

CHAPTER 1: INTRODUCTION

1.1 Statement of purpose

The broad purpose of this research was to analyse the relationship between the funding of education and the quality of education in selected diverse top performing secondary schools in the Gauteng province of South Africa. This broad statement of purpose is refined and qualified in paragraph 1.2

1.2 Significance and *situatedness* of this study

The persistent deep-rooted concern about the quality of education in South Africa amongst all stakeholders is evident from opinions expressed by different political leaders, educationists and economists (Bengu (1996), Asmal (2000), Pandor (2004), Motshekga (2009), Crouch (2005 & 2010) and van den Bergh (2011)). The new government has been spending large amounts of money on education since the 1994 elections. However, there has not been a corresponding improvement in the quality of education.

This study will investigate aspects of the above-mentioned problem. It will lead to new insights into, and a better understanding of the complexities involved in the intricate relationship between funding of education and the quality of education. It should also afford education managers and school governors insight into the utilisation of the funds at their disposal in their quest to provide quality education and to serve the best interests of the children in their care.

The title situates the dissertation in the arena of the international debate on the balance between quality and funding (education). However, both the statement of purpose and the main research question (*What is the relationship between the funding of education and the quality of education in selected diverse top performing secondary schools in the Gauteng province of South Africa?*) represents a very focussed look within the general broad debate. It is **not about equity**, nor is it about underperforming, failing or dysfunctional schools. It is also **not about the funding of education by the state**

in terms of its Section 34 obligation of SASA. This investigation takes a look at the use of available funds from within selected top performing schools in achieving sustained high levels of academic performance. Funding in the context of this dissertation is about the utilisation of available school funds, irrespective of its source.

Being a qualitative study, the purpose of the research is thus to investigate the principal as professional manager's view on and understanding of the role and contribution of funding in the outstanding performance of these top performing schools.

The research sample was purposefully selected and structured to provide a representative profile of two independent schools (presumably with parents of a high SES), two so-called former Model C schools (also with assumed high SES profiles since both are in quintile five) and two so-called transformed schools; previously white, now predominantly black; one from quintile five (high SES) and the other from quintile four (presumably with a lower SES). All six schools had to have a 100% pass rate in the NSC examination for three consecutive years. The assumptions on the schools communities' SES are based on the structure of the national quintiles as defined in the National Norms and Standards for School Funding, as amended.

Because this was a qualitative multiple case study investigation, identifying the contributing factors AND establishing a better / deeper understanding of the intricate matrix of factors determining the academic performance in the sample schools, in my opinion qualifies as contributing to the existing body of knowledge in the field.

1.3 Rationale

1.3.1 From a personal perspective

During my career, I have been involved in educational institutions at micro, meso and macro levels. Providing quality education has always been a priority of mine, both from a professional perspective, as well as from a managerial perspective. Having been a member of school management teams and tertiary institutions at various levels

for many years has sharpened my focus on the necessity to provide quality education in order to achieve individual as well as national excellence. Because of my involvement in lecturing and research in the field of financial management in education, I have become more and more intrigued by questions related to the amounts of money being spent on education and the performance of learners in the Senior Certificate Examination in public secondary schools in South Africa.

1.3.2 From a ‘practical / school / systems’ perspective

South Africa inherited a very diverse and fragmented education system at the onset of the new democracy in 1994. Not only were there fifteen³ different education departments that had to be merged administratively, but the quality of education rendered by these former departments of education was of vastly different standards and quality. The challenge to provide quality education is still facing South Africa today. As Crouch (2005:18) puts it *“There is little doubt that the biggest two problems South Africa faces are the extreme inequality in actual learning achievement and the relatively low level in this achievement across all groups.”*

The administrative restructuring has been concluded very successfully. There have been numerous major accomplishments regarding the provisioning of schools, enhancing enrolment rates and improving the standard of education, especially as measured in the annual National Senior Certificate Examinations (See Table 2.3 and Figure 2.3). However, the performance of South African schools in the Trends in International Mathematics and Science Study (TIMSS), Southern and Eastern Africa Consortium for Monitoring Education Quality (SACMEQ) and Progress in International Reading Literacy Study (PIRLS) tests leave much to be desired (Colditz, 2011: 1/2).

The funding of public education in South Africa will be discussed in greater detail later. However, the following serves as a broad introduction to the funding of public education in South Africa. South Africa has, on average, been spending 21% of the

³ Davies – personal communication

annual budget (almost 6% of GDP) on education since 1994⁴ (DoE, 2005b: Table A1). The budget for the 2011 financial year provides for R189.5 billion that constitutes 18.5% of the national budget (RSA, 2011b:2). This represents 5.3 % of GDP (RSA, 2011c:144).

According to the South African Schools Act, Act 84 of 1996 (hereinafter referred to as *SASA*), South African public schools are funded by the state from public funds, allocated to the nine provincial departments of education, according to the criteria embedded in the National Norms and Standards for School Funding (in future to be referred to as *NNSSF*). These Norms and Standards provide for five categories of schools referred to as quintiles one to five (quintile one being schools in the poorest communities and quintile five being schools in the least poor (richest) communities). The law obliges school governing bodies to augment the public funds received from the state (*SASA*, s36(1)). Parent communities are involved in the governance of public schools through statutory school governing bodies elected for a three-year term of office (*SASA*, s31). If a parent community so decides at an annual general meeting, a public school may charge school fees towards this purpose (*SASA*, s39(1)). *SASA* was amended in 2006 to provide for *no-fee schools*. These were schools from poorer communities, representing approximately 40% of public schools in a province and which are in quintiles one and two of the *NNSSF*. In 2007 quintile 3 schools were added to this category. No-fee schools may not charge school fees and are thus fully dependent on the state subsidy for funding and meeting their financial obligations for operational purposes.

1.3.3 Based on literature

A vast volume of literature exists on the quality of education and it is receiving continued attention throughout the world as a primary objective of individual governments as well as international organisations such as the United Nations Educational, Scientific and Cultural Organisation (hereafter *UNESCO*) and the Commonwealth Council of Education Ministers (*CCEM*); especially the 16 th *CCEM* Conference held in Cape Town in December 2006.

⁴ Information made available by Mr Riaan Cilliers of the Department of Basic Education

The assumption that more funding should lead to better quality education has not been proven conclusively. This is a continuing international debate. Apart from his own contribution, Gustafsson (2003:80 to 85) gives a chronological exposition of critical moments in this debate as represented by the work of Coleman et al (1966), Jencks et al (1972), Cooley and Leinhardt (1978), Hanushek (1981, 1989 and 1996) and Hedges, Laurie and Greenwald (1994). Ball, Cohen and Raudenbush contributed to this debate in their individual capacities, but also in their joint work published in 2003. In the South African context, significant contributions were made by van den Berg (numerous contributions since 2001), Wildeman (2000, 2003 and 2008), Fiske and Ladd (2004), Fleisch (2004), Christie (2007) and Motala (2007/2008). Research, especially in the USA, has led to conflicting views about the validity of this hypothesis. Hanushek (1996: 43) postulates that *“The effectiveness of school spending has been hotly debated for at least the past quarter century”*. There are researchers who completely reject this viewpoint while others claim that there is a relationship between funding at school level and career mobility as well as earning levels. Research in Texas suggests that how the money is spent, has a major impact on the performance levels of learners at school (Burtless, 1996:9 & 10). A more detailed discussion of this debate is contained in paragraphs 2.2 and 2.3 of chapter two.

1.4 Research questions

The main question that will be investigated is:

What is the relationship between the funding of education and the quality of education in selected diverse top performing secondary schools in the Gauteng province of South Africa?

There are any number of sub-questions that can be asked, but for the purposes of this study they will be limited to the following:

- Which factors have a direct impact on the performance levels of public secondary schools in the National Senior Certificate examinations?

- To what extent are the funds available to public schools spent on aspects that contribute to improving the quality of education in the research sample?
- To what extent does spending more funds on developing the skills of educators in the research sample improve the quality of education as reflected in the Senior Certificate Examinations?

The term ‘*extent*’, in the context of this dissertation, is used to indicate a degree to which an aspect applies, plays a role, or is significant. This interpretation is based on the meanings attached to the concept in different dictionaries listed below⁵

1.5 Theoretical framework

This research project is embedded to the fields of education law and financial management in education as subsets of the broader field of education management and leadership and the provisioning of quality education (see Figure 1.1).

Education management as a field of study focuses on the integration of the educational needs of society, the resources required to provide education and the actions that need to be undertaken in the process (see Figure 1.3). Education leadership is the driving force guiding the process of providing education at all levels of the education system (see Figure 1.4). Education law provides the regulatory framework within which the provision of education takes place. The quality of

⁵ <http://www.merriam-webster.com/dictionary/extent> - accessed on 02/02/2012:

a : the range over which something extends : SCOPE <the *extent* of her jurisdiction> *b* : the point, degree, or limit to which something extends <using talents to the greatest *extent*> *c* : the amount of space or surface that something occupies or the distance over which it extends : MAGNITUDE <the *extent* of the forest>

<http://www.thefreedictionary.com/extent> accessed on 02/02/2012

a. The range, magnitude, or distance over which a thing extends: *landowners unaware of the extent of their own holdings.*

b. The degree to which a thing extends: *prosecuted to the fullest extent of the law.*

Sykes (1982: 367) ...*width or limits of application, scope* ...

Sinclair & Hanks (1989: 273) 4 ... when you are discussing how true a statement is ...

education provided is the result of a complex range of variables that makes up the education production process .

1.6 Conceptual framework

A conceptual framework is used in research to outline possible courses of action or to present a preferred approach to a system analysis project. The framework is built from a set of concepts linked to a planned or existing system of methods, behaviours, functions, relationships, and objects. A conceptual framework might, in computing terms, be thought of as a relational model. The *educational production function* is, in principle, similar to any production function. The latter is a mathematical relation that describes how resources (inputs) can be transformed into outputs. In education, the production function likewise indicates *a mathematical relation describing how educational resources (inputs) can be transformed into educational outputs (outcomes)* (Cohn & Geske 1990:160).

The educational production function is described in terms of inputs, outputs and the process by which inputs are transformed into outputs (outcomes). It is thus concerned with the input – output process (see Figures 1.1 and 1.2).

The input – output process

The outputs of the educational process are functions of a number of types of inputs. They include student characteristics, the entire cluster of school related factors collectively referred to as physical and human resources, family and community influences. The school-related factors are of particular interest to economists because they include the factors that can be manipulated by education authorities through resource allocation.

From a sociological perspective education is the actions societies undertake to prepare their children for their social responsibilities when they become adult members of society. The social structures created for this purpose are manifested in a public education system and in public schools. The quality of education from this perspective

will depend on the degree to which the education system succeeds in preparing children for their social responsibilities as adults. If society at large and parents in particular perceive the quality of education to be of an acceptable standard, they are likely to have no qualms to contribute to the funding of education.

From a political perspective education systems are used to communicate the political agenda of the ruling party. Quality education from this perspective varies with the broad agenda of the government of the day while also taking into account the sociological perspectives in as much as they may pose a political threat to, or present an advantage to the government. Funding education is an obligation for which all modern states have to provide. It therefore stands to reason that the government of the day will at least fund education to the extent that it serves their political objectives. That is over and above any sociological and economic considerations.

From an economical perspective, there are two angles to be considered. In the first instance education is of extreme importance in that it provides qualified manpower to the labour market and industry (human capital). The contribution that can be made to the economy in this regard is directly proportional to the quality of the education provided. A second consideration is from a cost perspective. Economists are very keen to know what the return on the investment made in education is. All parties with an interest in the provisioning of education thus have a real interest in the link between the funding levels of education and the quality of education.

There is no single or simple explanation of what quality education is. It means different things to different people.

Cost is defined as expenses (expenditure) incurred in the production of a commodity or the rendering of a service. Cost thus refers to all resources used in the production process, while expenditure refers only to those resources paid for in money.

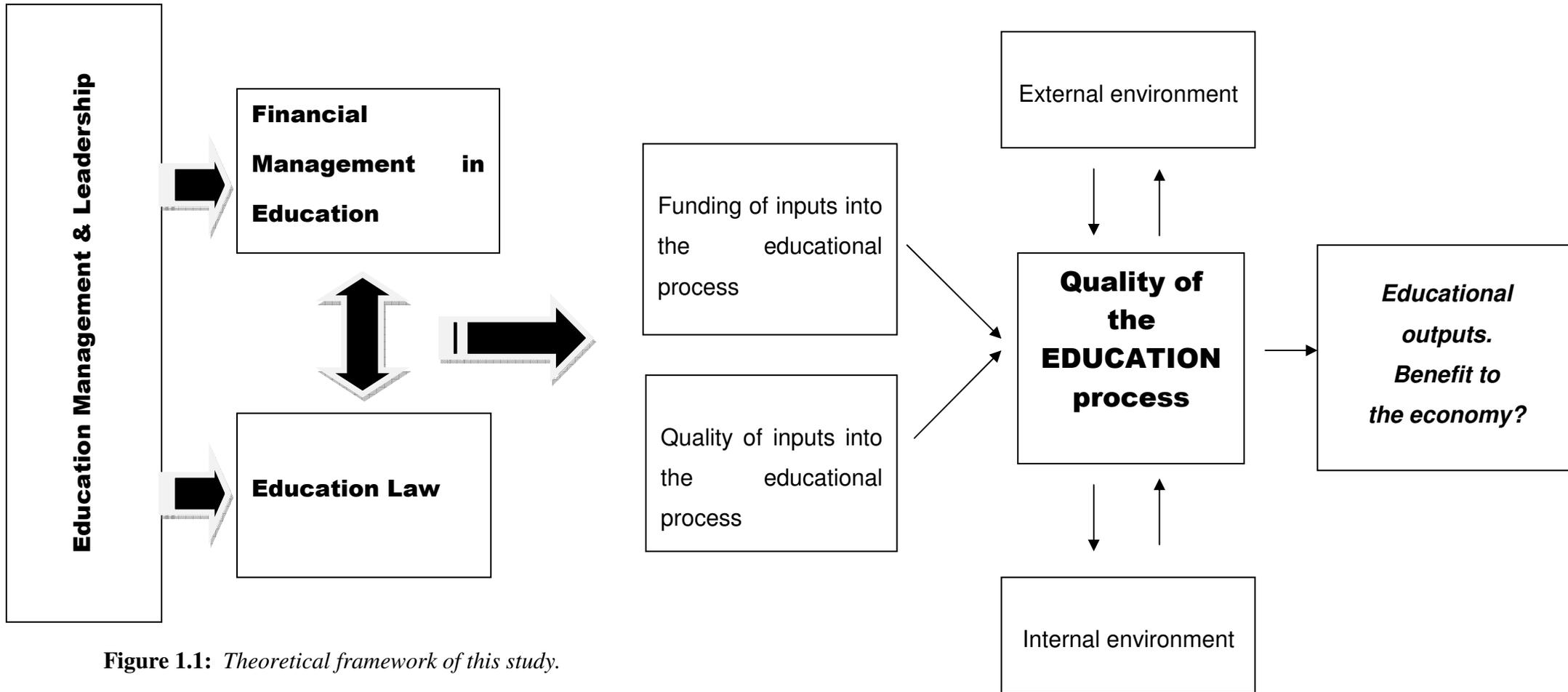


Figure 1.1: Theoretical framework of this study.

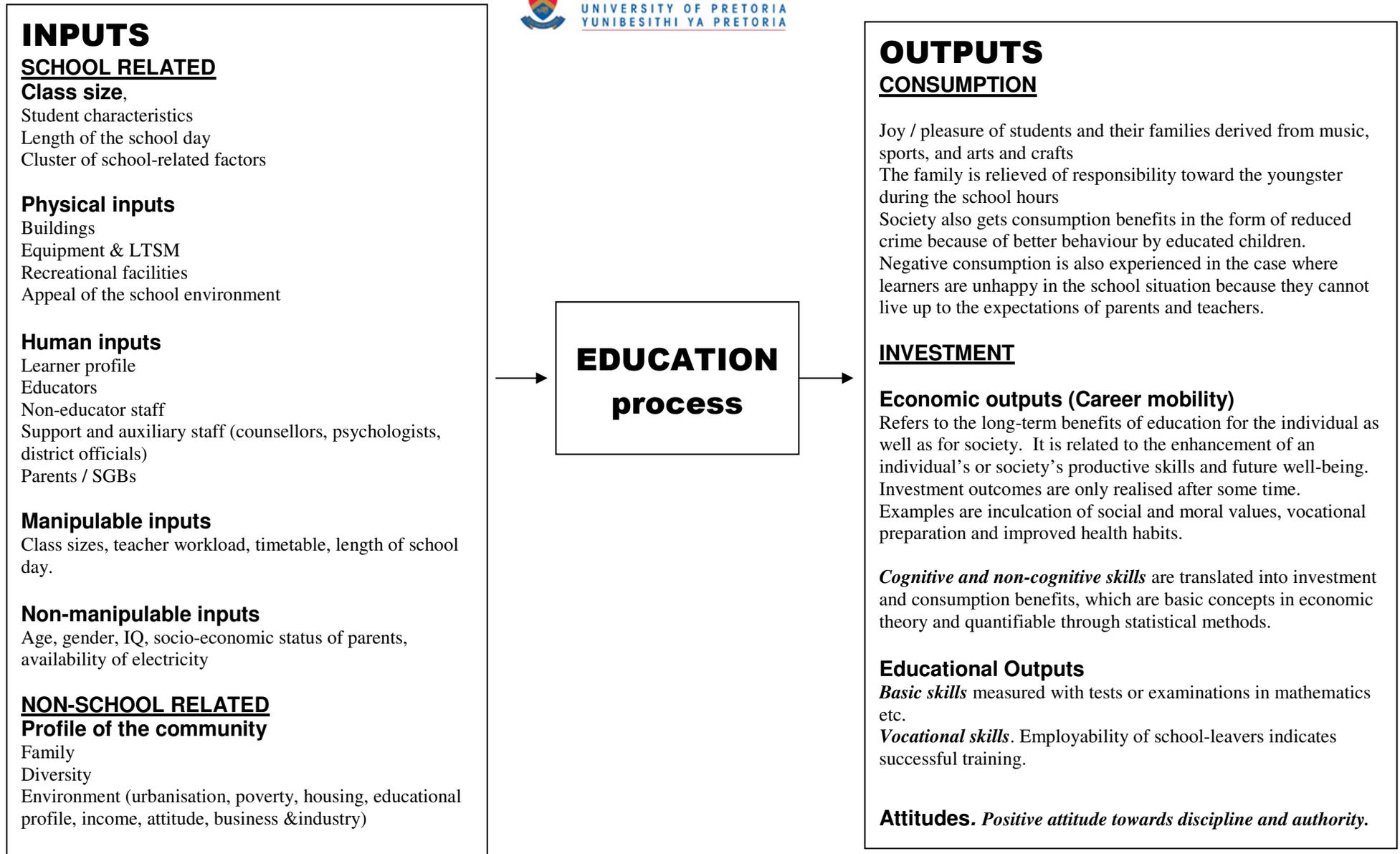


Figure 1.2: Conceptual framework (The Educational Production function)

1.7 Literature Review

1.7.1 Quality education

Since the Second World War, educational policy has faced two challenging priorities; the first was making equality education (*a school for everyone*) a reality and the second with which the world is still battling, is quality education (*a better school for everyone*) (De Groof, 1995: 7) . Every parent has the best interests of his/her child at heart specifically when it concerns the education of their children. This concern is manifested in the United Nations International Convention on the Rights of the Child (18 November 1989). Article 3 formulates the best interests of the child as '*All actions concerning the child shall take full account of his/her best interests*'.

The discussion of the provisioning of the quality of education from the sociological, political and economic perspectives (paragraph 1.6 above) highlighted different foci. There is no single or simple explanation of what quality education is. The concept is discussed in detail in paragraph 2.3 of Chapter 2 and developments in this area are discussed in chronological order. This discussion starts with the United Nations International Convention on the Rights of the Child (18 November 1989) before moving on to the work of Katarina Tomasevski and her well-known model of the four 'A's: *Availability, Accessibility, Acceptability* and *Adaptability* that played a huge role in the onset to the Education for All movement by UNESCO. It started with the World Conference on Education held in Jomtien, Thailand in 1990. This was followed by the conference held in Amman in Jordan in 1996. The World Education Forum held in Dakar, organised by UNESCO in Senegal in 2000 culminated in the six Millennium Development Goals formulated at the end of the conference. In 2004, UNESCO suggested that there are two dimensions to the concept of quality education, namely *quantity* (number of years) and *quality* (both cognitive/intellectual and non-cognitive skills, i.e. norms, values

NEEDS

Awareness
Vision
Goal
Aim
Objective
Action plan



RESOURCES

Intellectual

Physical resources

Environment

Money

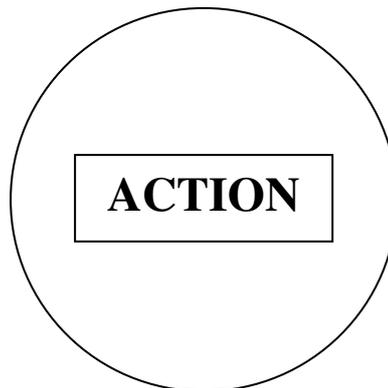


ACTION

Critical thinking
(Mental action)

Physical action

Buying / Selling
(Trade)



RESULT

The degree of integrating of the three aspects is indicative of the **degree of success!**

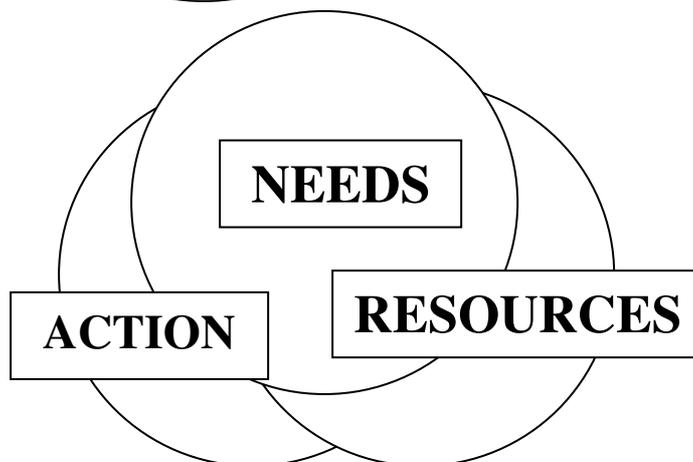
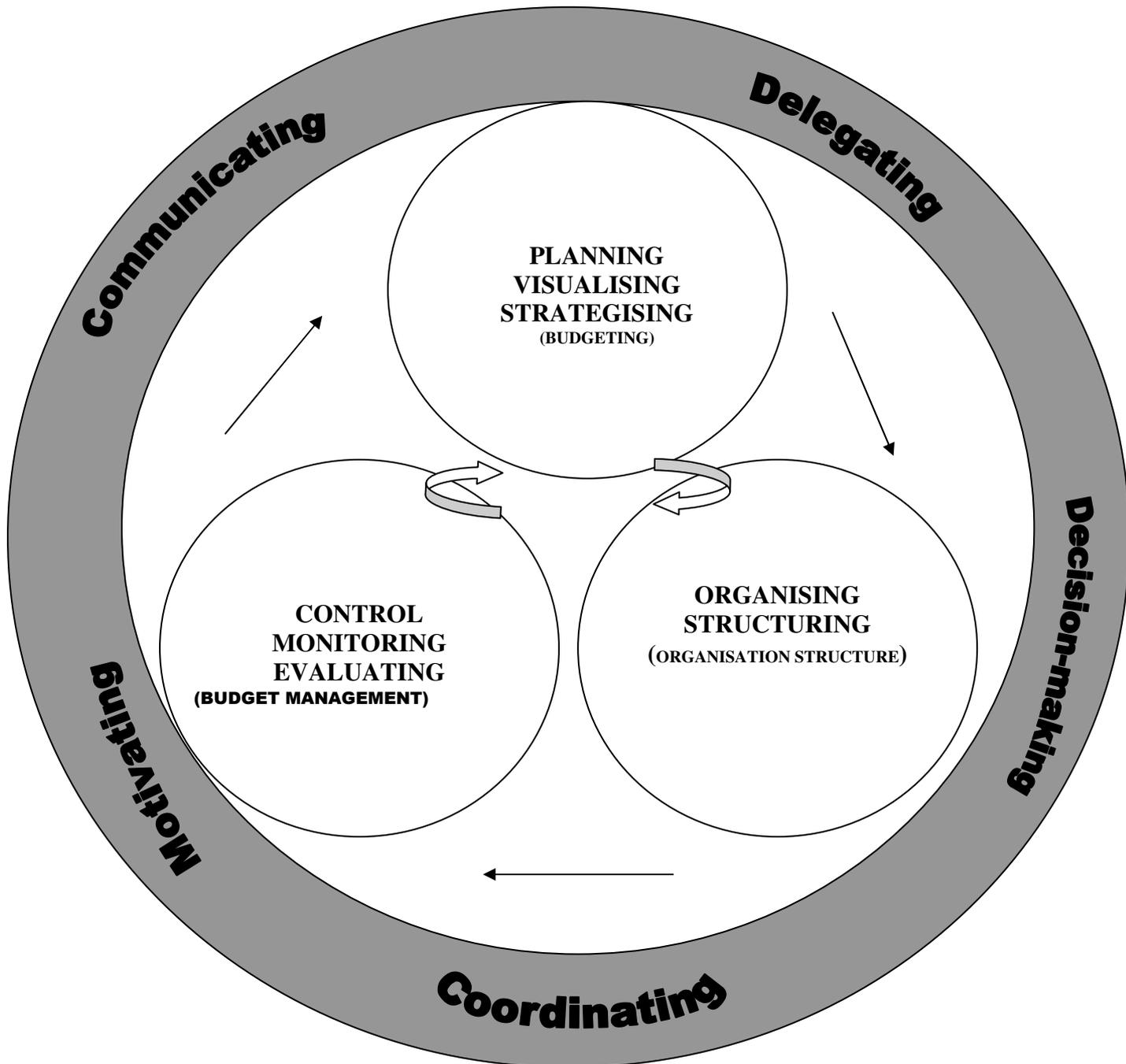


Figure 1.3: *Management as the integration of needs, resources and actions*

Leading / Directing



MANAGEMENT AREAS			
Human Resource Management	Curriculum Management	Financial Management	Managing Facilities

Figure 1.4: Leadership – the driving force (van Rooyen and Rossouw, 2007:19)

and behavioural aspects) of the education a person receives go hand in hand (UNESCO, 2004a: 77,78).

The onset of the new democratic era in South Africa brought huge changes to a very diversified education system; ten new education departments were formed (one national and nine provincial departments of education), new structures had to be devised and the TIRISANO document was introduced in 1999 by the then Minister of Education, Prof Kader Asmal, as a blue print business plan for the new education system. It was introduced as a five year plan to undo the discrepancies of the previous forty years. Unfortunately this was too ambitious and did not fully materialise.

Two major publications were released in 2003 as part of the on-going process to improve the quality of South African education, namely, the *Review to the Minister on Financing, Resourcing & Costs of Public Education in Public Schools* and the *Plan of Action: Improving access to free & quality basic education for all*. The former did a critical analysis of the funding levels, indicating that the quality of education in South African schools is worryingly low relative to what South Africa spends on schooling. The latter resulted in a programme of planned changes in the education system that was to be implemented from 2003 to 2005. In her 2005 budget speech, Ms Naledi Pandor, then Minister of Education in South Africa, identified six core issues that (in her opinion) would enhance the quality of education in South Africa (*Reaching untapped potential / School fees and no fee-schools / School governing bodies and language policy in schools / Higher education enrolment planning / Further education and skills for a modern economy and Access to adult education for adult learners*).

However, South Africa has been performing dismally in international tests and surveys on the quality of the education provided by our education system. Beckmann and Fuessel (2011:1/2) postulate that '*Studies to measure the achievement of the goals of EFA and the FW abound at both the international and national levels.*' They refer to the following international studies: PISA

(the Programme for International Student Assessment), PIRLS (the Progress in International Reading Literacy Study), TIMSS (the Trends in International Mathematics and Science Study), SACMEQ (The Southern and Eastern Africa Consortium for Monitoring Educational Quality) and ANA (Annual National Assessment) as an example of a national intervention. Van der Berg et al (<http://www.polity.org.za/article/low-quality-education-as-a-poverty-trap-april-2011-2011-04-20> - accessed on 5/11/2011) contend that the education outcomes of the South African schooling system are still appallingly low and that there are no indications that this state of affairs is improving despite radical interventions since 1994.

This dissertation requires that attention be given to the National Senior Certificate examination, written at the end of twelve years of schooling. This examination was first written in South Africa in the Cape of Good Hope in 1858 (<http://www.education.gov.za/Examinations/tabid/338/Default.aspx> accessed on 20 May 2011). It has since developed into an important indicator of the academic achievement of the individual learner as well as of the quality of the education offered in individual schools, school districts, provinces and at national level. The qualification and the examination have both undergone various changes over the years. Different departments of education in the pre-1994 dispensation offered separate examinations of varying standards. The name of the qualification changed from the Senior Certificate in Education in the pre-1996 era to the Further Education and Training Certificate or FETC in the period 1996 to 2008. In 2008 the name of this examination was changed to the National Senior Certificate Examination and the name of the qualification became the *National Senior Certificate in Education* (Loock, 2011). Control of this important qualification and examination was also handled by different entities over time. The Joint Matriculation Board (JMB) operated from 1918 to 1992 when it was dissolved and its records were transferred to the Matriculation Board. The functions of moderation, examination and certification were transferred to the South African Certification Council (SAFCERT) established by an Act of Parliament in 1986. SAFCERT operated until a new Council, constituted in June 2002 – now known as Umalusi – was created. The name is derived from the Nguni word “uMalusi” meaning

“shepherd” or, in the African context, “guardian of the family assets”. This body is still performing this function.

1.7.2 Funding of public education in South Africa

Worldwide, it is generally accepted that the funding of public education is the responsibility of the government of the day. De Groof (1995:7) puts the issue into perspective when he says:

It cannot be denied that the recent attention being given to quality in education is related to economic factors. It seems natural that society should call politicians to account regarding whether the considerable resources being pumped into the education system are indeed being put to proper use. Moreover, economic considerations are only one reason for the current questioning: even with unlimited resources, we would still be obliged to continue asking questions regarding whether we are offering citizens of the society of the future the very best that is in our power.

A perception exists in the minds of many people that basic education in the new democratic South Africa would be free (Various newspaper reports; Burger, Cape Times, Argus). This can partly be attributed to the expectations created by the Freedom Charter (1955: 4) that reads ‘*Education shall be free, compulsory, universal and equal for all children;*’ ... Another contributing factor was speculation in the media during the run-up to the 1994 elections. There is, however, no factual basis for these expectations when one reads Section 29 (1) of the South African Constitution. The ideal of free education proved to be impossible with the limited resources available to the government and in light of the many competing socio-economic priorities.

There are three key role players in the provision of education in South Africa, namely the state, the parents and the school. Section 15 of SASA determines that *every public school is a juristic person, with legal capacity to perform its functions in terms of this Act.* In legal terms this means that a public school may own property, may enter into contracts and that the school can litigate or

be litigated against . This means that the school has the legal capacity to take the necessary actions to enable it to provide education to the learners enrolled at that school. The parents of a public school are represented by the school governing body (SGB) in this matter. School governing bodies are duly elected representatives of the parent community of a public school. Section 16 of SASA states that

- (1) *Subject to this Act, the governance of every public school is vested in its governing body and it may perform only such functions and obligations and exercise only such rights as prescribed by the Act.*
- (2) *A governing body stands in a position of trust towards the school⁶.*

Section 34 of SASA spells out the state's responsibility regarding the funding of education in public schools in South Africa:

34. (1) *The state must fund public schools from public revenue on an equitable basis in order to ensure the proper exercise of the rights of learners to education and the redress of past inequalities in education provision.*
- (2) *The state must, on an annual basis, provide sufficient information to public schools regarding the funding referred to in subsection (1) to enable public schools to prepare their budgets for the next financial year.*

It is evident from the above that the state has a clear constitutional and legal responsibility to pay for basic education in public schools in South Africa from public funds obtained through taxation. Section 35 of SASA provides further information on what is meant in Section 34 (2) when it spells out the basis for the national norms and standards for the funding of public schools, which serve as the basis for the equitable funding of public schools throughout South Africa.

⁶ This is a fiduciary relationship. The SGB must act in the best interests of the school and every child in all matters pertaining to the school.

Parents' responsibility regarding the funding of education is regulated by Section 36 of SASA which reads as follows:

36 *A governing body of a public school must take all reasonable measures within its means to supplement the resources supplied by the state in order to improve the quality of education provided by the school and all learners at the school.*

The detailed responsibilities of SGBs regarding the financial management of a public school are spelt out in Sections 37 to 44 of SASA. The first responsibility is to supplement the financial resources that the state provides (S36(1) of SASA) and this responsibility is borne by all public schools. SGBs (of schools in quintiles 4 and 5) may also charge school fees and parents at such schools are liable to pay such school fees subject to the provisions of the Act. From the above it is clear that parents of a given school community have the responsibility to pay school fees to supplement the funding of a public school. Section 40 of SASA spells out this obligation in detail and also provides for possible exemption from paying school fees:

- 40 (1) *A parent is liable to pay school fees determined in terms of section 39 unless or to the extent that he or she has been exempted from payment in terms of this Act.*
- (2) *A parent may appeal to the Head of Department against a decision of a governing body regarding the exemption of such parent from payment of school fees.*
- (3) *In deciding on appeal referred to in subsection (2), the Head of Department must follow due process, which safeguards the interests of the parent and the governing body.*

It is thus evident that the funding of public schools in South Africa is the joint responsibility of the state (from public funds) on the one hand and the parent community (through the school governing body) of a public school (from private funds) and other stakeholders on the other hand. This is in line with the ideal of democratising education set out in the Constitution of 1996 as well as the original relationship between the parent (community) and the state on the other hand in the provision of education to children. It is also highlighted in part 2 of *The Reconstruction and Development of The Education and Training Programme* and part 4 of *The Funding of The*

Education System of the White paper on Education and Training of 1995. It is however, not in line with the ideals of the Freedom Charter and the Dakar agreement to provide free education at least at primary school level.

It is important to keep in mind that when either public or private funds are paid into a public school's bank account, they become part of the school fund of the school as juristic person and that the SGB has discretionary powers over the spending of the school fund subject to the provisions of Sections 37 to 44 of SASA.

Since 1995 education has received 21.4% of the annual national budget allocation. This represents almost 5.6% of GDP (gross domestic product) and the average allocation per learner for the period 1995 to 2004 amounts to R3,832.62. The 2004 allocation per learner amounted to approximately R5,721.38. All these figures are in line with major first world countries like the USA where they are currently spending 967.74 USD (R6 309) per learner in the USA. This represents approximately 6% of the GDP in the USA. It is however, disconcerting that South Africa fares badly in the TIMMS ratings. Countries are listed in descending order of their performance/position pertaining to maths and science education. "*South Africa had the lowest performance score in mathematics and science compared to the other TIMSS participants*" (Reddy, 2006:112).

The National Norms and Standards for School Funding (NNSSF for short, emanating from Section 35 of SASA) provide that public schools in South Africa are put into one of five quintiles as a basis for operational costs funding from public funds by the state. These categories are determined by applying a complex set of criteria, *inter alia* taking into account the quality of the physical facilities and the poverty level of the community around the school. Based on the NNSSF and a school's number of learners an annual per capita subsidy is then paid to public schools.

SASA determines that the finances of all public schools are managed by the SGB of the school. The annual subsidy to Section 20 schools is not paid into

the school's bank account but it is administered by the provincial department of education. The annual subsidy of schools that has applied for and has been allocated or who have been allocated Section 21 status without applying for it is, however, paid into the school's bank account and is managed by the SGB.

<http://www.education.gov.za/EMIS/StatisticalPublications/tabid/462/Default.aspx> - accessed 20/11/2011.

Table 1.1: National table of targets for school allocation (2008 – 2010)

A		2008		2009		2010	
		B	C	B	C	B	C
<i>NQ1</i>	30.0%	R775	100	R807	400	855	100
<i>NQ2</i>	27.5%	R711	100	R740	100	784	100
<i>NQ3</i>	22.5%	R581	100	R605	100	641	100
<i>NQ4</i>	15.0%	R388	67	R400	67	428	67
<i>NQ5</i>	5.0%	R129	22	R134	22	147	22
Overall	100%	R517	89	R538	89	571	89
No-fee threshold		R581		R605		641	

Column A reflects the pro-poor funding approach expressed as a percentage [pro-poor referring to the fact that national quintile 1 (Poor) schools get more funds than national quintile 5 schools (from more affluent communities). Column B represents the target per learner school allocation amount for each year. Column C reflects the maximum percentage of learners that could be funded to the no-fee threshold level.

With the promulgation of the Education Laws Amendment Bill in 2006, provision was made for no-fee schools. Section 39(9) of SASA provided that national quintiles 1 and 2 (40% of the public school learners nationally) should be used by the MEC for Education to identify specific schools in the province that may not charge school fees to be contemplated as no-fee schools. Legislation signed on 26 January 2006, provides that schools in quintile 1 (the poorest 20%) are forthwith so-called no fee schools that will in future receive a 100% budget allocation from the state. These schools will thus be charging no schools fees in future. In 2009 national quintile 3 schools were also

declared as no fee schools (that means that 60% of South African public schools are now no fee schools). In addition to all their other responsibilities, the SGBs of all public schools have the responsibility to manage the school fees paid by the parents (private funds).

1.7.3 Democratisation of education in South Africa

With the establishment of the new democracy in South Africa, the government embarked on the road to democratise education in South Africa. Nieuwenhuis & Mokoena (2005: 127) put it this way:

... democratisation as set out in the constitution of South Africa is based on the ideal of developing power and authority at community level. Running parallel with the ideal of democratisation and devolution of powers are the imperatives of redress, educational transformation and restructuring, to be managed by central government and provincial authorities.

The premise of democratising education and giving parents and governors decision making powers regarding the financial management of schools has been referred to as the self-management of schools. The idea is to create public schools in a system that will provide high quality education to all students and will be professionally rewarding to teachers and other professionals. Caldwell and Spinks (1988: 5) define a self-managing school as:

[O]ne for which there has been significant and consistent decentralisation to the school level of authority to make decisions related to the allocation of resources. This decentralisation is administrative rather than political, with decisions at school level being made within a framework of local, state or national policies and guidelines. The school remains accountable to a central authority for the manner in which resources are allocated.

Looking at the preceding paragraphs it becomes evident that public schools in the South African context can also be described as self-managing schools. In South Africa and across the world we find schools at various stages of self-management. Figure 1.5 depicts a continuum of the progression of a school

on the road to becoming a self-managing school. Discretionary powers, for the purposes of this study, refer to the authority to decide on policy, curriculum, human as well as physical resources and financial matters regarding the provisioning of quality education by all the stakeholders (parents, staff and learners in secondary schools) in a specific school community.

The efforts in South African to democratise education, based on the ideal of developing power and authority at community level, manifested in the establishment of SGBs with different levels of discretionary powers regarding the management of funds at school level. This creates a variety of possible levels of self-management in South African public schools:

Category 1 (C1): Section 20 schools not charging school fees receiving a full subsidy from the state.

Category 2 (C2): Section 20 schools charging school fees receiving a proportional subsidy from the state.

Category 3 (C3): Section 21 schools charging school fees receiving a proportional subsidy from the state.

Category 4 (C4): Section 21 schools charging school fees receiving a small subsidy from the state.

Even category one schools has discretionary powers regarding financial decision making and this ability increases as you move towards category four schools.

C1	C2	C3	C4
<i>No discretionary powers</i>		<i>Full discretionary powers</i>	

Figure 1.5: *Continuum of categories of self-managing public schools in South Africa*

1.7.4 The economics of education – linking funding and quality education

It all started with the so-called 1966 Coleman Report, where Coleman and his co-workers found that family background characteristics and community level variables accounted for variance in student achievement at the school level, while school resource variables, such as pupil /teacher ratios, per pupil expenditures, or teacher characteristics accounted for no or little variance. As mentioned in paragraph 1.2.3, Coleman's work sparked an international debate which is still continuing. Gustafsson (2003:19) explains that whereas research traditionally concentrated on the effects of resources on results in an educational production function approach (where input factors are related to output in statistical models), recent meta-analytic integrations from different studies indicate positive effects of resources such as per pupil expenditure, class size, teacher education and teacher experience. Motala (2001) in Wildeman (2003: 281) also warns against a simplistic approach to the relationship between investment in education and human capital development.

Hanushek (1996: 69) poses the question, “*What is the best way to improve schools?*” Few people, who have thought about school policies, would recommend just “throwing” extra resources into existing schools. The USA has been doing this for a number of years without any significant improvement in student performance. Central in all policy discussions is usually not whether to spend more or less on schools resources, but how to get the most *out of marginal expenditures*. *The issue is to get productive value from current and added spending*. Existing evidence simply shows that the typical school system today does not use resources well. It is tautological to claim that we will get good performance if we spend the money wisely. The current knowledge base does not suggest that all added funds will, on average, be spent wisely.

School personnel (the whole spectrum) have little at stake in student outcomes. Whether students perform particularly well or particularly poorly, the career progression and rewards of virtually all school personnel remains

unaffected. In essence US schools are unlikely to improve in either student outcomes or costs unless much stronger incentives for improved student performance are instituted. The policy focus is fraught with uncertainties, because little is known about how best to structure the various incentives. Improved performance incentives are central to school reform designed to improve student outcomes (*Ibid.*).

The Larry Hedges, Laine & Greenwald school of thought - formal statistical procedures (meta-analysis) does show a positive link (Burtless, 1996:9). They argue for using formal statistical procedures (meta-analysis) to combine the results of the studies included in Hanushek's survey. They then conclude that the data show systematic positive relations between resource inputs and school outcomes. Moreover, the median relation (regression coefficient) is large enough to be of practical importance. They suggest that a 500 USD (approximately 10%) increase in the average spending per pupil would increase student performance by 0.7 standard deviations; a meaningful amount.

Ronal Fergusson (*ibid.*) has used exceptionally rich information about the instructional qualifications of Texas teachers to argue that higher literacy skills among instructors, reductions in class size, and more experienced teaching staff all lead to improvements in average student scores on standardised tests. Ferguson's findings are in agreement with Hanushek's in one respect: they both agree that individual teachers make a difference. Hanushek (Burtless, 1996: 10) categorically states that "*teachers and schools differ dramatically in their effectiveness*". He also suggests that additional resources can make a difference to student achievement. However, he interprets the statistical evidence to show that, on average, additional resources are not effectively used by most schools to produce improved student outcomes.

The case of fifteen schools in Austin, Texas during 1989 to 1993 discussed by Murmane & Levy in Burtless (1996: 27) where each school was given an additional allowance for five years in an effort to improve the quality of education resulted in thirteen of them showing no significant improvement.

The thirteen schools falling into this category simply used the money to acquire the services of additional staff thus lowering the teacher: learner ratio. The two schools that did show a significant improvement used some of the money to employ a limited number of additional staff. The bulk of the money was however spent on staff development for existing staff. It is important to note that one principal also made a point of getting the parents involved in the process.

Card & Krueger did extensive research regarding the labour market effects of school quality to explore a positive relationship between additional funding for education at school level and the career performance of individuals from these schools subsequent to them joining the labour market (Burtless 1996: 281). Betts, Heckmann, Layne-Farrar & Todd were all able to show a positive link between funding at school level and subsequent earnings in the labour market (Burtless 1996: 119).

Carnoy postulates that countries face different sets of economic and political conditions. Each situation demands its own particular strategy for educational expansion and improvement. The experience of the 80s and 90s in the United States provides three major guidelines for educational strategies:

- (i) *The state, whether it be national, regional or local will continue to be responsible for educational expansion and improvement; i.e. it means that education will continue to be largely financed publicly and that the public sector will continue to regulate education, set standards, decide how to allocate resources among levels of education, and initiate and guide educational improvement programmes. The degree, to which it does so successfully, will enhance the legitimacy of the state (central / regional / local. The degree to which it fails to deliver high quality education in an equitable fashion, the state will lose even more power.*
- (ii) *There is much more political and even financial space for governments to condition the way globalisation is brought into education than is usually admitted. Testing and standards are good*

examples of this space, decentralisation and school autonomy are others.

- (iii) *A well-organised public administration is key to education improvement in the globalised economy. Economic growth and effective education in the global environment require physical capital investment, innovativeness and technical capacity, but also ultimately depend on efficient, honest government (Carnoy, 1999: 82 – 84).*

Summary

Teachers will continue to be fundamental to educational delivery, and the quality of education will depend largely on the quality of teaching and teacher effort. Just as in the rest of the global economy, where knowledgeable workers are increasingly the key to the production of value, the knowledge industry (education) logically will also depend increasingly on the quality of its human capital (teachers). Obviously parents are also important in any education strategy, but most parents expect teachers to teach their children. If teachers are crucial, education policy makers will need to get a much clearer picture of who their teachers are, how they view their role in the system, and the type of incentives, regulations and training that will increase their effort and improve their capacity to transmit knowledge to students.

Through the ages knowledge has been a very important basis of power. In today's information age it is even more so. It therefore comes as no surprise that there is a growing emphasis on the quality of education. From the above it is clear that although quality education means different things to different people and that there are different angles of approach to this phenomenon, there is increasing pressure to compare standards in quality of education on a worldwide basis.

It is also evident that the debate on whether increased funding actually leads to a commensurate increase in the quality of education also does not have simple answers to the question. How the money is spent seems to be more important than what the money is spent on. One thing that all schools of thought do

agree on is that the teacher is one factor in the equation that definitely makes a difference in the quest for quality education. It would therefore appear as though spending money on the teaching skills and the motivation levels of teachers could lead to a positive improvement in the quality of education.

It would further appear that although it is the ideal that increased funding of education should improve the quality of education, it does not necessarily have the desired effect - this is therefore more theory than praxis. It does not, however, imply that we must give up hope or that all the efforts are in vain. Every time we try, we improve the quality of education.

1.8. Research design

1.8.1 Epistemology

Epistemology or **theory of knowledge** is the branch of philosophy that studies the nature and scope of knowledge. The Oxford Dictionary (1982: 349) defines it as the *theory of or the method or grounds of knowledge*). The term "epistemology" is based on the Greek words "*επιστημη*" or "*episteme*" (knowledge) and "*λογος*" or "*logos*" (account/explanation).

Much of the debate in this field has focused on analyzing the nature of knowledge and how it relates to similar notions such as truth, belief, and justification. It also deals with the means of production of knowledge, as well as skepticism about different knowledge claims. In other words, epistemology primarily addresses the following questions: "What is knowledge?", "How is knowledge acquired?", and "What do people know?" Although approaches to answering any one of these questions frequently involve theories that are connected to others, there is enough particular to each that they may be examined separately. It has also been referred to as *how we know* as opposed to ontology that investigates what reality is.

There are many different topics, stances, and arguments in the field of epistemology. Recent studies have dramatically challenged centuries-old assumptions, and the discipline therefore continues to be vibrant and dynamic. My epistemological view and how it relates to my research is discussed in detail in paragraph 5.2 in chapter five.

1.8.2 Research approach

The research is approached from the interpretivist paradigm and a qualitative approach was followed. My reasons for adopting this paradigm and a qualitative approach to my research are explained in paragraph 5.4 in chapter five.

1.8.3 Methodology

1.8.3.1 Research method

I decided to use case studies as my research method. This research is my first step to investigate the complex relationship between the funding of education and the quality of the education that ensues. The purpose of my current investigation was to obtain an understanding of this complex relationship by looking at a representative sample of schools that provide quality education. The case studies would provide me with a ‘snap shot’ of the relationship between the funding of education and the quality of the education that ensues. My findings will then serve as the basis for further investigation.

1.8.3.2 Sampling

For the purposes of this dissertation I am focussing on education provided to learners at school level, thus I will be excluding adult basic education, further education and training and higher education and training.

Records of the results of the National Senior Certificate examination results obtained from the Department of Basic Education were used as a data base

from which the schools for my sample were selected. A combination of purposive and convenience sampling techniques was used to identify the schools for the research project. Six schools were purposefully selected to investigate the relationship between the funding of schools and the quality of the education they provide.

Six Gauteng schools, who maintained a 100% pass rate for three consecutive years, were selected for my research. Two are independent schools, two are public schools from socio-economically privileged communities and two are so-called transformed⁷ public schools from varying socio-economic backgrounds.

The sampling process is discussed in detail in paragraph 5.5.3 in chapter five.

1.8.3.3 Data collection

Data was collected on each of the sample schools for the period 2007 to 2009. Three categories of data were collected. The first category of data had to enable me to create a profile of the school. The second category of data had to shed light on factors enabling the sample schools to maintain their level of academic performance. The third category of data had to serve as triangulation for the data obtained in the previous two categories.

A multipurpose research instrument (attached as ANNEXURE 3) was designed to achieve the objectives of the previous paragraph. It consists of three sections.

Section A dealt with

- demographic information about the school,
- demographic information about the School Management Team (SMT),
- demographic information about the members of the Finance Committee,
- demographic information about the staff that taught the grade 12 learners for the period under investigation,

⁷ Transformed refer to schools whose student profile have changed from monoculture white to ethnically integrated.

- information regarding the school's budget for the period under investigation.

Section B served as the basis for a semi-structured interview with the school principal on

- information regarding special programmes / efforts to prepare the grade 12 learners for the senior certificate examination,
- an opinion on programmes / efforts to prepare the grade 12 learners for the senior certificate examination,
- evidence to substantiate the information provided in the two preceding bullets above

The interviews were recorded digitally and transcribed. Copies of the interview transcripts were sent to the respondents to sign off (member checking).

Section C of the instrument contained a matrix based on the sixteen indicators of the quality of school education developed by the European Commission in 2000, and was used to probe the quality of education in the sample schools by asking the respondents to react the different criteria in an open-ended manner.

1.8.3.4 Data analysis

The Senior Certificate examination results of the sample schools for the period under review obtained from the provincial departments of education were analysed to form a basis for comparison between sample schools and the national data base on the National Senior Certificate examination (NSCE).

The data obtained from Section A of the research instrument was analysed by using an Excel spread sheet. The transcripts of the semi-structured interviews obtained from Section B of the research instrument were analysed by using coding to create tables of data for further analysis and crystallisation. The data

obtained from Section C of the research instrument was analysed by making use of a combination of the methods used above.

The analysed data forms the basis for the discussions, tables and figures contained in Chapter six of this dissertation

1.8.3.5 Reliability, Validity

Research data needs to be *authentic, believable, valid and reliable* (Charles & Mertler, 2002: 40, 41)

Authenticity and believability are determined by the tests of external and internal criticism. *External criticism* has to do with determining whether the data comes from legitimate sources. This test is one of analysis and judgement and uses no statistical calculations. *Internal criticism* has to do with data accuracy and lack of bias. Data for this study will be collected from the sample schools and the provincial Departments of Education as primary sources. The principal and the officials concerned will have to sign off the information provided to ensure accuracy and authenticity. The methods used for data analysis will ensure accuracy and at the same time limit bias.

Validity The sampling methods as well as the methods used for collecting and analysing the data in this study were geared at ensuring that the data depicted or deal directly with the topic under consideration to guarantee validity.

Triangulation was with regard to information provided by schools as well as the results in the NSCE to build coherent justification for themes.

Despite the fact that a comprehensive / representative sample has been selected, no claims of completeness will be made. Because it is a qualitative study, the data obtained and the interpretation thereof will only reflect my understanding of the problem. Every effort will however be made to ensure authenticity and believability by applying both external (using legitimate sources) and internal criticism (respondents scrutinised the reports on their respective schools for accuracy and authenticity).

1.8.3.6 *Limitations*

My lack of experience as a researcher was the biggest limiting factor in my research. It resulted in a much time being wasted and having to redo a number of aspects of my investigation. My close involvement in the research process necessitated a constant awareness to guard against subjectivity and bias.

The fact that I did case study research balanced the size of the sample as a limiting factor because the purpose of the research was to develop an understanding of the relationship between funding and the quality of education.

Obtaining data was not too difficult. What was more important was to use the data in such a way that the anonymity of the sample schools and the respondents was always safeguarded. Because I used official and primary sources of information, the reliability of the data is secure.

1.8.3.7 *Ethics*

The established official procedures prescribed by the University of Pretoria and the Faculty of Education's policy documents were adhered to. Permission was obtained from the Faculty's Ethics Committee before I embarked on the process of collecting the data. A copy of the original ethical clearance certificate issued by the Faculty's Ethics Committee is included as ANNEXURE 1 to this dissertation.

1.8.3.8 *Proposed structure of the research report:*

Chapter 1 - Introduction

Chapter 2 - Quality education

Chapter 3 - Legal framework for the funding of education in South African public schools

Chapter 4 - Accountability regarding the financial management of education

Chapter 5 - Methodology

Chapter 6 - Research findings

Chapter 7 - Conclusions and recommendations

CHAPTER 2: QUALITY EDUCATION

2.1 Introduction

The National Centre for Public Policy and Higher Education on the quality of education in New Jersey, summarises the challenge to all countries of the world when they phrase it this way:

‘To sustain our quality of life, it is imperative that our children are taught to understand the basic systems that support us: the economy, the environment, government, and society.’

(http://www.njstatelib.org/Research_Guide/Public_Policy/Index.php accessed on 23 March 2010)

The debate on public education in South Africa is not new. The current education system has its roots in the Freedom Charter of the ANC (1955: 4) that reads that education shall be free, compulsory, universal and equal for all children. The second important international initiative that impacts on education in South Africa is the Dakar declaration of 2000, to which South Africa was a co-signatory; where it was agreed that all education at primary school level should be free by 2015.

The right to education in the democratic South Africa derives from Section 29(1) of the Constitution of 1996. It is important to take note of the ruling of the South African Constitutional court on this matter in where Judge Nkabinde J, (*The Governing Body of the Juma Masjid Primary School and another v Essay NO and Others (Centre for Child Law and Another as Amici Curiae)* 2011 (7) BCLR 651 (CC)) for a unanimous court stated the following:

‘It is important, for the purposes of this judgment to understand the nature of the right to a “basic education” under Section 29(1)(a). Unlike some of the other socio-economic rights this right is

immediately realisable. There is no internal limitation requiring that the right be “progressively realised” within “available resources” subject to “reasonable legislative measures”. The right to a basic education in Section 29(1)(a) may be limited only in terms of a law of general application which is “reasonable and justifiable in an open and democratic society based on human dignity, equality and freedom”. ...’

It is, however, important to note that no mention of quality education is made anywhere in the Constitution. It is further important to note that as far as the South African Schools Act (hereafter SASA) is concerned, quality education is never defined per se. It is however, mentioned four times, that is (i) in its preamble, (ii) Section 8(2), (iii) Section 20(1)(a) and (iv) in Section 36(1). The preamble to the SASA, reads that *‘this country requires a new national system for schools which will redress past injustices in educational provision, provide an education of **progressively high quality for all learners** (my emphasis) and in so doing lay a strong foundation for the development of all our people’s talents and capabilities’*. Section 8(2) refers to the code of conduct for learners, stating that it must be aimed at *‘... establishing a disciplined and purposeful school environment, dedicated to the **improvement and maintenance of the quality** of the learning process (my emphasis)’*.

The other two sections refer to responsibilities of the school governing body. Section 20(1)(a) says that the school governing body must *‘promote the best interests of the school and strive to ensure its development through the provision of **quality education for all learners** at the school(my emphasis)’* and Section 36(1) compels the school governing body to *‘... take all reasonable measures within its means to supplement the resources supplied by the State in order to **improve the quality of education** (my emphasis) provided by the school to all learners at the school’*.

Although quality education is not defined in legislation or case law, it can be assumed that all education offered in public schools aspires to be of a high standard. This chapter will investigate the phenomenon of quality education.

2.2 Quality education

As previously indicated in paragraph 1.7.1 of Chapter 1, educational policy has faced two challenging priorities since the Second World War; the first was making equality education (*a school for everyone*) a reality and the second with which the world is still battling, is quality education (*a better school for everyone*) (De Groof, 1995: 7).

Every parent should have the best interests of his/her child at heart specifically when it concerns the education of their children. In fact internationally this concern is manifested in the United Nations International Convention on the Rights of the Child (18 Nov 1989) where the following is spelt out:

Article 3: Best Interests of the Child:

All actions concerning the child shall take full account of his/her best interests. The state shall provide the child with adequate care when parents, or others charged with that responsibility, fail to do so.

Article 18: Parental responsibility:

Parents have joint primary responsibility for raising the child, and the State shall support them in this. The State shall provide appropriate assistance to parents in child-raising.

Article 28: Education

The child has a right to education, and the State's duty is to ensure that primary education is free and compulsory, to encourage different forms of secondary education accessible to every child and to make higher education available to all on the basis of capacity. School discipline shall be consistent with the child's rights and dignity. The State shall engage in international cooperation to implement this right. (UNESCO - <http://www2.ohchr.org/english/law/crc.htm> - accessed on 20/03/2006)

The White Paper on Education and Training of 1995 in paragraph 3 of Chapter 7 spells out the intention of the South African government to entrench into the relevant legislation “*a number of conventions which deal partly or wholly with rights to education and the rights of the child, including the Convention Against Discrimination in Education (UNESCO, 1960), the International Covenant on Economic, Social and Cultural Rights (UN, 1966), and the Convention on the Rights of the Child (UN, 1989)*”. The initial challenge of equality education (a school for everyone) was strongly advocated by the late Katerina Tomasevski, a world-renowned advocate for the right to education and former UN Special Rapporteur on the Right to Education. She developed the now well-known model of the four As regarding the provision of education. De Groof & Lauwers (2005:37/38) refer to this model in the UN’s document General Comments No 13 (08/12/99) when they say that education in all its forms and at all levels should exhibit the following interrelated and essential features:

- *Availability*
- *Accessibility*
- *Acceptability*
- *Adaptability*

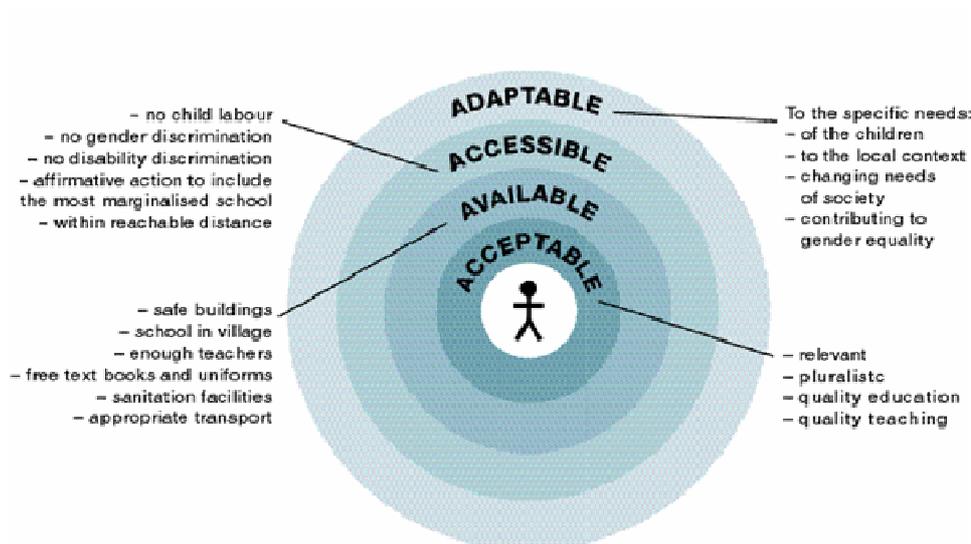


Figure 2.1: *Education Rights Circle Diagram* (<http://www.right-to-education.org/node/231> Accessed 20 August 2011).

Skelton (2011: 6/7) argues that ‘*Acceptability* – which may also be referred to by another A-word, “*adequacy*” is the major theme in a current case

regarding Rivonia Primary School. The case was heard in the South Gauteng High Court on 2 and 3 October 2011 but judgement has not been passed yet⁸. This case engages the question of class size, thereby raising the issues of adequacy and quality.

Adams (1993: 12/13) identifies multiple definitions of quality as a concept in use and concludes as follows:

- *Quality has multiple meanings*
- *Quality may reflect individual values and interpretations*
- *Quality often is multidimensional; it may subsume equity and efficiency concerns*
- *Quality is dynamic; it changes over time and context*
- *Quality may be assessed by either quantitative or qualitative measures*
- *Goals of quality may conflict with efficiency, equity, or other goals*
- *Quality is grounded in values, cultures and traditions: it may be specific to a specific nation, province, community, school, parent or individual student*
- *Different stakeholder groups often have different definitions of quality; thus 'winners' and 'losers' may be associated with any particular definition*

He also presents a list of characteristics of education quality without giving a specific definition (Adams, 1993:13):

- *Quality is definable in context*
- *Under some assumptions quality can be measured 'objectively'*
- *Quality often supplements, complements, or is integrated into interpretations of efficiency and equity*
- *Quality is not necessarily associated with high costs*
- *Given similar missions, goals and comparable contexts, educational quality can be elevated across educational settings*

⁸ Judgement was passed on 7 December 2011. Judge Mbha ruled against the applicants, but they have applied for leave to appeal in the Supreme Court of Appeal. The issue of adequacy only featured indirectly in this case thus far.

- *Even if there is lack of agreement on what quality is, there often is agreement that it is a goal.*

The quest for the improvement of education quality has been recognised as the most critical challenge facing most developed and developing nations. Critical moments in this process were the United Nations International Convention on the Rights of the Child in 1989 and the work of Katarina Tomasevski in 1995. Other critical moments listed by Beckmann & Fuessel (2011:1) were:

‘The education for all movement to ensure education for all by 2000 took off at the World Conference on Education held in Jomtien, Thailand in 1990. It was followed by a Mid-Decade Conference held in Amman in Jordan in 1996 and the World Education Forum held in Dakar, Senegal in 2000...’

The 2000 World Conference on Education for All in Dakar, concluded that good quality education is essential for supporting economic development and addressing poverty, equipping learners with requisite skills and knowledge, supporting people to transform their lives and the society in which they live, and to achieve the six Millennium Development Goals. The latter is contained in the ***Dakar Framework for Action Education for All: Meeting Our Collective Commitments***. They are:

1. Expanding and improving comprehensive *early childhood care and education*, especially for the most vulnerable and disadvantaged children.
2. Ensuring that by 2015 all children, have access to *free and compulsory primary education of good quality*.
3. Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and *life skills programmes*.
4. Achieving a fifty percent improvement in levels of *adult literacy* by 2015, especially for women, and equitable access to basic and continuing education for all adults.

5. Eliminating gender disparities in primary and secondary education by 2005 and achieving *gender equality* in education by 2015, with focus on ensuring girls' full and equal access to (and achievement in) basic education of good quality.
6. Improving all aspects of the *quality of education* and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially literacy, numeracy and essential life skills. (UNESCO, 2000:15)

UNESCO (2004a:77,78), postulates that there is ample evidence that the quantity (number of years) and the quality (both cognitive/intellectual and non-cognitive skills, i.e. norms, values and behavioural aspects) of the education a person receives go hand in hand. Their research concludes that the complexity of the drive for quality education for all is typified by the following:

- An analysis of country-specific schools systems found that different school systems within a country have produced either high or low levels of achievement.
- Debates within the education community regarding adequate teaching practices are not settled.
- Recent experimental studies on the education production function found that sufficient resources are necessary if education of acceptable quality is to be attained
- Adequate incentive structures for teachers appear to be a natural complement to resource policies, but that they can also produce contrary side effects that either reduce their impact on cognitive skills or affect other educational outcomes negatively.

Motha (2010: 8/9), quoting various authors on this matter (Myers, 1994; Dahlberg, Moss & Pence 1999; and Pigozzi 2008), contends that quality education is influenced by many factors and multiple environments which influence outcomes. UNESCO (2004a:17) contends that most attempts to define quality in education are characterised by two principles namely that, (i)

the cognitive development of the learner is the major explicit objective of all education systems and (ii) education has a role in promoting the values and attitudes of responsible citizenship.

2.3 Quality education in the South African context

This discussion has its roots in the national strategy for human resource development (hereafter HRD). The conventional interpretation of this concept focuses on skills development with a view to enhance economic growth. Such a narrow definition of HRD however, sits *at odds with South Africa's development discourse ... the strategic priorities and interventions that make up the strategy are explicitly designed to respond to economic, social and wider development imperatives*. Apart from purely economic considerations these strategies thus also include issues related to *values, good citizenship and wider development objectives* (RSA, 2009: 10/11).

Part of the education for all (EFA) debate is issues related to access and exclusion. Much progress has been made in this regard in South Africa since 1994. Perry and Arends (2003: 322/323) indicate that by 2001, access to schooling have improved to such an extent that 97% of the 7 to 13-year-old and 77% of the 14 to-year-old cohorts were respectively attending primary and secondary schools and that the number of students writing and passing the NSCE have increased significantly. *Of particular note is the high level of participation by female learners*. Despite progress made in South Africa, Wildeman (2003: 298) indicated that *while public schools have benefitted from the targeting of a broader majority of poor learners, funding for the ECD and ABET subsectors were still subject to policy and funding reviews*.

Motala (2008: 53) argues that this is not a simple matter and that two conceptions of educational access prevail in education policy and research, namely structural access and meaningful access. Although this falls outside the immediate context of this dissertation it is important to take note thereof in the context of the broader debate. South Africa has made major inroads regarding the first, i.e. getting all children of school going age into a classroom. It is a completely different story however, when we look at

meaningful access in terms of quality education. This matter is dealt with extensively later in this paragraph.

Motala (2008:51) further argues that factors featuring in the exclusion debate in South Africa (and elsewhere for that matter) present in terms of two broad themes. The first include economic and social factors (indirect cost of education, family structure, gender and HIV/AIDS). The second include school-related factors (discrimination, racism, sexism, poor quality teachers) and personal factors (health, support for and motivation of learners themselves).

In South Africa the following documents are of particular importance regarding efforts to raise the quality of education; the TIRISANO document, the 3 March 2003 Review to the Minister on *Financing, Resourcing & Costs of Public Education in Public Schools* and the 14 June 2003 Plan of Action: *Improving access to free & quality basic education for all*.

The TIRISANO document, announced in 1999 by the then Minister of Education, Prof Asmal, represents a five-year plan to improve the quality of education in South Africa. The implementation plan for TIRISANO provided for the running of five programmes from 2000 to 2004. These programmes focused on:

- ❑ Programme 1: HIV/AIDS
- ❑ Programme 2: School effectiveness and educator professionalism
- ❑ Programme 3: Literacy
- ❑ Programme 4: Further and higher education
- ❑ Programme 5: Organisational effectiveness of the national and provincial departments

These programmes were aimed at streamlining the functionality of the ten newly established departments of education (one national and nine provincial departments).

The 3 March 2003 Review to the Minister on *Financing, Resourcing & Costs of Public Education in Public Schools* states that there is considerable evidence indicating that the quality of education in South African schools is worryingly low relative to what South Africa spends on schooling (Department of Education (hereafter DoE), 2003b :101). This document explains the potential impact of a series of recommendations in terms of four critical areas namely:

- ❑ *Adequacy of state allocations to schools* – This item relates to the funding of schools on an equitable basis and has been addressed through subsequent amendments to the Schools Act and the National Norms and Standards for School Funding in 2005 with the introduction of the concept of *no fee schools*⁹ in National quintiles 1 and 2 (approximately 40% of schools)¹⁰.
- ❑ *Translation of monetary inputs into school resources* – This item relates to the phenomenon where funds are made available for the creation of infrastructure and learner support materials, but where the money is either not spent or not spent well. The case of the Department of Education in the Eastern Cape is an example where the Department of Basic Education (hereafter DoBE) had to put the department under administration in February 2011 because of the problems listed above.
- ❑ *Translation of school resources into learner performance* – This item relates to the poor performance of South African students in international surveys to assess the quality of education. This matter is discussed in more detail in paragraphs 2.3.1 to 2.3.5.
- ❑ *School fees and other private inputs demanded by schools* – This item relates to the fact that school governing bodies, irrespective of the quintile ranking of the school, are obliged to supplement the funding provided by the state in terms of Section 36(1) of the South African Schools Act. (DoE, 2003b: 105 – 111)

⁹ A public school that may not charge school fees because of the poverty index of the parent community and the state of the school's facilities

¹⁰ All the schools in South Africa are ranked into five groups referred to as the *National Quintiles* based on a poverty ranking determined by the average household income and the state of the school facilities (Quintile 1 being the poorest and quintile 5 the least poor).

The 14 June 2003 Plan of Action: *Improving access to free & quality basic education for all*, resulted in the planned changes in the education system set out in Table 2.1 below.

Table 2.1: *Excerpts from the table on key activities that the Department will embark on (DoE, 2003a: 30).*

<i>Year</i>	<i>System changes</i>
2003	<ul style="list-style-type: none"> • Finalisation of DoE’s monitoring and evaluation framework insofar as it relates to schools • Setting up of an Education Complaints Office (ECO)
2004	<ul style="list-style-type: none"> • Finalisation of measures that will bring about easier access by non-section 21 schools to their school allocations • Improved capital investment plans • A fully operational Budget Monitoring and Support Office in the DoE providing support to the provincial education budgeting process • Formulation of a long-term plan by government and the textbook industry on the supply of affordable textbooks to the education system • Release of the first major sector review focusing on schools
2005	<ul style="list-style-type: none"> • Release of first district-level learner performance reports to the public

The systemic changes envisioned in the table above have met with varying degrees of success. Ms Pandor, Minister of Education in South Africa in her budget speech in parliament (2005: 3) was of the opinion that *'Improving the quality of education in South Africa is a national priority that requires involvement and engagement throughout all levels of our society' and that 'teachers are at the heart of quality education'*.

She identified six core issues that, in her opinion, would enhance the quality of education in South Africa:

- Reaching untapped potential
- School fees and no fee-schools
- School governing bodies and language policy in schools
- Higher education enrolment planning
- Further education and skills for a modern economy

- Access to adult education for adult learners

The four ministers of education since 1994 have all contributed in specific ways to the continuous process of improving the quality of education in South Africa. Minister Sibusisu Bengu (1994 to 1999) restructured the system and contributed largely to address the issues of access and enrolment. Minister Kader Asmal's (1999 to 2004) major contribution was the TIRISANO document as a blue print development plan. Minister Pandor (2004 to 2009) created awareness of the lack of performance in international benchmarking and Minister Angie Mothsekga (2009 to present) has been instrumental in establishing the *Action plan to 2014: Towards the realisation of schooling 2025*. The successes in access, enrolment, and improved facilities are all cause for pride and gratitude when compared to the pre-1994 dispensation. These successes are representative of the will to improve the quality of and reflect the priority attached to education by the South African Government. However, the legacy of the previous dispensation is still very visible in many schools in rural areas, where to date, schools do not have access to electricity and running water and especially in the low standards of education as discussed in the paragraph that follows. The problems that still exist and the failure to resolve many of these are complex. Some can be attributed to the magnitude of the inheritance from the apartheid era, but I consider the following to be factors that contribute to and exacerbate the situation:

- lack of project management skills (coordination of objectives, time, cost and quality) manifesting in;
- lack of detailed planning; resulting in un-operationalised or un-operationalisable plans;
- inability to coordinate efforts;
- inexperience of officials; and
- suboptimal use/abuse of available funding.

Beckmann and Fuessel (2011:1/2) postulate that '*Studies to measure the achievement of the goals of EFA and the FW abound at both the international and national levels.*' They refer to the following international studies: PISA

(the Programme for International Student Assessment), PIRLS (the Progress in International Reading Literacy Study), TIMSS (the Trends in International Mathematics and Science Study), SACMEQ (The Southern and Eastern Africa Consortium for Monitoring Educational Quality) and ANA (Annual National Assessment) as an example of a national intervention.

Colditz (2011: 1/2) refers to the recently published research report published by Van der Berg et al (2011) that contends that education outcomes of the South African schooling system are still appallingly low and that, according to the report, there are no indications that this state of affairs is improving despite radical interventions since 1994.

What follows is a very brief exposition of what these studies entail and how they apply to the South African context. For the purposes of my research, however, I also include (in paragraph 2.3.6) a discussion on the National Senior Certificate examination (hereafter NSCE).

2.3.1 Progress in International Reading Literacy Study (PIRLS)

This study was developed to assist in improving the teaching of reading and the acquisition of reading skills around the world. It is endorsed by the International Association for the Evaluation of Educational Achievement (IEA), an association with more than 60 member countries founded in 1959. In these studies the focus is on (i) the purpose of the reading, (ii) the process of comprehension and (iii) on reading behaviours and attitudes.

Their first study was conducted in 2001 and the second in 2006. The next study is scheduled for 2011. South Africa only took part in 2006 and *South Africa's Grade 4s & Grade 5s came last in a study of 40 countries that took part in the Progress in International Reading Literacy Study (PIRLS) 2006* (<http://edulibpretoria.wordpress.com/2007/11/30/results-from-pirls-2006-international-report-is-shocking/> - accessed on 28/11/2011). It was initially decided that South Africa would in future rather take part in the SACMEQ

research (see 2.3.4), but that position has subsequently been changed and in 2011 a representative sample of Grade 5 learners from across the country participated in the study (School Management & Leadership, Vol. 4 Number 9 & 10, 2010:16).

2.3.2 Trends in International Mathematics and Science Study (TIMSS)

The *Trends in International Mathematics and Science Study* (hereafter TIMSS) is an international assessment of the mathematics and science achievement of fourth and eighth grade students worldwide. This survey has been conducted every four years since its inception in 1995. Like PIRLS, TIMSS was developed by the International Association for the Evaluation of Educational Achievement (IEA) to allow the participating nations to compare students' performance (<http://timss.bc.edu/>, accessed on 16/03/2010). South Africa took part in the 1999 and 2003 surveys and twice came last out of all the African countries, even behind African countries such as Ghana and other developing nations that spent far less of their budgets on education than South Africa. So in 2007 the education department, then under Minister Naledi Pandor, decided to withdraw from the study. This decision has since been reversed by the current Minister of Basic Education, Angie Motshekga, so in 2011 South African learners in grades four and eight again participated in the next TIMSS study (Scott, 2010).

2.3.3 Programme for International Student Assessment (PISA)

The *Programme for International Student Assessment* (hereafter PISA) is a survey undertaken every three years by the Organisation for Economic Co-operation and Development (OECD). It was conducted for the first time in 2000. Through these surveys 15-year-olds (near the end of compulsory education) in the principal industrialised countries, are assessed on how far students have acquired the knowledge and skills essential for full participation in society. <http://www.pisa.oecd.org/pages/0,3417,>

en_32252351_32235907_1_1_1_1_1,00.html accessed on 20/08/2010. South Africa has never taken part in PISA.

2.3.4 The Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ)

The Southern and Eastern Africa Consortium for Monitoring Educational Quality (hereafter SACMEQ) is an international non-profit developmental organisation of 15 Ministries of Education in Southern and Eastern Africa that decided to work together to share experiences and expertise in developing the capacities of education planners to apply scientific methods to monitor and evaluate the conditions of schooling and the quality of education, with technical assistance from UNESCO International Institute for Educational Planning (IIEP). SACMEQ has completed two major education policy research projects on the reading and mathematical ability of learners; SACMEQ I in 1995 and SACMEQ II (Moloi, M., & Strauss, J.) in 2005. The report on a third a project (SACMEQ III) that commenced in 2007, was published in 2010 (<http://www.sacmeq.org/about.htm>, accessed on 5/4/2011). Again, South Africa did not do well. Spaul (2011:26) in his concluding paragraph of analysis of the results, puts it this way:

‘The motif that runs through much of the analysis above is that South Africa is still a tale of two schools: One which is functional, wealthy, and able to educate students; with the other being poor, dysfunctional, and unable to equip students with the necessary numeracy and literacy skills they should be acquiring in primary school. While the constitution promises equal access to education, it cannot promise an equal quality of education.’

2.3.5 Annual National Assessments (ANA)

The Annual National Assessments (hereafter ANA) are standardised national assessments for languages and mathematics in the intermediate phase (grades

4 – 6) and in literacy and numeracy for the foundation phase (grades 1 – 3). The question papers and marking memoranda (exemplars) are supplied by the national Department of Basic Education and the schools manage the conduct of the tests as well as the marking and internal moderation.

(<http://www.education.gov.za/Curriculum/AnnualNationalAssessment/-tabid-/424/Default.aspx> accessed on 26/09/2011).

Table 2.2 below gives a brief exposition of the 2011 results for the ANA including comments that explain the results.

Table 2.2: 2011 Results for the Annual National Assessments.

Grade	Literacy	Numeracy	Comments
3	National average performance 35%. (47% of learners achieved above 35% in Literacy)	National average performance 28%. (34% of learners achieved above 35% in numeracy)	Provincial performance in these two areas is between 19% and 43%, the highest being the Western Cape, and the lowest being Mpumalanga.
6	National average performance 28%. (30% of learners achieved above 35% in Languages)	National average performance 30%. (31% of learners achieved above 35% in Mathematics)	Provincial performance in these two areas ranges between 20% and 41%, the highest being the Western Cape, and the lowest being Mpumalanga.

In her statement on the release of the Annual National Assessments Results for 2011, Mrs Angie Motshekga, Minister of Basic Education said:

‘We have taken an unprecedented step in the history of South Africa to test, for the very first time, nearly 6 million children on their literacy and numeracy skills in tests that have been set nationally. This is a huge undertaking but one that is absolutely necessary to ensure we can

assess what needs to be done in order to ascertain that all our learners fulfil their academic and human potential. ANA results for 2011 inform us of many things, but in particular, that the education sector at all levels needs to focus even more on its core business – quality learning and teaching.’

It is evident from Table 2.2 that the 2011 ANA the South African education system is failing to provide the learners with education that will enable “*all our learners (to) fulfil their academic and human potential*” and that the “*core business – quality learning and teaching*” is not being achieved adequately.

2.3.6 The National Senior Certificate Examination (NSCE)

2.3.6.1 Background

The National Senior Certificate (NSC) examination commonly known as “matric” is the exit level examination of the formal school system in South Africa. It ends twelve years of formal schooling and the results obtained in the NSCE are one of the key indicators for the departments of education, schools and parents alike, to indicate the state of health of the education system. This examination was written for the first time 152 years ago when the first formal examination was conducted in South Africa under the University of the Cape of Good Hope in 1858 (<http://www.education.gov.za/Examinations/tabid/338/Default.aspx> accessed on 20 May 2011).

In the period immediately preceding the 1994 democratic elections in South Africa, students wrote a national examination at the end of their twelve year school career within the context of the then different departments of education serving the different population groups in South Africa under the apartheid regime and the 1983 Constitution. At that stage it was still referred to as the Senior Certificate Examination. These included the education departments serving the House of Representatives (for people from Indian descent), House of Delegates (for people with a so-called coloured background), the Department of Education and Culture (for the people from a so-called white

background) and the Department of Education and Training, serving all the so-called black peoples of South Africa.

With the establishment of the new education system after the 1994 elections, the timetable for the NSCE was coordinated nationally but the respective provincial departments of education in the nine different provinces still set their own papers. One national examination at the end of grade twelve was written for the first time for the entire country in 2003. During the period 1996 to 2008, this qualification was referred to as the Further Education and Training Certificate or FETC. In 2008 the name of this examination was changed to the National Senior Certificate Examination and the name of the qualification became the *National Senior Certificate in Education*. This was the first time that students were examined on Curriculum 2005 (Loock, 2011).

In order to obtain a National Senior Certificate a learner must (DoBE 2009:5)

- (a) Complete the programme requirements for Grades 10, 11 and 12 separately and achieve the distinct learning outcomes and attain the associated assessment standards of all three years; and*
- (b) Comply with the internal assessment requirements and Practical Assessment Tasks where applicable for Grades 10, 11 and 12 and the external examination requirements of Grade 12 as contemplated in the National Protocol for Assessment (Grades R– 12) and the Subject Assessment Guidelines of the various subjects listed in Annexure A of this document.*

The Matriculation Board is an advisory committee on minimum admission requirements to Higher Education South Africa (HESA). The Matriculation Board is responsible for setting minimum admission requirements to degree study on the basis of the senior certificate, the Matriculation Board has a long history that dates back to statutory responsibilities vested in the Joint Matriculation Board (JMB). The JMB operated from 1918 to 1992 when it was dissolved and its records were transferred to the Matriculation Board. The functions of moderation, examination and certification were transferred to the South African Certification Council. SAFCERT concentrated on quality

assuring the Senior Certificate. The Council was established by an Act of Parliament in 1986, to introduce efficient administration to make standards uniform for qualifications to have credibility or legitimacy. An indication of how difficult it was for all concerned at the time to deal with even the most elementary changes is the fact that even though the South African Certification Council Act was passed in 1986, the first meeting of the Council was only held two years later in March 1988. The first executive officer was appointed a year later in 1989. The Council only became effectively operational in November 1992. It was in that year, 1992, that the first Senior Certificate Examinations were conducted under the auspices of this Council (<http://www.hesa-enrol.ac.za/mb/abus.htm> accessed on 20/08/2011) (Asmal: 2002).

The functions of the South African Certification Council (SAFCERT) were incorporated into those of the new Council, constituted in June 2002 – now known as Umalusi – while the function of determining minimum thresholds to degree study was taken over by the Matriculation Board. The name Umalusi is derived from the Nguni word “uMalusi” meaning “shepherd” or, in the African context, “guardian of the family assets”. UMALUSI is tasked to take care of some of the nation’s most valued possessions – general and further education and training. It will encourage and support, but also be firm on growth in quality through powerful and effective learning (<http://www.umalusi.org.za/Inveloper.asp?iP=2&iVdate=22/10/2011&iS={4CCABC8F-183A-4015-A076-6C898BC190DB}> accessed on 22/10/2011). Beckmann (2011: 17) mentions that the pass rate in the NSCE fluctuated between 47% and 75% since 1994 and that the average pass rate varied as much as 30% between provinces. He is of the opinion that the fluctuations could, in all probability be ascribed to different interventions, curriculum changes as well as attempts to influence the results.

2.3.6.2 Results

As indicated in the beginning of paragraph 3.6.1, the results in the NSCE are an important indicator of the success of the education system and the quality of the education provided at schools in the system. As the Minister of Basic

Education, Ms Angie Motshekga, put it on releasing the 2010 NSCE results: ‘*The Grade 12 National Senior Certificate examination is one of the instruments for measuring how government is doing in discharging its responsibility of improving quality of education.*’ During this same opportunity she mentioned that ... ‘*Over the years, our country has endeavoured to achieve a national pass rate of at least 70%*’. (<http://www.info.gov.za/speech/DynamicAction?pageid=461&sid=15519&tid=26422> – accessed on 22/10/2011).

Table 2.3 gives an overview of the NSCE results since the ‘90s and Figures 2.2 and 2.3 respectively depict the *number of students that sat for the examination* and the *pass rate* for the period 1999 to 2010 graphically.

Table 2.3: *National Senior Certificate Examination results*

Year	Students	Pass rate
1995	-	53.4%
‘96	-	53.4%
‘97	-	47.4%
‘98	552 384	49.3%
’99	511 159	48.9%
2000	489 941	57.8%
’01	449 371	61.7%
’02	443 824	68.9%
’03	440 267	73.2%

'04	467 985	70.7%
'05	508 363	68.3%
'06	528 525	66.5%
'07	564 775	65.2%
'08	589 912	62.5%
'09	581 573	60.6%
'10	537 543	67.8%
AVERAGE	512 740	60.98%

Looking at Table 2.3, it is interesting to note that the expressed target of a 70% overall pass rate was achieved only twice during the period 1999 to 2010 namely in 2003 and 2004. During 2002 (68.9%), 2005 (68.3%), 2006 (66.5%) and in 2010 (67.8%) the overall pass rate approached the target of 70% but fell slightly short of the benchmark. It is further interesting to note that the overall pass rate is 60.98% and that since the year 2001 the pass rate has been consistently above the 60% mark

The dysfunctionality of the pre 1994 plethora of education systems in South Africa also manifested itself in the pass rate in the NSCE. Beckmann (2011: 11) quotes *The Star* newspaper of 8 January 1990 reporting that the former Department of Education and Training (for Black students) only had a pass rate of 36,4%. A 70% pass rate may not be First World standard, but does reflect a vast improvement in the overall quality the education system is providing.

When the improvement in the pass rate is considered in conjunction with the issue of drop-out as discussed in paragraph 2.4.2 below, it is evident that,

although nowhere near ideal, these represent positive signs that the quality of education as manifested in the results of the NSCE is steadily improving.

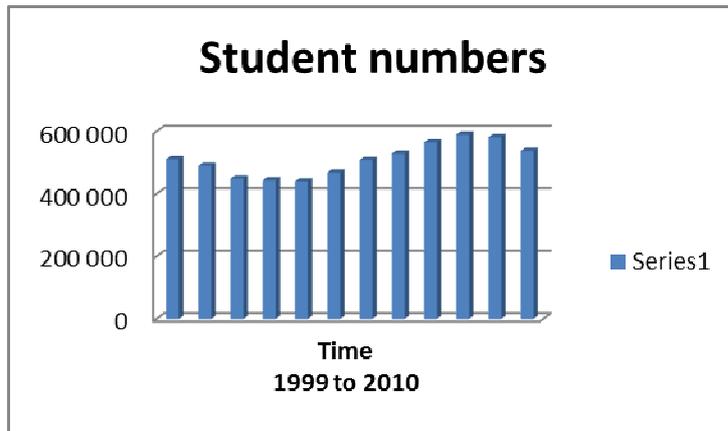


Figure 2.2: *Number of students writing the National Senior Certificate Examination*



Figure 2.3: *Pass rate for the National Senior Certificate Examination*

From the histograms in Figures 2.1 and 2.2 it appears as if there is an inverse proportionality between the number of students that sit for the NSCE and the pass rate. Attempting to interpret this observation would be mere speculation and merits an investigation on its own,

The six sample schools that I selected purposefully for my research had to have a pass rate of 100% for three consecutive years since 2007. Looking at the pass rates portrayed in Table 2.3, this is no mean feat. If a 70 % pass rate is the benchmark of acceptability, a 100% pass rate definitely represents

education of a high quality. To have done so for three consecutive years constitutes excellence.

2.3.7 Class size as factor in quality education

Class size is an inherited problem in South Africa. In the pre-1994 dispensation and even today, class size varies tremendously in amongst and even within provinces. Learner: educator ratios were initially addressed through the development of national norms for the provisioning of educators to schools. The official learner: educator ratio for primary schools is 1: 40 and 1: 35 for secondary schools. These norms were meant as targets for the year 2000, and would have been phased in over a period of five years Wildeman (200: 3).

A great deal of research using a variety of methods and approaches was done over the past 30 years especially in the USA. Table 2.4 summarizes some of the major initiatives in the USA this regard.

Table 2.4: *Class size projects in the USA (Adapted from http://ed.gov/pubs/ReducingClass/Class_size.html - accessed on 24/05/2011).*

Date	Initiative	Sate	Focus
1984	<i>Prime Time</i> Project	Indiana	Reduced class size to 18 in first-, second-, and then kindergarten and third-grade classrooms. Results were mixed. Tests of student achievement found that for students in the smaller classes, the reading scores for first-graders showed the greatest improvement, with smaller gains in mathematics.
1985	Project STAR (Student Teacher Achievement Ratio)	Tennessee	<i>STAR</i> was a 4-year longitudinal study of kindergarten, first-, second-, and third-grade classrooms in Tennessee which began in 1985. <i>STAR</i> compared classes of 13-17 students with classes of 22-26 students both with and without an additional instructional aide in the larger classes. Participating teachers did not receive any professional training focusing on teaching in reduced size classes. The evidence from student



			testing in <i>STAR</i> showed that the students in the smaller classes outperformed the students in the larger classes, whether or not the larger class teachers had an aide helping them.
1989	Lasting Benefits Study	Tennessee	<p>In 1989, the <i>Lasting Benefits Study</i> began a follow-up study to examine whether the effects of the smaller class size experience persisted when students were returned to normal size classes. The study is still on-going. To date, the research findings include:</p> <ul style="list-style-type: none"> • <i>In fourth grade, students from the smaller classes outperformed the students from the larger classes in all academic subjects.</i> • <i>In fourth grade, students from the smaller classes were better behaved than students from the larger classes (i.e., student classroom effort, initiative, and disruptiveness).</i> • <i>At least through eighth grade, a decreasing but still significant higher academic achievement level for the students from the smaller classes persists.</i>
1990	Project Challenge	Tennessee	In <i>Project Challenge</i> , Tennessee sought to put the <i>Project STAR</i> findings to use by implementing smaller class sizes in 16 of the state's poorest school districts. Beginning in 1990, the state phased in smaller classes at the kindergarten through third-grade levels in districts with the lowest per capita income and highest proportion of students in the subsidized school lunch program. The results of this effort were evaluated by examining the effect on the ranking of the school districts according to student performance on a state-wide achievement test. The <i>Project Challenge</i> districts moved from near the bottom of school district performance in Tennessee to near the middle in both reading and mathematics for second grade.
1990	Burke County Project	Burke County, North Carolina	Burke County pilot-tested and then phased in a class size reduction project in the county school district. In 1995-96, 1,193 first-graders and 1,125 second-graders participated in the initiative. The program's goal has been to reduce class size to 15 students in all first-, second-, and third-grade classes. The Burke County project also included professional development activities covering instruction and assessment, and so the effects are not necessarily



			<p>simply a function of reducing class size. Evaluation of the initiative has produced the following findings:</p> <ul style="list-style-type: none"> • <i>Compared to a matched group of students in classes that had not been phased into the smaller class initiative, students in the smaller classes outperformed the comparison group in first, second, and third grades on both reading and mathematics achievement tests.</i> • <i>Based on independent observations of classroom activity, the percentage of classroom time devoted to instruction in the smaller classes increased from 80 percent to 86 percent compared to the larger classes, while the percentage of time devoted to non-instructional activities such as discipline decreased from 20 percent to 14 percent.</i>
1996/7	SAGE (Student Achievement Guarantee in Education Programme)	Wisconsin	<p>The <i>SAGE</i> Program's objective is to phase in class size reduction in kindergarten through third grade in school districts serving students from low-income families. The <i>SAGE</i> Program reduced class sizes in kindergarten and first grade in 1996-97, added class size reductions in second grade in 1997-98, and added third grade class size reductions in 1998-1999. Its aim is to reduce class size in the appropriate grade levels to a student/teacher ratio of 15 to 1 or less. <i>SAGE</i> program classroom arrangements in the first two years of implementation were several, including regular classrooms with 1 teacher and 15 students, 2 teacher teams with 30 students, and 4 other types of arrangements reflecting the constraints of existing classroom settings and teacher assignments. In the 1997-98 school year there were 30 schools from 21 school districts participating in the <i>SAGE</i> program, and 14 schools in 7 districts providing comparison student background and achievement data for an evaluation study of the program that is on-going.</p> <p><i>SAGE</i> and comparison school students' academic learning was measured at the beginning and end of the first-grade year, and again at the end of the second-grade year. The students' scores were compared to those of students in</p>



			<p>matching comparison schools serving similar populations of students, with the following results:</p> <ul style="list-style-type: none"> • <i>SAGE first-grade students performed consistently better than comparison students in mathematics, reading, language arts, and total scores for the Comprehensive Test of Basic Skills.</i> • <i>The achievement gap lessened between white and African-American students in the SAGE smaller classes in the first grade, in contrast to a widening of the gap between white and African-American students in the larger classes of the comparison schools.</i> • <i>Second-grade SAGE students' academic achievement remained higher than that of the comparison school second-graders, but the difference did not increase substantially.</i> <p>These findings are consistent with the findings in <i>Project STAR</i>, but there are two important qualifications to make regarding the <i>SAGE</i> project data. First, these are second year evaluation data from an on-going study, and so the findings of this research may change substantially as the program is phased in and additional data analyses are performed. Second, the <i>SAGE</i> project class size reductions were accompanied by other program initiatives: participating schools were also required to implement a rigorous academic curriculum, provide before and after school activities for students and community members, and implement professional development and accountability programs.</p>
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An analysis of the existing research in an article titled *Reducing Class Size, What Do We Know?* (http://ed.gov/pubs/ReducingClass/Class_size.html - accessed on 24/05/2011)., the author arrives at the following three conclusions:

1. *A consensus of research indicates that class size reduction in the early grades leads to higher student achievement. Researchers are more cautious about the question of the positive effects of class size*

reduction in 4th through 12th grades. The significant effects of class size reduction on student achievement appear when class size is reduced to a point somewhere between 15 and 20 students, and continue to increase as class size approaches the situation of a 1-to-1 tutorial.

- 2. The research data from the relevant studies indicate that if class size is reduced from substantially more than 20 students per class to below 20 students (16 to 18), the related increase in student achievement moves the average student from the 50th percentile up to somewhere above the 60th percentile. For disadvantaged and minority students the effects are somewhat larger.*
- 3. Students, teachers, and parents all report positive effects from the impact of class size reductions on the quality of classroom activity.*

The relationship between class size and student achievement is very complex. A mere reduction of the number of students does not necessarily lead to improved performance. Hanushek (1986 to 1999) and Monk's work (1994/5) in this regard is of particular importance. Variables that need to be factored in are student-teacher ratios, number of teachers per class, students' socio-economic status, students' motivation, teachers' academic background, experience and commitment. The literature on this phenomenon from the USA focuses primarily on the junior phases of schooling (kindergarten to grade 6).

A complete analysis of class size as a factor impacting on the quality of education merits a full research project on its own. Since my research is focused on the academic performance of grade twelve students from secondary schools in South Africa, the exposition above sufficiently proves an existing relationship between class size and academic performance to state that I will have to factor it in in my research.

2.4 European Commission’s model on quality education

In a Council resolution of 26 November 1999, Ministers of Education of the European Union identified the quality of education as one of the priority issues for consideration. This led to a number of initiatives that paved the way for the pilot project on quality evaluation in school education which was implemented in 101 secondary schools across Europe in 1997/98. Based on the results of the pilot scheme, the Commission adopted a proposal for a recommendation of the European Parliament and the Council on ‘European cooperation in quality evaluation in school education’ in January 2000. The Education Ministers from the 26 participating countries invited the Commission to establish a working committee of national experts from the 26 European countries (designated by the Ministers) to identify a limited number of indicators or benchmarks for school standards to assist national evaluation of systems in assessing the quality of school education.

This resulted in the identification of sixteen criteria and the publication of two reports by the working committee. These indicators cover four broad areas: attainment levels; educational success and transition; monitoring of school education; and educational resources and structures (European Commission 2000:5/6). They are summarized in Table 2.5 below.

Table 2.5: *Sixteen indicators of the Quality of School Education (European Commission 2000:6).*

Attainment	Success & transition	Monitoring education	Resources and structures
1. Mathematics 2. Reading 3. Science 4. ICT 5. Foreign Language 6. Learning to learn 7. Civics	8. Drop-out rates 9. Completing upper Secondary Education 10. Participation in Tertiary Education	11. Evaluating & Steering School Education 12. Parent participation	13. Education & Training of Teachers 14. Participation in Primary Education 15. Number of student per computer 16. Education expenditure per student

2.4.1. Attainment.

In this area there are seven indicators of attainment which are seen by the European Commission as critical for all European countries. Criteria 1 to 3 (Mathematics, Reading and Science) are standard indicators used to probe the quality of education in schools as has been discussed earlier in this chapter. Performance regarding criteria 1 to 3 as well as 4 and 5 (Information and Communication Technology ('ICT') and Foreign languages) are fairly easy to measure. Criteria 6 and 7 (Learning to Learn and Civics), however, are much more difficult to measure and the content thereof will definitely vary greatly from country to country in Europe and in South Africa, as well.

The concept 'Civics' in the context of the European Commission (2000: 32) report refers to *'the way ... young people are prepared for citizenship, and how they learn to take part in public affairs'*.

2.4.2. Success and transition.

Criteria 8, 9 and 10 ('drop-out rate from school', 'completion of upper secondary education' and 'participation in tertiary education') are closely related and all three of them have serious implications for education planners and policy makers in the short, medium and long term.

Van der Berg in Beckmann & Prinsloo (2007: 11) is quoted as echoing other educational and economic statisticians in regard to drop-outs, that statistics in this regard are hard to come by. He also refers to the fact that a ministerial committee has just been appointed to investigate the issue. Crouch (2005), is also quoted by Beckmann & Prinsloo (2007: 3) stating that *'compared to other middle-income countries, it would be entirely unreasonable to classify South Africa's drop-out problem as 'huge.'* Although there are some drop-outs, South Africa does *'a little better than other middle income countries, and certainly better than its SADC neighbours'* He is of the opinion that drop-outs do not show earlier than the last grades due to the fact that the only

'meaningful measurement and accountability' in the system is faced at the end of Grade 12.

2.4.3. Monitoring of school education.

Criteria 11 and 12 ('evaluation and steering of school education' and 'parental participation'). Criterion 11 applies to all levels of an education system and provides management information that should form the basis for informed decisions on the quality and effectiveness of the education provided by the system, province, district and or institution (that is, from the South African perspective). Both criteria are concerned with stakeholder participation where heads of schools, teachers, students and parents are key stakeholders, consumers of information and active players in school improvement. These two criteria proved to be important factors in the academic performance in the schools under investigation.

2.4.4. Resources and structures.

This category (criteria 13 to 16) relates to infrastructure which impacts directly on school performance and pupil success. These are 'educational expenditure per student', 'education and training of teachers', 'participation rates in pre-primary education' and 'number of students per computer'. These criteria can be used to identify issues which need to be investigated further, and to suggest alternative routes in policy making.

I include the sixteen criteria developed by the European Commission's working group in my research for three reasons: (i) to be used for the purposes of triangulation in validating my findings (ii) to ascertain whether these criteria render another or new findings regarding the quality of the education offered at the sample schools, and (iii) to test the sixteen criteria's applicability for the South African context in assessing the quality of education offered at our schools.

2.5 The role of the teacher

Searches of literature on the role of the teacher in the delivery of quality education have rendered a number of intriguing views on this matter. De Groof (1995:7) refers to the crucial role of the teacher in the development of both the equality and the quality of education when he quotes the International Labour Organisation the United Nations Educational, Scientific and Cultural Organization (point 4, The Statute of Teachers, ILO, Geneva, 1984, p.6):

One of the guiding principles of the Statute of Teachers correctly assumes that “advance in education depends largely on the qualifications and ability of the teaching staff in general and on the human, pedagogical and technical qualities of the individual teachers”.

The 15th Conference of Commonwealth Education Ministers held in Edinburgh in October 2003 was of the opinion that

‘the continuing professional development (CPD) of teachers has been identified as a key element in ensuring quality in education systems. It is important for teachers to recognise that CPD is a pre-requisite for their professional careers and as part of the battle against ignorance. Ministers have agreed on the importance of improving teacher quality, and identified the issues of teacher selection, training, retention and on-going professional development as vital.’

http://www.thecommonwealth.org/Internal/177944/177947/178139/education_action_areas/ - accessed on 20 May 2010).

Having done a recent review of available literature on the role of teachers, schools, and communities in quality education, Leu (2005:1) identifies three trends namely that:

- (i) there is a persistent tug for the attention of policy makers between quality and quantity;*
- (ii) decentralising authority and responsibility to the schools and community levels; and*

(iii) *recognition of the key role of teachers in promoting the quality of student learning. The link between quality education and the professional ability of teachers is endorsed by a number of sources.*

The Center for American Progress proposes ‘*a federal education agenda that builds the capacity of public schools to provide a high-quality education for all students by greatly strengthening America's teaching workforce. Recent research provides convincing evidence that teacher quality plays a critical role in whether and how much students learn from year to year. Unfortunately, teachers are too seldom treated as an important resource in America's schools, let alone our most precious one*’ (<http://www.americanprogress.org/projects/progressivepriorities/education.html> - accessed on 20 March 2006).

A number of authors suggest that teachers with higher verbal ability and (at the secondary level) with greater subject matter knowledge are associated with greater student learning (Ehrenberg & Brewer, 1995; Ferguson, 1991; Ferguson & Ladd, 1996; Monk, 1994; Monk & King, 1995; Strauss & Sawyer, 1986).

Dr Tom Boasberg, reading a paper entitled *School reform* during the Edward Kennedy Memorial Lecture at the University of Pretoria on 8 April 2011, summarized his presentation by saying:

- *By far the greatest impact on student achievement is the quality of teachers*
- *Second is the quality of the principal (school leader)*
- *Intense focus on*
 - *Recruitment*
 - *Development*
 - *Retention*
 - *Reward*
 - *Replacement*
- *Develop clear and student focused criteria of excellence in teaching and school leadership*

- *Systems of personalized coaching, feedback, and development for educators on classroom practice.*

It is imperative to take note of the preceding chronological line of arguments on the important role that the teacher plays in determining the quality of education offered in classrooms. This aspect will form a pertinent part of the questioning during the interviews conducted with the respondents in my research.

2.6 Conclusion and synthesis.

In this chapter the debate on the quality of education was introduced by discussing the right to education. This was done by examining the Convention on the Rights of the Child, the 1996 South African Constitution and the South African Schools Act, 84 of 1996. The discussion then proceeded to *include* the work of Katerina Tomasevski on the so-called 4As (Availability, Accessibility, Acceptability and Adaptability).

A discussion of what the concept quality education means followed and covered the historical development of the education for all philosophy from the Jomtien conference in Thailand in 1990 to the Dakar agreement in 2000. This led to the realisation that the quest for quality of education should (i) provide for learning that accommodates the learner as an individual, family and community member, and as part of a world society; (ii) welcome the learner and be adaptable to meet learning needs; and (iii) acknowledge the diversity of experiences reflecting the learner's prior and current situation, as well as the characteristics and skills that the learner brings to the learning environment UNESCO (2004b:4). It includes both the cognitive (knowledge base) and non-cognitive (cultural and value systems) dimensions of the child.

I then discussed quality education from the South African perspective and referred to specific initiatives undertaken in this regard as well as the lack of performance in terms of national and international benchmarking.

A brief discussion of the national senior certificate examination as an indicator of the quality of education in the South African education system was followed by discussions of class size and the role of the teacher as factors impacting on the quality of education.

Using the arguments in the preceding discussions as a frame of reference, I suggest the following can be regarded as non-negotiable for providing quality education in any education system:

- *Motivated, well qualified teachers facilitating teaching and learning in a constructive manner*
- *Schools that provide the minimum infrastructure required for an environment conducive to effective teaching and learning*
- *Functional teaching and learning support material*
- *Sufficient funding to finance the above*
- *High standards of management and governance at micro, meso and macro levels in the education system ensuring the efficient and effective realisation of educational objectives at the respective levels in the organisation*
- *Sound articulation between the education system on one hand and the economy on the other hand (economy is used here in its broadest context to include all sectors of the economy of any country. As per definition of economy, this should include balancing the needs of the country and the available resources).*

These assumptions will be used to speak to the findings of my research in Chapter 7.

Chapters 3 and 4 will be used to discuss the *legal framework for the funding of public education* and the *accountable funding of education* in the South African education system respectively.