Interrogating School Effectiveness and Socio Economic Status:

The Implications for South Africa

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COMPULSORY DECLARATION

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

Signature:_____ Date:_____

ACKNOWLEDGEMENTS

Ejiroghene! Ejiroghene! Oghenerukevwe! Ejiroghene!

I have heard it said that when one crosses a milestone in life, one's success was made possible not merely by their own achievement but by the contribution of those who came alongside. Therefore this journey would not have been completed without the loving support of:

My Parents, who continuously motivate and encourage me to succeed. Beulah, who willingly supported me as my library sidekick, encouraged me and who is the best little sister ever! 'Wole, who loved me, believed in me, pushed me and prayed for me. Mo ni fe re!

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Thank you!

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Abbreviations

DET		Department of Education and Training
HOA		House of Assembly
HOR		House of Representatives
LIB		Low International Benchmark
SES		Socio-economic Status

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ABSTRACT

The concern of most education systems, especially those found in South Africa, lies in the need to increase student achievement amongst learners from disadvantaged backgrounds. In an effort to meet the aim of improved student achievement, the literature focuses on notions of effectiveness and quality as standards of education that can result in better outcomes. However, such efforts are beset by internal debates, particularly those which argue that school effects matter more than family effects in student achievement. This dissertation undertakes a critical review of the literature on school effectiveness and quality and examines arguments regarding socio-economic status (SES) (which is linked to the notion of family effects) and its role in achievement. The analysis finds that both school and family effects have an impact on achievement that is equally important and relevant. The dissertation concludes by highlighting areas for action in reference to the findings on socio-economic status and achievement.

INTRODUCTION

In an increasingly globalised world hungry for greater development and growth, education has become the central point of the discourse on growth and the ever present drive toward modernity. This is most prevalent in the global drive towards education for all. For the African continent, the need to catch up and keep up with Western and Asian nations drives national efforts for better education for citizens and underscores the proliferation of universal basic education initiatives in the 1980s. These initiatives have increased access to education for many children, as is the case of South Africa with one of the highest gross enrolment ratios at nearly 100% (Pendlebury, 2009).

However, in South Africa, the increase in access to education for all has not reflected widely in the transformation of livelihoods. More specifically, access to education and its resources has not resulted in a change in the prospects of the historically marginalized (Nattrass and Seekings, 2001; Van der Berg and Burger, 2003). As international, regional, and local studies in student performance show, South African learners continue to under-perform and thus under-achieve academically (Mullis et al., 2007; Moloi and Strauss, 2005; Van der berg and Burger, 2003). Moreover, the phenomenon of poor achievement occurs differentially between schools that were historically disadvantaged and between learners of different social backgrounds (Reddy, 2006). This persistent poor performance of South African learners has been seen in the literature and in broader society as reflective of the failure of education nationally. Thus it is clearly apparent that the quality of education in South Africa leaves much to be desired.

Yet the discourse on the 'crisis' in education and the concomitant quest for 'quality education' often touted in South African media is not unique. The prevailing notion in the United Kingdom and the United States is that the national education system is in 'crisis', is falling behind that in other countries, and that they cannot compete (Harrison, 2010; Humphrys, 2010; Obama, 2011). Indeed education seems to be the race in which every nation wants to come out on top. As such, education, and more specifically, the quality of education remains a global concern.

However, several converging points of the discourse on quality education are evident. Firstly, there is a dichotomy of performance along class lines and, simultaneously, racial lines. This is most obvious in the similarities evident in the experiences of the United Kingdom and the United States of America and South Africa, the focal point of this study. As a case in point, the

overwhelming concern of practitioners within the American and British education systems is the need to decrease the gap in performance between disadvantaged and more advantaged students (Humphrys, 2010). According to national studies in these countries, learner performance is often disaggregated along class, race and geographical lines (Gillborn and Mirza, 2000; Jacobson et al., 2001). In the United Kingdom it is noted that this gap increases over time (Humphrys, 2010). Further, in the United States, the difference in achievement has been described, not only in terms of a "gap", but as an "educational debt" reminiscent of the notion of national debt. This debt stems from "historical, economic, socio-political and moral components" (Billings, 2006).

A second point of convergence in the discourse is the use of new alternative and semi autonomous schools as solutions to the problem of quality education, which mirrors the notion of 'effective schools' in the school effectiveness literature. In the United States, these schools take on the form of 'charter schools' which attempt to exhibit excellence in educating children from more disadvantaged backgrounds. In the United Kingdom, the school model takes on the form of 'Academies' which target schools in struggling and deprived areas (Humphrys, 2010). South Africa's model, called Dinaledi Schools, aims to promote excellence in mathematics and science for schools serving disadvantaged populations (DOE, 2001).

Thirdly, underlying the push for quality education is the understanding that improving education is crucial for national development through "higher lifetime earnings and more robust national economic growth" (UNESCO, 2004). This rationale is, for better or worse, the prevailing justification for education globally.

In response to the problem of quality education internationally, there has emerged, since the early 1960s, a literature on effective schooling and a similar and, at times, interlinking literature on quality education. Scholars writing on effective schooling sought to investigate and disprove claims that schools have no bearing on student outcomes. In doing so, scholars developed a list of characteristics or factors within schools said to be beneficial for student achievement. On the other hand, scholars writing on quality education utilize different theoretical approaches to understand schooling and to determine their definitions of quality. Though the authors approach the subject from divergent theoretical perspectives, they intersect in conceptual frameworks that provide a broad understanding of what constitutes quality effective schooling.

A Rationale for Research

South Africa's crisis in education, influenced as it is by other issues of social concern, such as the problem of HIV/AIDS, must be addressed. In an upper middle income country with a high Gini

coefficient[1] seeking to compete globally, the issues of poverty and inequality remain salient (Bosch et al., 2010; World Bank, 2011). The role of education in transforming a society and more importantly, an economy, as human capital theorists argue, becomes crucially relevant for South Africa. And therefore, the policies that government formulates and implements to manage the education crisis become even more significant. Further, given the importance of education for development, both individual and societal, there is a need to address the systemic issues surrounding education today. Specifically in South Africa, a middle income country with high inequality, addressing the challenges of education to enhance national development is important. Thus, while this thesis cannot attempt to provide solutions to all education problems, it will endeavour to highlight the role of school effectiveness literature in answering the questions of quality and effectiveness in education.

Consequently, this thesis employs a critical review of the literature on school effectiveness to examine the state of education in South Africa and to understand the question of increasing quality in education. It provides a critical analysis of education in South Africa and applies the international literature on effective schools in an attempt to provide understanding for the challenges to schooling in South Africa. Further it reviews the discourse on socio-economic status to synthesise new conclusions on its impact on student achievement.

[1] The Gini coefficient excludes government provision for welfare through social grants and free services, factors which when taken into account can reduce the coefficient.

CHAPTER 1: AN ANALYSIS OF SOUTH AFRICAN LEARNER PERFORMANCE

Evidence of the poor state of education in South Africa abounds. Particularly, the data from international and local research point to a failure of performance amongst South African learners. Evidence also points to the alarming rates of dropouts, repetition, the unprepared-ness of high school learners for tertiary education, and concomitantly for work. As a result, there is overwhelming consensus that the nation's education system is in crisis, a condition described by education policy analyst Graeme Bloch, as a 'toxic mix'. A general investigation of the state of education in South Africa provides us with a broader national perspective of this crisis. We examine education in the Western Cape Province to provide a more specific understanding of education in South Africa. Whilst, as a whole the Western Cape achieves better education outcomes, a closer examination finds that the performance of the majority of pupils is in keeping with general South African trends. As well as providing insight into local, provincial trends in the Western Cape, subsequent chapters expand upon the findings of this chapter to provide a critical contextual analysis of some of the reasons behind the South African education crisis.

International and Regional Assessments of South African Learner Performance

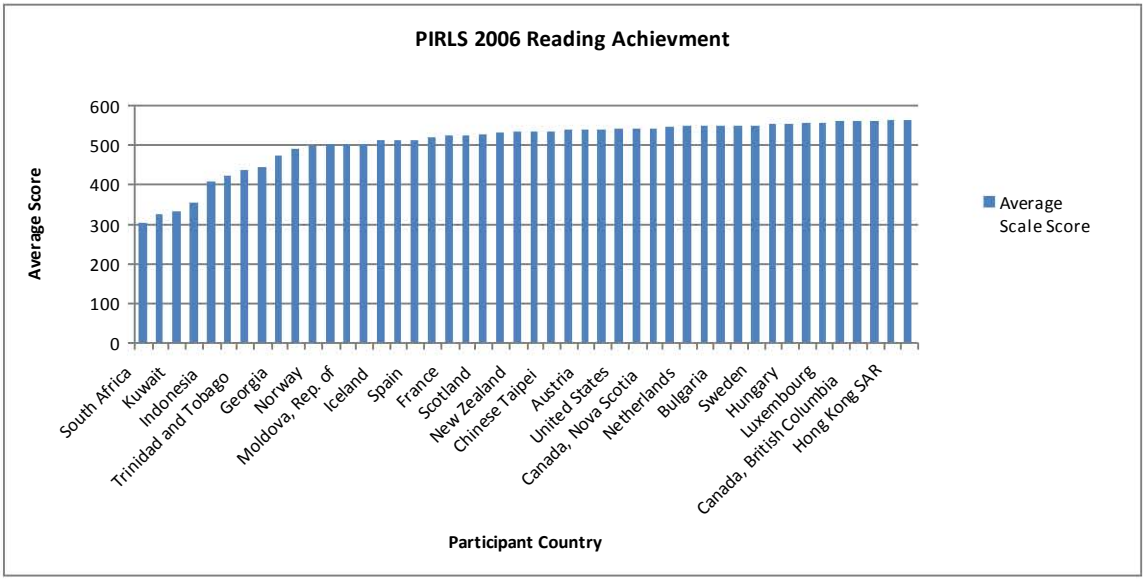
Comparative international and regional studies on the performance of education systems around the world rank the poor performance of South African learners and show that although South Africa is categorized as a middle income country, student education performance is more similar to that of pupils in low income countries. The two most comprehensive international studies are the Third International Mathematics and Science Study (TIMSS) and its twin, the Progress in International Reading Literacy Study (PIRLS), both developed and conducted by the International Association for the Evaluation of International Achievement (IEA) (Reddy, 2006). South Africa has been included in the TIMSS study three times, in 1995, 1999, and 2003. The most recent study took place on 2007, but South Africa did not participate after achieving last place in the previous two tests (Scott, 2010). The PIRLS study on South Africa's student performance was undertaken in 2006. Both studies are conducted regularly although a country may not be analysed each time. The aim of both studies is to provide a cross country comparison of achievement in education at different grade levels, as well as to highlight the overall performance of an education system. Another study, the South African Consortium for Monitoring Education Quality (SACMEQ) is mandated by fifteen Ministries of Education in southern sub-Saharan Africa, with a priority to engage in a process of

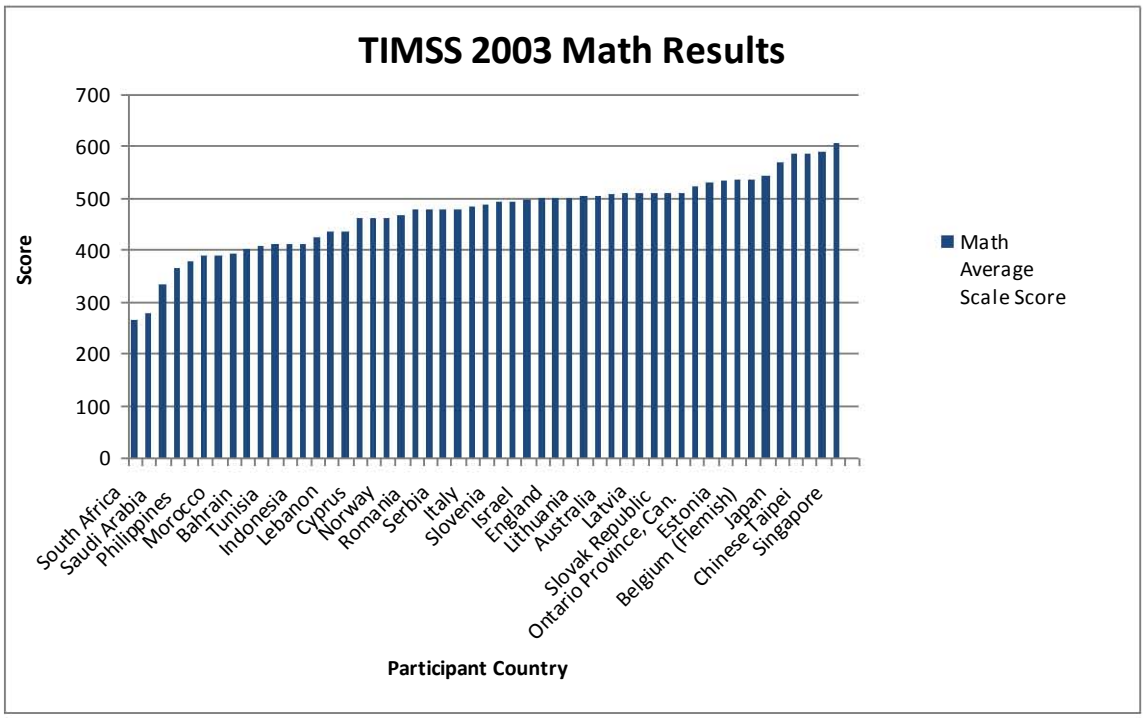
continually assessing the quality of education in the member countries. Together with TIMSS and PIRLS, SACMEQ provides concrete evidence of education failure in South Africa. The studies enable South Africa to compare its educational performance with those of other countries with similar characteristics. They also provide useful information to stimulate policy reforms (Reddy, 2006). It is to these studies that we now turn.

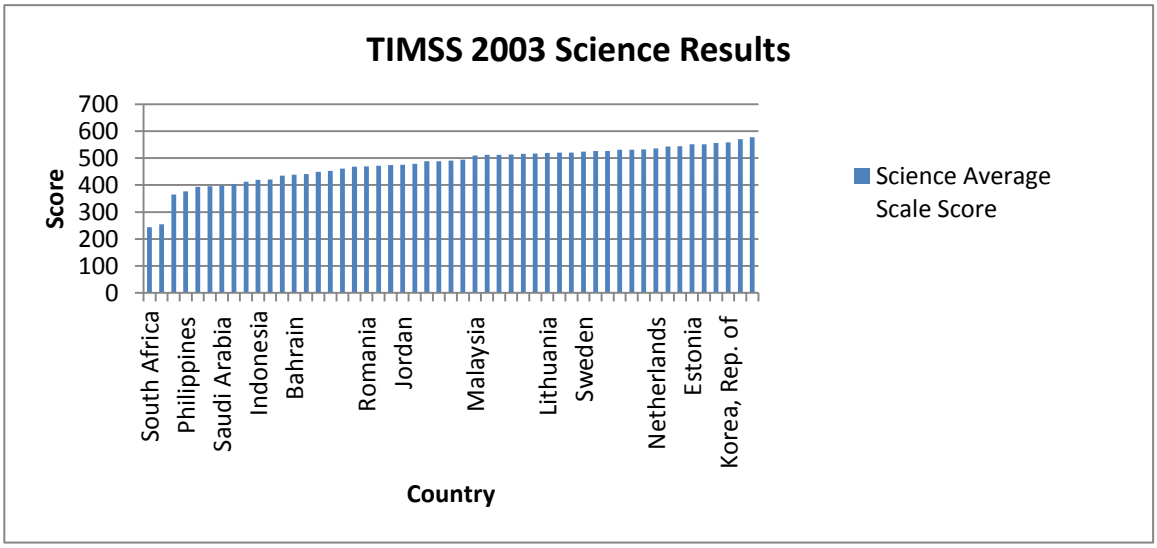
The overwhelming consensus provided by the TIMSS, PIRLS and SACMEQ II studies is that South African learners are failing to learn. In general, the studies paint a portrait of underachievement reflecting an inadequate proficiency in math and science, low levels of competency, and abysmal performance in comparison with international counterparts. Upon closer inspection, the portrait takes on a more nuanced view, revealing a differentiation of achievement along geographical and regional and racial lines.

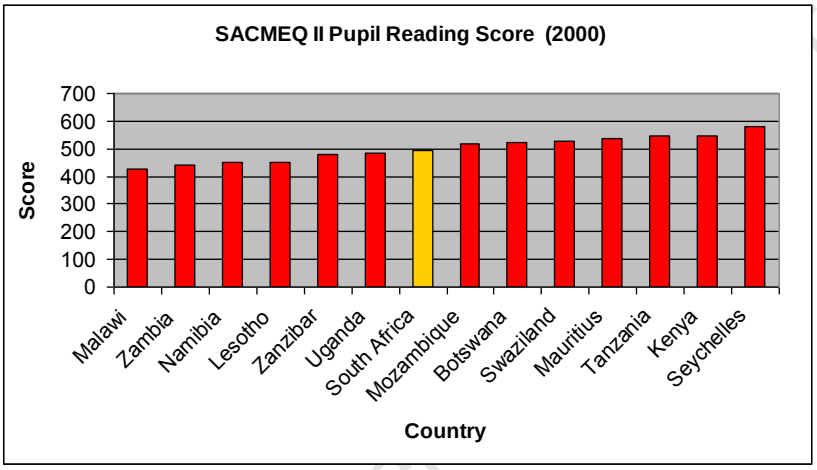
The graphs below show how South African learners persistently perform on average below the mean of all the studies mentioned. The TIMSS and PIRLS studies use different benchmarks to those created by the SACMEQ researchers. Though influenced by the TIMSS, PIRLS and other studies, the SACMEQ study creates its own levels of competency (Moloi and Strauss, 2005). The SACMEQ score scale or levels of competency are also different to those created by TIMSS and PIRLS. Both studies, however, utilize a congruent predetermined scale average of 500 with a standard deviation of 100 based on item response theory (IRT) (Mullis et al., 2004; 2007). One common finding on the international tests, TIMSS and PIRLS, is that, through the years, South Africa performed poorly, finishing last or nearly so, even though on the PIRLS 2006 tests, South African learners were a full grade (Grade 5) older than students taking the tests internationally at the Grade 4 level, as the results from the TIMSS 2003 and PIRLS 2006 studies show (Graph Group A). Only on the SACMEQ II tests, did South Africa finish in the middle of the countries tested. However, this result is not laudable since South Africa, an upper middle income country with roughly 22% of its population at the national poverty line, performed worse than low income countries – Mozambique, Tanzania, Uganda, and Kenya - each with 31-55% of their populations at the national poverty line (World Bank, 2011). Also, while the graph portrays a seemingly strong performance on SACMEQ II tests, closer investigation shows a worrying trend of poor performance and low competency.

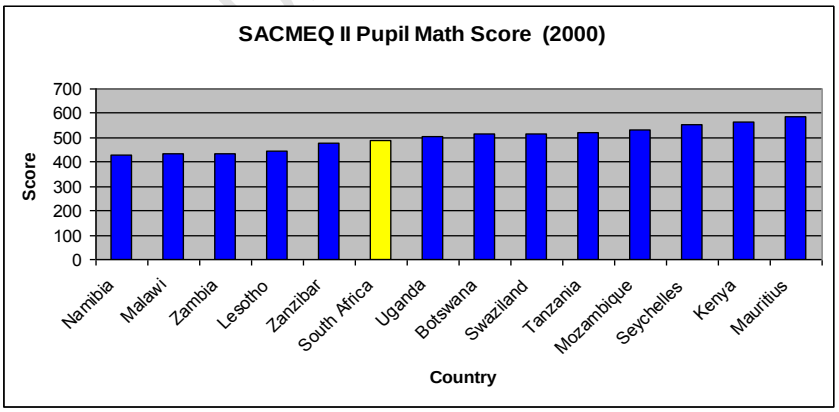
Graph Group A: South African Performance on International Tests







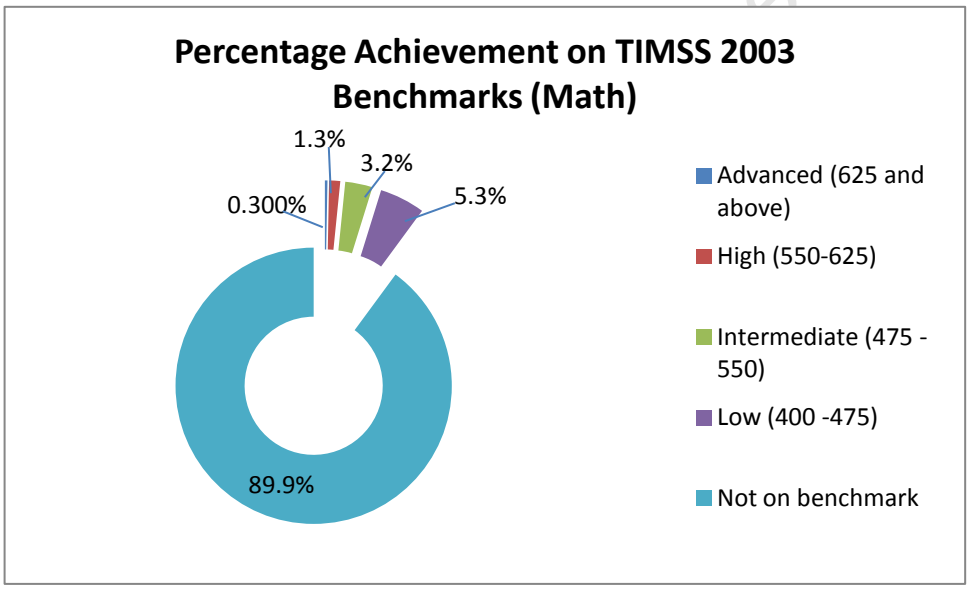


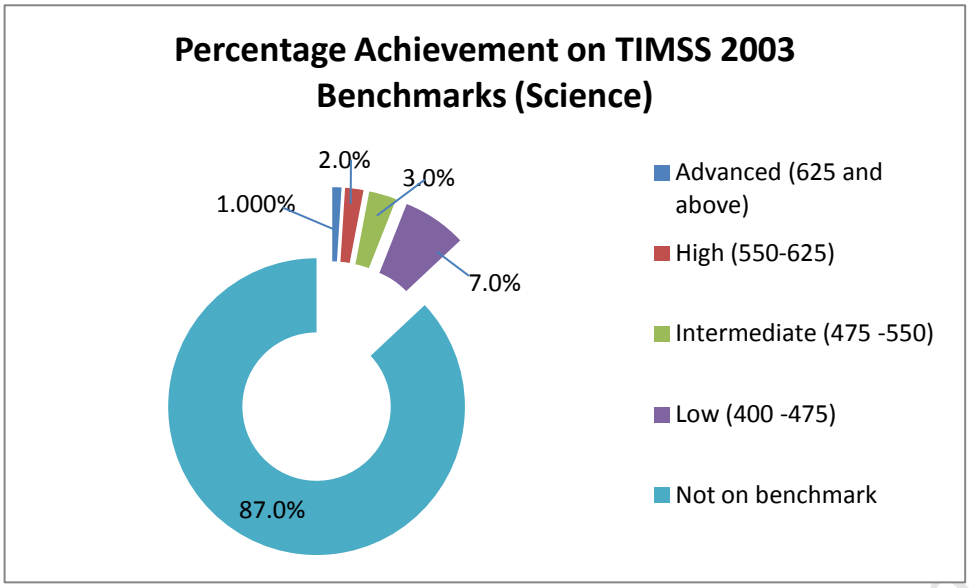


International tests also show that South African learners fail to perform at acceptable benchmarks (Group Graph B). An example is the TIMSS 2003 tests in which only 13% of learners performed above the Low International Benchmark (LIB) in science and 10% of learners performed

above the LIB in math (Reddy, 2006). Bearing in mind that the TIMSS and PIRLS tests use a cumulative benchmark such that, of the percentage of learners who reach the lowest benchmark (LIB), some also invariably reach higher benchmarks, for example, the Intermediate International Benchmark (475-550), the High International Benchmark (550-625), or the Advanced International Benchmark (625 and above) (Mullis et al., 2004; 2007). Overall, South Africa's performance at these benchmarks is disappointing. Likewise, on the SACMEQ II test, roughly "80% of grade 6 learners in the study reached the lower half of eight levels of competence in mathematics on the SACMEQ continuum" (Moloi, 2005). Similarly, most of South African learners, over 70%, did not attain the low level benchmark of reading achievement on the PIRLS test (Mullis et al., 2007). These studies reveal that in essence, the vast majority of learners failed to reach even the lowest benchmarks and as such did not perform at acceptable benchmark levels.

Group Graph B: South African Achievement on TIMSS Benchmarks





A more nuanced perspective of South African performance on international tests shows a worrying trend. As a case in point, the TIMSS 2003 (the most recent undertaken by South Africa) shows a differentiation of performance along provincial lines in correlation with provincial Human Development Index (HDI) ratings, which are calculated using GDP per capita, literacy rates, and life expectancy at birth (Reddy, 2006). As a result, learners in the top three HDI provinces, Western Cape, Northern Cape and Gauteng, achieved on average higher scores, albeit still at the Low International Benchmark (Reddy, 2006). Reddy attributes this trend to a variation in socio-economic circumstances existing in the provinces (2006). He argues that performance can be disaggregated along former racial school lines. Accordingly, Reddy found that, when performance is investigated using the former apartheid school categories, the scores of formerly black schools (ex-DET), 227 points, are almost twice as low as those of formerly white schools (ex-HOA) at 468 points (2006). Figure 1 below, which consolidates two data graphs developed by Reddy, reflects this. While learners at formerly white schools perform close to the international mean (500 points), they still fail, on average (with the exception of science), to break the Low International Benchmark boundary. This implies that performance is weak even at the highest (best) levels of education.

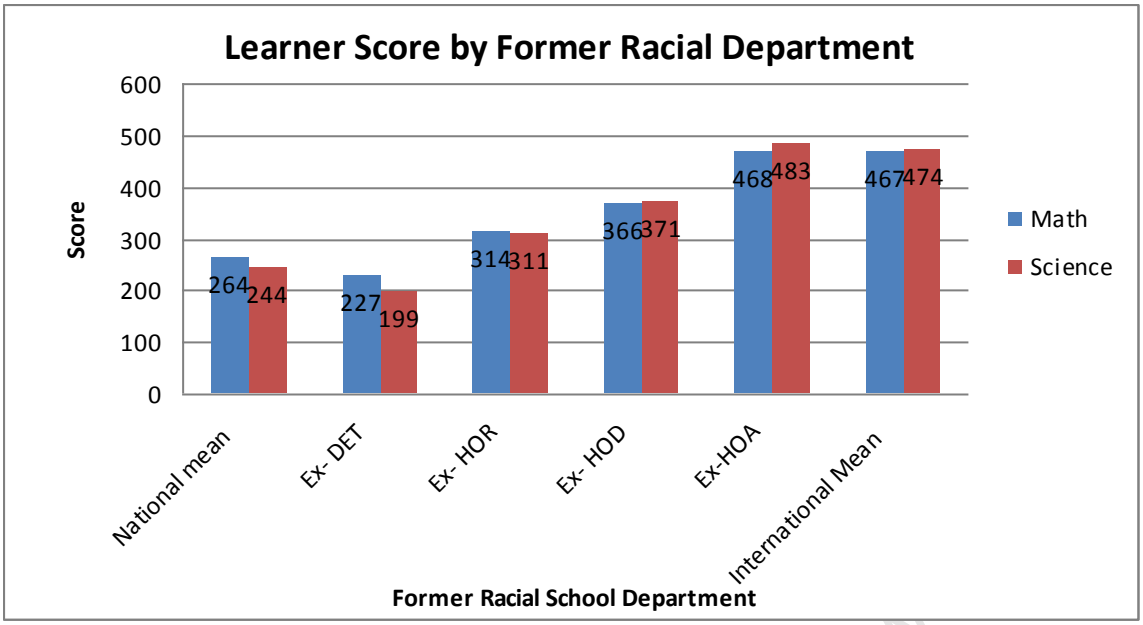


Figure 1: Distribution of Learner Scores among Former Racial School Departments, compiled from Reddy 2006 (p.51, 63)

The problem of socio-economic status (SES) is also raised within the findings of TIMSS 2003. In South Africa, the effect of SES in an already weak education system is greater. This is evident in the gap in performance between schools where more than 50 % of the learners came from low SES backgrounds and those schools where fewer learners came from low SES backgrounds. Reddy, the primary scholar[2] (and most widely cited (Long, 2007: Soudien, 2006)) to analyse South African performance on TIMSS 2006 tests, writes that

> *"In South Africa, 85% of learners were in schools with more than 50 percent economically disadvantaged learners. Five per cent of learners attended schools where there were fewer than 25 percent economically disadvantaged learners. Internationally, the average mathematics score for learners in schools with few economically disadvantaged learners was 496; in schools where more than 50 percent came from economically disadvantaged homes the score was 439 – representing a difference of 57 scale points. In South Africa, the average mathematics score for learners in schools with few economically disadvantaged learners was 479; in schools where more than 50 per cent came from economically disadvantaged homes the score was 237" (2006).*

[2] Reddy (2006) is the only scholar to analyse the results of South Africa's performance on TIMSS 2003. His work is widely cited by various authors to illustrate the magnitude of poor achievement in South Africa.

Thus, unlike international education systems, the South African education system is unable to overcome socio-economic disadvantage to produce strong or even moderate academic achievement. In other words, schools are not doing enough. This is an argument that will be explored later in Chapter Two.

In the SACMEQ II Math results, socio-economic status (SES) also features in the performance of learners. Using household possessions as a determinant of socio-economic status, researchers determined that Grade 6 learners with lower SES attained lower scores at Pre-numeracy (Grade 2 or lower) or Emergent levels (Grade 3 level) (Moloi,2005). Twenty-six percent of lower SES learners also achieved at the Basic Numeracy level (Grade 4), which is still below acceptable levels, and less than 3% achieved at the Competent Numeracy Levels (Moloi, 2005). On the contrary, students from higher socio-economic status backgrounds performed across the range of levels with more learners, over 27%, attaining the level of Competent Numeracy (Grade 6) (Moloi, 2005). Therefore, socio-economic status has greater bearing on learners' performance in South Africa.

South African Performance on Southern African Regional Assessment

Deeper insight into SACMEQ II, a regional assessment of education quality among Grade 6 learners in 14 southern African countries, including South Africa, in 1990 and again in 2001, is disquieting (Soudien, 2006; Van der Berg and Louw, 2007). The study showed that the vast majority of Grade 6 students performed at low levels of competency in mathematics, such that scores fell at least a full standard deviation from the mean (Moloi, 2005). SACMEQ's developed levels of competency in mathematics range from lowest to highest competency and assessment is on the basis of specific mathematical skill (see Table 1).

Table 1: SACMEQ Levels of Competence (Moloi, 2005)	
Pre- Numeracy	Grade 2
Emergent Numeracy	Grade 3
Basic Numeracy	Grade 4
Beginning Numeracy	Grade 5
Competent Numeracy	Grade 6
Mathematically skilled, Concrete problem solving, Abstract problem solving	Grade 7 and above

South African Grade 6 learners performed dismally on this scale. Twenty-four percent of learners attained a Basic numeracy or Grade 4, almost 9% performed at Beginning numeracy (Grade 5), six percent attained Competent numeracy or grade 6, while a little over 44% of grade 6 learners

attained the average or 'modal' competency at Emergent numeracy, Grade 3 (Moloi and Strauss, 2005; Moloi, 2005). This means that out of the total population tested, only 15.3% of Grade six learners actually understood mathematics at a Grade six level or higher. In contrast, "just over 44 percent of learners who had been in school for at least six years, could be said to be performing at the level of a child who has been in school for three years" (Moloi**,** 2005). What is astounding is that rather than having an average level of performance that falls within the Beginning numeracy or Competent numeracy ranges, South African average levels of achievement begin far below acceptable levels of achievement and stop at the recommended range. In other words, South African performance is often skewed to the left (see Figure 2) such that there is minimal diversity in achievement. As a result, very few learners actually achieve at grade level. This also shows that achievement in South Africa remains unequal.

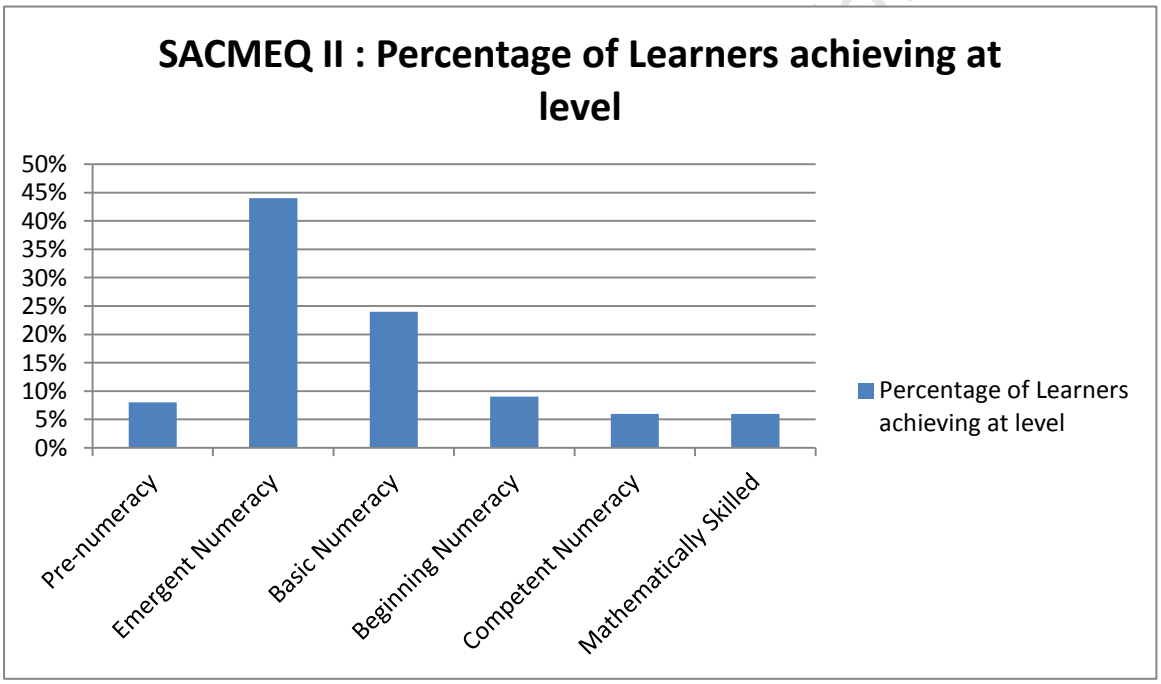


Figure 2: South African Mathematics Performance on SACMEQ, compiled by author

Learner Performance in the Western Cape

If the picture painted above is not clear enough, an investigation into learner performance in the Western Cape provides deeper insight into the problem. The Western Cape Province is South Africa's top performing province in education. Indeed, the nation's top performing high school, Westerford High School is located in the Newlands suburbs of Cape Town in the Western Cape (Govender, 2009). However, the state of learner performance is disconcerting. Reports from the

Western Cape Education Department (WCED) show that there is an increase in the number of underperforming high schools (Grant, 2010). Part of this problem is found in the poor performance of learners at the primary school level. The province's efforts to improve learner performance through continual diagnostic testing of Grade 3 and Grade 6 students produced findings that too many learners are not performing at their grade level in numeracy or literacy. In Grade 3, the 2002 diagnostic test revealed that only 37% of learners could perform at the Grade 3 levels in numeracy, while 32% of learners could perform at the same level in reading (Grant, 2009). A year later in 2003, the diagnostic study showed that only 15.6% of Grade 6 learners performed at a Grade 6 level in Numeracy, while 35% of learners performed at a Grade 6 level in Literacy (WCED, 2004). Western Cape learners are thus failing to retain knowledge in the long term. Moreover, the tests show that learners are not performing at equivalent levels in numeracy and literacy. For example, Western Cape Minister of Education, Mr. Donald Grant stated that while pass rates in literacy have experienced a 13.6% increase since 2003, numeracy pass rates, which have increased by only 3.4%, fail to improve at an acceptable pace (Grant, 2010). As a consequence, the inability of learners to acquire mathematical and numeracy skills adequately can have an adverse effect on the nation's ability to perform technologically. In particular, a lack of individuals skilled in math, and concurrently in science, affects the needs of industry. And as the National Strategy for Mathematics, Science and Technology Education (NSMSTE) notes, South African learners increasingly require higher level skills in math and science in order to successfully operate within "today's technically orientated work environment" (DOE, 2001).

The diagnostic studies also show that learner performance in primary school, as determined by pass rates (the percentage of learners achieving 50% and higher in tests), is weak. As recently as July 2009, the WCED stated that 86% of the province's primary schools attained less than a 40% pass rate in numeracy among Grade 6 learners (Grant, 2009). This means that in 86% of primary schools, less than 40% of learners are knowledgeable enough to continue to higher grades. Alternatively, it implies that over 60% of learners at primary school level in the Western Cape fail to pass Grade 6 numeracy. And, while pass rates have been slowly increasing in literacy in Grade 3 and 6, numeracy pass rates are weak and continue to fluctuate (Grant, 2009).

Further symptoms of poor quality education

While the trends for underperformance are most evident at the primary school levels, their impact is apparent in later academic years. Specifically, this impact is visible at the post secondary or university level, as recent research shows. Using information provided by the Department of

Education, the South African Institute of Race Relations (SAIRR) found that, although the number of learners taking matric exams or final year high school exams have increased fivefold (from 109,807 to 564, 775) since 1980, there is a significant gap between the numbers of learners who pass matric and those who are able to gain university entrance (see Figure 3) (SAIRR, 2008). More to the point, since 1980, there has been a large decline (50%) in the number of learners qualifying for study at university level. Whereas, 31% of matric learners in 1980 were able to attain entrance into university, in 2007, even with a fivefold increase in the number of learners taking matric exams, only 15% were able to gain entrance into university. Additionally, there is a decrease in the percentage of schools achieving pass rates between 80 and 100 percent and a concomitant increase in the number of schools achieving poor pass rates between 0 and 20 percent (Department of Education, 2009). This implies that fewer schools are able to produce students who perform well.

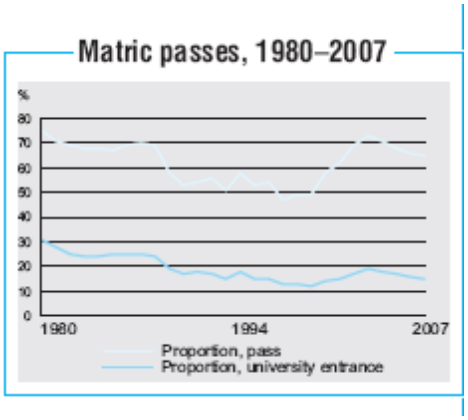


Figure 3 Trend in Matric passes, taken from SAIRR (2008)

What is more, it is becoming all the more evident that matric learners are unable to achieve at university levels. Universities around the country note that there is a high failure rate among first year university students (Govender, 2010). The failure rate has seen an increase in the number of first year students dropping out. And, while some of the reasons for this include the cost of university and the inability to cope with university life, another reason cited is the inability to perform academically (Govender, 2010). The inability of students to perform academically at university levels is also compounded by the fact that, as a result of a change in the curriculum, mathematics is now easier than it once was (IJR, 2009). This further ensures that high school students, more of whom are now passing math, are not learning enough to perform at a university level (IJR, 2009).

While the move to raise admission requirements is criticized by many, the reality is that admitting ill-equipped and under-prepared learners into a rigorous academic environment undermines the ability of a university to maintain its academic standard. Moreover, if learners coming from high school are unable to cope academically at university levels, they are more likely to be unprepared for the work place.

Further evidence documents this problem. The pilot National Benchmark Tests (NBT) Project's completed report raised ire when it insinuated that university students are not able to read

or write. The test makers clarified that the findings did not show that students could not read or write, but that they could not read and write in "ways specific to the university" (Boughey, 2009). Yet the problem remains that there is a gap between ability to perform at high school (as determined by the National Senior Certificate exams) and at university levels (as determined by the NBT exam). The results of the NBT Project showed that students could pass their NSC exams at the high school level but failed the NBT exams which tested for university requirements (Parliamentary Monitoring Group, 2009). This is a gap, stated members of the Parliamentary Portfolio Committee on Higher Education, that must be bridged (Parliamentary Monitoring Group, 2009).

The story of underperformance among South African learners continues. Yet another disquieting aspect of performance is the poor quality of academic passes obtained by students. The Department of Education statistics reveal that of the 65% of students who passed Senior Certificate exams, 86.3%, attained a normal pass the equivalent of 60% or less (2009). This fact highlights the troubling phenomenon that many learners perform below standard levels. It also highlights a trend in the lowering of standards for achievement (IJR, 2009).

Also noteworthy, is the rate of dropouts, which while remaining minimal in early primary school years, increases significantly after Grade 9 (Dieltiens and Meny-Gilbert, 2009; Ministerial Committee on Learner Retention, 2007). A primary factor in dropout rates is the problem of grade repetition (Ministerial Committee on Learner Retention, 2007). The issue of grade repetition is not new, as Motala notes early on in 1995. Motala found that in Model C[3] schools, 96% of learners (often white) take eight years to progress to Grade 8 (1995). In contrast, only 38-49% of African learners completed their schooling in 8 years (Motala, 1995). And accordingly, 51-62% of African children took 12 years to progress to Grade 8 (Motala, 1995). Addressing the issue of dropout and repetition is critical, particularly for the youth who often find themselves disillusioned in a cycle of joblessness and who can fall easily prey to a life of crime (Panday and Arends, 2008).

These issues are among some of many crippling the South African education system today. They provide a salient and tangible evidence of the problems plaguing South Africa's schools and the challenges to achieving quality basic education for all. Moreover they are shaped by and interlinked with other issues, such as poverty, HIV/AIDS, poor infrastructure, weak teacher training, school fees,

[3] In 1992, the government converted all previously white schools to Model C schools, using a class system from A to D developed by Piet Clase which determined the level of racial integration and public vs. private ownership in schools. Model C schools were granted a level of autonomy. They were partially funded, but could raise the remainder of their funds through fees and donations. They were also governed by a parent elected governing body (Fiske and Ladd, 2005: 50-51).

insufficient resources etc., each a cause and consequence of the crisis in quality education. Thus the nature of South Africa's education crisis is complex, multifaceted, and interlinking.

CHAPTER 2 A Solution to Poor Performance? A Review of the Literature on School Effectiveness and the Quality of Education

South Africa's experience with poor learner performance, though critical, is not unique. Indeed the challenge of student achievement remains a global concern. As noted in the introduction, much of the current debate on education in countries like the United States and the United Kingdom is centred on student achievement as an indicator of school quality. As a result, much emphasis is placed on increasing learner performance particularly among 'disadvantaged' children. Consequently, international literature on education, since the 1960s, has embarked on a study of school effectiveness and improvement as one solution to address the problem of poor student performance and particularly the differentiation of performance along racial and class lines.

As seen in the previous chapter, learner performance in South Africa is below par. Even more problematic is the differentiation in learner achievement according to socio-economic status, race, or geographic location. Van der Berg's findings and analysis of the Southern and Eastern African Consortium for Monitoring Education Quality II (SACMEQ II) study sums the situation thus: "Our best [students] are not better than our neighbours, though we are richer, and our poor are far worse off educationally than those in much poorer countries" (Van der Berg, 2005: 62). He also notes that "in poor (historically black) schools, children with a middle class background perform as poorly as their less well –off fellow students" (2005: 62). These findings on South African learner performance on the SACMEQ II tests give credence to and are reminiscent of two major seemingly opposing arguments in school effectiveness research by Coleman et al. (1966) and Edmonds (1986). The first argument is that socio-economic status (SES) and student background have a profound impact on student performance (Creemers, 1996: 36; Van der Berg, 2005: 62). The second is that schools, not SES, have a greater impact on student achievement. Thus in South Africa it is the case that, while SES has a great impact on performance, its impact is exacerbated by the type and class of school attended (Van der Berg, 2005: 62). The result is a doubly negative impact on student performance. Most notably, this phenomenon finds expression globally. In one American example, Calkins et al. find that "far from mitigating the achievement gap, the experience of most children in public (government run) schools appears to exacerbate it" (2007). Therefore even though socio-economic status plays a role in negatively or positively impacting performance, the type of school a student attends, whether adequately resourced, competently staffed, and with good leadership, can also deepen that impact and further divide the equality of achievement or education outcomes.

While Van der Berg does not provide a theoretical argument, his claims, which are rooted in empirical research, are not out of the ordinary or novel. In fact, they are at the crux of the debate in education. The claims highlight a complex interaction of factors that determine student failure or success and have theoretical implications for the literature. His arguments reflect a long debate in international and local literature that is concerned with the burgeoning crisis in education, specifically the academic achievement of students. Van der Berg's research has its roots in the larger school effectiveness research (SER) movement in the United States and simultaneously in Britain. Over the years, the effective schools literature has shaped the debate surrounding what an effective school is whether schools that are 'effective' exist for the disadvantaged, and how schools can be made effective. The questions posed by the literature are at the core of education policy in South Africa and elsewhere (Creemers, 1994:11; Sammons et al., 1995). They provide the underlying motivation in the pursuit of quality education by policy makers and practitioners. In answering these questions, the literature attempts to address the poor quality of education and the poor state of learner performance. It is to this literature that we now turn.

The Coleman Report

Much of the preoccupation with learner performance and achievement in the school effectiveness literature has its roots in the landmark 1966 Coleman Report. In actual fact, the school effectiveness research (also known as Effective Schools Research) was birthed in reaction to this government sponsored study on schools in the United States. The Report ignited the debate on school effectiveness and effective schools with its seemingly pessimistic and gloomy findings on student achievement in the United States. Firestone writes that, Effective Schools Research (ESR) "was a direct reaction to the work of Coleman (Coleman et al., 1966) and (Jencks et al. 1972) which discounted the contribution of schooling to student achievement and suggested that school quality did not make a difference" (Firestone, 1991:1).

The quantitative study of 4,000 schools and 645,000 students, undertaken by John Coleman and others, was a macro-analysis of the equality of educational opportunities and the equality of access to educational opportunities in the States. Its methodology relied on the education production function and on the notion that educational inputs could produce outputs (Reynolds et al., 1994: 29). (This methodology has since been criticized by Teddlie, Reynolds and Sammons (2000).) Coleman and his colleagues investigated schools across the nation, both metropolitan and non-metropolitan, from various demographic backgrounds (racial categories/ classification). They measured teacher characteristics, resources, curriculum, and the characteristics of students' classes

(Coleman, 1966; Scheerens, 2000). Coleman's findings confirmed the well known inequality of achievement in American schools. The statistics showed that the majority of minority students (excluding Asian students) and, in particular, black students, performed lower than their white counterparts (Coleman et al., 1966:21). In fact, the research showed that, at the Grade 1 level, most racial minority groups performed a full standard deviation lower than their white counterparts (Coleman et al., 1966:21). This poor performance increased at higher grades. As a result, though a small minority of black students outperformed their white counterparts, most black students "performed progressively worse (more than a standard deviation) than their counterparts at progressively higher levels" (Coleman et al., 1966:21).

Coleman et al. also noted that even when socio-economic factors and student background are statistically controlled and taken into account, the difference in achievement owing to the impact of schools is minimal (Coleman et al., 1966:21). Specifically, their findings showed that after taking into account ethnic origin and socio-economic status,

> *"…the [above] three clusters of school characteristics (teacher characteristics, resources and curriculum, and student characteristics) together accounted for 10 percent of the variance in pupil performance. Moreover, the greater part of this 10 percent variance was due to the third cluster that was operationalized as the average background characteristic of pupils, which means that again socio economic and ethnic origin- now defined at the level of the school- played a central role" (Scheerens, 2000).*

In view of these findings, Coleman et al. concluded that schools therefore had a minimal impact on student achievement. Coleman wrote

> *"For most minority groups, then, and most particularly the Negro, schools provide little opportunity for them to overcome this initial deficiency; in fact they fall farther behind the white majority in the development of several skills which are critical to making a living and participating fully in modern society. Whatever may be the combination of non-school factors – poverty, community attitudes, low educational level of parents- which put minority children at a disadvantage in verbal and non-verbal skills when they enter the first grade, the fact is the schools have not overcome it"(Coleman, 1966:21).*

This latter argument is one that Van der Berg would later make.

Taken at a glance, the perceived sentiment expressed in the research was that schools did not matter and did not make a difference to student achievement (Creemers 1996: 38)**.** The Report was then criticized for over-generalizing the findings and limiting the focus on schools. Critics argued that it did not focus on particular schools and their effects but rather looked at schools in a group (Reynolds et al., 1994; Scheerens, 2000: 37). But Scheerens rebuts these statements, noting Coleman's extensive investigation into schools, even the attitudes of school leadership (2000: 37).

However, in a separate but often unacknowledged statement, the Report noted that because of the disadvantage created by students' background and socio-economic status, schools remained all the more important for increasing achievement. The report stated that "improving the school of a minority pupil may increase his achievement more than would improving a school of a white child increase his…[therefore] it is for the most disadvantaged that improvements in school quality will make the most difference in school achievement" (1966:22). Although, Coleman's statement seemed contradictory at the outset, it remained valid because it recognized the interaction between two variables in achievement, school effects and family effects. He understood that while some school effects exist, these do not often play the overwhelming role in student achievement. Nevertheless, Coleman reemphasized the importance of schooling in the face of family effects (socio-economic status and family background). As Van der Berg would later discover, Coleman grasped the complex interplay between family effects and school effects in determining student achievement.

Consequently, Coleman's arguments in America triggered the debate on the effectiveness of schools and paved the way for researchers to begin investigating school factors, particularly school effects that impacted student achievement, as well as later research into resources (Silver, 1994). What is more, it directed the research by turning its attention to student outcomes (results and attainment) (Silver, 1994). As a result, much of the research since this time has been driven by student achievement as a standard measurement of school effectiveness.

The International Literature on School Effectiveness

The origins and context of the research

Out of the Coleman Report grew the debate on schools and their impact on student achievement. This debate and the associated School Effectiveness Research (SER) are founded largely upon the work of scholars in the United States, Great Britain and to a lesser extent the Netherlands and other countries (Silver, 1994; Reynolds, et al., 1994). In the various countries, school effectiveness research grew from local education research traditions and socio-political experiences. In United States and Great Britain, where much of the research was focused, a mix of political and social issues and concerns drove the research. While research in the Netherlands was an outgrowth of concerns surrounding teachers, the curriculum, the effectiveness of instruction and school organization (Sammons et al., 1995:4; Creemers, 1996:40).

In the United States increasing concern with the prevalence of poverty post World War II saw a rise of new policies (e.g., the Economic Opportunity Act (EOA) of 1964, the Headstart Program, a pre-school initiative, and the Civil Rights legislation) under President Lyndon B. Johnson (Silver, 1994: 77). The literature on school effectiveness arose during this period in the mid 1960s. Subsequent to the emergence of the literature, with its focus on understanding schools using different methodologies, there was a strong impetus to provide solutions to education problems and concomitantly address poverty. This was particularly evident in the ready adoption of research findings by policymakers and the widespread use of the literature to improve schools at local levels (Silver, 1994; Reynolds et. al., 1994:30).

Across the ocean in post war era Great Britain, research was largely a function of the socio-political context at the time. In particular, scholars and politicians were greatly concerned with the issue of social class and achievement (Chitty, 2002; Silver, 1994). It was noted that British education was largely divided along class lines with working class children attending second rate schools (Coleman, 1967; Chitty, 2002:123). Moreover, education was also seen by some politicians as a means to enact social reform and create a level of class equality without economic interventions (Silver, 1994; Chitty, 2002:124). As a result, education policy was defined by a focus on equality of opportunity or the desire to ensure that working class children gained similar access to schools of the same calibre as middle class children (Chitty, 2002). One particular outcome of education policy was the creation of comprehensive schools which brought together students from diverse social and academic backgrounds and integrated them in secondary schools with the aim of contributing to a

more integrated and harmonious society (Chitty, 2002:125). Mirroring the political developments in the world of academics, there was a rise in studies on social injustice and social class (Silver, 1994). In particular sociologists investigated schools in order to answer some principal questions. The researchers sought solutions to several questions including: whether schools have effects on students and what are the common characteristics of effective schools (Reynolds et al., 1994). In short, while the government concerned itself with structural issues of social class, researchers busied themselves with investigations into the effects of schools on students from different socio-economic backgrounds.

In both countries, there was a degree of concern about student background or socio-economic status and education. Yet, each country took different approaches to address these concerns. For the United States, the aim was to ameliorate effects of student background through compensatory programs. Alternatively, in the United Kingdom, the government took a structural view to address the problems of social class. Silver comments that "governments were looking for ways to make schools more effective in contributing to the policies for economic security and social stability that became basic to the conservative political agendas of the late 1970s and 1980s" (1994:4).

Overall the literature on school effectiveness focused, at the outset, on schools in the developed West. Only later, in the 1970s, did research address schools in the developing nations (Yu, 2007). Even then, the focus was largely on the use of education production functions and the need to enhance the cost effectiveness of education.

Trends in the research

Various methods have been used to outline and highlight the trends in the literature. Silver, for example, provides a relatively exhaustive overview of the literature covering its ebb and flow in the founding countries, the United States and Britain (1994). He gives a general account of key research that spurred the effective schools movement and changed the direction of the research. Lezotte, on the other hand, approaches the literature more narrowly from the American perspective, noting the growth in the literature through various phases from the response to the Coleman report, the introduction of correlates of effective schools, the prescription phase, and so on (2008). Still others choose to cluster the trends in the literature by the types of studies conducted – case studies, outlier studies, program evaluation studies, etc. (Purkey and Smith, 1983; Scheerens, 1992). Others divide their critiques of the literature into time periods based on the methodologies used to conduct the research (Jansen, 1995).

Another well-known trend must be mentioned. It is widely recognized that the field of school effectiveness consists primarily of reviews and reviews of reviews of the school effectiveness literature, more so than empirical studies (Sammons et al. 1995; Yu, 2007 – citing Sammons et al, 1997). Commenting on this phenomenon, Creemers wrote that although reviews provided insight into methodological and conceptual flaws in the research, there are more reviews of school effectiveness research, than empirical research on school effectiveness itself (Creemers, 1994:9). Examples of these reviews include Purkey and Smith (1983), Scheerens (1992), Rutter et al. (1979), and Weber's (1971) work (Yu, 2007). Consequentially, the literature is predisposed to repetition and is prone to a simplistic and narrow outlook (Purkey and Smith, 1983).

One aspect of this repetitive trend in the literature is found in the type of studies conducted and the methodologies used. Historically, scholars tend to replicate their investigations and focus on core factors that are said to promote the effectiveness of schools (Sammons et al., 1995; Yu, 2007**)**. These investigations often involved studying seemingly effective schools or conducting large scale surveys of schools and their students. The result of such studies is often a 'recipe like' solution to problems of poor student performance (Yu, 2007). Moreover, some authors also use similar models of education rooted in an economic production function to represent effective schools. These models are usually structured around input-process-output frameworks (for more see the following chapter).

Of most importance to the literature are the underlying debates and in particular positions taken on the issue of school effectiveness and student achievement. Two primary arguments, as earlier mentioned, have governed the trajectory of the literature. The first is that socio-economic status (also described as family effects' in the literature) determines student achievement. The second argument, the 'school effects' thesis, is that schools matter and are able to change a student's academic outcomes. A linked branch of the research with a focus on school improvement follows from the latter argument. The literature on school improvement, which is not discussed in this dissertation, builds upon and draws from the literature on school effectiveness to find practical ways to improve schools (Creemers, 1994:10). Its primary goal is to facilitate school change by focusing on the process level (Reynold and Teddlie, 2000; Harris and Hopkins, 2000; Hopkins and Reynolds, 2001). As this literature has progressed, it has been determined that "in order to make schools more effective, a whole series of characteristics on the classroom and school levels must be introduced into the educational system" (Creemers, 1994:10). This in itself is linked to the use of school effectiveness models that work at different levels of the school system seen in the school effectiveness literature (Scheerens, 2000; Heneveld and Craig, 1994). The focus on school effectiveness in this thesis is not meant to undermine the usefulness and importance of the school

improvement tradition. Rather, given the limited scope of the thesis, school effectiveness has been chosen as the focus of the research at hand. Further, though school improvement focuses on the process of schools, school effectiveness gives a clearer picture of the context and background in which these processes play out. For South Africa, given its historical deficit in education, understanding the context and characteristics of successful schools is a necessary part of the reflection process through which change must occur.

Underlying the debate on the factors affecting learner performance is a broader debate about the quality of education, often measured by the quality of academic achievement. This is framed in terms of the equality of education opportunity, which is linked to the problem of inequality of achievement in South Africa and elsewhere, as well as the inequality of opportunity in an individual's adult years. The equality of educational opportunity (EEO) is frequently defined in different ways as the equality of resource inputs or the equality of outputs (student performance), or the "meritocratic distribution of resources, the compensatory distribution of resources, or the equal distribution of resources" (Jencks, 1988). These definitions are somewhat limited in large part because they are difficult to implement (Coleman, 1965, 1975; Fiske and Ladd, 2001). Further, equality of educational opportunity is about more than a simple equalizing of resource inputs or the achievement of equal outputs in performance. Rather it is about reducing existing inequalities in education by ensuring that differences in the quality of education are minimized (Coleman, 1975; Fiske and Ladd, 2001). This may imply that education must be equally adequate and efficient (Fiske and Ladd, 2001). What's more, the concept of equality of educational opportunity assumes that education is the means to an end and not the end in itself (Coleman, 1975). This is based on the understanding that education serves the purpose of enhancing access to opportunities for individuals post-schooling.

The aforementioned debates are salient for South Africa today. If we accept the second, school effects, argument, the fact that South African schools do not produce results would indicate that schools are underperforming, and thus: Schools are the source of the crisis in education. However, since the majority of schools in South Africa have students from poor socio-economic backgrounds, it could equally be argued that schools are adequate but that pupils' backgrounds contribute to their failure, as implied in the first argument. This raises a third argument that in South Africa the combination of school quality and socio-economic status combine to produce poor academic performance.

Another argument supporting the school effects thesis and the notion that schools matter is present in the literature. In a 2007 report on school systems around the world, Barber and

Mourshed argued that the solution to the problem of poor quality education and effective schools was better teachers. Simply stated, they said that "the main driver of the variation in student learning at school is the quality of the teachers" (2007). This argument implicitly supports the notion that schools matter, but emphasizes the role of school actors in providing quality education. It represents a different branch in the research, placing emphasis on the investigation of teacher effects on student outcomes. Barber and Mourshed's focus on teachers and government policy regarding teachers is linked to the teacher effectiveness aspect of the school effectiveness research. It will not be entered into in depth, as other authors (see Hanushek, 1971; Darling-Hammond, 2000; Goe and Stickler, 2008) have already addressed it. Suffice it to say, it is an important part of the literature and informs current challenges in education in the world, and more especially in South Africa today.

Although this review of the literature relies on a 'review of reviews' and thus builds on the work of previous authors, the aim is not to repeat the research but show intersections and common conclusions reached. To that end, this review will look at the literature as divided by the main theses on school effectiveness, the argument for and against socio-economic status as a primary factor in student achievement, making certain to mention the existing limitations of the research. A more in depth overview of the literature can be found in the works of Purkey and Smith (1983), Silver (1994), and Sammons, Hillman and Mortimore (1995) to name a few. Though not all factors of achievement (i.e, student characteristics or teacher effects) can be discussed fully, in the final analysis, the review will help to highlight how SES and school quality intersect to contribute to student performance.

The Response to Coleman

Research emerging in response to the Coleman Report can be divided into two groups. Those who supported Coleman's premise (a limited few) stressed that socio-economic or familial factors (family effects) played an important role in student achievement. However, the majority, those who disagreed contended that there *were* socio-economic factors that influenced achievement but that these factors could be overcome to create effective schools. Their argument, at times rooted in a notion of equity, was that school factors (school effects) played a greater role in achievement (Teddlie, 1994). Central to both arguments is a concern about student socio-economic status which became a primary preoccupation in the literature.

Edmonds, a main critic of the Coleman Report's family effects thesis argued vociferously against the idea that achievement is linked solely to a pupil's family background (1986:95). Rather, he claimed that variable schools created variable achievements:

> *"variability in the distribution of achievement among school age children in the United States derives from variability in the nature of the schools to which they go. Achievement is relatively independent of family background, at least when achievement is defined as pupil acquisition of basic school skills" (1996:95).*

While Edmonds acknowledged the presence of social class in student achievement, he believed that the type of school a child attends had an overwhelming positive or negative effect on student achievement, much more than the family he or she came from. His argument was based on an equity perspective which held that schools could provide equal achievement for students from all backgrounds (Teddlie, 1994; Edmonds, 1979; 1996). As such, he contended that schools should provide similar instruction to both poor and middle class students (1979). Thus raising student achievement was possible by raising the equity of schooling for students of all backgrounds. Moreover, he argued that schools had a greater effect on teacher effectiveness than teacher characteristics themselves (Edmonds, 1996: 102). Edmonds argument, which embodied the school effects thesis, resulted in the creation of the widely used 'five factor model' or characteristics of effectiveness (Creemers, 1996:39).

Edmonds, and others who argued in favour of school effects, believed that school impact on achievement was easily evident when student socio-economic background was accounted for. Using multilevel methods and longitudinal data, proponents of the schools effects thesis in the United States and the United Kingdom probed the links between school factors and student variables (Lee, Zuze, and Ross, 2005). A case in point, Brimer's UK study on school differences emphasized school effects by criticizing Coleman's report, stating that it obscured the differences or variance between schools. His argument, similar to Edmonds' (1979) was that school differences accounted largely for the variance in Coleman's findings (Silver, 1994:91). In other words, schools differences accounted more for the differences in achievements than Coleman understood.

In a similar vein, Rutter et al.'s work in the UK further emphasized school effects when it critiqued the findings of Coleman and Jencks for failing to investigate "the internal life of schools" (Silver, 1994:91). The authors chose to investigate factors affecting effectiveness and looked particularly at the links between school characteristics and outcomes, using process and organizational variables in their analysis (Silver, 1994:91; Creemers, 1996:39). They found several factors affecting effectiveness, all similar to the characteristics of effective schools:

> *"the balance of intellectually able and less able children in school, the reward system, the school's physical environment, the opportunities for children to take*

responsibility, the use of homework, the possession of academic goals, the teacher operating as a positive role model, good management of the classroom, and strong leadership combined with democratic decision making from the Head Teacher" (Creemers, 1996: 39).

Their review also found that physical aspects of schools, such as the size of the school, had no bearing on differences in achievement, but did contribute to the overall character of the school (Silver, 1994:92; Creemers, 1996:39). Most importantly, the study concluded that "there was a strong probability that the associations between school process and outcome reflect in part a causal process" (Silver, 1994:92). This was also evident in the combined effect of school processes on student outcomes.

Beyond the criticism of the Coleman Report, scholars supporting the school effects thesis sought to prove the importance of schools for achievement. The studies that emerged were at times differentiated by the methodology used and the type of study conducted. However, their findings were similar. Underlying these studies were the assumptions about socio-economic status or student background, schools, and student achievement. The core premise of school effectiveness literature was that if socio-economic status and student background were taken into account, then the existing difference in achievement is a factor of the differences in schools. This concept, also known as 'school effects,' is defined variously as 1) "the amount of population variance in scholastic attainment accounted for by schooling (or any other variable);" 2) "school effects in terms of reducing inequality"; and 3) "school effects in terms of raising standards" (Rutter, 1983). Despite the support for school effects, some studies seemed to support the role of family effects in achievement. Rutter writes that the majority finding in the studies was that "far more of the variance in pupils' attainment is attributable to family variables than to school variables" (1983; Sammons, 1995). Creemers, likewise, makes the comment that "differences between students in their school outcomes are determined to a great degree by their background, the socio-economic status of their parents, and their initial abilities" (1996). Nevertheless, he and others of the school effects thesis continued to argue that "it is clear … that different schools and classrooms also have considerable effects" (Creemers, 1996:36).

In support of the above premise, the conclusion of several authors was that the difference in achievement is the result of differences between school and classroom factors (Creemers, 1994 in Sammons et al., 1995). An American study further confirmed this finding when it argued that the effect of schools on achievement is derived largely from variations in teacher quality (Hanushek, Kain & Rivkin, 1998). This sentiment is echoed in a recent report on top schools in the world.

According to the McKinsey Report, which compared the top schools in 25 countries around the world (though not including the African continent), "the main driver of the variation in student learning at school is the quality of the teachers" (Barber and Mourshed, 2007). In proving their point, the authors asserted that the best schools in the world were influenced by three important factors: 1) "getting the right people to become teachers, 2) developing them into effective instructors, and 3) ensuring that the system is able to deliver the best possible instruction for every child" (2007). These three factors, argued the authors, could transform an education system irrespective of local culture. In conjunction with Edmonds and other authors, Barber and Mourshed inherently take the view that school effects, in this case the capacity of teachers and the level of teaching offered, matter more. While the report's conclusions are appealing, it must be noted that the study focuses on much of the developed world with Brazil, the only nation of developing status. Thus, it is not certain how a similar study would fare in more developing nations such as those found on the African continent.

The McKinsey Report and others like it demonstrate the argument that teachers are the primary catalyst of student performance. This argument comprises a different branch in the school effects literature, which because it does not fit within the current scope of this paper, will not be discussed here (See Goe and Stickler, 2008; Goldhaber and Anthony, 2003, among others).

However, while some school effects proponents have argued from the perspective of school and classroom factors and others from the perspective of teacher quality, yet others view school effects from the point of view of system wide transformation. This latter group, though a part of the School Improvement tradition, are relevant to the discussion. Like teacher quality and school and classroom factors, this school effects perspective believes that a change in a certain aspect of schooling, in this case school systems at local or state/province levels, will translate into better student outcomes. (Note: This is suggestive of the models of quality and effective school discussed in Chapter 3). An example of the system change school effects thesis is found in the American study, the Turnaround Challenge, conducted by Calkins et al. in 2007. The study, which investigated "high performing, high poverty" schools, called for a "'protected space' where schools are given the flexibility, resources, and support that teachers and administrators are calling for – and that true cultural and system change requires" (2007:4). Its three elements, creating conditions, increasing capacity, and organizing clusters, coupled with its Readiness Model are touted as a solution to the challenge of poor achievement in schools serving poor students in America. A major requirement for this system change is a "clearly defined authority to act" (p.11) in which school leaders are able to make entrepreneurial and at times maverick decisions regarding "staffing, scheduling, budget,

and curriculum" (Calkins et al., 2007; 11). Without such authority and the local political will to act behind it, the solution offered by Calkins et al is weak. A limitation to this expression of the school effects thesis is that the recommendations proffered by the Turnaround Challenge are based upon context specific experiences that may be difficult to duplicate elsewhere. Specifically, the authors acknowledge that Turnaround is a response to a new kind of challenge within the American school system, namely the threat of school closure for underperformance under the 2002 No Child Left Behind Act (Calkins, et al., 2007: 8). This threat provides the impetus for school leaders to take drastic action to prevent closure. As such, it may be difficult to translate some of the gains made in this context to other contexts.

It is worth mentioning another limitation to the school effects thesis. Namely there is an inconsistency in the percentage differences resulting from school or classroom factors across authors (Sammons et al., 1995). In particular, research finds that the variance in achievement resulting from school factors can range between 8 - 18% (citing Creemers, 1994 in Sammons et al., 1995). School effects are usually measured as the correlation between the differences of schools (the "predictor variable") and student achievement (the "outcome variable") (Rutter, 1983). Thus how each variable is measured can influence to a degree the level of the school effects found. Yet, Rutter notes that in studies, even when school variables account for a greater portion of the variance in achievement, they are still only a small minority of the variance (1983; Wyatt, 1996). This raises the question of the "size of effects" of school factors. Indeed, one criticism of the school effects thesis, is that the "size of the effects of the school on learning are disappointingly small" (Wyatt, 1996).

Nevertheless, it is argued that the primary variables within schools that make them have a seemingly stronger effect on achievement are their internal characteristics, which "do account for much of the variation between schools" (Rutter, 1983). This is significant because the emphasis placed on school characteristics in a later phase of the literature confirms the importance of internal characteristics in shaping effective schools.

Characteristics of Effective Schools

Proponents of the schools effects thesis, in addition to investigating the effects of school variables, conducted various studies to show how schools matter. The literature recognizes and documents these studies in different ways. Purkey and Smith's division of this trend into four types of studies is well known. These authors divide the types of studies into "outlier studies, case studies, program evaluation studies, and 'other' studies" (1983). Scheerens also identified five kinds of studies that have emerged (1992). These include

1) Studies of equality of opportunity and the significance of the school,

2) Economic studies of education production functions,

3) Evaluation of programs,

4) Studies of effective schools and school improvement programs, and

5) Studies on the effectiveness of teachers and their teaching methods (Sammons, Hillman and Mortimore, 1995; Scheerens, 2004b).

It is important to note that although the literature is subjectively divided into different groups, the studies show the different foci used by researchers to answer similar questions.

Although these studies conducted over the history of school effectiveness research have at times used different methods, the outcome of the literature on school effectiveness has been similar. The research generated a portrait of factors said to be present in 'effective schools' (see Edmonds, 1979 and Creemers, 1996), as well as those that were deemed to be of no consequence to student attainment. For example, Hanushek's 1986 review of over 100 studies on education production functions found that there was no correlation between expenditure and attainment (Scheerens, 1992:36). In another example, Fuller's review of 60 multivariate studies investigating school effects in the developing world concluded that for the majority of studies, "school factors do influence achievement (at statistically significant levels)... net the influence of social class background" (1987).

Even further, post Coleman, Weber's school effects focused research into inner city schools in New York, Kansas City, and Los Angeles, elicited some of the first characteristics of effective schools. In 1971, Weber hypothesized that poor schools could attain high levels of reading attainment (Weber, 1971; Silver, 1994:81). The study proved the validity of the hypothesis and Weber discovered several characteristics: "*strong leadership, high expectations, good atmosphere, strong emphasis on reading* (author's emphasis), additional reading personnel, use of phonics, individualization, and careful evaluation of pupil progress," which made success more imminent (Weber, 1971; Purkey and Smith, 1983; Silver, 1994:81; Stringfield, 1994). Notably, Weber's identification of "good atmosphere", which he described as the mixture of "order, sense of purpose, relative quiet and pleasure in learning" is reminiscent of later authors' description of 'school climate' as a characteristic of effective schools. Further, Weber identified the importance of placing children at the focus of learning, when he described the notion of individualization, which he defined as "a concern for each child's progress" and willingness to assist individually (Weber, 1971). The

conclusion drawn from this study was that high levels of reading achievement were possible amongst inner city schools when certain key characteristics where present.

In much of the literature, the aforementioned factors were developed as a set of characteristics, or in the words of Lezotte, correlates of school effectiveness, to provide an illustration and description of effective schools. These lists have been varied as Table 2 at the end of the chapter shows. This variation is a part of the reason authors critiqued the literature citing differences in definitions of school effectiveness. Yet, despite the varied ways authors describe effective schools, there are some common threads that emerge even from the South African literature. These commonalities are at times described as the '5 factor model' of school effectiveness (Creemers, 1994:12). They include: "strong educational leadership, high expectations of student achievement, an emphasis on basic skills, a safe and orderly climate, and frequent evaluations of students' progress" (Creemers, 1994:12). Others are: teacher and principal expectations of student success, focused goals and instructional focus, parental involvement and support, school climate, and a focus on learning and time on task (Purkey and Smith, 1983; Lezotte, 2008; Sammons, Hillman and Mortimore, 1995).

While the characteristics of effective schools have been commonly noted, some criticisms have been levelled against them. D'Amico in particular critiques the literature's inability to reach a concrete consensus on the particular characteristics that contribute to effective schooling (1982). Specifically, D'Amico expresses concern with the liberal "interpretation [used to translate] findings into conclusions" (1982). Other concerns arising from the literature are linked to the weak theoretical base, the reliability of results, the research methodology and small sample sizes used, and the inconsistency in defining the term "effectiveness" (discussed later) (D'Amico, 1982; Sammons et al., 1996). And finally, the literature consists largely of reviews of reviews of the literature which lends to the research its tautological character (Sammons et al., 1996).

School Effectiveness Literature in South Africa

The school effectiveness literature in South Africa and largely in Africa is young in comparison to that in the West. As a result, the literature often draws on Western experience to address national education challenges. Consequently, indigenous South African literature on effective schooling is limited. Home grown, African literature on school effectiveness is constrained by limited access to funding for researchers, a different focus of the research on issues of universal access to schooling, and the lack of consensus on the usefulness of school effectiveness and school

improvement as a paradigm (Fleisch, 2007). Another constraint is the dominance of donor organizations such as the World Bank which tend to finance and direct the research as well as define its focus in terms of cost effectiveness measures for achieving 'good educational outcomes' (Yu, 2007; Fleisch 2007). As a result the research is often motivated and determined by movements external to African experiences and circumstances. Despite these limitations in the research, South African scholars follow a similar trajectory to that found in the international literature and have found some striking similarities in results. It must also be noted that South African studies have had a tendency to argue from the perspective of school effects rather than family effects until recently.

South African studies on effective schools are often congruent and in agreement with the international literature on effective schooling and the notion of characteristics of effective schools. Particularly, South African literature resembles the international literature in its use of methodology and the types of research conducted. Like the international scholars (Weber, 1971; Reynolds, 1976; Mortimore, 1988) seeking to understand which aspects of schools made them effective, South African researchers conducted investigation into the nature of school effectiveness in South African schools. Carrim and Shalem's review of the 1992 School Effectiveness in South Africa (SESA) Conference study, the 1996 Gauteng Committee on the Culture of Learning and Teaching (CCOLT) study, and the more recent Schools that Work study (2007) are some of the major examples of research in this area. All three studies utilized the qualitative case study approach (Purkey, 1983) to understand why some schools were able to succeed in the midst of severely challenging and at times debilitating conditions and how others failed (Carrim and Shalem, 1992:62; Christie, P., Butler, D., and Potterton, M., 2007). Using qualitative methodology, authors contextualize schools effectiveness by providing portraits or sketches of schools. The aim is to show that some schools do succeed in spite of detrimental and debilitating social conditions such as poverty or violence. South African researchers thus utilized the qualitative methodology to argue that schools can rise above socio-economic status and social contexts to perform.

Each study also resulted in findings that are in keeping with the school effectiveness literature. A significant conclusion drawn from the SESA study regarding school effectiveness was that understandings of school effectiveness are differential and not static. According to the results of the SESA conference, the schools investigated approached school effectiveness in different context specific ways (Carrim and Shalem, 1992:62). This corroborates the earlier criticism of the effective school research that cites the lack of a conclusive definition of effectiveness and an effective school as a limitation of the research (D'Amico, 1982). It also supports the arguments of the school effects strand of literature.

A major finding and concluding argument of the CCOLT study was that the collapse of a culture of learning and teaching in schools was linked to 'critical issues' of "infrastructure, facilities and resources, leadership, management and administration, fractured and adversarial relationships between principals, teachers, students and parents and the socio-economic context" (Chisholm and Vally, 1996: 11). Interestingly, these factors are the opposite of those that are deemed to be characteristics of effective schools. Thus, while providing an example of ineffective schools, the study highlighted the important characteristics of an effective school.

The conclusion arising from the Schools That Work study also explicitly supported the outcome of school effectiveness literature, namely the characteristics of effectiveness. The researchers found that all schools investigated managed to achieve a certain amount of success in functioning despite their various challenges with social issues such as poverty, AIDS, teen pregnancy and the like (Christie, P., Butler, D., and Potterton, M., 2007). The study highlighted the following characteristics as important to effective schools:

- *all of the schools were focused on their central tasks of teaching, learning, and management with a sense of responsibility, purpose and commitment;*
- *all of the schools carried out their tasks with competence and confidence;*
- *all had organisational cultures or mindsets that supported a work ethic, expected achievement, and acknowledged success; and*
- *all had strong internal accountability systems in place, which enabled them to meet the demands of external accountability, particularly in terms of Senior Certificate achievement.* (Christie, P., Butler, D., and Potterton, M., 2007).

In addition to these studies, qualitative case studies such as those conducted by Christie et al. (2007) and the Centre for Research and Development in Mathematics, Science and Technology Education (RADMASTE) also served to provide insight into schools that worked well (Malcolm, et. al., 2000: 15). One outstanding difference in the effective schools studied was a lack of parental involvement that was evident in the international literature (Christie et al., 2007). Also in evidence at effective South African schools was the safety and security factor (Christie et al., 2007). These characteristics of effective schools are crucially linked to the nature of the South African context and experience in education and specifically the cultural dynamic of educational practices in the nation.

In the final analysis, South African studies, by dwelling on case studies focusing on factors of effectiveness, like much of the international research, have taken the view in the debate that school effects matter much more for achievement than familial effects, as Coleman et al., Jencks et al., and

others have argued. The aforementioned South African scholars' focus on schools' characteristics is a case in point. Additionally, the findings of much of the South African literature agree with qualitative research in the international literature that effective schools can exist even within contexts constrained by negative social and economic factors. These findings also confirm the argument that within such 'effective schools' certain characteristics can be found in common. Further, with regard to the debate on school effects versus family effects, much of the South African literature seems to support the argument for school effects. In the RADMASTE case study, the researchers found that despite their socio-economic status and family circumstances, students were able to succeed "grandly" (Malcolm, et al., 2000:114). They thus concluded that contrary to the common arguments that socio-economic status limits student achievements, "schools through effective programs and the culture of learning they are able to establish, can 'compensate for' – or rather, capitalise on – the students' backgrounds. They do this especially through conceptualising the school as a 'family' and 'second home'" (Malcolm, et al., 2000:115). Thus the literature implicitly supports the argument that school effects matter more for student performance.

Without discounting the South African research, it must be noted that there are limitations to the notion of success in South Africa. As the literature reveals, the reliance on assessments to determine school effectiveness is problematic. Christie et al. write that "while assessment may indeed drive the curriculum, exam success may be achieved by repetition and rote learning rather than by critical and creative thinking. If so, success reflects primarily the diligence of learners and their teachers, rather than quality learning experiences in school" (2007). Furthermore, assessments themselves are flawed. Assessments can hide gross realities and can be skewed to reflect desired realities. And when the so called successful students are compared against their counterparts in other nations, it may be difficult to find similar levels of achievement.

Conclusion

The question of school effects and familial effects is an important one for policy. Understanding what factors impact achievement enables policy makers to better assess and develop plans to improve the quality of education and student outcomes. However, this work can be hindered by the relative contradictions and inconclusiveness found in the literature regarding the roles that socio-economic status or school factors play in achievement. Nonetheless, as we later elaborate, both arguments remain relevant to the pursuit of quality education and better student outcomes.

Table 2. Common Characteristics of Effective Schools in the Literature							
Common Characteristics	**Leadership**	**Teacher/Principal expectation of success**	**Focused goals/ instructional focus**	**Focus on learning/ time on task**	**Parental Involvement/ community support**	**School Climate**	**Other**
Phi Delta Kappa (1980) (in D'Amico, 1982)	Leader's behaviour matters	Leader attitudes toward education & expectation for school/program success determine impact on school.	Clearly stated curricular goals and objectives	Individualized instruction and structured learning environment	"Successful schools are characterized by high levels of parental contact and involvement".		Resources are insufficient. Staff development and service training are important for success
Edmonds (1982)	"The leadership of the principal is notable for substantial attention to the quality of instruction."	Teacher behaviours that convey the expectation that all students are expected to obtain at least minimum mastery.	A pervasive and broadly understood instructional focus			Orderly and safe climate conducive to teaching and learning.	The use of measures of pupil achievement as the basis for program evaluation.
Rutter et al. (1970)	"Teachers were positive role models for punctuality, cleanliness of the school, concern for students, etc. "	"Outcomes were better in schools where teachers expected the children to achieve."				"Outcomes were better in schools that provided pleasant working conditions for pupils." And the school functions as a whole which contributes to its atmosphere.	Use of praise and approval as means of feedback to students. Children hold positions of responsibility and are included in school.

Table 2. Common Characteristics of Effective Schools in the Literature							
Common Characteristics	**Leadership**	**Teacher/Principal expectation of success**	**Focused goals/ instructional focus**	**Focus on learning/ time on task**	**Parental Involvement/ community support**	**School Climate**	**Other**
Levin and Lockheed (1993) - 3 main criteria: basic inputs, facilitating conditions, will to change	*Facilitating conditions:* professionalism *Will to change*		*Basic input*: trained teachers, well developed curriculum, access to quality instructional material	*Basic input:* time for learning and teaching (with student participation).	*Facilitating Conditions:* community and parental involvement		*Facilitating conditions:* flexible curriculum and organization
Sammons, Hillman, and Mortimore (1995)	Professional leadership	High expectations	Shared vision and goals	A concentration on teaching and learning. Purposeful teaching and a learning organization.	Home school partnership	A learning environment	Pupil's rights and responsibilities are emphasized. Feedback in the form of positive reinforcement as well as monitoring progress.
Brookover & Lezotte (1979)	Principals are assertive instructional leaders, disciplinarians, and take responsibility for evaluating	Staff (teachers and principal) feels that all students are capable of mastering the basic skills.	Mastery of basic skills is a prime goal and objective.	Staff takes responsibility for teaching basic skills and spend more time achieving basic skills objectives.	Parent initiated contact and involvement		

Table 2. Common Characteristics of Effective Schools in the Literature							
Common Characteristics	**Leadership**	**Teacher/Principal expectation of success**	**Focused goals/ instructional focus**	**Focus on learning/ time on task**	**Parental Involvement/ community support**	**School Climate**	**Other**
	achievement of objectives.						
Lezotte (2008)	Instructional leadership	Climate of High expectations	Clear and focused mission	Opportunity to learn and student time on task	Positive home school relations	Safe and orderly environment	Frequent monitoring of student progress
Purkey and Smith (1983) – Two type of variables: Organizational/ structure and Process variables	*Organizational variable*: instructional leadership. The encouragement of staff stability and development.	*Process variable:* high expectations. And the relationship among staff characterized by collaborative planning and collegial relations.	*Process variable:* clear goals	*Organizational variable*: maximized learning time. A focus on curriculum articulation and organization.	*Organizational variable*: Parental support and involvement	*Process variable:* a defined school culture and climate that promotes a sense of community and order and discipline.	*Organizational variable*: district support, school site management
Chisholm & Vally (1996) – ***The collapse of culture of teaching and learning affected by the following***:	"Leadership, management and administration"				"fractured & adversarial relationships between principals, teachers, students & parents"	Socio-economic context	

Table 2. Common Characteristics of Effective Schools in the Literature							
Common Characteristics	**Leadership**	**Teacher/Principal expectation of success**	**Focused goals/ instructional focus**	**Focus on learning/ time on task**	**Parental Involvement/ community support**	**School Climate**	**Other**
Christie, Potterton et al. (1997)	Quality leadership - Committed teachers and principals who were effective leaders. Includes strong organizational capacity.	Concern for future student welfare. High expectation of learners.	A purposeful focus on teaching, learning and management	Focus on Time on Task; organization of curriculum	Lack of parental and community support was a negative factor, but where existent was a beneficial factor.	Leaders embody a sense of ownership and community. Also presence of organizational cultures and mindsets of hard work. Strong accountability systems.	Monitoring of teacher performance. Acknowledgement of good student performance. District and Departmental support
Teddlie and Springfield, 1993 (in Creemers, 1996)		"the possession of high expectations"; "positive reinforcement"		"Higher (focus) on time on task"		"a friendly ambience"; "the physical state and appearance of the classroom"	
Mortimore et al. 1988	Purposeful leadership of Head Teacher and involvement of Deputy Head			Limited focus within session, a work centred environment	Parental involvement	Positive climate	

CHAPTER 3: Defining Quality and Effective Schooling

In light of the argument put forward by Coleman and Van der Berg (2005) early in the previous chapter, it is evident that although a student's SES has implications for their achievement, the type of school they attend matters even more. Schools are thus instrumental in perpetuating and entrenching social inequalities (Taylor and Yu, 2008). For this reason, the type of school (SES and characteristics) that a student attends can also determine the level of achievement obtained by the student. To that end, we investigate a framework for quality and effective schools that the literature has deemed instrumental for student success. This literature embodies not only the characteristics of effective schools earlier mentioned, but also the various definitions and models developed in relation to the quality of education.

To begin, defining quality is no easy feat, as the literature readily acknowledges. The definitions of quality are so various that Scheerens comically writes "the term 'quality' of education qualifies for the world championship of frequently used terms that are nevertheless considered indefinable" (2004). Meanings of quality range from the simple to the complex, are rooted in different academic disciplines, and are grounded in diverse theoretical and ideological frameworks reflective of the historical period at the time of writing (Nikel and Lowe, 2009). They often find expression and measurement as 'indicators', which are tautologically self-defining. Moreover, scholars and key stakeholder organizations define quality singularly, in categories, or in frameworks, a collection of different definitions focusing on particular aspects of quality and effective education. The latter understanding of quality in a framework finds its expression largely in the literature on effective schools. In the final analysis however, all efforts to understand quality endeavour to improve the quality of education.

The following exposition highlights some conceptions of quality framed within the different categories or groupings utilized in the literature to understand definitions of quality. Additionally, it will underline alternative definitions of quality, linking these to the literature on effective schools and its attendant frameworks, in an effort to elucidate relevant connections.

An Early Definition of Quality

An early definition of quality is given by Beeby in 1966. Beeby, writing from the perspective of a former education administrator, traces the evolution of education in the post World War II era. He particularly notes the entrance of economists into the field of education and their dominance in defining education theory (1966). He argues that economists were instrumental in defining the value of education and lent it credibility by asserting its relevance for the national economy (1966). Beeby, acknowledging that quality was difficult to define and measure, suggested that it could be understood at three levels: the classroom level, the marketplace level, and the social level (1966:11-12). Consequently, his analysis of quality focused on the classroom level which was central to primary schooling, a trend that was to continue decades later in the literature. Moreover, Beeby's conception of quality involved a continuous progression or development that schools were expected to undergo from a low stage to a high and more advanced stage (see Box 1). Interestingly, the only factor Beeby highlighted as necessary for continued development and quality in schools was teachers, their level of education and the training received (1966). (An argument that would resurface again forty-one years later in Barber and Mourshed's 2007 report on the world's best performing schools.) Thus, Beeby maintained that teacher education and training was determinant of the level of quality in a school and was a necessary catalyst to produce progression from one stage of development to another.

BOX 1: Beeby's Stages of Development (1966:72)

1) Dame School Stage (ill educated and not trained teachers)
2) Formalism (ill educated but trained teachers)
3) Transition (educated and trained teachers)
4) Stage of Meaning (well educated and well trained teachers)

However, Beeby's analysis of 'quality' in education is not a definition *per se* of quality, but an explanation of the different levels at which "quality" is "judged". More specifically, at each level mentioned, quality is the ability of education to perform according to, and meet the expectations of, each level. At the classroom level, quality is education's ability to produce students with a grasp of the subject in a speedy manner. At the marketplace level, quality is education's ability to perform through high productivity and efficiency. And at the social level, quality is education's ability to help 'our children' reach set societal goals. Barrett et al. note that the last two levels of quality are today seen as 'relevance' and 'external quality' (2006). Beeby's use of levels of quality is reminiscent of the division of quality into different categories in the literature evident below. Each level can be viewed as a different type of definition for quality. As such, the marketplace level definition of quality reflects a market or economist definition of quality, the social level reflects a societal, goal oriented perspective of quality, and the classroom level reflects an organizational definition of

quality (in the sense that the achievement of organizational goals can define their perception of quality). Beeby's understanding of quality also assumes that schools can 'develop' qualitatively over time, such that they progress from a stage of relative poor quality to one of better quality. Teacher education and teacher training are the two key factors that are crucial to the movement of schools from one stage to another. This is a fact that is most salient for policy makers today.

Categorizing Quality Definitions

The literature on the quality of education and effective schools has developed along separate trajectories, yet both are parallel and related concepts in the literature motivated by the need to improve student achievement. Defining these concepts and understanding their links is necessary to developing a working definition for quality effective schooling.

Definitions of quality found in the literature can be divided into three broad categories: the affective (idealist or utopian) definitions, the economic and neo-liberal definitions, and the humanist conception of quality (Harvey and Green, 1993; Smith, 1997; Sayed, 1997; Barrett et al., 2006; Nikel and Lowe, 2009). These broad categories are culled from the categories developed by the five groups of authors above. In keeping with the trends found in the literature, I use these same categories to highlight the definitions of quality found in the literature. However, I deviate from trends by subsuming within these categories, the concept of effective schools and the prevalent characteristics of effective schools in order to show the existing parallels. Box 2 (below) provides specific definitions of quality in their category as defined by the different authors.

The first type of definition of quality is the *affective* definition. The affective definitions, also known as idealist and utopian, are evident in the works of Harvey and Green (1993), Sayed (1997), and to some degree, Hawes and Stephens (1997). Affective notions of quality define quality in sentimental terms. They are based on a relative standard that cannot often be quantified or measured. Harvey and Green's (1993) conception of 'quality as exceptional' and 'quality as perfection' is one example. Hawes and Stephens also highlight this aspect through their concept of "something more". This concept is defined only through individual experience of the learner, an experience that is shaped as much by the emotional and psychological interaction of a child with his/her school environment, as their intellectual (what they learn) interaction with the environment. It is also evocative of the term 'good school,' a notion that is defined by its intangible aspects, the ambience, the relationships among key stakeholders in the school setting, and the culture and traditions set in place by a school. Thus this definition of quality is relative and is dependent upon subjective interpretations. Moreover, this approach to quality is rooted in the aspirations and desires of the individual or group doing the defining. Beeby, in his definition of quality, describes it

best as the 'goals we set for ourselves, our children, our tribe, our country" (1966). In this way, an affective definition of quality is seen to carry the intangible hopes of a group or individual. As such, the affective definition of quality is defined largely by its relative nature and is dependence upon subjective interpretations.

BOX 2 : Categories of Quality

Economic and Neo-liberal Definitions

- Harvey and Green (1993): "Quality as fitness for purpose." "Quality as value for money."
- Smith (1997): The economic definition of quality includes the concept of 'efficiency', 'quality assurance', 'customer driven quality', and 'total quality management'.
- Sayed (1997): The fitness for purpose definition of quality views quality as the ability of a product to fulfill or meet the purpose for which it was made.
- Barrett et al. (2006): Economic definitions of quality are neo-liberal in nature and use output to measure quality.

Humanist Definitions

- Barrett et al. (2006): Humanist definitions of quality emphasizes the process of education, is measured through 'indicators', and has a strong focus on learners, their human development and cognizance of basic skills in literacy and numeracy.

Affective Definitions

- Hawes and Stephens (1990): "Something more in relation to the pursuit of excellence and human betterment."
- Harvey and Green (1990): "Quality as exceptional". " Quality as perfection".
- Sayed (1997): The "idealist or utopian" category of quality can be described in three forms: "as an attribute or characteristic of the product", as "a grade of achievement", as a "set standard".

Other

- Harvey and Green (1993): "Quality as transformative."

The second type of quality definitions is the *economic and neo-liberal* definitions of quality. This definition is most strongly rooted in global history, and in particular, the rising importance of the economy in the 20th century. Sayed (1997) and Nikel and Lowe (2009) label this period the "quality movement." This was an era in the 1980s and 1990s in which neo-liberalism and its tenet of limited state intervention in the public sector held sway. According to the authors, this period was influenced by the emergence of 'private sector management styles' which, in education, found expression through a focus on accountability, measurement of outcomes and "quality management" (Nikel and Lowe, 2009). Sayed also links this era to an attempt to strengthen capitalist economies post the 1970s economic recession (1997). According to Sayed, the quality movement resulted in the use of market driven approaches to increase productivity for competition, and the prominence of management based approaches to increase profitability, all of which have come to characterize this category of quality (Sayed, 1997). Quality in this period was thus a function of the structure of education and its attendant institutions and systemic levels (Nikel and

Lowe, 2009). The role of quality interventions was therefore to improve management through effectiveness and efficiency at the different institutional and systemic levels (Nikel and Lowe, 2009).

The economic definition is the most common type of definition of quality in existence and is seen in Barrett et al.'s (2006), Smith's (1997), Harvey and Green's (1993), Hawes and Stephens (1997), and many other categories of definitions as seen above. Nikel and Lowe's (2009) categorization above shows the emergence of this type of definition as a particular period in history, 'the quality movement'. The economic definition of quality incorporates a range of theories and approaches, market approaches, management theory, human capital theory, fitness for purpose definitions (and customer satisfaction definitions within it), goals approaches, and efficiency definitions, all of which have economic roots. For example, fitness for purpose definitions (see Sayed, 1997; Harvey and Green, 1993) are inherently market driven and concerned with producer vs. consumer needs. These definitions have "producer driven and consumer oriented approaches to quality" (Sayed, 1997). As a result, products are required to meet the producer's specifications, consumer needs and customer satisfaction (Sayed, 1997). In another example, Smith's (1997) management theory definition of quality is rooted in commercial management, the relationships between customers and producers, and the need to deliver externally driven (customer driven) levels of quality.

In short, each of these theories has at one time or another been used to give credence to the need for education or the quality of education. Indeed, the debate on education has often centred on the impact of education on economic growth. Human capital theory in particular "has been … compelling in policy circles, as it points to how and why governments should intervene in social policy to connect the social (educational) and economic aspirations of individuals, families and nations" (Unterhalter, 2009). Concomitantly, the argument that education yields returns in economic growth and promotes economic development has served as the driving force behind the work of development organizations such as the World Bank and their key scholars. Psachoropoulos' perspective of education, which equates education with the returns it yields to productivity for the individual and society (rate of returns) and notions of manpower development, is a case in point (1988; 1983).

Linked with these approaches are notions of efficiency and effectiveness, another economically based definition attributed to effective schools (Scheerens, 1992: Pennycuick, 1993). Effectiveness in quality education and effective schools is seen to occur when "the desired output is achieved", whereas efficiency is characterized as "the maximum output for the lowest possible cost" (Scheerens, 1992:3). Additionally, the economic concept of inputs and outputs and the related

notion of production, found in some quality conceptual frameworks (Scheerens, 2004a; UNICEF, 2000; UNESCO, 2004), define quality education and effective schooling through an economic lens that is easily evident in the research through the use of certain methodologies. For example, quantitative studies often use a production function approach to determine key inputs that result in achievement. However, this economically grounded definition of effectiveness has elicited criticism for being too monetarist in nature and therefore too limited in scope (Carrim and Shalem, 1999).

Finally, the third category of definitions is typified under the broad heading of *humanist* conceptualizations of quality and is widely championed by international organizational giants, the World Bank and UNESCO (2005). Nikel and Lowe (2009) associate the humanist category with an era in the global education debate called "quality debate". This period is distinguished by the rise of the debate around millennium development goals (MDGs) and the emergence of the education for all movement (EFA) (Nikel and Lowe, 2009). Unlike an earlier period (the quality movement), at the heart of this period is a focus on pedagogy and an improvement of the processes of education, in particular, teaching and learning (Nikel and Lowe, 2009). While the earlier period focused on institutions and systems, this period focused on "individuals, relevance and responsiveness" (Nikel and Lowe, 2009).

Barrett et al. (2006) initially define the humanist category as definitions of quality concerned with the process of education. Humanist definitions of quality emphasize the process of education, as measured through 'indicators', and have a strong focus on learners, their human development and cognizance of basic skills in literacy and numeracy (Barrett et. al, 2006). It embodies definitions that are inherently learner centred and are thus rooted in humanism (UNESCO, 2004). This category has also been extended to include rights-based and equity-based definitions of quality, which in themselves adhere to the notion of placing learners at the centre of the education process. Moreover, the humanist definitions of quality are inclusive of the characteristics of effective schools. This is evident in their inherent learner focus (toward the end of student achievement), their assumption of equity of achievement and equality of access for all students, and their extensive use of the conceptual framework on quality (see UNICEF, 2000; UNESCO, 2004; Scheerens, 2004b). This latter aspect of this definition, the conceptual framework, is similar to the economist definition of quality (Scheerens, 2004). However, rather than looking at the output side of conceptual frameworks, it uses the humanist paradigm to focus on the processes of education in conceptual models.

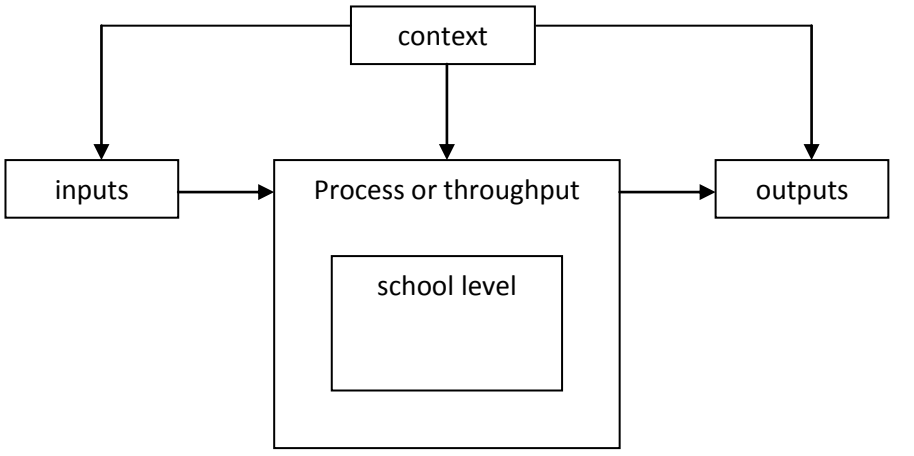
Other Definitions

Using the categories above, some others develop their own definition of education linked to a different framework for educational quality. Barret et al. (2006) define quality education using a framework composed of five components: "effectiveness, efficiency, equality, relevance, and sustainability". Quality, then is defined "in the context of 'the obligation to establish and sustain the conditions for each and every individual, irrespective of gender, ethnicity, race or regional location, to achieve valued outcomes'" (Barrett et. al, 2006). Their aim of quality education remains broadly linked to notions of education for employment, though not wholly so. It is to "buil[d] 'human capacity not only for employability, but for broader lifelong learning as well as for adaptive and 'coping' livelihood strategies in a fast moving and complicated world'" (Barrett et. al, 2006). Interestingly, in an effort to synthesize a new definition of quality, the authors replicate existing definitions, namely, "effectiveness", "relevance", and "efficiency". However they provide some new insights with respect to the notion of "sustainability".

Like Barrett et al., Nikel and Lowe's critique of the understanding of quality serves as a basis for their 'dimensional model' of quality in education, which views quality as a 'stretched fabric' holding seven conceptualized dimensions: efficiency, effectiveness, sustainability, equity, responsiveness, relevance, and reflexivity (2009). This model expands upon Barrett et al.'s aforementioned framework. Interestingly, similarities can be drawn from Nikel and Lowe's categorization of quality definitions and Barrett et al.'s 2006 study, in which Nikel and Lowe were contributing authors. Nikel and Lowe's categorization of quality definitions as the "quality debate" and the "quality movement" is reminiscent of Barrett et al.'s categorization of the understanding of quality as 'economist' and 'humanist'. Both categorizations contain the same features. Barrett et al.'s classifies the 'economist' understanding of quality in that way because of its inherent focus on outputs (2006). Similarly, Nikel and Lowe's 'quality movement' recognizes the focus on outcomes, also an economic term. Both categorizations evoke an overly market driven neo-liberal approach to quality. In the same manner, Nikel and Lowe's categorization of the "quality debate" is evocative of Barrett et al.'s "humanist" categorization in that they both address the processes of education and the focus on individuals and pedagogy. These similarities are reflective of the fact that though different terms may be used to categorize quality, similar trends in the understanding of quality are being recognized in the literature.

Models for Quality and Effective Schooling

The literature on effective schooling and its attendant characteristics of effective schools provides an alternative source for understanding quality. A common trend in this literature is the use of 'conceptual frameworks' or models to define and improve quality and effective schooling. Conceptual frameworks are useful in that they provide a way of synthesizing various approaches within the research (Scheerens, 2004b). These conceptual frameworks are, more often than not, drawn from the literature on school effectiveness and the effective school characteristics and are constructed around an input-output model which is rooted in a systems model of education (see Heneveld, 1995; Scheerens, 1990, 2004a; UNESCO, 2004). And while in form it may appear different, it shares some similarities with the definitions of quality which will be made clear later.



BOX 3: Taken from Scheerens (2004): A basic systems model on the functioning of education

The conceptual models for quality and effectiveness found in the literature evince some similarities. Most evident, is the earlier mentioned formulation around a basic systems model (Scheerens, 2004a). This model (see Box 3) is composed of inputs, processes, outputs and context. This basic model, writes Scheerens, describes education using a multilevel approach, as a productive system where "inputs are transformed into outcomes" within an overarching context (Scheerens, 2004a). Perhaps most important is that the framework helps to illustrate the causal relationships that occur at different levels within the education system, highlighting in particular the processes of education (Scherman, 2007). In drawing attention to the processes of education, the model understands its importance for the functioning of the system. The model also differentiates between two levels: the school level, wherein the organization of the school is found, and the classroom level where the processes of instruction occur (Scheerens, 2004b). Overall, the basic systems model serves as a template for modelling quality and effective schooling conceptualizations. As a result, it lends itself to interpretation by various scholars and has evolved over time (see Figures below**)**.

Scheerens, and Heneveld and Craig Models

An early conceptual framework (Scheerens 1990, see Figure 4), based on a "review of reviews of school effectiveness," emerged as a model of school effectiveness integrating different kinds of studies in educational effectiveness (see Chapter Two) that attempt to understand effectiveness at school and instructional levels (Scheerens, 2004b). The model offered a "choice of variables" and was enhanced by "multi-level analysis" (Scheerens, 2004b). Moreover, it was grounded by key assumptions put forth by different scholars.

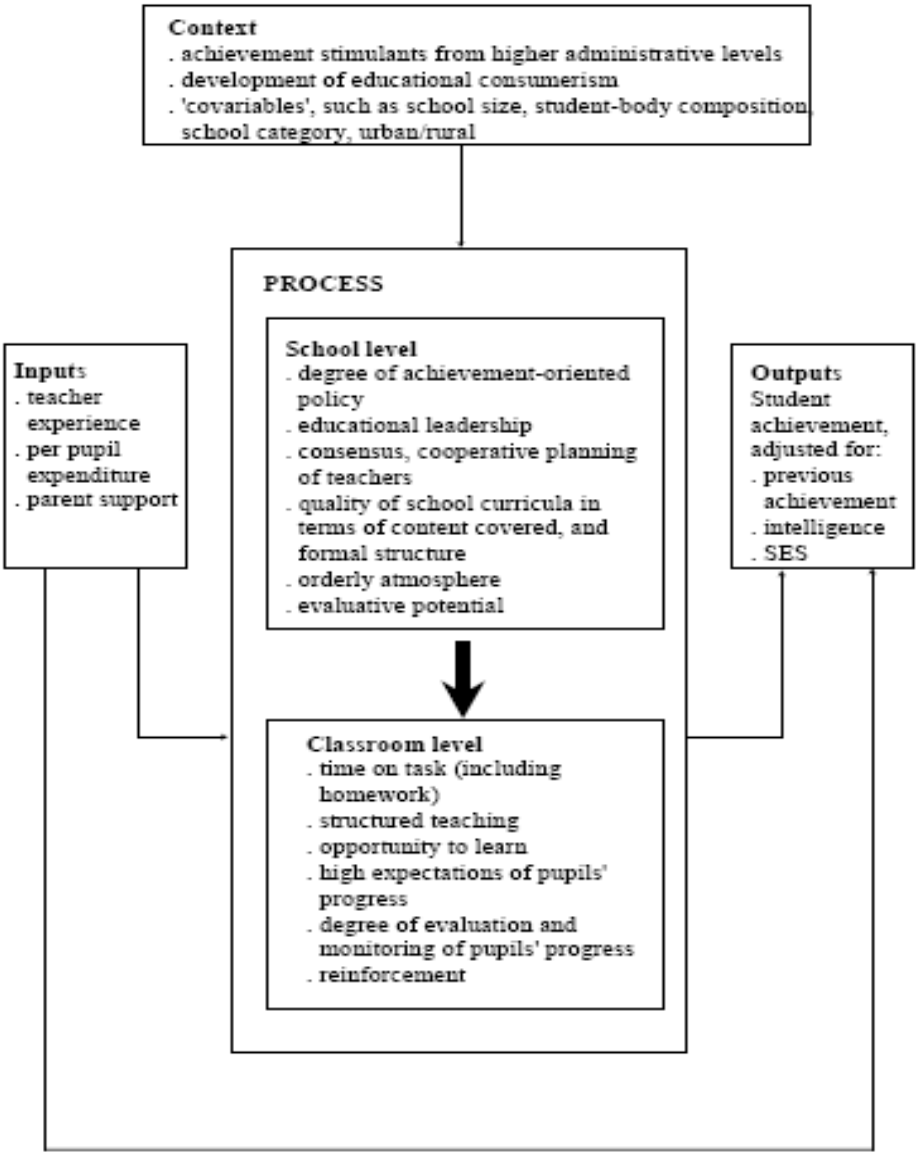


Figure 4: Scheerens 1990 Integrated Model of School Effectiveness (Taken from Scheerens, 2004b)

Particularly, Purkey and Smith's(1983) argument that schools existed in "nested layers," such that organization at a higher level influenced the effectiveness of a lower level (a concept supported by Scheerens and Creemers in 1989), resulted in the creation of different levels (i.e., school level, classroom level, etc.) within the model (Scheerens, 2004b). The model also facilitated the integration of different strands of research, such as the instructional effectiveness, school effectiveness, and production function strands of research, as different layers or levels within the model (Scheerens, 2004b; Scherman, 2007). It is also used as a "basis for defining different perspectives on education quality", a quality which makes the framework open to interpretation (see Box 4) (Scheerens, 2004b).

Box 4: Scheerens (2004a) –Six ways to define education quality

- *Productivity view* – Quality and its indicators are viewed as the success of desired outputs, outcomes and impact (i.e. achievement or attaining the expected diploma). The focus is on a standard or benchmark..
- *Instrumental Effectiveness* – Quality is determined by inputs, context and processes, which act as indicators and which when manipulated can produce predictable outcomes.
- *Adaptation perspective* – Quality is determined by an analysis of educational goals. This implies an aspect of monitoring education, particularly in the area of inputs, context and processes, in order to ensure that desired goals are achieved.
- *Equity perspective* – Quality is determined by the equal distribution of inputs, outcomes and processes among all stakeholders in education regardless of their different characteristics. The presence of equity is the indicator used to determine quality.
- *Efficiency perspective* – Quality is evident when the "highest possible outcome for the lowest possible cost" is achieved. Otherwise known as cost effectiveness, this view draws upon the productivity and instrumental views.
- *Disjointed view* – Quality is determined by looking at each component part of education (for example, teacher training or class size) individually to assess its appropriateness or acceptability. This view is most prevalent and is at times combined with other views.

This early conceptual framework is well cited in the literature, but has been improved upon over time by Scheerens and others (Scheerens, 2004b). The conceptual frameworks following this model have reinterpreted the literature on school effectiveness, at times using theory from various disciplines, while using the model as an infrastructure for its argument. The conceptual framework developed by Heneveld and Craig (1995) (Figure 5) which bears resemblance to Scheerens' model is a case in point. Like Scheerens, it uses the school effectiveness literature as the basis of the framework. Using 16 characteristics of effective schools to develop indicators, Heneveld and Craig define their framework around "supporting inputs, enabling conditions, school culture and climate, teaching/learning process, and student outcomes" (Heneveld and Craig, 1994; Lezotte, 2008). Unlike Scheerens' framework, this model is specifically grounded in organizational and behavioural theory and views the school as a social system composed of "complex networks of formal and informal social relationships", a unique and individual culture embedded in the larger community environment, and "an interdependence of parts within the school" (Heneveld, 1995). The framework also links quality to effectiveness and the processes of education (Heneveld, 1995).

Thus quality is defined in terms of the outcomes of education, what is taught, how it is taught, where it is taught and to which children (Heneveld, 1995).

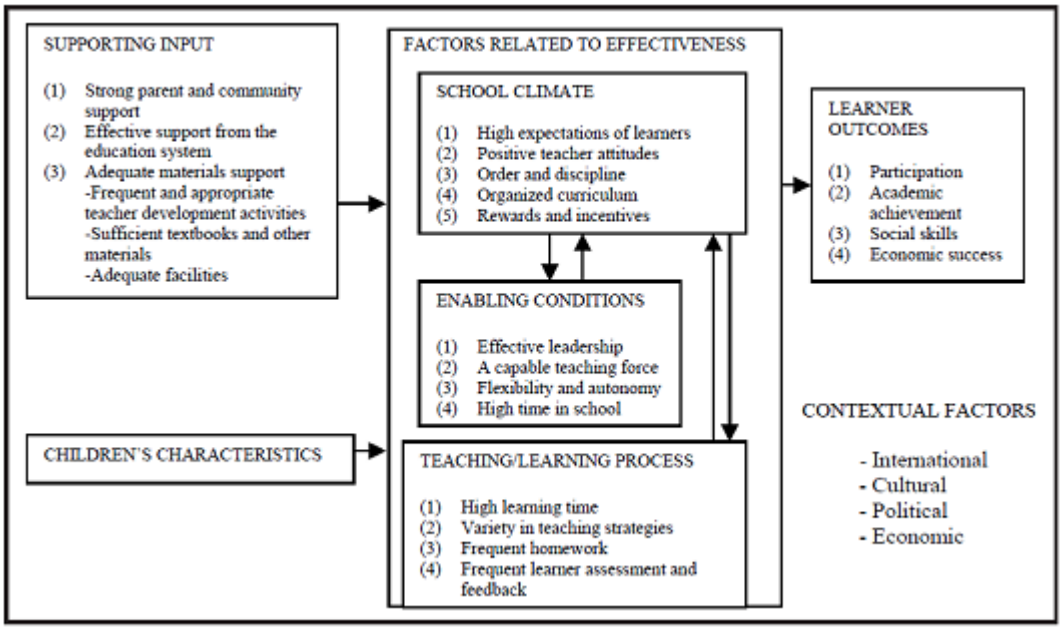


Figure 5: Conceptual Framework for factors of school effectiveness, Heneveld and Craig, 1995

Other differences between Heneveld and Craig's and Scheerens' models are apparent. Firstly, both models conceptualize the context differently. While Scheerens' model develops a bi-level context (the 'higher administrative levels' and school levels) which act directly upon the process aspect of the framework, Heneveld and Craig's context is entirely exogenous and acts as a setting in which the process occur. Secondly, Heneveld and Craig's input expands Scheerens' inputs and have a direct impact on factors related to effectiveness (the process). Scheerens' input, however, influences directly both process and output aspects of the framework. Thirdly, both models conceive of the process differently. In Scheerens' framework, it is composed of two levels, the school and classroom level that together impact the output aspect. Within the process, the direction of influence is from the school level to the classroom level. This implies that the processes occurring at the school level hold implications for the classroom level. On the other hand, Heneveld and Craig's framework conceives of the process aspect solely at one level, namely the school. In their understanding, the school climate has the greater impact upon both enabling conditions and the teaching/learning process with which it interacts mutually. Interestingly, it appears that the enabling conditions and the teaching and learning process themselves do not interact. Finally, although both models are conceived differently, their linear understanding (the notion that input impacts process which in turn impacts output) of causal factors that impact student achievement, and ultimately the output, remains similar.

UNESCO and UNICEF Models

In more recent times, the conceptual framework model has also been used by international organizations to define and monitor quality and effectiveness. This comes in the wake of an increasing international emphasis on quality as a central precondition to achieving equity in education (UNESCO, 2000; 2004). The international recognition of quality's priority in education is noted particularly in the Dakar Framework for Action which aims to "improve all aspects of the quality of education [to] ensure [the] excellence of all so that recognized and measurable learning outcomes are achieved by all" (UNESCO, 2000: 8; 2004: 30). However, while quality took root as an integral part of education, it was often conceived in limited terms as the means to an end (learning outcomes) in education. It remained in many cases an affective term, understood as part of the general hope for education for all and thus was almost never fully defined.

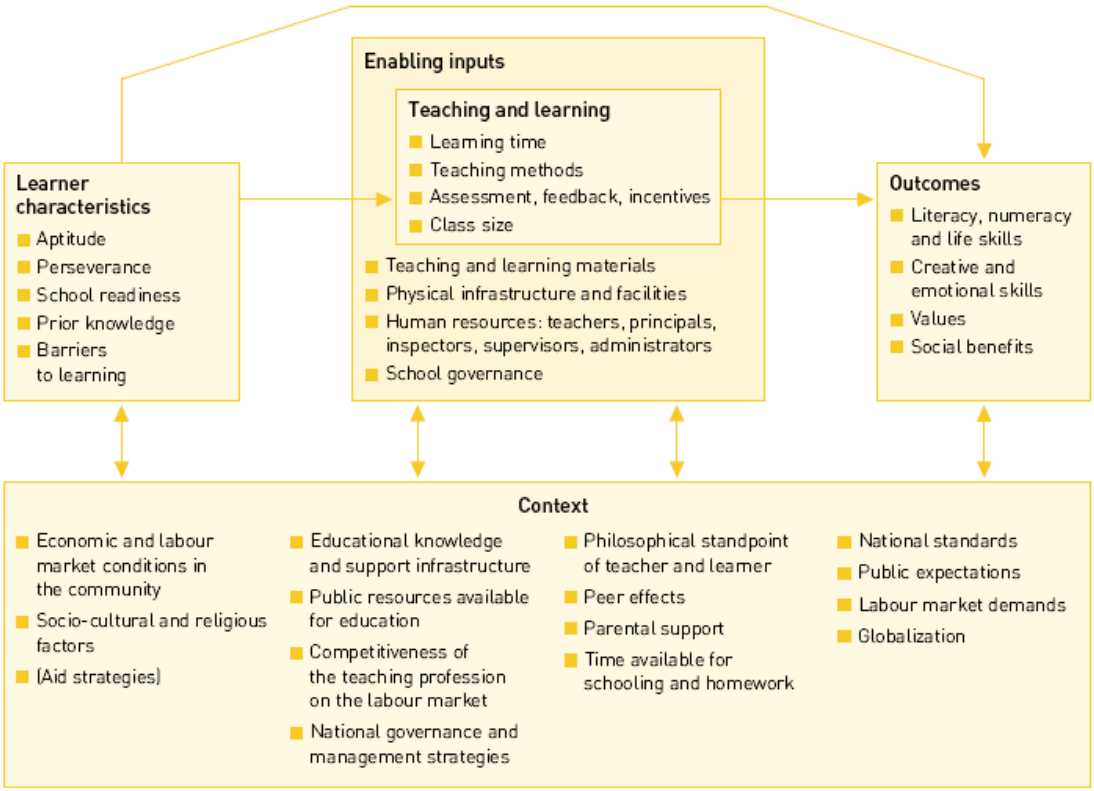


Figure 6: UNESCO's conceptual framework for education quality, EFA Global Monitoring Report, 2005

The use of the input-process-output framework found in the conceptual model has been beneficial to defining quality by international organizations such as UNESCO and UNICEF. While the UNESCO framework maintains similarity to early models, its difference lies in its use of various approaches to create a holistic concept of quality and effective schools. Whereas Scheerens uses the framework to define different perspectives of quality (Box 4), UNESCO's framework takes hold of different academic disciplines to define one perspective of quality. This framework (see Figure 6) draws upon relativist, client centred and standards based approaches that are themselves rooted in various educational traditions (UNESCO, 2004: 32). These traditions are grounded in the sociological discipline and include the humanist, behaviourist, critical, indigenous and to some extent adult education, all of which emphasize a particular perspective of education (UNESCO, 2004: 32). Ultimately, the framework aims to reflect the main goals of education, illustrate the different though linked parts of the education system, and act as a tool for the analysis and measurement of quality (UNESCO, 2004: 35).

Other differences between frameworks emerge. For example, the framework interprets the labels 'input-process-output' differently from earlier models as 'learner characteristics dimension', 'contextual dimension', 'enabling inputs dimension', 'teaching and learning dimension', and 'outcomes dimension' (UNESCO, 2004: 35). UNESCO's framework also sets itself apart from other

frameworks by taking a different approach to the links between its component parts. Like Heneveld and Craig, the UNESCO framework, under the influence of the humanist paradigm, understands the importance of learner characteristics. This feature is missing in Scheerens' 1990 conceptual framework. And although Heneveld and Craig fail to elaborate upon learner characteristics, UNESCO views this component as crucial for learning and understands that the differential abilities of learners, impacted as it is by their social background, personal characteristics, and individual barriers to learning, can impact the learner's ability to learn (UNESCO, 2004:35). In particular, learner characteristics, notably not an input *per se*, have shared links with the context, contributes to teaching and learning, and have an impact on the outcomes of education.

The context dimension represents perhaps the greatest departure from Scheerens 1990 and Heneveld and Craig's framework. In Scheerens' framework, context has a direct and singular impact on the process component. In Heneveld and Craig, context exists and agreeably does influence children's learning, but falls outside the realm of action, because "educators have little influence over these factors [of effectiveness] outside the school" (1995). The authors conceive of context in this way because their primary focus is on school level factors. In the above framework, the context maintains a strong link between all other components in the framework. It has reciprocal influences following the notion that society and education are mutually influencing. Yet it also holds to the understanding that society in the 'short term' has a greater influence and is thus more easily reflected, with all its inequalities, within education (UNESCO, 2004: 35). Also within the context are situated national education policies, which play a crucial and foundational role in education.

Box 5: UNICEF Definition of Quality in Education, 2000

- The quality of learners - health, nutrition, family & local community support,
- The quality of the learning environment - good resources, infrastructure and facilities, physical safety for teachers and pupils, especially girl pupils, and an environment of sound community determined rules and policies, and inclusivity,
- The quality of curriculum content, literacy and numeracy, etc.;
- The quality of processes - "how teachers and administrators use inputs to frame meaningful learning experiences for students."
- The quality of outcomes – achievement in literacy and numeracy, the use of proper assessment tools and achievement of expected outcomes in other areas, lifelong learning, health outcomes, etc

Another departure in the framework is illustrated in the process and input components. The process of education, also known as the 'black box', is positioned within the inputs, here called 'enabling inputs'. The process of education is identified as 'teaching and learning' and consists of time spent learning, the methods of teaching, size of a class, and feedback and assessment. It can be differentiated from Scheerens' conception in which it is divided between two levels, the school and the classroom level, and from Heneveld and Craig's

conception in which it is divided into enabling conditions, teaching and learning process, and school climate. More importantly, it is different because it is nested within inputs, which are "enabling in that they underpin and are intrinsically interrelated to teaching and learning processes, which in turn affects the range and the type of inputs used and how effectively they are employed" (UNESCO, 2004: 36). By placing the process within the inputs, the framework implicitly challenges the assumption that education occurs in a linear manner, first by introducing inputs, then undergoing the processes that lead to outcomes. Rather, it shows that the workings of the education system are multilayered and simultaneously occurring.

Finally, the outcomes component is similar to other framework conceptions in that it uses student achievement as a determinant of favourable outcomes. It is also grounded in the notion that the outcome of education should reflect the "agreed [upon] objectives of education" (UNESCO, 2004:37).

One final definition of quality is provided by UNICEF. This definition, however, does not construct a schematic diagram like earlier models discussed, instead it delineates quality along similar lines (see Box 5) rooted in a political, cultural and economic context (UNICEF, 2000). Using a humanist perspective UNICEF defines quality in a holistic manner encompassing five different dimensions of education that correlate with the different parts of the basic conceptual framework. As a whole, this definition conforms to the basic conceptual framework, with the only departure being its holistic approach, though this remains similar to the UNESCO model.

Stringfield and Slavin

In essence, the models, drawing as they do from the literature on effective schools, serve as an expression of the characteristics of effective schools. Yet, while there are certain similarities across the models, some differences do exist. Stringfield and Slavin's 1992 model of school effectiveness is a case in point. This model (see Figure 7) avoids an explicit input-process-output framework. Instead it reformulates findings from the literature on school effectiveness to create a four level hierarchical model, QAIT/MACRO. Whereas the emphasis in earlier input-process-output frameworks is to show relationships between different actors and to emphasise input and process factors that are relevant to effectiveness, the QAIT/MACRO model identifies learner aptitude and capacity to understand as the main catalyst in student achievement. Thus, where earlier models place greater emphasis on school and classroom level factors in influencing achievement, this model instead places importance on students for achievement. Stringfield and Slavin's model works such that in the second level, teachers, and other academic instructors (including parents) play a role in enhancing student achievement by providing quality instruction (QAIT or "**Q**uality instruction at the

Appropriate difficulty levels and within adequate **I**ncentives over sufficient **T**ime") (1994). And in the third level, the broader school leadership, principals functioning under the notion of MACRO (or "the provision of **M**eaningful goals, **A**ttention to daily academic functioning, **C**oordination among programs, **R**ecruitment, development or retraining, and as necessary, removal of teachers, and **O**rganizing to sustain all of the above within considerable bureaucracies") facilitate the provision of instruction, ensuring that teachers provide quality instruction (Stringfield, 1994). And at the fourth level, external groups (community, school district, state and federal policy), provide facilitative support to the third level. In this framework, student achievement is not the direct function of the school level where MACRO occurs, instead, drawing from early arguments of Carroll (1963) "Students' learning is assumed to be a function of aptitude, ability to understand, perseverance, opportunity and quality of instruction" (Stringfield, 1994). In short, the argument is that schools cannot 'cause learning' but they do facilitate the type of instruction students receive (QAIT) and thus, indirectly, student achievement, when coupled with student attributes. Interestingly, the UNESCO model earlier mentioned takes note of this when it draws links between learner characteristics, teaching and learning, and outcomes (2005). It recognizes that teaching and learning is most effective with the right learner characteristics. And learner characters can have a direct impact on outcomes.

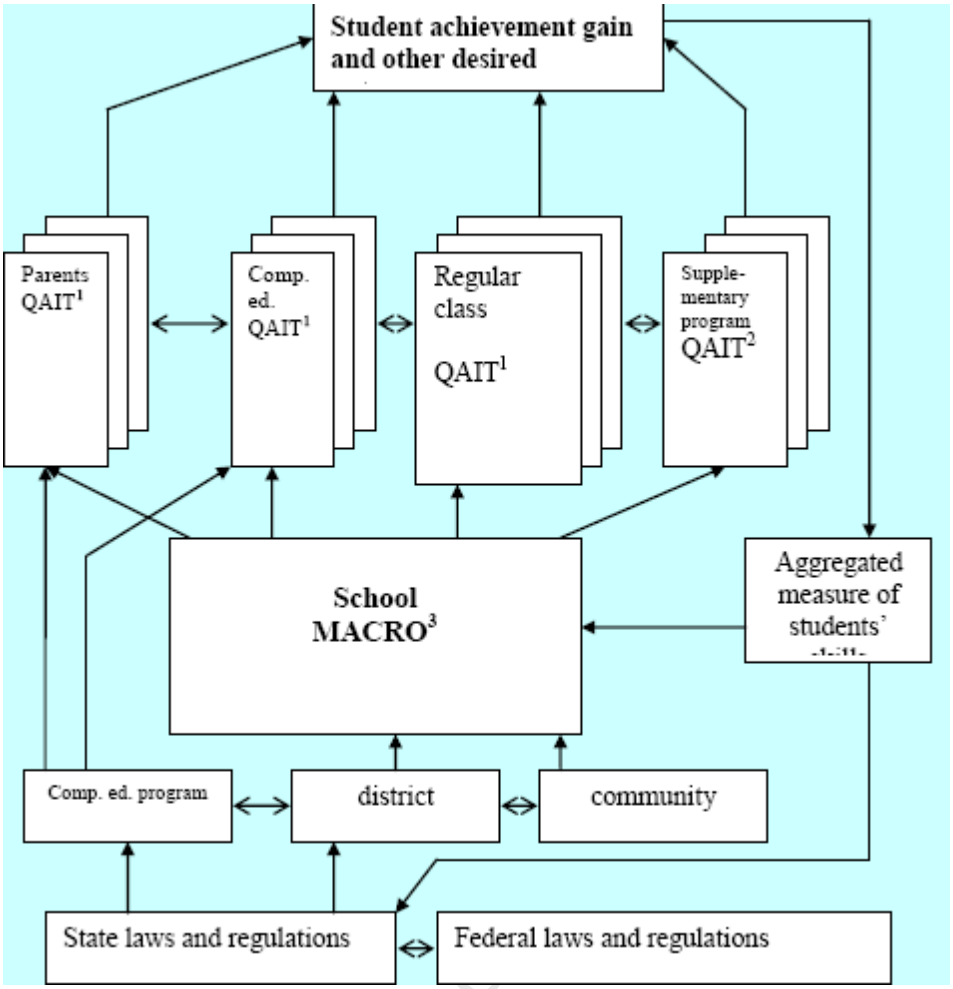


Figure 7: A hierarchical elementary educational effects model, Stringfield and Slavin, 1992

The QAIT/MACRO model raises some noteworthy issues. Firstly, it highlights the importance of parental involvement (level two), which provides a valuable source of learning for children. This is important given arguments that parental involvement (homework help, etc.) can positively affect achievement (Trivette and Anderson, 1995; Keith, T., Reimers, T., Fehrmann, P., Pottebaum, S., and Aubey, L., 1986). Secondly, in placing emphasis on learners, the model understands that students' personal background comprising their cultural capital (a concept mentioned earlier and developed by Bourdieu (1986)), which has a great impact on learner aptitude and capacity to understand, is an important factor in learning. Finally, under MACRO, the model recognizes the importance of teacher recruitment, a topic which is well supported in the literature (see Barber and Mourshed, 2007).

Limitations of Defining Quality and Effective Schooling

Although the meaning of quality and effective schools provides some understanding into the concepts, it is at times limited. The greatest limitation of defining quality and effective schooling is that there is no consensus on the terms or their measurement (Smith, 1997). Sayed and Scheerens make a similar criticism when they note that the terms are "frequently used but never defined" (1997; 2004). Recall also Scheerens' words that "the term 'quality' of education qualifies for the world championship of frequently used terms that are nevertheless considered indefinable" (2004). And D'Amico notes "definitions of effectiveness" as one key limitation in the research on effective schooling (1982). He also notes that the literature has seen a proliferation of terminology used in the effort to understand schooling (D'Amico, 1982). The multiplicity of definitions and understanding of 'effectiveness', as evident in the various approaches noted above, places the practical work of school improvement in a tenuous position. It makes the measurement of 'effectiveness' difficult and subject to varying interpretations (Harber and Muthukrishna, 2000). Furthermore, definitions in both the quality of education literature and the effective schools literature are often not explicit in that they are often symptoms or characteristics of the concept and they lend themselves to better use as indicators. In other words, definitions of quality and effective schooling fail to address their precise meaning, relying rather on measurements to explain the concept.

Meanings of quality are also often relative, which can be problematic in the context of education (Nikel and Lowe, 2009; Sayed, 1997). Despite these limitations, both terms are useful "analytical devices that can help inform understanding and, through that, inform practice and policy" (Barrett et al., 2006).

Linking Quality and School Effectiveness

Despite the limitations to quality and school effectiveness, both concepts remain relevant. Quality in education and school effectiveness are often treated as separate concepts in the literature. However, they are inevitably linked and share key similarities. A primary similarity is the focus on learners found in both concepts. School effectiveness places a priority on learners in its support of the schools effect thesis and its attention to school processes within the conceptual framework mentioned earlier. Its aim to develop factors that affect student achievement is another example of this focus on learners. In quality definitions, the focus on learners is largely found in the humanist approaches with their attention to the processes of education and pedagogy, and to a lesser extent in the affective and economist approaches to quality.

Another similarity between the two concepts is that both have some roots in economics. The quality definitions as earlier mentioned are at times rooted in an economic outlook, especially with regard to efficiency, effectiveness, etc. Likewise the school effectiveness definitions have roots in economics. The use of the conceptual framework to operationalize the characteristics of effective schools is a case in point. Here the notion of inputs that work on processes in order to produce required outcomes is itself an economic construct. Another example is the notion that time spent in learning and teaching, the size of a class, the availability of infrastructure and resources, all part of the characteristics of effective schools, are rooted in research that took an economic approach (education production functions) to understanding student achievement (Rutter, 1983; Hanushek, 1979).

There are other links between quality and school effectiveness definitions. By breaking down a conceptual framework model into its component parts and comparing it with the three major categories of quality definitions, it is possible to see the linkages between concepts. The diagram below (Figure 8) uses the UNESCO conceptual framework[4] to show an example of these linkages. First, the context factor of the framework has links with economic definitions of quality because of its emphasis on economic and labour market conditions as well as the time for schooling and homework, the latter of which has been part of the literature on education production functions (Hanushek, 1979). Also linked to the economic definitions of quality are some input and output factors, specifically "teaching and learning materials", "infrastructure and facilities," "literacy, numeracy and life skills." These reflect the economic notion that certain material inputs can result in the desired outputs, in this case, literacy and numeracy achievements.

Links to the humanist definition of quality are found primarily in the process factors of the conceptual framework. These include teaching methods and human resources and describe the working of schools at a classroom level. The input factor also has links to the humanist definition of quality largely because of its focus on learner characteristics. In doing so, the input factor highlights the importance of learner factors in the process of education and their impact on the outputs and outcomes. Finally, the output factor is linked to the affective definition of quality because it posits, at times, idealistic standards such as the gaining of values. It also posits standards in achievement (i.e. literacy and numeracy and life skills) as well as the idea of 'something more' in its notion of "creative and emotional skills", which are highly relative to specific situations and relationships (between teacher and student) at the school level.

[4] The UNESCO framework is recent and as well embodies a wide range of perspectives in its definition.

Put simply, definitions of quality and school effectiveness models are inextricably linked. While quality definitions provide a fabric, school effectiveness models lend the structure. Together they illustrate the very framework within which education occurs and describe the existing relationships within the system.

Conclusion

This chapter has attempted to provide a critical understanding of quality and school effectiveness as variously defined in the literature. These concepts are vital to the discussion of effective schools and student performance. In view of arguments in favour of school effects, these concepts become even more important. Understanding quality and the definition of school effectiveness can aid in understanding what sort of schools can enable students to achieve despite poor socio-economic status or background.

Figure 8: Links between Quality and School Effectiveness Definitions (Erhiawarien, 2011).

CHAPTER 4: UNDERSTANDING THE IMPLICATIONS OF THE SES DEBATE IN THE SOUTH AFRICAN CONTEXT

Remembering Coleman: Why the debate remains salient today

At this point, it is necessary to draw attention once again to the seminal report that transformed the field of education. The Coleman Report (1966) was catalytic in directing the course of education research. One consequence of the report was the debate into school effects and family effects, the qualitative case study research into schools, specifically outlier schools, and the subsequent conclusions regarding effective schools and their characteristics. Of particular importance arising from Coleman's Report is the debate around socio-economic status and achievement, a part of the school effects and family effects arguments. To briefly summarize, Coleman's conclusion was that "socio-economic factors bear a strong relation to academic achievement. When these factors are statistically controlled, however, it appears that difference between schools account for only a small fraction of differences in pupil achievement" (1966:21-22). Thus, the report implied that schools had a minimal impact on student achievement. Another implication is that in an unequal society, schools that are unable to transform socio-economic disadvantages into achievement will likely perpetuate inequality. Yet, despite these seemingly negative findings, Coleman made an often overlooked statement that for students from minority (disadvantaged backgrounds) school remained all the more important. Therefore "the achievement of minority pupils depends more on the school they attend than does the achievement of majority pupils" (Coleman, 1966:22). And as such, this indicated that it is for the "most disadvantaged that improvements in school quality will make the most difference in school achievement" (Coleman, 1966).

Several authors (Edmonds, 1979; Rutter et al., 1979; Mortimore et al., 1988) attempted to disprove this argument. By emphasizing that schools did matter, these authors actively worked against Coleman's findings. Perhaps the most influential and beneficial contribution of this rebuttal to Coleman's arguments have been the defining of standard attributes (characteristics) of effective schools and a growing interest in the internal process of school functioning as a focal point of investigation. Yet the research on school effects was not without issue. Specifically, data concerning the size of school effects, said to be important to the relative overall importance of schools to achievement, remained inconclusive. Reports of varying sizes in school effects render the conclusions drawn inconsistent, even though the argument is made that school effects matter more for the value added to student progress, than socio-economic factors (Wyatt, 1996: Sammons et al.,

1995). Additionally, teacher quality and teacher effects, which are a part of the broader school effects, are widely noted as being most important to learning (Wyatt, 1996; Barber and Mourshed, 2007; Beeby, 1966).

Despite the arguments to the contrary socio-economic status (SES) remains inextricably linked to achievement (Taylor & Yu, 2008). This is made clear in the South African experience documented in Chapter One of this dissertation, where, research findings from international and regional studies into student achievement found that performance could be disaggregated by human development index ratings, SES and former racial school lines (Reddy, 2006). An analysis of the TIMSS study revealed that when performance was divided by former racial school categories, those who attended the former white only schools (and usually better resourced) performed on average better than those who attended former African schools (usually less well resourced) (Reddy, 2006). Specifically Reddy noted that "the average score of learners in African schools was almost half that of learners in ex HOA (previously white) schools" (2006).

Fleisch's (2007) review of learner performance in South Africa also revealed the impact of SES on student achievement. He observed that

> *"While a small minority of primary schoolchildren attending privileged schools are achieving at curriculum benchmarked 'grade level', which is comparable to countries such as Germany and the United States, the vast majority of children attending disadvantaged schools do not acquire a basic level of mastery in reading, writing and mathematics" (Fleisch, 2008:3).*

His findings led him to the conclusion that there is a "bimodal distribution of achievement" in South African primary schools. This is despite South Africa's achievement of near universal enrolment with a gross enrolment ratio between 96.5 and 99 percent (DOE, 2009; Pendlebury, 2009). A further observation by Bloch linked the bifurcation of achievement to South Africa's dual economy:

> *"The research clearly shows that if you are black- particularly if you are rural and poor- schooling and education does not work for you. For 60-80% of our children, education reinforces marginalization, trapped in a second economy of unemployment and survival with few ways out. It may even be said that there are 'two education systems' in South Africa mirroring the problems in the two economies" (2005, quoted in SAHRC 2006:18).*

Bloch and Fleisch's arguments confirm the work of other authors (Reddy, 2006) who pioneered the analysis of data from the TIMSS 2003 tests. Moloi's analysis of South African

performance on the SACMEQ math tests also confirms the impact of SES on achievement (2005). Here, SES as defined by geography of students, (rural or urban) was a determinant of student performance.

An added factor to the phenomenon of SES is cultural capital. The term 'cultural capital' is first coined by Bourdieu in 1960s who uses it to explain the differences in performance by students from different social classes. Whereas, socioeconomic status (SES) refers to student's social class as defined by economic geography (rural or urban) and household possession, cultural capital refers to the socialization that every individual and specifically students receive, which enables them to function educationally and prepares them for life in society (Bourdieu, 1986). Such socialization is comprised of the skills, knowledge, education, attitudes and habits, and social advantages transmitted from parent to child (Bourdieu, 1986). It is also reproduced or reinforced in the society through schools. For Bourdieu, one's educational achievement is the result of the "investment of time and cultural capital" (1986). Thus, academic achievement is not merely a matter of 'natural aptitude' but one of cultural capital inheritance. In other words, one's cultural capital can contribute to or detract from one's ability to be academically successful. When coupled with socio-economic status, and the fact that schools reinforce social structures, the outcome for academic achievement can be negative.

Factors contributing to poor performance in South Africa

If we accept the evidence of the research, then socio-economic status is a primary cause of the problem of poor performance in South Africa. Yet, SES is simply the face of a variety of complex symptoms that interact to create under-performance in education. In reality, South Africa's poor performance in education is indicative of a historic legacy of political and economic domination of Africans. For example, early education in pre-apartheid South Africa functioned to entrench social roles between British and Afrikaner settlers and Africans (Hlatshwayo, 2000; Molteno, 1984). And although several mission schools provided good education for Africans, colonial education policy utilised education as "an agent of social control" for the purpose of extending colonial hegemony over the indigenous people (Johnson, 1982). Later, the emergence of industry and the discovery of minerals changed the economic landscape of South Africa and created a need for African labour. Consequently, the curriculum provided to African learners also changed to reflect the need for a non-academic working class (Molteno, 1984). Yet again, in the 1950's, emerging industrialization and a new capitalist economy with its need for cheap labour further motivated the rise of Bantu Education policy. Under the Bantu Education Act of 1953, control of education was removed from

provincial councils and missionaries and given to the Native Affairs Department (Shepherd, 1955). Africans, therefore, became under-educated in preparation for a life of subordination and exploitation (Enslin, 1984). Thus South African education was historically governed by a politics of domination, from the colonial era to the apartheid era. And through the period leading up to democracy, education continued to be characterized by a politics of power and negotiation (Fiske and Ladd, 2004). As a result of this history, South Africans entered into democracy in 1994 with an education system fractured by inequality of quality and opportunity in education. Inequality of opportunity is thus among the legacies bequeathed by South Africa's history.

Inequality is particularly apparent in incomes. Income inequalities exist such that 80 percent of households in South Africa hold 34% of the national income (Porteus, 2004:342). Conversely, 20 percent of households hold 66 % of the national income (Porteus, 2004:342). Bhorat and Kanbur identify some trends in the South African welfare, which they argue has been impacted by weak economic growth rates (2006). In particular, absolute and relative income poverty and income inequality have been on the rise. African households are most affected by the increase of relative and absolute poverty. Bhorat and Kanbur state that, for these households, poverty levels have increased from 1995 to 2000 (2006:4). This is despite South Africa's status as a middle income country. Most importantly, the presence of poverty has great social implications. For example, 70% of children reside in poverty (Dieltiens and Meny-Gilbert, 2009). And it is well known that poverty in South Africa is racially and spatially defined. Amongst the population, black people are most affected. According to StatsSA, cited in Porteus (2004:343), over half of black people, 52%, are poor; 17 percent of coloured people are poor, and of those least affected, less than five percent of whites and Indians combined are poor. Porteus also notes that poverty is concentrated in rural as opposed to urban areas (2004:343). This is problematic given that nearly half of the population resides in rural areas and is composed of largely older women head of households raising young children (OECD, 2008; Fiske and Ladd, 2004:11). Poverty also impacts upon education in very real ways. For example, it impedes the access of the poor to education through hunger, costs of schooling, and transport, among other factors (Spreen and Vally, 2006). The expenses incurred by a family sending children to school, even if fees are waived on grounds of poverty, remains a great burden, as families must provide school uniforms, shoes, sports equipment, school outings and textbooks, lunch, stationery, etc. And poverty as a factor impacting socio-economic background plays a role in determining student achievement in school (Van der Berg, 2005).

The impact of inequality is also evident in unequal school attendance. During apartheid, inequality was largely divided along racial lines such that being black or white was synonymous with

being poor or rich (Nattrass and Seekings, 2001). As a result, education was segregated and unequal such that students would often attend either low SES schools or high SES schools. The historic segregation of education under apartheid by race (and by default, class) led to a situation in which schools became highly unequal structures mirroring the inequalities in society. However, post apartheid, policies of negotiated settlement in education further entrenched inequality within the schooling system (Fiske and Ladd, 2004). Allowing schools to preserve their autonomy through the ability to set their own policies on hiring and admissions and the imposition of school fees deepened the existence of inequality between schools, since not all (mostly the previously black schools) were equipped to transform these political gains into school quality (Fiske and Ladd, 2004: 69). And despite the decline in inequality between races as a consequence of greater upward mobility amongst blacks, inequality persists and increases particularly among blacks (Nattrass and Seekings, 2001; Van der Berg, 2002). Even further, the exodus of black students, with the upward mobility of their parents, from previously black schools to formerly white schools, results in a persistent high inequality amongst schools rather than within them reflected largely in the primary school population (Soudien, 2004; van der Berg, 2005; van der Berg and Louw, 2007). And, though 5% of black students attend formerly white schools, the vast majority of black students still attend predominantly black schools where poor quality may be the norm (Van der Berg, 2002). Van der Berg thus notes that "the great inequality and wide divergence in the performance of individual learners is made worse by high inequality amongst schools" (2005).

Finally, the combination of history, poverty, inequality and a myriad other social factors like HIV/AIDS contribute to student SES and concomitantly to performance in education. One major consequence of school inequality, the aforementioned factors, and low school SES is that schools with this characteristic are likely to be inefficient. The inefficiency lies in the inability of a school with low SES to sustain the achievement of a student with moderate SES over time. Van der Berg describes it thus:

> *"For the top layer schools (historically white and Indian schools), individual SES and school level SES interact positively to produce improved outcomes. Schools with a lower mean SES (historically black schools) on the other hand, on average not only fail to transform the future of children from poor socio-economic backgrounds, but also reduce the chances of children from better backgrounds maintaining or improving their status in later life"* (2005).

In essence we return to the argument made early in Chapter Two by Van der Berg. In so doing, we support and confirm Coleman's much debated thesis concerning the role that socio-economic status

plays in achievement. And more importantly, we conclude also that the SES of a school further contributes to student performance and achievement.

SES Matters

Ultimately, despite the argument to the contrary and the research in favour of school effects, SES does matter! More importantly, it can be argued that the literature on school effects and the literature on family effects are both valid. They present two halves of an intricate story of student achievement. The case of South Africa illustrates this story.

An often cited researcher of school achievement and SES in South Africa, Servaas Van der Berg, provides an analysis of performance on a regional research study, SACMEQ II, from which two major findings emerge. The first is that socio-economic background has an impact on student performance. In the case of SACMEQ II tests, SES had an effect that was twice as large as those found in other regional countries tested (Van der Berg, 2005). The second finding is that, while SES has a great impact on performance, this impact is exacerbated by the type and class of school attended. The result is a doubly negative impact on student performance. Consequentially, the type of school a student attends also entrenches and deepens the impact of SES on their achievement, further dividing existing inequalities of achievement (van der Berg, 2005). This finding is in contrast to Edmonds who rightly understood that schools created variable achievement, but did not link this achievement to school SES as others later did.

Taylor and Yu, who also draw upon Van der Berg's research, confirm these findings and note that the SES of students and their schools work together to uniquely impact achievement (2008). These authors argue that "home SES appears critical in determining which school system a student enters. Then for those in the historically black system, the chances of achieving high quality educational outcomes are small, regardless of home SES" (Taylor and Yu, 2008). Thus there are two types of SES factors at work: individual student SES (or family SES) and school SES (the aggregate SES of a school's population). This finding is echoed in American literature, which found that attending schools with high SES had a greater influence than attending schools with lower SES in which students carried with them the "disadvantages associated with minority race to the school environment" (Caldas and Bankston, 1997).

Sadly, these findings lead Van der Berg to conclude that **"**the school system is not yet capable of systematically enabling learners to overcome inherited socio-economic disadvantage, and poor schools least so" (Van der Berg, 2005: 62)

Understanding what to do about the problem of SES

Thus far, the literature makes it clear that SES does influence achievement. However, with regard to school SES, Van der Berg, Caldas and Bankston, and others do not elaborate on what makes low SES schools incapable of transforming student achievement, although it is recommended that greater diversity in school SES may assist in increasing achievement (2005; 1997). Caldas and Bankston postulate that lower achievement in schools with low SES may be due to negative stereotypes placed upon particular groups of students that serve to lower expectations of success (1997). Such stereotypes may become an accepted part of low SES student behaviour (Caldas and Bankston, 1997).

It can be assumed that peer influence has an effect on individual student achievement. In fact, there exists a literature investigating this question, though this has not been the focus in this dissertation. This influence may stem from an inherent cultural difference (or cultural capital) between students from low SES and high SES backgrounds. In other words, students from high SES backgrounds may carry within themselves certain cultural attributes and attitudes that bear influence on achievement. Another assumption could be that students from particular SES backgrounds are treated differently from students from another SES background. For example, teachers may focus more energy on students from higher SES backgrounds or "elite status cultures" because they are perceived to be 'more intelligent' or bright (DiMaggio, 1982). Further, low SES schools could lack the capacity and capability to transform low SES students' achievement. These assumptions may have some currency, and though not within the scope of this dissertation, must be investigated further.

Regardless of the reasons behind the influence of SES on achievement, one thing is certain, it cannot be controlled. For those seeking to transform education, it remains a factor that must be considered, given its implications for social inequality, labour market outcomes, and individual mobility in society. Therefore there is a need to transform low SES schools into high achieving schools despite their SES status. This is especially important for the majority South African schools that are low performing and usually low SES. Here, the literature on school effectiveness becomes once more important.

In retrospect, in spite of the criticisms against the school effectiveness literature for being too formulaic and recipe like, or for its limitations in methodology, the literature remains useful. Specifically, the school effectiveness literature provides insight into how effective schools work and what characteristics of quality they embody. As such, they remain relevant to addressing the

problem of school quality and better student performance. Of particular importance are the human agency centred aspects of effective school characteristics. These include leadership, teacher/principal expectation of success, and focused goals (Chapter Two). These qualities embody what Hawes and Stephens described as "something more" (1993) in the sense that they capture a certain will of human spirit to strive for excellence. These qualities are also necessary for the fulfilment of the other characteristics. These qualities, which draw upon individual human nature, cannot be mandated by policy or law, but rather must be individually cultivated. In this respect, policy insights are necessary to address the needs of lower SES schools through human agency centred interventions.

The school effectiveness literature remains relevant to the problem of low school SES achievement. The understanding of quality and effective schooling provided by the literature remains beneficial to address the issue of poor school performance. However, the responsibility for this application is laid at the feet of scholars engaged in school improvement.

Moreover, in making improvements to the school, it must remembered that cookie cutter applications of theory do not always provide solutions to the problem given that each school is embedded in its own local, historical and cultural context. Therefore, as many have said, the characteristics of effective schools are not one size fits all, but are context specific.

In South Africa, pursuing quality effective schools becomes increasingly important in the face of high correlation between school inequality and poor performance amongst low SES pupils and low SES schools. At the forefront of the pursuit of quality effective schools stands the need for leadership in the form of strong and dedicated principals and qualified and equipped teachers. It will be recalled that the latter is strongly argued to be crucial to the transformation of student performance and schools overall (Barber and Mourshed, 2007; Beeby, 1966). Though it has not been the topic of this paper, teachers and their effects continue to emerge as crucial to the progress of quality and effective education. An aspect of the problem for schools in South Africa could well be a lack of capacity or capability on the part of teachers and principals.

In hindsight, it would appear that Coleman may have been misunderstood. His findings revealed one aspect of the factors affecting student performance, namely that socio-economic background plays a role in determining achievement. Silver writes: "the essential Coleman message was that school differences accounted for only a small percentage of differences in pupil's attainment, but that this was generally interpreted in the press and elsewhere to mean that school made no difference, that teaching was unimportant" (1994: 79). And, while many scholars may

disagree, what is also true, that schools, as Edmonds argues, can impact positively on achievement. Yet another fact must be considered, that school factors can exacerbate socio economic or familial factors as Van der Berg shows at the start of this chapter. Indeed, Van der Berg's argument brings together the two arguments of Coleman and Edmonds to show that school effects and family effects on performance can co-exist and further entrench negative learner outcomes. In summation, neither school effects nor family effects can do without the other. Family effects arguments are largely pragmatic, providing perspective of realities in education experience, whereas school effects arguments are beneficial in pointing out the possibilities and opportunities for success in an otherwise disappointing system.

Finally, in merging the arguments around school effects and family effects, as well as the parallel discourses on quality and effective schooling, it is clear that each contributes in crucial ways to the outcomes of education. As such, solutions to the challenges in education must stem from a combined understanding of influences of school and family effects on achievement.

CHAPTER 5: RECOMMENDATIONS AND CONCLUSION

In the wake of the evidence concerning poor performance in South Africa and in light of the research conducted in school effectiveness, it would be remiss not to address some relevant recommendations for policy. First it is necessary to restate the facts concerning South African learner performance. In the first place, learner performance is differentiated along socio-economic status. In other words, learners from poorer socio-economic backgrounds tend to perform lower than their counterparts from more well of socio-economic backgrounds (Reddy, 2006; Fleisch, 2007). Secondly, schools exacerbate the difference in achievement especially when the student body is comprised of a majority of learners from poor socio-economic backgrounds. As a result, even middle class children will perform at the same levels as children from poorer backgrounds when they both attend poor schools (low SES, historically black schools) (Van der berg, 2005). This is in contrast to international examples where (in the TIMSS report) it was shown that in some schools, poor learners achieved at a fraction below their better-off counterparts (Reddy, 2006).

Recommendations

The solution to South Africa's education challenges are not one size fits all. Rather South Africa requires a cluster of policies that address the various levels of the school system. Even as researchers provide definitions of quality and effectiveness rooted in conceptual frameworks, these frameworks can be used to identify relevant solutions for education. However, at the centre of these solutions must be recognition of the presence of socioeconomic status and its impact on achievement. Thus to build on international examples (see Calkins et al. Turnaround Challenge, 2007), policy solutions must address input, process and context aspects of the conceptual framework in order for change to occur.

In view of this, one major policy recommendation arises, namely, the need for greater emphasis on teachers and teacher quality. This notion is not new in the literature. Beeby argues as early as 1966 that without teacher quality as determined by teacher development, education cannot progress from one level to another. Quoting a South Korean policymaker, Barber and Mourshed also note that "the quality of an education system cannot exceed the quality of its teachers" (2007). Thus, there is a need for South African policy to further invest in teacher quality and professional development. One way to do this is to "get the right people to become teachers" (Barber and Mourshed, 2007). This implies that South Africa must continue to invest in recruiting excellent

students to the field of teaching and provide them with incentives, as well as excellent learning opportunities to help them become good teachers. This calls to mind programs that target the recruitment of top teachers for disadvantaged students, such as the United State's "Teach for America" program. However, the current uncertainty in the media surrounding the direction of teacher training and the inability of the South African Council of Educators (SACE) and universities to produce sufficiently trained teachers for the system gives cause for concern (Clarke, 2010).

Crucially linked to this is the need to create a supportive context, what Calkins et al. call "' a protected space' where schools are given the flexibility, resources and support that teachers and administrators are calling for – and that true cultural system change requires" (2007). For South Africa, a protected space will require giving schools the authority to circumvent impeding factors to progress, such as collective bargaining, to make crucial decisions regarding the staffing of competent teachers. Such a change has the ability to impact positively the context of the school system, while improving the teaching force will help to improve the input aspect of the school system.

To further improve the process aspect of the school system, policy must be formulated which provides principals and local leaders with a "clearly defined authority to act" (Calkins, et al., 2007) and make unconstrained decisions that benefit schools. School leaders will also need to be trained in order to make them capable to carry out this task. Targeting organizational leadership at the school level places the responsibility for school quality squarely school administrators. This supports the emphasis place by the literature on schools and classrooms and not the national context. It could be argued that the current top down nature of policymaking in South Africa may impede progress towards quality in education because it shifts focus away from school and classrooms. A concerted focus on schools would see more programs targeting school leadership for capacity building and mentorship, a concept Barber and Mourshed mention. It would perhaps also result in greater stakeholder participation in the development of policy affecting the core work of schools.

Conclusion

In the final analysis, addressing South Africa's educational debt and, specifically, learner performance requires a balanced perspective on the factors that affect achievement, individual socio-economic backgrounds, school socio-economic status, and other school factors. Such a perspective, if rooted in the local historical context, allows policymakers to better determine courses for action in school improvement. On the other hand, a narrower perspective limits the scope for action.

This dissertation has thus far endeavoured to draw together several strands of literature, the school effectiveness and quality strands concomitantly with the debates on the factors affecting student achievement (school vs. family effects). By contextualizing the literature in the South African experience, the thesis has illustrated how the phenomenon of school and family effects work together to produce poor performance. There still remains scope for further research. In particular, more effort must be made to determine how to transfer the lessons learned from the minority effective schools to the majority school population that continues to underachieve. Doing so will take concerted effort and what Levin and Lockheed call 'a will to change'. Yet, doing so will help to achieve the goal of equality of educational opportunity.

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