

THE WESTERN CAPE MICRO ECONOMIC STRATEGY PROJECT

**THE IMPORTANCE OF INTERMEDIATE AND HIGH
SKILLS DEVELOPMENT IN THE WESTERN CAPE**

Background Paper 1:

**The underpinning infrastructure: Public Schooling in the Western
Cape**

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In general then, each paper draws on the most up-to-date statistical data available, analysing provincial data in relation to national trends. Each paper also benefits from a number of national studies recently conducted by the HSRC in relation to areas that are not well researched, such as enterprise based training, or higher education-industry partnerships. These were mined to provide a fresh new analysis of provincial trends, to increase breadth of coverage.

Background Paper 1

THE UNDERPINNING INFRASTRUCTURE: PUBLIC SCHOOLING IN THE WESTERN CAPE

INTRODUCTION

The intent of this background paper is primarily descriptive, to identify key trends over the past six years which have implications for the transition of young people in the Western Cape through their educational and working lives.

The public provision of schooling contributes fundamentally to human resources development by laying the basis of the life skills needed to function in society, as well as preparing people for the labour market and higher education. This paper investigates the extent and quality of school coverage in the Western Cape from 1998 to 2003. It assesses the size of the school system over the last 6 years as well as its output. Its focus is a quantitative overview of access to education, the efficiency of the school system, and issues of equity in the provision and outcomes of schooling.

Access of children to schooling is shown through the growth in school enrolment and indicators such as the gross and net enrolment. The paper assesses internal efficiency by studying the dynamics of student flows and by measuring dropout and repetition. An analysis of enrolments resulting from intra-provincial and inter-provincial transfers and the impact it will have on the human and physical resources of the Western Cape is undertaken. Finally, indicators of learning achievement are investigated and include scores on international testing instruments and output from the Senior Certificate Examination.

Analysis will demonstrate that relative to national trends, the education system in the Western Cape is performing satisfactorily. The Western Cape schooling system ensures virtually universal access to schooling for children between the ages of 7 and 14, and on a key exit indicator, its learners have consistently achieved the highest provincial pass rate in the matriculation examination in recent years. However, there remain significant problems in relation to the efficiency and equity of the system, which have implications for the number and quality of school leavers available to enter the workforce, Further Education colleges and higher education institutions.

decline in primary enrolment for the period 1999-2000 and 2000-2001 followed by a slight increase for the period 2001-2002. While enrolment in Grade 1 grew annually by 2 per cent from 1993 to 1998 it experienced a 12 per cent decline in 1999 and then a 26 per cent decline in 2000 due to the policy change of that year, which precluded the entry of children under age 7. In 2002, the age policy was reversed/amended (DoE 1998b), and entry into Grade 1 grew by 6.3 per cent. The stable pattern of primary enrolment since 2002 suggests a recovery but trends are distorted by policy change to the extent that any firm conclusion is difficult.

The dynamics in secondary enrolment are also noteworthy. Secondary enrolment in the Western Cape has shown a year-to-year growth of more than 2 per cent, except for the 1999-2000 period where enrolment growth dropped to about 1 per cent. Grade 12 enrolments seem to fluctuate slightly from year to year with either an increase or a decrease in a two-year cycle. Grade 12 enrolment has dropped relative to overall secondary enrolment. Table 2 shows a substantial drop in learner numbers after Grade 10, for all the years indicated. The phenomenon referred to as 'gate-keeping', that is, preventing at-risk Grade 10 or 11 learners from proceeding, is not sufficient enough to contribute to the massive loss of learners in the Western Cape (see below for further elaboration of the phenomenon). Part of the problem of high dropouts can be attributed to the transition within the GET phase, usually from Grade 7 to Grade 8, and from GET to FET. Do students encounter difficulties adjusting socially to a new school? To what extent do students benefit from school transition programmes? Importantly, how does the junior secondary level prepare students for the academic demands of the FET curriculum?

Table 2: Number of learners and growth rates in ordinary public schools, 1998 - 2003

	1998	1999	2000	2001	2002	2003	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003
GR 1	98,969	87,430	64,835	81,790	86,962	86,912	-11.7	-25.8	26.2	6.3	-0.1
GR 2	89,824	92,922	81,860	62,960	77,018	82,447	3.4	-11.9	-23.1	22.3	7.0
GR 3	85,295	88,605	92,334	81,832	64,129	75,930	3.9	4.2	-11.4	-21.6	18.4
GR 4	84,883	88,010	91,940	94,302	83,015	66,029	3.7	4.5	2.6	-12.0	-20.5
GR 5	80,621	83,068	85,757	89,254	93,176	82,381	3.0	3.2	4.1	4.4	-11.6
GR 6	76,549	78,492	80,654	83,305	86,786	92,338	2.5	2.8	3.3	4.2	6.4
GR 7	73,874	74,661	75,813	77,778	80,865	84,514	1.1	1.5	2.6	4.0	4.5
Total Primary	590,015	593,188	573,193	571,221	571,951	570,551	0.5	-3.4	-0.3	0.1	-0.2
GR 8	76,901	79,043	80,026	82,190	75,601	81,154	2.8	1.2	2.7	-8.0	7.3
GR 9	67,586	69,674	70,634	71,966	80,450	73,200	3.1	1.4	1.9	11.8	-9.0
GR 10	61,926	63,479	63,840	67,034	69,752	81,739	2.5	0.6	5.0	4.1	17.2
GR 11	46,115	49,247	48,934	50,206	51,618	51,746	6.8	-0.6	2.6	2.8	0.2
GR 12	40,980	40,206	40,996	39,910	40,468	39,644	-1.9	2.0	-2.6	1.4	-2.0
Total Secondary	293,508	301,649	304,430	311,306	317,889	327,483	2.8	0.9	2.3	2.1	3.0
Total GR 1 - 12	883,523	894,837	877,623	882,527	889,840	898,034	1.3	-1.9	0.6	0.8	0.9

Source: Data EMIS WC

EDUCATION COVERAGE

The Gross and Net Enrolment Ratios are standard education indicators of access and coverage and provide some indication of the internal efficiency of the education system. When read together and looked at over time, they paint a picture of the extent to which the school system accommodates the youth of the country.

Gross enrolment ratio

Table 4 shows the gross enrolment ratio for both Public and Independent schools in primary and secondary schooling for 1997, 2000 and 2001 for the Western Cape. Primary education coverage has been extensive since 1985, covering far more than the population of school-going age (Perry and Arends, 2003). The decrease in the primary school GER between 1997 and 2000 is primarily due to the implementation of the age grade admissions policy in 2000 (DoE 1998b). The increase in the GER at secondary level between 1997 and 2000 is an indication of the growth of learner numbers relative to the population growth of 14–18 year-olds.

The implementation of the age grade admissions policy was expected to bring stability to Grade 1 enrolment after 2000. What is of concern is the huge difference in the primary GER for 2000 and 2001 in the Western Cape. Ordinary school enrolment decreased from 585 770 in 2000 to 585 361 in 2001, a negligible amount. At the same time Stats SA projections for the primary Appropriately School Age Population, 7–13 years, showed a decrease of 612 252 in 2000 to 529 153 in 2001, that is by 14 per cent. While ordinary school enrolment remained constant over this period the statistical techniques employed by Stats SA to project population numbers indicated a substantial reduction in the appropriately school aged population for the primary phase, resulting in the high GER for 2001.

Table 4: Gross enrolment ratio (percentage) in the ordinary public and independent school sector, 1997, 2000 and 2001

Year	Primary	Secondary	Total
	7-13 years	14-18 years	
1997	111%	77%	97%
2000	96%	84%	91%
2001	111%	82%	99%

Source: 1997 data from DoE's 1997 Annual School Survey database; 2000 data from DoE (2002a); 2001 data from DoE (2003a)

Table 5 shows the GER for Public Ordinary school learners for the years 2000–2003. "Education Statistics in South African at a Glance in 2001" (DoE 2002a) indicates that 96.8 per cent of Western Cape learners attended public schools in 2001. This proportion was calculated from the appropriate age data in Census 2001, and the 2000 and 2002 Labour Force Surveys to arrive at an estimate that was used to determine the GER by grade for Public Ordinary schools.

The Gender Parity Index

The Gender Parity Index (GPI) is used to indicate the level of access of females to education compared to that of males. Table 7 shows the GPI for 2000 and 2001 in primary education was 0.99 and for the same years 1.15 and 1.13 respectively in secondary education. This means that there were 1 per cent fewer female learners than male learners at the primary school level, whilst, on the other hand there were 15 per cent and 13 per cent more female learners than male learners at secondary school level for the years 2000 and 2001 respectively. Although no analysis was done with regard to the throughput rates by gender (data not available), it seems as if the repetition and dropout rates for boys is higher than that of girls in the secondary level.

Table 7: Gross Enrolment Ratio (GER) and Gender Parity Index (GPI) for 2000 and 2001

Year	Gender	GER			GPI		
		Primary (as a %)	Secondary (as a %)	Total (as a %)	Primary	Secondary	Total
2000	Female	95	90	93			
	Male	96	78	89			
	Total	96	84	91	0.99	1.15	1.04
2001	Female	110	87	100			
	Male	111	77	97			
	Total	111	82	99	0.99	1.13	1.03

Source: 2000 data from DoE (2002a); 2001 data from DoE (2003a)

INTERNAL EFFICIENCY

Access to education is tempered by the inefficient flow-through of learners due to repetition and dropout. This section looks at a number of indicators of internal efficiency, namely dropout and repeater rates and the number of year's effort to complete schooling. Promotion, repetition and dropout are essentially the three paths of student flow from grade to grade, which characterise the efficiency of the education system in producing graduates. These rates are therefore used for evaluation, monitoring and projection of student flow in an education system.

Repetition and dropout rates

Table 8 shows the 2000/2001, 2001/2002 and 2002/2003 promotion, repetition and dropout rates. Grade 1 has the lowest promotion rate and the highest repetition rate (except for the 2000/2001 period) of the primary grades, probably because of inadequate preparation or school readiness. Many teachers believe that retention, particularly in the early grades, is an effective strategy to remedy poor school performance and may reduce the likelihood of later school failure. Although it is difficult to ascertain the real reasons for this, Roderick as cited

- Health and Nutrition (UNESCO 1998)
- Level of educators' qualifications (Crouch & Mabogoane 2001)
- Management of schools, and in particular management of the available resources (Crouch & Mabogoane 2001)

Years of effort to complete primary and attain Grade 11 and 12

Seekings (WCPT 2003) found that up to the age of seventeen, enrolment in school was almost 100 per cent among White adolescents, while enrolment was lower among African adolescents, and even lower among Coloured adolescents. Seekings also found that African adolescents remained in primary school long past the age when White and Coloured adolescents had moved into secondary school. Young African adults also remained in secondary school long past the age when Coloured and White young adults had left. African children not only started school later than White and Coloured children, but also were more likely to fail or repeat grades. By the age of 18 years, African and Coloured children were 5 times as likely to have failed a grade than their White counterparts.

Significant proportions of African and Coloured adolescents and youths also left school without completing matric. African adolescents tended to drop out at older ages (older than 17) having completed Grades 9, 10 or 11, but without completing matric. Coloured adolescents dropped out at younger ages (especially 15 and 16 years), having completed only Grade 7, 8 or 9. Almost half of dropouts occurred during the school year. The most commonly cited reasons given for dropping out included the family's inability to afford to keep the learner in school or because the learner found a job or wanted to look for a job (WCPT 2003).

Yamauchi (2003) argues that grade repetition induces early transition to the labour force and worsens employment prospects in labour markets. Since those who have repeated and participate in labour markets are young and uneducated, grade repetition deteriorates labour markets, by worsening the quality of labour supply, increasing the unemployment rate and ultimately strengthening downward pressures on wage distribution.

RACIAL COMPOSITION OF SCHOOLS AND MIGRATION

This section looks in some detail at the racial composition of Western Cape schools and the intra-provincial and inter-provincial transfer of learners. The section will first look at the extent of racial integration in Western Cape schools and then will consider whether this can be attributed to intra-provincial or inter-provincial migration of learners.

Table 10: Transfers in public ordinary schools, 2002 and 2003

Ex-Department	2002			2003		
	Inter Provincial	Intra Provincial	Transferring Out	Inter Provincial	Intra Provincial	Transferring Out
DET	11,022	13,895	6,858	12,506	10,474	5,632
HOR	2,650	36,120	21,877	2,647	27,351	17,259
HOD	26	252	161	17	214	123
CED	2,472	13,129	12,012	2,351	9,843	9,192
Total	16,170	63,396	40,908	17,521	47,882	32,206

Source: Western Cape EMIS

Former HOR schools have the largest numbers of learners in terms of intra provincial transfers and learners transferring out of these schools. A recent study on migration in the Western Cape states that it is clear that concern for children's schooling remains strong in rural Coloured communities, and is capable of affecting migration flows for the Coloured population. In Coloured households, most migration was local. This result is supported by qualitative data in Cape Town, where Coloured learners often lodge with kin to be able to access better schools in the metro (Mongwe as cited by Cloete 2002).

Mongwe as cited by Cloete (2002) reports on the power of perceptions and how they influence decisions taken by both parents and learners. Middle class African township residents tend to be very critical of township schools and prefer to send their children to former white and coloured school. The standard of education in the Western Cape is perceived as superior to that offered in the Eastern Cape, schools in formerly coloured neighbourhoods are perceived to be superior to schools in African townships and schools in formerly white neighbourhoods are again perceived to be superior to schools in both formerly coloured and black townships.

The perceptions are that the Western Cape has a significantly better infrastructure and also offers a relatively better quality of life than the two neighbouring provinces, the Eastern Cape and Northern Cape, the two provinces from where most of the in migrants come (Cloete 2002).

The intra provincial transfers into former White (CED) schools can be attributed to the enrolment of mostly Coloured learners in these schools. According to the Western Cape migration study mentioned above, White respondents sampled, had a relatively low concern over schooling, and not as high in the rural districts as in the metro itself. The study concludes that outside of the West Coast, it does not appear that perceived deficiencies in children's schooling are likely to drive significant on-migration among rural Whites in the Western Cape. The possibility then exist that White learners either transfer to other CED schools within the province or perhaps enroll in private schools.

Policy allowing schools to employ governing-body educators was enacted in the early 1990s and by 1996 there were 10 931 governing-body paid educators nationally. This constitutes eight per cent of all educators employed in public schools. In the Western Cape the number of governing-body paid educators increased by 187 per cent from 1 399 in 1996 to 4 012 in 2000 and increased between 2000 and 2003 by 35 per cent.

Table 11: Number of State-paid and governing body-paid educators, 1996, 2000 and 2003 in the Western Cape

Year	Number of state-paid educators	Number of SGB-paid educators	Total number of educators	Learner/educator ratio of state-paid educators	Learner/educator ratio of SGB-paid educators
1996	32,315	1,399	33,714	27	26
2000	25,861	4,012	29,873	35	31
2003	25,401	5,411	30,812	35	31

Source: 1996 and 2000 data from DoE (2001c); 2003 from WC EMIS

The dramatic increase in the number of governing-body paid educators had a significant impact on the learner educator ratio in public ordinary schools in the province. The 2003 learner educator ratio for the Western Cape is 35:1, when considering state-paid educators only. When governing body-paid educators are included in the equation, the learner educator ratio decreases to 31:1.

EQUITY IN LEARNING ACHIEVEMENT

The measurement of learning achievement has relied almost entirely on the Senior Certificate Examination (SCE). There have been a number of initiatives supported by the international agencies in collaboration with the Department of Education to test a nationally valid sample of South African learners in mathematics, literacy and life skills. This section looks at the findings of two of the most recent of these instruments – the Third International Mathematics and Science Study Repeat (TIMMS-R) and the Monitoring Learning Achievement (MLA) project, as well as the Senior Certificate Examination.

Mathematics and Science Foundations

The Third International Mathematics and Science Study Repeat (TIMMS-R) was conducted in 1998 and 1999 in 38 participating countries and tested Grade 8 learners in mathematics and science competence. South Africa's test scores in both mathematics and science were significantly lower than all the other tested. The mean scores of 275 and 243 for mathematics and science respectively are well below the international average of 487 and 488 for these two subjects. The result is significantly below the mean scores of all other participating countries, including the two other African countries of Morocco and Tunisia as well as that of other developing and newly developed countries such as Malaysia, the Philippines, Indonesia and Chile.

Nevertheless, the number and profile of learners who sit for and write the SCE continues to provide some indication of the contribution of schooling to human resource development and more specifically to the stock of learners who are eligible to proceed to higher education and training opportunities.

Overall performance in the SCE

Only three provinces (Gauteng, Northern Cape and Western Cape) experienced an increase in the number of candidates writing the examinations between 2002 and 2003. All provinces recorded an increase in their pass rate in 2003. Increases ranged from less than one percentage point in the Western Cape to a high of nine percentage points in the Free State and eight in the Eastern Cape. The Western Cape achieved the second highest pass rate, 87 per cent, and had the highest proportion of candidates who passed with university endorsement, 27 per cent.

Table 21 shows the national and Western Cape enrolment and pass rates disaggregated by gender in 2002 and 2003. Both years show substantially more female than male candidates enrolled for the SCE. While there are more females than males passing the examination, their performance as measured by the pass rate has been poorer than their male counterparts. This holds true for both the national and Western Cape SCE results. This gap in performance has remained constant at the national level with the female pass rate only 3.3 percentage points lower than the male pass rate in 2002 and 2003. This gap in performance in the Western Cape shows the female pass rate as 1.4 and 2.6 percentage points lower than the male pass rate in 2002 and 2003 respectively. Although the gap has remained unchanged at the national level, in the Western Cape it shows a slight increase.

Table 12: Number of SCE candidates enrolled and passing and as a percentage of the total, 2002 and 2003.

Province	Year	Gender	Candidates	Percentage of total	Candidates passing	Percentage pass rate	Candidates gaining endorsement	Percentage endorsement rate
Western Cape	2002	M	17125	44.9	14948	87.3	4438	25.9
		F	20992	55.1	18037	85.9	5680	27.1
		T	38117	100.0	32985	86.5	10118	26.5
	2003	M	17095	44.1	15154	88.6	4611	27.0
		F	21655	55.9	18615	86.0	5712	26.4
		T	38750	100.0	33769	87.1	10323	26.6
National	2002	M	202730	45.7	143289	70.7	35392	17.5
		F	241091	54.3	162485	67.4	39656	16.4
		T	443821	100.0	305774	68.9	75048	16.9
	2003	M	201408	45.7	151127	75.0	39124	19.4
		F	238859	54.3	171365	71.7	42886	18.0
		T	440267	100.0	322492	73.2	82010	18.6

Source: DoE (2003b, 2003c)

for schooling that are not due to learners exiting for other educational opportunities are cause for concern.

It is also important to understand the extent to which learners are advancing effectively through the system and exiting with a reasonable quality of learning achievement. In this regard, the background paper investigated a number of indicators of efficiency and quality. In terms of efficiency, repetition and dropout are both a concern in the province. Apartheid quality and resources inherited by the province from the former education departments are still playing themselves out. The Western Cape inherited school systems from former departments with high number of learners dropping out, particularly from the former House of Representatives. In general, this has led to the kind of wastage, which means that it takes more than the average 12 years for a learner to complete Grade 12.

Therefore, the province has a long way to go before the most effective usage of resources is harnessed in the schooling sector. Reducing repetition should be a high priority for policy-makers in the province because of the substantial wastage of resources involved.

Indicators such as the high GER and NER, and the GPI which indicates significant levels of female participation in secondary education, presents a healthy situation for Western Cape education. That is not to say that there is not significant intra-provincial inequality which is being masked by the aggregating effect of a historically well-resourced segment. The extent to which these inefficiencies are the direct result of inequitable resource inputs is not investigated in this chapter. Great strides have been made in addressing resource inequality, most particularly in the equalisation of learner educator ratios. However, former Cape Education Department (CED) schools have more resources available to appoint more governing-body paid educators to reduce the learner educator ratio substantially from 35:1 to 23:1.

Similarly, the inherited inequality in the quality of learning achievement is a legacy that will take years to overcome. This means that learners in the most poorly resourced schools are not able to achieve their full potential, and that education attainment in South Africa is not yet close to the learning achievements of some of its economic competitors or other countries in Africa.

In monitoring the output of the SCE there have been some encouraging developments. The number of learners attaining an SCE pass has been growing over the last decade and the pass rates have been steadily climbing in the past few years. Learners appear to be more realistic about the level at which they take their examinations and are more likely to achieve a pass. Of particular note is the high level of participation by female learners in the SCE and the closing of the gap between male and female performance – to such an extent that since

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