

**MINISTERIAL COMMITTEE ON LEARNER RETENTION IN THE
SOUTH AFRICAN SCHOOLING SYSTEM**

MARCH 2008

CONTENTS

ACKNOWLEDGEMENTS	VIII
1. EXECUTIVE SUMMARY	IX
1.1 INTRODUCTION	ix
1.2 KEY FINDINGS AND CONCLUSIONS	xi
1.3 KEY RECOMMENDATIONS	xviii
1. CHAPTER ONE: INVESTIGATING LEARNER RETENTION	1
1.1 BACKGROUND	1
1.2 THE BRIEF	1
1.3 DEFINITION OF TERMS	3
1.4 REVIEWING METHODOLOGIES OF PREVIOUS REPORTS	9
1.5 CONCLUSIONS	16
2. CHAPTER TWO: SURVIVAL RATES AND DROPOUT RATES	18
2.1 INTRODUCTION	18
2.2 THE UNESCO DEFINITION OF SURVIVAL	18
2.3 THE DEPARTMENT OF EDUCATION MODEL	19
2.4 EMIS DATA AND SURVIVAL CURVE MODELLING	20
2.5 A SIMPLE METHOD FOR ESTIMATING SCHOOL RETENTION	25
2.6 DATA REQUIREMENTS	33
2.7 CONCLUSION	34
3. CHAPTER THREE: ATTAINMENT AND AGE SPECIFIC ENROLMENT	

RATES BASED ON SURVEYS AND CENSUSES	36
3.1 INTRODUCTION	36
3.2 EDUCATIONAL ATTAINMENT: A LONG HISTORY	36
3.3 AGE-SPECIFIC ENROLMENT	42
3.4 RECENT ATTAINMENT LEVELS BY AGE FROM SURVEY AND CENSUS DATA	53
3.5 CONCLUSION	68
4. CHAPTER FOUR: FACTORS INFLUENCING LEARNER DROP- OUT	69
4.1 INTRODUCTION	69
4.2 FACTORS ASSOCIATED WITH GRADE REPETITION	70
4.3 SCHOOL FACTORS RELATED TO SCHOOL DROPOUT	75
4.4 OUT OF SCHOOL FACTORS RELATED TO SCHOOL DROP OUT	77
4.5 STUDIES OF VARIABLES IN INTERACTION WITH EACH OTHER	86
4.6 PREDICTORS OF CATEGORICAL AT-RISK HIGH SCHOOL DROP OUTS (NOT AVAILABLE AS FULLTEXT)	87
4.7 LEARNER, FAMILY AND SCHOOL CHARACTERISTICS INTERACTION	89
4.8 TEST SCORES, DROP OUT RATES, AND TRANSFER RATES	91
4.9 ANALYSIS OF THE VARIABLES THAT PREDISPOSE ADOLESCENTS TO DROP OUT OF SCHOOLS	92
4.10 INTERVENTIONS TO PREVENT DROP OUT	93
4.11 CONCLUSION	106
5. CHAPTER FIVE: COMPARATIVE ANALYSIS	108
5.1 INTRODUCTION	108
5.2 PARTICIPATION AND FLOW RATES	108
5.3 CONCLUSION	117

6.	CHAPTER SIX: PUBLIC SUBMISSIONS	119
6.1	INTRODUCTION	119
6.2	BACKGROUND OF RESPONDENTS	119
6.3	METHOD OF ANALYSIS FOR SUBMISSIONS	120
7.	CHAPTER SEVEN: KEY RECOMMENDATIONS	139
7.1	DATA COLLECTION AND REPORTING SYSTEMS,	139
7.2	POLICY INTERVENTIONS	141
8.	ANNEXURES	143
8.1	SURVIVAL RATES BY GRADE: DEFINITIONS AND CALCULATIONS	143
8.2	CLASSIFICATION OF OBSERVATIONS IN THE ANALYSIS OF FURTHER EDUCATION	145
8.3	LIST OF ACRONYMS	147
8.4	LIST OF COMMITTEE MEMBERS	148
8.5	REFERENCES:	149

List of Figures

Figure 3.1	Mean Educational Attainment by Birth Cohort: Using Combined Census Data	34
Figure 3.2	Mean Black African Educational Attainment by Birth Cohort: Using Combined Census Data	34
Figure 3.3	Mean Educational Attainment by Birth Cohort and Race: Using Combined Census Data	35
Figure 3.4	Mean Black African Educational Attainment by Birth Cohort and Location Type: Using Combined Census Data	35
Figure 3.5	Proportion of Population with Complete Primary Schooling by Birth Cohort and Race: Using Combined Census Data	37
Figure 3.6	Proportion of Population with Matric by Birth Cohort and Race	37
Figure 3.7	Proportion of Population with Tertiary Qualifications by Birth Cohort and Race: Using Combined Census Data	38
Figure 3.8	Age-specific enrolment rates from various surveys and censuses: All races	44
Figure 3.9	Age-specific enrolment rates from various surveys and censuses: Black Africans	44
Figure 3.10	Age-specific enrolment rates from various surveys and censuses: Whites	45
Figure 3.11	Age-specific enrolment rates from various surveys and censuses: Coloureds	45
Figure 3.12	Age-specific enrolment rates in selected years: Black Africans	46
Figure 3.13	Age-specific enrolment rates in selected years: Whites	46
Figure 3.14	Age-specific enrolment rates in selected years: Black African and Whites compared	47
Figure 3.15	Age-specific enrolment rates from OHS1996: race groups compared	47
Figure 3.16	Age-specific enrolment rates from LFS2001a: race groups compared	48
Figure 3.17	Age-specific enrolment rates from LFS2006a: race groups compared	48
Figure 3.18	Attainment Profile of Individuals Aged 15-19: South Africa in International Perspective	49
Figure 3.19	Attainment Profile of Individuals Aged 21-25 years by Race, using	50

	Census 2001 Data	
Figure 3.20	Attainment Profile of Black African Individuals Aged 21-25 Years	51
Figure 3.21	Attainment Profile of Coloured Individuals Aged 21-25 Years	52
Figure 3.22	Attainment Profile of Indian Individuals Aged 21-25 Years	52
Figure 3.23	Attainment Profile of White Individuals Aged 21-25 Years	53
Figure 3.24	Attainment Profile of Black African Individuals Aged 16-20 Years by Quintile, 1991	54
Figure 3.25	Attainment Profile of Black African Individuals Aged 16-20 Years by Quintile, 2001	55
Figure 3.26	Attainment Profile of Coloured Children Aged 16-20 Years by Quintile, 1991	55
Figure 3.27	Attainment Profile of Coloured Children Aged 16-20 Years by Quintile, 2001	56
Figure 3.28	Attainment Profile of White Children Aged 16-20 Years by Quintile, 1991	56
Figure 3.29	Attainment Profile of White Children Aged 16-20 Years by Quintile, 2001	57
Figure 3.30	Average Parent Education: No Schooling	58
Figure 3.31	Average Parent Education: 1-6 years (Incomplete Primary)	58
Figure 3.32	Average Parent Education: 7-11 yrs (Incomplete Secondary)	59
Figure 3.33	Average Parent Education: 12yrs (Matric)	59
Figure 3.34	Mean Attainment by Age, OHS1996 to LF S2006B	61
Figure 3.35	Mean School Education completed by Age, OHS1996 to LF S2006B	61

List of Tables:

Table 2.1	Repeaters per thousand enrolments (2005 data)	
Table 2.2:	Repeaters per thousand enrolments (2004 data)	
Table 2.3:	DoE survival curve estimates for 2003/2004	
Table 2.4	Survival Rates	
Table 2.5:	Life table analysis	
Table 2.6 (a)	School survival for birth cohort of 1970-1974	
Table 2.6 (b)	School survival for birth cohort of 1975-1979	
Table 2.6 (c)	School survival for birth cohort of 1980-1984	
Table 2.6 (d)	School survival for birth cohort of 1985-1989	
Table 2.6 (e)	School survival for birth cohort of 1990-1994	
Table 3.1	Surveys and censuses included in the analysis and differences in questions regarding school involvement	41-42
Table 3.2	Age specific enrolment patterns obtained from surveys and censuses, 1993-2006, for the age group 7 to 12	43
Table 3.3	Mean Attainment by age group from surveys, and gain in attainment compared to one year younger age group	70
Table 4.1	Factors associated with grade repetition	65
Table 4.2	List of factors that may play a role in school dropouts	67
Table 4.3	Predictors for later school drop out	72
Table 5.1	Factors attributed to high and low rates of repetition	104
Table 5.2	Repeater rates at primary school level for South Africa and international median rates for 1999 and 2004	106
Table 5.3	Primary school level dropout rates and survival rates for South Africa and international medians for the school year ending in 2003	107
Table 5.4	Transition rates from primary to secondary, enrolment rates and repeater rates for South Africa and selected countries	109

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

The Ministerial Committee on Learner Retention in the South African Schooling System was appointed by the Minister of Education, the Honourable Mrs GNM Pandor, in April 2007 to conduct an investigation on the extent of retention and dropout in the schooling system. In accordance with the Terms of Reference for the Committee published in the Government Gazette of 9 March 2007, the investigation would be conducted in order to:

- (i) Review relevant existing data, information and research on learner retention in South African Schools;
- (ii) Assess the validity of the methodologies used by researchers and commentators in reporting on retention in South African schools;
- (iii) Specifically investigate the extent of retention and dropout, as well as the reasons for dropout amongst learners in Grades 9 to 12 by undertaking an empirical study in a representative sample of schools;
- (iv) Empirically investigate any anomalies in learner retention among Grade 1 learners in a purposive sample of schools; and
- (v) Report on the findings of the review, assessment and investigation.

The point of departure for the Committee was the premise that the education system should strive towards retaining learners in schools for as long as possible. This is particularly important for the compulsory school phase of Grade 1 to 9, which the Constitution of the Republic of South Africa bestows as a right to all citizens of this country. In addition, in terms of the South African Schools Act No.84 of 1996, the Department must “investigate circumstances for learners’ absence” from schools and take necessary steps to remedy the situation. In the post compulsory school level, learners have a myriad of opportunities to pursue further education and training, which the state is obliged to make “progressively available and accessible”.

It is important to emphasise that not all individuals who leave the schooling system after grade 9 are necessarily dropping out of the education system. Many have completed the compulsory school phase, and may pursue other

options in terms of careers or education. So, for instance, the expansion of Further Education and Training Colleges will increase the numbers leaving the formal academic school system without matriculating - but this should not necessarily be seen as negative, or as a failure of the school system. To some extent, this may even be considered healthy - that children pursue various options for preparing for the labour market after completing the compulsory school phase. Therefore we should beware of this and take this into consideration when this report refers to dropping-out, where it pertains to the post-compulsory phase.

In considering the provisions of the legislative framework, it is evident that the Department has a responsibility to account for all children of school-going age, whether they attend school or not. The investigation into learner retention in the schooling system has explored a number of indicators of the performance of an education system in retaining learners, including survival-rate, age-specific enrolment rate, general levels of education attainment in the population, as well as the frequently cited dropout and repetition rates. These measures highlight the efficiency of an education system from different angles, and the use of one without the other, does not provide a comprehensive overview of the education system. Data sources used include EMIS, Census, Labour Force Survey and General Households Survey in an attempt to obtain a holistic view of the extent of learner retention. The Community Survey 2007 was released at a stage when the Committee had finalised its analytical work.

In the process of the investigation, the Committee employed a multi-faceted approach that includes the following:

- (a) **Quantitative analysis** of population and schools data to respond to points (ii), (iii) and (iv) of the Terms of Reference;
- (b) **Empirical research review** focusing mainly on empirical studies that were published in recognised research journals or were conducted by scholars in the education sector. This aspect of the investigation would assist in addressing points (i) and (ii) of the Terms of Reference;
- (c) **Methodology assessment**, to address point 1 in the Terms of Reference, which included discussions with researchers, commentators and journalists who have conducted studies on the subject of learner retention and learner dropout, or have written public commentary on the subject;

and

- (d) **Public submissions** in order to obtain an understanding of the reasons behind the phenomenon of leaving school before significant milestones are reached, thereby addressing point (iii) in the Terms of Reference. A total of fourteen responses were received. It is important to highlight that the submissions provide useful information, which cannot, however, be treated as conclusive evidence due to the size of the sample. For that reason, this section of the report will not attempt to summarise the input. A detailed summary appears in Chapter Six of the main report, in which a qualitative thematic analysis of the documents submitted is utilised

1.2 KEY FINDINGS AND CONCLUSIONS

The key findings of the investigation are summarised below. For the sake of reference, all attempts have been made to group the findings in accordance with the Terms of Reference of the Committee.

1.2.1 Primary tasks: (i) *Review relevant existing data, information and research on the retention of learners in South African Schools;* (ii) *Specifically investigate the extent of retention and dropout, as well as the reasons for dropout amongst learners in Grades 9 to 12 by undertaking an empirical study in a representative sample of schools; and (iii) Investigate empirically any anomalies in learner retention among Grade 1 learners in a purposive sample of schools.*

With regard to the extent of retention and dropout, having reviewed existing data, information and research, the investigation concluded that there is sufficient evidence to state that:

- a) There is a problem of learner retention, which is more pronounced after Grade 9. The dropout rate below Grade 9 is statistically insignificant, but increases sharply from Grades 10 to 12. However, the extent of the problem is no-where near the levels that were cited in the SAHRC report and the Mail and Guardian, amongst others;
- b) A proportion of learners starting Grade 9 are not in a position to finish secondary school, and that the system does not provide sufficient alternatives. As a consequence, there is a high failure rate, repetition and

dropout in Grades 10 – 12, which is a waste of many years of learning. Urgent attention should be given to providing suitable alternative FET programmes which include a focus on both content and mode of delivery.

- c) There is no evidence of anomalies between Grade 1 and Grade 2 that point toward dropping-out. In fact, as can be seen in the survival rates by grade, the flow between the two grades is just below a hundred percent. A problem that seems to plague Grade 1 is high repetition of the grade, a phenomenon which is not peculiar to South Africa.
- d) However, retention is improving, as are levels of education attainment, with younger age groups having a better chance of progressing to secondary school grades than the older age groups.
- e) South Africa compares favourably with other developing countries on progression rates, enrolment rates and levels of education attainment.
- f) *Learner retention*, as measured by survival rate estimates, indicates an improving trend in general education since 1970. The birth cohort of 1970 to 1974 showed a progression rate of 71.6% to Grade 9, while the 1985-1989 birth cohort had a progression rate of 86.2%. The 1985-1989 birth cohort is the 18 to 22 age group currently, who started schooling between 1992 and 1996. In essence, this means the younger age groups have a better chance of ultimately completing compulsory education than the older age groups. This is shown in the table below:

Group	Birth dates	Age in 2007	% ultimately completing Grade 9
1	1970-1974	33-37	71.6
2	1975-1979	28-32	78.8
3	1980-1984	23-27	81.1
4	1985-1989	18-22	86.2
5	1990-1994	13-17	Too soon to tell

- g) Learner retention at FET level indicates that the percentage of people with Grade 9 reaching Grade 12 tends to remain almost static over the years. The estimates indicate a static progression pattern within further education

among learners entering this phase with slightly less than 90% of those with Grade 9 reaching Grade 10. About three-quarters reach Grade 11 and just below 60% reach Grade 12. This trend has remained fairly static across all birth cohorts.

- h) Drop-out rates, measured at the end of each grade per birth cohort, indicate fairly high flows until Grade 9. Essentially, the drop-out rate is minimal for at least the first 8 years of schooling. The dropout rates increase sharply from Grade 9 onwards. Out of a thousand people born between 1980 and 1984, about 984 entered Grade 1 and 456 reached Grade 12. This means slightly more than 46% of this birth cohort that started Grade 1 eventually reached Grade 12. The survival and dropout rates of the 1980–1984 birth cohort (aged 23 to 27 in 2007) by grade, revealed the following:

Grades	Mean survival rate*	<i>Drop out rate</i>
Grade 1	984	0.2%
Grade 2	982	0.4%
Grade 3	979	0.7%
Grade 4	972	1.2%
Grade 5	960	1.7%
Grade 6	944	2.8%
Grade 7	917	4.8%
Grade 8	873	7.0%
Grade 9	811	11.5%
Grade 10	717 [#]	16.1%
Grade 11	602 [#]	24.2%
Grade 12	456 [#]	

* Mean survival rate calculated per thousand births of the 1980 – 1984 birth cohort using the 2003, 2004, 2005 and 2006 GHS. This table should be read in conjunction to School Survival tables in pages 29-32. (Those who have attended further education institutions other than schools or ABET are removed from the sample, since they have branched out into a non-school stream)

Figures are from the 2006 GHS.

- i) Mean educational attainment of the cohort born in 1981 is about 9½ years, compared to only about 6 years of the cohort born in 1945. (As the latest data is drawn from the 2001 census, it is not possible to investigate the situation for cohorts born after 1981, as many of these would not yet have completed their education by 2001).

- j) As a result of rising educational attainment, the proportion of the population reaching certain educational milestones has risen dramatically. For example, the cohort born in 1981 is approaching universal completion of primary education, as has long been the case for Whites. When the lowest schooling hurdle – completed primary education – is used, the racial gap in attainment is quite small. There is only a difference of 14% between the proportion of Whites and Black Africans who have completed primary school. (Higher milestones, such as matric and tertiary qualifications, show a dramatically different pattern, though Matriculation completion rates are low amongst the Black African and Coloured population, even though these have been rising quite significantly over the years).
- k) There is an upward shift in the entire educational attainment profile for each of the censuses for the 21 to 25 age group. This upward shift is greatest in the case of the Black African population. From the 21 to 25 year-old Black African people in the 1970 census, 40% did not enrol for school and fewer than 1% passed matric. By the 2001 census, these figures had improved to 9% and 36% respectively for the same age group.
- l) The attainment profiles of Black African children aged 16 to 20, according to their parents' income quintile, rises strongly with higher per capita income.
- m) Age-specific enrolment figures reveal a fairly consistent pattern - sustained high enrolment rates of 95% or above until about age 15 or 16, following which enrolment falls quite sharply as expected to about 50% by age 19. This pattern is so consistent that there can be little doubt that there is almost universal school enrolment until age 16, which corroborates the findings from the analysis of survival rates and dropout rates. There is no clear evidence of changes in age-specific enrolment patterns over the past decade. Age-specific enrolments also show no statistically significant evidence of dropout from the school system before age 16.
- n) Age-specific enrolment figures at age 15 or 16, broken down by race, indicate that the Coloured population shows the earliest trend towards dropout, before the completion of high school. The Black African population

evinces a major dropout rate at about age 16. The White population has the lowest dropout rate. No separate figure is shown for the Indian population, as their small dimension makes it impossible to use sample surveys of this nature as good evidence of enrolment patterns.

- o) While the data indicates that there is minimal dropping-out of the school system before the age of 16, (at least not for about 95% of the population), there are clear indications that learners show high levels of perseverance at secondary schools, without achieving matriculation, when the age restriction comes into effect. In addition, the pattern of age-specific enrolment indicates that, for the most part, all race groups have been attending school for the past decade until well beyond the compulsory phase.

- p) The attainment of 15 to 19 year old youths was compared to selected Latin American countries for which data is available to provide an international frame of reference. Patterns of progression through the South African system are favourable compared to this group of middle-income countries with which SA is often compared. Venezuela, the Dominican Republic, Panama, Brazil and Nicaragua have shown lower education attainment levels for this age group than South Africa. Bolivia and Peru have shown generally higher attainment levels than South Africa (Data used pertains to different years due to data availability).

With regard to the **reasons** for dropping-out among learners, the investigation found that:

- a) **Grade repetition** has been identified as the single most powerful predictor of dropping-out. Studies conducted internationally have revealed that learners who have repeated a grade in their schooling career are most likely to drop out of school. Learners become disillusioned, and generally disengage from school activities. The fact that grade repeaters are taken through exactly the same material and content when repeating the grade, exacerbates the situation.

- b) **Grade repetition** occurs most frequently in the first grade. Schools all over the world experience higher grade repetitions at the start of a school cycle than they do in subsequent years. The high rate of grade repetition in the

first grade is attributable to inadequate school readiness programmes, serious problems with learners' learning abilities, or significantly high enrolments which have not been accompanied by appropriate levels of provisioning.

- c) **Drop out is preceded** by indicators of withdrawal or unsuccessful school experiences (academic or behavioural difficulties) which often begin in the primary school years. Preventive measures should be taken at the earliest manifestation of withdrawal indicators.
- d) The risk of dropping-out is very high for learners who are older than the median age when they enter secondary education; independent of their achievement scores (therefore grade repetition needs to be minimized). The cycle of previous failure may either impact on these students or they may have more mature goals than their younger classmates, goals which are non-school related, such as obtaining an occupation, an income, raising a family, or goals that are more directed at autonomy.
- e) Educational levels of parents related strongly to dropout and interacted with gender. Girls with highly educated parents have a lower risk of dropping-out than boys with highly educated parents. The effect of educational level also differs for minority and non-minority groups.

1.2.2 Primary task: (ii) *Assess the validity of the methodologies used by researchers and commentators in reporting on retention in South African schools.*

In assessing the methodologies that have been used to report on learner retention and dropout, the Committee concluded that most of these reports were based on methodologically unsound calculations, albeit at varying degrees.

All the methodologies that were widely quoted in the media in the recent past were flawed. They ranged from crude calculations which simply subtracted the number of learners in a grade from the number of learners in the next grade of the following year, and declared the difference in dropouts - to formulae that

used Grade 12 enrolment as a proportion of Grade 1 enrolment twelve years ago. Such crude calculations have omitted critical variables, including:

- a) Policy provision which allows learners to repeat grades for a maximum of four times in their school career. The Admission Policy for Public Ordinary Schools requires the norm of repetition at one per school phase, effectively allowing learners to complete a 12-year schooling career in 16 years.
- b) The progression of a significant number of Grade 9 learners into public Further Education and Training (FET) colleges to enrol for Grade 10 – 12 equivalents.
- c) Other forms of learning institutions such as private FET colleges, home schools and workplace-based colleges where data is not easily available to detect the extent of coverage of the 15 to 18 year old group.

A more rigorous method is the cohort model presently used by the Department of Education, which is also unsatisfactory both in respect of its structure and in respect of the estimation of repeater and dropout rates. It arrives at dropout rates by subtracting the promotion rate, plus repeater rate, from one. This makes the dropout rate a residual whose value is sensitive to errors in the promotion and the repeat rate. Since repeater information is almost always underreported, the low repeater data will invariably lead to exaggerated dropout rates.

In addition, the use of a school-based EMIS system to trace children who are out of school creates additional hurdles. A learner-based tracking system would yield more reliable findings.

A number of technical challenges were encountered in using the EMIS data to arrive at conclusive evidence on learner retention. The challenges related to the non-differentiation between a nil return in terms of the number of repeaters and “zero” number of learners who are repeating. In addition, the EMIS data does not constitute a complete accounting system and is thus flawed. Estimates based on it are subject to unknown selection biases. Departmental estimates of survival based on aggregate repeaters taken from EMIS, are sharply biased downwards. These challenges would have been experienced by the

Department in its calculations. The Committee concluded that the state of the Annual Schools Survey in EMIS makes estimates of repeater rates quite uncertain and estimates of drop-out virtually impossible.

So what are the alternatives?

In the face of the paucity of sound methodologies and education data, the investigation has relied on estimates of the population extracted from the General Household Surveys, the Labour Force Survey and the Census data. Estimates based on the General Household Survey are more reliable, but they are necessarily cohort based and therefore cannot be calculated with precision until most of the cohort has passed beyond school education.

In measuring the extent to which the schooling system is able to retain learners, the investigation used:

- (i) the survival curve that measures the survival of a cohort from Grade 1 to Grade 12 or of any group of learners;
- (ii) extent of coverage measured by the age specific enrolment ratio;
- (iii) the levels of education attainment in the population in general; and
- (iv) grade attainment per age group to determine the retention rate over the past few years.

These measures are used internationally to measure the performance of an education system, and the Committee strongly recommends that greater attention be given to these measures and less on dropout. In order to move towards improved measures of system efficiency, consideration should be given to new survey instruments that will enable South Africa to put the estimation of learner retention on a sounder empirical basis. If the intention is to measure internal efficiency, then consideration should be given to the widely used measures such as repetition rates, school life expectancy and years of input per graduate.

1.3 KEY RECOMMENDATIONS

On issues relating to the findings on the **extent of learner retention and drop out** in the schooling system, it is recommended that:

- Interventions to improve learner retention in the schooling system should

focus on the post-compulsory school phase as there is conclusive evidence to suggest higher dropout rates from age 16 onwards. While it is noted that the age group is beyond the compulsory school phase, it is in the interest of the country to retain as many learners as possible until they complete Grade 12, or until they have completed an equivalent qualification through the FET College system.

- A small proportion of learners starting Grade 9 do not stand a good chance of completing Grade 12. The education system does not provide sufficient alternatives for the 16-18 year old group. Consequently Grade 10 – 12 have high rates of failure, repetition and dropout. Urgent attention should be given to providing suitable alternative FET programmes which include a focus on both content and mode of delivery.
- Despite the insignificant dropout rates in primary school grades, it is imperative that the Department investigates circumstances for learner absence as provided for in the South African Schools Act No. 84 of 1996. Active mobilisation of communities to identify and report children who do not attend school should be encouraged.

With regard to **reasons** that lead to learner drop-out and the **interventions** that have to be designed to prevent learner drop-out, it is recommended that:

- Consideration be given to effectively utilizing the wider communities and improving social networks to monitor and track learner attendance. In addition, consideration should be given to developing a cadre of “attendance officers” who should be appointed at local levels to monitor attendance and provide psychosocial support to learners who are at risk of dropping out.
- Indicators of low self-esteem and aggressive behaviour in early childhood should be attended to so as to promote continuing academic success and prevent dropout. Early measurable factors and behaviours are highly associated with later school drop-out.
- Grade repetition is generally ineffective as an intervention to address early learning problems, regardless of when the repetition occurs. Learners

repeating grades should have special programmes that are not a mere repetition of the material and content covered during the first year in the grade. In this regard, lessons can be learned from the Grade 12 recovery plans which were implemented in schools across the country following the month-long public service strike that took place in May/June 2007, provided that the programmes are well-researched and understood.

- Access to early childhood development be improved. There is a growing research/knowledge base that demonstrates that children who have experienced ECD interventions, or minimum pre-primary schooling, are better achievers at school than those who have not experienced ECD interventions or minimum pre-primary schooling. Those children who attend ECD programmes are more highly motivated, perform better, achieve higher scores in cognitive tests, and socialize better with their classmates and teachers. ECD graduates are therefore less likely to drop out or to repeat grades. Therefore, the cost of their schooling is reduced, with the result that primary and even secondary education is more cost-effective. Thus, ECD in itself can spur educational participation in a region of the world that lags behind in most educational indicators. (Hyde, 2006). South Africa is committed to ensuring that by 2010, all learners entering Grade 1 would have completed an accredited Grade R programme. It is therefore recommended that the roll out of Grade R be prioritised and that the necessary ground work be completed without delay.
- Positive classroom climate should be actively created and schools should be urged to cultivate supportive personal relationships with struggling students. Smaller class sizes, more personalised settings and individualised learning plans are identified as characteristics for lowered drop-out rates in some of the studies. It is recommended that a more intensive interventional approach should be applied.
- Intensive staff development programmes for teachers should be provided in order to improve their skills and ability to identify learners with learning disabilities. Learners who are at risk of dropping out of school should be identified and the use of a variety of instructional and assessment methods and techniques should be applied in order to benefit the largest possible

number of learners in class.

On issues of data quality, as well as the **improvement of data collection and reporting systems**, it is recommended that:

- Particular attention is paid to improving the data collection systems of the Department of Education. Interventions for improving the systems should begin at school level, ensuring that all schools submit all required data every year. Consideration should be given to linking submission of forms to resource allocation and making the system an accounting system so that schools that did not submit the previous year are restricted from submitting the following year until the previous year's data is updated. At Departmental level, interventions should target standardising the data entries and database structures as well as applying statistical techniques to quantify margins of error for meaningful analysis.

- The learner tracking system that the Department of Education is already rolling out should be accelerated to facilitate an empirically sound methodology of determining dropout rates. The system would have to be operational for a number of years before being used to develop a meaningful conclusion on internal efficiency. Meanwhile, the Department should publish survival rates and dropout rates based on the General Households Survey, although these can only be calculated with precision when a significant number of the cohort has passed beyond school education.

- Consideration should be given to improving the existing Annual Schools Survey return to allow for accurate dropout rate determination. This could be achieved by adding a school register to the Annual Schools Survey, which would simply be a list of learners containing the following information for each learner:
 - Identity number
 - Full name
 - Grade in which enrolled

Over time, such learner registers, if fully completed, should yield information

on dropout (and drop-in), repeaters, promotions and moves between schools.

- Once every two years a retrospective Educational Experience Survey should be carried out. A substantial sample of people between ages 20 and 29 should be selected with the intention of obtaining a complete educational history of the respondents. Properly designed, this could yield invaluable information on pathways through the educational system, including information on enrolments not currently recorded (e.g. private further education), as well as qualifications obtained. Information on possible determinants of retention in the educational system, such as the socio-economic status of the household of origin, should be collected and analysed. Usually, there should be five observations on each two year wide birth cohort.
- The Department of Education should work closely with Statistics South Africa to obtain technical expertise and support relating to data collection and reporting techniques, systems and processes.
- The two Departments should also work together in ensuring that key data fields on repetition are incorporated in the General Households Survey. The manner in which the question on repetition is asked in the survey form, determines the quality of data that is obtained from the survey. Ideally, the questions should be “What grade were you in last year” and “What grade are you in this year”.

1. CHAPTER ONE: INVESTIGATING LEARNER RETENTION

1.1 BACKGROUND

The Ministerial Committee on Learner Retention in the South African Schooling System was appointed by the Minister of Education, the Honourable Mrs GNM Pandor in April 2007 to conduct an investigation into the extent of learner retention and dropout in the schooling system. The Committee consisted of Professor Sizwe Mabizela of Rhodes University; Professor Charles Simkins of Wits University; Prof Sarah Howie of the University of Pretoria; Prof Servaas van der Berg of the University of Stellenbosch; Dr Jairo Arrow of Statistics South Africa; Mr Firoz Patel of the Department of Education; and Ms Gugu Nyanda, an independent consultant as the Chairperson.

The establishment of the Committee followed widely published reports that criticised the education system on the basis of dropout rates which were reportedly high. Of particular importance to the Minister and the Department of Education, was that South Africa should be able to measure progress towards the achievement of the Millennium Development Goals (MDGs), using accurate measures and sound methodologies.

1.2 THE BRIEF

The Committee began its work immediately after it was launched by the Minister of Education on 12 April 2007. Its primary task was to “provide definitive information with regard to learner retention rates from Grade 1 to Grade 12 and the methodologies used to determine these” as indicated by the Minister in her media statement published on 11 April 2007. In addition, the Committee was expected to advise the Minister on what causes learners to “drop out” of school and what steps could be taken to prevent or limit this.

Notwithstanding the challenges relating to the availability of data, this report provides a detailed analysis of the status of learner retention in the schooling and the methodologies used to determine learner retention. In particular, the report focuses on the following key indicators:

- Retention of learners within the schooling system leading to ultimate attainment using survival rates of selected birth cohorts;

- Dropout rates at the end of each grade for a birth cohort, derived from survival rates;
- Mean education attainment in the population; and
- Age-specific enrolment rates to measure the extent of coverage of specific ages regardless of the grade in which they are enrolled.

In addition, the report addresses all the critical aspects of the work of the Committee as articulated in the Terms of Reference. These include:

- (i) Reviewing relevant existing data, information and research on the retention of learners in South African Schools;
- (ii) Assessing the validity of the methodologies used by researchers and commentators in reporting on retention in South African schools;
- (iii) Specifically investigating the extent of retention and drop-out, as well as the reasons for dropout among learners in Grades 9 to 12 by undertaking an empirical study in a representative sample of schools;
- (iv) Investigating empirically any anomalies in learner retention among Grade 1 learners in a purposive sample of schools;
- (v) Reporting on the findings of the review, assessment and investigation.

In the process of the investigation, the Committee employed a multi-faceted approach that included the following:

- (a) **Quantitative analysis** of population and schools data to respond to points (ii), (iii) and (iv) of the Terms of Reference, which is addressed in Chapter Two of this report.
- (b) **Empirical research review** focusing mainly on empirical studies that were published in recognised research journals or were conducted by scholars in the education sector. This aspect of the investigation would assist in addressing points (i) and (ii) of the Terms of Reference and is addressed in Chapter Three of this report.
- (c) **Methodology assessment**, to address point (i) in the Terms of Reference, which includes discussions with researchers, commentators and journalists who have conducted studies on the subject of learner retention and learner dropout, or have written public commentary on the subject. The results of this aspect of the investigation are provided in the latter part of this chapter.
- (d) **Public submissions** in order to obtain an understanding of the reasons

behind the phenomenon of leaving school before significant milestones are reached, thereby addressing point (iii) in the Terms of Reference. A summary of the Public submission is in Chapter Four of this report.

1.3 DEFINITION OF TERMS

There are a number of terms that are used in relation to school drop-out and learner retention that are interpreted differently across the world. Furthermore, there are a number of associated terms that are also inter-related. In this section *learner retention*, *survival rate*, *grade repetition*, *gross enrolment ratio*, *net enrolment ratio*, *age-specific enrolment ratio*, and *cohort* are defined in terms of the literature and terms used in this report. Most of the literature defining these terms originated in the USA, but some studies also come from in the Netherlands, Hong Kong, Nigeria, Brazil, and England.

Learner retention

For purpose of this report, learner retention is defined as “the continued participation of a learner in the formal schooling system until the completion of the compulsory schooling phase. Learner retention is the complement of dropout. It is an indicator of the efficiency or quality of the schooling education system”.

Just as in the case of dropout, there are many factors outside the school environment that impact on whether or not a learner persists with schooling until completion. Learner retention, as measured by survival rate, refers to the extent to which school-going learners remain in the schooling system, and will be used as such throughout this report.

Survival Rate

Survival rate by grade is the percentage of a cohort of pupils or students who are enrolled in the first grade of a given education level or cycle in a given school year and are expected to reach a specified grade regardless of repetition (UNESCO, 2007:352). It is generally used to measure the holding power and **internal efficiency** of an education system. It illustrates the situation regarding retention of pupils (or students) from grade to grade in schools, and conversely the magnitude of dropout by grade.

A survival rate approaching 100% indicates a high level of retention and low incidence of dropout. The survival rate may vary from grade to grade, giving indications of grades with relatively more or less dropouts. The distinction between survival rate, with and without repetition, is necessary to compare the extent of wastage due to dropout and repetition. The survival rate to Grade 5 of primary education is of particular interest since this is commonly considered as a pre-requisite for sustainable literacy.

For purposes of this report, the UNESCO definition is adopted. However, due to the data gaps in the EMIS data, the analysis conducted was based on birth cohorts rather than grade cohorts.

Gross Enrolment Ratio

The **Gross Enrolment Ratio (GER)** is *the total enrolment in a specific level of education, regardless of age expressed as a percentage of the population in the official age group corresponding to this level of education. The GER can exceed 100% due to early or late entry and or grade repetition (UNESCO, 2007: 349).*

Net Enrolment Ratio

Net enrolment ratio is *the enrolment of the official age group for a given level of education expressed as a percentage of the population in that age group (UNESCO, 2007:350).*

Age-specific Enrolment Ratio

The **age-specific enrolment ratio** is the proportion of the relevant age group currently enrolled in schools, or educational institutions more generally, as the case may be.

School Drop-Out

Internationally, there are various understandings of what school drop out is and how it is interpreted and commonly found definitions are presented below.

In the USA, there are the following specific official qualifying criteria for an individual learner to be considered as a school dropout (NCES, 2002:1) and these are that:

- The learner was enrolled in school at some time during the previous school year;
- The learner was not enrolled at the beginning of the current school year; and
- The learner had not graduated from high school or completed a state-approved educational programme

Furthermore, the learner does not meet any of the following exclusionary conditions for consideration (NCES, 2002):

- Transfer to another public school district, private school, or state or district-approved educational programme (including correctional or health facility programmes)
- Temporary absence due to suspension or school-excused illness; or death. This includes learner absence due to pre-natal care during pregnancy and post-natal care of a child.

The NCES definitions are used by researchers in the USA and a number of articles from the USA provide evidence of this. However, there are researchers who embellish this interpretation; for instance, Daniel, Walsh, Goldstone, Arnold, and Reboussin (2006) propose that individuals can be classified as not completing school when they have dropped out or taken a path that has led to them not successfully graduating from school with the associated qualifications. These researchers suggest that this includes youth who have decided to receive vocational training rather than finish secondary school. While this is largely consistent with the NCES definition above, they differ in including the vocational training aspect.

Dropping out has also been seen with “excessive absences”, defined as more than 15, 20 or 30 days of unexcused absence. Barnet, Arroyo, Devoe and Duggan (2004, p.264) delineated drop out using two approaches: A) a learner can be classified as a drop out if his or her school records document a withdrawal. B) if a learner was present at school in a given academic year

fewer than 20 days of the 180 day American school year (i.e. unexcused absence for more than 88% of the school year), he or she was classified as dropped out.

A study from the Netherlands reveals that, similar to the definition proposed by the USA/NCES, school dropouts can also be considered as those who leave school without a basic qualification, that is, without the minimum level of education required for entering the job market (Luyten, Bosker, Dekkers & Derks, 2003). In other words, those who leave school before the age of 16, which marks the end of compulsory fulltime schooling, may be considered by the system in the Netherlands dropout.

A measure provided by UNESCO is that of dropout rate per grade, defined as *the percentage of pupils who drop out from a given grade in a given school year. It is the difference between 100% and the sum of the promotion and repetition rates* (UNESCO, 2007: 347).

For purposes of this report, the Committee adopted the UNESCO definition to ensure that South Africa's reporting schedules on the Millennium Development Goals are within the international guidelines set by UNESCO.

Grade repetition

Grade repetition is defined as *the practice of requiring a learner who has been in a given grade for a full year to remain in the same grade where the expectation is either promotion to the next grade or completion of schooling*. Grade repetition is widely used to afford an underachieving learner an opportunity to master the work required of that grade and to acquire developmentally appropriate social skills. The belief is that a learner who repeats a grade will improve academically and become motivated to work harder. Grade repetition at lower grades is seen as a mechanism for insuring that learners master the basic skills necessary for success in higher grades. At the high school level, grade repetition is advocated as a strategy to prevent schools from graduating students who lack the basic skills necessary to be productive members of society (Martinez and Vandergrift, 1991). Grade repetition is therefore understood as an appropriate and effective remediation

mechanism that will give a learner an opportunity to “catch up”.

There is however an extensive body of research which points to the fact that the benefits of grade repetition are at best short-term and that the long-term effects of grade repetition are harmful on academic achievement and other outcomes.

The economic costs of grade repetition are all too obvious. The burden of financing an extra academic year and the reduction in the capacity of a grade to enrol new learners are immediate economic consequences of grade repetition. The financial cost of learner repetition around 1995 was estimated to be approximately \$6 billion for all regions in the developing world (UNESCO, 1998).

The South African Admission Policy for Ordinary Public Schools (1998) limits grade repetition to a maximum of one year per school phase. This translates to a maximum of 4 years in the twelve years of schooling. This policy recognises that grade repetition seldom results in better learning achievement and frequently has the opposite effect. While there is a cap on the number of repetitions allowed in the schooling system, the policy cautions that this limit should not be construed as promoting automatic promotion.

There is a copious body of research which suggests that there is a causal link between grade repetition and school drop out. While recognising this link, Eisenmon (1997) cautions that high repetition rates only give a partial explanation to drop-out.

International literature suggests that it is a mistake to focus primarily on drop outs, and that from a policy and efficiency perspective, it is important to tackle repetition (Cuadra (1989), Motala (1995)). This is in line with the old saying that an ounce of prevention is worth a pound of cure. Anderson and Lam (2001) underscore the importance of focusing on grade repetition by noting that grade repetition is a conceptually important educational measure because it is both an outcome of a previous failure and a predictor of a subsequent failure.

In this work, the study surveys international literature to understand the nature and extent of the link between grade repetition and school abandonment.

Brophy (2006) and Eisenmon (1997) identify two kinds of grade repetition: *voluntary grade repetition* and *involuntary grade repetition*.

- *Voluntary grade repetition* occurs when the decision to repeat a grade is at the request of a learner or parent with the approval of school authorities. In this case, repetition is undertaken willingly as it is viewed as serving the best interests of the learner (Brophy, 2006). Some examples of circumstances where voluntary grade repetition usually occurs are:
 - a learner wants to continue with schooling but has no access to a school that offers the next grade. This form of repetition is common in remote regions of developing countries where schools may offer the first few grades only;
 - a family may be of the opinion that their child did not learn much on account of sporadic school attendance due to schooling itself being sporadic or because many children spend time working rather than attending school. This form of repetition is prevalent in developing countries;
 - a family may request that their child repeat a grade in order to gain fluency in the language of instruction. This form of repetition is most common in countries where the language of instruction at school differs from the language spoken at home.
- Some educational systems administer examinations at the end of a certain grade and qualification for admission to the next grade or level of education requires a learner to have performed at an exceptionally high level in those examinations. In order to enhance their chances of entry to the next grade or level of education, learners may intentionally repeat a grade with the hope that repeating will help them to be better prepared for the next examinations. This form of repetition occurs at higher grade levels in developing countries where access to limited secondary or post-secondary education is highly competitive. Eisenmon (1997) observes

that in Kenya and in Burundi repetition is highly concentrated in the penultimate and final years of primary education and that it is the academically talented learners who are allowed to repeat. He further comments that selection favours students who are most likely to pass the competitive school-leaving examinations.

- *Involuntary grade repetition* occurs when the decision to repeat a grade is initiated by the school rather than by the learner or parents of the learner. There are two main reasons why the school may require a learner to repeat a grade:
 - if the learner has not achieved the required level of attainment for promotion to the next grade;
 - if the learner has not achieved social adjustment appropriate for the age/grade of the learner.

According to Brophy (2006), voluntary repetitions that enable the learner to pass examinations or learn content that was not learnt the year before are viewed by learners and their families as rational decisions with desired outcomes. Involuntary school-imposed grade repetition has negative effects on the academic attainment of a learner and is associated with social adjustment problems and increased likelihood of school dropout (Brophy, 2006).

1.4 REVIEWING METHODOLOGIES OF PREVIOUS REPORTS

One of the critical aspects of the work of the Committee entailed reviewing existing information on the retention of learners in the system, particularly the media reports that had been published on the subject and publications of acclaimed institutions such as the Human Rights Commissions. The intention was to gain insight into the robustness of the methodologies that were employed to arrive at drop out rates.

Representatives of different organisations attended a briefing session with the Committee, at which they presented their methodologies. One group of presenters included experts who have either conducted empirical research on

the subject or conducted quantitative analysis of primary data. The other group included a wide range of organisations ranging from social activists to journalists. The common thread amongst the latter group was that they had not conducted research but were using secondary information to arrive at various conclusions. By the end of the hearing session, a total of ten presentations had been made to the Committee, which are summarised below. Only a few invited organisations could not attend the session.

NAPTOSA

The Committee invited the National Professional Teachers Organisation of South Africa (NAPTOSA) to render a presentation on their widely reported assertion that out of 100 learners who enter Grade 1, only 30 succeed in reaching Grade 12. During the presentation, it emerged that NAPTOSA, had not conducted research on learner dropout but had quoted statistics from a report by the Department of Labour.

The NAPTOSA representative highlighted the difficulties that they had experienced in obtaining primary data from the Department of Education. According to NAPTOSA, their sole intention in reporting such figures was to highlight a trend rather than create a focus on the figures. By signalling the trend, NAPTOSA had hoped to stimulate a debate that would attempt to seek answers and reasons for dropouts. Towards the end of the presentation, the representative of NAPTOSA acknowledged the limitations of their methodology, and that many other variables had not been considered before arriving at their conclusions.

South African Human Rights Commission

The SAHRC released a report following the public hearings, hosted by the Commission concerning, amongst other issues, the state of education provision. The report quoted NAPTOSA observations that placed dropout rates between Grade 1 and Grade 3 at 26.2%, figures that were based on a Department of Education publication – *Statistics at a Glance*, 2002. While the SAHRC report pointed out the contestation on the figures, an impression was created that the “South Africa has a disturbingly high dropout rate in the first three years of schooling”.

The representative of the SAHRC highlighted the importance of addressing issues of terminology for such terms as dropout rates as well as methodological issues used to determine dropout to minimise confusion and misreporting. Lack of clarity of such fundamental issues detracted from real challenges that create barriers for learners in their attempt to exercise their right to basic education. The representative of SAHRC highlighted the following areas for greater focus:

- unaffordable school fees and other hidden costs;
- the unusually higher proportion of girls than boys in high schools, which could be a result of boys dropping out because of anti-social activities;
- teenage pregnancies; and
- difficulties encountered by children in rural areas, children from child-headed households and children who experience disadvantages in accessing education.

In concluding their input, SAHRC noted that South Africa already has high enrolment rates, but that the focus should be on attaining the MDG goals and ensuring that education is of high quality. The importance of education as a right, not only by itself, but also as a facilitative right towards the realisation of an individual's ability to enjoy other rights enshrined in the Constitution, was underscored.

The Mail and Guardian

A representative of the Mail and Guardian began by highlighting their concern that the tone of the press release, issued by the Minister on the establishment of the Committee, seemed to suggest that the underlying assumption was that the country did not have high learner dropout problem. The importance of the Committee maintaining its independence was underscored, in order to create public confidence on the findings of the investigation.

The Mail and Guardian had been invited to provide clarity on the methodology that the newspaper had used in drawing conclusions on dropout rates as reported in the Mail and Guardian. The representative of the Mail and Guardian indicated that the newspaper article had been based on a report which Crain Soudien had written for the SADTU 6th National Congress. The Mail and Guardian had also conducted further analysis by subtracting the

number of Grade 12 learners from the Grade 1 enrolment 12 years before, which the presenter acknowledged as methodologically flawed. In a subsequent analysis on the dropout rate between Grade 9 and 12, the Mail and Guardian attempted to use a slightly improved methodology, working with figures supplied by the Department of Education. The revised methodology took into account repetition and progression to Further Education and Training colleges, both public and private. Of particular concern to the Mail and Guardian was the inability of the Department of Education to provide figures that were consistent, which raised further concerns that the problem was not only high dropout rates, but also an inability to understand and report on the extent of the problem.

In concluding his input, the Mail and Guardian representative highlighted issues that could have an influence on a learner's decision to drop out or remain at school, which should be addressed as a matter of urgency. The issues included:

- Cost of education. Policy interventions to minimise the negative impact of high school fees and other hidden costs were either too cumbersome to implement (such as school fee exemptions) or were not fully understood by both schools and parents (such as no-fee schools). The issue of free education should become central to the debate.
- The weaknesses in policy monitoring, related to the above issue, to ensure that policy intentions translate to real benefits for learners from relatively poor communities. An example of monitoring the implementation was cited, following reports that there were no-fee schools that were still charging school fees.
- Inconsistencies in policy intentions, where some policy intentions appeared to contradict other policy instruments. An example that was cited related to the Department's clear intent to retain learners in the schooling system as far as possible, yet pregnant girls were encouraged to leave school.
- Improving the teaching-learning encounter and the quality of education so that learners could regard the learning experience as useful and exciting.

Factors such as low teacher morale and inadequacy to deal with the demands of the new curriculum have not been inspiring for learner confidence, and could partly contribute to the dropout rate.

Helen Perry: Independent Consultant

Ms Helen Perry, an independent analyst, conducted an analysis of the dropout rates, particularly focusing on grade anomalies. Of particular note was that her presentation was the first to demonstrate a fairly sound methodology for determining dropout rates. Ms Perry concluded that there was no significant drop out between Grade 1 and Grade 2, as well as in the GET phase in general.

Grade 1, however, had a fairly high repeater rate, which could explain the over enrolments of Grade 1 in 2006 that were as high as 140% in the Eastern Cape. The findings of Ms Perry's analysis suggested that the repeater rate in Grade 1 was significantly higher than reported by the Department of Education. A strong suggestion was made to the Department to improve the quality of repeater data. Current repeater data was underreported primarily due to the nature of the data collection instruments. The phenomenon where young children are enrolled in Grade 1, removed during the course of the year, and re-registered the following year, was not reported as repetition in the EMIS data.

The post-compulsory schooling phase (Grades 10, 11 and 12) showed significantly higher dropout rates than the lower grades, across all provinces.

CREATE Project

The Consortium for Research on Educational Access, Transitions and Equity (CREATE Project) is a research programme supported by the UK's Department for International Development (DfID). Two representatives of the project presented the work of CREATE Project to the Committee. The main purpose of the project is to "undertake research designed to improve access to basic education in developing countries". CREATE's premise is that opening access to educational opportunities for all is at the heart of development for developing countries. In order to improve learner retention and education levels of attainment, it was imperative that the following six (out

of seven) “zones of exclusion” were identified:

- Zone 1 which accommodates children who have never been to school;
- Zone 2 accommodating children who have obtained access to primary schooling until Grade 7, but do not complete their primary schooling successfully;
- Zone 3 with children who enter and stay in primary school but are at risk of dropping out due to a number of reasons that include low achievement, repetition, poor teaching, household poverty, poor health amongst others;
- Zone 4 which accommodates children who complete Grade 7, but are not able to enter secondary schooling;
- Zone 5 accommodating learners who enter secondary school but do not complete secondary education; and
- Zone 6 accommodating learners who enter and remain in secondary school but are at risk of dropping out. (The seventh zone, Zone 0, includes pre-school learners.)

In concluding their input, the presenters from CREATE emphasised the following:

- The importance of improving the quality of teaching and learning, in order to ensure that learners are retained within the schooling system for as long as possible. Most learners, at least 95% of them according to the Create team, enrol and complete basic education in South Africa, but there were high dropout rates after Grade 9.
- Vulnerable groups should be the focus of attention for the system, including the silently excluded, as the risk for them to drop out is high.

Department of Education: Sample Survey on Grade Participation

In 2004, the Department of Education commissioned the HSRC to conduct a sample survey on grade participation. One of the main findings of the surveys was that there was an estimated 2% dropout rate from Grade 1 to Grade 7; age-specific enrolment ratios showed high participation rates; and the GHS was more reliable in determining participation rates than the EMIS data.

In concluding the input, the presentations suggested that:

- Consideration should be given to using the age-specific enrolment rates to measure the extent of learner retention rates since it was a more reliable

and useful measure.

- The Department should conduct similar surveys periodically, or work closely with StatsSA to ensure that critical questions, which should address retention issues, be included either in the GHS, LFS or the Community Survey.

Statistics South Africa

The presentation by Statistics South Africa (StatsSA) focused primarily on the availability of reliable data that should be used by the Committee to determine the extent of learner retention and dropout in the schooling system. StatsSA conducts a GHS of about 30 000 households who capture critical information such as reasons for not attending school, highest level of education and current studies. StatsSA conducts the Labour Force Survey every quarter, which should be also become a useful source of information on education attainment.

The GHS has sampling errors, as does any other survey, and the extent of the sampling error is common knowledge. EMIS surveys such as the Annual School Survey and Snap Surveys were accepted as full censuses, and the assumption was that they would necessarily be more reliable than StatsSA surveys.

In concluding the input, StatsSA had concrete recommendations on how the Department of Education could improve the quality of EMIS data. These included:

- Quality assurance systems that seem to be in need of improvement across the value chain.
- Standardisation of systems, including naming conventions for data types, process documentation, EMIS numbers and others.

Department of Education: EMIS

The Department of Education presented an outline of the contents of the EMIS data, particularly relating to the data that would be relevant for the determination of the extent of learner retention. The presentation also highlighted data quality issues that posed challenges for meaningful

determination of such critical internal efficiency indicators as repetition rates. In addition, the Department noted that the methods that were used to validate EMIS data needed to be reviewed.

1.5 CONCLUSIONS

The presentations are useful in enabling the Committee to gauge the extent to which the widely reported dropout rates were informed by sound quantitative analysis; and to assess the credibility and/or validity of the research methodology used to arrive at the conclusions.

The conclusions that were drawn by the Committee from the input can be summarised as follows:

- The few methodologically sound analyses of learner retention seem to converge around the findings that dropout rates at primary school level are significantly lower than reported in the media. In one presentation the dropout rates from Grade 1 to 7 are estimated at 2%, while the other presentation suggests that the dropout rates are almost non-existent. Participation rates in Grades 1 and 2 are found to be above 100% by one presentation, while another estimated that at least 95% of primary school learners complete Grade 7.
- Similarly, the presentations seem to concur that dropout rates are significantly higher in Grades 10, 11 and 12.
- There is an urgent need to address terminology issues, and to reach some form of consensus amongst the education community on the most critical measures for the ability and success in retaining learners within the schooling system.
- There are equally strong views on the need to shift the focus of the debate to improving the learning encounter for learners so that dropout could be prevented. Quality of teaching and learning is regarded as one of the critical factors that affect learner level of engagement with content of learning.
- Consideration of the socio-economic conditions of learners emerge as an

equally critical issue that appears to be creating barriers, psychological, financial or otherwise, for learner attendance at school.

2. CHAPTER TWO: SURVIVAL RATES AND DROPOUT RATES

2.1 INTRODUCTION

In this chapter, the estimation of a survival curve from Grade 1 to Grade 12 will be discussed. The UNESCO definition of survival rates by grade is attached as Appendix A, and it will be used as a basis in all discussions that follow. It will be argued that the cohort model presently used by the Department of Education is unsatisfactory both in respect of its structure and in respect of the estimation of repeater and dropout rates. However, estimation of these variables from EMIS returns is problematic and an alternative way of estimating a survival curve from household surveys is proposed. Finally, new survey instruments are proposed to enable South Africa to offer a sound empirical basis for the estimation of learner retention.

2.2 THE UNESCO DEFINITION OF SURVIVAL¹

The UNESCO definition has two important features:

- It refers to a cohort of pupils at a reference year. A cohort can refer to any group of pupils. It could refer to pupils born in 2000, or it could refer to pupils arriving in Grade 1 for the first time in 2007 or it could refer to all pupils in Grade 1 in 2007, whether or not they are in this grade for the first time. All these are actual cohorts, in the sense that individuals belong to them and there is a criterion for determining who do and who do not belong to them. One can also define a hypothetical cohort, which successively undergoes the promotion, repeat and dropout probabilities measured between, say, 2003 and 2004. No actual group of pupils experiences these probabilities, but applying them to a hypothetical cohort produces a survival curve which summarises conditions in 2003/2004. Such a survival curve is called a period curve.
- It is cumulative in the sense that one has to track all the pupils belonging to the cohort until one knows whether they have reached successive grades or dropped out before doing so. Suppose, for instance, the one failure per school phase policy is applied strictly. Consider the cohort who had entered Grade 1 in 1990 for the first time, remained at school, passed

¹ The UNESCO definition of survival rates and their recommended mode of calculation are set out in Appendix A

each year, and reached Grade 12 in 2001. According to policy, it would have been possible to remain at school until 2005. However, for an accurate estimate one would need to know the number of Grade 12 pupils in 2001, 2002, 2003, 2004 and 2005, who had entered Grade 1 in 1990 for the first time. In addition, there might even have been stragglers who had missed a year of school, but re-entered, and then would have shown up in 2006 Grade 12 classes. Growing dispersion of learners by age with increasing grade is what one observes in South African education statistics. However, it is impossible to keep track of any cohort within EMIS, since it is a school-based rather than a learner-based information system. Assumptions have to be made to generate a hypothetical survival curve and these may not be accurate.

2.3 THE DEPARTMENT OF EDUCATION MODEL

The Department's hypothetical survival model requires the following data for each grade:

- Enrolments in year t
- Enrolments in year t+1
- Repeaters in year t+1

It then calculates:

- The promotion rate from each grade i in year t , by taking enrolments in grade $i+1$ and year $t+1$, subtracting repeaters in grade $i+1$ in year $t+1$ and dividing them by enrolments in grade i in year t .
- The repeat rate in grade i in year t , by taking repeaters in grade i and year $t+1$ and dividing them by enrolments in grade i and year t .
- The dropout rate is then calculated by subtracting the promotion rate plus the repeater rate from one. Note that the dropout rate is not directly observed. It is a residual whose value is sensitive to errors in the promotion and the repeat rate. However, it is the dropout rate which drives the survival curve. If l_x refers to the number in a cohort surviving to age x , then the dropout rate from grade x is simply $(l_x - l_{x+1}) / l_x$.

As far as the structure of the model goes, it allows for one failure between Grade 1 and Grade 12, so that those reaching Grade 12 may do so in two

successive years. This does not fully capture the Department's policy of allowing up to four failures between Grade 1 and Grade 12. More elaborate modelling, however, requires new data. For instance, the probability of drop out almost certainly rises with the number of times a learner has failed. But we have no information to allow us to estimate the size of this effect.

2.4 EMIS DATA AND SURVIVAL CURVE MODELLING

The relevant data come from the Annual Survey of Schools. The tables in the 2005 Annual Survey which are relevant to estimating retention are:

- Tables 2.5.1 and 2.5.2 – Number of learners according to grade and age
- Table 2.12 – Number of transfers to and from the school by grade
- Table 2.13 – Number of learners who stopped attending school, were not promoted and are repeating a grade
- Table 2.14 – Grade 1 first-time enrolments
- Table 2.15 – Number of Grade 1 learners who have attended pre-primary programmes

There are two main problems with the EMIS system from the point of view of estimating survival curves:

- The system is not an accounting system; that is, it does not require schools to revert to the returns of the previous year and account for all the changes in enrolment between the previous and the current years. The accounting framework would have to be as follows:

Enrolment in Grade n last year

***Minus* Learners enumerated in Grade n last year who did not complete the school year and did not transfer to another school**

***Minus* Learners enumerated in Grade n last year who transferred to another school last year**

***Minus* Learners enumerated in Grade n last year who were not promoted**

***Minus* Learners enumerated in Grade n last year who were promoted but who have not re-registered in Grade n+1 this year**

***Plus* Learners enumerated in Grade n+1 last year who were not promoted and are repeating Grade n+1 this year**

Plus Learners who have transferred into Grade n+1 from other schools this year

Plus Learners who entered Grade n+1 this year who were not in any school last year

Equals Enrolment in Grade n+1 this year

The items in bold-face are collected - although with some ambiguity in a certain number of cases - so not much more information is needed. But the discipline of making the accounts balance would be a considerable step forward. It would oblige schools to think carefully about flows, since non-balanced tables would indicate errors in the submission.

- EMIS does not distinguish between blanks and zeroes. This could probably be traced back to the returns from schools. The difference is important. If there are no repeaters in Grade n, a zero should be entered to distinguish it from the case where no return has been made.

In 2005, the master list of schools incorporated 27 696 schools which were ordinary schools, and which had unique NATEMIS and PROVINCE and EMIS identifiers. This will be regarded as the universe of ordinary schools in that year. They were classified by phase as:

- Pre-primary 637
- Primary 19 536
- Combined 1 139
- Intermediate 418
- Secondary 5 956
- Unknown 10

Of these schools, 2 602 had no enrolment entries for any Grade between R and 12. A further 7 892 had no repeater entries for any grade for which they provided enrolment entries. If one assumes that a complete set of blanks for repeaters means that repeater information was omitted from the returns, but that if at least one repeater entry means that the repeater table has been fully reported and that blanks for other grades can be interpreted as zeroes, three sets of repeater rates could be calculated for the system as a whole.

- The first set simply divides repeaters by enrolments in the relevant grades. This set of repeater rates will be biased downwards, because many repeaters will not have been reported.
- The second set divides repeaters by enrolments in schools which have reported at least one repeater. Here the bias is unknown, because many schools are not accounted for and the schools which remain may not be a representative sample of all schools.
- The third set assumes that non-promotions from a grade last year are equal to repeaters in a grade this year, if one but not the other magnitude is reported. This equality does not hold in all cases, because of entry to and exits from the school between grades, but usually when both numbers are reported they differ by not more than two. Schools, where neither value is available, are omitted from the calculation.

Repeaters per thousand enrolments per grade are as follows:

Table 2.1: Repeaters per thousand enrolments (2005 data)

	<i>Calculation 1</i> <i>(Downward bias)</i>	<i>Calculation 2</i> <i>(Unknown bias)</i>	<i>Calculation 3</i> <i>(2 plus imputation)</i>
Grade R	18	25	27
Grade 1	67	92	96
Grade 2	45	61	65
Grade 3	44	61	56
Grade 4	46	63	67
Grade 5	42	57	61
Grade 6	39	54	58
Grade 7	39	53	57
Grade 8	66	81	85
Grade 9	71	87	90
Grade 10	176	215	220
Grade 11	178	218	226
Grade 12	56	69	104

These can be compared with non-promotion rates in 2004 (the numerator

being non-promotions and the denominator being 2004 enrolments less drop outs during 2004 less transfers out during 2004) in 2004 as follows:

Table 2.2: Repeaters per thousand enrolments (2004 data)

	<i>Calculation 1 (Downward bias)</i>	<i>Calculation 2 (Unknown bias)</i>	<i>Calculation 3 (2 plus imputation)</i>
Grade R	21	30	32
Grade 1	68	96	97
Grade 2	49	69	71
Grade 3	48	69	70
Grade 4	57	81	81
Grade 5	51	71	72
Grade 6	42	59	54
Grade 7	48	66	65
Grade 8	96	120	117
Grade 9	103	129	130
Grade 10	247	311	313
Grade 11	242	304	304
Grade 12	123	154	143

A preliminary check can be carried out on the accounting coherence between 2004 and 2005, according to the scheme set out in Paragraph 3. Since there is no measure of dropout between failure/promotion and re-registration, one would not expect complete coherence, and a margin of error of up to five enrolments per school per grade, is regarded as a coherent result. Classification of schools between Grades 1 and Grades 7 is then as follows:

Transition	No Grade n in 2004 or No Grade n+1 in 2005	Discrepancy between expected and actual enrolment in Grade n+1 in 2005	
		Less than 5	5 or more
Grades 1 to 2	9 722	6 643	10 385
Grades 2 to 3	9 812	8 092	8 036
Grades 3 to 4	10 089	8 850	7 811
Grades 4 to 5	11 040	8 722	6 988
Grades 5 to 6	10 826	9 143	6 781
Grades 6 to 7	13 153	7 316	6 281

It is only in a minority of schools that reasonably concordant accounts of the flow of learners can be constructed. **Accordingly, indirect estimates of drop out are likely to be very unreliable.**

The state of the Annual Schools Survey in EMIS is such that it makes estimates of repeater rates quite uncertain and estimates of drop-out virtually impossible. It appears the Departmental practice of simply taking aggregate repeaters from the EMIS and dividing them by aggregate enrolments to calculate repeater rates will impart a downward bias to estimates of repetition. The reason is because many more schools fail to report their repeaters than those failing to report enrolments. There is, therefore, a corresponding upward bias to indirectly estimated dropout rates and a too pessimistic estimate of survival. The period survival curve for 2003/04 estimated by the Department is:

Table 2.3: DoE survival curve estimates for 2003/2004

Grade 1	1000
Grade 2	880
Grade 3	841
Grade 4	808
Grade 5	767
Grade 6	729
Grade 7	686
Grade 8	638
Grade 9	561
Grade 10	600 ²
Grade 11	408
Grade 12	269

Based on the transition rates of 2003/2004, these imply that nearly half of the learners entering Grade 1 would not reach Grade 9 with a few more than a quarter reaching Grade 12. This would imply that a large number of children

² This is correctly calculated, but indicates a problem with the structure and calibration of the Department's model. A survival curve should be monotonically decreasing.

between the ages of seven and fifteen drop out of school (over 20%), much in excess of what the General Household Survey finds. This kind of analysis has partly contributed to the reports that have over-estimated dropout rates.

Therefore an alternative method for estimation is required which proposes any data set which contains the following variables:

- Age
- Highest educational level
- Whether attending an educational institution
- Type of educational institution attended.

More than one Statistics South Africa data set contains such information. The analysis here will be confined to the four General Household Surveys published containing data for each year from 2003 to 2006. Other databases (LFS and Census) are fully explored in the next chapter. If one wants to analyse the effects of other variables, such as population group and gender, these variables will have to be included as well, and sample size will become an issue. The analysis here considers the simplest case: the population at large.

2.5 A SIMPLE METHOD FOR ESTIMATING SCHOOL RETENTION

The core technique is the construction of a life table with grade attainment rather than time as the independent variable. Any of the major statistical packages can be used to compute the life table; STATA has been used in this study.

National policy has as its aim that all young people should remain in school until Grade 9. After Grade 9, there are multiple pathways through further and higher education. Accordingly, the analysis is divided into two parts: schooling up to and including Grade 9 and schooling in the further education phase.

Retention here refers to ultimate attainment in line with the UNESCO definition. However, it is neither possible nor necessary to compute grade-specific promotion and repetition rates.

Retention in general education

Consider people born in the periods:

1970-1974	Cohort 1
1975-1979	Cohort 2
1980-1984	Cohort 3
1985-1989	Cohort 4
1990-1994	Cohort 5

Eleven highest educational levels achieved can be distinguished:

0	No schooling
1	Grade R
2	Grade 1
3	Grade 2
4	Grade 3
5	Grade 4
6	Grade 5
7	Grade 6
8	Grade 7
9	Grade 8
10	Grade 9 or better

The final distinction to be made is between learners attending an educational institution at the time of the survey and learners who did not attend. The learners who did not attend are regarded as having left the general phase of the schooling system at the highest level of education reported. The required information for them is therefore complete.

By contrast, information is incomplete for learners still attending school with a highest level of Grade 8 or below. They are regarded as 'right censored' observations since one did not know at the time of the survey what their ultimate level of educational attainment would be. The life table programme regards them as survivors in the system up to the point reported and uses this information in its calculations. But the more 'right-censored' observations, compared with completed observations which appear in a data set, the less reliable the estimate will be. This means that there are practical limits as to how recent birth cohorts can be considered, using this method - these limits

are more stringent for further education than for general education. If more than 20% of the observations are right-censored, the results should be regarded as unreliable. The indications are that unreliable estimates will be upwardly biased.

The cohort here is defined by date of birth, so the rates reported are per thousand born, not per thousand starting Grade 1. Nearly everyone begins at Grade 1, so the survivals are little different between a birth cohort and a Grade 1 cohort. But the difference between birth date and age should always be considered. Seven year-olds entering Grade 1 in 2007 belong to the birth cohort of 2000. This method measures the actual experience of cohorts and not a 'period' measure based on a synthetic cohort.

The survival rates are reported in Table 2.4. Means are used when all the observations over the four GHSs contain few right-censored cases. Otherwise the most recent GHS results are used ('ultimate'). The estimates can be summarised as follows:

Table 2.4: Survival Rates

Group	Birth dates	Age in 2007	Percentage ultimately completing Grade 9
1	1970-1974	33-37	71.6
2	1975-1979	28-32	78.8
3	1980-1984	23-27	81.1
4	1985-1989	18-22	86.2
5	1990-1994	13-17	Too soon to tell

These estimates indicate improving survival through general education since 1970. The younger birth cohorts have a better survival rate than the older cohorts with 86.2% of the 1985-1989 birth cohort ultimately completing Grade 9 compared to 71.6% of the 1970-1974 cohort.

Retention in further education

Here the analysis becomes a little more complicated. The cohorts are the same as in the analysis of general education, except that Group 5 is omitted

as being too young at the time of the General Household Survey. Only learners older than age 15, who have attained at least Grade 9, are considered.

The levels of education in this analysis are:

Level 1: Grade 9

Level 2: Grade 10

Level 3: Grade 11

Level 4: Grade 12

Appendix B sets out the manner in which observations are classified. Those who have attended further education institutions other than schools or ABET are removed from the sample, since they have branched out into a non-school stream.

The results of the life table analysis are as follows:

Table 2.5: Life table analysis

Group	Birth dates	Age in 2007	Level	Percentage with Grade 9 reaching level
1	1970-1974	33-37	Grade 10	89.0
			Grade 11	75.0
			Grade 12	59.7
2	1975-1979	28-32	Grade 10	89.5
			Grade 11	75.6
			Grade 12	57.5
3	1980-1984	23-27	Grade 10	89.2
			Grade 11	74.9
			Grade 12	56.7
4	1985-1989	18-22		Too soon to tell

These estimates indicate a static survival pattern within further education among learners entering this phase with slightly fewer than 90% of Grade 9 learners reaching Grade 10. About three-quarters of the learners reach Grade 11 and just below 60% reach Grade 12. It may be that later cohorts will have

better survival rates, but whether or not this is so, cannot be determined by using this method at the current date.

The post-Grade 9 survival rates can be chained to the pre-Grade 9 survival rates and this is established in Table 1. Because pre-Grade 9 survival rates are rising, the proportion of successive birth cohorts reaching Grade 12 rises as well.

Table 2.6 (a) - School survival for birth cohort of 1970-1974

Group 1						
Born: 1970-1974				Age at the beginning of 2007: 33-37		
	General Household Survey					Drop out rate at end of grade
	2003	2004	2005	2006	Mean	
Birth	1000	1000	1000	1000	1000	
Grade 1	960	964	955	954	958	0.5%
Grade 2	956	956	952	950	954	0.8%
Grade 3	948	950	945	941	946	1.6%
Grade 4	931	936	930	927	931	2.4%
Grade 5	909	915	906	906	909	2.9%
Grade 6	884	886	883	877	883	4.5%
Grade 7	843	849	843	835	843	7.0%
Grade 8	790	781	784	778	783	8.7%
Grade 9	721	708	725	707	715	11.0%
Grade 10	633	639	638	634	636	15.7%
Grade 11	528	543	536	538	536	20.5%
Grade 12	403	450	427	426	427	
Per cent right censored observations						
Up to Grade 9	0.1	0.0	0.1	0.1		
Beyond Grade 9	0.4	0.0	0.2	0.0		
Per cent removed from sample						
Beyond Grade 9	15.4	3.5	3.9	3.4		

Table 2.6 (b) - School survival for birth cohort of 1975-1979

Group 2						
Born: 1975-1979				Age at the beginning of 2007: 28-32		
	General Household Survey					Drop out rate
	2003	2004	2005	2006	Mean	at end of grade
Birth	1000	1000	1000	1000	1000	
Grade 1	979	976	975	974	976	0.3%
Grade 2	977	972	971	971	973	0.5%
Grade 3	973	967	966	966	968	1.1%
Grade 4	960	958	957	956	958	1.6%
Grade 5	943	941	942	942	942	1.9%
Grade 6	924	924	923	924	924	3.1%
Grade 7	897	892	894	896	895	5.2%
Grade 8	849	844	849	850	848	7.1%
Grade 9	793	783	790	785	788	10.5%
Grade 10	697	706	710	706	705	15.5%
Grade 11	579	603	602	598	595	23.9%
Grade 12	441	460	462	449	453	
Per cent right censored observations						
Up to Grade 9	0.3	0.2	0.1	0.0		
Beyond Grade 9	0.4	0.8	0.5	0.4		
Per cent removed from sample						
Beyond Grade 9	9.1	3.6	3.8	3.1		

Table 2.6 (c) - School survival for birth cohort of 1980-1984

Group 3							
Born: 1980-1984				Age at the beginning of 2007: 23-27			
	General Household Survey						Drop out rate at end of grade
	2003	2004	2005	2006	Mean	Ultimate	
Birth	1000	1000	1000	1000	1000		
Grade 1	986	985	983	982	984		0.2%
Grade 2	984	983	981	981	982		0.4%
Grade 3	980	980	978	976	979		0.7%
Grade 4	973	971	972	970	972		1.2%
Grade 5	962	959	959	960	960		1.7%
Grade 6	947	942	943	942	944		2.8%
Grade 7	920	913	917	917	917		4.8%
Grade 8	875	872	873	870	873		7.0%
Grade 9	815	812	813	804	811		11.5%
Grade 10	738	719	721	717		717	16.1%
Grade 11	636	617	604	602		602	24.2%
Grade 12	511	496	465	456		456	
Per cent right censored observations							
Up to Grade 9	3.9	2.1	1.0	0.5			
Beyond Grade 9	32.1	19.6	11.1	6.0			
Per cent removed from sample							
Beyond Grade 9	5.4	5.0	5.6	4.7			

Table 2.6 (d) - School survival for birth cohort of 1985-1989

Group 4						
Born: 1985-1989			Age at the beginning of 2007: 18-22			
	General Household Survey					Drop out rate at end of grade
	2003	2004	2005	2006	Ultimate	
Birth	1000	1000	1000	1000	1000	
Grade 1	993	991	991	989	989	0.3%
Grade 2	992	988	989	986	986	0.3%
Grade 3	990	986	985	983	983	0.6%
Grade 4	985	980	980	977	977	0.7%
Grade 5	978	973	973	970	970	1.2%
Grade 6	968	962	959	958	958	2.1%
Grade 7	956	945	941	938	938	3.4%
Grade 8	936	920	910	906	906	4.9%
Grade 9	910	890	868	862	862	
Grade 10	869	839	811	792		
Grade 11	825	780	735	711		
Grade 12	735	705	650	615		
Per cent right censored observations						
Up to Grade 9	49.2	33.9	19.7	10.3		
Beyond Grade 9	87.9	80.6	69.5	55.5		
Per cent removed from sample						
Beyond Grade 9	2.3	3.6	5.6	4.7		

Table 2.6 (e) - School survival for birth cohort of 1990-1994

Group 5				
Born: 1990-1994		Age at the beginning of 2007: 13-17		
	General Household Survey			
	2003	2004	2005	2006
Birth	1000	1000	1000	1000
Grade 1	992	993	994	991
Grade 2	991	992	994	990
Grade 3	989	991	992	988
Grade 4	987	987	991	986
Grade 5	984	984	989	983
Grade 6	981	982	986	978
Grade 7	978	978	981	974
Grade 8	974	971	970	961
Grade 9	965	965	959	940
Grade 10				
Grade 11				
Grade 12				
Per cent right censored observations				
Up to Grade 9	97.8	96.4	90.9	78.2
Beyond Grade 9				

2.6 DATA REQUIREMENTS

This is about as much as can be done with existing data sources. The problem with the EMIS data is that it does not constitute a complete accounting system and that it is flawed. Estimates based on it are subject to unknown selection biases. In the end, the EMIS is only as good as school record-keeping and registers in many schools are incomplete or altogether missing. Departmental estimates of survival based on aggregate repeaters taken from EMIS are sharply biased downwards. Estimates based on the General Household Survey are more reliable, but they are necessarily cohort-based and therefore cannot be calculated with precision until most of the cohort has passed beyond school education. They, therefore, cannot represent recent survival trends. Moreover, there are limited opportunities for

analysis of variables determining survival rates. The GHS will permit analysis by population group, gender, disability and reason for leaving school, but little else.

When data becomes available from the Community Survey, it should be analysed using the same technique as for the GHS.

If more precise and detailed information is required, new data will have to be collected. There are two possible approaches that could be considered:

- A school register, which would simply be a list of learners containing the information for each learner which follows, could be added to the existing Annual School Survey:
 - Identity number
 - Full name
 - Grade in which enrolled

Over-time, such learner registers, if fully completed, would yield information on dropout (and drop-in), repeaters, promotions and movements between schools.

- Once every two years a retrospective Educational Experience Survey could be carried out. A substantial sample of people between ages 20 and 29 could be selected with the intention of obtaining a complete educational history of the respondents. If properly designed, this could yield invaluable information on pathways through the educational system, including information on enrolments in parts of which are not currently recorded (e.g. private further education) as well as qualifications obtained. Information on possible determinants of retention in the educational system, such as socio-economic status of the household of origin, should be collected and analysed. Usually one would have five observations on each two year wide birth cohort.

2.7 CONCLUSION

The survival rate for birth cohorts is steadily improving over the years and the ability of the schooling system to retain learners, at least until the end of the GET phase, is also improving. However, retention at FET level appears to be

much lower than at GET and has effectively remained almost static over the years across all birth cohorts. There is also a significant increase in dropout rates from Grade 9 onwards, reaching 24% in Grade 11 for the 1980-1984 birth cohort.

3. CHAPTER THREE: ATTAINMENT AND AGE SPECIFIC ENROLMENT RATES BASED ON SURVEYS AND CENSUSES

3.1 INTRODUCTION

This chapter utilises census and survey data to derive conclusions about educational attainment and age-specific enrolment patterns in schools. In all this data, there are naturally sampling and comparability issues. Although this will not be discussed in any great detail, readers should be aware that data of this kind have limitations and cannot give a fully accurate picture of events.

Nevertheless, the data is able to assist considerably in developing a better understanding of the history of educational attainment, progress and continuation in the school system and, together, provide strong evidence that the SA schooling system is doing a remarkable job at retaining children in school for the compulsory school years and beyond. However, an issue that is not directly addressed here but evidence of which is found in some of the data, is that the progress slows abruptly at matric level, the first hurdle regarding quality of education. At this point, extremely large differentials between race and income groups exist that are also reflected in attainment at higher levels.

3.2 EDUCATIONAL ATTAINMENT: A LONG HISTORY

In order to investigate historical trends in educational attainment, the educational attainment patterns of different birth cohorts from the 1970 and 2001 censuses were analysed³. As educational attainment is a permanent personal characteristic that can be supplemented but not decreased later in life, this creates a fairly accurate representation of historical patterns of educational attainment and therefore of the historical flow through the school system. For older cohorts, however, the picture may be less accurate if there are differential mortality patterns. Mortality patterns are known to differ between race groups, and they are also likely to differ to some extent between less and more educated groups within any population group. The availability

³ In this paper, the qualifications included in census questionnaires are converted into formal education grade equivalents. For purposes of this conversion, having achieved less than matric with a diploma or certificate is counted as completion of Grade 11 at most, to reflect the fact that the final hurdle of the matriculation exam (the only real hurdle in the school system) has not been cleared.

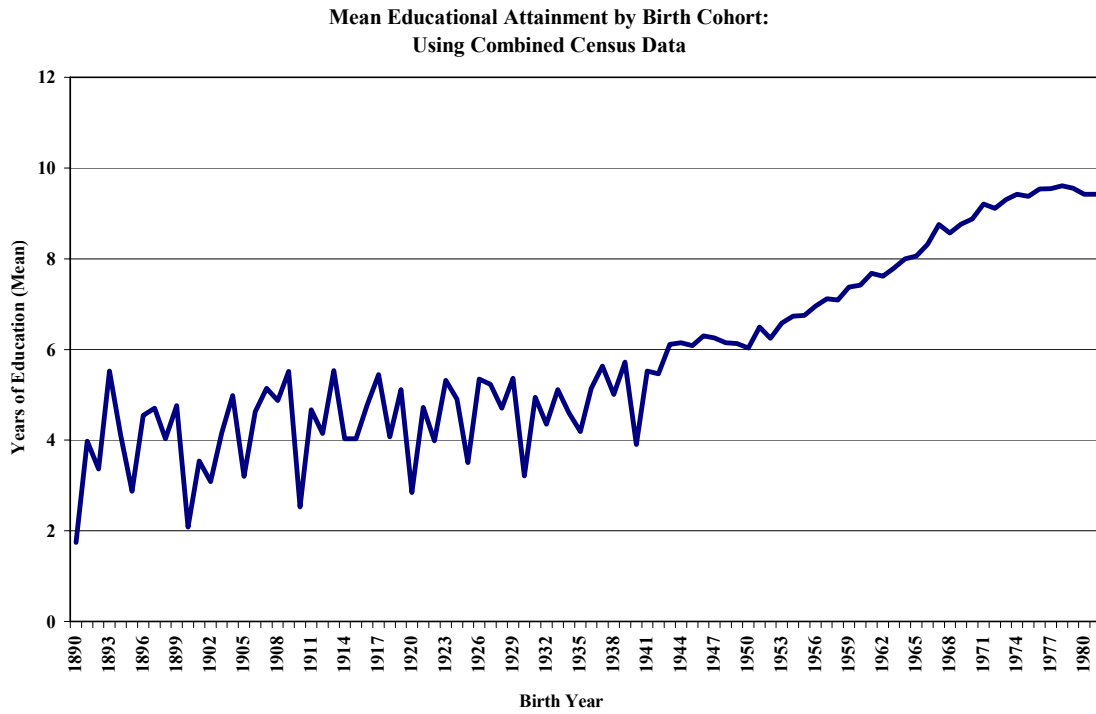
of an older census – that of 1970 – allows for the supplementation of some of the data from the 2001 census with data from three decades earlier for the same birth cohorts. Educational attainment series drawn from the two censuses are spliced at 1940, with the 1970 census providing attainment information for cohorts born prior to 1940 and the 2001 census providing attainment information for cohorts born subsequent to that.⁴ In this way, this census-based picture of educational attainment provides a snapshot of the past.

As can be seen from Figure 3.1, over-all educational attainment of the SA population has grown very strongly for cohorts born after the mid-1940s. Mean educational attainment of the cohort born in 1981 is about 9½ years, compared to only about 6 years of the cohort born in 1945. (As the latest data is from the 2001 census, it is not possible to investigate the situation for cohorts born after 1981. Many of these would not yet have completed their education by 2001). This improvement was largely the result of increasing Black African education levels as the Black African population attainment levels rose from 4 years to just over 9 years in the same period (Figure 3.2).

This rise in Black African attainment was almost uniform amongst those presently in urban and those presently in rural areas (Figure 3.4). Of course it is impossible to determine in the census data as to where someone grew up and was educated, so this data would be affected by rural-urban migration, which in itself is also selective in terms of education. The attainment gap between Whites and other groups has decreased, and the rapid rise of attainment in the Indian population is particularly noticeable in Figure 3.3.

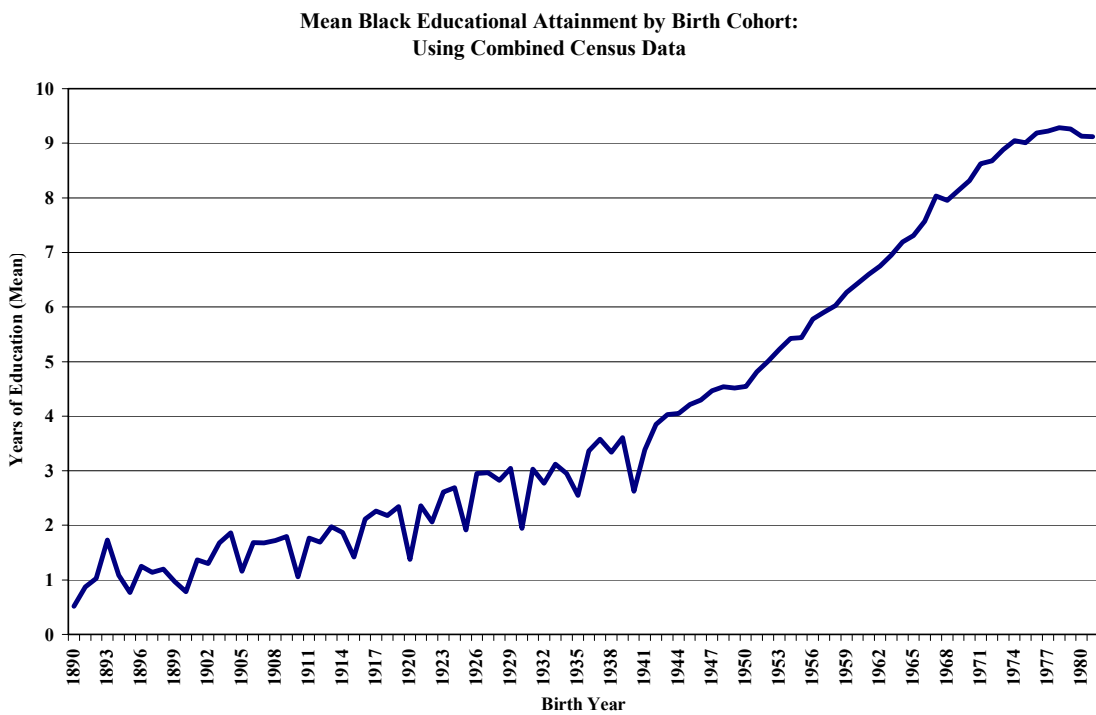
⁴ Interested readers are referred to Louw, Van der Berg and Yu (2006) for further details regarding the splicing exercise.

Figure 3.1



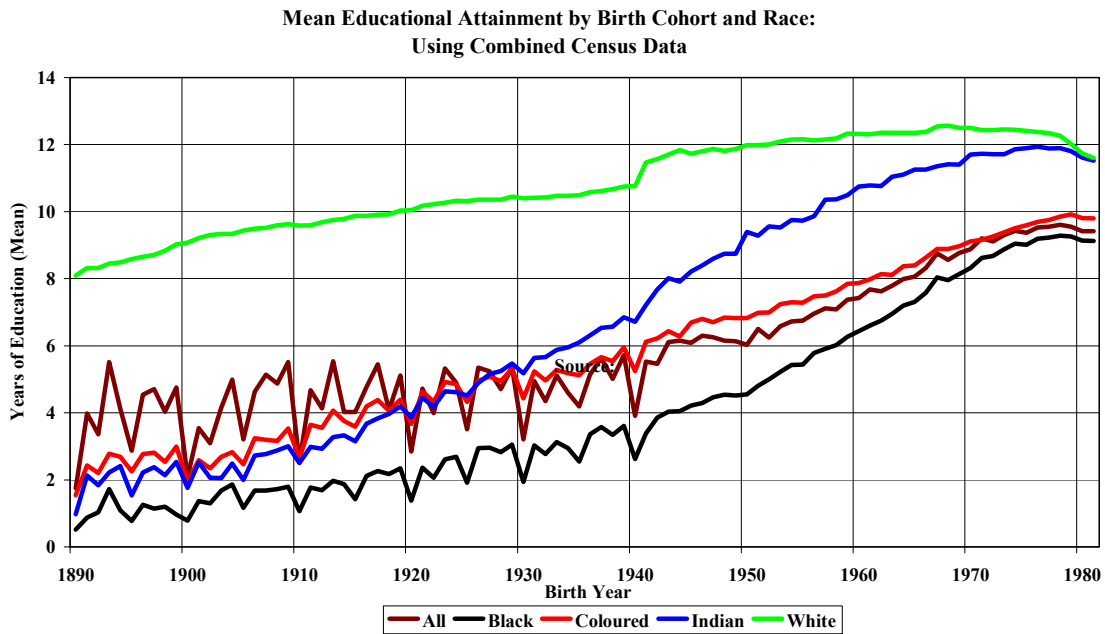
Source: Own calculations based on 1970 and 2001 Census data

Figure 3.2



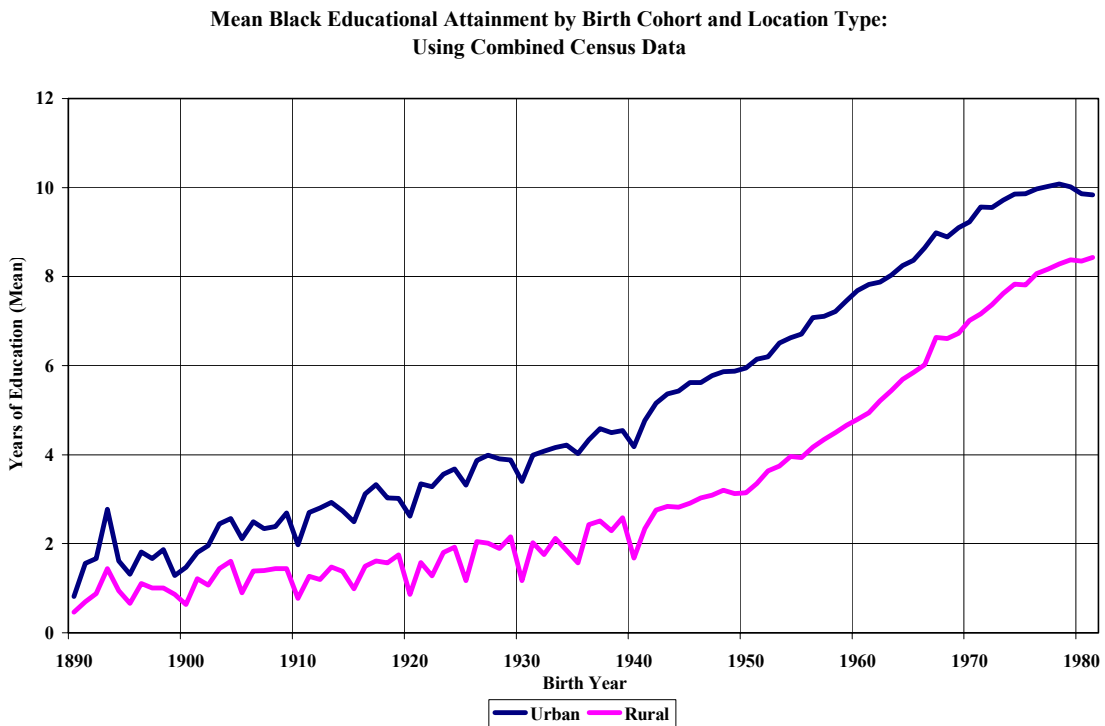
Source: Own calculations based on 1970 and 2001 Census data

Figure 3.3



Source: Own calculations based on 1970 and 2001 Census data

Figure 3.4



Source: Own calculations based on 1970 and 2001 Census data

As a result of rising educational attainment, the proportion of the population reaching certain educational milestones has risen drastically. Figure 3.5 shows that the cohort born in 1981 is approaching universal completion of primary education, as has long been the case for Whites.

When the lowest schooling hurdle – completed primary education – is used, the racial gap in attainment is quite small. There is only a difference of 14% between the proportion of Whites and Black Africans that have completed primary school. Higher milestones (matric and tertiary qualifications) show a drastically different pattern, though: Figure 3.6 shows that matriculation completion rates are low amongst the Black African and Coloured population, even though the matriculation completion rates have risen quite sharply.

Two aspects about this data should, however, be noted. In this figure, and even more so in Figure 3.7 relating to tertiary education, the effect of the splicing of the two census datasets in 1940 is quite clear – these two censuses give different versions concerning these higher attainment milestones in the earlier period. Fortunately, this does not affect the present purpose. The downturn at the end of the figure may partly be the result of some members of this cohort not yet having completed their school education. Figure 3.7 shows rising tertiary qualifications for younger cohorts, but in this case, the gap between the White population and the other population groups is still massive: Even the Indian population, (who now have similar matriculation rates to Whites), have not yet converted this success into higher tertiary participation and completion rates. In this case too, it is difficult to know what age group to consider, as tertiary qualifications are often only attained at a relatively high age.

Figure 3.5

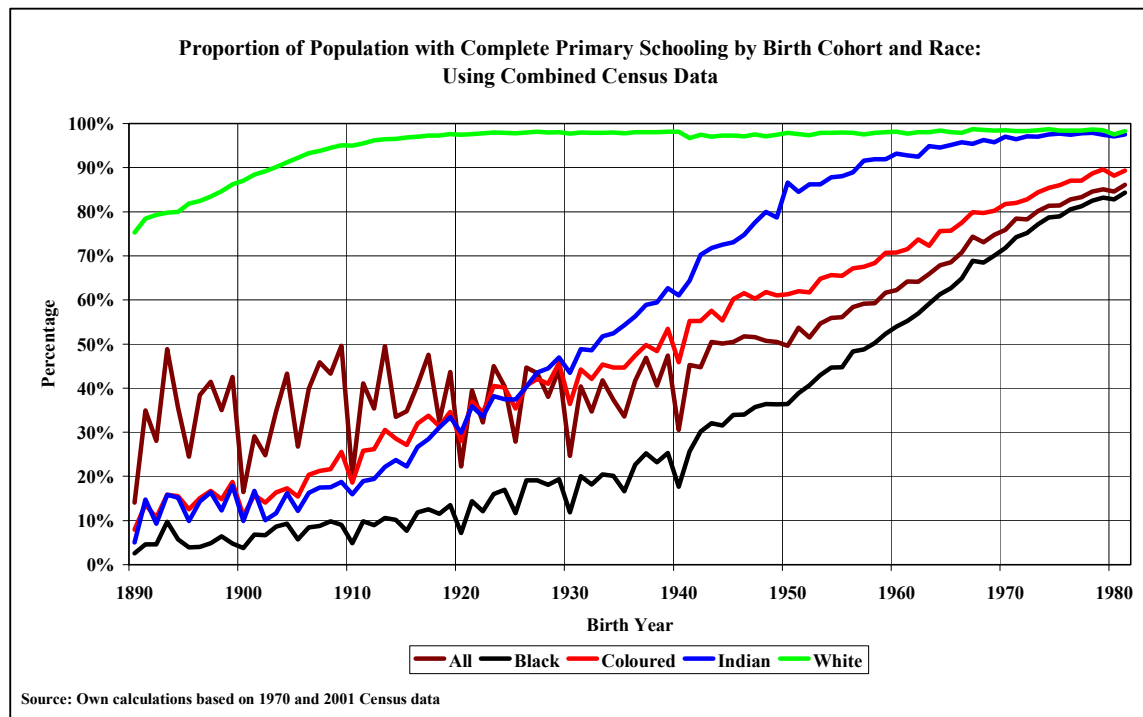


Figure 3.6

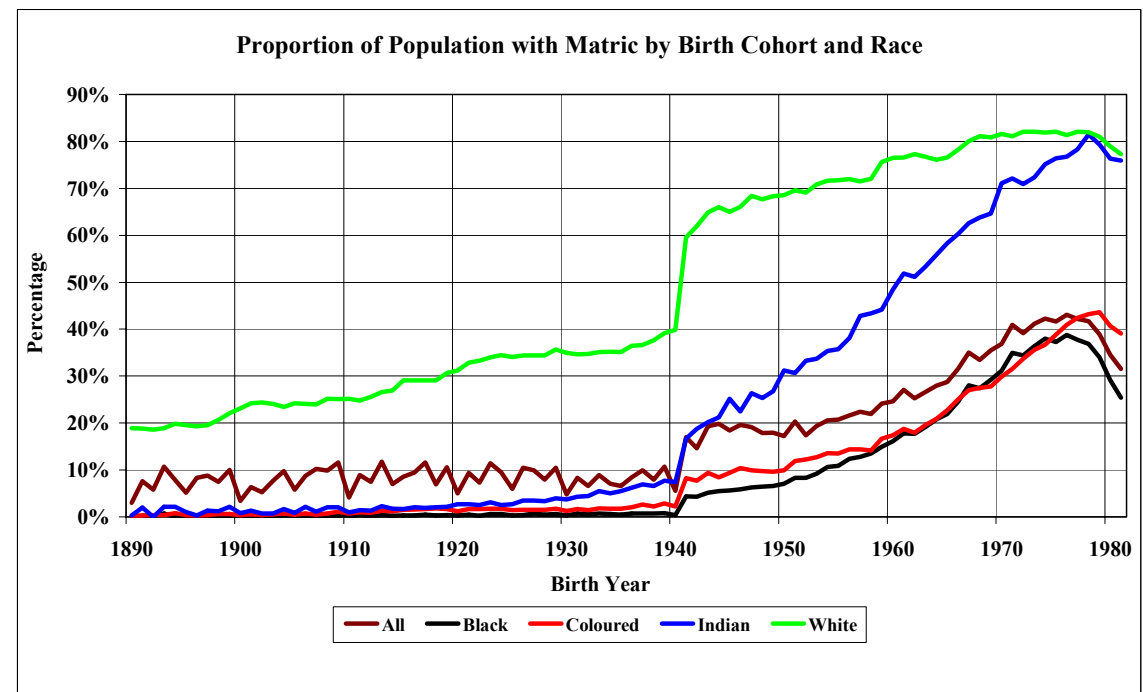
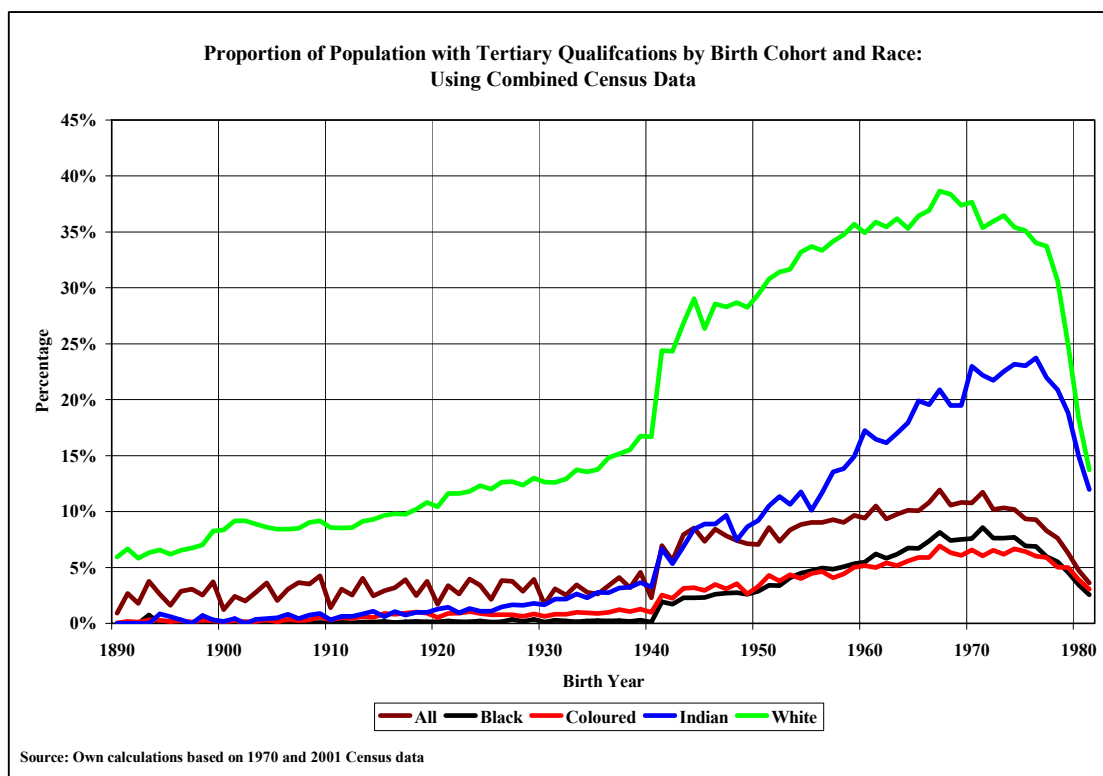


Figure 3.7



This data shows that attainment has been rising quite strongly over time, reflecting the fact that a large proportion of all population groups attend school and remain there long enough to sustain these rises in attainment.

3.3 AGE-SPECIFIC ENROLMENT

In order to gain a proper understanding of school enrolment patterns, age-specific enrolment rates were analysed using a large number of official surveys and censuses for the period 1993 to 2006. The surveys and censuses covered are the October Households Surveys of 1993 to 1999, the Labour Force Surveys from March 2000 to March 2006 (the LFS was conducted in both March and September of each year), and the Censuses of 1996 and 2001. The different surveys and censuses did not provide data in exactly the same format, so school enrolment figures had to be deduced in some cases from a combination of responses. The manner in which this was dealt with is explained in Table 1.

Age-specific enrolment figures show a fairly consistent pattern, as reflected in Table 2

and Figure 3.8: Sustained high enrolment rates of 95% or above until about age 15 or 16, where-after enrolment falls quite sharply to about 50% by age 19. This pattern is so consistent that there can be little doubt that there is almost universal school enrolment until age 16. Preliminary analysis of the Community Survey of 2007 confirms the pattern: Enrolment of 96% or above until the age of 15.

There is no clear evidence of changes in age-specific enrolment patterns over the past decade. The major exception, the Census of 1996, gives odd results in terms of early enrolment for the Black African population, but other than that all the data-sets show the same underlying patterns. There is also no evidence of dropout from the school system before age 16. Enrolment until this age is also not really differentiated by race: All race groups show consistently high enrolment rates, though drop out after age 15 is differentiated by race, as Table 2 and Figures 3.9 to 3.12 illustrate.

The Coloured population show the earliest trend towards dropout, before the completion of high school (Figure 3.11). This may be partly related to access to labour-market opportunities. For the Black African population (Figure 3.9), there is also evidence of a major degree of dropping out at about age 16, but there is also perseverance in the school system amongst a part of these learners until age restrictions start applying. This may relate to poor labour market prospects amongst a section of these learners. No separate figures are shown for the Indian population, as their small numbers make it impossible to use sample surveys of this nature as good evidence of enrolment patterns.

Focusing only on a few selected years, as depicted in Figures 3.12 and 3.13 for Black Africans and for Whites, (the two largest population groups), show no real patterns of change over time. (It must be considered that these particular surveys took place in the October 1996 in the case of the OHS96, and in March of their respective years in the case of both LFS surveys which would slightly affect age patterns.)

Figure 3.14 shows that there is greater perseverance in the school system by Black African learners, probably due to poorer progress, as most White learners pass matric and then leave school. Enrolment at earlier ages rose, and perseverance in higher ages amongst Black Africans declined somewhat in the more recent surveys. The racial patterns from each of these three surveys (Figures 3.15 for OHS1996, Figure 3.16 for LFS2001a and Figure 3.17 for LFS2006a) confirm that a large part of the Black African population persevere longest in school, but note that there has been

a drop since 1996 in the proportion of Black African learners who persevere until age 20, probably because age restrictions which have been introduced discourage learners who may otherwise have remained in the system in the hope of matriculating.

What this data indicates is that there is no apparent major problem of dropping out of the school system before the age of 16, at least not for about 95% of the population. Instead, there are problems of long perseverance without achieving matriculation, when the age restriction comes into effect; and the pattern of age-specific enrolment indicates that, for the most part, all race groups have been attending school for the past decade until well beyond the compulsory phase. This, however, does not explain the problems of repetition and the slow progression through the school system. This will be analysed in the next section.

Table 3.1: Surveys and censuses included in the analysis and differences in questions regarding school enrolment

SALRDU1993	The questionnaire only asks the question 'are you enrolled in some kind of formal education?' The question on highest educational attainment is not asked.	
OHS1993	The questionnaire only asks the question 'Are you presently attending school/college/university/technikon, etc.?' One can rely on the other question "what is your highest completed level of education?" If the respondents' answer is anything from 'no schooling' to 'Grade11', and they claim that they are currently attending school/college/university/technikon/etc., then one can assume they are currently at Grade1 to Grade12	
OHS1994		
OHS1995/IES1995		
Census1996		
OHS1996		
OHS1997	OHS1993 excludes the former TBVC states...	
OHS1998		
	Which of the following educational institutions do you attend?	
OHS1999		
LFS2000a	1 = School	
LFS2000b/IES2000	2 = University	
LFS2001a	3 = Technikon	
LFS2001b	4 = College	(There is no option called 'pre-school', some people attending
LFS2002a	5 = Adult basic education and training/literacy classes	pre-schools could choose option 1 as the answer)
LFS2002b	6 = Other adult education classes	
LFS2003a	7 = Other than any of the above	
LFS2003b	8 = None	
LFS2004b		
	Do you presently attend an educational institution?	
	1 = No	
	2 = Yes: Pre-school	
	3 = Yes: School	

Census2001	4 = Yes: College 5 = Yes: Technikon 6 = Yes: University 7 = Yes: Adult education centre 8 = Yes: Other (specify)
	Which of the following educational institutions do you attend?
	1 = Pre-school/Creche
	2 = School
LFS2004a	3 = University
LFS2005a	4 = Technikon
LFS2005b	5 = College
LFS2006a	6 = Adult basic education and training/literacy classes 7 = Other adult education classes 8 = Other than any of the above 9 = None

Figure 3.8: Age-specific enrolment rates from various surveys and censuses: All races

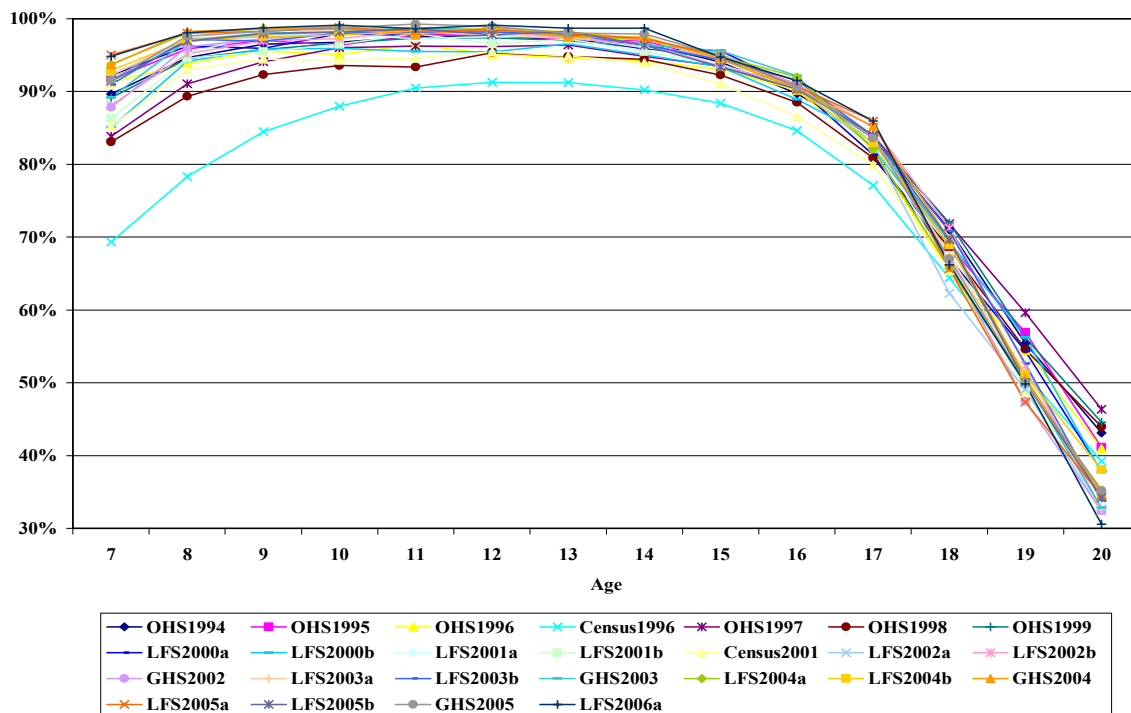


Figure 3.9: Age-specific enrolment rates from various surveys and censuses: Black Africans

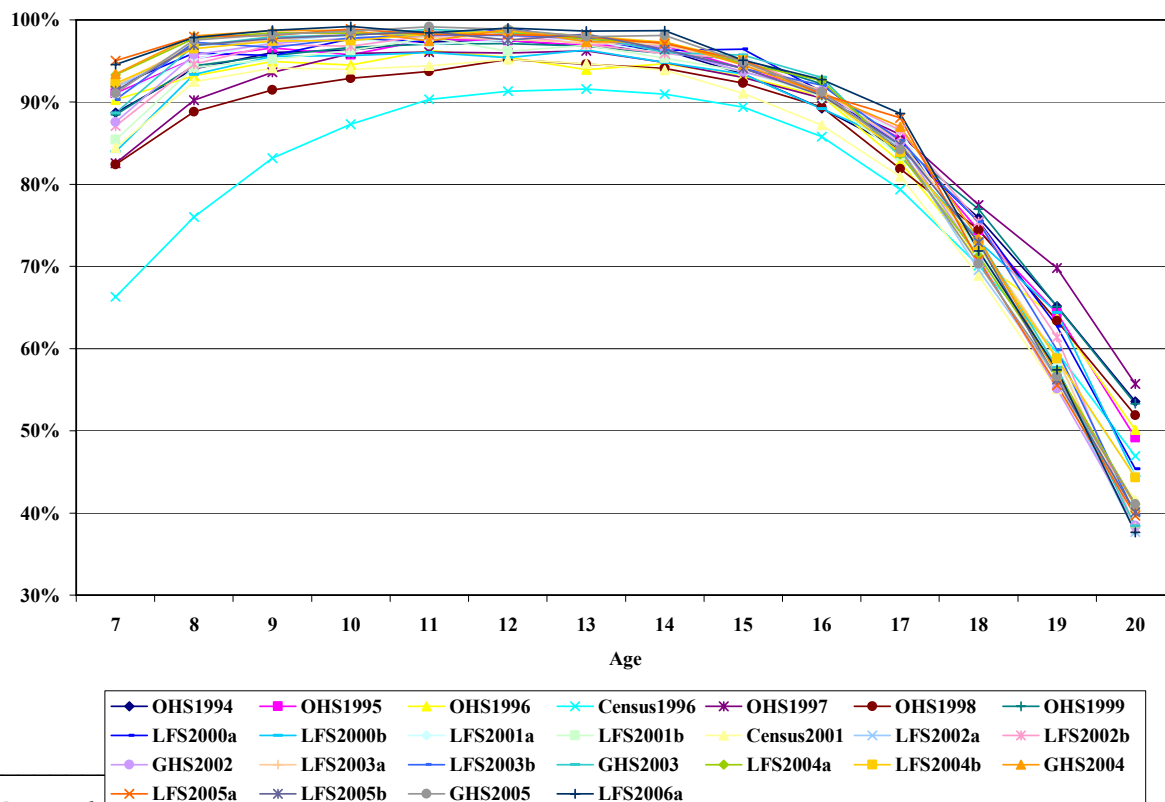


Figure 3.10: Age-specific enrolment rates from various surveys and censuses: Whites

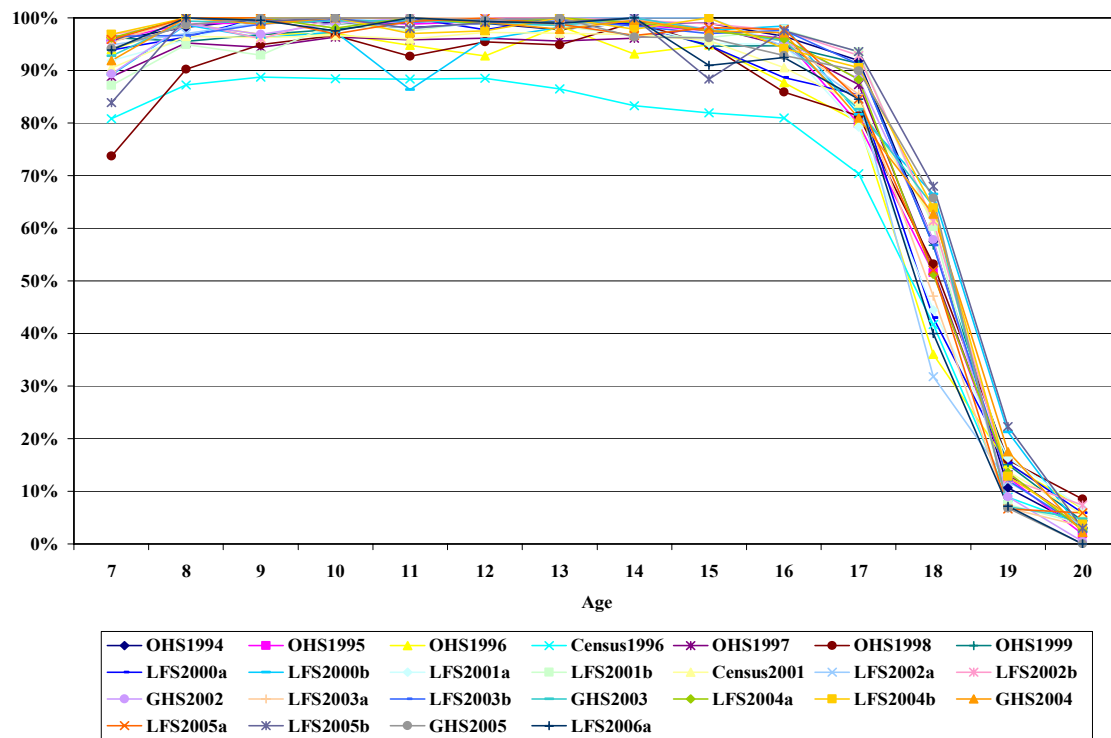


Figure 3.11: Age-specific enrolment rates from various surveys and censuses: Coloureds

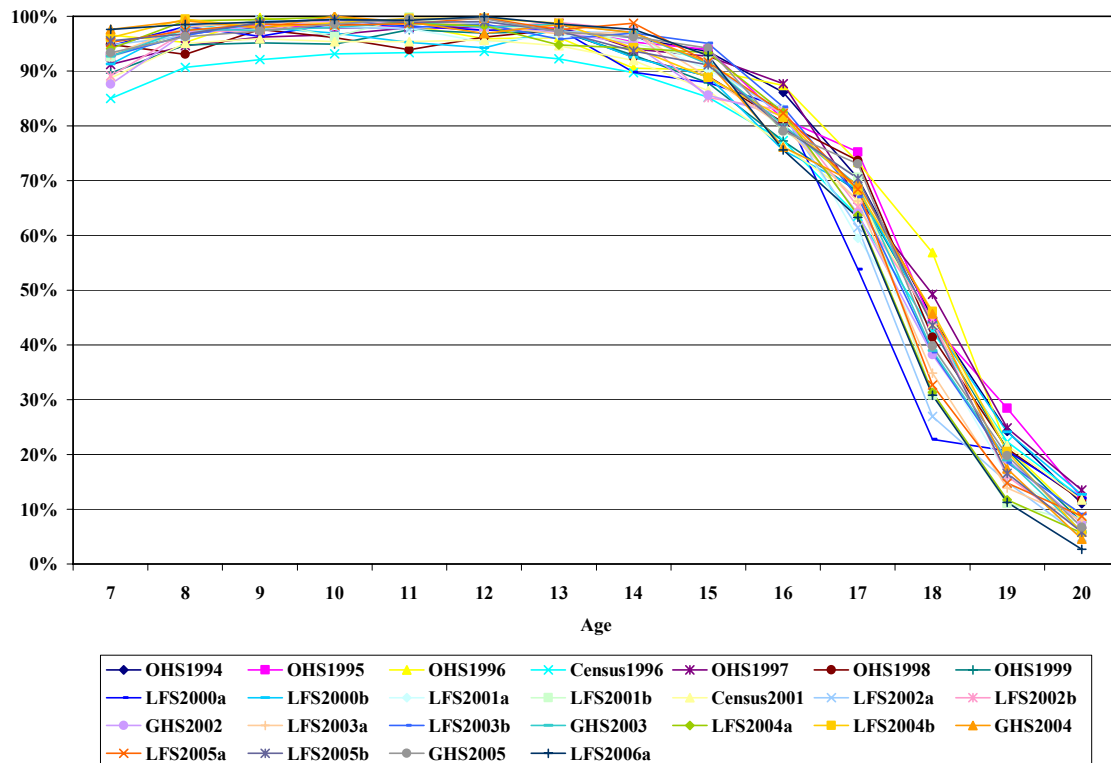


Figure 3.12: Age-specific enrolment rates in selected years: Black Africans

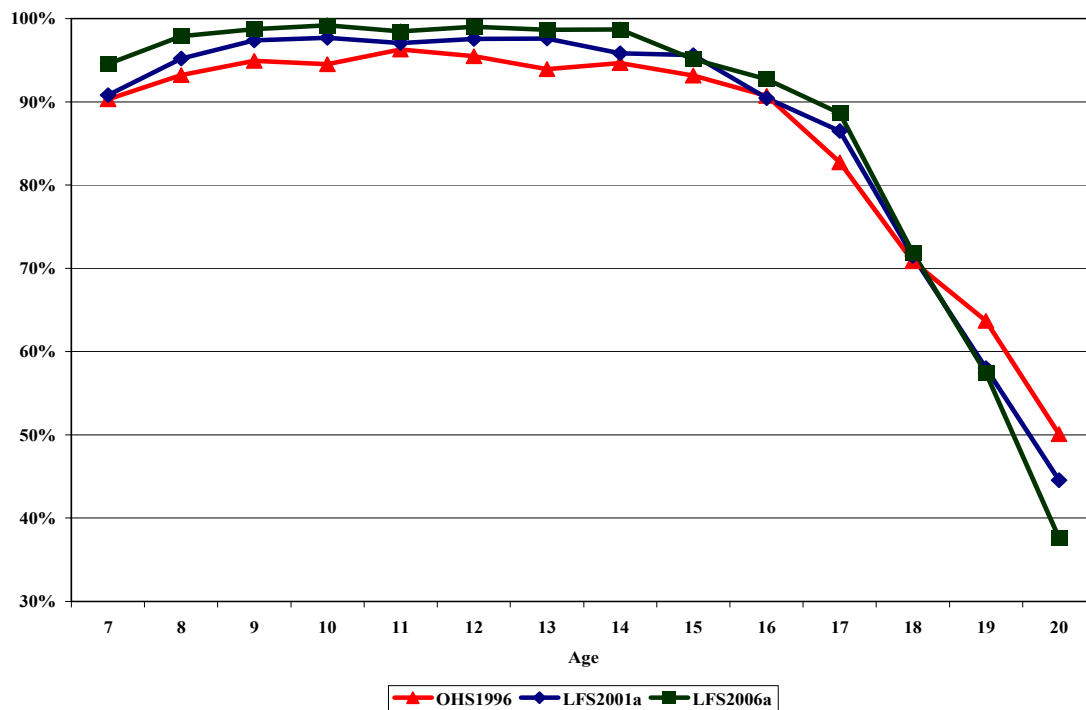


Figure 3.13: Age-specific enrolment rates in selected years: Whites

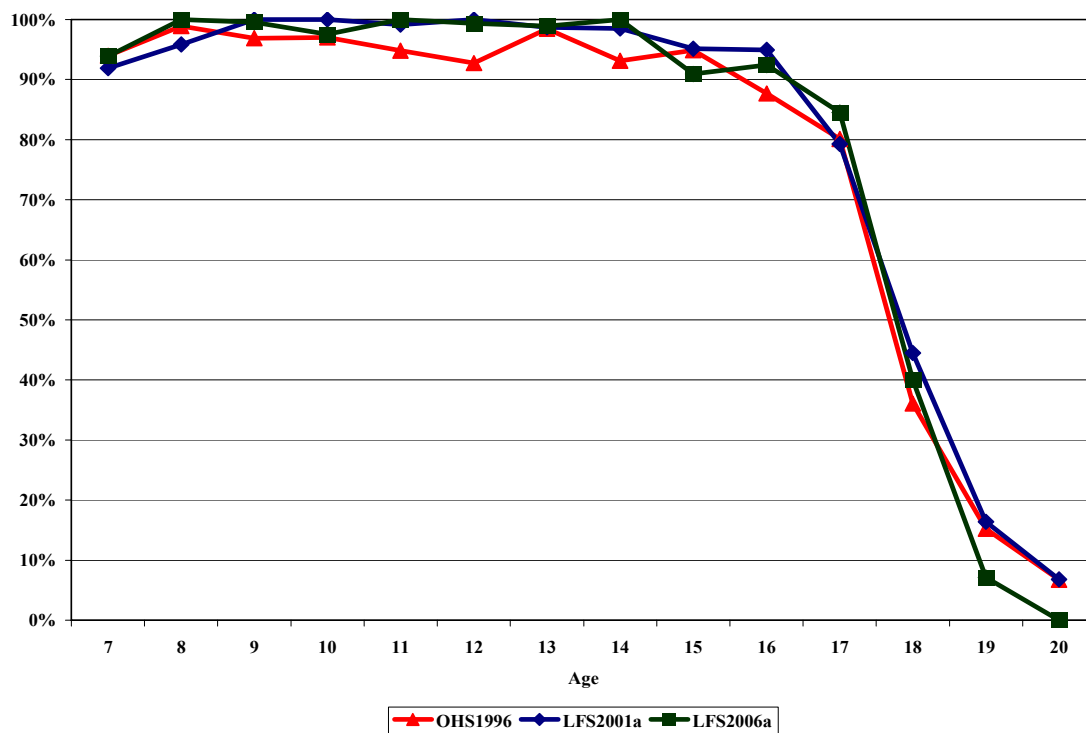


Figure 3.14: Age-specific enrolment rates in selected years: Black Africans and Whites compared

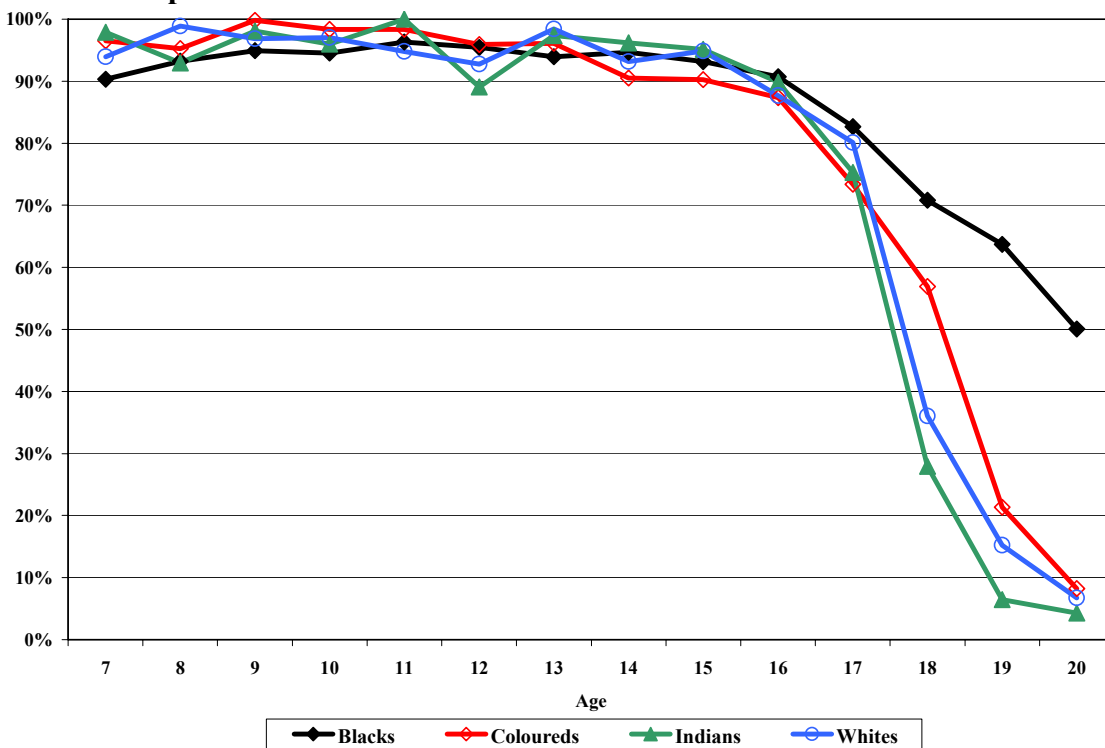


Figure 3.15: Age-specific enrolment rates from OHS1996: race groups compared

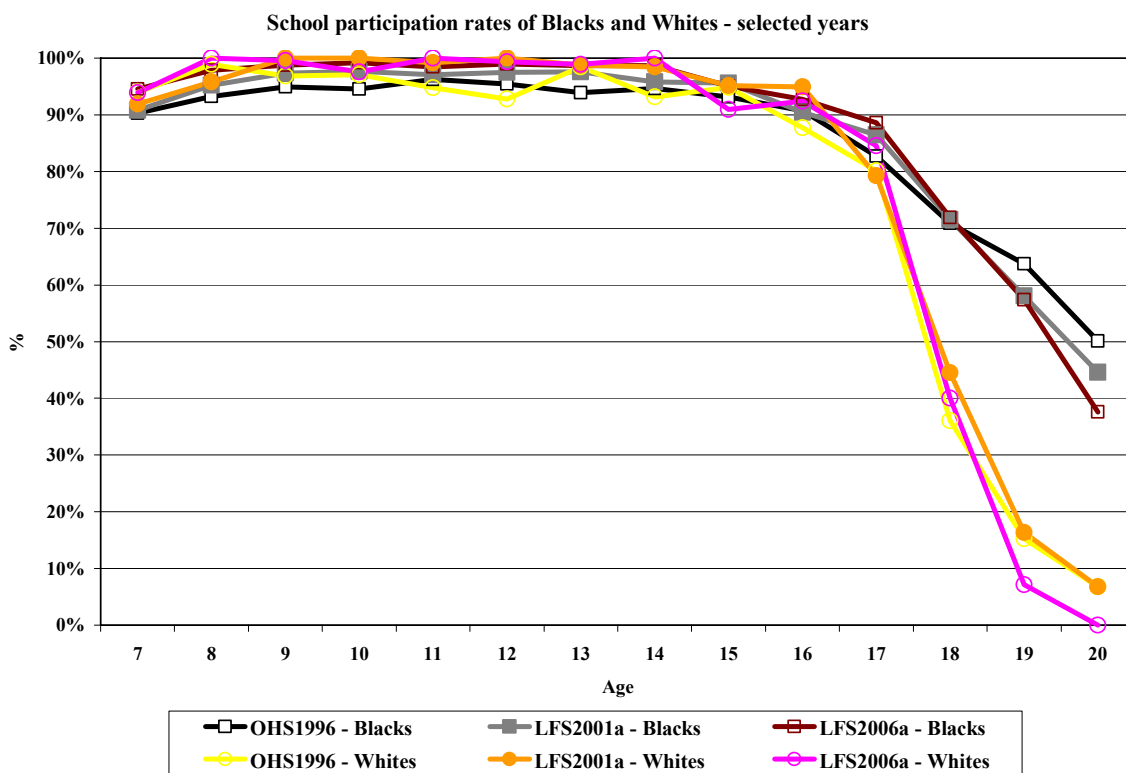


Figure 3.16: Age-specific enrolment rates from LFS2001a: race groups compared

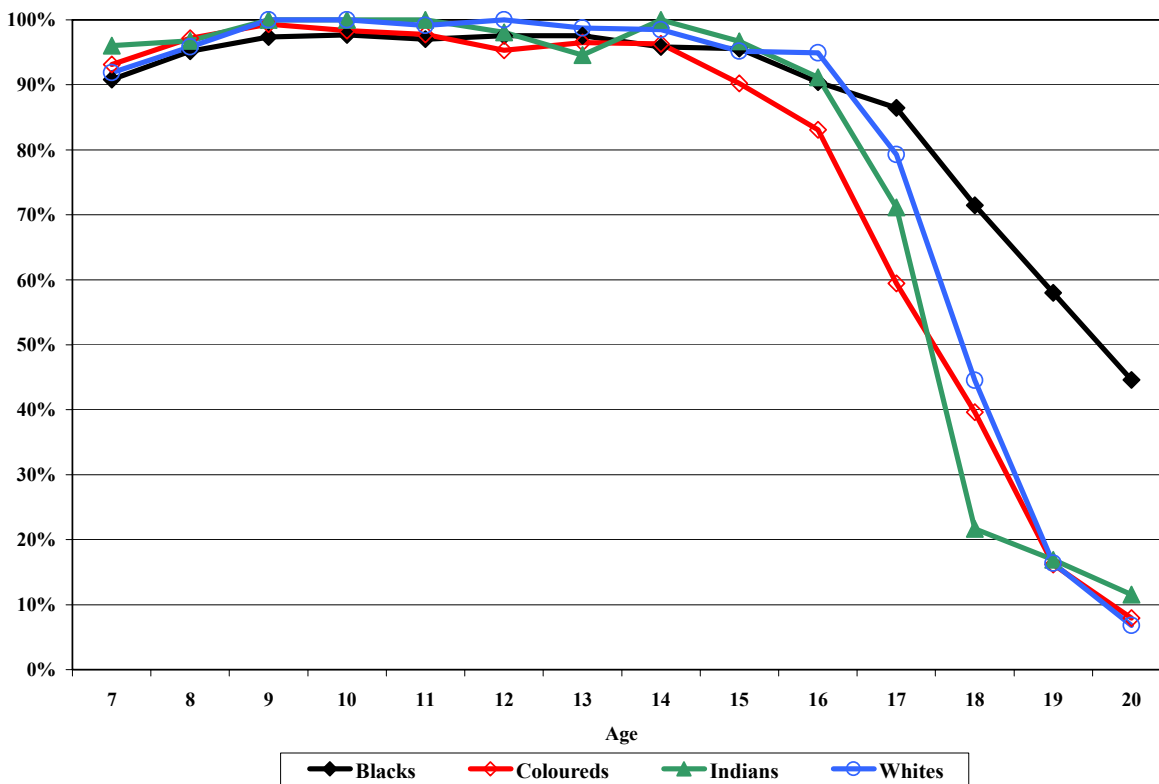
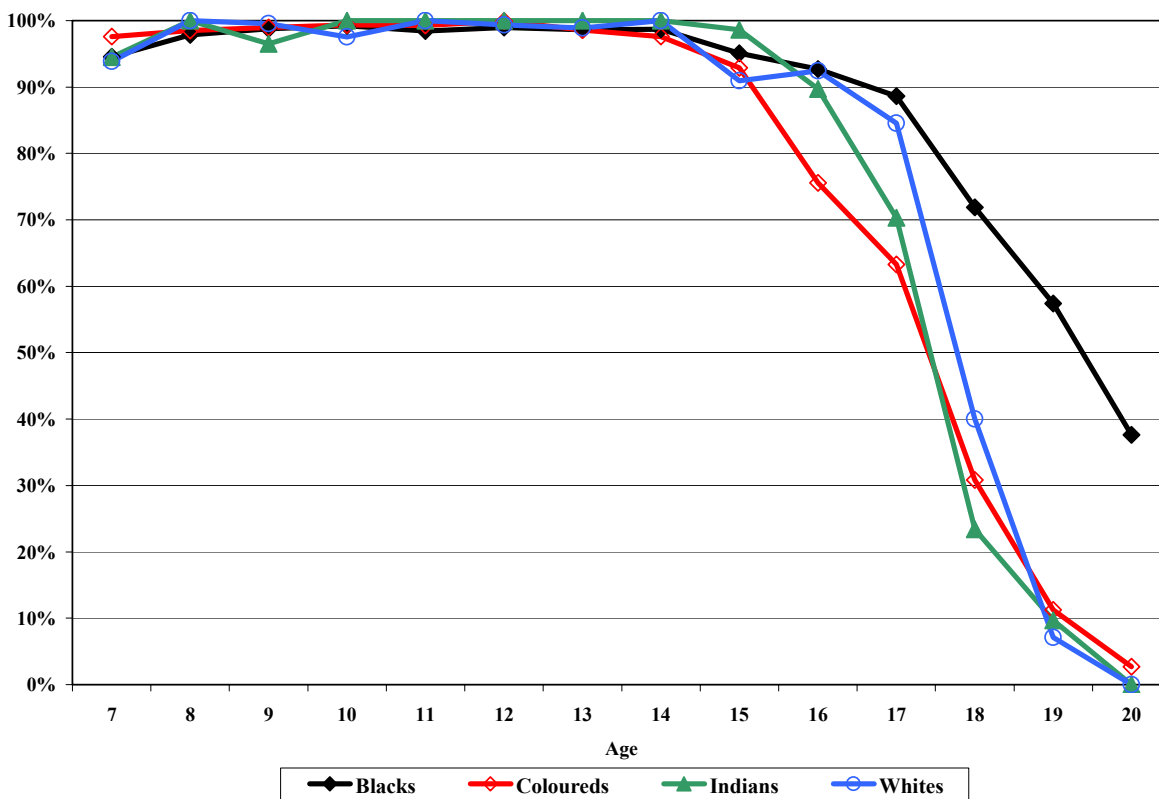


Figure 3.17: Age-specific enrolment rates from LFS2006a: race groups compared

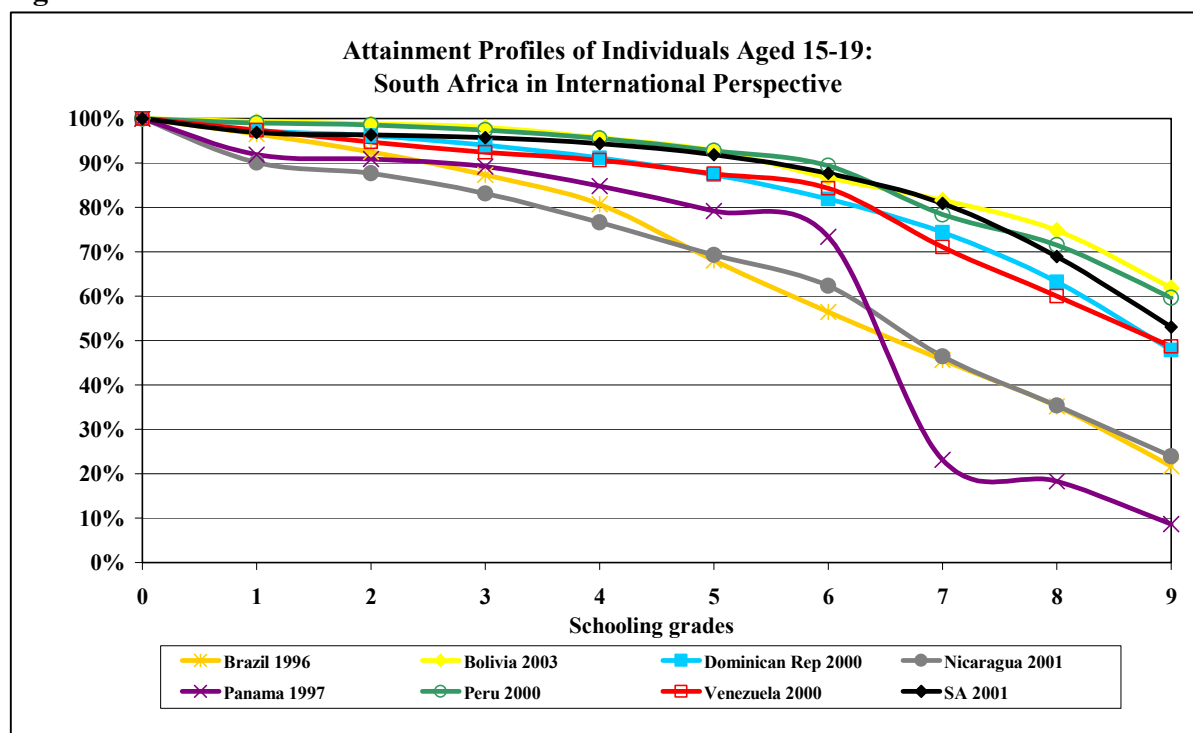


3.4 RECENT ATTAINMENT LEVELS BY AGE FROM SURVEY AND CENSUS DATA

3.4.1 Attainment in international comparison

The analysis now turns to investigating attainment levels from different censuses, showing educational attainment by school grades completed. Figure 3.18 investigates progress through the South African schooling system in international context by plotting the attainment of 15-19 year old youth against that in selected Latin American countries for which data is available. Patterns of progression through the South African system are favourably compared to this group of middle-income countries with which SA is often compared. (The steep decline of the line for Panama after Grade six is due to drop out after completion of primary schooling.)

Figure 3.18

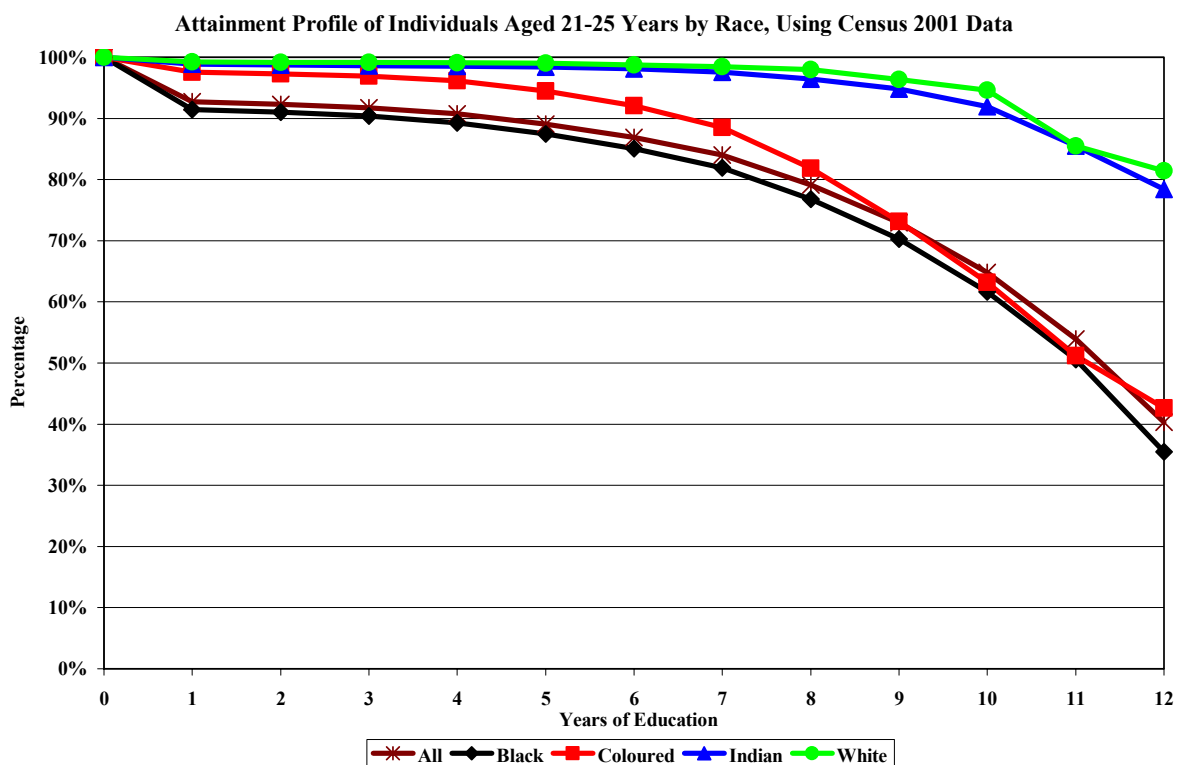


3.4.2 Attainment by race

Considering the attainment of those who are old enough to have completed their school education, Figure 3.19 shows the educational attainment profile of individuals South Africans aged 21-25 in 2001, disaggregated by population

group. Whites and Indians follow similar patterns of attainment, with modest declines in completion levels at higher secondary school grades. Coloureds perform better than Black Africans at passing lower grades, although this is largely due to a larger numbers of Black Africans who do not enrol. By Grade 9, Coloureds have lost their initial advantage, pointing to higher repetition or discontinuation rates for this group between Grades 4 and 8.

Figure 3.19

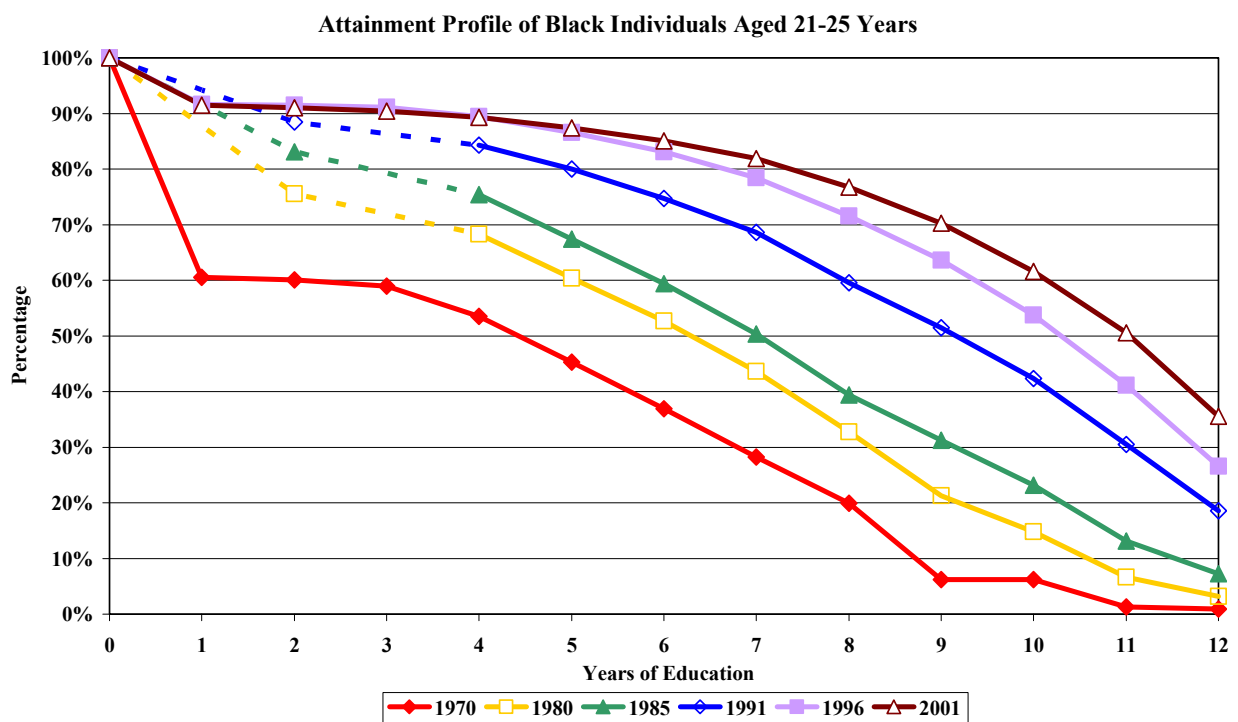


Source: Own calculations based on Census 2001 data

Figures 3.20 to 3.23 show an upward shift in the entire educational attainment profile for each of the censuses for the age group 21-25. This upward shift is greatest in the case of the Black African population. Of the 21-25 year old Black African individuals in the 1970 census, 40% had never enrolled at school and fewer than 1% had passed matric (Figure 3.20). By the 2001 census, these figures had improved to 9% and 36% respectively for the same age group. While non-enrolment has not been as large a problem, Coloureds appear to drop out in large numbers in secondary school, generally around age 15 (Figure 3.21). This phenomenon has been observed for a long time, and

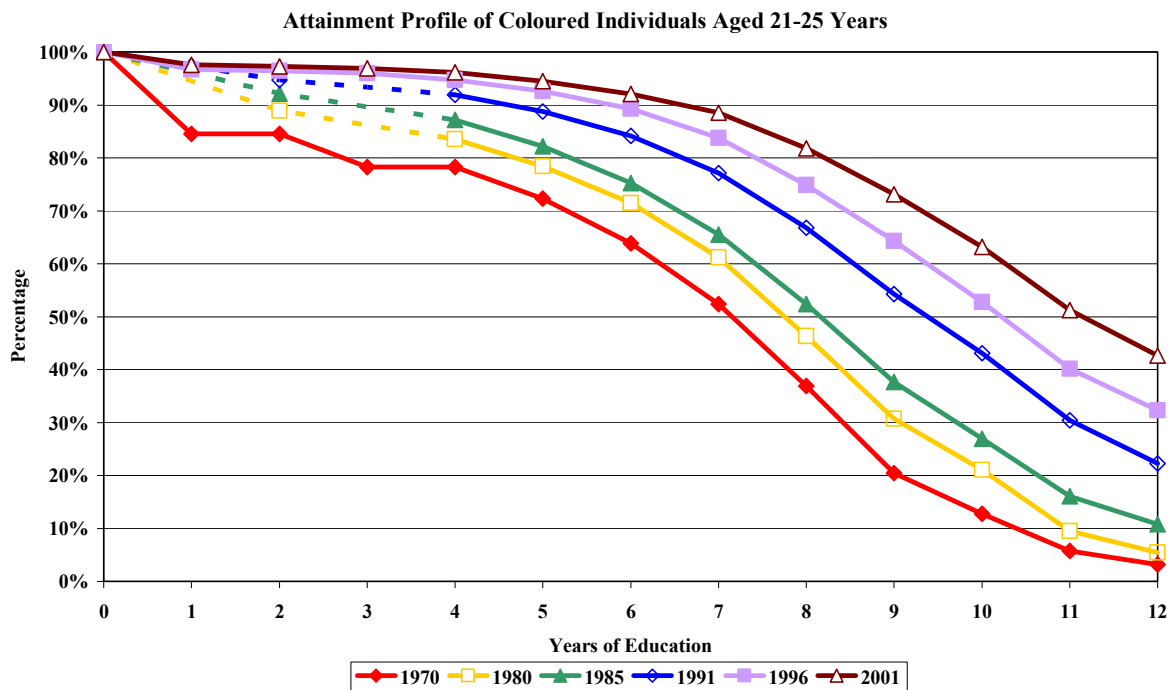
appears to be, at least partly, linked to earlier labour market access due to better labour market links and networks relative to Black Africans, and in part, also a reflection of the greater degree of urbanisation of the Coloured population. Indians and Whites (see figures 3.22 and 3.23) have approximately 80% matric completion rates (the proportion of the cohort who have completed matric), the result of rapid catch-up at higher education levels by Indians and more modest improvement by Whites, who, by 1970, had already virtually achieved universal education up to Grade 8.

Figure 3.20



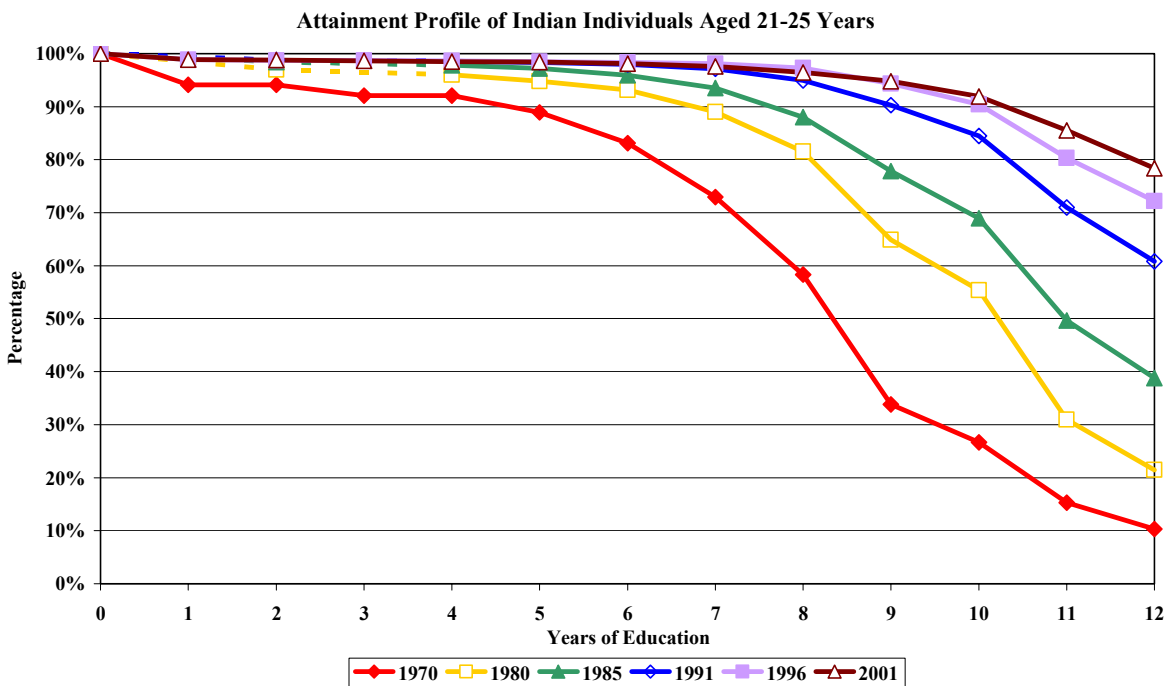
Source: Own calculations based on Census data for various years

Figure 3.21



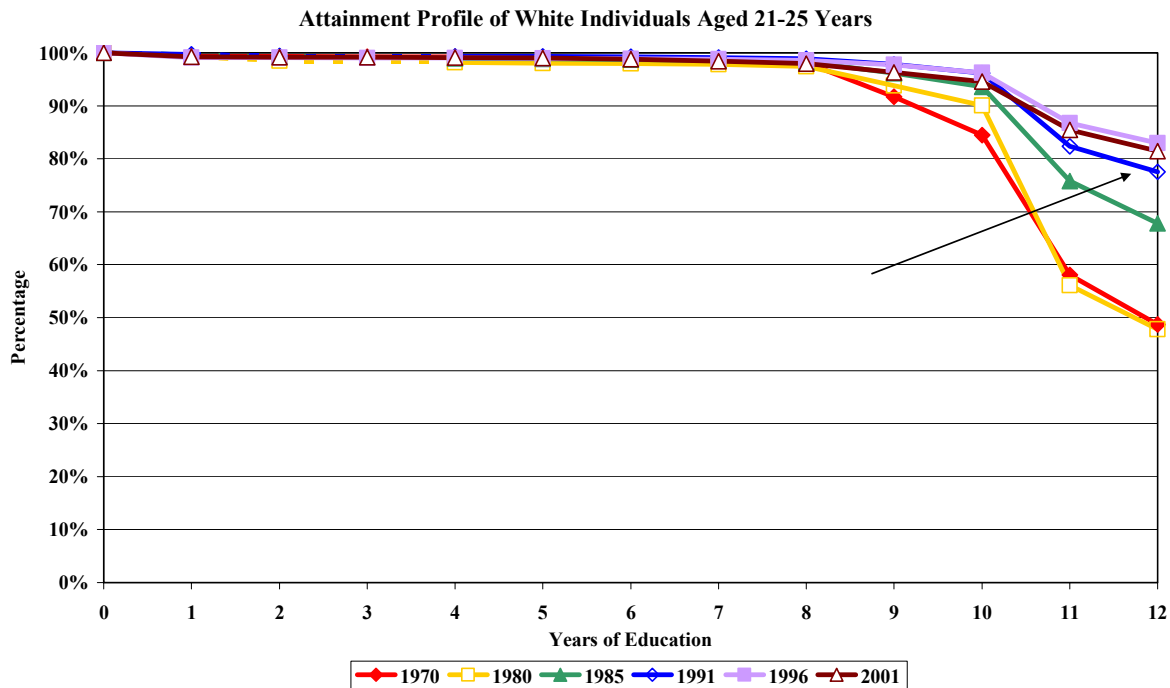
Source: Own calculations based on Census data for various years

Figure 3.22



Source: Own calculations based on Census data for various years

Figure 3.23



3.4.3 The effect of parent socio-economic status and education on children's attainment

In order to better relate the attainment of children to their home background or socio-economic status (per capita income and parental education), it is necessary to investigate the attainment of a younger age-group, who are more likely to have been enumerated in their parental homes during censuses.

The following analysis thus focuses on children aged 16 to 20. This is unfortunately a relatively diverse group in terms of their educational experience, but to maintain a healthy sample size, it is not viable to use a narrower age group for this analysis. For each of the groups, the population of this age within each race group was separated into equal sized groups (called quintiles) according to their parents' economic status. In the case of the Black African population, which is large, it was possible to distinguish five different groups (quintiles), whereas for the White and the Coloured population, it was only practical to separate the population into a top and a bottom half.

Figure 3.24 shows 1991 attainment profiles of Black African children aged 16-20 by their parents' income quintile (a quintile is a fifth of the population, arranged by per capita income levels). As can be seen, the pattern of attainment rises strongly with higher per capita income. A similar pattern applies in 2001 (Figure 3.25), although it appears that there is now less socio-economic differentiation – the attainment profiles of all quintiles have risen, although more so at the bottom income levels. Figure 3.26 shows a similar graph for 1991 for the Coloured population, but because of the smaller sample size, only two income groups, a higher and a lower income group, are distinguished.

Comparing Figure 3.27 to this, it is yet again clear that the socio-economic gap has shrunk slightly between 1991 and 2001, mainly because of better progress amongst the poor than amongst the less poor in terms of attainment profile. A similar picture holds for the White population (Figures 3.28 and 3.29). Because of the small number of the Indian population, such an exercise is not viable for them.

Figure 3.24

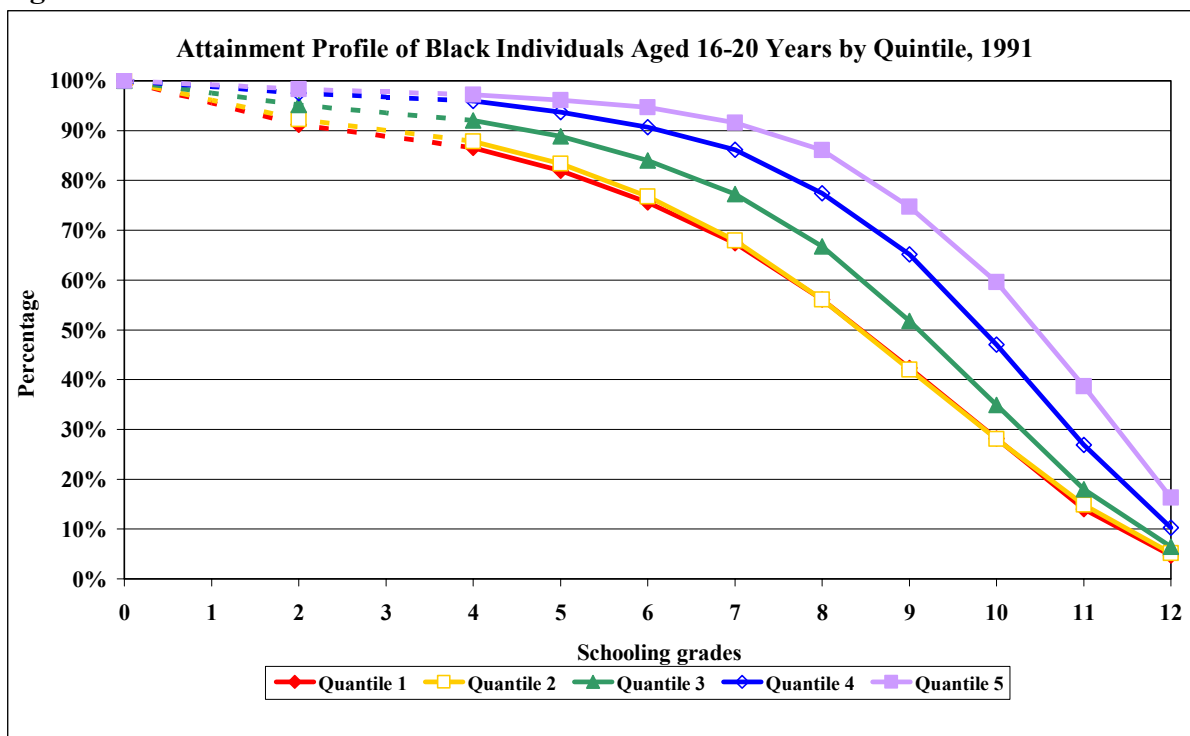


Figure 3.25

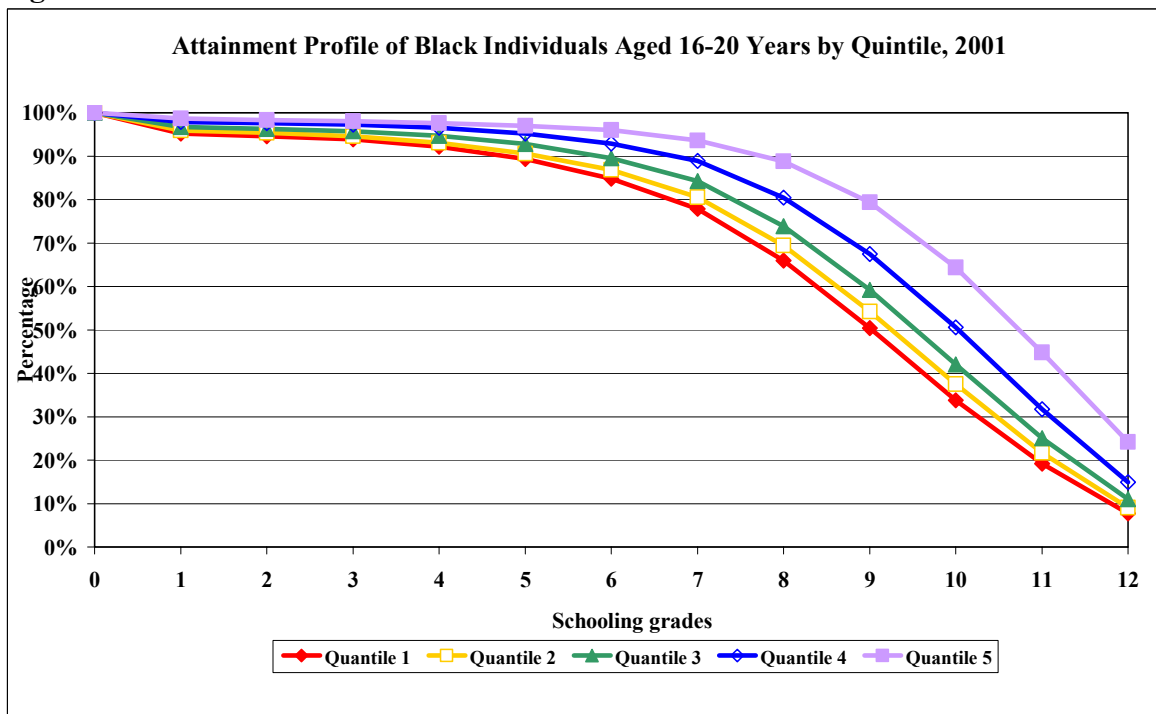


Figure 3.26

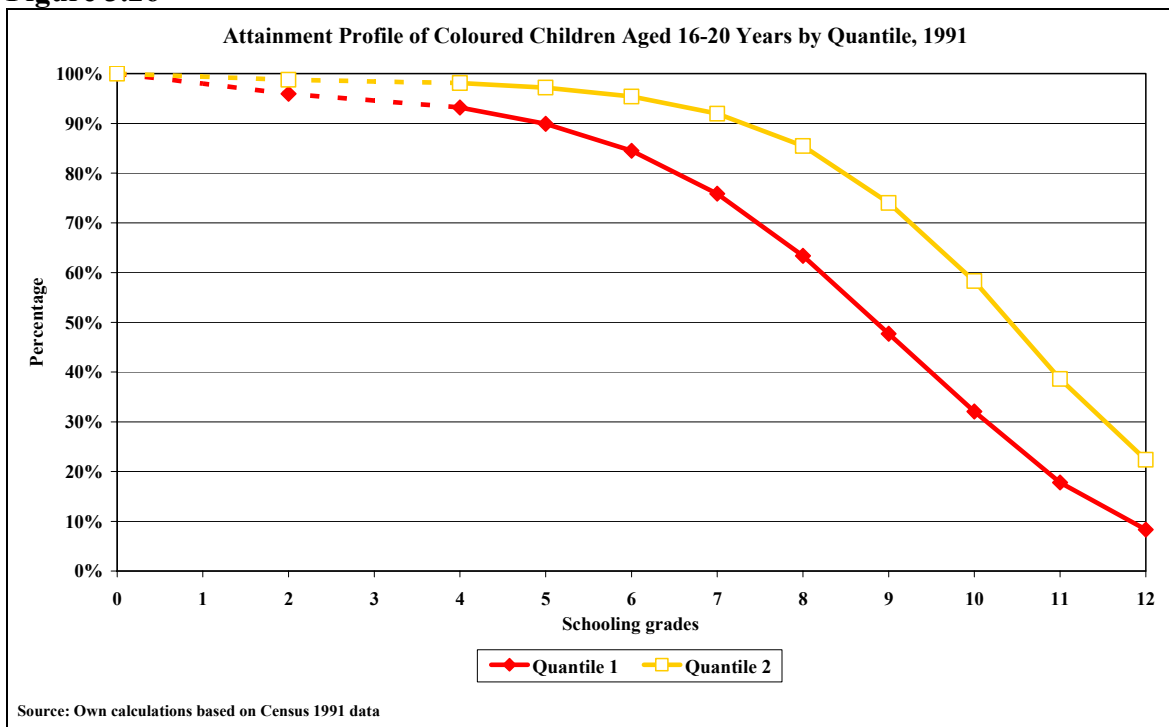


Figure 3.27

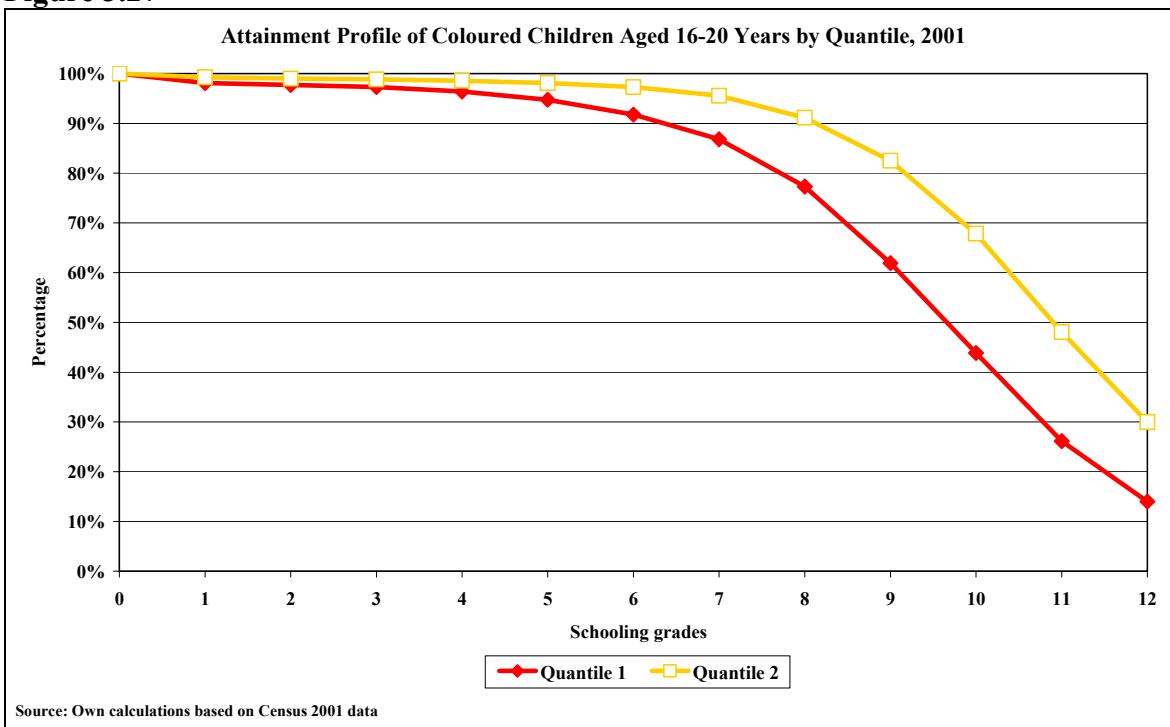


Figure 3.28

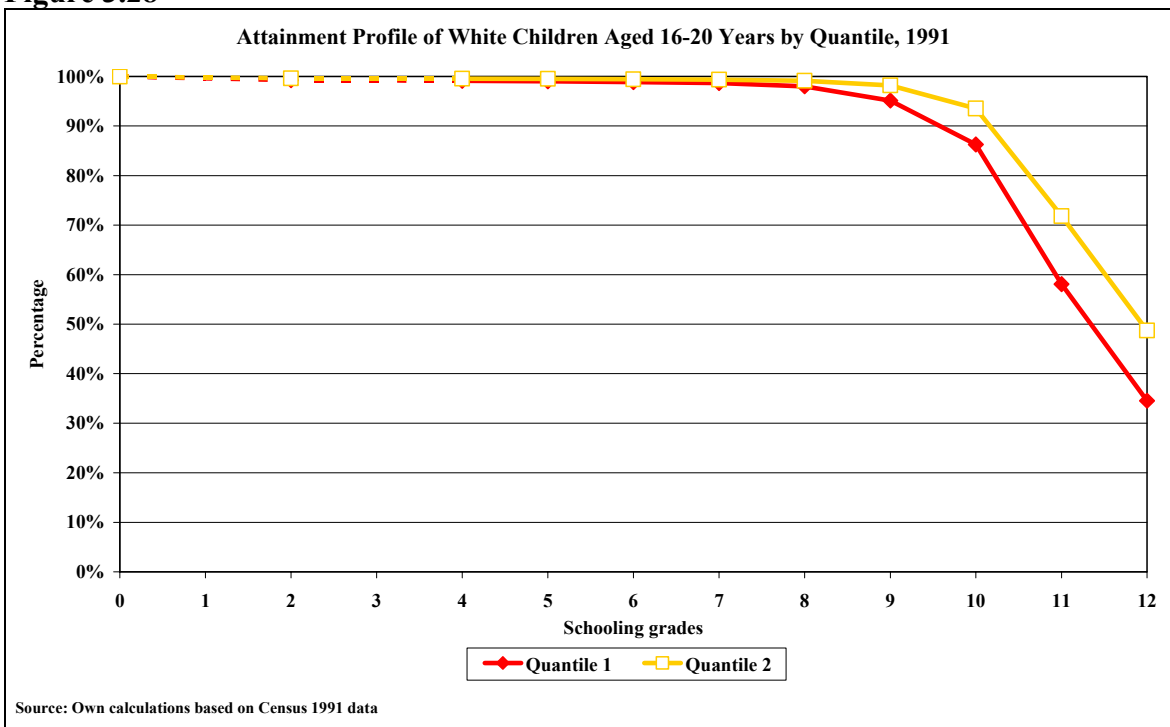
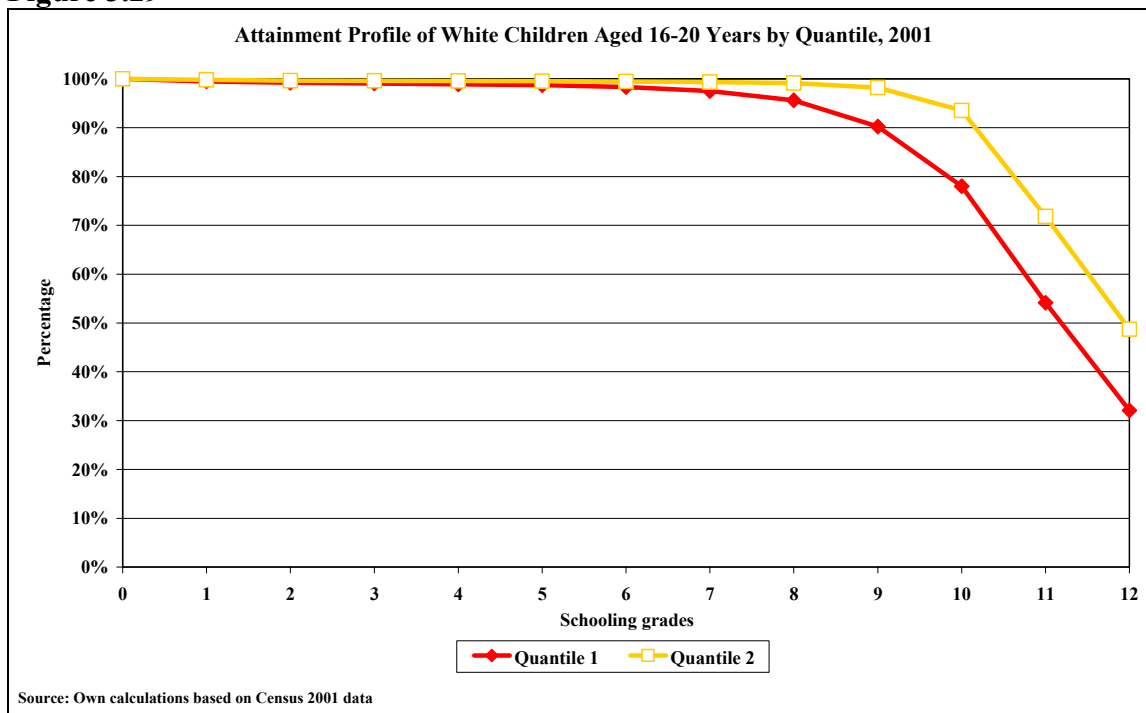


Figure 3.29

The next set of graphs looks at inter-generational educational mobility for the Black African population, showing patterns of child attainment in different census and linking these to parental education levels. Figure 3.30 shows that there was a strong increase of attainment patterns between the 1985 and the 1991 censuses for children of parents who had had no schooling themselves⁵, but that this increase slowed down considerably in the two subsequent inter-censal periods. Similar patterns apply for children of parents with incomplete primary education (Figure 3.31), incomplete secondary education (Figure 3.32) and matric or beyond (Figure 3.33).

⁵ The highest parent education level was used for this analysis. Where one parent's education level was not known, that of the other parent was used. In the data for the 1985 census, children could not be linked to their own parents, but the assumption was made that the head of household was the parent of the child. For most instances, this would be correct, and in other cases, the parent's education would probably be similar to that of the head of household.

Figure 3.30

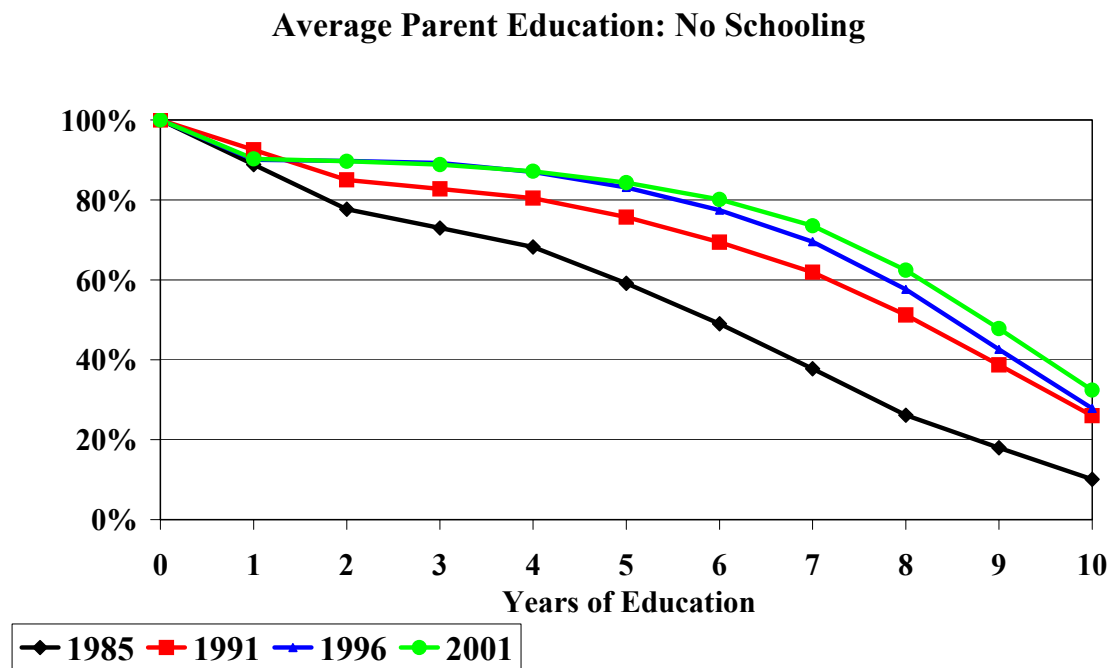


Figure 3.31

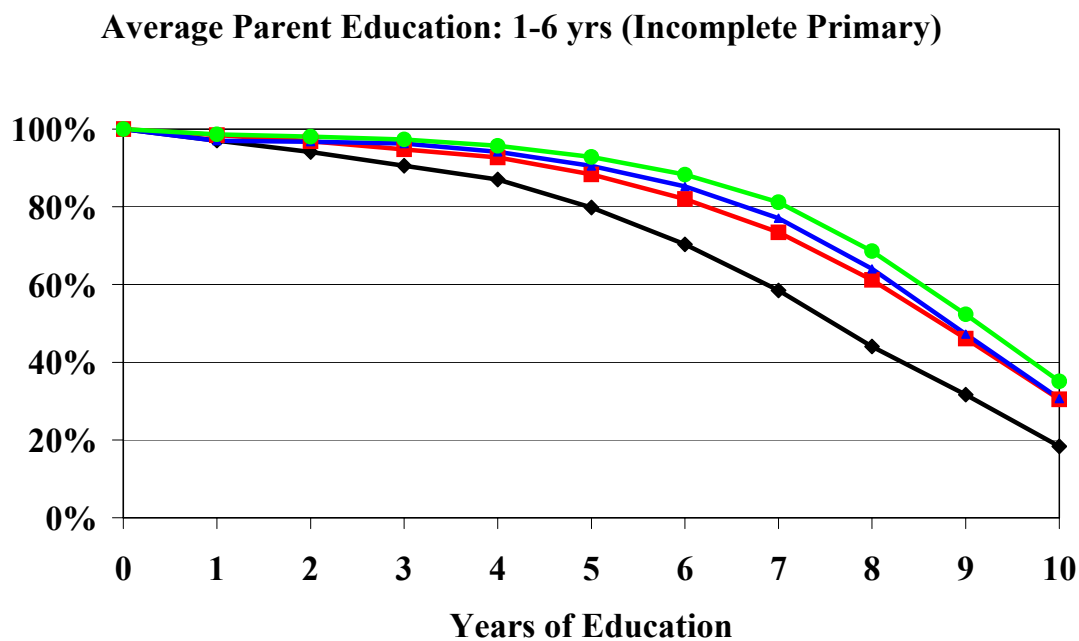


Figure 3.32

Average Parent Education: 7-11 yrs (Incomplete secondary)

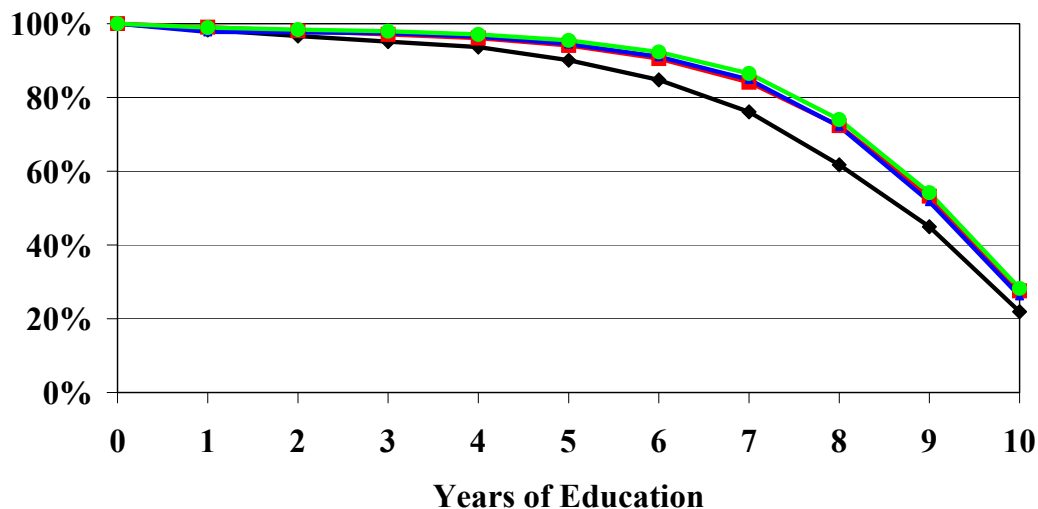


Figure 3.33

Average Parent Education: 12 yrs (Matric)

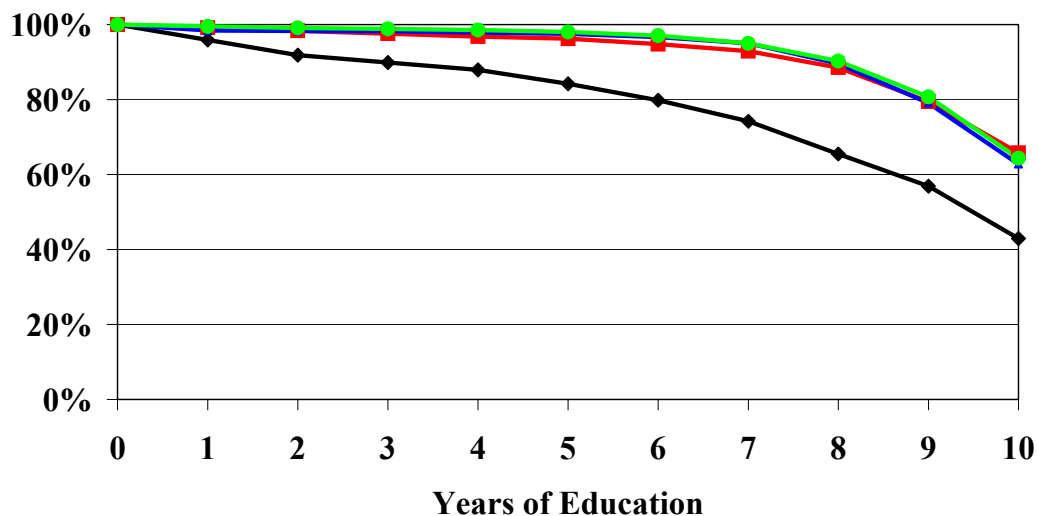


Figure 3.34 shows the mean attainment level by age derived from a number of surveys. There appears to be a slow rise in attainment levels at higher age groups. Figure 3.35 confirms this: At higher age groups, there is a slight upward incline in mean attainment levels, something that is not as evident at lower ages,

probably reflecting the fact that there is little further gain to be made in terms of attainment at these low ages. It is only at higher ages, where there is greater repetition or discontinuation (temporary or permanent), that there is still greater scope for attainment progress.

Table 3.3 shows attainment levels derived from a number of surveys by age level, as well as the gains in attainment for each age cohort compared with the cohort one year younger. Because these are surveys, subject to sampling and other errors, each of them reflects a snapshot at one point in time. The figures should not be interpreted too finely. Moreover, gains between years are to some extent a reflection of sampling and of histories of different age cohorts, rather than being histories of progression of particular cohorts. Nevertheless, these figures offer important insights.

The gain, in mean attainment per year of age based on the average⁶ of the LFS2004B and LFS2006B time trends, was 0.95 years for progression from 10 to 11 years of age, but this gain declines with every subsequent year, as the second panel of Table 3.3 indicates. After age 17, it declines sharply. This gain can be regarded as an indicator of efficiency: The maximum gain to be made with an increase of one year in age is 1.00 year; the actual gain, achieved according to the final column for the age group 11 compared to the age group 10 is 0.95 years, is shown at the top of the bottom panel in the final column. As age rises, efficiency declines to about three quarters of the maximum for those aged 17, but thereafter it drops sharply to less than half the maximum, and even further for 20 year olds. This is an indication that up to age of 17 there is also fair progress through the schooling system. However, by the age of 18 there are already some individuals who have successfully completed their school education, so they would not show any further gain.

⁶ The average is used to reduce the effect of over-reliance on one sample.

Figure 3.34

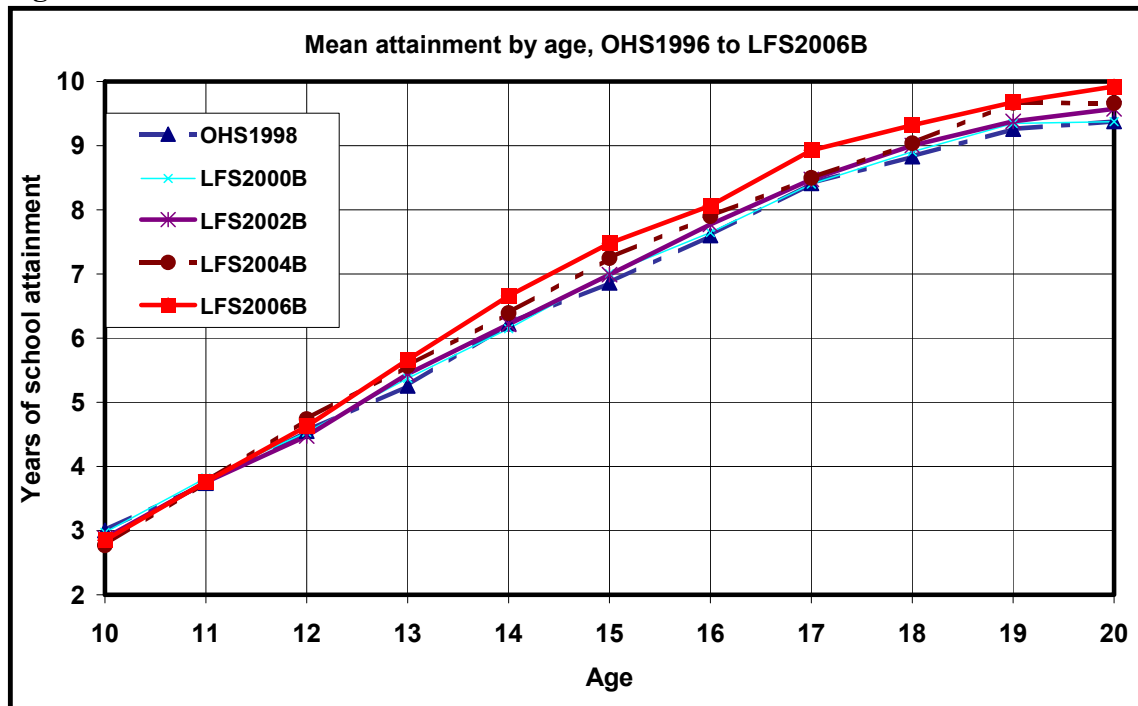


Figure 3.35

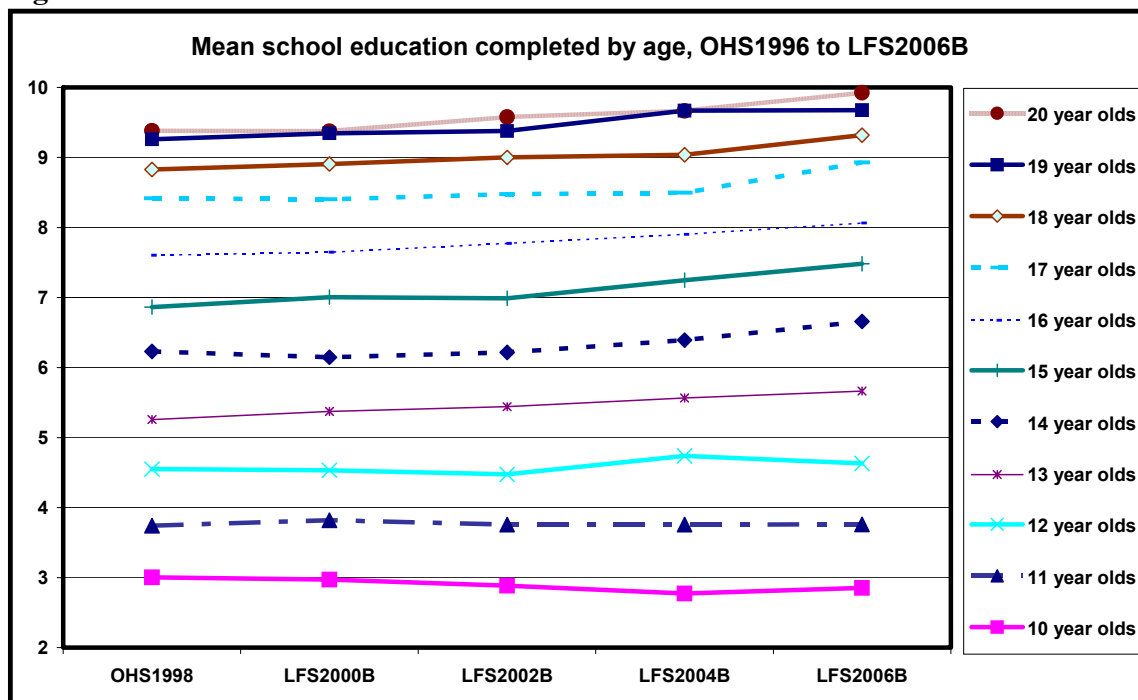


Table 3.3: Mean attainment by age group from surveys, and gain in attainment compared to one year younger age group

Age	OHS1998	LFS2000B	LFS2002B	LFS2004B	LFS2006B	Average LFS2004B & LFS 2006B
Mean attainment in years:						
10	3.00	2.97	2.88	2.77	2.85	2.81
11	3.74	3.82	3.76	3.76	3.76	3.76
12	4.55	4.53	4.48	4.74	4.63	4.68
13	5.26	5.37	5.44	5.57	5.66	5.61
14	6.23	6.15	6.22	6.39	6.66	6.53
15	6.86	7.01	6.99	7.25	7.48	7.37
16	7.60	7.65	7.77	7.90	8.06	7.98
17	8.42	8.40	8.48	8.50	8.93	8.71
18	8.83	8.91	9.00	9.04	9.32	9.18
19	9.26	9.35	9.38	9.67	9.68	9.67
20	9.38	9.37	9.58	9.67	9.92	9.79
Gains in mean attainment compared to age group one year younger (years)						
11	0.74	0.85	0.87	0.99	0.91	0.95
12	0.81	0.71	0.72	0.98	0.87	0.92
13	0.71	0.84	0.97	0.83	1.03	0.93
14	0.97	0.77	0.78	0.83	1.00	0.91
15	0.63	0.86	0.77	0.86	0.82	0.84
16	0.74	0.64	0.78	0.65	0.58	0.62
17	0.81	0.76	0.70	0.59	0.86	0.73
18	0.41	0.50	0.53	0.54	0.39	0.47
19	0.43	0.44	0.38	0.63	0.36	0.49
20	0.12	0.03	0.20	0.00	0.25	0.12

3.5 CONCLUSION

This chapter has shown that attainment patterns are rising across the board from census to census; that racial patterns of attainment have become less divergent, particularly at lower levels of attainment; that there has been considerable progress in attainments; and that parent socio-economic status and parent education still play a role in attainment, but not a very large role at these relatively modest grade levels. However, the obstacles to higher attainment which reflect quality differentials (matric and tertiary qualifications) still greatly affect a large part of the population, and failure to overcome these obstacles (or fear that these obstacles would be too great) is probably largely responsible for discontinuation in the school system at higher grades.

4. CHAPTER FOUR: FACTORS INFLUENCING LEARNER DROP-OUT

4.1 INTRODUCTION

There are many factors which influence how much time children spend at school. Some of these have already been briefly highlighted in the previous chapter, particularly the correlation between the socio-economic status of parents and educational attainment. This section of the report provides a synthesis of the factors influencing learner dropout that are emerging from the extensive literature review that was conducted as part of this investigation. In addition, the section highlights interventions that have been implemented by some countries to prevent dropping out of school.

UNESCO reports that poverty in particular serves as a significant obstacle to children's education (UNESCO, 2007a). They also report that of 132 countries reviewed, about 87% of a cohort of pupils who had access to primary education, reached the last grade in 2003. In sub-Saharan Africa, less than two-thirds of pupils reached the last grade in most of the countries. However, school retention is also low in several South and West Asian countries (UNESCO, 2007a: 12).

There appears to be an almost universal commitment in providing nine years of basic education internationally. Of the 203 countries that were investigated, approximately three-quarters have compulsory education until lower secondary school. The enrolment in primary education worldwide increased by 6% between 1999 and 2004 with the largest increases occurring in sub-Saharan Africa (27%) (UNESCO, 2007a: 25). Similarly, the demand for secondary education has risen by 20% in sub-Saharan Africa. This is also seen in the Arab States and South and West Asia where transition rates from primary to secondary education are close to 90% in about half of the countries in each region. The only exception occurs in Sub-Saharan Africa where fewer than two-thirds of pupils make the transition to secondary school. (UNESCO, 1997a: 12).

However, access to secondary schools remains highly inequitable and

marginalised children are often excluded. These would include poor, disabled, certain ethnic groups and, in some places, girls. The excluded are disproportionately poor, rural and female (UNESCO, 1997a: 13). It is not surprising that the same factors that influence being out of school, also influence drop out, and children from rural areas and poor homes, are most at risk.

4.2 FACTORS ASSOCIATED WITH GRADE REPETITION

There is substantial literature to support the conclusion that grade repetition is a prelude to school dropout. Herrán and Van Uythem (2001: 19) state that "the set up towards dropping out of school is rather a gradual process of accumulated school failures whereby the risk of dropping out is progressively concentrated among the poorest students. Once a student is trapped in a cycle of repeated school failure he or she succumbs easily to economic, family or peer group to leave school in pursuit of an illusion of financial independence." Jimerson, Egeland, Sroufe and Carlson (2000) make a similar point that dropping out is best conceptualized as an evolving process rather than an event.

Research has identified no single cause for grade repetition, but several characteristics are associated with grade repetition. These roughly fall into two categories: in-school (also known as supply side) factors and out-of-school (also known as demand side) factors. In-school factors include availability of materials such as desks, textbooks, teachers, teacher attitudes, and policy framework of a specific educational system. Out-of-school factors include the socio-economic status of the family, nutritional status of a child, age of entry at school, number of children in the household, level of academic attainment of parents/guardian, school readiness, and lack of parental involvement in school. These can be summarised as follows:

Table 4.1: Factors associated with grade repetition

<i>Home and family</i>	<ul style="list-style-type: none"> ✓ Low socio-economic status ✓ Unstable family structure ✓ Lack of parental involvement in child's schooling activities
<i>Administration</i>	<ul style="list-style-type: none"> ✓ Lack of support systems for at-risk students ✓ Lack of support systems for teachers ✓ Absence of school policy on teaching of reading
<i>Learning environment</i>	<ul style="list-style-type: none"> ✓ Poor infrastructure ✓ Large teacher-student ratios (creating a climate not conducive to positive interaction between teacher and student and between student and student)
<i>Curriculum delivery</i>	<ul style="list-style-type: none"> ✓ Poor curriculum delivery ✓ Insufficient attention given to teaching of reading ✓ Inappropriate instructional practices (which are not developmentally appropriate)
<i>Teacher quality</i>	<ul style="list-style-type: none"> ✓ Unprepared to deal with transition, slow learners, student diversity ✓ Inconsistencies in standards and services offered to pre-primary aged learners ✓ Finds difficulty in diagnosing learners with learning difficulties and unable to design appropriate remedial programmes for ensuring student success ✓ Low teacher expectation ✓ No opportunities for upgrading skills and competencies ✓ Limited student-teacher interaction
<i>Resources</i>	<ul style="list-style-type: none"> ✓ Outdated equipment

	<ul style="list-style-type: none"> ✓ Lack of necessary support services e.g., guidance counsellors and facilitators to cater for individual needs of students at risk.
Students	<ul style="list-style-type: none"> ✓ Malnutrition ✓ Insufficient mental stimulation in early years ✓ Social, emotional and health problems ✓ Individual needs not met ✓ Absenteeism

Adapted from: Ready to Learn: Early Childhood Education of Quality to Prevent school failure in Trinidad and Tobago. OAS hemispheric ECCE Team Report, October 2004

Most reviews and meta-analyses (Holmes, 1989, Jimerson, 2001) on research carried out in North America, present cumulative evidence that use of grade repetition as a strategy to address academic underachievement or to deal with problems associated with poor socio-emotional adjustment, is ineffective and potentially harmful to the learners. Jimerson, Anderson and Whipple (2002) in their review of the literature on dropping out of school, present compelling evidence that grade repetition is the “most powerful predictor of drop out status”. Roderick (1995) corroborates the conclusion to which much research points, namely, that repetition:

- does not solve the problem (of academic underachievement);
- sends a message of failure to a student, who then may suffer from long-term self-esteem and engagement problems;
- results in a student being overage during adolescence, increasing the risk of disengagement from school.

In their seminal paper, Jimerson et al. (2002) make the following points:

- Repetition in first through third grades was a strong indicator of later dropping out.
- Repetition increases the risk of dropping out by 30% to 50%.
- Repeating a grade or grades during elementary school reduces the likelihood of pursuing post-secondary education by 85 percent.

- Students who repeated a grade once had a 69% drop out rate, those who repeated twice had a 94% drop out rate, compared to a 27% drop out rate for those who had never repeated a grade.

Other studies that identify grade repetition as a strong predictor of drop out include Alexander et al (2003), Grissom and Shephard (1989) and Rumberger (1995).

There is a less negative view of grade repetition. In particular, Alexander et al (2003) argue that grade repetition in the early primary grade helps prepare low-achieving learners for better performance in later grades. The positive effects accrue to the learners who have repeated only once after the first grade. However, this short-term benefit seems to dissipate with time. Kenny (1991) makes the observation that each group of repeating learners show improvement during the year of repetition and regress in the year following repetition. Her research concludes that grade repetition tends to benefit only a minority of learners.

The international literature that was reviewed on school dropout can be grouped into four areas, namely rates and methodology, interventions (i.e. prevention of school drop outs), and future trajectories and contributing factors to school drop outs. By far the largest body of work has been undertaken in identifying the factors that contribute to school dropouts. One of the main critiques by Luyten et al. (2003) is that literature, available on factors influencing drop out, tends to be just one of the potential variables which may play a role and be analysed at a particular time. Therefore, Luyten et al. (2003) suggest that multiple factors linked to family, school and learner characteristics as potential explanatory variables, need to be considered, factors which are outlined in Table 4.2. A further limitation of some studies is a reliance on survey and/or interview data and a lack of investigation of the early years of a child's academic life (Jimerson et al., 2002).

Table 4.2: List of factors that may play a role in school dropouts

<i>Learner/ demography</i>	<i>School principal and teacher opinions</i>
<ul style="list-style-type: none"> • Gender 	<ul style="list-style-type: none"> • Achievement orientation

<ul style="list-style-type: none"> • Minority/ non-minority status • Immigrant to country • Educational level of parents • SES • Neighbourhood-level variables 	<ul style="list-style-type: none"> • Special approach disadvantaged students • Education system causes low achievement • Lack of intelligence causes low achievement • Parents cause low achievement • Consensus amongst teachers
<p>School context variables</p> <ul style="list-style-type: none"> • Percentage of learners taking further education • Truancy • School size • School sector • Single track school • Urbanicity of school location • Percentage of working class learners 1st grade • Percentage of minority learners 1st grade • Average level of parents education 	<p>School organization variables</p> <ul style="list-style-type: none"> • Measures against truancy • Actions against dropout • Learner counselling • Focus of counselling on transition problems • Number of formal meetings • Number and intensity of school rules • Monitoring and evaluation • Evaluating and supporting quality teaching • Activities for labour market transition • Activities to get minority parents involved • Informing parents through home visits • Comparing achievement with other schools • Manager learning about quality of lessons • Frequency discussing report grades
<p>Family characteristics</p> <ul style="list-style-type: none"> • Single-parent households • Older siblings • Family's cultural capital • Parent-child conversations about school 	<p>Classroom teaching</p> <ul style="list-style-type: none"> • Effective teaching time • Instruction adapted to learners' aptitudes • Checking and testing during regular classes • Monitoring progress during the school year • Use of test results to adjust teaching
	<p>Learner education characteristics</p> <ul style="list-style-type: none"> • Age • Well-being at school • Achievement motivation • Achievement problems • Failing grades • Behavioural problems • Poor peer relationships

Source: Adapted from: Luyten, Bosker, Dekkers and Derks (2003: 377); Jimerson et al., 2002

In the two sections which follow, the factors directly related to the school are firstly analysed (in 3.2.1) and thereafter, the out of school factors will be analysed (3.2.2).

4.3 SCHOOL FACTORS RELATED TO SCHOOL DROPOUT

There are a number of factors which hamper learner's achievement at school and increase the risk of dropout. These include poor education quality which manifests in overcrowded classrooms, poorly trained teachers and shortages of learning materials (UNESCO, 2007a: 12). Luyten et al. (2003) argue that characteristics of the school itself may play an important role in learner drop out.

A number of conclusions arise from the literature as cited by (Montes & Lehmann, 2004). Firstly, *Early Predictors* matter, even after taking into account other factors, first grade problem behaviours, school performance and repeating a grade were significant predictors of school dropout. Secondly, repeating a *grade* is a major predictor. This comes through clearly in various studies and is well-established in the literature. Keeping learners in a single grade more than once is identified as a key variable at every grade level. Repeating a grade is associated with a seven-fold increase in drop out risk, and when controlling for measures of school performance, children's attitudinal and behavioural school engagement, and parents' psychological supports.

(i) Grade Repetition

Jimerson, Anderson and Whipple's (2002) systematic review of seventeen studies examining factors associated with dropping out of high school prior to graduation, confirmed that repeating a grade is one of the most powerful predictors of school dropout. Each of these seventeen studies found that repeating a grade was associated with subsequent school withdrawal. Of these studies, several included statistical analysis which allowed for controlling of many individual and family level variables commonly associated with drop out, including socio-emotional adjustment, SES, ethnicity, achievement, gender, parental level of education and parental involvement. The overview revealed the consistent finding that learners, who repeat during primary school, are at an elevated risk for dropping out of high

school. It was found that learners who repeated a grade, were 2 to 11 times more times likely to dropout than other learners.

Jimerson, Ferguson, Whipple, Anderson and Dalton (2002) conducted a 12-year longitudinal study of a small sample of learners (n = 124) followed from pre-school to 11th grade, exploring the learner characteristics associated with *grade repetition and school drop out*. Learner level variables including lower self-esteem, problematic behaviour, and lower academic achievement are associated with the increased risk of dropping out. Family level variables such as lower maternal educational attainment and lower maternal value of education also characterised repeating learners who dropped out relative to those who persisted. In this study, socio-emotional and behavioural variables at each age were consistently associated with dropping out. The measures of academic achievement during elementary school did not differentiate future dropouts from those who persisted. However, in junior high school and continuing through high school, the learners, who had previously repeated a grade and who dropped out, demonstrated lower grade point averages

The results indicate the need to attend to indicators of low self-esteem and aggressive behaviour early in childhood in order to promote continuing academic success and prevent dropout. This study also indicates that early measurable factors and behaviours are highly associated with later school dropout. Therefore, the need for early prevention and intervention is highlighted. The results also reiterate that grade repetition is generally ineffective as an intervention to address these early problems, regardless of when repetition occurs. Despite the importance of the implications from the findings, these would have to be verified with a larger sample.

(ii) **School environment, structure and organisation**

Smyth and Hattam (2002) conducted a study focusing on what they termed cultural geography. “The cultural politics of the school has a powerful effect on how young people make sense of schooling, the spaces that exist for them to be listened to, and how they work to shape schools as places” (Smyth & Hattam, 2002 : 376-377).

The study report examined early school leaving from the position of 209 young Australians who had left school or who were at imminent risk of doing so. They investigated how the culture of the school contributed to or interfered with early school leaving. They concluded that contributory factors to school-leaving included: making students responsible for their failure, handling 'kids' who 'speak back, learners who fell through the cracks, uninspiring pedagogy and being treated like a child.

Lee and Burkam, 2003 explored how high schools, through their structures and organization, may influence students' decisions to remain at school or drop out. Using a sample of 3840 students in 190 urban and suburban high schools from the High School Effectiveness Supplement of the National Educational Longitudinal Study of 1988 in the USA, the researchers applied multilevel methods to explore the schools' influence on dropping out, taking into account students' academic and social background. They found that in schools which offer mainly academic courses and few non-academic courses, students are less likely to drop out. Similarly, students in smaller schools enrolling fewer than 1500 students more often stay at school. Most importantly, students are less likely to drop out of high schools where relationships between teachers and students are positive. The latter factor is one of the most overlooked school factors emphasising the quality of the relationship between teachers and students, especially with at-risk students and the powerful impact of teacher attitudes and beliefs on student success (David & Dupper, 2004). The impact of positive relations, however, is contingent on the organizational and structural characteristics of high schools (Lee & Burkam, 2003).

4.4 OUT OF SCHOOL FACTORS RELATED TO SCHOOL DROP OUT

School drop out can be considered an evolving process rather than a single event which occurs across developmental stages, as illustrated by Montes and Lehmann's (2004) outline of predictor variables for drop out in Table 4.3. The process itself can start prior to a child entering school, later manifesting in a number of behavioural and emotional forms (Montes & Lehmann, 2004).

Table 4.3: Predictors for later school drop out

<i>Before School*</i>	<i>First grade</i>	<i>Foundation Phase</i>	<i>Intermediate phase and High School</i>
Quality of care giving	Problem behaviours School performance Grade retention	Problem behaviours School performance Grade repetition Parent involvement Gender SES Stressful life events Mobility	Problem behaviours School performance Grade repetition Parent involvement Gender SES Stressful life events Mobility Absenteeism Disciplinary problems Self-report (likelihood of graduation)

Source: Montes and Leymann (2004).

*Many important variables have not been studied at this level

Luyten et al. (2003) critiqued research-based literature which links the likelihood of school drop out to learner characteristics such as low economic status, ethnicity and gender. These variables purportedly influence drop out because they relate to the capacities and the school motivation of learners. Luyten et al. (2003), report that this literature is dominated by personal background characteristics, which then leads to the view that dropout is a personal or family problem. In particular, the following factors clearly emerge as correlates of secondary school drop out, albeit mostly in the USA.

4.4.1 Societal or community factors

(i) Neighbourhood socio-economic distress (Crowder & South, 2003).

Crowder and Smith found (n = 6792) that among African Americans, the detrimental impact of neighbourhood socio-economic distress on school drop out has increased significantly over the past quarter-century, a probable repercussion of the increasing geographic concentration of urban poverty. The negative effect of neighbourhood distress on high school completion is

particularly pronounced among Black African adolescents from single-parent households and among white adolescents from low-income families, the results of which are broadly consistent with Wilson's claim that exposure to neighbourhood poverty reinforces the damaging consequences of individual disadvantage. The data for this research was drawn from the Panel Study of Income Dynamics (PSID), a nationally representative longitudinal survey of US families and their individual members initiated in 1968 with approx. 5000 families. The sample includes Black African and White PSID family members who were between the ages of 14 and 19 between 1968 and 1993 (3067 Black African and 3689 White people for a total of 6792).

(ii) **Social capital, class background (Dunham & Wilson, 2007)**

Using 1996 data from the National Educational Longitudinal Survey (in the USA) (drop out (N = 2998) and non drop out (N =2995)), Dunham and Wilson found that the social class of Whites, African Americans, Hispanics, and Asian adolescents and consequences for dropout vary across ethnic groups. Whites and Asians are specifically, able to compensate in some way for their poor backgrounds in terms of reducing the likelihood of dropping out compared to African Americans and Hispanics, who are less likely to be able to compensate and thus have a higher risk of dropping out.

4.4.2 Individual factors

In their review of 55 studies, Hymel and Ford (2003) reported that 11.4% of Canadian youth leave school early, with a greater proportion of male than female dropouts (14.7% vs. 9.2%). In that context, the authors reported that learners who drop out tend to be less intellectually competent, receive lower grades and achievement scores, and are more likely to have repeated a grade. These learners are also more likely to come from lower income and single-parent homes. Their parents tend to be less involved and demanding with their children, provide less educational support and are less likely to model educational attainment. Academic ability and family support are only part of the picture, however. Although drop-out rates are higher among lower income and single-

parent families, the majority of dropouts come from two-parent, middle income homes.

Similarly, although school dissatisfaction is a central reason for dropout, difficulty with schoolwork is cited by less than a third of drop outs. Instead, students cited difficulties in teacher and peer relationships, feeling unsafe or not belonging or having friends who have left school as main reasons for dropping out. That is, they fail to connect with the school milieu, citing socio-emotional factors as being equally important considerations for academic failure and school drop out.

Children, who have difficulty socially and/or emotionally, demonstrate poorer school adjustment and performance. Early interpersonal behaviour also predicts academic performance and often better than intellectual factors. Indeed, social behaviour (e.g. aggression), low SES and early academic difficulties are associated with decreased likelihood of graduation and the authors found recent longitudinal studies suggesting that these associations were likely to be causal.

(i) **School girl pregnancy**

One of the very few pieces of research conducted in South Africa and linked to school drop out was done by Grant and Hallman (2006). As such, it is elaborated more fully than other summaries of research in this section.

Case study

Using data collected in 2001 in KwaZulu-Natal, South Africa, Grant and Hallman examined the factors associated with schoolgirl pregnancy, as well as the likelihood of school drop out and subsequent re-enrolment among pregnant schoolgirls. Their analyses triangulated data collected from birth histories, education histories, and data concerning pregnancy to strengthen the identification of young women who became pregnant while enrolled in school and to define discrete periods of school interruption prior to first pregnancy.

Grant and Hallman's main findings were that prior school performance⁷ was strongly associated

⁷—defined as instances of grade repetition or non-pregnancy-related temporary withdrawals from school

with a young woman's likelihood of becoming pregnant while enrolled in school, dropping out of school if she became pregnant, and not returning to school following a pregnancy-related drop out. Young women who were the primary caregivers to their children were also significantly more likely to have left school than are women who shared or relinquished childcare responsibilities. Furthermore, young women who lived with an adult female were significantly more likely to return to school following a pregnancy related drop out.

Sample

The data for the study were drawn from a 2001 survey study "transitions to adulthood in the context of AIDS in South Africa" conducted in KZN. Durban Metro and Mtunzini Magisterial districts were purposively chosen because they represent urban, rural and transitional areas. A modified stratified, multistage cluster sampling method was used. Data were collected directly from each young person (ages 14 to 24). In addition to standard questions regarding schooling and educational attainment, the survey collected a complete educational history for all respondents, beginning with the year the respondent first enrolled in school and ending in her most recent year of enrolment. For each year, the respondent reported whether she enrolled during that particular school year, withdrew during the school year, or repeated the grade because of poor performance. For every withdrawal or interruption during a school year, the respondent was asked why this happened.

Apart from educational history, data were also collected for every live birth. Details on the month and year of the birth were matched with the young women's educational history (triangulation of data). A girl not enrolled in school when she gave birth, was defined as having been a "pregnant schoolgirl" if she gave birth within nine months of the end of the last school year she attended. Of these young women, 33 percent of 14 to 19 year olds and 25 percent of 20 to 24 year olds either withdrew partway through the school year in which they became pregnant or they failed the grade. For purposes of the study, the participants were regarded as having been enrolled in school at the time that they became pregnant. Data were also collected on whether the respondent was enrolled at school at the time of her first pregnancy, whether she dropped out of school because of her first pregnancy, and whether she was subsequently able to return to school.

Findings:

76% of respondents cited pregnancy as their reason for dropping out of school, although a further 6% reported that they dropped out of school to care for a child. In contrast 11% of women reported

that they dropped out of school because they were unable to pay school fees. These 11% of women were also pregnant at the time so it is unclear if the pregnancy placed an extra financial burden or precipitated the drop out. Of pregnant schoolgirls who had not returned to school by the time of the survey, 19% cited their inability to pay school fees as the reason. The pregnancy questions also shed light on pregnancies that did not result in live births. Less than 3% of women who had ever been pregnant did not report ever having given birth (the majority of these pregnancies- 14 of 17- had been terminated). The majority of 14 to 19 year old respondents were enrolled at school at the time of the survey (78%) compared with only 28% of 20 to 24 year old respondents. 13% of all 14 to 19 year old female respondents became pregnant while enrolled at school compared to 38% of 20 to 24 year old respondents.

Conclusions:

Prior school performance is strongly associated with a young woman's likelihood of becoming pregnant whilst enrolled at school, and, among pregnant schoolgirls, with the likelihood of dropping out of school at the time of pregnancy. Young women with a prior non-pregnancy-related grade repetition are two times more likely to leave school at the time of their pregnancy than are those who had not repeated a grade, and women, who had withdrawn from school temporarily, are two to three times more likely to drop out than those who had not. For those who dropped out for pregnancy-related reasons, those who had repeated a grade or who had withdrawn temporarily from school, are significantly less likely to return to school following childbirth.

Access to childcare plays a significant role in subsequent educational attainment. Those who were primary caregivers were more likely to drop out of school than are those who shared child caring responsibilities with others. Those living with an adult female, were also more likely to return to school following a pregnancy-related dropout. This variable was not a significant factor in whether women dropped out of school.

The research lends some support to the hypothesis that young women who are more engaged in their education are less likely to become pregnant while attending school and, if they do become pregnant, are less likely to drop out as a result of the pregnancy. A significant proportion of pregnant schoolgirls in South Africa either remained in school or re-enrolled shortly after the birth of their child.

Prior school performance measured by grade repetition or temporary withdrawal from school is highly predictive of which young women will drop out.

School engagement⁸ is therefore thought to play a role. School behaviours such as attending class, participating in discussions, completing homework assignments, avoiding distracting behaviour and taking part in extracurricular activities are used as proxies for engagement and have been shown to be correlated with academic achievement. Disengagement has been associated with learners' perceptions that few opportunities follow school completion. If young women believe that education offers low returns, they may feel little incentive to avoid pregnancy.

Although education is the primary investment strategy used by poor families to escape poverty in less developed countries, evidence from South Africa indicates that labour-market incentives for young black African women aged 15 to 24 to complete secondary school are not high and may even be declining. This age group has the highest unemployment rate by far; jobless rates rose markedly for this group between 1995 and 2002.

(ii) **Early adolescent peer affiliations.**

There is evidence of the effect of peer group pressure on individual students resulting in dropouts. Farmer, Estell, Leung, Trott, Bishop and Cairns (2003) conducted research into individual characteristics and peer group membership type in 7th grade in relation to school drop out. A sample of 475 participants (248 girls and 227 boys) was drawn from Cohort II of the Carolina Longitudinal Study (CLS). Being a member of an aggressive group was associated with increased rates of dropout for aggressive⁹, but not non-aggressive youth. Membership in popular (i.e. majority of members were popular) and zero-popular (i.e. no popular

⁸ School engagement is the combination of learners' sense of belonging in their school, commitment to school, and commitment to academic work.

⁹ Peer group type was characterized according to the proportion of group members who were high on teacher-rated aggression and popularity

members) groups was linked to dropping out, while membership in a non-popular group (i.e. a few popular members) appeared to be protective for aggressive youth. Both popular and non-popular youth who affiliated with aggressive peers had elevated rates of school drop out.

All aggressive participants, who were socially isolated, dropped out, while non-aggressive youth, who were socially isolated, tended to complete school. Physical aggression as a predictor of drop out was further pursued by Kokko, Tremblay, Lacourse, Nagin and Vitaro (2006) using a sample of males between 6 and 12 years of age (N = 1,025). They found that that physical aggression predicted both school drop out and physical violence.

In contrast, Hymel and Ford (2003) in a Canadian study, found in a review of 55 studies, that positive peer relationships were reported as being a protective factor, supporting a child's academic pursuits, with studies showing that peers can serve as effective socialization agents for effective school engagement and motivation. From early on and throughout school, having a friend is associated with higher academic performance, more positive attitudes towards school, and less school avoidance. Being rejected or without friends at school, as well as being aggressive, places children at risk for poor academic performance, grade retention, absenteeism and truancy both concurrently and in subsequent years.

However, peer relationship difficulties are not just one-sided as poor school adjustment is also associated with peer victimization and peer aggression/antisocial behaviour. Peer rejection and marginalization can lead to lack of engagement in the school milieu and more of a likelihood that the learner will associate with other marginalized youth.

(iii) **Learning problems and lack of motivation**

Beekhoven and Dekkers (2005) assessed the reasons for very early school leaving of boys in the lower secondary vocational track. A unique combination of quantitative and qualitative data from different sources provided background data on these boys from a national cohort study on their elementary and high school

periods. In-depth interviews, in which the boys reflect on their early school leaving, were conducted. Four case studies are presented in which the boys' own reflections are interpreted in light of the cohort data. It was found that several factors contribute simultaneously to early school leaving; however, the emphasis lies with learning problems, lack of motivation and problems arising from choosing the wrong vocational track. Specific personal problems also negatively affected the school career. While the boys did not feel alienated from school, they did not enjoy studying and would rather start work.

(iv) **Educational Engagement**

Educational engagement¹⁰ was also found to be an important factor in avoiding school drop out. Suh and Suh (2006) (n = 1430) showed that self-concept engagement factors have a long-lasting impact on degree attainment, while school-related personal factors appear to be temporary. Fostering self-esteem, good study habits and organizational skills while in school, are significantly associated with eventual degree attainment among drop outs. The data were drawn from the National Education Longitudinal Study: 88/00 database (a nationally representative longitudinal sample of U.S. students enrolled in 8th grade in 1988) conducted by the NCES. The research sample includes 1430 drop outs and excludes those graduates who did not drop out, those who were still working towards a credential of some sort or those who failed to answer.

They found that high levels of engagement were associated with lower drop out rates and lower teen pregnancy rates. Conversely, a lack of engagement resulted in increased risk for drop out, substance use, teenage pregnancy and criminal activity. Research points to a relationship between drop out and school factors (teacher relationships, peer networks, connections to school). The importance of Suh and Suh's work (amongst others) is that little research has been conducted about how learners who drop out go about high school education in out-of-school settings, how they self-regulate their learning in these

¹⁰ Educational engagement considered in this article focuses on student factors such as educational aspiration, organizational skills, and locus of control.

settings. Important student factors which may have an influence on drop out behaviour such as routine study habits, time management efficiency and educational engagement have received little attention. Students, whose educational expectations (what you think about your personal potential and your future) were less than high school graduation, may be seven times as likely to drop out than learners with educational expectations more than high school graduation.

A lack of motivation (lack of self-determination and feelings of competence) is also associated with dropping out. Learners with an intrinsic locus of control¹¹ believe that their behaviour is directly responsible for specific outcomes and these learners are more likely to experience educational success than those with an extrinsic locus of control. The conclusion was that the three most prominent factors associated with degree attainment for dropout adolescents were academic aspiration, organizational skill and locus of control.

4.5 STUDIES OF VARIABLES IN INTERACTION WITH EACH OTHER

A number of studies which investigated multiple factors at multiple levels affecting school dropout and repetition were identified. These studies, including the interaction of these multiple factors, are discussed below.

(i) Academic performance, personal and environmental characteristics

Adolescents from disadvantaged families are more likely to leave school at age 16. Maani and Kalb (2007) extended the literature on school-leaving decisions by using a new and extensive panel data set from New Zealand and by examining the effect of family income, and personal and environmental characteristics since childhood, on both academic performance and subsequent schooling choices. Results obtained from single equations and joint estimation, allowing for possible endogeneity of academic performance, revealed the importance of the role of

¹¹ Locus of control is about how a learner attributes success, to what extent the learner has control over their educational outcomes.

academic performance in models of demand for education. Several factors which have submerged over time - such as household income at different points in time - influence the school-leaving decision through academic performance. These results point to the role that stimulating academic performance can play in breaking cycles of disadvantage.

(ii) **Learner mobility, parent-child relationship, peer networks, academic performance, school attachment, psychological well-being**

Several studies have linked adolescent residential and school mobility to an increased risk of dropping out of school. However, the reasons for this association have not been examined thoroughly.

South and Haynie (2007) explored the ability of several domains of adolescent life - parent-child relationships, peer networks, academic performance, school attachment, and psychological well-being, by using data from approximately 8500 respondents to the first two waves of the National Longitudinal Study of Adolescent Health (Add Health) - to account for the higher rate of school drop out among mobile rather than non-mobile adolescents. Characteristics of adolescents' peer networks, particularly students' centrality in those networks and the academic performance of their friends, have emerged as the most important mediators of the mobility drop out association. They found an increased risk of dropping out among both mobile and non-mobile students attending schools with high rates of student mobility, which appears partially attributable to lower levels of school attachment and weaker academic performance in high mobility schools.

4.6 PREDICTORS OF CATEGORICAL AT-RISK HIGH SCHOOL DROP OUTS (NOT AVAILABLE AS FULLTEXT)

Suh, Suh and Houston (2007) attempted to identify key contributing factors to school drop out among three categories of at-risk students: those with low grade point averages, those who had been suspended, and those from low socio-economic backgrounds. Logistic regression analysis of the data, which were derived from the National Longitudinal Survey of Youth 1997 (U.S. Bureau of Labor

Statistics, 2002), indicated that student drop out rates were affected differently by students' membership in the three at-risk categories.

(i) **Motivational characteristics, employment patterns**

More and more high school dropouts are obtaining GED's or returning to school to gain diplomas, and several studies point to socio-economic status, academic standing, parenthood status and student's expectations as predictors of drop out's later high school certification. Entwistle, Alexander and Olson, (2004) focused on measures of student's motivational characteristics and employment patterns prior to dropping out as these were absent in the literature.

The authors' research takes a life course perspective, drawing upon a longitudinal study of first time drop outs in Baltimore, USA, where the dropout rate is high (over 40%). The research compares those who dropped out temporarily to those who dropped out permanently. The authors found that Baltimore students who later achieved high school degrees resembled their counterparts – those who completed high school – in US national studies in terms of demographics and school performance. They also found that before dropping out, the temporary dropouts had more positive motivational qualities and were more often employed than the permanent dropouts.

(ii) **Individual, family, school, neighbourhood, diversity, inequality factors**

Van Dorn, Bowen and Blau (2006) used data from the National Education Longitudinal Study in the USA, combined with census data at the zip code (postal code) level, to examine the impact of neighbourhood racial and ethnic diversity and consolidated inequality, in addition to individual, family and school factors, on the likelihood of dropping out of high school. Their results indicate **that while the effects for diversity and consolidated inequality did not increase the likelihood of dropping out of high school, the main effects for family risk and prior academic achievement were significant in predicting the likelihood of**

not dropping out. When they controlled for individual, family, school and neighbourhood characteristics, African Americans were less likely than White students to drop out of school.

(iii) **Attendance, family structure, finance and race**

Koshal, Koshal and Marino (1995) proposed and estimated a statistical model which incorporated the approach of the supply of and demand for school dropouts. The model was estimated by using data for 604 Ohio school districts in the USA. On the supply side, school attendance was the most dominant variable in explaining the variations in the drop-out rate. This is followed in importance by family structure, price and race. On the demand side, price of schooling is the most dominant variable, followed by income of household, attendance rate and divorce rate. The model was also estimated by using cumulative inputs over 5 and 9 years. The results support the hypothesis that dropping out is a cumulative process. According to the results of this paper, schools can reduce drop outs with additional financial resources.

4.7 LEARNER, FAMILY AND SCHOOL CHARACTERISTICS INTERACTION

Luyten, Bosker, Dekkers and Derks (2003) concluded that much of the research literature on dropout was related to student characteristics such as low economic family status, ethnicity and gender. These variables may affect dropout as they are related to the capacities and school motivation of students, which leads to the view that drop out is an individual or family problem. However, the reasons dropouts give for leaving school, suggest that the characteristics of the school itself may play an important role. Nevertheless, only a few empirical studies have been conducted with regard to the influence of school characteristics on drop out and their interaction with other variables.

Luyten et al. integrated the effect of factors with regard to family, student and school characteristics using a subset of a nationally representative sample of 19524 students in 381 secondary schools (VOCL or secondary education, first grade of secondary education in 1989). Information about these students' position

in the educational system was provided for 5 consecutive years by their schools. The student and family characteristics that are tracked were derived from drop out and school disadvantage in general.

Only a single school variable was identified that correlated significantly with drop out rate although the findings varied greatly across schools. The effect of relevant student characteristics (gender, achievement, parent's level of education, minority status), did not vary significantly among schools, but for some variables, the effect was found to differ between boys and girls or between minority and non-minority students.

The variation in dropout rates among secondary schools was found to be large: the dropout rate of the majority of schools (68%) varied between 12.6 and 32.2%, which means that the remaining schools score below 12.6%, respectively above 32.2%. Twenty two percent of learners in LBO and IBO (i.e. the vocational) tracks did not obtain a basic qualification. Schools differ with regard to the general drop out rate but no differential effects were found. Apparently, the effects of gender, social class or ethnicity do not vary among schools.

School factors could explain no more than 11.5% of the school variance in addition to individual student characteristics. Of all variables tested (organization, opinions, classroom teaching), only the percentage of students that had moved on to further education in the past is predictive of the overall drop out rate in the years to come. This may be interpreted as an effect of decisions and motivation of students in higher year groups with regard to their future education, on students in lower year groups. It therefore seems important that schools stimulate their students to continue their educational career after secondary school, either to stop the negative chain of influence through the years or to prevent such a process from getting started in the first place.

Factors which relate to school organization and processes seem to be less promising for understanding drop-out than has been suggested in the literature. The only school factor that has been found to affect drop out is the context factor,

school size, as found from research in the USA, although this did not apply to The Netherlands.

Half of the student characteristics correlate with dropout rates. Both achievement scores and achievement motivation appear to be related to the likelihood of dropping out (measured in the first grade of secondary school). The analyses show that the risk of dropping out is very high for learners who are older than the median age when they enter secondary education, independent of their achievement scores (therefore grade repetition needs to be minimized). The cycle of previous failure may either impact on these students or they may have more mature goals than their younger classmates, goals which are non-school related, such as obtaining a job, an income, raising a family, or goals that are more directed at autonomy. Educational level of parents related strongly to dropout which interacted with gender. Girls with highly educated parents manifest a lower risk for dropping out than boys with highly educated parents. The effect of educational level also differs for minority and non-minority groups. In non-minority groups, the probability of dropping out increases considerably as the educational level of parents decreases. However, with minority students, no such effect was observed.

Some family characteristics appear to relate to drop out, but family factors are less easily influenced by intervention practices. The family's cultural capital (literacy level in the home and cultural activities of parents) does affect the risk of dropping out. Parent-child conversations about school appear not to be related to drop out rates, which seems strange but it may be that parent influence is important in the pre-secondary school years but diminishes in the secondary school years. In contrast to other international findings, being in a single-parent family is not a risk factor in The Netherlands.

4.8 TEST SCORES, DROP OUT RATES, AND TRANSFER RATES

Rumberger and Palardy (2007) investigated the relationships among several different indicators of high school performance: test scores, dropout rates, transfer rates and attrition rates. Hierarchical linear models were used to analyze panel

data from a sample of 14,199 students who took part in the National Education Longitudinal Survey of 1988. Schools that are effective in promoting student learning (growth in achievement) are not necessarily effective in reducing dropout or transfer rates. In fact, after control for student inputs, high schools exhibit relatively little variability in dropout rates but considerable variation in transfer rates. In addition, characteristics of schools that contributed to performance in one area often did not contribute to performance in another.

4.9 ANALYSIS OF THE VARIABLES THAT PREDISPOSE ADOLESCENTS TO DROP OUT OF SCHOOLS

Aluede and Ikechukwa (2003) investigated the variables that predispose adolescents to drop out of school. The sample for their study was made up of 350 participants drawn from the adolescent school drop outs in Edo Central Senatorial district of Edo State of Nigeria. From their analyses, they found that the following factors predispose students to drop out of schools: financial, home, societal values and personal characteristics of the adolescents. However, peer influences (in contrast to studies in the USA) and school factors were found not to predispose adolescents to drop out.

(i) Differences across grade level, age, ethnic and gender groups

Stearns and Glennie (2006) tested whether the reasons for dropouts leaving school differed by grade level and age in the USA. They compared dropout rates and reasons across grade levels and ages for all high school students, ethnic groups, and gender groups. Across all students, ninth graders had the highest drop out rate: this pattern persists for African Americans, Latinos and Native Americans, and for male students. Dropout reasons varied by age, grade, ethnicity, and gender as well. Ninth graders and learners aged 16 and younger were more likely than advanced and older learners to leave school for disciplinary reasons. Older male learners are more likely than younger males to leave school for employment. They concluded that the significant variation in dropout rates and reasons by grade level and age indicated that multiple dropout processes may influence teens to leave school.

(ii) **Typology of students at risk of dropping out of school**

Fortin, Marcotte, Potvin, Royer and Joly (2006) attempted to identify the different subgroups of students at risk of dropping out of school. They developed a typology based on the three main contexts associated with school dropout risk, namely, the personal, family and school contexts. On the basis of these factors, the clustering results enabled the researchers to categorize at-risk learners into four subgroups: (1) the Anti-Social Covert behaviour type, (2) the Uninterested in school type, (3) the School and Social Adjustment Difficulties type, and (4) the Depressive type. Moreover, considering all the contexts involved in school dropout, their clustering technique confirmed the importance of behaviour problems and learning difficulties, while emphasizing the significance of both depression and the family and classroom environments in the development of dropout risk. Students, at risk of dropping out of school, reported many family organisational problems obtaining little emotional support from their parents. They also perceived little order or organisation in the classroom.

4.10 INTERVENTIONS TO PREVENT DROP OUT

There is emerging evidence from developing countries that early childhood care and education (ECCE) programmes are starting to have an impact on school retention and drop out rates. The impact of ECCE is stronger for children from poor families than for more advantaged children and the participation in these programmes results in lower dropout and lower repetition rates in primary school. For instance, a pre-school health programme in Dehli, India increased the average school participation by 7.7% for girls and 3.2% for boys. Similar findings were made in Bolivia, Colombia and Egypt.

A number of interventions were found in the literature regarding grade repetition and appropriate Intervention strategies to prevent or reduce grade repetition. Much research frames the debate on grade repetition as a choice between two options: automatic promotion and grade repetition. The literature points out that neither automatic promotion nor grade repetition is able to address the underlying problems of underachieving learners. Denton (2001) states that automatic promotion, as a practice, is unfair to students and is also detrimental to society. He

further points out that low-performing students who are promoted, typically fall further and further behind their classmates and ultimately leave school without the basic skills and knowledge every adult needs to be a productive member of society. Commenting on grade repetition as an alternative to automatic promotion, Denton (2001) remarks that to most schools, repetition has meant doing the same thing over and over again and hoping that what did not work the first time somehow will work the second time. Reviewed literature shows that this approach to grade repetition seldom succeeds.

The solution to the problem of grade repetition lies in providing such learners with better opportunities to succeed. Most research on intervention strategies to reduce grade repetition, focuses on helping low-performing learners achieve at acceptable levels. Various researchers propose a variety of intervention strategies, including the following:

- Improve access to early childhood development programmes. There is a growing research/knowledge base that demonstrates that learners who have experienced ECD interventions, or at a minimum pre-primary schooling, do better in school than those who have not. Specifically, those children who attend ECD programmes are more highly motivated, perform better, get higher scores on cognitive tests, and get on better with their classmates and teachers. ECD graduates are therefore less likely to drop out or to repeat classes. Therefore, the cost of their schooling is reduced and primary and even secondary education is more cost-effective. Thus, ECD in itself can spur educational participation in a region of the world that lags behind on most educational indicators. (Hyde, 2006);
- Identify student problems as soon as possible in the school year instead of waiting until the entire year is lost, and intervene as soon as problems are identified to provide struggling students with the extra time and the help that they need;
- design extra help around each student's individual needs and have strong quality controls and monitoring to ensure that extra help and time are

working;

- strengthen home-school cooperation;
- create positive classroom climate and cultivate supportive personal relationships with struggling students; and
- provide intensive staff development programmes for teachers.

With regard to school dropout, a number of interventions were identified in the international literature and are summarised as follows:

(i) Knowledge system for prevention

Kapeliuk, Reich and Bar-Lev (2004) reported that more or less 9 percent of the students in Israel drop out of school. Attendance officers, who are appointed to enforce attendance laws and other decisions, have to deal with many dropout cases with limited resources, leading to sub-optimal or even incorrect solutions. In contrast, creative, successful solutions adopted by one attendance officer, are not shared by others, since there is no system (manual or computational) that accumulates knowledge. Kapeliuk, Reich and Bar-Lev (2004) presented a knowledge management model, developed for supporting attendance officers, that is based on problem solving according to precedents.

The model was tested in laboratory settings with 12 attendance officers, each solving 6 problems, and was found to have remarkable potential for improving attendance officers' work and their understanding and perception of their work. The system developed was found to be easy to use and can be easily deployed in real settings and which supported the work of attendance officers. The model was based on problem-solving according to precedents called case-based reasoning. A knowledge system based on this model gave them a mechanism for generating knowledge from their own practice. The power of the model comes from the creation of a community of practice of attendance officers that share knowledge.

(ii) Preventing Poor Mental Health and School Drop out of Mexican American Adolescents Following the Transition to Junior High School

This study by Gonzales, Dumka, Deardorff, Jacobs and McCray (2004) provided an initial test of the *Bridges to High School Program* in the USA, an intervention designed to prevent school disengagement and negative mental health trajectories during the transition to junior high school. The intervention included an adolescent coping skills intervention, a parenting skills intervention, and a family strengthening intervention.

The programme was evaluated by examining pre-test to post-test changes on targeted mediators and outcomes with a sample of 22 predominantly Mexican American families. Adolescents reported increased use of active and distraction coping strategies, and decreased depressive symptoms for themselves from pre-test to post-test. They also reported significant changes in their mothers' parenting skills, including increased monitoring and a decrease in inconsistent discipline. Maternal caregivers reported an increase in supportive parenting and a decrease in inconsistent discipline for themselves and fewer adolescent problem behaviours. Process evaluations confirmed the attractiveness and perceived helpfulness of the programme.

(iii) A package of interventions to reduce school drop out in public schools in a developing country. A feasibility study¹²

Graeff-Martins, Oswald, Comassetto, Kieling, Goncalves and Rohde (2006) reported that school drop out rates were extremely high in developing countries, particularly for elementary school children. Graeff Martins (in press) found only 10 articles addressing preventive interventions for school drop out in a systematic review of the worldwide literature. There is a complete lack of research in this area in developing countries, where school drop out is frequent and problematic (Graeff-Martins et al., 2006).

¹² Due to the fact that this intervention was found in a developing context, it is elaborated more fully than others.

Graeff-Martins et al's study (2006) assessed the feasibility and initial efficacy of a package of interventions tailored to reduce school drop out in public schools in an urban city in Brazil. Two public schools with similar high rates of dropout in elementary grades were selected. In one of them, a package of universal preventive interventions was implemented during a school year, including two workshops with teachers, five informative letters to parents, three meetings with parents at school, a telephone helpline at school, and a 1-day cognitive intervention. For children who stayed out of school for ten consecutive days without reason, mental health assessment and referral to mental health services in the community were offered. In the second school, no intervention was implemented.

Two meetings with teachers in all grades were held, addressing children's normal development and the second addressed how to recognise and manage emotional and behavioural disorders in children in the school environment. The team presenting these workshops comprised two psychiatrists, a psychologist, a social worker and two research assistants. Informative letters: five letters addressing school drop out were sent to parents during the school year (prevalence, reasons for school drop out and its outcomes, how to know if a child is really attending school and where to seek help if they are not, how to improve communication and relationships in the family and with school personnel, topics to keep parents motivated). Content was reviewed to make sure content would be accessible to families in low income areas. Letters are available online at www.ufrgs.br/psiq/prodah.html. Three meetings with parents at the school were conducted with the aim of addressing school dropout, setting limits for children and adolescent sexuality. Parents received their children's marks after these meetings.

Furthermore, a music contest was promoted to stimulate adolescents to compose songs concerning problems related to school dropout. On Wednesdays (10-12 am) a member of the team was available to talk to parents about emotional and behavioural problems of learners or family problems. These families were referred to services within the community.

"The advantages of staying in school", is a structured cognitive intervention aimed

to keep students at school by combining the concepts of employability, qualification and education. Manuals are provided for the participant. It is implemented by trained volunteers in the classroom and lasts one school day. Five sections are included:

- (a) personal success and qualifications
- (b) statistics showing the advantages of staying at school
- (c) elaborating one's personal budget
- (d) anticipating one's future
- (e) the "pros and contras" of staying at school

At the end, learners are required to write a letter to a friend explaining why you should stay at school. The 7th grade was chosen for this intervention as previous records indicated a surge in dropout at this age. In addition to this, targeted intervention was provided to learners considered as at-risk (those who had been 10 days or more out of school). Targeted intervention included:

- (a) Mental health assessment (home visits by a social worker, psychologist and psychiatrist to assess child and family mental health status).
- (b) Connection to available resources when mental health problems were detected.

After this 1-year intervention, there were significant differences between the two schools in rates of both dropout ($P < 0.001$) and absenteeism in the last trimester ($P < 0.05$; effect size = 0.64). At the end of the school year, the test school had a drop out rate of 3.85% whereas the control school had a drop out rate of 9.54%. In the intervention school, 18 (45%) youths returned to school after intervention among the 40 at-risk students. The students who did not respond to the intervention, presented higher scores in family hierarchy than those who returned to school. Moderate engagement of school staff was the main logistical problem. Other problems included low accuracy of school staff in registering the dropout rate, tendency of families with at-risk children to participate less in the universal preventative strategies, difficulties in referring children to mental health services, lack of encouragement by teachers for those learners who decided to remain at school after an absence of ten days. Due to difficulties in relations between

researchers and the school team and resistance of the school team to adopt some of the methodological procedures needed for the research, findings suggest that more intensive work with teachers might be required at the beginning of this kind of project. On the basis of these results, the researchers concluded that programmes combining universal primary preventive strategies and interventions focused on at-risk learners could be implemented and be useful in developing countries in order to reduce school dropout. Furthermore, mental health professionals might serve as consultants for designated schools with high rates of drop out (Graeff-Martins et al., 2006).

(iv) School dropouts: prevention, considerations, interventions and challenges (Christenson & Thurlow, 2004).

Preventing school dropout and promoting successful graduation, is a national concern that poses a significant challenge for schools and educational communities working with youth at risk for school failure. Although students who are at greatest risk for dropping out of school can be identified, they disengage from school and dropout for a variety of reasons for which there is no one common solution.

Christenson and Thurlow (2004) found that the most effective intervention programmes identify and track youth at risk for school failure, maintain a focus on students' progress toward educational standards across the school years, and are designed to address indicators of student engagement and to impact enrolment status and not just the predictors of dropout. In order to leave no child behind, educators must address issues related to student mobility, alternate routes to school completion, and alternate time lines for school completion, as well as engage in rigorous evaluation of the school-completion programme.

The authors listed critical considerations in dropout prevention and suggested that teachers, designing dropout-prevention programmes, need to attend to five critical considerations:

(a) Dropout as a process

Early and sustained intervention is integral to the success of learners. Teaching children to read is vital for them to become engaged learners. Dropout is preceded by indicators of withdrawal or unsuccessful school experiences (academic or behavioural difficulties) that often begin in the primary school years.

(b) The role of context

School dropout cannot be understood in isolation from contextual factors as there is a complex interplay among student, family, school, and community variables, as well as risk and protective factors. School and family policies and practices are critical e.g. schools with the greatest holding power tend to have relatively small enrolments, fair discipline policies, caring teachers, high expectations and opportunities for meaningful participation. Family factors such as parental support, monitoring and supervision, high regard for education and positive expectations about school performance are important.

(c) Alterable variables

Some variables are more alterable than others. For example, behavioural variables are more changeable than more stable variables such as socio-economic status.

(d) An orientation towards completion and engagement

School drop out and school completion are two sides of the same coin. School completion programmes require a primary focus on student engagement, particularly on finding ways to enhance students' interest in and enthusiasm for school, sense of belonging at school, motivation to learn and progress in school, as well as the value they place on school and learning. Engagement is multi-dimensional and involves academic and behavioural (observable indicators such as classroom participation and attendance) cognitive and psychological components (internal indicators such as self-monitoring and a sense of belonging). Conceptually, school personnel need to emphasise development of learners' competencies rather than dwelling on their deficits. Successful programmes are comprehensive interfacing family, school and community efforts rather than

offering a single, narrow intervention in one environment, are implemented over time rather than a single period of time and make an effort to tailor interventions to individual learners.

(e) The importance of empirical evidence

The National Dropout Prevention Center at Clemson University, USA studied the issue of drop out for nearly two decades and has developed a database cataloguing such programmes but few studies have actually been published. The Centre reported that the dropout research has been overwhelmingly predictive and descriptive, and in addition, the methods used for evaluation of interventions have been judged to be of low quality or poor scientific merit. As such, currently considerably more is known about who drops out than about efficacy of intervention programmes. They concluded that most interventions have been designed to remediate poor attendance or performance, but little evidence exists to suggest that these programmes change dropout rates.

An integrative review of 45 prevention and intervention studies addressing drop out or school completion (1983 to 2000), identified many similarities among the interventions, including their focus on changing the learner with a personal-affective focus (individual counselling, classes in personal relations) and then shifting to an academic focus (tutoring) as well as efforts to address alterable variables (attendance, poor grades, amongst others.). Most interventions were implemented with secondary school learners. Interventions that yielded moderate to large effects on at least one dependent variable provided early reading programmes, tutoring, counselling, and mentoring, emphasising creating caring environments and relationships, used block scheduling, and offered community-service opportunities. Therefore, successful interventions help students and families, who feel marginalised in their relations with teachers and peers, become connected at school and with learning. However, there needs to be a match between school characteristics and learner characteristics.

Christenson and Thurlow (2004) believe that consensus is emerging about essential intervention components. The personalisation of education - striving to

understand the nature of academic, social, and personal problems affecting students and tailoring services to address individualised concerns - is an essential component. Successful programmes focus on building students' relationships with teachers, parents, and peers and include systematic monitoring of students' performance; they provide opportunities for success in schoolwork, create a caring and supportive environment, communicate the relevance of education to future endeavours, and help students with personal problems. Smaller class sizes, more personalised settings and individualised learning plans are identified as characteristics for lowered drop out rates in both GED programmes and alternative middle school programmes.

Case study: Reducing the dropout rates of at-risk high school students

The Effective Learning Program (ELP)

Nowicki, Duke, Sisney, Stricke and, Tyler (2004) evaluated the effectiveness of the Effective Learning Program (ELP) with students who are at high risk for dropping out of high school in a single school in Louisville, Kentucky, USA. The intervention sought to change external control expectancies to more internal ones, improve students' skills in building relationships with peers and adults, and increase graduation rates. Thirty-eight students, considered at risk for dropping out of high school, received the intervention. In addition, ELP-eligible students who did not receive the ELP intervention (n = 36) and regular education students (n = 50) from the same high school were compared with the students who received the ELP. A significantly greater percentage of ELP students graduated, became more internally controlled, achieved more as shown by standardized tests, and developed greater social skills and better relationships than their ELP-eligible but non-participating peers. The authors suggest that researchers identify which aspects of the ELP are responsible for the improvement in retention, achievement, and personal attributes. Clearly with this design (a single case), the results of the study would need to be replicated with greater numbers in randomly assigned schools.

Nowicki et al. (2004) identified five major demographic indicators associated with the risk of dropping out (a) poverty, (b) race or ethnicity, (c) family configuration, (d) parental education, and

(e) limited proficiency in English. The drop out rate in low SES groups was 25% compared with 13% and 8% in middle and high SES samples. The majority of a growing number of successful efforts to change life courses of at-risk learners appear to focus on making changes at the more local level of students' personal experiences of high school. Interventions focus on changing student perceptions of experiences and their attitudes toward school academic work, in general, and teachers and peers, specifically.

Approaches to intervention that reduce high school dropout rates

Nowicki et al. (2004) analysed various approaches that would reduce high school drop out rates. They concluded that the more students are "engaged" in school, the more "academically resilient" they become and more likely they are to complete school. A study of 1800 minority, low income learners found that greater engagement and higher resilience were associated with lower drop out rates in a significant number of low SES minority learners. Among the most important factors found to be associated with engagement and school success were two personality variables that have been identified as important in child and adolescent development and function: locus of control and self-esteem. An external locus of control was related to lower academic achievement and higher rates of dropping out. In another study, higher levels of self-esteem and an internal locus of control were significantly associated with success in high schools with low income minority students. If locus of control is associated with school engagement, and school engagement is, in turn, associated with lower dropout rates, then change in locus of control may also be associated with lower drop out rates.

Method

The ELP programme is a school within a school, serving approximately 90 at-risk juniors and seniors in a high school. These learners were identified for programme involvement by counsellors, teachers, administrators and parents on the basis of problems such as low grades, poor attendance, learning disabilities and so forth. Learners participate in a 3-hour afternoon block of English, Mathematics, social studies and humanities instruction. The learner to teacher ratio is about 15:1 in comparison to regular classes where the ratio is about 31:1. The ELP block allows learners and teachers to form closer bonds via a "family" or "team" atmosphere. ELP teachers were trained for involvement in the research. Every opportunity was taken to speak to students both in class about interpersonal skills and a common language about relationship processes. This language made certain that all understood the process. Teachers acted as a mirror of student behaviour making sure they understood how they were acting according to the circumplex model and were aware of the outcomes that this approach could

have.

ELP teachers were also in regular contact with counsellors, parents, administrators and non ELP teachers to monitor learner progress.

Conclusions

Locus of control orientation is found to be related to academic achievement and non-verbal performance for all three groups. Students who were more internally controlled, have achieved more than their externally controlled ELP peers and are more proficient in reading nonverbal cues in emotion. In terms of locus of control, the authors are of the opinion that the regular education comparison group is significantly more internal than either of the ELP groups, which does not differ from each other. The researchers reported that the ELP group had significantly fewer absences than did the ELP comparison group. They are also significantly less hostile according to the second tests. The graduation rate of 98% of the ELP learners are significantly higher than those of the ELP comparison group (38%) and are significantly greater than that of the regular education student group.

(v) Reduced school drop out rates among adolescent mothers receiving school-based prenatal care

Pre-existing school failure and disengagement, leading to high-risk behaviours such as early sexual activity and pregnancy, may explain why childbearing adolescents manifest significant educational underachievement. After delivery, lack of child care and other support systems may prevent an adolescent mother from returning to school. Dropout rates in this group may also reflect a long process of disengagement related to social and economic contextual factors, including the presence or absence of occupational opportunities and the perception of being a valued community member.

The authors' research focused on school-based health centres (SBHCs) which enhance access to and compliance with care-giving, while promoting school continuation for populations with high dropout rates. Learners would go to medical appointments on site, returning to class instead of missing school. The centres

may also provide counselling for learners who need assistance with social services and personal and family issues. During this study, family physicians, social workers, medical assistants, health educators and a part-time psychiatrist at the SBHC offered:

- Primary, prenatal, delivery, and postpartum care
- Family planning services
- Primary care for infants
- Episodic care
- Case management
- Nutrition education
- Parenting education
- Mental health services

However, the researchers' engagement with the evaluation of the extent to which school-based health centres might help reduce school absenteeism and dropout rates in this group, had not been extensively studied. Therefore, the study sought to evaluate the effect of school-based prenatal services on school attendance, achievement, and dropout rates, while controlling for the confounding variables of pre-pregnancy school performance and prior childbearing. It was hypothesized that teens, attending the SBHC for their prenatal care would miss fewer days of school attendance and, as a result, have lower dropout rates.

The researchers used a retrospective cohort study and school rosters from an alternative school¹³. Adolescents, aged 18 years or younger who delivered a baby between the beginning of July 1995 and the end of August 1997 in Baltimore, Maryland, were identified. School records spanning 3 years were linked with medical records and birth certificates. School variables such as attendance and drop out rates were examined in relation to the teen's year of pregnancy and prenatal care setting (school-based vs. non-school-based). In total, 431

¹³ Alternative schools are offered for pregnant and parenting adolescents. Attendance may range from a few days to an entire school year. Traditional academic studies and specialized services such as parenting classes and day care are offered.

predominantly African American, low-income adolescents, who attended the alternative school in their pregnancy, were identified. In the year prior to pregnancy, most performed poorly at school and significant absenteeism was recorded. During their pregnancy school-year, teens receiving school-based prenatal care were absent 12 days fewer compared to those receiving non school-based care ($P= 0.01$), and their dropout rate was half that of those receiving non school-based care (6% vs. 15%; $P=0.2$). Thus, absenteeism and dropout rates were reduced for pregnant adolescents receiving pre-natal care at a school-based health centre in an urban alternative school.

4.11 CONCLUSION

This chapter has considered a number of factors influencing drop out, as well as some interventions that have been successfully implemented to curb learner drop out. Christenson et al. (2003) have indicated that the shift in the current framework of student engagement in schooling is the shift in focus from preventing drop out to promoting school completion. They conclude that "The concept of engagement has emerged as a critical theme in the process of understanding students' exit status from school¹⁴. Key ingredients of student engagement include student participation, identification with school or social bonding, academic performance, and personal investment in learning¹⁵. According to Christenson, Sinclair, Lehr and Hurley "Increasing students' engagement and enthusiasm for school is much more than simply staying in school and, thus, much more than the dropout problem - it involves supporting students to meet the defined academic standards of the school, as well as underlying social and behavioural standards" (2000:21). Aspects or components of educational programmes that have been used to address drop out and school completion are routinely practised in schools across America. These practices vary and include counselling services, reading remediation, tutoring, attendance monitoring, or after-school clubs.

Strategies associated with reduced dropout rates included (a) early intervention,

¹⁴ (Doll & Hess, 2001; Finn, 1993; Grannis, 1994)

¹⁵ (Finn, 1993; Maehr & Midgely, 1996; Wehlage, Rutter, Smith, Lesko, & Fernandez, 1989)

(b) basic core strategies, (c) making the most of instruction and (d) making the most of wider communities. Certain drop out prevention programmes that have been developed include five components that are common to all, that is, persistence, continuity and consistency, monitoring, relationships, affiliation and problem-solving skills. Some authors posit that effective programmes aimed at promoting school engagement and completion must include four broad intervention components, namely:

- providing opportunities for success in schoolwork
- creating a caring and supportive environment
- communicating the relevance of education to future endeavours
- helping with students' personal problems

A combination of these strategies and interventions could be tested in South Africa to reduce the incidence of learner drop out, particularly at the post compulsory school phase.

5. CHAPTER FIVE: COMPARATIVE ANALYSIS

5.1 INTRODUCTION

In this section, the international literature is discussed in terms of the published rates and methodologies (3.1). In particular, these include the patterns for grade repetition internationally and an overview of school drop out including the comparative rates for primary and indicators for secondary education. Thereafter, the factors affecting drop out and repetition are reviewed (3.2) as well as the interventions that have been developed to prevent or reduce drop outs and repetition.

5.2 PARTICIPATION AND FLOW RATES

The Education for All initiative monitors a number of indicators that are published in the Global Monitoring Reports. One of the sets of indicators is the student flow rates which comprise:

- Access and participation at each level of education;
- Internal efficiency; and
- Disparities in education.

The internal efficiency set of indicators is of most interest to this report. This set of indicators (flow rates) is composed of three basic indicators, being promotion, repetition and drop out. To derive these measures, the school statistics of at least the two most recent successive years or at best, the past ten years (UNESCO, 2007), are needed. These indicators (repetition and drop out rates) provide a means to measure the systems. Related to these two indicators are survival, retention and completion rates (the latter evaluates the percentage of pupils completing a study cycle in relation to the corresponding age population, UNESCO, 2007).

(i) Patterns in Grade Repetition

Quantifying the magnitude, nature and extent of grade repetition is recognised as a major challenge. The prevalence of under-reporting of repetitions is identified as a major source of this problem. As pointed out by Eisenmon (1997), some

government policies and practices impose sanctions for high repetition and thus encourage under-reporting. The other major cause of the inability to accurately quantify the magnitude of repetition, lies in the poor recording and keeping of educational statistical data in many developing countries.

Grade repetition is the highest in first grade. As noted by Morris (1993), schools all over the world experience higher grade repetitions at the start of a school cycle than they do in subsequent years. The high grade repetition in the first grade is attributed to inadequate school readiness program or serious problem with a learner's learning ability. The other reason for high repetition in Grade 1 is the significantly high enrolment which has not been accompanied by appropriate levels of provisioning. The expansion in enrolment has to a large extent benefited marginalized sectors of the society, including rural areas, low socioeconomic communities, and those communities that speak languages other than the one used for instruction.

Research notes that teaching practice has not shown sensitivity to this reality – traditional pedagogy continues to be used and the result is that the new enrollees find themselves lacking the prerequisite skills needed to benefit from the educational services available (UNICEF/IBE 1995).

According to Alexander et al,(2003) during the elementary years, the rate of grade repetition generally is the highest in the first grade, with the rate often two or three times more than that of Grades from 2 through 5. In Brazil each year, over 50 percent of learners in the first grade of primary school repeat, resulting in the highest first grade failure rate in Latin America,¹⁶ reinforcing Karweit's (1999) argument that first grade is the grade that is frequently repeated. However, grade repetition tends to increase at the transitions from one phase to the next which is attributed to the adjustment that the learner has to make when moving from one phase to the next.

¹⁶ *Source:* Economics of Education: Brazil: Stipends to Increase School Enrolment and Decrease Child Labor.

Table 5.1: Factors attributed to high and low rates of repetition

<i>High rates of repetition</i>	<i>Low rates of repetition</i>
Developing nations	Developed nations
Rural area	Urban areas
Students studying in a language other than their mother tongue	Students whose mother tongue is the same as the national language (of instruction)
Students from low socio-economic background	Students from high socio-economic background
Students whose parents have low levels of literacy, especially mothers	Students whose parents have high levels of literacy, especially mothers
High absenteeism	Low absenteeism
Teachers with low expectations of students	Teachers with high expectations of students
Schools with limited contact hours	Schools with longer contact hours
Poor school infrastructure	Good school infrastructure
High teacher-student ratio	Low teacher-student ratio

(ii) Drop out rates and associated indicators internationally

The NCES (2005) reports on the event drop out rate which provides a measure of the percentage of high school students who drop out of high school over the course of a given school year. This is useful for studying what happened to a particular group of high school students in a single year. The event drop out rate reported here focuses on public high school students in Grades 9 through 12. The drop out rate can thus be calculated by summing the number of drop outs for a district, province or in a given year, and dividing this sum by the number of students enrolled at the beginning of that school year.

Event dropout rate =

$$\frac{\Sigma \text{ dropouts grades 9–12y}}{\Sigma \text{ enrolment grades 9–12y}}$$

where y is a given year.

Other drop out rates have been developed for different purposes. NCES has published several such rates including status drop out rates and cohort drop out rates. Status drop out rates report the percentage of individuals in a given age range who are not in school and have not earned a high school diploma or equivalent credential, (NCES, 2005).

It was particularly difficult to find comparative national drop out rates at secondary school level and more often than not, individual reported rates were found scattered throughout various articles and documents. Where the source could be validated, these are reported in this report. Despite this difficulty at secondary level, however, these are available in the Education for All Global Monitoring Report at primary school level and are reported below in 3.1.3. The indicators of internal efficiency, with regard to repetition, are captured at secondary level together with the associated measures of enrolment rates and the transition rates from primary to secondary level. These are presented in 3.1.4.

(iii) Comparative rates for primary education

The repeater rates produced in the Global Monitoring Report (UNESCO, 2007), provide useful measures against which to evaluate the South African data, although it should be noted that the South African data pertains to 2003 and not 2004. It is evident that South Africa has halved its repeater rates between 1999 and 2003/2004. By doing this, the repeater rates are significantly lower than the rates for sub-Saharan Africa and lower than the median for developing countries. This should be understood within the context of issues of downward bias as a result of EMIS data that were discussed in Chapter 2. However, they are higher than the rate recorded for those of the “world” and substantially higher than those for developed countries. In general, repeater rates are lower for female learners than male learners internationally and certainly in South Africa.

There is a direct attempt to measure the drop out rate at primary school level. The drop out rates at the primary school level for South Africa presented in Table 5.2 appear high. The South African data pertains to the years 2002 and not 2003 as for the other rates listed. The Ministerial Committee found the drop out rate of all grades to be 6.2%. The rates are higher for boys than for girls indicating more boys drop out than girls. Despite the fact that the rates in the table are not precisely comparable, (being in two different years), the international figures provide a relative sense for the South African data. Whilst the SA dropout figures are lower than the sub-Saharan median, they are slightly higher overall than the developing world and the World and substantially higher than for developed countries. The drop outs for girls, however, provide a contrast to the sub-Saharan African median where actually fewer boys drop out than girls.

The survival rate for South African primary school children is much higher than the sub-Saharan African median and slightly lower than the developing countries' median. However, it is certainly lower than the world median and substantially below the developed countries' median. Once again, it should be noted that the purpose of using the UNESCO data is to provide a comparative view of South Africa in relation to other countries.

The Ministerial Committee found the survival rate to be 93.8%, which is significantly higher than that reported by UNESCO. Figures used by UNESCO are derived from databases submitted by the Department of Education using the EMIS data, which is fraught with data quality challenges as outlined earlier in this report.

Table 5.2: Primary school level dropout rates and survival rates for South Africa and international medians for the school year ending in 2003

Education Systems	DROP OUT RATES ALL GRADES					
	SCHOOL YEAR ENDING IN 2003					
	Drop out rates all grades			Survival rate to last grade (%)		
	Total	Male	Female	Total	Male	Female
South Africa	21.3#	24.7#	17.7#	78.7#	75.3#	82.3#
Median						
Sub-Saharan Africa	33.9	33	35.2	66.1	67	64.8
Developing countries	20.3	-	-	79.7	-	.
World	13.4	13.6	13.2	86.6	86.4	86.8
Developed countries	2	2.5	1.5	98.3	98.8	97.8
South Africa*	6.2*			93.8*		

* Row has been added by the Ministerial committee. Figures reflect the findings of this study.

data for school year ending 2002

Source: UNESCO EFA Global Monitoring report, 2007: 284-285

(iv) Comparative rates for secondary education

As mentioned earlier, it was particularly difficult to find comparative national drop out rates at secondary school level and more often than not, individual reported rates were found scattered throughout various articles and documents. The rates found include: Israel at 9% (Kapeliuk, Reich & Bar-Lev, 2004) and Canada at 11.4% (Hymel & Ford, 2003). The USA is one of the few countries where published data is also easily available on dropouts and retention rates. The NCES publishes a report annually on the condition of education wherein a number of tables list the status drop outs¹⁷ all the way back to 1972 to the latest available figures, in this

¹⁷ Status drop out rate indicates the percentage of 16-24 year olds who are not enrolled in high school and who lack a high school credential relative to all 16-24 year olds. High School credential refers to a high school diploma or equivalent credential such as a General Educational Development (GED) certificate.

case 2004. The drop outs recorded in 1972 reflect a 14.6% drop out rate with the majority of drop outs being Hispanic (34.3) and African American (21.3) versus White students (12.3%), indicating in that context a high association of drop outs with ethnicity. By 2004, the overall drop out rate had reduced to 10.3% with the relative percentages per ethnic group having improved (23.8, 11.8 and 6.8) (NCES, 2006).¹⁸ In total 3 766 000 children dropped out of US Schooling during 2004 with the profile being majority male, Hispanic, 18 years and older and more from the South and West of the USA.

In the same report, there is an analysis of the High School Sophomores who left without graduating within two (2) years. The most recent figure given is that of 2002 where 7.8% dropped out. Once again, the profile indicated: male, Hispanic, poor, low parental education, English as second language, low achiever, higher levels of absenteeism, most of their friends had dropped out. Thus, students with this profile appear to be more likely to drop out than others.

Many sources refer to out of school children without defining them by drop out rates or what is meant by drop outs. For instance, the UK has nearly 20% of 14-19 year olds out of school without any qualifications. They are referred to “zero status” (UNESCO, 2002).i. The same source quotes on average 25% of 13 year olds in the USA fail to graduate from high school, which by their own definition (see NCES), would make these drop outs. In New York and Washington D.C schools, this is 45% (UNESCO, 2002).There are an estimated 77 million out of school children worldwide with 23 million of these children living in from Nigeria, Pakistan, India and Ethiopia (UNESCO, 2007a).

Unlike the primary school level, UNESCO does not construct nor publish

(NCES, 2006:164-165)

¹⁸ National Centre for Education Statistics. (2006) The Condition of Education. Published report. Washington: NCES.

secondary school drop out rates. However, the indicators shown below provide associated indicators and comparative measures. Once again there is some difficulty with the data and the direct comparisons that was made because the data reflects a different year (2003 or 2002) instead of 2004. A number of countries from different regions were selected for comparison with South Africa due to their contextual factors (e.g. Malaysia, Brazil) or size of the education (Korea, Italy) or having factors of interest to South African education (Australia, UK). South Africa's transition rate is mostly comparable to the reference countries and substantially higher than the sub-Saharan median, and higher than the developing countries. It is comparable to the world figures but rates below the developed countries. The fact that 95% of children make the transition from primary to secondary school implies that 5% do not. However, it is not clear what has happened to that 5%, whether there is a reasonable explanation for this or the extent to which this percentage may be deemed as drop out.

The GER at lower and upper secondary seems higher than all the African countries, sub-Saharan Africa, developing countries and the world, but again rating lower than developed countries. This could be an indication of the number of over-age learners in South African schools and perhaps this also relates to the relatively high repeater percentage. The repeater percentage looks favourable compared to the likes of Brazil and sub-Saharan Africa but high when compared to the international medians.

Table 5.4: Transition rates from primary to secondary, enrolment rates and repeater rates for South Africa and selected countries

	<i>Transition from primary to secondary</i>	<i>Gross Enrolment ratio Lower secondary</i>	<i>Gross enrolment ratio Upper secondary</i>	<i>Net Enrolment ratio Secondary school</i>	<i>Repeaters</i>		
					Total	Male	Female
					<i>Year ending 2003</i>	<i>School year ending in 2004</i>	<i>School year ending in 2004</i>
South Africa*	95y*	95z	88z	-	10.9z	11.4z	10.4z
Australia	99	112	221	85**	-	-	-
Indonesia	84	80	48	57	.4	.6	.2
Malaysia	-	126**z	67**z	74**z	3.1**y	3.1**y	3.2**y
Republic of Korea	99	95	90	90	.02**	.02**	.02**
Argentina	93y	100z	73z	79z	11.5z	13.7z	9.4z
Brazil	-	114	66	76z	17.4y	-	-
Chile	97	100	84	78	2.7	3.3	2.1**
Mexico	94	104	53	64	2.1	2.7	1.5
France	-	110	111	96	-	-	-
Italy	100	107	94	92	3.2	4.3	2.3
UK	-	100	108	95	-	-	-
USA	-	102	87	90	-	-	-
Botswana	99**	87	58**	61**	.6**	.4**	.8**
<i>Ghana</i>	<i>97**</i>	<i>64</i>	<i>23**</i>	<i>37**</i>	<i>2.4**z</i>	<i>2.4**z</i>	<i>2.5**z</i>
Kenya	95**	87	29**	40**	-	-	-

Nigeria	-	37	32	27**	-	-	-
Median							
Sub-Saharan Africa	64	36	23	24	12.3	12.2	12.6
Developing countries	87	74	44	52	6.1	6.7	5.5
World	94	78	51	58	3.2	4.2	2.3
Developed countries	99	103	99	91		2.9	.5
					1.7		

Source: UNESCO EFA Global Monitoring report, 2007: 286

Notes:

z - data for school year ending in 2003

y - Data are for school year ending in 2002

x - data are for school year ending in 2001

Italics – data are for school year ending in 2005

Transition rate to secondary education is defined as the new entrants to the first grade of secondary in a given year expressed as a percentage of the number of pupils enrolled in the final grade of primary education in the previous year (UNESCO, 2007:353).

* The view of the Ministerial Committee is that the repeater data reflected in the table has a downward bias as it is based on the EMIS data.

(v) Repetition rates in Grade 1

Although repetition rates vary by grade, in the majority of countries and particularly in the developing world, the highest repetition rates are usually found in Grade 1. In Nepal, 43% of pupils repeat this grade compared to 11% in Grade 5. Nearly 30% of Grade 1 children repeat the grade in Brazil, Guatemala, the Lao People's Democratic Republic and several countries in sub-Saharan Africa. These high repetition rates may be related to school readiness as there are low rates of participation in pre-primary education (UNESCO, 2007a: 35).

5.3 CONCLUSION

Comparative data should be interpreted with caution as there are many data issues that compromise comparability of the figures. Notwithstanding those limitations, South Africa appears to compare favourably with other developing countries on

issues relating to survival rates, participation rates, repeater rates and drop out rates. However, a greater emphasis should be put on developing interventions that will prevent drop out, such as improving early childhood education as well as the general quality of education.

6. CHAPTER SIX: PUBLIC SUBMISSIONS

6.1 INTRODUCTION

A call for public submissions on learner retention was published in various newspapers in June/July 2007. A total of fourteen responses were received as of 31 August 2007. Respondents who had either dropped out of the schooling system or who had witnessed learners dropping out of the system for one reason or another, were specifically asked to submit written input that will assist the Committee understand the challenges that lead to learner drop out. This section provides a summary of the input received.

6.2 BACKGROUND OF RESPONDENTS

It is necessary to briefly contextualise the issues raised by these fourteen members of the public by providing a brief breakdown of their demographics.

- Twelve submissions were received from Black African members of the public. Six of these respondents were males and three were females. The gender of the other three submitters in this demographic grouping was not determinable.
- Of the six Black African male respondents, two submitters, one being the chairperson and founder of an NGO, and, the other having a postgraduate certificate in business leadership, sent proposals for township school intervention initiatives.
- Another respondent, whilst responding as a private citizen, works for the Department of Transport. The other three Black African male respondents are: an Information Technology specialist/ Education Facilitator; a respondent with qualifications in Education and Business, specifically Business Ethics; and another who works in the research unit of the Development Bank of South Africa.
- Of the three Black African females who responded, one acts as the coordinator of the South African Girl Child alliance. The current occupational background of the other two Black African female respondents

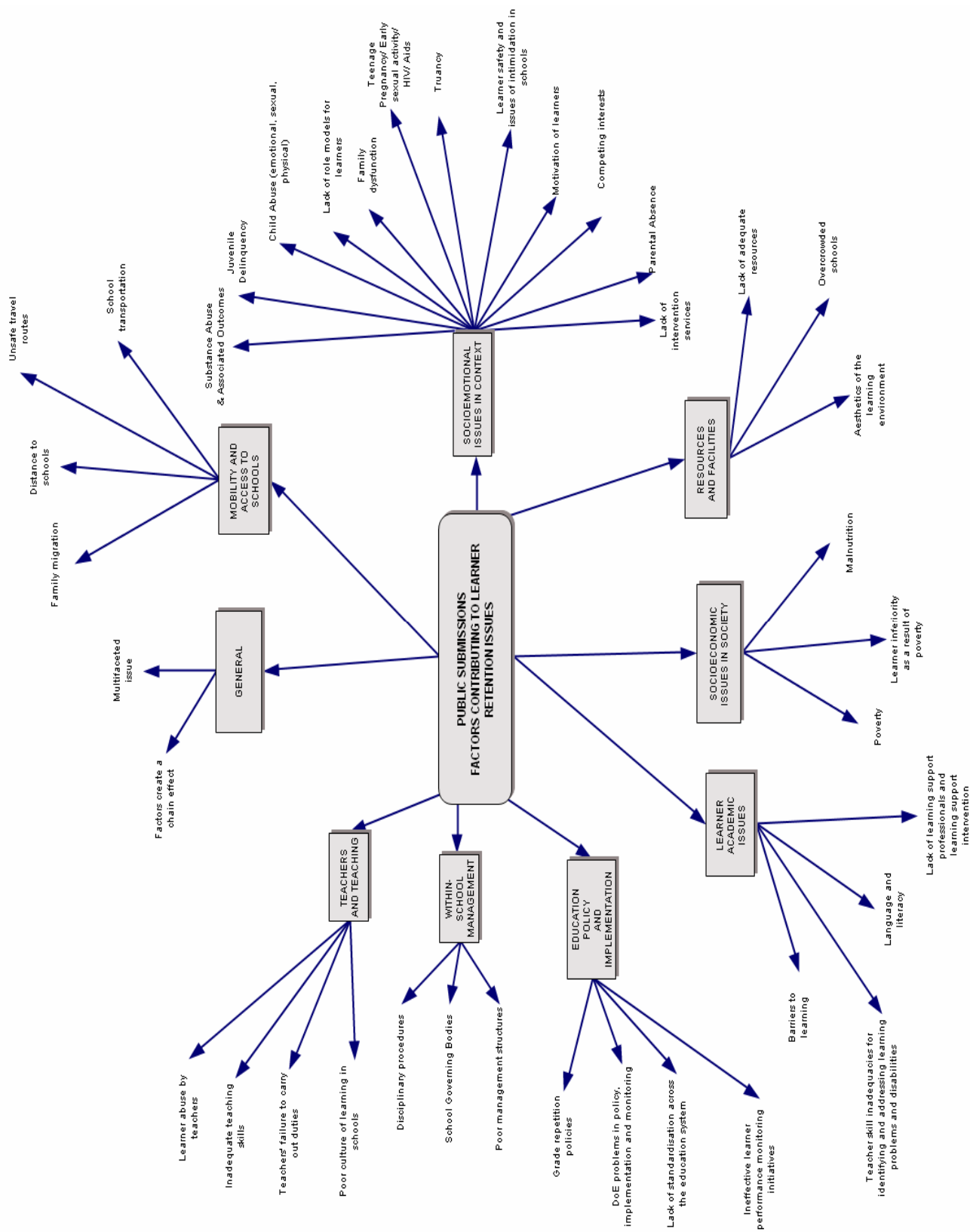
was not given, although one of these individuals did identify herself as someone who had dropped out of high school. One of the other Black African respondents is a teacher and journalist. One submission was received from a Coloured Female who teaches high school Mathematics in Mitchell's Plain, Cape Town. A joint submission was submitted by a White male and female, responding in their capacities as educational consultants at a private study centre dealing with learning support interventions.

6.3 METHOD OF ANALYSIS FOR SUBMISSIONS

Qualitative thematic analysis of the documents submitted was utilised. Based on the overall content, a decision was made to focus on differentiating between two types of content, namely, (1) content aimed at illuminating the respondents' stated reasons for learner drop out, and, (2) content focused on presenting ideas for potential solutions. Codes were derived from each of the submissions, separated into one of the above-mentioned content types, after which these codes were further clustered into identifiable themes and sub themes for presentation. The codes, identified as suggestions for potential solutions were, in most instances, aligned to the issues that the respondents indicated as problems leading to learner retention difficulties. As such, each of the themes presented is subdivided into discussions of problems raised and potential solutions proposed.

For audit trail purposes, each submission was assigned a number (ranging from 1 to 14) and these numbers are reflected at the end of each of the codes presented. An appendix at the end of the theme discussion provides a breakdown of the codes identified for each theme in table format. A total of ten major themes and associated sub themes were generated, as illustrated in Figure 1 on the following page. Thereafter, these themes are discussed and illustrated with specific examples of respondent commentary. Nine of these themes are specific (A to H), whereas one theme (I) was generated for codes of a general nature that could not be placed into a specific category. The themes are:

- A. Socio-emotional issues in context**
- B. Learner academic difficulties**
- C. Socio-economic issues in society**
- D. Mobility and access to schools**
- E. Resources and Facilities**
- F. Teachers and teaching**
- G. Within-school management**
- H. Education policy and implementation**
- I. General**



Twelve sub-themes for this theme were identified, namely: lack of role models for learners; learner motivation problems; truancy ; juvenile delinquency; teenage pregnancy/early sexual activity and HIV/Aids; substance abuse and associated outcomes; family dysfunction; parental absence; child abuse; learner safety and issues of intimidation in schools; competing interests of a social nature; and lack of intervention services.

To elaborate further on these sub themes, respondents suggested learners' diminished motivation for school and scholastic tasks as a factor influencing their effective participation. A lack of future perspective, ambition, personal goal-setting and poor attitudes along with lack of internalisation of the importance of academic performance were of specific concern to respondents in this regard. These suggestions are indicated by the following comments submitted by members of the public:

“Value for education is not passed on to learners to understand why they have to stay in schools to aspire for professions or skills” (Public submission no.9, p.2).

“Lots of youth believe that after school there is no future for them. Their brothers and sisters before them are all unemployed and there is no money to study further because they were not interested in getting good grades while they were at school” (Public submission no.5, p.2).

In relation to juvenile delinquency and learner hooliganism as factors, one respondent noted the impact of gang culture on learners within communities. Truancy may, amongst other reasons, be linked to care for siblings and chores in the home environment. For instance, respondents made the following remarks in this regard:

“Talking about children... remaining in school in class is understood and should be supported but what do we do with children... who will be found roaming the street during school hours... those are the very ones who tempt serious minded children to lose interest in schooling” (Public submission no.3, p.1).

“Children given house responsibilities, like selling alcohol, taking care of siblings,

house chores, like getting water from the river or mountain streams as daily tasks keep them away from school” (Public submission no.9, p.1).

“Older children remaining with the young ones while both parents are employed in far away towns” (Public submission no.9, p.1).

Learner alcohol and drug abuse were also identified as potential contributors, as reflected by the following:

“Many learners in urban communities face the dangers of being exposed to the life of drug and alcohol addiction...This impacts the learning ability of children” (Public submission no.4, p.1).

“learners indulge in drugs such (as) dagga, mandrax...dagga to the learners is a cigarette” (Public submission no. 13, p.1).

This substance abuse was also noted as being complicit in learner academic failure due to its impact on learner cognitive functioning:

“... the abuse of drugs on the Cape Flats where I work... learners’ brains have been affected and hence they cannot cope with the pressure that school presents” (Public submission no.5, p.1)

The impact of associated inhibition was also linked to learner violence and engagement in inappropriate sexual activity. The emotional impact of teacher participation in substance abuse with learners was also mentioned. Learner prostitution could be aligned with any of these scenarios and/or financial need.

Family dysfunction and related home environment instability for learners were suggested as potential contributors as well. Lack of parental communication, encouragement and provision of disciplinary boundaries to assist learners in their educational development could contribute to learners’ non-performance and non-commitment to schooling. Parental absence, whether emotional or physical, is also considered to be causal. A factor that may potentially be linked is the lack of positive role models for educational

engagement in families (and communities) with whom learners can identify. Abusive circumstances in the learners' home, community and/or school may also influence learners' participation in education. Respondents gave these examples:

"I could never give homework on a Friday because alcohol abuse was so high and most of these children spent the weekend going from family member to family member because their parents were drunk and often their mothers would be abused in front of them" (Public submission no.5, p.1).

"Breakdown of family structure and values and the resultant lack of discipline and encouragement on education issues" (Public submission no.6, p.3)

Of specific concern, is the incidence of intimidation and violence in schools themselves, as exemplified by the following comment. Character attacks on the basis of personal attributes may lead to learner avoidance of school. Learners' subjective feelings of insecurity in settings without adequate safety measures, and teacher supervision to prevent intimidation and violence play a fundamental role here.

"learners are threatened by other students, promising to kill them or beat them. Learners have guns, knives, serious weapons at school" (Public submission no.13, p.1).

Society may also have an impact on learner attendance. For instance, according to respondents, learners may be more interested in material gain than schooling (immediate gratification), which may be associated with a de-emphasis on the importance of education. Rapid changes in social environment and peer pressure were also suggested as causes for drop out. Furthermore, self-involving technologies that take focus away from educational activities may also have an influence on learners:

"... chatting services offered on cell phones have become a nuisance in the sense that learners have become addicted to such cheap services that exploit on their school time...this type of service... has the potential to disengage the learners from fully participating in their studies" (Public submission no.4, p.3).

For all of these issues, the lack of support services and fragmented interaction of role-players for intervention were indicated as contributing to drop out.

Potential Solutions

Respondents advocated a number of solutions for addressing socio-emotional factors that impact on learners' education. In general, respondents mentioned that crime in society needs to be dealt with, technology devices that distract learners in schools need to be banned and there needs to be more active monitoring and ensuring of school attendance. Assessment of learner characteristics and needs, as well as the provision of school counselling, access to external intervention services and availability of other helping professionals to assist learners, were advocated to promote learner well-being.

One of the main areas of solution suggested was the need to create programmes which address the career and academic development of learners in the form of educational guidance, career development facilitation including lifeskills and the promotion of a future perspective, whilst providing exposure to positive role models for mentoring purposes. The need for the holistic (emotional, social, academic) development of learners seems to be underlying these suggestions. One respondent suggested an integrated approach to intervention programmes:

“take an integrated approach in retention programmes that incorporate both academic and non-academic factors into the design and development of school programmes...” (Public submission no.8, p.1).

Learners need to be assisted to engage in their learning. School environments need to be places where learners feel safe, and not a threat to or from other learners or external criminal activity that penetrates the school grounds due to lack of security measures.

The role of parents in their children's education was considered important in that it was felt that parents need to be held accountable for their children's behaviour and encouraged to participate in their education. The role of the community in learner behaviour also came to the fore.

B. Theme discussion: Learner academic difficulties

Causal Factors

(1) Language and literacy issues; (2) barriers to learning; (3) lack of learning support professionals and learning support interventions; and (4) teacher skill inadequacies for identifying and addressing learning problems and disabilities are the sub-themes for the over-all theme.

Respondents suggested that the academic difficulties (both intellectual and environmental) that a learner experiences may have a negative impact on their educational participation and completion. Learners' actual preparation for formal schooling was thought to negatively impact their future scholastic endeavours. The Language of Teaching and Learning, if not aligned to a learner's home language, was another factor listed as inhibiting educational outcomes. Poor literacy, especially poor reading skill and physiological factors probably due to inadequate exposure to reading and specific types of reading materials, were outlined as factors impacting on achievement. This specific comment was offered:

"... the education system is not delivering when it comes to maintain high literacy level in our schools" (Public submission no.3, p.2).

As one respondent intimated, poor basic reading skills are apparent in high school learners and as a result, learners enter high school ill-prepared with the cognitive skills to cope with secondary school education tasks, a situation that leaves teachers in an almost hopeless position to assist them:

"...a secondary school cannot begin to teach literacy" (Public submission no.14, p.5)

It was thought that due to large class sizes, there was not enough individualised attention for learners experiencing difficulties:

"The large class means that you do not get to each learner who might have a

problem” (Public submission no.5, p.3).

It was also felt that the lack of availability of specialised assistance for learners experiencing difficulties, along with teachers’ inability to recognise and implement strategies to address learners’ learning problems and disabilities, contribute to worsening of scholastic problems, eventual learner failure and drop out:

“Unfortunately not all educators are able to diagnose learners’ problems. In cases where teachers are able to diagnose learners’ problems, they sometimes lack skills to assist in corrective measures.” (Public submission no.14, p.2).

“There are many learners who need help. Educators need assistance from remedial workers; educational psychologists; and clinical psychologists. These professionals are not available in the department (of education). There are no intervention mechanisms to help such learners” (Public submission no.14, p.4).

“Some children are underachieving due to natural/ psychological factors. These children do not pass. Some of them qualify to be placed at special schools but instead they find themselves in mainstream schools (where) educators are still unskilled in inclusive education” (Public submission no. 14, p.3).

Potential Solutions

According to respondents, learner difficulties need to be identified and their individual learning needs ought to be addressed accordingly. Three respondents indicated that there is a need to create alternative scholastic options for those experiencing difficulties, be it via the creation of more schools for Learners with Special Educational Needs or specialist schools that cater for learners’ specific talents and abilities. Individualised assistance needs to be provided in the form of learning support assessment and intervention, with teachers being aided by helping professionals with specialist skills in learning support. The following respondent’s comment mirrors this sentiment:

“Learning difficulties need to be diagnosed and treated symptomatically” (Public submission no.7, p.1).

Tutoring and peer tutoring were mentioned as a prospect in this regard. The need to ascertain learners' potential strengths for Learning Area choices (aptitude determination for subject choice) and to provide guidance in the Learning Areas was mentioned. Revision and repetition of content to assist learners in mastering the curriculum was also suggested.

Further investigation into Mother Tongue education and the need for the implementation of Early Childhood Education (ECD) were advocated as well as ending social promotion practices. In specific reference to ECD, this suggestion was given by a member of the public:

“Early Childhood Development (ECD) needs to be developed across the board especially in the more rural and township schools” (Public submission no.4, p.2).

C. Theme discussion: Socio-economic issues in society

Causal Factors

The importance of considering socio-economic reasons for learner retention issues was raised by eight of the respondents. Poverty and the associated effects of learner malnutrition and learner inferiority in schools were apparent as sub-themes. Learner malnutrition, which impacts on academic performance and attendance, was suggested as a factor, as was the non-affordability of education for some parents. One respondent pointed out that although a high school learner may lack food, their stage of emotional and social development may make it difficult for them to accept any help offered at school:

“Sometimes such a child goes to bed on an empty stomach. At primary school they will stand in line for a slice of bread but not at high school. They have their pride” (Public submission no.5, p.1).

The lack of financing as a factor for attraction to criminal financial gain or school leaving to find jobs, was also implicated in learner retention. Poverty was also thought to lead to

learner financial attraction to childcare grants, which are informally recognised as a reason for teenage pregnancy. The emotional impact of poverty on learners as they interact with their more well-off peers was also considered as a factor which could impact school attendance:

“Children who are exposed to poverty in their homes fail to cope in the classroom... children from poor backgrounds are unable to handle the pressure of accommodating themselves amongst those that come from well-to-do backgrounds” (Public submission no. 11, p.2).

While children may become homeless for socioeconomic, familial or emotional reasons, it was recognised that their fight for economic survival could also lead to their non-attendance of school.

Potential solutions

Respondents called for a review of the childcare grant, free education in rural and semi-rural schools and an interdepartmental audit of learner poverty in schools.

D. Theme discussion: Mobility and access to schools

Causal Factors

Five respondents mentioned the impact of the practicalities associated with learners' abilities to access schools in terms of transportation and the geographical location of schools. Lack of accessibility was specifically thought to be a problem in rural areas where transportation is scarce, too costly or non-existent and the effects of inclement weather conditions on learner attendance:

“Getting to school in deep rural areas and farm schools is very costly in terms of time and energy required to travel to school due to long distances as a result of location of most schools far away from residential areas”. (Public submission no.1, p.1).

“Many in rural communities still walk a long distance...this then places such learners

in a disadvantaged position” (Public submission no.4, p.1).

Lack of transportation can lead to learner absenteeism, learners who start school at later ages when they are physically more able to cope with the demands of walking long distances to schools, and, learner fatigue and associated non-performance for those who do walk long distances to schools.

As another respondent pointed out, even in urban areas, parents may battle to afford transport to get their children to schools, especially when their children attend schools that are not in their local areas of residence. Learner transportation safety issues were also brought to the fore as were the existence of unsafe travel routes where learners could face personal threat from dangerous persons, travel through isolated areas and problems resulting from weather conditions:

“Roads to school (are) very unsafe, either through forests, rivers with no bridges, or several taverns where the out of school boys hang around” (Public submission no.9, p.1).

Migration of families into new areas may also create issues with access to schools:

“Migration of families to new homes or from one village to another, one township to another” (Public submission no.9, p.1).

When this movement results in movement into a geographical area with a Language of Learning and Teaching that is different from the learner’s previous language of schooling, it can be especially challenging for the educational progress of the learner.

Potential Solutions

It was suggested that accessibility to schools needs to be improved by building schools closer to local communities and by providing modes of transportation for access to schools:

“... interventions should focus on improving access to schools by building schools

closer to villages and residential areas, as well as the provision of transport services for learners, especially those in deep rural, remote and resource poor areas” (Public submission no.1, p.3).

The Department of Transport’s “Shova Kalula Bicycle Project” was outlined as a constructive initiative being undertaken to assist with transportation.

E. Theme discussion: Resources and facilities

Causal Factors

Three sub-themes were identified: (1) lack of adequate resources; (2) aesthetics of the learning environment; and (3) overcrowded schools. A lack of facilities including adequate security measures, material and human resources and large classes were thought to hamper educational activities in schools. The following illustrations of the nature of the problem were given:

“Lack of safety and security in and around schools, like no fences, broken windows, dirty school yards, no control into school yards” (Public submission no. 9, p.2).

“Inadequate classrooms...overcrowding in classes, insufficient furniture, desks and benches” (Public submission no.9, p.2).

One respondent also intimated that there are discrepancies between resource allocation in town schools and other schools, which may cause parents to attempt to transfer their children to more expensive schools. The need for inviting learning environments was stressed. This goes hand-in-hand with proper management and maintenance of schools. One respondent summed up the importance of well-maintained and resourced schools when he stated that:

“... I know what a huge difference a comfortable and welcoming learning environment and culture contribute(s) to learners wanting to (do) good in school” (Public submission no.2, p.2).

Potential Solutions

It is suggested that good governance of resources is needed in schools to promote learning and retention of learners. Moreover, more access to human and material resources is needed. Teachers need to be trained in effectively using and maintaining these resources. These proposals for addressing the issue were made:

- *“Transformation of township schools in terms of good governance... should receive priority so as to make sure that the schools are professionally run and well kept at all times”* (Public submission no. 3, p.2).

“Under-resourced and staffed schools are more likely to under perform... Learners need to have a proper learning environment. Lack of information and facilities greatly hamper children’s education... Access to books, labs and educators need to be one of the priorities” (Public submission no.4, pp.1-2).

F. Theme discussion: Teachers and teaching

Causal Factors

The four sub-themes for this theme are: (1) inadequate teaching skills; (2) teachers’ failure to carry out professional duties; (3) poor culture of learning in schools; and (4) learner abuse by teachers. Two respondents focused on the role of poor teaching, lack of continuing professional development by teachers and lack of educational monitoring for improvement of education. Discrepancies in schools’ performance across school localities were also noted.

It was noted that teachers do not carry out their professional duties, with some not coming to work at all. This neglect of duties leads to a lack of learner supervision and learner involvement in negative activities. This could also lead to a poor culture of learning in schools, along with the holistic development of learners not being advanced and the lack of creative teaching to engage their needs:

“Some teachers are accused of not respecting periods. It is said that during their periods, learners do not receive effective facilitation of learning” (Public

submission no.13, p.1).

“... the culture of learning in most schools has declined...Many teachers do not show enough commitment in their duties. They do not honour their periods, if they do, they go to class in their own chosen time. This gives learners ample time to visit shebeens and engage in illicit behaviour like sex and alcohol abuse” (Public submission no.11, p.1)

“The attitude of educators does not stimulate creativity and critical thinking in learners, hence intelligent learners feel bored” (Public submission no.9, p.2).

Teachers who abuse learners either verbally, sexually or physically or who project non-approachable stances towards learners, may impact negatively on learner attendance too.

“Some of the educators are just unapproachable... they harass and even abuse (learners)” (Public submission no.9, p.2).

Potential Solutions

It was suggested that teachers' professional performance needs to be closely monitored, specifically; learners should be enabled to provide feedback on their teachers' performance and classroom practices. Teachers also need to be held accountable for their actions and in addition, teachers who are caring need the recognition.

G. Theme discussion: Within-school management

Causal Factors

Three sub-themes were ascertained as (1) disciplinary procedures; (2) School Governing Bodies; and (3) poor management structures. Respondents were concerned about the lack of effective management in schools. They specifically indicated a lack of adequate monitoring and disciplinary practices for learners and a lack of proper structuring of school processes and policies. Moreover, a perceived lack of principals' authority in the management of schools and the potential role of interference from ill-informed School Governing Bodies, in this regard, were implicated:

“The SGB are either functional/ non functional with very little knowledge of school organisation... these variables compound... the problems facing the principals and they end up losing control of the school’s discipline” (Public submission no. 3, p.2).

“When the principal has no authority, teachers relax their authority on learners. Everyone comes to work as s/he wishes. There’s a lack of work conscience... this problem, if left unattended, becomes a grooming ground for directionless children who become failures...” (Public submission no.14, p.5).

The management of disciplinary issues within district and provincial education departments was another suggested problem area in this regard:

- *“The (South African Schools) Act stipulates that the Head of Department will delegate functions to deal with disciplinary processes to the principal at school... The problem is that in some provinces... such functions are not delegated to principals and as such principals rely on submitting reports to highly incapacitated circuit managers. The process moves very slowly because both districts and Head Offices are apparently running without relevant or enough staff”* (Public submission no.14, p.5)

The lack of proper management of disciplinary queries from principals at this level was thought to lead to a lack of confidence in principals' abilities to deal with the management of disciplinary processes in their own schools.

Potential Solutions

Two respondents indicated that principals need to take a more active stance in the management, monitoring and ensuring of service-delivery in schools. It was also suggested that tasks need to be structured so as not to interfere with active teaching time. One respondent advocated that School Governing Bodies need to implement strategies to monitor and take into account what actually happens in schools. Workable disciplinary measures and guidance for this need should be found.

H. Theme discussion: Education policy and implementation

Causal Factors

Respondents raised questions about the impact of slow policy implementation, monitoring implementation, ineffective learner performance monitoring initiatives and/ or ineffective policies and their impact on learner performance and retention. The social promotion policy was specifically mentioned as being ineffective. A non-cohesive and stratified education system was also mentioned as a negative within the education system. One respondent queried the influence of changes to the Grade 12 syllabus next year, which this person thinks will lead to learners, who fail their matric this year following the old syllabus, not being able to repeat next year. Another respondent was specifically concerned that from his perspective, learner performance monitoring is too focused on matriculation results rather than at other grades when there is an opportunity to effect changes that may assist learners. Furthermore, this respondent also queried the effectiveness or existence of interventions for learners in cases where performance has been evaluated at lower grades of the school system.

Potential Solutions

Role-player ownership of the education system was suggested as well as standardisation of the education system across all provinces, including provision of qualified teachers for each province.

- *“The education system needs to be standardized across all the different provinces in order to offer an equal opportunity to all”* (Public submission no.4, p.3)

Collaboration with other governmental departments to ensure learner wellbeing was proposed by one respondent:

- *“DoE must partner with other departments e.g. Health; Safety and Security etc. on common issues that provide protection to children”* (Public submission no. 6, p.6).

The quality of service delivery in schools, including the establishment of key performance areas for teachers, needs to be looked into. The quality of education in the General Education and Training Band also should be improved to prevent learner scholastic fallouts in the Further Education and Training Band. The speedy addressing of problems submitted to the Department of Education was also proposed. The South African Schools Act also necessitates re-evaluation, according to one of the respondents.

In terms of retention policies, one respondent provided a number of suggestions for successful retention. This respondent recommended both short and long-term retention programmes which focus on the determination of learner characteristics and needs; incorporate academic and non-academic factors in the design of school programmes so that they are socially inclusive; utilise early alert assessment and monitoring systems in schools based on test scores, attendance records, non-academic information derived from home and community surveys; determine the economic impact of retention programmes to enable decision-making for interventions (transport, remediation, incentives to stay in school); coordinate and mainstream retention in the planning of the school and not just as an add on to what teachers do, but with a designated coordinator in each school.

I. Theme discussion: General

Causal Factors

In general, respondents acknowledged that school dropout is a multifaceted issue that involves academic and non-academic factors such as social, economic, familial and geographical aspects. These factors impact each other in a continuous cycle that in turn, affects schools.

General solutions suggested

Two respondents expressed the need for more localised research into factors contributing to drop out. It was suggested that both NGOs and government need to participate in initiatives to promote learner retention in schools.

7. CHAPTER SEVEN: KEY RECOMMENDATIONS

The key recommendations have been summarised below. For presentation purposes, the recommendations have been categorised as follows:

- a) Data collection systems and processes
- b) Policy interventions

7.1 DATA COLLECTION AND REPORTING SYSTEMS,

The importance of a sound and credible EMIS can never be over-emphasised, for improving planning, allocation of resources as well as for monitoring the progress that the education system is making towards improving access, internal efficiency and equity. Almost all reports which had mis-represented the state of learner retention and drop out in the country, had essentially used the EMIS data, which is one of the biggest data sources for researchers, educationists and policy makers operating in the education field. The data collection systems should, therefore, be improved as a matter of urgency.

In particular, it is recommended that:

- Particular attention should be paid to improve the data collection systems of the Department of Education. Interventions for improving the systems should begin at school level, so as to ensure that all schools submit all required data every year. Consideration should be given to linking submission of forms to resource allocation and making the system an accounting system so that schools which did not submit the previous year are restricted from submitting the following year until the data of the previous year is updated. At departmental level, interventions should target standardising the data entries and database structures as well as application of statistical techniques to quantify margins of error for meaningful analysis.
- The implementation of a learner tracking system should be accelerated to facilitate an empirically sound methodology of determining dropout rates. The system should be operational for a number of years before being used to

develop a meaningful conclusion on internal efficiency. Meanwhile, the Department should publish survival rates and dropout rates based on the General Households Survey, although these can only be calculated with precision when a significant number of the cohort has passed beyond school education.

- Consideration should be given to improving the existing Annual Schools Survey return to allow for accurate dropout rate determination. This should be done by adding a school register to the Annual School Survey, which would simply be a list of learners containing the following information for each learner
 - Identity number
 - Full name
 - Grade in which enrolled

Over time, such learner registers, if fully completed, would yield information on drop out (and drop-in), repeaters, promotions and moves between schools.

- Once every two years, a retrospective Educational Experience Survey should be carried out. A substantial sample of people between ages 20 and 29 should be selected with the intention of obtaining a complete educational history of the respondents. Properly designed, this could yield invaluable information on pathways through the educational system, including information on enrolments not currently recorded (e.g. private further education) as well as qualifications obtained. Information on possible determinants of retention in the educational system, such as socio-economic status of the household of origin, should be collected and analysed. Normally, there would be five observations on each two year wide birth cohort.
- The Department of Education should work closely with Statistics South Africa to obtain technical expertise and support, relating to data collection and reporting techniques, systems and processes.

7.2 POLICY INTERVENTIONS

Interventions to improve learner retention in the schooling system should focus on the post-compulsory school phase, as there is conclusive evidence to suggest that higher dropout rates occur from the age of 16 onwards. While it is noted that the age group is beyond the compulsory school phase, it is in the interest of the country to retain as many learners as possible until they have completed Grade 12, or until they have completed an equivalent qualification through the FET College system. It is recommended that:

- Despite the insignificant dropout rates in primary school grades, it is imperative that the Department should investigate circumstances for learner absence, as provided for in the South African Schools Act No. 84 of 1996. All attempts should be made to establish a register of all children of compulsory school-going age who are not attending school. Such an intervention will require active mobilisation of communities to identify and report children who are not attending school. It will also require the Department to establish easily-accessible avenues and mechanism for reporting, such as a toll-free line.
- Consideration should be given to effectively utilising the wider communities and improving social networks to monitor and track learner attendance. In addition, consideration should be given to developing a cadre of “attendance officers” who would be appointed at local levels to monitor attendance and provide psychosocial support to learners who are at-risk of dropping out.
- Signs of low self-esteem and aggressive behaviour in early childhood should be addressed in order to promote continuing academic success and prevent dropout, as early measurable factors and behaviours are highly associated with later school dropout.
- Grade repetition is generally ineffective as an intervention to address early learning problems, regardless of when the repetition occurs. Learners repeating grades should have special programmes which are not a mere

repetition of the material and content that learners experienced the first time. In this regard, various lessons should be learnt from the Grade 12 recovery plans which were implemented in schools across the country following the month-long public service strike provided that the programmes are well-researched and understood.

- Improve access to **early childhood development programmes**. There is a growing research/knowledge base which demonstrates that children who have experienced ECD interventions, or have completed minimum pre-primary schooling, do better at school than those who have not. Specifically, those children who attend ECD programmes are more highly motivated, perform better, accomplish higher scores on cognitive tests, and get on better with their classmates and teachers. ECD graduates are, therefore, less likely to drop out or to repeat grades. Therefore, the cost of their schooling should be reduced and primary and even secondary education should be more cost-effective.

ECD in itself should spur educational participation in a region of the world that lags behind on most educational indicators (Hyde, 2006). South Africa is committed to ensuring that by 2010, all learners entering Grade 1 should have completed an accredited Grade programme, and it is critical that the necessary ground work should be completed in the next few months.

- A positive classroom climate and supportive personal relationships with struggling learners should be cultivated. Smaller class sizes, more personalised settings and individualised learning plans are identified as characteristics for lowered dropout rates in some of the studies. A more intensive interventionist approach should be applied.
- Intensive staff development programmes for teachers should be provided.

8. ANNEXURES

8.1 SURVIVAL RATES BY GRADE: DEFINITIONS AND CALCULATIONS

Definition: Percentage of a cohort of learners (or students) enrolled in the first grade of a given level or cycle of education in a given school-year who are expected to reach successive grades.

Purpose: Survival rate measures the holding power and **internal efficiency** of an education system. It illustrates the situation regarding retention of pupils (or students) from grade to grade in schools, and conversely the magnitude of drop-out by grade.

Calculation method: Divide the total number of learners belonging to a school-cohort who have reached each successive grade of the specified level of education by the number of learners in the school-cohort i.e. those originally enrolled in the first grade of primary education, and multiply the result by 100.

Formula:

$$SR_i = \sum_i P^t / E * 100, \text{ where } {}_iP^t = {}_{i+1}E^{t+1} - {}_{i+1}R^{t+1}$$

i = grade (1, 2, 3, ..., n) t = year (1, 2, 3, ..., m) .

SR_i = Survival Rate of pupil-cohort g at grade i for a reference year k

E = Total number of pupils belonging to a cohort g at a reference year k

${}_iP^t$ = Promotees from E who would join successive grades i throughout successive years t .

${}_iR^t$ = Number of pupils repeating grade i in school-year t .

Data required: Enrolment by grade for two consecutive years (years t and $t+1$); number of repeaters by grade for year $t+1$.

Data source: School register, school survey or census.

Type of disaggregation: Survival rates could be disaggregated by gender, by

geographical location (region, urban/rural) and by the type of institution (private/public). Survival rates could also be disaggregated between survival with and without repetition.

Interpretation: A survival rate approaching 100% indicates a high level of retention and low incidence of drop-out. The survival rate may vary from grade to grade, giving indications of grades with relatively more or less drop-outs. The distinction between survival rate with and without repetition is necessary to compare the extent of wastage due to drop-out and repetition. The survival rate to grade 5 of primary education is of particular interest since this is commonly considered as a pre-requisite for sustainable literacy.

Quality standards: Since the calculation of this indicator is based on pupil-flow rates, the reliability of the Survival Rate depends on the consistency of data on enrolment and repeaters in term of coverage over time and across grades.

Limitations: Given that this indicator is usually estimated using **cohort analysis** models which are based on a number of assumptions, care should be taken in using of the results in comparisons.

Source: UNESCO Institute for Statistics, Education Indicators: Technical Guidelines, page 14

8.2 CLASSIFICATION OF OBSERVATIONS IN THE ANALYSIS OF FURTHER EDUCATION

The observations are divided into the following categories:

	Description	Category		Level
		Life table	Schooling	
1	Certificates or diplomas with Grade 12, Degrees	Failure	Success	4
2	Grade 12 not enrolled in an educational institution	Failure	Success	4
3	NTC I, II or III, certificate or diploma with less than Grade 12 not enrolled in an educational institution	Remove	Non-school success	N/A
4	Not attending an educational institution with Grade 9, 10 or 11 as the highest level achieved	Failure	Drop-out	1-3
5	Enrolled at universities or technikons	Failure	Success	4
6	Enrolled in other adult education or other education	Failure	Success or drop-out	1-4
7	Enrolled in schools	Right-censored	Ongoing	1-3
8	Enrolled in further education college or ABET	Remove	Non-school ongoing	N/A

Row 1 imputes attendance in Grade 12 to people reporting that they have degrees, diplomas with Grade 12 and certificates with Grade 12.

Row 2 includes people who report that they have attended Grade 12 and are not enrolled in any educational institution.

Row 3 removes from the analysis people who report a non-school qualification and are not enrolled in any educational institution

Row 4 assigns the highest level of education to people reporting their highest level of education as Grade 9, 10 or 11 and not enrolled in any educational institution.

Row 5 imputes attendance in Grade 12 to people enrolled in universities and technikons.

Row 6 assigns the highest level of education to people reporting their highest level of education as Grade 9, 10 or 11 and enrolled in adult education or other educational classes. This treats such people in the same way as those in Row 4, i.e. assumes that their school education is complete. Effectively, enrolment in adult education or other education is disregarded.

Row 7 assigns the highest level of education to learners reporting their highest level of education as Grade 9, 10 or 11 and who are still at school. From a life-table point of view, these learners are regarded as right-censored observations.

Row 8 removes from the analysis persons who are enrolled in further education colleges or ABET. Rows 3 and 8 together remove persons who have gone through, or are in, non-school parts of the education system.

8.3 LIST OF ACRONYMS

ASER	Age Specific Enrolment Ratio
CS	Community Survey
DfID	Department for International Development (United Kingdom)
ECD	Early Childhood Development
EMIS	Education Management Information System
FET	Further Education and Training
GET	General Education and Training
GHS	General Households Survey
LFS	Labour Force Survey
MDG	Millennium Development Goals
SES	Socio economic status
KZN	KwaZulu-Natal Province

8.4 LIST OF COMMITTEE MEMBERS

Dr Jairo Arrow

Prof Sarah Howie

Prof Sizwe Mabizela

Mr Firoz Patel

Prof Charles Simkins

Prof Servaas van der Berg

Ms Gugu Nyanda (Chairperson)

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