), 474–495.

Ellenburg, F. C. (1972). Factors affecting teacher morale. *NASSP Bulletin, 56,* 76–87.

Elliot, A. J., & McGregor, H. (2001). A 2 × 2 achievement goal framework. *Journal of Personality and Social Psychology, 80,* 501–519.

Elliott, J. (2005). *Using narrative in social research: Qualitative and quantitative approaches.* London: SAGE publications.

Ellis, T. J., & Levy, Y. (2008). A framework of problem-based research: A guide for novice researchers on the development of a research-worthy problem. *Informing Science: The International Journal of an Emerging Transdiscipline, 11,* 17–33.

Ellsworth, E. (1997). *Teaching positions*. New York: Teachers College Press.

Elmore, R. F. (2007). *School reform from the inside out: Policy, practice, and performance*. Cambridge, MA: Harvard Education Press.

Epstein, J. L. (1995). School/family/community partnerships: Caring for the children we share. *Phi Delta Kappan, 76,* 701–712.

Epstein, J. L., & Becker, H. J. (1982). Teachers' reported practices of parent involvement: Problems and possibilities. *The Elementary School Journal,* 103-113.

Epstein, J. L., & Connors, L. J. (1992). School and family partnerships. *Practitioner, 18*(4), n4.

External Review Team (1997). *Learning, creating, and communicating: A curriculum review*. Singapore: Ministry of Education.

Faber, B. (1991). *Crisis in education: Stress and burnout in the American teacher.* San Francisco: Jossey–Bass.

Fecho, B. (2001). Why are you doing this?: Acknowledging and transcending threat in a critical inquiry classroom. *Research in the Teaching of English, 36,* 9–37.

Fenstermacher, G. D. (1990). Some moral considerations on teaching as a profession. In J. I. Goodlad, R. Soder, & K. Sirotnik (Eds.), *The moral dimensions of teaching.* San Francisco: Jossey–Bass Publishers.

Fenstermacher, G. D. (1992). The concepts of method and manner in teaching. In F. K. Oser, A. Dick, & J. Patry (Eds.), *Effective and responsible teaching: The new synthesis.* San Francisco: Jossey–Bass.

Fenstermacher, G. D. (2001). On the concept of manner and its visibility in teaching practice. *Journal of Curriculum Studies, 33,* 639–653.

Fenstermacher, G. D. (2002). *Pedagogy in three dimensions: Method, style, and manner in classroom teaching.* Paper presented at Teacher's College, Columbia University, April 15, 2002.

Fenstermacher, G. D., & Richardson, V. (2005). On making determinations of quality in teaching. *Teachers College Record, 107*(1), 186–213.

Ferguson, M. (2014). Behind in assessment and losing the shame game. *Phi Delta Kappan, 95*(6), 66–67.

Ferguson, R. F. (2002). *What doesn't meet the eye: Understanding and addressing racial disparities in high-achieving suburban schools*. Retrieved August 8, 2014, from http://files.eric.ed.gov/fulltext/ED474390.pdf

Fetterman, D. M. (1998). *Ethnography: Step by step.* (2nd ed.). Thousand Oaks, CA: SAGE publications.

Figlio, D. (2001).*What might school accountability do*? Cambridge, Mass: National Bureau of Economic Research.

Finnan, C., Schnepel, K., & Anderson, L. (2003). Powerful learning environments: the critical link between school and classroom cultures. *Journal of Education for Students Placed At Risk, 8*(4), 391–418.

Forte, E. (2010). Examining the assumptions underlying the NCLB federal accountability policy on school improvement. *Educational Psychologist, 45* (2), 76–88.

Foucault, M. (1996). In S. Lotringer (Ed.), *Foucault live: Interviews 1961–1984*. New York, NY: Semiotext (e).

Franklin, L. (1992). Quality and equality: the case of East Birmingham College. *Journal of Further and Higher Education, 16*(2), 34–40.

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden–and–build theory of positive emotions. *American Psychologist, 56,* 218–226.

Freiberg, H. J. (1998). Measuring school climate: Let me count the ways. *Educational Leadership, 56*(1), 22–26.

Freiberg, H. J. (Ed.). (1999). *School climate: Measuring, improving and sustaining healthy learning environments*. Philadelphia, PA: Falmer Press.

Fried, R. L. (1995). *The passionate teacher: A practical guide.* Boston, MA: Beacon Press.

Friedman, I. A. (1991). High and low burnout schools: School culture aspects of teacher burnout. *The Journal of Educational Research, 88,* 281–289.

Friedman I. A. (1995). Student behaviour patterns contributing to teacher burnout *The Journal of Educational Research, 88*(5), 281-289.

Friesen, D., & Williamson, M. (1985). Organizational stress among teachers. *Canadian Journal of Education, 10*, 13–34.

Fuchs, L. S., & Fuchs, D. (1985). *A quantitative synthesis of effects of formative evaluation on achievement*. Retrieved July 11. 2014, from http://files.eric.ed.gov/fulltext/ED256781.pdf

Fuchs, L. S., & Fuchs, D. (1986). Effects of systematic formative evaluation: a meta-analysis. *Exceptional Children, 53*(3), 199–208.

Fullan, M. G. (2007). *The new meaning of educational change* (4th ed.). New York: Teachers College Press.

Fullan, M. G., & Hargreaves, A. (1991). *What's worth fighting for? Working together for your school*. Andover, MA: Regional Laboratory of the Northeast and Islands.

Fullan, M. G., & Miles, M.B. (1992). Getting reform right: what works and what doesn't. *Phi Delta Kappa, 73*(10), 745–752.

Frymier, J. (1986). Legislating Centralization. *Phi Delta Kappa*, *67*(9), 646–48.

Frymier, J. (1987). Bureaucracy and the neutering of teachers. *Phi Delta Kappa, 69,* 9–14.

Gadamer, H. G. (1975). *Truth and method.* London, England: Sheed & Ward.

Gadamer, H. G. (1976). *Philosophical hermeneutics.* Berkley, CA: University of California Press.

Gadamer, H. G. (1960/2006). *Truth and method* (2nd revised edition) (J. Weinsheimer & D. G. Marshall, Trans.). New York: Continuum. (Original work published 1960)

Gandara, P. (1999). *The Dimensions of Time and the Challenge of School Reform*. Albany, NY: State University of New York Press.

Gates Foundation (2010). *Learning about teaching: Initial findings from the measures of effective teaching project*. MET Project.

Gentilucci, J. L. (2004). Improving school learning: The student perspective. *The Educational Forum, 68*(2), 133–143.

Gerstl-Pepin, C. I. (2006). The paradox of poverty narratives: Educators struggling with children left behind. *Educational Policy*, *20*(1), 143–162.

Getzels, J.W., & Jackson, P.W. (1963). The teacher's personality and characteristics. In N.L. Gage (Ed.), *Handbook of research on teaching*. Chicago: Rand McNally.

Ghaith, G. (2003). The relationship between forms of instruction, achievement and perceptions of classroom climate. *Educational Researcher*, *45*(1), 83–93.

Gibbs, G. R. (2002). *Qualitative data analysis: Explorations with NVivo*. Buckingham: Open University Press.

Gillespie, D. (2014). *Free schools: How to get a great education for your kids without spending a fortune*. Australia: Pan Macmillan.

Giorgi, A. P., & Giorgi, B. (2008). Phenomenological psychology. *The SAGE handbook of qualitative research in psychology*, 165–179.

Glasser, W. (1989, September). Quality is the key to the disciplines. *Education Digest, 55,* 24–27.

Glesne, C. (2011). *Becoming qualitative researchers*: *An Introduction*. (4th ed.). Boston, MA: Pearson Education.

Goddard, R. D., Hoy, W. K., & Woolfolk Hoy, A. (2000). Collective teacher efficacy: Its meaning, measure and impact of student achievement. *American Educational Research Journal, 37*(2), 479–507.

Goe, L. (2007). *The link between teacher quality and student outcomes: A research synthesis.* Washington, DC: National Comprehensive Centre for Teacher Quality.

Goe, L., Bell, C., & Little, O. (2008). *Approaches to evaluating teacher effectiveness: A research synthesis*. Washington, DC: National Comprehensive Center for Teacher Quality. Retrieved June 1, 2014, from http://www.gtlcenter.org/sites/default/files/docs/EvaluatingTeachEffectiveness.pdf

Goh, C. T. (1997). Speech delivered at the opening of the Seventh International conference on Thinking. Suntec City Convention Centre Ballroom, Singapore, 2 June. Retrieved March, 6, 2013, from http://www.moe.gov.sg/media/speeches/1997/020697.htm

Goh, C.B., & Gopinathan, S. (2006). *The development of education in Singapore since 1965.* Background paper prepared for the Asia Education study tour for African policy makers. http://siteresources.worldbank.org/EDUCATION/Resources/278200-1121703274255/1439264-1153425508901/Development_Edu_Singapore_draft.pdf

Goh, C. B., & Gopinathan, S. (2008) The development of education in Singapore since 1965. In S. K. Lee, C. B. Goh, B. Fredriksen, & J. P. Tan (Eds.), *Toward a better future: Education and training for economic development in Singapore since 1965*. Washington, D. C.: The World Bank.

Goh, K.S. (1972). *The Economics of Modernization*. Singapore: Asia Pacific Press

Goh Report (1979). *Report on the Ministry of Education 1978*. Singapore: Singapore National Printers.

Goldhaber, D. (2002). The mystery of good teaching. *Education Next, 2,* 50–55.

Goldhaber, D., D. J. Brewer, D. J., & Anderson, D. (1999). A three-way error components analysis of educational productivity. *Education Economics*, *7*(3), 199–208.

Goldhaber, D., & Hansen, M. (2010). Using performance on the job to inform teacher tenure decisions. *The American Economic Review*, 250–255.

Goldstein, L. S. (1999). The relational zone: The role of caring relationships in the co–construction of mind. *American Educational Research Journal*, *36*(3), 647–673.

Goleman, D. (1995). *Emotional intelligence*. London: Bloomsbury.

Gonzalez, M.A. (1997). *Study of the relationship of stress, burnout, hardiness and social support in urban secondary school teachers* (Unpublished doctoral dissertation). Temple University, Philadelphia.

Good, T. L., & Weinstein, R. S. (1986). Schools make a difference. *American Psychologist, 41*, 1090–1097.

Goodlad, J. I., Soder, R., & Sirotnik, K. (1990). *The moral dimensions of teaching*. San Francisco: Jossey-Bass.

Goodson, I. F. (1991). Sponsoring the teacher's voice: Teachers' lives and teacher development. *Cambridge Journal of Education, 21*(1), 35–45.

Goodson, I. F. (1994). Studying the teacher's life and work. *Teaching and Teacher Education, 10*(1), 29–37.

Goodwin, A. L. (1987). Vocational choice and the realities of teaching. *Teacher Renewal: Professional Issues, Personal Choices*, 30-36.

Gopinathan, S. (1999). Preparing for the Next Rung: Economic Restructuring and Educational Reform in Singapore. *Journal of Education and Work, 12* (3), 295–308.

Gopinathan, S., Ho, W. K., & Tan, J. (1999). Teacher education and teaching in Singapore: Recent trends. *Asia–Pacific Journal of Teacher Education & Development, 2*(1), 3–14.

Gopinathan, S., Leo, E., Myers, K., Sharpe, L., Stoll, L., & Mortimore, J. (2000). *The culture of change: Case studies of improving schools in Singapore and London*. University of London, Institute of Education.

Graham, S., & Weiner, B. (1996). Theories and principles of motivation. *Handbook of Educational Psychology, 4*, 63–84.

Gratch, A. (2001). The culture of teaching and beginning teacher development. *Teacher Education Quarterly, 28*(4), 121–136.

Grattan Institute (February, 2012). *Catching up: Learning from the best schools in East Asia.* Retrieved July 15, 2014, from http://grattan.edu.au/events/event/catching-up-learning-from-the-best-school-systems-in-east-asia/

Graziano, A. M., & Raulin, M. L. (2007). *Research methods: A process of inquiry.* ($6^{th}$ ed). Boston, MA: Pearson Education Inc. Allyn & Bacon.

Greb, F. M. (1999). *Learning–style Preferences of Fifth–through Twelfth–grade Students Medically Diagnosed with Attention–deficit Hyperactivity/disorder.* St. John's University.

Greene, M. (1973). *Teacher as stranger.* Belmont: Wadsworth Publishing.

Greene, M. (1978). *Landscapes of learning.* New York: Teachers College Press.

Greene, M. (1995). Art and imagination: Reclaiming the sense of possibility. *Phi Delta Kappan, 76*(5), 378–382.

Greene, M. (2001). Reflections on teaching. In V. Richardson (Ed.), *Handbook of research on teaching* (pp. 82–89). Washington, DC: American Educational Research Association.

Green–Reese, S., Johnson, D. J., & Campbell, W. A. (1991). Teacher job satisfaction and teacher job stress: School size, age and teaching experience. *Education, 112*(2), 247–252.

Greenwood, D. J., & Levin, M. (2000). Reconstructing the relationships between universities and society through action research. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of Qualitative Research* (2nd ed., pp. 85–106). Thousand Oaks, CA: SAGE publications.

Gregoire, M. (2003). Is it a challenge or a threat? A dual process model of teacher's cognition and appraisal processes during conceptual change. *Educational Psychology Review, 15,* 147–179.

Griffith, J. (1995). An empirical examination of a model of social climate in elementary schools. *Basic and Applied Social Psychology, 17*(1–2), 97–117.

Gritz, R. M., & Theobold, N. D. (1996). The effects of school district spending priorities on length of stay in teaching. *Journal of Human Resources, 31*(3), 477–512.

Grumet, M. (1983). My face is thine eye, thine in mine appears: The look of parenting and pedagogy. *Phenomenology and Pedagogy, 1*(1), 45–48.

Grundy, S. (1991). *Curriculum: Product or praxis.* New York: Falmer Press.

Guest, G., MacQueen, K. M., & Namey, E. E. (2011). *Applied thematic analysis*. SAGE publications.

Gunzenhauser, G. W. (1996). *Assuring an appreciation for student diversity: alternative to teacher education field experiences.* US: Illionis.

Haberman, M. (1995). *Star teachers of children in poverty*. West Lafayette, IN: Kappa Delta Pi.

Haberman, M. (1999). Victory at Buffalo Creek: What Makes a School Serving Low-Income Hispanic Children Successful? *Instructional leader, 12*(2), 1.

Haberman, M. (2005). Teacher burnout in black and white. *The New Educator, 1*(3), 153–175.

Haberman, M., & Post, L. (1998). Teachers for multicultural schools: The power of selection. *Theory into Practice, 37*(2), 96-104.

Halford, J.M. (1998). Easing the way for teachers. *Educational Leadership 55*(5), 33–36.

Hall, J. A., Rosenthal, R., Archer, D., Di Matteo, M. R., & Rogers, P. L. (2001). Nonverbal skills in the classroom. *Theory into Practice, 16,* 162–166.

Hamel, D. (2000), Letter to a Colleague, unpublished graduate paper, Michigan State University, East Lansing, MI.

Hamilton, L. (2003). Assessment as a policy tool. *Review of research in education*, 27, 25–68.

Hammersley, M. (1996). The relationship between qualitative and quantitative research: Paradigm loyalty versus methodological eclecticism. In J.T.E

Richardson (Ed.), *Handbook of qualitative research methods for psychology and the social sciences* (pp. 159–174). Leicester, England: BPS Books.

Hamre, B. K., & Pianta, R. C. (2005). Can instructional and emotional support in the first–grade classroom make a difference for children at risk of school failure? *Child Development, 76*(5), 949–967.

Hansen, D. T. (1993). From role to person: The moral layeredness of classroom teaching. *American Educational Research Journal 30*(4), 651–674.

Hansen, D. T. (1995). *The call to teach.* New York: Teachers College Press.

Hansen, D. T. (1998). The moral is in the practice. *Teaching and Teacher Education 14*(6), 643–655.

Hansen, D. T. (1999). Conceptions of teaching and their consequences. In M. Lang, J. Olson, H. Hansen, & J.W. Bunder (Eds.), *Changing schools/changing practices: Perspectives in Educational Reform and Teacher Professionalism* (pp. 91–98). Louvain: Garant.

Hansen, D. T. (2001a). *The moral heart of teaching: Towards a teacher's creed.* New York: Teachers College Press.

Hansen, D. T. (2001b). Teaching as a moral activity. In V. Richardson (Ed.), *Handbook of Research on Teaching* (4th ed.) (pp. 826–857). Washington, D. C.: American Educational Research Association.

Hanushek, E. A. (2005). Education and the economy: Our school performance matters. *Education Week, 24*(24), 40–41.

Hanushek, E. A., Kain, J. F., O'Brien, D. M., & Rivkin, S. G. (2005). *The market for teacher quality* (No. w11154). National Bureau of Economic Research.

Hanushek, E. A., & Lugue, J. A. (2000). Smaller classes, lower salaries? In S. W. Laine & J. G. Ward (Eds.), *Using what we know: A review of research on class size reduction* (pp. 35–51). Oak Brook, Il: North Central Regional Educational Laboratory.

Hanushek, E. A., & Rivkin, S. G. (2010). Generalizations about using value–added measures of teacher quality. *American Economic Review, 100*(2), 267–271.

Hargreaves, A. (1990). Teachers' work and the politics of time and space. *Qualitative Studies in Education, 3*(4), 303–320,

Hargreaves, A. (Ed.). (1997). *Rethinking educational change with heart and mind*. Alexandria, VA: Association for Supervision and Curriculum Development.

Hargreaves, A. (2000). Four Ages of Professionalism and Professional Learning, *Teachers and Teaching: Theory and Practice*, *6* (2), 151–182.

Hargreaves, A. (2003). *Teaching in the knowledge society*. Buckingham: Open University Press.

Hargreaves, A., & Fullan, M. (2012). *Professional capital: Transforming teaching in every school*. Teachers College Press.

Hargreaves, A., & Giles, C. (2003). The knowledge society school: An endangered entity. In A. Hargreaves (Ed.), *Teaching in the knowledge society: Education in the age of insecurity.* Maidenhead and Philadelphia: Open University Press.

Hargreaves, A., & Tucker, E. (1991). Teaching and guilt: exploring the feelings of teaching, *Teaching and Teacher Education*, 7, 491–505.

Harris, A., & Chrispeels, J. H. (Eds.). (2006). *Improving schools and educational systems: International perspectives*. Routledge.

Harris, D. N., & Sass, T. R. (2006). *Value-added models and the measurement of teacher quality.* (Unpublished manuscript). Florida State University. Retrieved July 13, 2014, from http://myweb.fsu.edu/tsass/Papers/IES%20Harris%20Sass%20EPF%20Value-added%2014.pdf

Harris, D. N. & Sass, T. R. (2007). *Teacher training, teacher quality, and student achievement*. Calder Center. Retrieved May 18, 2013, from http://www.caldercenter.org/PDF/1001059_Teacher_Training.pdf

Harris, K. (1994). *Teachers: Constructing the future*. Basingstoke: Falmer Press.

Hart, C. (1998). *Doing a literature review: Releasing the social science research imagination*. London: SAGE publications.

Hartshorne, H., & May, A. (1928–30). *Studies in the nature of character: Vol. 1 studies in deceit; Vol. 2 studies in self–control; Vol. 3 studies in the organization of character.* New York: Macmillan.

Harvey L., & Green, D. (1993). Defining quality. *Assessment and Evaluation in Higher Education 18*, 8–35.

Haskvitz, A. (2002). *Top 11 traits of a good teacher*. Horace Mann Educators Corporation. Retrieved October 7, 2012, from http://www.reacheverychild.com/feature/traits.html

Hatfield, E., Cacioppo, J. L., & Rapson, R. L. (1993). Emotional contagion. *Current Directions in Psychological Sciences, 2,* 96–99.

Hattie, J. A. (1992). Towards a model of schooling: A synthesis of meta-analyses. *Australian Journal of Education, 36,* 5–13.

Hattie, J. A. (1993a). Measuring the effects of schooling. *SET, 2,* 1–4.

Hattie, J. A. (1993b, July). *What works: A model of the teaching-learning interaction*. Paper presented at the Annual Conference of the Australian Teacher Education Association, Fremantle.

Hattie, J. A. (2003). *Teachers make a difference: What is the research evidence?* Camberwell: Australian Council for Educational Research.

Hattie, J. A. (2012). *Visible learning for teachers: Maximizing impact on learning*. Routledge

Hattie, J. A. (2013). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge.

Hattie, J. A., & Timperley, H. (2007). The power of feedback. *Review of Educational Research, 77*(1), 81–112.

Haycock, K. (2004). The real value of teachers: If good teachers matter, why don't we act like it? *Thinking K–16, 8*(1), 1–2. Retrieved January, 1, 2013, from http://www.cea-ace.ca/sites/default/files/EdCan-2009-v49-n4-Carey.pdf

Hayes, D., Mills, M., Christie, P., & Lingard, B. (2006). *Teachers & schooling making a difference: Productive pedagogies, assessment and performance.* Sydney: Allen & Unwin.

Heck, R. (2000). Examining the impact of school quality on school outcomes and improvement: A value-added approach. *Educational Administration Quarterly, 36*(4), pp. 513–552.

Heidegger, M. (1972). *What is called thinking.* New York: Harper & Row.

Heidegger, M. (1993a). What is metaphysics? In D. Krell (Ed.), *Martin Heidegger: Basic writings* (pp. 93–110). San Francisco: HarperCollins. (Original work published 1949).

Heidegger, M. (1993b). Letter on humanism. In D. Krell (Ed.), *Martin Heidegger: Basic writings* (pp. 217–265). San Francisco: HarperCollins. (Original work published 1947).

Heidegger, M. (1993c). The question concerning technology. In D. Krell (Ed.), *Martin Heidegger: Basic writings* (pp. 311-341). San Francisco: Harper Collins. (Original work published 1954).

Heidegger, M. (1993d). On the essence of truth. In D. Krell (Ed.), *Martin Heidegger: Basic writings* (pp. 111-138). San Francisco: HarperCollins. (Original work published 1949).

Heidegger, M. (1994). *Hegel's phenomenology of spirit* (P. Emad & K. Maly, Trans.). Indianna, IN: University Press.

Heidegger, M. (1996). *Being and time: A translation of Sein und Zeit*. SUNY Press.

Helsby, G. (2000) Multiple truths and contested realities. The changing faces of teacher professionalism in England. In C. Day, A. Fernandez, T. E. Hauge, & J. Moller (Eds.), *The life and work of teachers. International perspectives in changing times* (pp. 93–108). London: Falmer Press.

Henderson, D., & Henderson, T. (1997). *Texas teachers: Moonlighting and morale, 1980–1996*. ERIC Document ED398170.

Hernard, F., & Leprince–Ringuet, S. (2008). *The path to quality teaching in higher education.* Retrieved June 4, 2014, from http://www.oecd.org/edu/imhe/44150246.pdf

Hershberg, T., Simon, V. A., & Lea-Kruger, B. (2004). How value-added assessment can be used to drive learning gains. *American School Board Journal, 191*(2), 27–31.

Hertz, R. (1997). *Reflexivity & voice*. Thousand Oaks, CA: SAGE publications.

Heuer, F., & Reisberg, D. (1992). Emotion, arousal, and memory for detail. *The Handbook of Emotion and Memory: Research and Theory*, 151–180.

Hicks, C. R., & Turner, K. V. (1999). *Fundamental concepts in the design of experiments*. New York, NY: Oxford University Press.

Hill, H. C., Rowan, B., & Ball, D. (2005). Effects of teachers' mathematical knowledge for teaching on student achievement. *American Educational Research Journal, 42*(2).

Hill, P. W., & Rowe, K. J. (1996). Multilevel modeling in school effectiveness research. *School Effectiveness and School Improvement, 7* (1), 1–34.

Hill, P. W., & Rowe, K. J. (1998). Modeling student progress in studies of educational effectiveness. *School Effectiveness and School Improvement, 9* (3), 310–333.

Ho, C. L., & Au, W. T. (2006). Teaching Satisfaction Scale: Measuring Job Satisfaction of Teachers. *Educational and Psychological Measurement, 66,* 172–185.

Hoepfl, M. C. (1997). Choosing qualitative research: A primer for technology education researchers. Retrieved July 14, 2014, from http://scholar.lib.vt.edu/ejournals/JTE/v9n1/hoepfl.html

Hofer, B. K., & Pintrich, P. R. (1997). The development of epistemological theories: Beliefs about knowledge and knowing and their relation to learning. *Review of Educational Research, 67,* 88–140.

Hoffman, M. L., & Saltzstein, H. (1967). Parent discipline and the child's moral development. *Journal of Personality and Social Psychology, 79* (4), 217–232.

Hogan, D., & Gopinathan, S. (2008). Knowledge management, sustainable innovation and preservice teacher education in Singapore. *Teachers and Teaching: Theory and Practice, 14*(4), 369–384.

Holloway, I., & Wheeler, S. (2013). *Qualitative research in nursing and healthcare* (3rd ed.). West Sussex, UK: John Wiley & Sons.

Holt-Reynolds, D. (2000). What does the teacher do?: Constructivist pedagogies and prospective teachers' beliefs about the role of a teacher. *Teaching and Teacher Education, 16*(1), 21–32.

Hord, S. M. (1997). *Professional learning communities: Communities of continuous inquiry and improvement*. Austin, Texas: Southwest Educational Development Laboratory.

Hopkins, D. (Ed.). (2005). *The practice and theory of school improvement: International handbook of educational change* (Vol. 4). Springer.

Hopkins, D., & Stern, D. (1996). Quality teachers, quality schools: International perspectives and policy implications. *Teaching and Teacher Education, 12*(5), 501–517.

Hoy, W. K., & Miskel, C. G. (1987). *Educational administration: Theory, research, and practice* (3rd ed.). New York: Random House.

Huberman, M., & Miles, M. B. (Eds.). (2002). *The qualitative researcher's companion*. London, UK: SAGE publications.

Huebner, D. (1999a). Curriculum as concern for man's temporality. In V. Hillis (Ed.), *The lure of the transcendent: Collected essays by Dwayne E. Huebner* (pp. 131–142). Mahwah, NJ: Lawrence Erlbaum. (Original work published 1967).

Huebner, D. (1999b). An educator's perspective on language about God. In V. Hillis (Ed.), *The lure of the transcendent: Collected essays by Dwayne E. Huebner* (pp. 257–284). Mahwah, NJ: Lawrence Erlbaum. (Original work published 1977).

Huebner, D. (1999c).Challenges bequeathed. In V. Hillis (Ed.), *The lure of the transcendent: Collected essays by Dwayne E. Huebner* (pp. 432–445). Mahwah, NJ: Lawrence Erlbaum. (Original work published 1996).

Hughes, J. N., Cavell, T. A., & Willson, V. (2001). Further support for the developmental significance of the quality of the teacher–student relationship. *Journal of School Psychology*, *39*(4), 289–301.

Hunsaker, J. S. (1988). It's no joke: Using humour in the classroom. *Clearing House, 61*, 285–286.

Husserl, E. (1982). *Ideas pertaining to a pure phenomenology and to phenomenological philosophy. First book - General Introduction to a pure phenomenology* (K. F. Kluwer, Trans.). Boston, MA: Academic.

Ingvarson, L., Meiers, M. & Beavis, A. (2005, January 29). Factors affecting the impact of professional development programs on teachers' knowledge, practice,student outcomes & efficacy. *Education Policy Analysis Archives, 13*(10). Retrieved November 20, 2012, from http://epaa.asu.edu/epaa/v13n10/

Ingvarson, L., & Rowe, K. (2008). Conceptualising and evaluating teacher quality: Substantive and methodological issues. *Australian Journal of Education*, *52*(1), 5–35.

Irvine, J. J. (2003). *Educating teachers for a diverse society: Seeing with the cultural eye*. New York: Teachers College Press.

Iser, W. (1980). The reading process: A phenomenological approach. In J. Tompkins (Ed.), *Reader response criticism* (pp. 118-133). Baltimore: Johns Hopkins University Press.

Isoda, M. (2007). *Japanese lesson study in mathematics: Its impact, diversity and potential for educational improvement*. World Scientific.

Jackson, P., Boostrom, R., & Hansen, D. (1993). *The moral life of schools*. San Francisco: Jossey-Bass.

Jacob, B., & Lefgren, L. (2008). Can principals identify effective leaders? Evidence on subjective performance evaluation in education. *Journal of Labour Economics, 26*(1), 101–136.

Jacobson, M. J., So, H. J., Teo, T., Lee, J., & Pathak, S. A. (2008, June). Teachers' beliefs about knowledge and learning: a Singapore perspective. In *Proceedings of the 8th international conference on International conference for the learning sciences-Volume 3* (pp. 43-44). International Society of the Learning Sciences.

Jantzen, E. (1988, January). An approach for overcoming student passivity. *Education Digest, 53*, 33.

Jardine, D. W. (2006). Abundance and the limits of teacher knowledge. In D. Jardine, P. Clifford & S. Friesen, *Curriculum in abundance* (pp. 99-101). Mahwah: NJ: Lawrence Erlbaum.

Jardine, D. W., Clifford, P., & Friesen, S. (2006). *Curriculum in abundance.* Mahwah, NJ: Lawrence Erlbaum.

Jardine, D. W., Clifford, P., & Friesen, S. (2008). *Back to the basics of teaching and learning, Thinking the world together* (2nd ed.). New York: Routledge.

Jensen, B. (2012). *Catching up: Learning from the best school systems in East Asia. Summary report*. Retrieved July 11, 2014, from http://grattan.edu.au/static/files/assets/23afab6b/129_report_learning_from_the_best_main.pdf

Jerald, C. D. (2006). 'Teach to the Test'? Just Say No. *Center for Comprehensive School Reform and Improvement Issue Brief*. Retrieved August 9, 2104, from http://www.boundlessreaders.org/storage/documents/Research/teach_to_the_test_july06.pdf

Jessee, C., Mchazime, H., Dowd, A. J., Winicki, F., Harris, A., & Schubert, J. (2003). Exploring factors that influence teaching and learning: Summary findings from the IEQ/Malawi longitudinal study 1999-2002. *Improving Educational Quality (IEQ) Project.*

Johnson, S.M. (1990). *Teachers at work: Achieving success in our schools.* Boston: Basic Books.

Johnson, B., & Christensen, L. (2014). *Educational research: quantitative, qualitative, and mixed approaches* (5th ed.). Thousand Oaks, CA: SAGE publications.

Jordan, H., Mendro, R., & Weerasinghe, D. (1997). Teacher effects on longitudinal student achievement: A report on research in progress. *National Evaluation Institute*.

Kane, R. G. & Russell, T. (2003, June). *Reconstructing professional knowledge–in–action: Learning from the authority of experience as a first–year teacher*. Paper presented at the 11th ISATT Conference, Leiden, The Netherlands.

Kane, T. J., & Staiger, D. O. (2012). Gathering Feedback for Teaching: Combining High-Quality Observations with Student Surveys and Achievement Gains. Research Paper. MET Project. *Bill & Melinda Gates Foundation*.

Kane, T. J., Taylor, E. S., Tyler, J. H., & Wooten, A. L. (2011). Evaluating teacher effectiveness: Can classroom observations identify practices that raise achievement? *Education Next,* Summer, 55–60.

Kaplan, A., Middleton, M. J., Urdan, T., & Midgley, C. (2002). Achievement goals and goal structures. In C. Midgley (Ed.), *Goals, goal structures, and patterns of adaptive learning* (pp. 21–53). Mahwah, NJ: Erlbaum.

Kaplan, L. S., & Owings, W. A. (2002). *Teacher quality, teaching quality, and school improvement*. Indiana, U.S.A.: Phi Delta Kappa International.

Karp, S. (2004). NCLB's selective vision of equality: Some gaps count more than others. In D. Meier, A. Kohn, L. Darling-Hammond, T. Sizer, & G. Wood, (Eds.), *Many children left behind* (pp. 53–65). Boston, MA: Beacon Press.

Kemp, L., & Hall, A. H. (1992). *Impact of effective teaching research on student achievement and teacher performance: Equity and access implications for quality education*. Jackson, MS: Jackson State University.

Kelchtermans, G. & Ballet, K. (2002). The micropolitics of teacher induction. A narrative–biographical study on teacher socialisation. *Teaching and Teacher Education, 18*, 105–120.

Kelly, K. O., Ang, S. Y. A., Chong, W. L., & Hu, W. S. (2008). Teacher appraisal and its outcomes in Singapore primary schools. *Journal of Educational Administration*, *46*(1), 39–54.

Kennedy, M. M. (1997). Defining an ideal teacher education program. *National Council for Accreditation of Teacher Education*, 1– 29.

Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of behavioural research* (4th ed.). Holt, NY: Harcourt College Publishers.

Kerr, D., Ireland, E., Lopes, J., Craig, R., & Cleaver, E. (2004). Citizenship Education Longitudinal Study: Second Annual Report: First Longitudinal Study. *National Foundation for Educational Research*, 1–154.

Keys, P. (2005). Are teachers walking the walk or just talking the talk in science education. *Teachers and Teaching: Theory and Practice, 11*(5), 499–516.

Keys, P. (2007). A knowledge filter model for observing and facilitating change in teachers' beliefs. *Journal of Educational Change, 8*, 41–60.

Killinger, B. (2010). *Integrity: Doing the right thing for the right reason*. Canada: McGill–Queen's University Press.

King, M.B. & Newmann, F.M. (2001). Building school capacity through professional development: Conceptual and empirical considerations. *International Journal of Educational Management*, *15*(2), 86–93.

Kingdon, G., & Teal, F. (2007). Does performance related pay for teachers improve student performance? Some evidence from India. *Economics of Education Review*, *26*(4), 473–486.

Kleinsasser, R. C. (2010). Why qualitative data matter: Community members' perceptions of learning environments. *Studies in Languages and Language Teaching*, *14*(2), 1–12.

Knowles, K. T., Plake, B. S., Robinson, D. Z., & Mitchell, K. J. (Eds.). (2001). *Testing teacher candidates: The role of licensure tests in improving teacher quality*. National Academies Press.

Konert, E. (1997). *Relationship among middle-school teacher burnout, stress, job satisfaction and coping styles* (Unpublished doctoral dissertation). Wayne State University, Detroit.

Koo, T. K. (2007). *Singapore's education system works*. Asiaone News. Nov. 24. Retrieved July 20, 2014 from http://news.asiaone.com/News/Education/Story/A1Story20071124-38193.html

Koon, J. R. (1971). *Effects of expectancy, anxiety and task difficulty on teacher behaviour* (Unpublished doctoral dissertation). Syracuse University, Syracuse, New York.

Koretz, D. (2005). Alignment, high stakes, and the inflation of test scores. *Yearbook of the National Society for the Study of Education*, *104*(2), 99–118.

Korthagen, F. A. J. (2004). In search of the essence of a good teacher: Towards a more holistic approach in teacher education. *Teaching and Teacher Education*, 20, 77–97.

Kounin, J. (1996). The Kounin Model. *Building Classroom Discipline*, *43*.

Kozéki, B., & Berghammer, R. (1992). The role of empathy in the motivational structure of school children. *Personality and Individual Difference, 13* (2), 191–203.

Kruse, S. D., Louis, K. S., & Byrk, A. (1995). An emerging framework for analyzing school–based professional community. In K.S. Louis & S.D. Kruse (Eds.), *Professionalism and community: Perspectives on reforming urban schools* (pp. 23–44). Thousand Oaks, CA: Corwin Press.

Kupermintz, H. (2002). *Teacher effects as a measure of teacher effectiveness: Construct validity considerations in TVAAS*. Los Angeles, CA: CRESST/University of Colorado, Boulder.

Kvale, S. (1994). Ten standard objections to qualitative research interviews. *Journal of Phenomenological Psychology, 25*(2), 147–173.

Kvale, S. (1996). *InterViews–An introduction to qualitative research interviewing*. Thousand Oaks, CA: SAGE publications.

Kyriacou, C. (1987). Teacher stress and burnout: An international review. *Education Research 29,* 7.

Kyriacou, C., & Sutcliffe, J. (1978). A model teacher stress. *Educational Studies, 4*(1), 1–6.

Lackney, J. A. (1999). *Assessing school facilities for learning assessing the impact of the physical environment on the educational process*. Mississippi State, Miss.: Educational Design Institute.

Lankford, H., Loeb, S., & Wyckoff, J. (2002). Teacher Sorting and the Plight of Urban Schools: A Descriptive Analysis. *Educational Evaluation and Policy Analysis, 24*, 37–62.

Lawn, M. (1990). From responsibility to competency: A new context for curriculum studies in England and Wales. *Journal of Curriculum Studies, 22*(4), 388–392.

Leal, M. R. M. (2002). *The caring relationship*. Paper presented to The Ninth Annual International Conference Education Spirituality and the Whole Child. University of Surrey, Roehampton.

LeCompte, M. D. (2000). Analyzing qualitative data. *Theory Into Practice, 39*(3), 146–154.

Leedy, P. D., & Ormrod, J. E. (2005). *Practical research: Planning and design* (8th ed.). Upper Saddle River, NJ: Prentice Hall.

Lee, H. L. (2012). *A home with hope and heart*. Prime Minister Lee Hsien Loong's National Day Rally 2012. Prime Minister's Office. Singapore. Retrieved July 20, 2014, from http://www.pmo.gov.sg/content/pmosite/mediacentre/speechesninterviews/primeminister/2012/August/prime_minister_leehsienloongsnationaldayrally2012speechinenglish.html

Lee, J. C. K., Williams, M., & Lo, L. N. K. (2006). Teachers, learners and curriculum. *School Improvement: International Perspectives*, 49-63.

Lee, J. J. (1980). Singapore: Bold internal decisions, emphatic external outlook. *Southeast Asian Affairs*, 273-291.

Lee, K.Y. (2000). *From third world to first: The Singapore story 1965 – 2000*. Singapore: Times Publishing.

Lee, O. K. (n.d.). *Teacher evaluation in Singapore.* Retrieved October 28, 2012, from http://www.oecd.org/dataoecd/36/25/44695022.ppt

Lee, S. K. (Ed.). (2008). *Toward a better future: Education and training for economic development in Singapore since 1965*. World Bank Publications.

Lee, V. E., & Burkam, D. T. (2002). *Inequality at the starting gate: Social background differences in achievement as children begin school*. Economic Policy Institute, 1660 L Street, NW, Suite 1200, Washington, DC 20036.

Lee, V. E., & Smith, J. B. (1995). Effects of high school restructuring and size on early gains in achievement and engagement. *Sociology of Education, 68,* 241–270.

Lee, V. E., & Smith, J. B. (1997). High school size: Which works best and for whom? *Educational Evaluation and Policy Analysis, 9,* 205–227.

Lee, V. E., Smith, J. B., & Croninger, R. G. (1997). How high school organization influences the equitable distribution of learning in mathematics and science. *Sociology of Education, 70,* 128–150.

Lefcourt, H. M., & Shepherd, R. S. (1995). Organ donation, authoritarianism, and perspective taking humour. *Journal of Research in Personality, 29* (1), 121–138.

Leigh, A. (2010). Estimating teacher effectiveness from two-year changes in students' test scores. *Economics of Education Review, 29*(3), 480-488.

Leigh, A., & Ryan, C. (2011). Long-run trends in school productivity: Evidence from Australia. *Education, 6*(1), 105-135.

Leithwood, K., Patten, S., & Jantzi, D. (2010). Testing a conception of how school leadership influences student learning. *Educational Administration Quarterly, 46*(5), 671–706.

Lemasters, L. K. (1999). *A synthesis of studies pertaining to facilities, student achievement and student behaviour.* Blacksburg, Virginia: Virginia Polytechnic and State University.

Lemov, D. (2010). *Teach Like a Champion: 49 Techniques that Put Students on the Path to College (K-12).* San Francisco, CA: John Wiley & Sons.

Levin, D. M. (2003). *The body's recollection of being: Phenomenology, psychology, and the deconstruction of nihilism.* New York: Routledge.

Lickona, T. (1991). *Educating for character: How our schools can teach respect and responsibility.* New York: Bantam.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: SAGE publications.

Lincoln, Y. S., & Guba, E. G. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research*, 105-117.

Linn, R. L., Graue, M. E., & Sanders, N. M. (1990). Comparing state and district test results to national norms: The validity of claims that "everyone is above average". *Educational Measurement: Issues and Practice, 9*(3), 5–14.

Little, J. W. (1987). Teachers as colleagues. In V. Richardson–Koehler (Ed.), *Educators' handbook: A research perspective* (pp. 491–518). New York, NY: Longman.

Little, J.W. (2002). Locating learning in teachers' communities of practice: Opening up problems of analysis in records of everyday work. *Teaching and Teacher Education 18*(8), 917–946.

Litvack–Miller, W., McDougall, D., & Romney, D. M. (1997). The structure of empathy during middle childhood and its relationship to pro–social behaviour. *Genetic, Social and General Psychology Monographs, 123* (3), 303–324.

Llewellyn, G., Sullivan, G., & Minichiello, V. (1999). Sampling in qualitative research. *Handbook for research methods in health sciences*, 173–199.

Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunette (Ed.), *Handbook of industrial and organizational psychology*. Chicago: Rand McNally.

Lortie, D. C. (1975). *Schoolteacher: A sociological study*. Chicago: University of Chicago Press.

Louis, K. S. & Gordon, M. F. (2006). *Aligning student support with achievement goals: The secondary principal's guide.* Thousand Oaks, CA: Corwin.

Louis, K. S., Kruse, S. D., & Bryk, A. S. (1995). Professionalism and community: What is it and why is it important in urban schools? In K. S. Louis, S. Kruse, & Associates (Eds.), *Professionalism and community: Perspectives on reforming urban schools* (pp. 3-24). Long Oaks, CA: Corwin.

Low, L., Toh, M. H., & Soon, T. W. (1991). *Economics of education and manpower development: Issues and policies in Singapore*. Singapore: McGraw-Hill.

Lowe, J. M. (1990). *The interface between educational facilities and learning climate in three elementary schools* (Unpublished doctoral dissertation). Texas A&M University, College Station, Texas.

Lowell, C., & Gallup, A. M. (2002). The 34th Annual Phi Delta Kappa/Gallup poll of the Public's attitude towards the Public Schools. *Phi Delta Kappan, 84* (1), 41–56.

Lucaites, J. L., Condit, C. M., & Caudill, S. (Eds.). (1999). *Contemporary rhetorical theory: A reader*. Guilford Press.

Lucas, J. (1981). *Effects of Noise on Academic Achievement and Classroom Behaviour*. Sacramento, CA: California Department of Health Services.

Luke, A., Freebody, P., Shun, L., & Gopinathan, S. (2005). Towards research–based innovation and reform: Singapore schooling in transition. *Asia Pacific Journal of Education, 25*(1), 5–28.

Lumsden, L. (1988). *Teacher morale*. Retrieved July 8, 2014, from http://eric.ed.gov/?id=ED422601

Macmillan, R. (September, 1999). Influence of workplace conditions on teachers' job satisfaction. *The Journal of Educational Research*.

Maehr, M. L., Midgley, C. & Urdan, T. (1992). School leader as motivator. *Educational Administration Quarterly, 28*(3), 410–429.

Malcomson, J. (1999). Individual Employment Contracts. In O. Ashenfelter , & D. Card (Eds.), *Handbook of labour economics*. (Vol. 3B., pp. 2291–2372). New York: Elsevier Science, North –Holland.

Mansfield, C., Beltman, S., & Price, A. (2014). 'I'm coming back again!'The resilience process of early career teachers. *Teachers and Teaching, 20*(5), 547–567.

Marshall, K. (October, 2013). *Burnout hits one in four teachers.* Retrieved July 7, 2014, from http://www.theage.com.au/victoria/burnout-hits-one-in-four-teachers-20131005-2v13y.html

Martin, A. J. (2005). The role of positive psychology in enhancing satisfaction, motivation, and productivity in the workplace. *Journal of Organizational Behaviour Management, 24*(1-2), 113–133.

Marzano, R. J., Gaddy, B. B., Foseid, M. C., Foseid, M. P., & Marzano, J. S. (2005). *A Handbook for Classroom Management that Works*. Alexandria, VA: Association for Supervision and Curriculum Development.

Mateer, N. H. (1993). *Altruism in Teachers: An Exploratory Study* (Unpublished doctoral dissertation). Pennsylvania State University.

Mathews, J. (1988). *Escalante: The best teacher in America*. New York: Holt.

Mauzy, D. K., & Milne, R. S. (2002). *Singapore politics under the People's Action Party*. New York: Routledge.

Maxwell, J. A. (2002). Understanding and validity in qualitative research. In A. M. Huberman & M. B. Miles (Eds.), *The qualitative researcher's companion* (pp. 37–64). Thousand Oaks, CA: SAGE publications.

May, P. R. (1971). *Moral education in school*. London: Methuen Educational Ltd.

Mayseless, O., Scharf, M., & Sholt, M. (2003). From authoritative parenting practices to an authoritarian context: Exploring the person-environment fit. *Journal of Research on Adolescence, 13*(4), 427–456.

McGee, H.M. (1955). Measurement of authoritarianism and its relation to teachers' classroom behaviour. *Genetic Psychology Monographs, 52*, 89–146.

McIntyre, D. J., & Byrd, D. M. (Eds.). (1998). *Strategies for career–long teacher education*. Teacher Education Yearbook VI. Thousand Oaks, CA: Corwin Press.

McKinsey & Company (2007). *How the world's best–performing schools systems come out on top*. Retrieved June 2, 2014, from http://mckinseyonsociety.com/downloads/reports/Education/Worlds_School_Systems_Final.pdf

McLoyd, V. C. (1998). Socioeconomic disadvantage and child development. *American Psychologist, 53*(2), 185–204.

Meador, D. (2014). *Qualities of an effective teacher: ten qualities of an effective teacher*. Retrieved July 14, 2014, from http://teaching.about.com/od/pd/a/Qualities-Of-An-Effective-Teacher.htm

Meadows, L. M., & Morse, J. M. (2001). Constructing evidence within the qualitative project. *The nature of qualitative evidence*, 187–200.

Meece, J. L., Anderman, E. M., & Anderman, L. H. (2006). Classroom goal structure, student motivation, and academic achievement. *Annu. Rev. Psychol., 57*, 487–503.

Meek, A. (1989). On creating ganas: A conversation with Jaime Escalante. *Educational Leadership, 46*(5), 46–47.

Meier, D., & Wood, G. (Eds.). (2004). *Many children left behind: How the No Child Left Behind Act is damaging our children and our schools.* Boston: Beacon Press.

Mendel, P. C. (1987). *An investigation of factors that influence teacher morale and satisfaction with work conditions* (Unpublished doctoral dissertation). University of Oregon, Canada.

Merleau-Ponty, M. (2006). *Phenomenology of perception* (C. Smith, Trans.). New York: Routledge. (Original work published 1945).

Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. San Francisco: Jossey–Bass.

Merriam Webster Collegiate Dictionary (2008). Eleventh edition. Springfield, MA: Merriam Webster Incorporated.

Meyrick, J. (2006). What is good qualitative research? *Journal of Health Psychology, 11*(5), 799–808.

Miech, R., & Elder Jr, G. H. (1996). The service ethic and teaching. *Sociology of Education, 69*, 237–253.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2013). *Qualitative data analysis: A methods sourcebook*. Thousand Oaks, CA: SAGE Publications.

Miller, R. (2006). Making connections to the world: Some thoughts on holistic curriculum. *Encounter, 19*(4), p. 19.

Miller, S. K. (1983). *The history of effective schools research: A critical overview*. Annual Meeting of the American Educational Research Association, Montreal, Canada.

Minichiello, V., Aroni, R., & Hays, T. (2008). *In–depth interviewing: principles, techniques, analysis* (3rd Ed.). Australia: Pearson Education.

Minor, L. C., Onwuegbuzie, A. J., Witcher, A. E., & James, T. L. (2002). Preservice teachers' educational beliefs and their perceptions of characteristics of effective teachers. *The Journal of Educational Research, 96*(2), 116–127.

Mitchell, C., & Sackney, L. (2011). *Profound improvement: Building capacity for a learning community* (2nd ed.). London: Taylor & Francis.

MOE (2005). *Greater support for teachers and school leaders*. Retrieved June 4, 2014, from http://www.moe.gov.sg/media/press/2005/pr20050922b.htm

MOE (2010). *Teacher evaluation and compensation in the Singapore education system.* Retrieved June 2, 2014, from *www.apecknowledgebank.org/file.aspx?id=2460*

MOE (2012a). *Primary education*. Retrieved March 15, 2012, from http://www.moe.gov.sg/education/primary/

MOE (2012b). *Desired outcomes of education*. Retrieved October 14, 2012, from http://www.moe.edu.sg/education/desired–outcomes/

MOE (2012c). *Education in Singapore*. Retrieved March 28, 2014, from http://www.moe.gov.sg/about/files/moe–corporate–brochure.pdf

MOE (2012d). *Gifted Education Programme: Rationale and goals*. Retrieved March 28, 2014, from http://www.moe.gov.sg/education/programmes/gifted–education–programme/rationale–andgoals

MOE (2012e). *New model for teachers' professional development launched.* Retrieved November 20, 2012, from http://www.moe.gov.sg/media/press/2012/05/new–model–for–teachers–profess.php

MOE (2012f). *MOE scraps secondary school banding.* Retrieved March 30, 2014, from http://www.moe.gov.sg/media/news/2012/09/moe–scraps–secondary–school–ba.php

MOE, Press Release (October 15, 2008). *Ms Grace Fu forms primary education review and implementation (PERI) committee***.** Retrieved July 1, 2014, from http://www.moe.gov.sg/media/press/2008/10/ms–grace–fu–forms–primary–educ.php

MOE (2014). *About us: Our vision*. Retrieved May 29, 2014, from http://www.moe.gov.sg/about/

Mokhtar, F. (2011, July 22). *Foreign talent allows Singapore to punch above its weight.* Retrieved March 25, 2014, from http://sg.news.yahoo.com/blogs/singaporescene/more–foreign–talents–equal–better–society–growth–lee–133937815.html

Morse, J. (2007). Strategies of intraproject sampling. In P. Munhall (Ed.), *Nursing research: A qualitative perspective* (pp. 529-41). Sudbury, MA: Jones and Bartlett.

Morse, W. C. (2000). Foreword. In M. Friend & L. Cook, Interactions: collaboration skills for school professionals (3rd ed., pp. xi-xii). New York: Longman.

Moustakas, C. E. (1994). *Phenomenological research methods.* Thousand Oaks, CA: SAGE publications.

Muller, C., Katz, S., & Dance, L. (1999). Investing in teaching and learning. Dynamics of the teacher–student relationship from each perspective. *Urban Education, 34*, 292–337.

Murnane, R. J., & Papay, J. (2010). Teachers' views on No Child Left Behind: Support for the principles, concerns about the practices. *Journal of Economic Perspectives*, *24*(3), 151–66.

Murnane, R. J., & Olsen, R. J. (1989). The effects of salaries and opportunity costs on length of stay in teaching: Evidence from Michigan. *Review of Economics and Statistics, 71*(2), 347–352.

Murnane, R.J., Singer, J. D., Willett, J. B., Kemple, J. J, & Olsen, R. J. (2009). *Who will teach?: Policies that matter*. Cambridge: Harvard University Press.

Myers, D. (1993). *Social psychology*. New York: McGraw–Hill.

Mykletun, R. (1984). Teacher stress: Perceived and objective sources, and quality of life. *Scandinavian Journal of Educational Research, 28,* 17–45.

National Centre for Educational Statistics. (1996). *The status of teaching as a profession*. (NCES 84017). Washington, D.C.: U.S. Government Printing Office.

National Education Association. (2007). *Voices from America's classrooms NCLB/ESEA It's time for a change!* Washington, DC. Retrieved from: http://www.nea.org/esea/nclbstories/index.html

National Educational Commission on Time and Learning (1994). *Prisoners of time.* Washington, DC: National Educational Commission on Time and Learning.

Natriello, G. (2002). At–Risk Students. In D.L. Levinson, A.R. Sadovnik, & Peter W. Cookson, Jr. (Eds.), *Education and sociology: An encyclopaedia*. New York: Routledge Falmer.

Naylor, C. (2001a). *Teacher workload and stress: An international perspective on human costs and systemic failure*. British Columbia Teachers' Federation Research Report.

Naylor, C. (2001b). *What do British Columbia teachers consider to be the most significant aspects of workload and stress in their work?* Analysis of qualitative data from the BCTF Worklife of Teachers Survey Series, 1: Workload and Stress. BCTF Research Report.

Naylor, C., & Malcolmson, J. (2001). "I love teaching but...": A study of the workload of English teachers in B.C. secondary grades. In C. Naylor, A. Schaefer, & J. Malcolmson (Eds.), *Worklife of B.C. teachers: A compilation of BCTF research reports on working and learning conditions in 2001* (pp. 15-46). Vancouver: British Columbia Teachers' Federation.

Naylor, C., & Schaefer, A. C. (2002). Teacher workload and stress: A British Columbia perspective. *Education Quarterly Review*, *8*(3), 33.

NCEE (2012). Teacher and Principal Quality. Retrieved December 2, 2012, from http://www.ncee.org/programs–affiliates/center–on–international–education–benchmarking/top–performing–countries/singapore–overview/singapore–teacher–and–principal–quality/

Neumann, A. (2006). Professing passion: emotion in scholarship of professors at research universities. *American Educational Research Journal*, *43*(3), 381–424.

Newton, J. (2000). Feeding the beast or improving quality? Academics' perception of quality assurance and quality monitoring. *Quality in Higher Education, 6*(2), 153 –163.

Ng, P. T. (2008a). Educational reform in Singapore: From quantity to quality. *Educational Research for Policy and Practice*, *7*(1), 5–15.

Ng, P. T. (2008b). Developing forward-looking and innovative school leaders: The Singapore leaders in education programme. *Journal of In-service Education*, *34*(2), 237-255.

Nias, J. (1989). *Primary Teachers Talking: A Study of Teaching as Work.* London, UK: Routledge

Nichols, S., & Berliner, D. (2007). *Collateral damage: How high-stakes testing corrupts America's schools.* Cambridge, MA: Harvard Education Press.

Noddings, N. (1986) *Caring – A feminine approach to ethics and moral education.* Berkeley and Los Angeles: University of California Press.

Noddings, N. (1988). An ethic of caring and its implication for instructional arrangements. *American Journal of Education, 96,* 215–230.

Noddings, N. (2002). *Educating moral people. A caring alternative to character education.* New York, NY: Teachers College Press.

Noddings, N. (2005). *The challenge to care in schools: An alternative approach to education.* New York, NY: Teachers College Press.

Noddings, N. (2013). *Caring: A relational approach to ethics and moral education*. Berkeley: University of California Press.

Noddings, N., & Shore, P. J. (1984). *Awakening the inner eye. Intuition in education*. New York, NY: Teachers College Press.

Nuthall, G. (2004). Relating classroom teaching to student learning: A critical analysis of why research has failed to bridge the theory–practice gap. *Harvard Educational Review, 74*, 273–306.

Nye, B., Konstantopoulos, S., & Hedges, L.V. (2004). How large are teacher effects? *Educational Evaluation and Policy Analysis*, *26*(3), 237–257.

OECD (2005). *Teachers matter: Attracting, developing and retaining effective teachers*. Paris: OECD Publishing.

OECD (2009). *Creating effective teaching and learning environments: First results from TALIS*. Paris: OECD Publishing.

OECD (2010). *Strong performers and successful reformers in education: Lessons from PISA for the United States*. Paris: OECD Publishing.

OECD (2012). *PISA in focus 16: Does performance-based pay improve teaching?* Paris: OECD Publishing.

OECD (2013). *PISA 2012 results: What students know and can do: Student performance in mathematics, reading and science (Volume 1).* Paris: OECD Publishing.

Oiler, C. (1982). The phenomenological approach in nursing research. *Nursing research*, *31*(3), 178–181.

Omoto, A. M. & Snyder, M. (1995). Sustained helping without obligation: Motivation, longevity of service, and perceived attitude change among AIDS volunteers. *Journal of Personality and Social Psychology*, *68*, 671–686.

Orlando, M. (2014). *Nine characteristics of a great teacher*. Retrieved 14 July, 3014, from http://www.facultyfocus.com/articles/philosophy-of-teaching/nine-characteristics-of-a-great-teacher/

OED Online (2014). Retrieved from http://www.oed.com/

Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research, 62,* 307–332.

Palardy, J. M., & Palardy, T. J. (1987). Classroom discipline: Prevention and intervention strategies. *Education, 108,* 87–92.

Palmer, P. J. (2010). *The courage to teach: Exploring the inner landscape of a teacher's life*. San Francisco, CA: John Wiley & Sons Inc.

Panitch, L. (1994). Globalisation and the State. In R. Miliband & L. Panitch (Eds.), *Between globalism and nationalism: Socialist register 1994*. London: The Merlin Press.

Parkay, F. W., Stanford, B. H., & Gougeon, T. D. (2010). *Becoming a teacher* (pp. 432–462). Pearson/Merrill.

Parliament of Singapore Report 12 (2014). *Head K–Ministry of Education*. Retrieved April 13, 2014 from http://sprs.parl.gov.sg/search/topic.jsp?currentTopicID=00005797–WA&currentPubID=00005790–WA&topicKey=00005790–WA.00005797–WA_5%2Bbudget%2B

Patrick, C.B. Hisley, J., & Kempler, T., (2000). What's everybody so excited about? The effects of teacher enthusiasm on student intrinsic motivation and vitality. *The Journal of Experimental Education, 68*(3), 217–36.

Patrick, H., Ryan, A. M., & Kaplan, A. (2007). Early adolescents' perceptions of the classroom social environment, motivational beliefs, and engagement. *Journal of Educational Psychology, 99*(1), 83–99.

Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: SAGE publications.

Peck, R. F., & Havighurst, R. J. (1960). *The psychology of character development*. New York: John Wiley & Sons Inc.

Pehkonen, E. (1992). *Problem fields in mathematics teaching. Part 3: Views of Finnish seventh-grades about mathematics teaching* (No. 108). Helsinki, Finland: University of Helsinki, Department of Teacher Education.

Penner, L. A., & Finkelstein, M. A. (1998). Dispositional and structural determinants of volunteerism. *Journal of Personality and Social Psychology*, *74* (2), 525–537.

Phillips, J. (2003). Powerful learning: Creating learning communities in urban school reform. *Journal of Curriculum and Supervision*, *18*(3), 240–258.

Phua, V. (2004). Convenience sample. In M. S. Lewis-Beck, A. Bryman & T. F. Liao (Eds.), *The SAGE encyclopedia of social science research methods* (Vol. 1, pp. 197). Thousand Oaks, CA: SAGE publications.

Pianta, R. C. (1999). *Enhancing relationships between children and teachers*. Washington, DC: American Psychological Association.

Pigozzi, M. J. (2006). What is the 'quality of education'? (A UNESCO perspective). In K. N. Ross & I. J. Genevois (Eds.), *Cross-national studies of the quality of education: Planning their design and managing their impact* (pp. 39–50). Paris: International Institute for Educational Planning.

Pinar, W. (2012). *What is curriculum theory?* (2nd ed.). New York, NY: Routledge.

Pinar, W., Reynolds, W., Slattery, P., & Taubman, P. (2002). *Understanding curriculum.* New York: Peter Lang.

Pintrich, P. R. (2000). An achievement goal theory perspective on issues in motivation terminology, theory, and research. *Contemporary Educational Psychology, 25*, 92–104.

Polkinghorne, D. E. (1983). *Methodology for the human sciences: Systems of inquiry*. Albany: State University of New York Press.

Polkinghorne, D. E. (1988). *Narrative knowing and the human sciences*. Albany: State University of New York Press.

Pomerantz, E. M., Moorman, E. A., & Litwack, S. D. (2007). The how, whom, and why of parents' involvement in children's academic lives: More is not always better. *Review of Educational Research, 77*(3), 373–410.

Popham, W. J. (2006, August). *An autumnal message: Let the AYP pigeons fly*. Retrieved August 1, 2014, from http://www.ioxassessment.com/download/AN%20AUTUMNAL%20MESSAGE.pdf

Porter, A. C. (2002). Measuring the content of instruction: Uses in research and practice. *Educational Researcher, 31*(7), 3–14.

Price, H. E. (2012). Principal–teacher interactions: How affective relationships shape principal and teacher attitudes. *Educational Administration Quarterly, 48*(1), 39–85.

Prince, C. D., Schuermann, P. J., Guthrie, J.W., Witham, P. J., Milanowski, A. T., & Thorn, C. A. (2009). *The other 69 percent: Fairly rewarding the performance of teachers of nontested subjects and grades.* Revised edition. Center for Education Compensation Reform. Retrieved June 8, 2014, from http://www.cecr.ed.gov/guides/other69Percent.pdf

Pring, R. (2000). The 'false dualism' of educational research. *Journal of Philosophy of Education, 34*(2), 247–260.

Pugach, M. C. (2005). Research on preparing teachers to work with students with disabilities. In M. Cochran–Smith & K. M. Zeichner (Eds.), *Studying teacher education: the report of the AERA panel on research and teacher education* (pp. 549–590). Mahwah, NJ: Lawrence Erlbaum Associates.

Purkey, W. W. (1970). *Self–concept and school achievement*. New York: Prentice–Hall.

Ragin, C. C. (1994). *Constructing social research: The unity and diversity of method*. Thousand Oaks, CA: Pine Forge Press.

Rand, A. (1964). *The virtue of selfishness: A new concept of egoism*. London, England: Penguin Books Ltd.

Raudenbush, S. W., Rowan, B., & Cheong, Y. F. (1992). Contextual effects on the self-perceived efficacy of high school teachers. *Sociology of Education, 65*(2), 150–167.

Raywid, M. A. (1993). Finding time for collaboration. *Educational Leadership, 51*(1), 30–34.

Reason, P., & Rowan, J. (Eds.). (1981). *Human inquiry: A sourcebook of new paradigm research*. Chichester: Wiley.

Redd, Z., Brooks, J., & McGarvey, A. (2001). *Background for community level work on educational adjustment in adolescence: Reviewing the literature on contributing factors* (Report prepared for the John S. & James L. Knight Foundation). Washington, DC: Child Trends.

Reeve, J. (2006). Teachers as facilitators: What autonomy–supportive teachers do and why their students benefit. *Elementary School Journal, 106*, 225–236.

Reich, R. B. (2001). *The future of success.* USA: Alfred A. Knopf.

Ricoeur, P. (1981). *Hermeneutics and the human sciences: Essays on language, action and interpretation*. UK: Cambridge University Press.

Reynolds, A. J., Weissberg, R. P., & Kasprow, W. J. (1992). Prediction of early social and academic adjustment of children from the inner city. *American Journal of Community Psychology, 20*(5), 599-624.

Richards, L. & Morse, J. M. (2012). *Readme first for a user's guide to qualitative methods* (3rd ed.). Thousand Oaks: CA: SAGE publications.

Richardson, V. (1996). The role of attitudes and beliefs in learning to teach. In J. Sikula (Ed.), *The handbook of research on teacher education: A project of the Association of Teacher Educators* (2nd ed., pp. 102–119). New York: Macmillan.

Richardson, V., & Fenstermacher, G. D (2001). Manner in teaching: The study in four parts. *Journal of Curriculum Studies, 33*, 631–637.

Riessman, C. K. (2002). Narrative analysis. In A. M. Huberman & M. Miles (Eds.) The qualitative researcher's companion (pp. 217-271). Thousand Oaks, CA: SAGE publications.

Ritchie, J., Lewis, J., & Elam, G. (2003). Designing and selecting samples. In J. Ritchie & J. Lewis (Eds.), *Qualitative research practice. A guide for social science students and researchers* (pp.77–108). Thousand Oaks, CA: SAGE publications.

Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005). Teachers, schools, and academic achievement. *Econometrica, 73*(2), 417–458.

Robertson, S. L. (1996). Teachers' work, restructuring and post-Fordism: Constructing the new professionalism. *Teachers' professional lives*, 28–55.

Robinson, V. M. J. (2007). *School leadership and student outcomes: Identifying what works and why* (ACEL Monograph Series No. 41). Winmalee, NSW, Australia: Australian Council for Educational Leaders, Inc.

Rocco, T. S., & Plakhotnik, M. S. (2009). Literature reviews, conceptual frameworks, and theoretical frameworks: Terms, functions, and distinctions. *Human Resource Development Review, 8*(120).

Rockoff, J. E. (2004). The impact of individual teachers on student achievement: Evidence from panel data. *American Economic Review*, *94*(2), 247–252.

Rockoff, J. E. (2008). *Does mentoring reduce turnover and improve skills of new employees? Evidence from teachers in New York City* (No. w13868). National Bureau of Economic Research.

Rockoff, J. E., & Speroni, C. (2010). Subjective and objective evaluations of teacher effectiveness. *The American Economic Review*, *100*, 261–266.

Rogers, B. (2011). *Classroom behaviour: A practical guide to effective teaching, behaviour management and colleague support* (3rd ed.). London: SAGE publications.

Rogers, C. R. (1975). Empathic: An unappreciated way of being. *The Counselling Psychologist, 5* (2), 2–9.

Rohrkemper, M., & Corno, L. (1988). Success and failure on classroom tasks: Adaptive learning and classroom teaching. *Elementary School Journal, 88*, 296–312.

Rosenholtz, S. J. (1989). *Teachers' workplace: The social organization of schools*. New York, NY: Teachers College Press.

Rosenthal, R. (1973). The pygmalion effect lives. *Psychology Today*.

Rothstein, R. (2004). Class and schools: Using social, economic, and educational reform to close the achievement gap. *Washington, DC: Economic Policy Institute*.

Rothstein-Fisch, C., & Trumbull, E. (2008). *Managing diverse classrooms: How to build on students' cultural strengths*. ASCD.

Rowan, B., Correnti, R., & Miller, R. (2002). What large-scale survey research tells us about teacher effects on student achievement: Insights from the prospects study of elementary schools. *The Teachers College Record, 104*(8), 1525–1567.

Rowe, K. J. (2003). *The importance of teacher quality as a key determinant of students' experiences and outcomes of schooling*. Retrieved July 3, 2014, from https://www.det.nsw.edu.au/proflearn/docs/pdf/Rowe_2003_Paper.pdf

Rowe, K. J. (2004). *The importance of teaching: Ensuring better schooling by building teacher capacities that maximize the quality of teaching and learning provision – implications of findings from the international and Australian evidence–based research*. Retrieved July 3, 2014, from http://research.acer.edu.au/cgi/viewcontent.cgi?article=1010&context=learning_processes

Rowe, K. J., & Hill, P. W. (1998). Modeling educational effectiveness in classrooms: The use of multilevel structural equations to model students' progress. *Educational Research and Evaluation, 4* (4), 307–347.

Rowe, K. J., Hill, P. W, & Holmes–Smith P. (1995). Methodological issues in educational performance and school effectiveness research: A discussion with worked examples (Leading article). *Australian Journal of Education, 39* (3), 217–248.

Ruddell, M. R. (2005). *Teaching content reading and writing.* Hoboken, N.J.: Wiley.

Rudd, G. A., & Wiseman, S. (1962). Sources of dissatisfaction among a group of teachers. *British Journal of Educational Psychology, 32*(3), 275–291.

Rudduck, J., Chaplain, R., & Wallace, G. (Eds.). (1996). *School improvement: What can pupils tell us?* London: David Fulton.

Rumberger, R. W., & Palardy, G. J. (2005). Test scores, dropout rates, and transfer rates as alternative indicators of high school performance. *American Educational Research Journal, 42*, 3–42.

Rushton, J. P., Chrisjohn, R. D., & Fekken, G. C. (1981). The altruistic personality and the self–report altruism scale. *Personality and Individual Differences, 2*, 293–302.

Rutt, J. (2006) *On hermeneutics*. E-LOGOS ISSN 1121-0442. Retrieved from http://nb.vse.cz/kfil/elogos/student/rutt.pdf

Rutter, M. (1983). School effects on pupil progress: Research findings and policy implications. *Child Development, 54*, 1–29.

Ryan, K., & Bohlin, K. (1999). *Building character in schools*. San Francisco: Jossey–Bass.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivation: Classic definitions and new directions. *Contemporary Educational Psychology, 25*, 54–67.

Sandelowski, M. (1991). Telling stories: Narrative approaches in qualitative research. *IMAGE: Journal of Nursing Scholarship, 23*(3), 161–166.

Sandelowski, M. (1993). Rigor or rigor mortis: the problem of rigor in qualitative research revisited. *Advances in Nursing Science*, *16*(2), 1–8.

Sandelowski, M. (1995). Sample size in qualitative research. *Research in Nursing & Health*, *18*(2), 179–183.

Sandelowski, M. & Barroso, J. (2002). Finding the findings in qualitative studies. *IMAGE: Journal of Nursing Scholarship, 34*(3), 213–219.

Sanders, W. L., & Rivers, J. C. (1996). *Cumulative and residual effects of teachers on future student academic achievement*. Retrieved July 11, 2014, from http://mccluelearning.com/wp-content/uploads/2011/09/Cumulative-and-Residual-Effects-of-Teachers.pdf

Sargent, T. C., & Hannum, E. (2009). Doing more with less teacher professional learning communities in resource-constrained primary schools in rural china. *Journal of Teacher Education*, *60*(3), 258–276.

Sartre. J. P. (1965/1993). *Essays in existentialism.* New York, NY: Citadel Press, Kensington Publishing.

Sartre, J. P. (2012). *Being and nothingness*. Open Road Media.

Sattes, B. (1985). *Parent involvement: A review of the literature*. Charleston, WV: Appalachia Educational Laboratory.

Sawchuk, S. (2011). EWA research brief: What studies say about teacher effectiveness. *Washington DC: Education Writers Association.* Retrieved September 8, 2014, from http://www.oxydiane.net/IMG/pdf/TeacherEffectiveness-final.pdf

Sayed, Y. (1997). The concept of quality in education: A view from South Africa. *Educational Dilemmas: Debate and Diversity*, *4*, 21–29.

Schaefer, A. (2001a). *Demographic overview: teacher workload issues and stress survey,* Spring 2001. British Columbia Teachers' Federation Research Report.

Schaefer, A. (2001b). *How I spent my summer vacation: Time use data from the Spring 2001 BCTF Worklife of Teachers Survey Series–Workload issues and stress.* British Columbia Teachers' Federation Research Report.

Schleicher, A. (2011). *Building a high–quality teaching profession: lessons from around the world*. Paris: OECD.

Schroeder, D. A., Penner, L. A., Dovidio, F. J., & Piliavin, J. A. (1995). *The psychology of helping and altruism: Problems and puzzles.* New York: McGraw-Hill.

Schwab, R. L., Jackson, S. E., & Schuler, R. S. (1986). Educator burnout: Sources and consequences. *Educational Research Quarterly*, *10*(3), 30–40.

Schwandt, T. A. (2000). Three epistemological stances for qualitative inquiry: Interpretivism, hermeneutics and social constructivism. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed.) (pp. 189–214). Thousand Oaks, CA: SAGE publications.

Scott, P. (1998). Massification, internationalisation and globalisation. In P. Scott (Ed.), *The Globalisation of Higher Education*. SHRE / Open University Press, Buckingham.

Scott, C. & Dinham, S. (1999). The Occupational motivation, satisfaction and health of English school teachers. *Educational Psychology*, *19* (3), 287–309.

Scott-Jones, D. (1984). Family influences on cognitive development and school achievement. *Review of research in education*, 259-304.

Seale, C., & Silverman, D. (1997). Ensuring rigour in qualitative research. *The European Journal of Public Health*, *7*(4), 379–384.

Seashore, K., Anderson, A., & Riedel, E. (2003). *Implementing arts for academic achievement: The impact of mental models, professional community and interdisciplinary teaming*. Retrieved July 20, 2014, from http://conservancy.umn.edu/bitstream/11299/143717/1/Report.pdf

Sekaran, U. (2003). *Research methods for business* (4th ed.). Hoboken, NJ: John Wiley & Sons.

Selder, F. E., & Paustian, A. (1989). Burnout: Absence of vision. *Loss, Grief and Care, 3,* 73–93.

Seldin, P. (2006). *Evaluating faculty performance: A practical guide to assessing teaching, research, and service*. San Franscisco, CA: Anker Publishing Co., Inc.

Selwyn, D. (2007). Highly qualified teachers: NCLB and teacher education. *Journal of Teacher Education, 58*(2), 124–136.

Sen, K. (2013). The political dynamics of economic growth. *World Development, 47*, 71–86.

Shepard, L. (2000). *The role of classroom assessment in teaching and learning*. Center for the Study of Evaluation. National Center for Research on Evaluation, Standards and Student Testing. Retrieved August 8, 2014, from http://www.cse.ucla.edu/products/Reports/TECH517.pdf

Shivers, N. L. (2004). Firing "immoral" public employees: If article 8 of the European convention on human rights protects employee privacy rights, then why can't we? *Arizona Journal of International & Comparative Law, 21*(2), 621–661.

Sia, L. (1976, March 24). Teachers made whipping boys, says Sia. *The Straits Times*, p. 11. Retrieved from http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19760324-1.2.74.4.aspx

Silverman, D. (2011). *Interpreting qualitative data*. Thousand Oaks, California: SAGE Publications.

Silverman, D. (2013). *Doing qualitative research: A practical handbook*. Thousand Oaks, California: SAGE Publications.

Sinclair, C. (2008). Initial and changing student teacher motivation and commitment to teaching. *Asia-Pacific Journal of Teacher Education, 36*(2), 79–104.

Singapore Budget (2013). Ministry of Finance, Singapore. Retrieved July 14, 2012, from http://www.mof.gov.sg/budget_2013/expenditure_overview/moe.html

Sirin, S. R. (April, 2003). *The relation between socioeconomic status and school achievement: A meta–analytic review of research 1990–2000*. Paper presented at the 2003 Society for Research in Child Development Biennial Meeting, Tampa, FL.

Sirin, S. R., & Rogers–Sirin, L. (2004). Exploring school engagement of middle–class African American adolescents. *Youth and Society, 35*(3), 323–340.

Sizemore, R. W. (1981). Do Black and White students look for the same characteristics in teachers? *Journal of Negro Education, 50(*1), 48–53.

Skinner, B. F. (1976). *About behaviourism*. New York: Vintage Books.

Skinner, E. A., Furrer, C., Marchand, G., & Kinderman, T. (2008). Engagement and disaffection in the classroom: Part of a larger motivational dynamic. *Journal of Educational Psychology, 100*(4), 765–781.

Slavin, R. E. (2012). Educational psychology: Theory and practice (10th ed.). Boston: Allyn & Bacon.

Smith, D. (1991). Hermeneutic inquiry: The hermeneutic imagination and pedagogic text. In E. Short (Ed.), *Forms of curriculum inquiry* (pp. 187–209). Albany: State University of New York Press.

Smith, D. (1997). Phenomenology: Methodology and method. In J. Higgs (Ed.), *Qualitative research: Discourse on methodologies* (pp. 75–80). Sydney, New South Wales, Australia: Hampden Press.

Smith, D., & Goh, W. L. (2003). Prevalence and Sources of Burnout in Singapore Secondary School Physical Education Teachers. *Journal of Teaching in Physical Education*, *22*, 203–218.

Smith, J. A., & Osborn, M. (2003). Interpretative phenomenological analysis. In J.A. Smith (Ed.), *Qualitative psychology: A practical guide to research methods*. Thousand Oaks, CA: SAGE Publications.

Smith, K. B., & Meier, K. J. (1994). Politics, bureaucrats and schools. *Public Administration Review, 54*, 551–558.

Smith, T. M., & Ingersoll, R. M. (2004). What are the effects of induction and mentoring on beginning teacher turnover? *American Educational Research Journal*, *41*(3), 681–714.

Snipes, R. L., Oswald, S. L., LaTour, M., & Armenakis, A. A. (2005). The effects of specific job satisfaction facets on customer perceptions of service quality: an employee–level analysis. *Journal of Business Research 58*, 1330–1339.

Sockett, H. (1993). *The moral base for teacher professionalism*. New York: Teachers College Press.

Soon, T. W. (1988). *Singapore's new education system: Education reform for national development*. Institute of Southeast Asian Studies.

Spradley, J. P. (1979). *The ethnographic interview*. New York: Holt, Rinehart and Winston.

Steeves, P. (1994). Phenomenology and the possibility of narrative. *CLIO, 24*(1), 21–28.

Steinberg, L. (2001). We know some things: Parent-adolescent relationships in retrospect and prospect. *Journal of Research on Adolescence, 11*, 1–19.

Stenlund, K. V. (1995). Teacher perceptions across cultures: The impact of students on teacher enthusiasm and discouragement in a cross-cultural context. *Alberta Journal of Educational Research, 41*(2), 145–161.

Stephens, C. E. (2001). *Report to the Governor on teacher retention and turnover*. Athens, GA: Standards Commission.

Stipek, D. J. (2001). *Motivation to learn: Integrating theory and practice* (4th ed.). Boston: Pearson Allyn & Bacon.

Stodolsky, S. S., & Grossman, P. L. (1995). The impact of subject matter on curricular activity: An analysis of five academic subject areas. *American Educational Research Journal, 32*, 227–249.

Straughan, R. (1988). *Can we teach children to be good?* London: Open University Press.

Strawser, M. (2009). Assessing assessment: Toward a hermeneutic-phenomenological perspective. *InSight: A Journal of Scholarly Teaching, 4*, 56–68.

Strike, K. A. (1990). The legal and moral responsibility of teachers. In J. I. Goodlad, R. Soder, & K. Sirotnik (Eds.). *The moral dimensions of teaching*. San Francisco: Jossey–Bass Publishers.

Strike, K. A., & Soltis, J. (1992). *The ethics of teaching* (2nd ed.). New York: Teachers College Press.

Stronge, J. H. (2007). *Qualities of effective teachers* (2nd ed.). Alexandria VA: Association for Supervision and Curriculum Development.

Stronge, J. H., & Tucker, P. D. (2000). *Teacher evaluation and student achievement.* Washington, DC: National Education Association.

Sunstein, B.S., & Chiseri–Strater, E. (2007). *Fieldworking: Reading and writing research*. Boston: Bedford/St.Martin's.

Sutton, R. E., & Wheatley K. F. (2003). Teacher's emotions and teaching: A review of the literature and directions for future research. *Educational Psychology Review, 15*(4), 327–358.

Switzer, G. E., Dew, M. A., Butterworth, V. A., Simmons, R. G., & Schimmel, M. (1997). Understanding donor's motivations: A study of unrelated bone marrow donors. *Social Science & Medicine, 45* (1), 137–147.

Tam, M. (2001). Measuring quality and performance in higher education. *Quality in Education, 7*(1), 4–54.

Tan, C. (2008). Tensions in an ability–driven education. In J. Tan & P.T. Ng (Eds.), *Thinking schools, learning nation* (pp. 7–18). Singapore: Prentice Hall.

Tan, J. (2008). Whither National Education? In J. Tan & P.T. Ng (Eds.), *Thinking schools, learning nation* (pp. 72–86). Singapore: Prentice Hall.

Tan, J., & Gopinathan, S. (2000). Education reform in Singapore: Towards greater creativity and innovation. *NIRA review, 7*(3), 5–10.

Tan, K. P. (2008). Meritocracy and elitism in a global city: Ideological shifts in Singapore. *International Political Science Review, 29*(1), 7–27.

Tan, N. (1979, April 22). The search for quality teachers. *The Straits Times*, p. 16. Retrieved from http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19790422-1.2.77.7.aspx

Tang, N. N. (2001). Address to the Malaysian National Convention for Trainers of English Language Learning and Teaching, Kuala Lumpur, Malaysia, 27–30 August.

Tapper, D. (1995). *Swimming upstream: The first year experience of teachers working in New York City public schools*. New York: Educational Priorities Panel.

Taylor, B. M., Pearson, D., Clark, K., & Walpole, S. (1999). Effective schools, accomplished teachers. *Reading Teacher*, *53*(2), 156–159.

Taylor, S. J., & Bogdan, R. (1984). *Introduction to qualitative research methods: The search for meanings* (2nd ed.). New York: Wiley.

Teddlie, C., & Tashakkori, A. (2009). *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioural sciences.* Thousand Oaks, CA: SAGE publications.

Teo, C. H. (2001, July*).* Speech by Radm (NS) Teo Chee Hean, minister for education and second minister for defence at the NIE teachers' investiture ceremony on Wednesday, 4 July2001 at 9.30 am at the Singapore indoor stadium. Retrieved March 14, 2012, from http://www.moe.gov.sg/media/speeches/2001/sp04072001.htm

Tesch, R. (2013). *Qualitative research: Analysis types and software tools*. New York, NY: Routledge.

Tharman, S. (2005a). *Achieving quality: Bottom up initiative, top down support*. Speech by Mr Tharman Shanmugaratnam, Minister for Education, at the MOE Work Plan Seminar 2005 at the Ngee Ann Polytechnic Convention Centre, Singapore, 22 September.

Tharman, S. (2005b). Parliamentary reply by Mr Tharman Shanmugaratnam, Minister for Education, at the Singapore Parliament, 9 March.

The Economist Intelligence Unit (2014). *Worldwide cost of living 2014*. Retrieved March 25, 2014, from http://www.cfoinnovation.com/system/files/EIU_WCOL%20–%20February%202014.pdf

Thomas, R. (2011). My nine "truths" of data analysis. *Education Week*, *30*(35), 36.

Thomas, T. (2011). *Ten traits of a great teacher.* Retrieved December 20, 2014, from http://www.integratedcatholiclife.org/2011/10/thomas-ten-traits-of-a-great-teacher/

Thorne, S., Kirkham, S. R., & MacDonald-Emes, J. (1997). Focus on qualitative methods. Interpretive description: a non-categorical qualitative alternative for developing nursing knowledge. *Research in nursing & health*, *20*(2), 169–177.

Tizard, J., Schofield, W. N., & Hewison, J. (1982). Collaboration between teachers and parents in assisting children's reading. *British Journal of Educational Psychology*, *52*(1), 1-15.

Tobin, K., & McRobbie, C. J. (1996). Cultural myths as constraints to the enacted science curriculum. *Science Education, 80*, 223–241.

Tom, A. R. (1984). *Teaching as a moral craft*. New York: Longman.

Toole, J. C., & Louis, K. S. (2002). The role of professional learning communities in international education. In K. Leithwood & P. Hallinger (Eds.), *Second international handbook of educational leadership and administration* (pp. 245-279). Dordrecht: Kluwer.

Trimmer, K. J. (2011). *Non–compliance by school principals: The effects or experience, stakeholder characteristics and governance mechanisms on reasoned risk–taking in decision–making*. Retrieved from http://espace.library.curtin.edu.au/R?func=dbin-jump-full&object_id=159520

Tripp, D. (2002). *Valuing the teaching profession: purpose, passion and hope*. Invited formal response to Margot Cameron–Jones' and Belinda Charles' plenary papers presented at the Singapore National Institute of Education Symposium to mark the opening of the Nanyang Campus, 25 January.

Tripp, D. (2004). Teachers' networks: a new approach to the professional development of teachers in Singapore. In C. Day & J. Sachs (Eds.), *International handbook on the continuing professional development of teachers*. (pp. 191–214). Maidenhead: Open University Press.

Tucker, P. D., & Stronge, J. H. (2005). *Linking teacher evaluation and student learning*. Alexandria, VA: Association for Supervision and Curriculum Development.

Turner, J. C., Christensen, A., & Meyer, D. K. (2009). Teachers' beliefs about student learning and motivation. In *International handbook of research on teachers and teaching* (pp. 361–371). USA: Springer.

Tye, B. B., & O'Brien, L. (2002). Why are experienced teachers leaving the profession? *Phi Delta Kappan, 84*(1), 24–32.

Unger, L. S. & Thumuluri, L. K. (1997). Trait empathy and continuous helping: The case of voluntarism. *Journal of Social Behaviour and Personality, 12* (3), 785–800.

U.S. Census Bureau (2001). *Poverty in the United States: 2001*. Retrieved August 8, 2014, from http://www.census.gov/prod/2002pubs/p60-219.pdf

U.S. Department of Education. (2011). *A blueprint for reform: The reauthorization of the elementary and secondary education act*. Retrieved April 12, 2014 from https://www2.ed.gov/policy/elsec/leg/blueprint/publication_pg4.html

Vallerand, R. J. (2004). Intrinsic and extrinsic motivation in sport. *Encyclopedia of Applied Psychology, 2*, 427–435.

Vallerand, R. J. (2008). On the psychology of passion: In search of what makes people's lives most worth living. *Canadian Psychology, 49*, 1–13.

Vallerand, R. J., & Ratelle, C. F. (2002). Intrinsic and extrinsic motivation: A hierarchical model. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 37–63) Rochester, NY: University of Rochester Press.

Valli, L. (1997). Listening to other voices: A description of teacher reflection in the United States. *Peabody Journal of Education, 72*(1), 67–88.

Valli, L. (2008). *Test driven: High-stakes accountability in elementary schools*. New York: Teachers College Press

Van Driel, J., Bulte, A., & Verloop, N. (2007). The relationships between teachers' general beliefs about teaching and learning and their domain specific curricular beliefs. *Learning and Instruction, 17*, 156–171.

Van Manen, M. (1991). *The tact of teaching: The meaning of pedagogical thoughtfulness*. London, ON: Althouse Press.

Van Manen, M. (2003). *Researching lived experience: Human science for an action sensitive pedagogy* (3rd ed.). London, ON: Althouse Press.

Van Manen, M. (Ed.). (2005). *Writing in the dark: Phenomenological studies in interpretive inquiry* (2nd ed.). London, ON: Althouse Press.

Van Manen, M. (2007). Phenomenology of practice. *Phenomenology & Practice, 1*(1), 11-30.

Van Manen, M., & Levering, B. (1996). *Childhood's secrets: Intimacy, privacy and the self reconsidered*. New York: Teachers College Press.

Vasquez, J. A. (1988). Contexts of learning for minority students. *Educational Forum, 52*, 243–253.

Vogt, F. (2002). A Caring Teacher: explorations into primary school teachers'professional identity and ethic of care. *Gender and Education, 14*, 251–264.

Voight, B. (2010). *Building relationships for effective student management*. Retrieved March 27, 2014, from http://barryvoight.efoliomn.com/Uploads/behavior%20management%20plan.pdf

Vrasidas, C., & Glass, G.V. (Eds.). (2004). *Online professional development for teachers.* Greenwich, CN: Information Age.

Vygotsky, L. S. (1978). *Mind in Society*. London and Cambridge, MA: Harvard University Press.

Walsh, K. (2010, July 12). Kate Walsh responds: The bottom line [blog comment]. Retrieved August 8, 2014, from http://education.nationaljournal.com/2010/07/defining-effective teachers.php#1604499

Watson, B., & Ashton, E. (1995). *Education, assumptions and values*. London: David Fulton.

Watts, G., & Castle, S. (1993).The time dilemma in school restructuring. *Phi Delta Kappan, 75*(10), 306–310.

Wayne, A. J., & Youngs, P. (2003). Teacher characteristics and student achievement gains: A review. *Review of Educational Research, 73*(1), 89–122.

Weaver, I. I., Richard, L., & Cotrell, H. W. (1987). Ten specific techniques for developing humour in the classroom. *Education, 108*(2), 144–169.

Weimer, M. (2013). *Learner-centered teaching: Five key changes to practice*. New York: John Wiley & Sons.

Weinstein, C. S. (1998). 'I want to be nice, but I have to be mean': exploring prospective teachers' conceptions of caring and order. *Teaching and Teacher Education, 14*, 153–163.

Weiss, R. S. (1995). *Learning from strangers: The art and method of qualitative interview studies*. Simon and Schuster.

Wenglinsky, H. (2000). *How Teaching Matters: Bringing the Classroom Back into Discussions of Teacher Quality.* Princeton, NJ: Educational Testing Service.

Wenglinsky, H. (2002, February 13). How schools matter: The link between teacher classroom practices and student academic performance. *Education Policy Analysis Archives, 10*(12). Retrieved March 10, 2012, from http://epaa.asu.edu/epaa/v10n12/

West, J. P., & West, C. M. (Summer, 1989). Job stress and public sector occupations. *ROPPA. 9*(3), 46–65.

Williams M. & Burden R. L. (1997). Psychology for Language Teachers: a Social Constructivist Approach. Cambridge: Cambridge University Press

Williamson, R., & Blackburn, B. R. (2013). *Rigorous schools and classrooms: Leading the way*. New York, NY: Routledge.

Wilson, S. M. (2011). How can we improve teacher quality? *Phi Delta Kappan, 93*(2), 64–67.

Wilson, T. D. (2002). Alfred Schutz, phenomenology and research methodology for information behaviour research. *The New Review of Information Behaviour Research, 3*(71), 1-15.

Winkley, D. (1996). *Towards the human school – Principles and practice.* Paper presented to the conference, Beyond Market Forces –Creating the Human School. West Hill College, Birmingham.

Winograd, T., & Flores, F. (1986). *Understanding computers and cognition: A new foundation for design*. Norwood, NJ: Ablex.

Wittrock, M. C. (1978). The cognitive movement in instruction. *Educational Psychologist, 13*, 15–29.

Wolcott, H. (1990). *Writing up qualitative research*. Newbury Park, CA: SAGE publications.

Wolters, C. A. (2004). Advancing achievement goal theory: Using goal structures and goal orientations to predict students' motivation, cognition, and achievement. *Journal of Educational Psychology, 96*, 236–250.

Woodward, B. A. (2011). *Amidst the test: The lived experience of teaching "under" No Child Left Behind* (Unpublished doctoral dissertation). University of Maryland, College Park.

World Bank (2014). *Public spending on education, total (% of GDP).* Retrieved August 9, 2014, from http://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS

Wynne, E., & Ryan, K. (1997). *Reclaiming our schools: Teaching character, academics, and discipline*. New Jersey: Merrill.

Yasin, S. (1999). *The supply and demand of elementary and secondary school teachers in the United States*. ERIC Clearinghouse on Teaching and Teacher Education.

Yeoh, O. C., Lam, T. L. P., & Foong, Y. Y. (1994). *Teacher curriculum belief, concerns and practice: Implications for implementing curriculum change in primary school*. Singapore: Nanyang Technological University.

Yin, R. K. (2009). *Case study research: Design and methods* (Vol. 5). Los Angeles, CA: SAGE publications.

Young, B. B. (1978). Anxiety and stress—how they affect teachers' teaching. *NASSP Bulletin, 62*, 78–80.

Zakrzewski, V. (2012, September, 18). Four ways teachers can show they care. Retrieved June 14, 2014, from http://greatergood.berkeley.edu/article/item/caring_teacher_student_relationship

Zimmerman, B. J. (1995). Self-regulated learning and academic achievement: An overview. *Educational Psychologist, 21*, 3–8.

# Appendix A: Ethics Clearance

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OFFICE OF RESEARCH AND HIGHER DEGREES
EthicsCommittee Support Officer
PHONE (07) 4631 2690 | FAX (07) 4631 1995
EMAIL ethics@usq.edu.au

Friday, 29 June 2012

Kamariah Mohamed
Email: Kamariah.mohamed@usq.edu.au; kmemohd@yahoo.com

CC: Anne Jasman (Supervisor)

Dear Kamariah

The USQ Human Research Ethics Committee (HREC) at its meeting on assessed your application and agreed that your proposal meets the requirements of the *National Statement on Ethical Conduct in Human Research (2007)*. Your project has been endorsed and full ethics approval granted.

| | |
|---|---|
| Project Title | Singaporean teachers' voice on improving teaching quality for enhancing student outcomes |
| Approval no. | H12REA098 |
| Expiry date | 30.06.2013 |
| HREC Decision | **Approved as submitted** |

The standard conditions of this approval are:

(a) conduct the project strictly in accordance with the proposal submitted and granted ethics approval, including any amendments made to the proposal required by the HREC
(b) advise (email: ethics@usq.edu.au) immediately of any complaints or other issues in relation to the project which may warrant review of the ethical approval of the project
(c) make submission for approval of amendments to the approved project before implementing such changes
(d) provide a 'progress report' for every year of approval
(e) provide a 'final report' when the project is complete
(f) advise in writing if the project has been discontinued.

For (c) to (e) forms are available on the USQ ethics website: http://www.usq.edu.au/research/ethicsbio/human

Please note that failure to comply with the conditions of approval and the *National Statement (2007)* may result in withdrawal of approval for the project.

You may now commence your project. I wish you all the best for the conduct of the project.

**Melissa McKain**
Ethics Committee Support Officer
Office of Research and Higher Degrees

**Appendix B: Information Sheet for Participants of Interview**

**INFORMATION SHEET FOR PARTICIPANTS OF INTERVIEW**

**HREC Approval Number: H12REA098**

**Title: Singaporean Teachers' Voices on Teacher and Teaching Quality**

**Principal Researcher:** Kamariah Binte Mohamed
**Other Researchers**: Associate Professor Karen Trimmer
Associate Professor Anne Jasman

**Dear Colleagues**,

The following information is designed to assist you in deciding whether to participate in this study by agreeing to be interviewed by me.

Your participation, though greatly appreciated for the success of my research, is entirely voluntary.

**Background**

Teachers in Singapore are touted to be one of the best educators by international standard (OECD, 2011) but a review of the literature suggests that we know very little about the views of teachers, and their authentic views of what makes a difference to the quality of their teaching. There are research studies which provide different perspectives on what constitute a quality teacher but they do not necessarily reflect the views of teachers.

**Purpose of the study**

This study will attempt to hear the voices of the teachers. The teachers' voices, in my opinion is very important as they are most directly responsible for the education of students. The broad patterns that emerge will be used to relate to past experiences and literature.

**Methods of Data Collection**

This research will involve the collection of information from a total sample of nine ex–primary school teachers. You are one of nine teachers specially selected to be asked if you would like to volunteer to participate in a face–to–face interview. The interview will be audio–taped to ensure that your views are recorded accurately.

You may withdraw from the study at any time, without affecting your relationship with the researcher(s) or the University of Southern Queensland now or in the future.

You may stop the interview at any time if you do not wish to continue, the audio recording will be erased and the information provided will not be included in the study.

Transcript of the interview and analysis will be emailed to you for any amendment to ensure accuracy.

Should you have any queries regarding the progress or conduct of this research, you can contact the principal researcher:

Kamariah Mohamed
Faculty of Business, Education, Law and Arts
L Block Room 413
West Street, Toowoomba 4350
Office: 61 7 46311539
Mobile: +61452268030
Email: Kamariah.Mohamed@usq.edu.au

**Confidentiality and anonymity**

The identities of all participants and schools will remain confidential at all stages of the project and in the resulting reports and publications. Audio recordings as well as the transcripts of the interviews will be kept in a locked cabinet in the researcher's office and deleted/shredded after five years.

**Ethics approval and contacts**

If you have any ethical concerns with how the research is being conducted or any queries about your rights as a participant please feel free to contact the University of Southern Queensland Ethics Officer on the following details.

Ethics and Research Integrity Officer
Office of Research and Higher Degrees
University of Southern Queensland
West Street, Toowoomba 4350
Ph: +61 7 4631 2690
Email: ethics@usq.edu.au

Thank you for taking the time to read this information sheet. It is anticipated that the interview will take about one hour to complete.

**Appendix C: Consent Form for Interviewees**


**INTERVIEWEE CONSENT FORM**

**Title: Singaporean Teachers' Voices on Teacher and Teaching Quality**

I, .....[PRINT NAME], give consent to my participation in the research project

In giving my consent I acknowledge that:

1. The procedures required for the project and the time involved have been explained to me, and any questions I have about the project have been answered to my satisfaction.
2. I have read the Participant Information Statement and have been given the opportunity to discuss the information and my involvement in the project with the researcher/s.
3. I understand that I can withdraw from the study at any time, without affecting my relationship with the researcher(s) or the University of Southern Queensland now or in the future.
4. I understand that my involvement is strictly confidential and no information about me will be used in any way that reveals my identity.
5. I understand that being in this study is completely voluntary – I am not under any obligation to consent.
6. I understand that I can stop the interview at any time if I do not wish to continue, the audio recording will be erased and the information provided will not be included in the study.
7. I understand that the interview will take about one hour and will be audio–taped. I also understand that the transcript and analysis will be sent to me via email for amendments and confirmation.

Name of Participant:

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Signature: Date:

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**Statement by Investigator**

☐ I have explained the project & the implications of participation in it to this volunteer and I believe that the consent is informed and that s/he understands the implications of participation

If the Investigator has not had an opportunity to talk to participants prior to them participating, the following must be ticked.

☐ The participant has received the Information Sheet where my details have been provided so participants have the opportunity to contact me prior to consenting to participate in this project.

Name of Investigator: Kamariah Mohamed

Signature of Investigator