

Education Series I

Focus on schooling in Limpopo

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List of acronyms used in this document

Acronym	Description
ABET	Adult Basic Education Training
ASER	Age Specific Enrolment Rate
EMIS	Education Management Information System
DBE	Department of Basic Education
DE	Department of education
LP	Limpopo Province
ECD	Early Childhood Development
EFA	Education for All
FAL	First Additional Language
FET	Further Education and Training
GHS	General Household Survey
NDP	National Development Plan
PCA	Principal Component Analysis
SAMPI	South African Multiple deprivation index
SES	Socio-economic Status
LLECS-2013	Limpopo Learner and Educator Census of Schools 2013
MDG	Millennium Development Goals
MTSF	Medium Term Strategic Framework
NEIMS	National Education Infrastructure Management System
NHTS	National Household Travel Survey
OECD	Organization for Economic Cooperation and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
PPS	Probability Proportional to Size
MOS	Measure of size

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Foreword

This report is the first in a series of education narratives to provide evidence regarding the socio-economic and spatio-temporal correlates and determinants of state of pedagogy in South Africa. It utilizes data from a number of sources across time about the environment of pedagogy, pupil perceptions, living arrangements for pupils and access to learning infrastructure, including transport. These are all brought together under a unified analysis. The report is comprehensive in that it includes the Limpopo Learner, Educator Census of Schools (LLECS) data amongst other sources. The LLECS, which gathered information about the pupils and their learning environment, subject preferences, choices and perceptions about teaching, was done after StatsSA was approached to assist. A similar study was done in the Eastern Cape. The analysis that includes findings based on the LLECS data is therefore only possible in respect of those two provinces. For now the focus is on schooling in Limpopo. The second report in the series will deal in detail with the Eastern Cape and will be published in February 2016.

Limpopo probably has the most complex education history in the country as it represents the amalgamation of the education departments of three former so called “home lands”, namely Lebowa, Gazankulu, Venda, and the northern part of what was known as the Transvaal province. The legacies of these old systems are still evident in the current distribution of learning resources and scholastic achievements as measured through the Annual National Assessment (ANA) and National Senior Certificate (NSC).

At first glance it appears to be the province with the most eager learners as it has the highest educational attendance rate for persons aged 7 to 24 years of all provinces in the country. However, at closer inspection it becomes clear that some of this is partly due to an inordinate percentage of learners who lag behind the expected age per grade and still attend school well into their twenties. Progress has been made in reducing the percentage of learners who are not in education by age 18 and enrollment in Grade R has increased significantly between 2002 and 2013. Available evidence suggests that great progress has also been made in terms of expanding the social safety nets such as child support grants, no fee schools and the school nutrition program to make it easier for poor learners to attend school and stay in school. Even though progress has been made with regards to improving adult literacy rates in the province, Limpopo still has the lowest adult literacy rate in the country.

The adjusted net enrollment rate in primary school and primary school completion rate by age 15 are higher in Limpopo than the national average. Yet from Grade 9 onwards large proportions of learners begin to repeat grades, with four or more learners out of ten older than the expected age for their grade. An apex in relation to age for grade is reached in Grade 11 with a sudden drop of overall enrollment levels for Grade 12. When the data for the number of students who sat for their NSCs between 2010 and 2013 is considered, it becomes evident that there was a significant decrease in registrations for the NSC exam between 2010 and 2011 with slow growth between 2011 and 2013 when compared with a province such as KwaZulu-Natal. Thus many students, especially male students, never reach Grade 12. Only a third of individuals aged 20-24 years in the province have completed secondary school. This is well below the national average of 46%.

Even though the reasons for the dis-functioning of educational systems are usually multi-dimensional and complex, the findings of the study provide some pointers towards some of the crucial factors at play in the overall poor educational outcomes in Limpopo province.

These include amongst others:

- A poor educational base during the early years, as evident from the well below the RSA average performance of grade 3, 6 and 9 learners in the ANA assessments.
- Even though repetition is not a good sign, the fact that it only starts in the senior years is indicative of a system that does not identify poor performance early enough to allow students who have fallen behind to repeat and catch up before they reach the senior phase. By that time entrenched gaps are difficult if not impossible to correct.
- In spite of significant progress that has been made in expanding the social safety nets for poor students, poverty still plays a major role in educational outcomes. Perhaps sheer need is not as prominent anymore, but other circumstantial factors such as the study and work environment at home and poorly educated parents or guardians, continue to play a role here. Students in Grades 7 to 9 that are two years or more older for their grades are more likely to live in female headed households and in extended families that are dependent on social grants as their main source of income. Learners in Limpopo are significantly more likely than students in the country as whole to live with neither of their biological parents or only with their biological mothers.
- Male students are more likely to enroll initially, but the relative success of girls in the education system, based on those who wrote and pass the NSC, are already manifested early on in the form of higher primary school completion rates by age 15. Male and female learning styles and class room behavior differs and it appears as if the current system does not make adequate provision for the learning needs of male learners in order to ensure their success and retention in the education system.
- Better performing secondary schools are in wards where the primary schools that act as feeders for the secondary schools have the following characteristics: the mean years of experience of primary school managers are higher, the mean number of services and facilities at the schools are higher, the ratio of female primary school managers in the ward is higher, the primary schools are from the upper income quintiles and the primary schools feed into secondary schools that generally enroll larger numbers of students.
- Student performance in the NSC is positively correlated to secondary schools that: enrolled large numbers of students for NSC, have higher learner classroom ratios and a higher proportion of school services and facilities available, are in the upper school quintiles and have school managers with more years of school management experience.
- Higher mean learner classroom ratios play an important role in NSC achievement in English, mathematics and natural sciences. This seems to be counter intuitive. However, learner classroom ratios drop significantly in Grade 12 when compared to Grades 9-11 and the finding may suggest that smaller schools, with smaller classes are in areas where they may not be able to attract the same caliber teachers as larger schools with higher learner classroom ratios. Alternatively, schools with good pass rates may be attracting more successful students increasing the learner classroom ratios for especially Grade 12 in those schools.

-
- Mokgalakwena, Mopani and Vhembe generally performed the poorest in relation to the learning environment deprivation index, whilst Tshipise-Sagole and Waterberg appeared to have less problems.
 - The learning environment deprivation index developed for this study has identified very specific districts and schools where targeted interventions are needed.



Mr. Pali Lehohla
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Chapter 1: Introduction

This report seeks to explore the dynamics of basic education in Limpopo province by primarily using data produced by Statistics South Africa. Limpopo came into being in 1994 after the first democratic elections and includes the former homelands of Lebowa, Gazankulu, Venda and the northern part of what was known as the Transvaal province. It was initially named Northern Transvaal, then Northern Province and eventually Limpopo in 2003. The former homeland areas in Limpopo and elsewhere in the country have been and remain the poorest and most deprived geographic regions in the country (Noble et al. 2014).

The education department in the province is an amalgamation of the former Department of Education and Culture: House of Representatives (DEC: HoR) – for Coloureds; Department of Education and Culture: House of Delegates (DEC: HoD) – for Indians; Department of Education and Training (DET) – for Blacks who were not in homelands; Gazankulu Education Department (GED) – for Tsonga/Shangaan-speaking black Africans; Lebowa Education Department (LED) – for Northern Sotho (Sepedi)-speaking black Africans; Transvaal Education Department (TED) – for Whites; and Venda Education Department (VED) – for Venda-speaking black Africans (Mahomole 2008).

The primary challenge faced by the newly formed education department in Limpopo in 1994 was to integrate the diverse organisational structures and education systems of all these entities into a coherent whole, and establish some form of unity within the framework of the National Government's aim to restructure the entire education system, the imperatives of the Reconstruction and Development Program (RDP) and the post-1994 education-related legislation and policies. Nationally, all schools falling under the new education department use the same curriculum, have the same conditions of service, are subject to the same national legislation and the same policies. However, some authors, for example Gardiner (2008), argues that given the historical legacy of disadvantage and continued poverty and inequality in rural areas (predominantly ex-homeland areas) there is a case to be made for providing special attention to schools sharing the historical 'ex-homeland' legacy.

Limpopo was one of the poorest performing provinces in the NSC and other standardised tests throughout the 1990's and early part of the 21st century. Given a number of governance-related concerns, cabinet intervened in five departments in Limpopo (section 100(1)(b) interventions) in December 2011. One of these was the Department of Education. The main reason for the intervention in education was poor financial and cash-flow management, which had adverse effects on the procurement and delivery of LTSMs; training for the roll-out of CAPS; a bloated CoE, rollout of learner transport and infrastructure programme, transfer of funds to schools in terms of national norms and standards; administration of ANA and the NSC; and general management and inability to meet contractual obligations (Motshekga 2013).

Some of the most significant achievements of the section 100(1)(b) intervention that have been achieved during 2012 and early 2013 include: the reduction and stabilisation of education budget; introduction of an innovative and cost-effective system and strategy for the procurement and delivery of learning and teaching support materials (LTSMs) has been developed and implemented; integration and customisation of EMIS, SA-SAMS and LURITS information systems; re-alignment of the organisational structure of the department and cleaning up of PERSAL system in collaboration with the DPSA; temporary educators in substantive vacant posts have been permanently absorbed, suitably qualified educators have been and are in the process of being

appointed in promotional posts (principals, deputy-principals and subject heads of departments); and vacant Circuit managers' posts have been and are being filled; and 308 schools are in the process of being merged because these schools are not educationally and economically viable (Mosthekga 2013).

This document aims to provide a general overview of education in the province of Limpopo using various data sources. The importance of quality of education is captured well in the National Development Plan (NDP) 2030 and it is the main focus of the government programme of action. South Africa has achieved the Millennium Development Goals (MDGs) of universal access to basic education, but the quality of education is still a concern.

An index is also developed that is aimed at capturing, from a learner perspective, relative deprivation in terms of the learning and teaching environment. It is assumed that schools need basic services like electricity and piped water to function, educators need a manageable number of learners per class to give learners individual attention, and learners as the center of learning and teaching outcomes need an enabling environment to achieve the goal of learning.

This document follows the following format:

The second chapter will describe the methodology used. This is followed by a chapter on the educational context and chapter 4 which deals with general patterns of educational institution attendance. Chapter 5 describes educational attainment in the province, whilst Chapter 6 focusses on the development of an index of the learning and teaching environment. The final chapter will summarize the main findings and recommendations of the study.

Chapter 2: Methodology

2.1 Introduction

The General Household Survey (GHS), Census 2011, the National Household Travel Survey (NHTS) 2013, the Learner and Educator Census of ordinary public schools in Limpopo (LLECS-2013) and administrative databases were used in this study to explore schooling in Limpopo. Key indicators from these data sources are used to build a comprehensive and integrated picture of the school managers, learners and educators, school infrastructure facilities and performance. Census 2011 data is used in cases where more recent data is not available. All data was analysed using SAS Enterprise Guide version 4.3 and represent own analysis unless stated otherwise.

2.2 General Household Survey

The GHS is a household survey that has been performed annually by Stats SA since 2002. The survey was introduced to address a need identified by the Government of South Africa to determine the level of development in the country and to measure, on a regular basis, the performance of programmes and projects that were implemented to address these needs. The survey is specifically designed to measure issues around education and multiple facets of the living conditions of South African households, as well as the quality of service delivery in a number of key service sectors. The target population of the survey consists of all private households in all nine provinces of South Africa, and residents in workers' hostels. The survey does not cover other collective living quarters such as students' hostels, old-age homes, hospitals, prisons and military barracks, and is therefore only representative of non-institutionalised and non-military persons or households in South Africa.

The 2009 questionnaire, including the education section, was significantly revised in close cooperation with stakeholders. Based on these changes, the Department of Basic Education has been releasing an annual report called "Focus on schooling" which provides a general summary of the status of education as measured by the GHS conducted in the preceding year.

In most instances where changes over time are discussed, data from the whole time series (2002–2013) of the GHS are used. However, some indicators are based on questions that were only introduced in 2009, and in those instances all available data is used. Even though a distinction was made from 2009 onwards between public and private school attendance, for consistency and comparability over the time series all school types were included in the GHS analysis.

Since the GHS is a sample survey and relies on population estimates and a weighting process to extrapolate sample estimates to population estimates, the absolute number of cases does not always correspond with administrative and Census data sources.

2.3 National Household Travel Survey

The National Household Travel Survey (NHTS) was conducted in 2003 and 2013, and is aimed at providing insights into the travel modes, times and costs of South African households. A number of indicators related to scholar travel patterns were included in the survey. As a result of significant provincial boundary changes and the sample design that is firstly based on Travel Analysis Zones and then on administrative boundaries, provincial comparisons between 2003 and 2013 are difficult.

2.4 Limpopo Learner and Educator Census of ordinary public schools

The Limpopo Learner and Educator Census of public schools in Limpopo (LLECS 2013) was done in order to provide a head count of educators and learners, as well as information on location and actual conditions of schools in the province and provide additional data for decision-making by the Limpopo Treasury (LT), Limpopo Education Department (LED), the Department of Basic Education (DBE) and National Treasury (NT). Statistics South Africa executed the study between 21 January and 07 June 2013 in all ten education districts in Limpopo. All schools, school managers, educators and learners who were at schools in the province during the survey period were targeted for the study. Both ordinary and special public schools were included and the data does not reflect the situation in private schools. Four different questionnaire types (for schools, school managers, educators and learners) were administered.

2.5 Administrative data sources

Two administrative data sources were used for the study: the National Senior Certificate results for 2013 and the EMIS master list of schools for 2013. The LLECS-2013 was not reconciled with other data sources of the department in relation to school record information other than at a high level of editing, where basic school types were compared with the EMIS numbers provided by teachers and learners.

2.6 Methodology used for the development of an index of school environment deprivation

The purpose of this part of the study was to develop indices of deprivation for learners using the LLECS-2013 datasets. The indices can be used for targeted interventions by education authorities and policy makers in the province of Limpopo and were based on learner and school manager records.. The concept of space as defined for this part of the study refers to the space of functioning and capabilities. Learners and educators require an enabling environment for effective learning and teaching. Learners require classrooms with ample space for effective and interactive learning, well equipped computer and science laboratories, sufficiently stocked libraries, and suitably equipped sports facilities for various sporting codes. Teachers on the other hand need good and relevant qualifications and experience to deliver quality education. They also need to be rewarded appropriately for the services they render. Due to the fact that the index was learner centered and learners could not be linked to a specific teacher, teacher attributes were not considered in the construction of the index.

Alkire-Foster's method of Multidimensional Poverty Analysis

The Alkire and Foster (AF) methodology is a general framework for measuring multidimensional poverty, although it is also suitable for measuring other phenomena (OECD 2005, Akire, S. & Roche, J.M. 2012). Even though there are several other methods in use, it was selected for this study because of its ease of use, its production of both the incidence and intensity of deprivation indicators and the fact that it has already been used by Statistics South Africa for the development of the South African Multi-dimensional Poverty Index (SAMPI). With the AF method, many key decisions are left to the user. These include the selection of the purpose, space, unit of analysis, dimensions, deprivation cutoffs (to determine when a person is deprived in a dimension), weights or values (to indicate the relative importance of the different deprivations), and poverty cutoff (to determine when a person has enough deprivations to be considered to be poor). The AF

methodology for measuring multidimensional poverty consists of identification and an aggregation method and identifies people as poor using a 'dual-cutoff' counting method. The fundamental step of deciding who is poor is **identification**. It entails counting the number of dimensions in which people suffer deprivation; the number of dimensions in which they fall below the threshold. A counting approach to identify the poor can be broken down into the following steps:

1. Defining a set of relevant indicators;
2. Defining a threshold of satisfaction (deprivation cutoff) for each indicator such that if the person does not reach it, the person is considered deprived;
3. Creating binary deprivation scores for each person in each indicator, where 1 is being deprived and 0 is non-deprived;
4. Assigning a weight or deprivation value to each considered indicator;
5. Producing a deprivation score by taking weighted sum of deprivations (the number of deprivations, if equally weighted); and
6. Setting a threshold score of poverty (or poverty cutoff) such that if the person has a deprivation score at or above the threshold, the person is considered poor.

Analysis of the Learner Domain

The learner should be the focus of the learning and teaching environment and must take and pass certain subjects and participate in some sporting activities. Schools must also conform to a minimum set of criteria in so far as infrastructure and services are concerned. The indices developed for this study were therefore constructed around the learners and their learning environments as informed by the LLECS 2013 datasets for school managers and learners. Indicator choices were informed by policies in relation to facilities and learning environments, but also by a study of patterns in the data and discussions with educators and officials of the DBE.

The national policy pertaining to the programme and promotion requirements of the national curriculum statement for Grades R–12 indicated that at least three subjects stand out across all four education phases:

- Home Language and First Additional Language;
- Mathematics or Mathematical Literacy; and
- Life Skills or Life Orientation.

Mathematical Literacy is taken at the FET phase. Life Skills as a subject is taken at the Foundation and Intermediate phases and Life Orientation is taken at the Senior and FET phases. As a result, enrolment for these subjects will play a significant role in the selection of indicators. The unit of analysis under this domain is a learner.

Table 2.1 summarises the indicators identified for the foundation, intermediate, senior and FET phase. The total weights allocated to each dimension is provided in this table, but more detailed weights at indicator level can be found in Appendix B. In Chapter 6, where the actual index values are provided, a more detailed explanation will be given for the selection of domains and indicators.

Table 2.1: List of learning environment deprivation index indicators/dimensions for the different educational phase learners with their allocated weights

Dimension	Total weight for dimension	Foundation phase indicator	Intermediate phase indicator	Senior phase indicator	FET phase indicator
Age	0,125	Age > 9	Age > 12	Age > 15	Age > 18
Subjects	0,125	Not taking Maths Not taking Life Skills Not taking Home Language and first additional language as subjects Taking less than 3 subjects including compulsory subjects - - - - -	Not taking Maths Not taking Life Skills Not taking Home Language and first additional language as subjects Not taking NST Not taking Social Science Taking less than 5 subjects including compulsory subjects - - -	Not taking Maths Not taking Life Orientation Not taking Home Language and first additional language as subjects Not taking Natural Science Not taking Technology Not taking Creative Arts Not taking Social Science Not taking Economics and Management Science Taking less than 8 subjects including compulsory subjects Grade 7 class ratio > 40 learners per class Grade 8 class ratio > 40 learners per class Grade 9 class ratio > 40 learners per class	Not taking Maths/mathematics literacy Not taking Life Orientation Not taking Home Language and first additional language as subjects Taking less than 3 subjects including compulsory subjects - - - - -
Learner-class ratio	0,125	Grade R class ratio > 30 learners per class Grade 1 class ratio > 40 learners per class Grade 2 class ratio > 40 learners per class Grade 3 class ratio > 40 learners per class	Grade 4 class ratio > 40 learners per class Grade 5 class ratio > 40 learners per class Grade 6 class ratio > 40 learners per class	Grade 7 class ratio > 40 learners per class Grade 8 class ratio > 40 learners per class Grade 9 class ratio > 40 learners per class	Grade 10 class ratio > 40 learners per class Grade 11 class ratio > 40 learners per class Grade 12 class ratio > 40 learners per class
Home language	0,125	Not using home language as language of teaching and learning -	Not using home language as language of teaching and learning School language not English/Afrikaans	Not using home language as language of teaching and learning School language not English/Afrikaans	Not using home language as language of teaching and learning School language not English/Afrikaans
Sport	0,125	Deprived in sport	Deprived in sport	Deprived in sport	Deprived in sport
Basic services	0,125	No gardener in school No cleaner in school No admin clerk in school No security guard in school No piped water in school No toilet facility in school No electricity in school No Internet No library No admin block No computer laboratory No fencing -	No gardener in school No cleaner in school No admin clerk in school No security guard in school No piped water in school No toilet facility in school No electricity in school No Internet No library No admin block No computer laboratory No fencing -	No gardener in school No cleaner in school No admin clerk in school No security guard in school No piped water in school No toilet facility in school No electricity in school No Internet No library No admin block No computer laboratory No fencing No science laboratory	No gardener in school No cleaner in school No admin clerk in school No security guard in school No piped water in school No toilet facility in school No electricity in school No Internet No library No admin block No computer laboratory No fencing No science laboratory
Infrastructure	0,125	No Internet No library No admin block No computer laboratory No fencing -	No Internet No library No admin block No computer laboratory No fencing -	No Internet No library No admin block No computer laboratory No fencing -	No Internet No library No admin block No computer laboratory No fencing -
Financial contribution of SGB	0,125	No teachers paid by SGB	No teachers paid by SGB	No teachers paid by SGB	No teachers paid by SGB
Total weight	1,000				

Deprivation cutoffs per dimension and uncensored head count

The deprivation cutoff of each dimension is the minimum value or achievement Z_j considered necessary in the dimension. It is assumed that such values or levels are positive values. These minimum values are collected in the d-dimension vector: $Z = (Z_1, \dots, Z_d)$.

When selecting a cutoff, a solely statistical solution is not feasible as other considerations such as the practical use of the index and the general distribution of the deprivation counts have to be taken into consideration as well. In this particular case it was found that if the standard of a third or more deprivations are used in order to determine whether a learner is deprived, more than 90% of all learners would be classified as deprived. However, if the cutoff was set to 50% for each phase (i.e. if more than half of the indicators for a particular learner indicates deprivation), a much more realistic and practically useful picture emerged.

Data limitations

The LLECS-2013 was meant to visit all the schools in Limpopo and enumerate all the learners, educators, school managers, and basic services and infrastructure that made up a school. Some schools could not be visited and not all learners and educators of schools visited were found at school and hence those who could not be found after four attempts were not enumerated. However, these represent a small percentage of the overall number of schools, learners and educators in the province and have a negligible impact on the overall conclusions of the study. The EMIS dataset from 2012 was used as a frame of schools with required information on data structure; and as such the 2012 EMIS dataset is used as a frame of reference when checking the validity and consistency of the EMIS codes in LLECS-2013 datasets.

The final school information dataset contains data collected using the “Overall School Information” questionnaire where school managers were respondents. The school information dataset has 3 930 observations where each observation represents a school. A total of 3 930 enumerated schools carried valid EMIS codes and only four observations could not be merged because the schools were not visited. Table 2.2 lists the four schools that were not visited during enumeration.

Table 2.2: List of schools missed during enumeration

Phase	Emis number	Education District	Circuit	Sector
Secondary School	922220897	Capricorn	Maune	Public
Primary School	925631275	Greater Sekhukhune	Driekop	Public
Primary School	928330619	Vhembe	Nzhele West	Public
Combined School	930321189	Vhembe	Vhuronga 1	Public

For purposes of this analysis, five percent of the records were not included. Study limitations regarding the Census of Schools are captured in the report on the subject as published in early 2014.

Data used for constructing the deprivation index is based on 1 468 499 (94,9%) of the 1,5 million (1 547 589) learners that were enumerated in the census of schools.

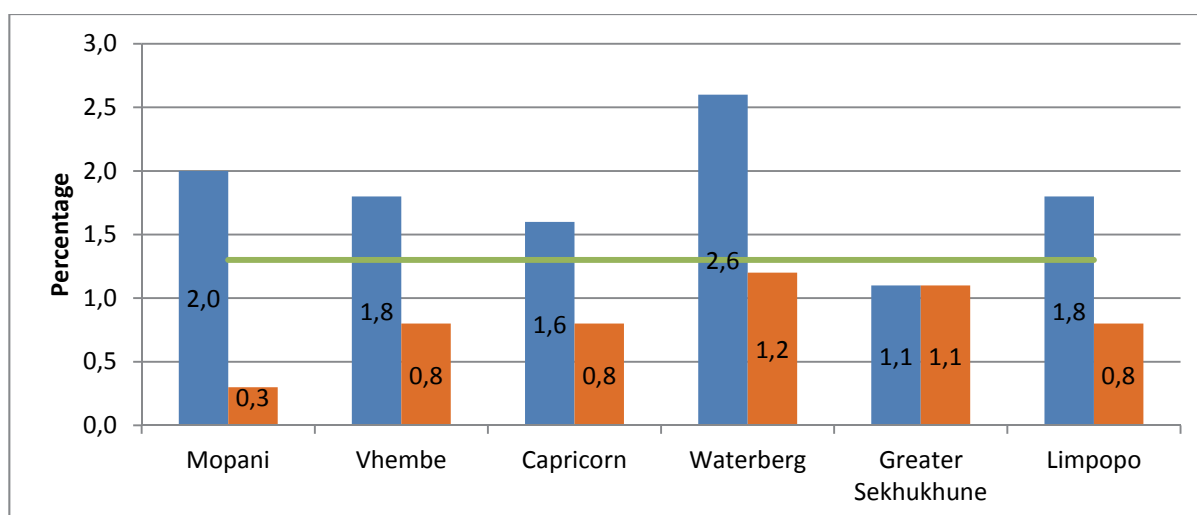
Chapter 3: Educational context

3.1 Introduction

Education does not take place in a vacuum, and the socio-economic context on a space and time continuum needs to be considered if one is to adequately understand the dynamics and outcomes of education in a particular geographic location. This chapter aims to look at the demographic changes that have taken place in Limpopo during the past 20 years and its relevance to education and educational outcomes, intra-household dynamics that may impact on the support and/or ability of learners to do homework and have a supportive home environment such as orphan-hood, the household types and living arrangements. The report continues by looking at the various social safety nets that have been implemented by the Government such as the school nutrition programme, school fee exemption and the child support grant within the context of Limpopo. Other social safety nets that have an indirect impact such as free basic water, primary health care and the housing subsidy scheme are acknowledged as impacting on the learner’s socio economic well-being, but not discussed in greater detail.

3.2 The demographic imperatives

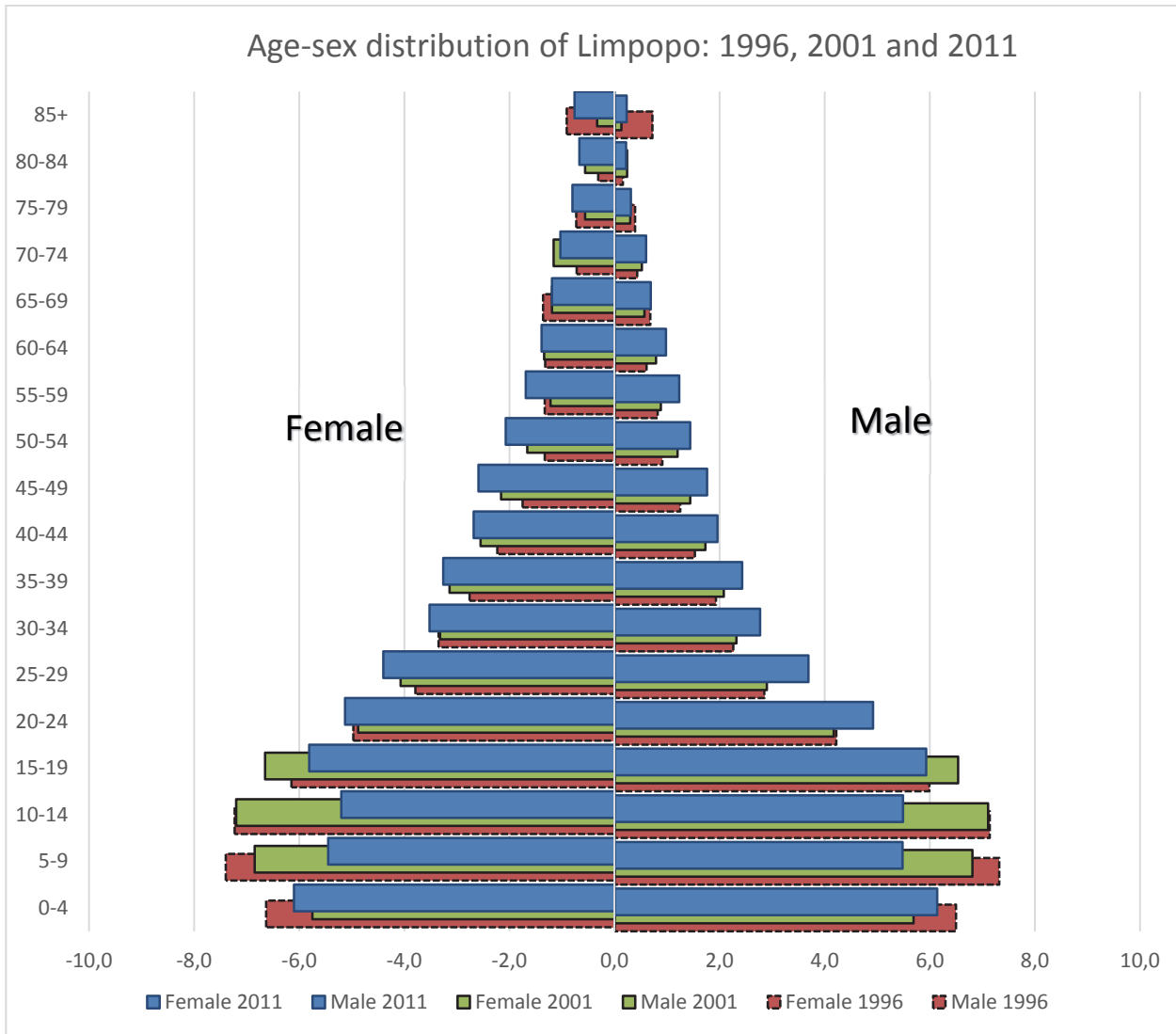
Figure 3.1: Annual population growth rates by district municipality, 1996-2001 and 2001-2011



Source: Census 2011 Municipal Report: Limpopo, Statistics South Africa 2012a, RSA annual growth rate own calculation based on data in Mid-year population estimates, 2011 and 2013, own calculation.

The population distribution and population growth rates are two of the most important factors that influence the demand for social infrastructure and services such as schools and education. Population Census 2011 findings suggest that Limpopo experienced slow population growth in the post-1994 period. The provincial population is estimated to have grown by 1,8% in the five years between 1996 and 2001, and 0,8% in the ten-year period between 2001 and 2011. These low growth rates can partially be attributed to out migration. In the period 2001 to 2011 372 283 individuals left the province people left the province to establish residence elsewhere and 219 426 migrated to the province (Statistics South Africa 2012b). The highest growth rates during the past ten years were found in Waterberg (1,2%) and Greater Sekhukhune (1,1%) which is below the national growth rates during the same time period (1,44%). Greater Sekhukhune is the only district where growth was constant in these two inter-censal periods, whilst Mopani district experienced the biggest decline in population growth rates when comparing the 1996–2001 and 2001–2011 periods.

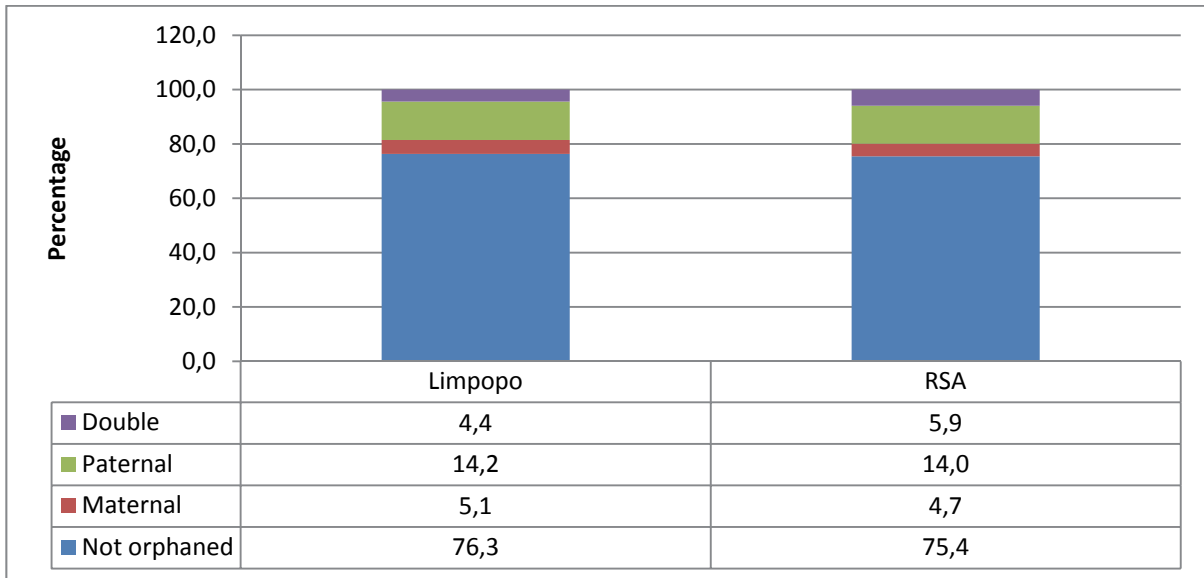
Figure 3.2: Distribution of the population by age and sex, Limpopo, 1996, 2001 and 2011



Source: Census 2011 Municipal Report: Limpopo, Statistics South Africa 2012

Changes in the demographic distribution of the population in Limpopo as measured in Census 1996, 2001 and 2011 indicate that the demographic distributions of males and females of all age ranges below 20 years, are similar. Even though a sharp decline in fertility was noted across the country after 1994, the population distribution as measured through Census 2011 does show particularly sharp declines for the age groups 5–14 years between 1996 and 2011, with a bulge again for the 0–4 year age group. The numbers of young people aged 15–19 in 2011 were lower than expected when considering their numbers in 1996 at the age range 0–4 years. The age group 10–14 years in 2011 who were aged 0–4 in 2001 also showed a small decline, albeit lower than for the 10–14 year age group. Possible reasons for the lower than expected numbers of young individuals could be lower fertility rates and higher rates of outmigration of parents with children in this age group to other provinces in pursuit of job opportunities, and better life circumstances.

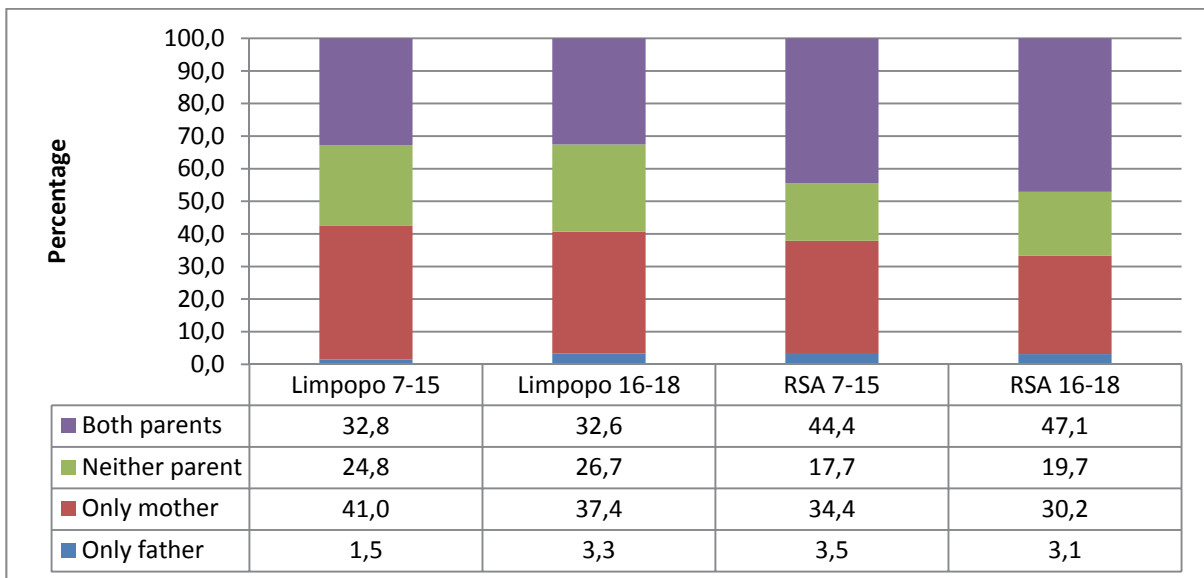
Figure 3.3: Percentage of children aged 7–18 that are orphans, 2013



Source: General Household Survey 2013

In comparison with the rest of the country, children aged 7–18 living in Limpopo are less likely to be orphaned; only 4,4% are double orphans compared to 5,9% in the country as a whole. However, joint orphan-hood rates for the province are slightly higher than the national orphan rates at 5.1% compared to 4.7% at the national level suggesting a higher rate of adult parents compared to females.

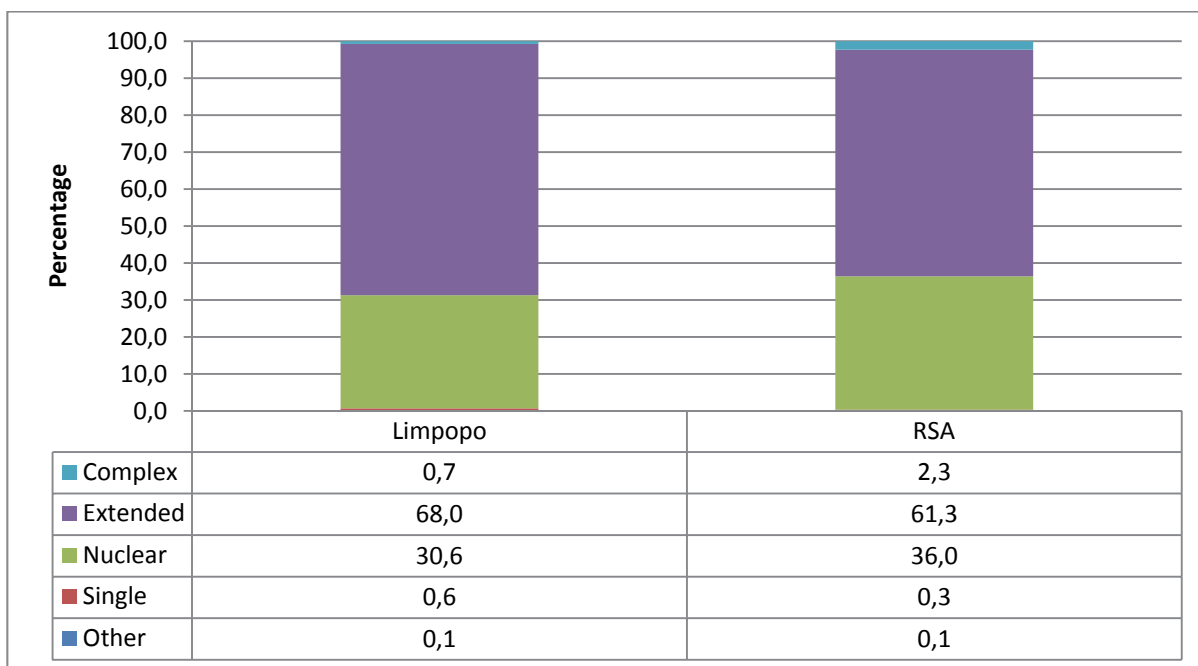
Figure 3.4: Percentage of children aged 7–15 and 16–18 living with one, both or none of their biological parents, Limpopo and RSA, 2013



Source: General Household Survey 2013

Learners in Limpopo are significantly more likely than learners in RSA to live with neither of their biological parents and or only with their biological mothers. Approximately a quarter of learners aged 7-15 do not live with any of their biological parents and 41% only live with their biological mothers.

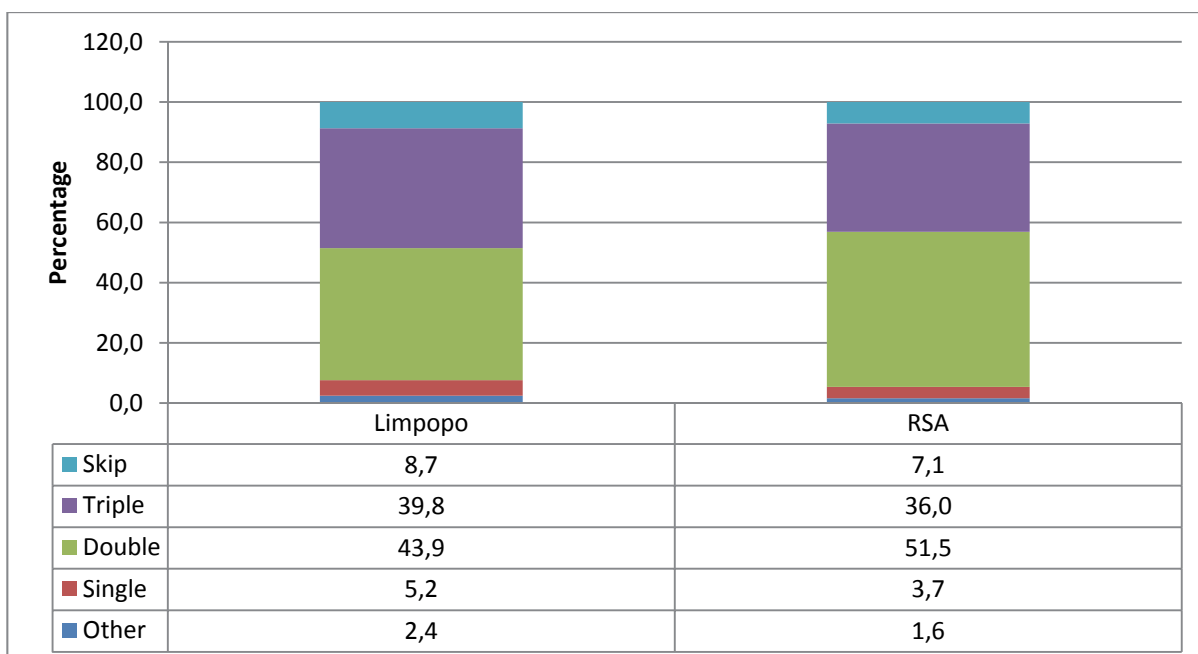
Figure 3.5: Percentage of children aged 7–18 living in different household types, Limpopo and RSA, 2013



Source: General Household Survey 2013

Figure 3.5 shows the percentage of children aged 7–18 by the household types in which they live. Most live in either extended (68%) or nuclear families (30,6%). Nuclear households are defined as households consisting of household heads, their spouses and offspring, while the extended household would typically include other relatives in addition to the nucleus. Complex households are households with members who are not related to the household head. Generally children in Limpopo are more likely to live in extended households than 7–18 year olds in the country as whole.

Figure 3.6: Percentage of children aged 7–18 living in household types classified according to the generations present, Limpopo and RSA, 2013



Source: General Household Survey 2013

When the living arrangements of individuals aged 7–18 are considered, those living in Limpopo are more likely than individuals living elsewhere to live in intergenerational households. Slightly more than four out of ten (43,9%) children live in households that contained at least two generations (i.e. their parents or guardians), while 39,8% live in households that contained three or more generations. Almost 9% of children lived in skip-generation households with their grandparents.

Table 3.1: Living arrangements of children aged 7–18 in relation to their biological parents, Limpopo and RSA, 2013

Region	Living arrangements (percentage)					
	Sex	Only father	Only mother	Both	Neither	Total
Limpopo	Male	1,9	40,6	24,2	33,3	725 543
	Female	2,4	41,3	23,6	32,7	756 700
	Total	2,2	40,9	23,9	33,0	1 482 243
RSA	Male	4,0	34,1	32,9	29,1	6 112 928
	Female	3,7	36,1	32,3	27,9	6 068 075
	Total	3,9	35,1	32,6	28,5	12 181 003

Source: General Household Survey 2013

The living arrangements of individuals aged 7–18 years are summarised in Table 3.1. It shows that nearly a quarter live with both their parents (23,9%), a third live with neither of their biological parents and 40,9% live with their biological mothers.

3.3 Social safety nets that impact on children, their well-being and potentially on education

3.3.1 Introduction

The adoption of the constitution in 1996¹ entrenched several rights aimed at protecting the poor in general and more particularly children. The obligation of the state to meet these rights is tempered within the context of reasonable means and the greater good. In response to these imperatives, several social safety nets aimed at improving the well-being of the poor were introduced.

Safety nets with a direct impact:

- School nutrition programme (the right of access to sufficient food)
- Right of children to basic nutrition (the right to basic education)
- School Fee Exemption Policy (the right to education)
- Child Support Grant (the right to social security)

Safety nets with an indirect impact:

- Free Basic Water Policy (the right to water)
- Free Primary Health Care (the right to health care services)
- Housing Subsidy Scheme (the right to basic shelter and housing)

3.3.2 The school nutrition programme

The National School Nutrition Programme (NSNP) was introduced in 1994 as one of the strategic initiatives that formed part of the Reconstruction and Development Programme (RDP). From 1994 to 2004 the programme functioned under the auspices of the Department of Health. However, in 2002 a decision was made that by April 2004 the Department of Education should be responsible for the programme.

¹ The Constitution of the Republic of South Africa Act, Act No. 108 of 1996.

Several constitutional rights of children are addressed by the National School Nutrition Programme (NSNP). These are the right of access to sufficient food [Section 27 (1) (b)]; the right of children to basic nutrition [Section 28 (1) (c)]; and the right to basic education [Section 29 (1) (a)].

The NSNP was never conceived to fully meet the right to access to sufficient food and the right of children to basic nutrition, but rather to complement a range of other social security interventions that would impact on the nutritional status and well-being of children and by implication their education. It was also hoped that the programme will encourage children to attend school and improve their concentration and learning capacity.

The specific objectives of the programme are to²:

- Contribute to enhanced learning capacity through school feeding programmes;
- Promote and support food production and improve food security in school communities; and
- Strengthen nutrition education in schools and communities.

After the NSNP was transferred to the Department of Education in 2004, it continued to operate the feeding scheme in the way it was run by the Department of Health. The intention was to build on the already established programme, meet existing standards and improve on quality rather than quantity (Kallman 2005). Changes in targeting and implementation only began to take shape in 2005. Various evaluations of the programme during its early years concluded that it was successful in quantitative terms i.e. number of students reached and to some extent targeting (e.g. IDASA 2004, Kloka 2003b), but some studies such as that of the Human Rights Commission (HRC 2003) questioned the decrease in number of students reached between 2001/2002 and 2002/2003. Concerns about the programme that were identified by these evaluators included: insufficient human resource availability, lack of adherence to national guidelines on feeding times and menus, food safety and the quality of food, amongst other problems.

At the time of transition, the gazetted allocation for Limpopo (R153 million) for this programme represented 18,4% of the national allocation whilst the number of students targeted (912 800) comprised 19,6% of the total number of learners in RSA (own calculations from Kallman 2005). In a joint evaluation between the United Nations Child and Education funds (UNICEF) and the Department of Education (DE) published in 2008, no information was found for most indicators for Limpopo for 2004, whilst the province performed the poorest of all provinces in 2005 and amongst the poorest in 2006 for most indicators measured (DE 2008).

An evaluation conducted at about the same time by the Public Service Commission (PSC 2008), focused primarily on Eastern Cape and Limpopo, because they were the poorest and predominantly rural. In addition to the centralisation of the programme at provincial level, the PSC report also identified the following key challenges:

- Unavailability of the necessary and needed infrastructure;
- Non-delivery or delayed delivery of supplies;
- Deliveries that deviate from prescribed requirements and substitution of food items due to shortages on particular days;
- Limited stakeholder awareness and involvement; and
- Centralisation of the programme at the provincial level.

² Department of Basic Education. 2010. NSNP Annual Report 2009/10. Department of Basic Education, Pretoria.

DBE guidelines in relation to the NSNP indicate that the school head master or manager, as the accounting officer of the school, is responsible for the overall management of the nutrition programme (DBE 2010:5). This not only provides an opportunity for local community involvement in the administration of the programme, but also places a big responsibility on the school principal as manager. The PSC (2008) evaluation found that school managers were not always aware of their responsibilities and role in relation to the NSNP. Only 27% of the managers included in the study indicated that they knew what their responsibilities were in relation to this programme and less than a quarter (22%) are involved in it on a daily basis. Eberhard (2013) found in a study in Limpopo that none of the school managers interviewed for the study had significant NSNP management functions. The assessment suggested that at the schools included in the study, the programme is largely centrally managed with little or no school manager involvement.

Table 3.2: Number of learners and schools benefiting from the NSNP in Limpopo (2009–2013)

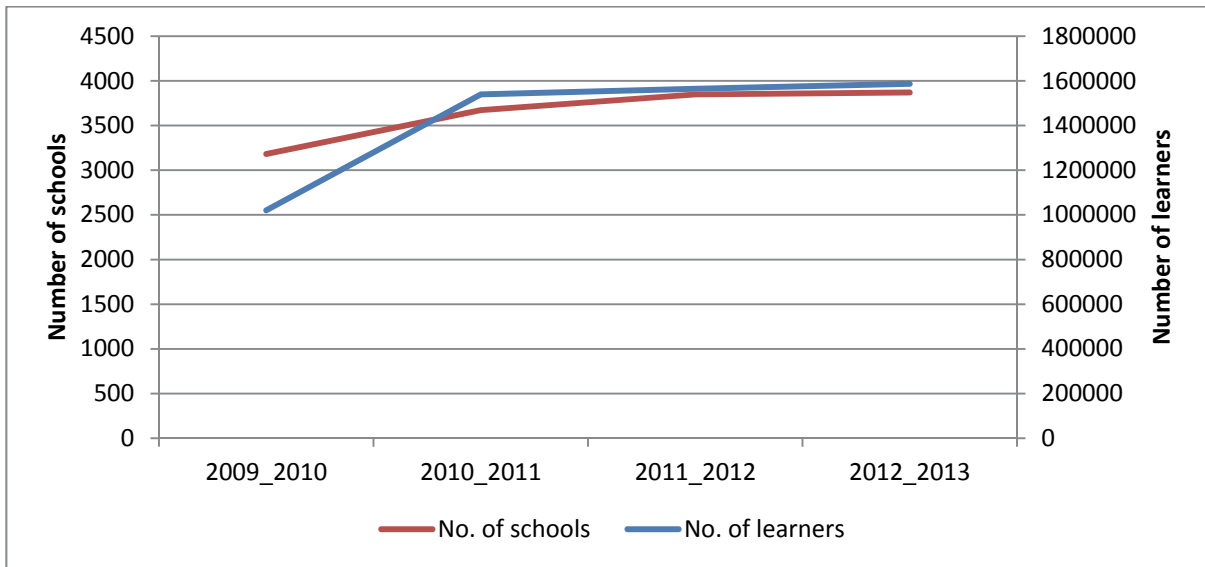
Period	NSNP annual reports	
	No. of learners	No. of schools
2009–2010	1 020 569	3 181
2010–2011	1 538 919	3 672
2011–2012	1 563 994	3 848
2012–2013	1 586 343	Not specified

Source: NSNP Annual Reports 2009/10, 2010/2011, 2011/2012, 2012/2013

According to the annual NSNP reports, the province made progress over time in terms of both the involvement of community volunteers and other stakeholders and the promotion and development of vegetable gardens and orchards. In the 2009/2010 report it was indicated that of 1 063 food gardens initiated, 1 056 gardens survived and 60 schools were supplying service providers with produce (NSNP Annual Report 2009/10). The numbers of schools with food gardens increased to 2 056 in 2011/2012 with an additional 98 with orchards (NSNP Annual Report 2009/10). Even though it is not clear how many of the gardens established during previous years survived, the 2012/2013 NSNP report indicates that 1 911 gardens were established during that year and that schools were supported by providing seedlings, capacity building and gardening tools.

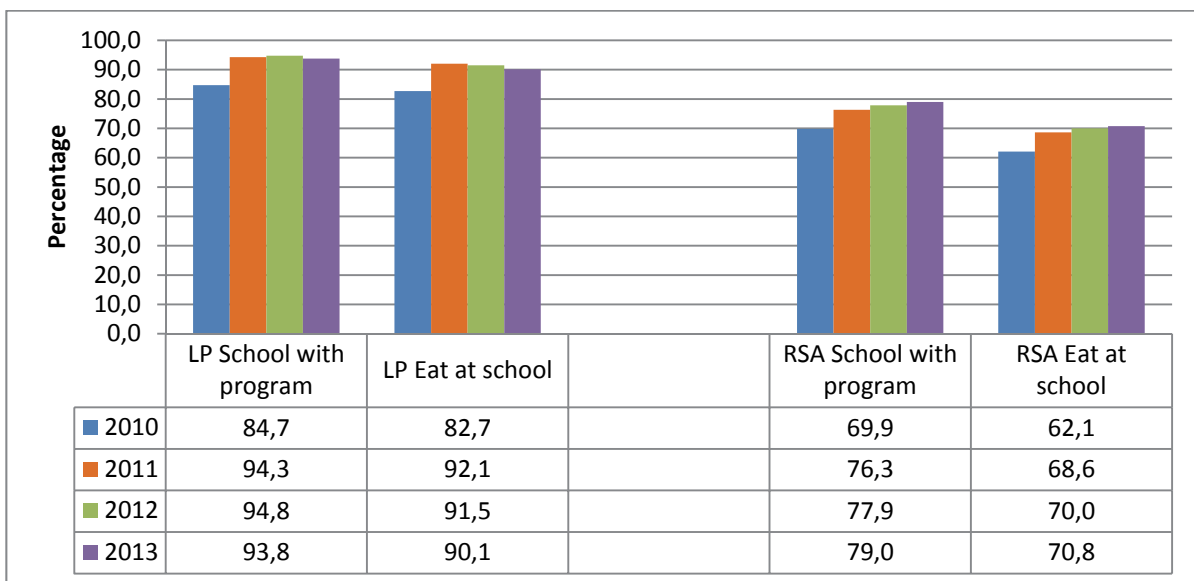
The programme in Limpopo, which is offered at quintile 1, 2 and 3 schools, also creates some economic opportunities in the local communities as service providers, food handlers and monitors are sourced from there (Motshekga 2013).

Figure 3.7: Number of learners and schools benefiting from the school nutrition programme (2009–2013)



Source: NSNP Annual Report 2009/10, 2010/2011, 2011/2012, 2012/2013³

Figure 3.8: Percentage of learners attending schools with a nutrition programme and the percentage who made use of it, Limpopo and RSA (2010–2013)

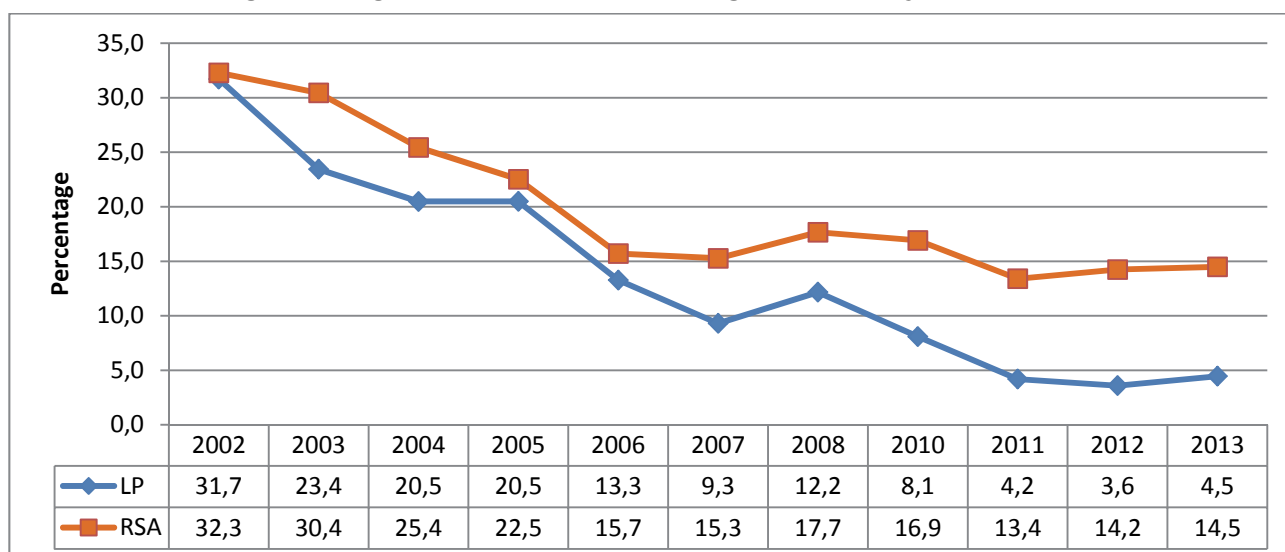


Source: General Household Survey 2010–2013

According to the GHS, 94% of the learners in Limpopo attend a school that offers a nutrition programme and 90% of them actually make use of the service. This is significantly higher than the national average for 2013 of 70,8% of pupils who eat at the school and the participation rates recorded for Limpopo in 2010 (82,7%).

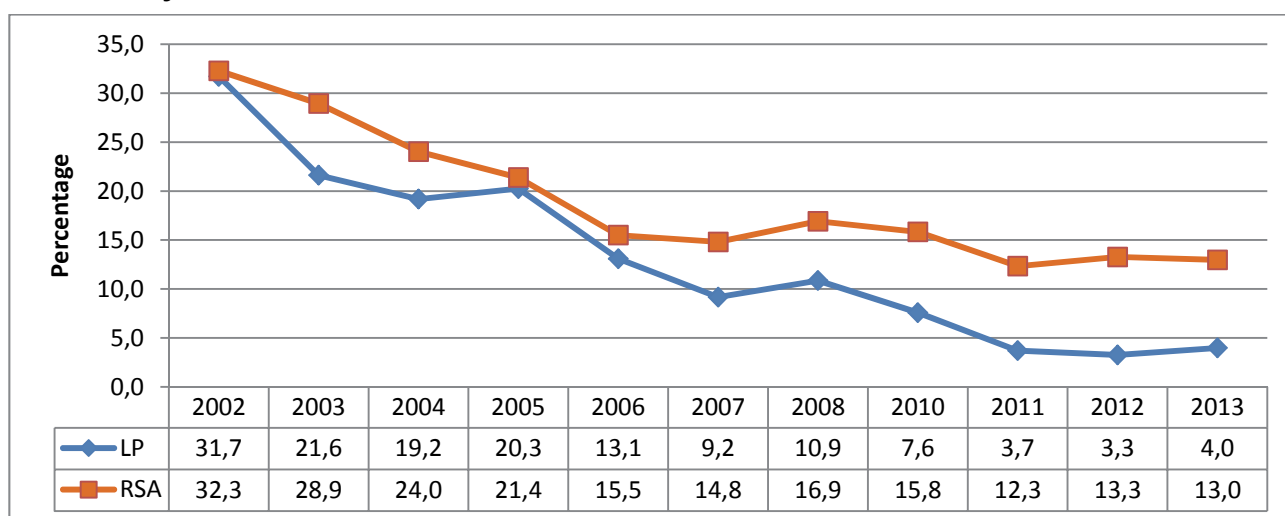
³ The number of schools benefiting in 2012/2013 were not reported and for the purpose of the graph it was assumed that it remained the same as the previous year.

Figure 3.9: Percentage of individuals attending school who live in households where adults experienced hunger during the 12 months preceding each survey, 2002–2013⁴



Source: General Household Survey 2002–2013

Figure 3.10: Percentage of individuals attending school who live in households where children aged 17 years or younger experienced hunger during the 12 months preceding each survey, 2002–2013⁵



Source: General Household Survey 2002–2013

Since 2002 there has been a steady decline in South Africa, as well as in Limpopo, in the percentage of households with school-going children who indicated that adults and/or children 17 years or younger suffered from hunger in the year preceding the survey. The 2008/2009 economic crises tempered the decline in most of the country. In the case of adults, there was a decline from 31,7% to 4,5% and for children from 31,7% to 4% between 2002 and 2013. The decline in Limpopo was sharper than in the country as a whole. Possible contributing factors to the relatively good picture in Limpopo could be the high proportion of households dependent on social grants which make them less vulnerable to economic changes that result in job losses, as well as the supplementary effect that the school nutrition programme and small scale food production has on household food consumption.

⁴ The questions about hunger were not included in the questionnaire in 2009.

⁵ The questions about hunger were not included in the questionnaire in 2009.

3.3.3 Pro-poor education support

The relatively high cost of education for households trapped in absolute poverty is commonly used as an explanation for school drop-out rates. However, Dieltiens and Meny-Gibert (2012) argue, based on a study done in Limpopo, that rather than using only absolute poverty to explain enrolment and dropout patterns in the country it should be complemented with the notion of relative poverty. According to them, learners' subjective experience of poverty is a better measure of higher dropout risk than absolute poverty and that inclusion policies should receive more attention in learner retention strategies. Reducing the costs of schooling has been found to have a direct impact on the enrolment of both boys and girls. However, it has been found in Africa that the abolition of direct fees increases girls' enrolment more significantly than that of boys (Aikman and Unterhalter 2007).

After 1994 the Government introduced two programmes that are aimed at reducing the direct costs of education for poor families:

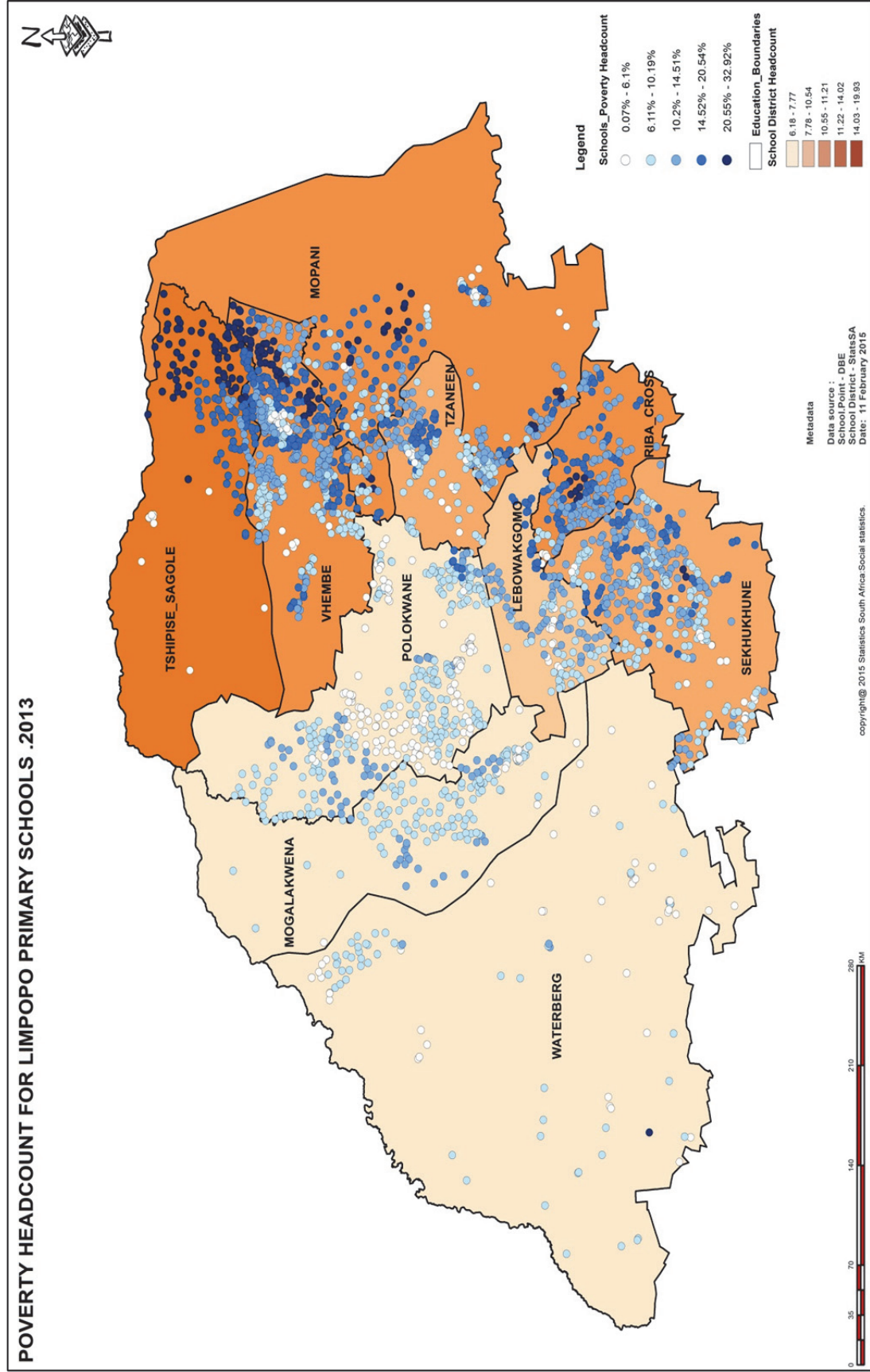
- The fee exemption policy
- No fee schools

The fee exemption policy stipulates that parents, through the School Governing Body (SGB), should set school fees for the school and determine under which circumstances students are exempted from paying school fees (Schools Act 1996). The policy provides guidelines when students should be exempted from paying school fees based on the combined annual gross income of parents (OECD 2008). The "no fee" policy adopted in 2006 (DE 2006, DE 2007) gives the Minister of Education the power to exempt schools from charging fees on the basis of poverty levels in the areas immediately surrounding these schools. In practice, the schools to be exempted are identified at provincial level and these exemptions are reviewed annually (OECD 2008).

In 2008, two years after the introduction of the "No fee" school policy, approximately 1 million learners and 2 832 schools in Limpopo benefited (OECD 2008). By 2013 more than 97% of the schools in Limpopo were classified as "no fee" schools (quintiles 1, 2, and 3) to the benefit of more than 96% of the learners in the province (Motshekga 2013).

Maps 3.1 and 3.2 show the poverty headcounts in percentage as measured through SAMPI and associated with the wards in which primary and secondary schools are situated. Schools in the more densely populated districts in the north and north east of the province are more likely to be classified as poor than those situated in the west and south west.

Map 3.1: Poverty head count (in percentage) for primary schools



Map 3.2: Poverty head count for secondary schools

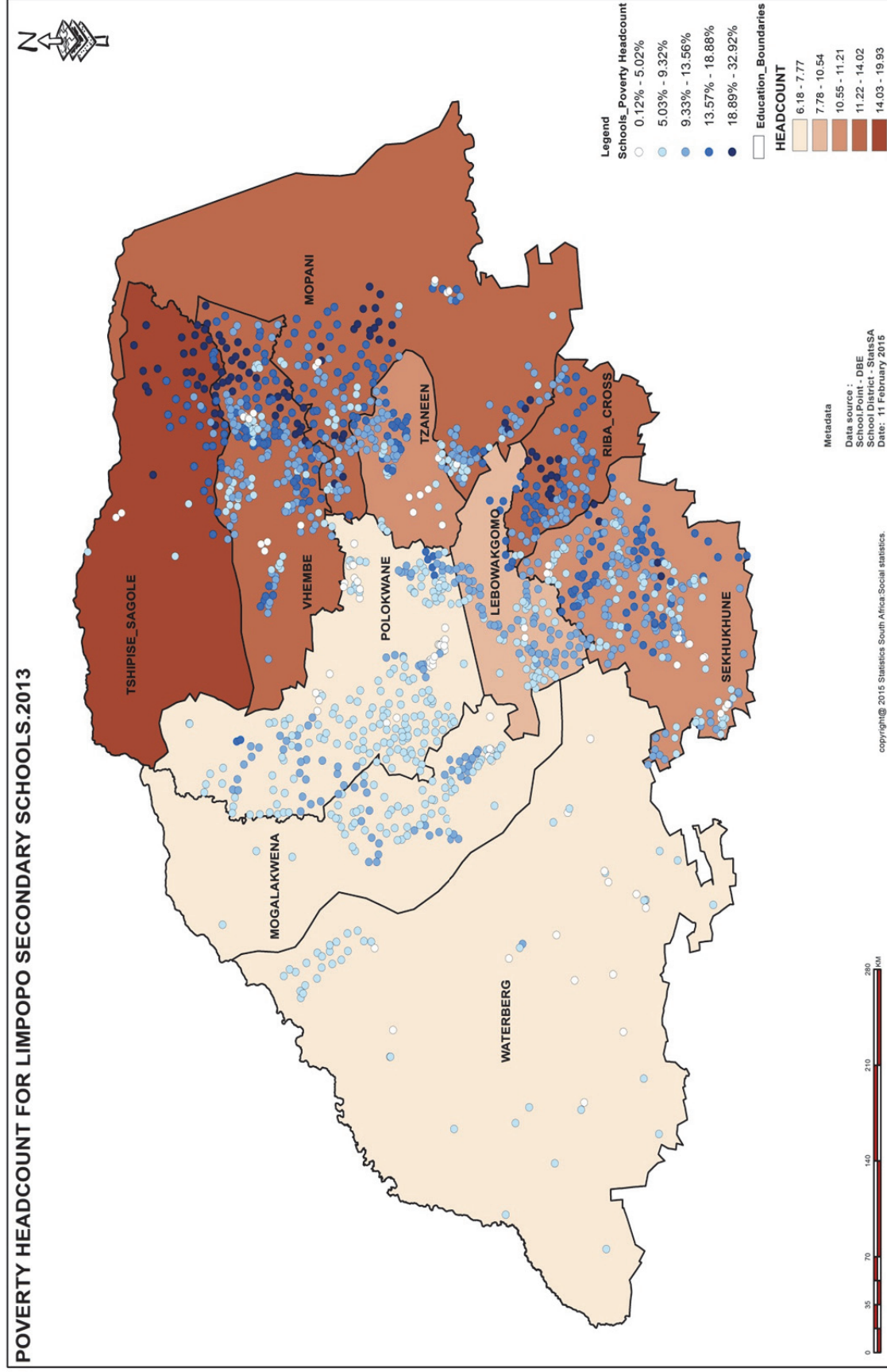


Table 3.3: Key SAMPI statistics per educational district and percentage for primary schools with feeder areas below poverty line

Education district	Number of schools included in analysis ⁶	Statistic	Headcount for district: % households in feeder ward who suffer from a third or more deprivations	Intensity: % indicators in index for which households in feeder ward are deprived	SAMPI ⁷ for feeder wards
Lebowakgomo	142	Min	0,3	38,7	0,001
		Max	17,9	43,5	0,075
		Mean	10,5	41,2	0,043
		STD	3,8	0,9	0,016
Mogalakwena	164	Min	0,2	38,4	0,001
		Max	12,6	43,8	0,052
		Mean	7,8	41,0	0,032
		STD	2,7	1,1	0,011
Mopani	300	Min	0,0	35,1	0,000
		Max	25,0	44,2	0,105
		Mean	12,6	41,1	0,052
		STD	5,5	1,1	0,023
Polokwane	412	Min	0,1	35,7	0,000
		Max	15,2	45,2	0,063
		Mean	7,4	41,1	0,031
		STD	2,9	1,2	0,012
Riba Cross	162	Min	5,1	39,7	0,021
		Max	20,8	45,8	0,087
		Mean	14,0	41,8	0,059
		STD	3,2	1,2	0,013
Sekhukhune	392	Min	0,4	37,1	0,002
		Max	21,9	44,6	0,090
		Mean	11,2	41,2	0,046
		STD	3,8	1,0	0,016
Tshipise–Sagole	160	Min	1,2	37,8	0,0
		Max	32,9	43,6	0,1
		Mean	19,9	41,8	0,1
		STD	7,7	1,2	0,0
Tzaneen	138	Min	0,4	38,4	0,002
		Max	25,0	44,9	0,105
		Mean	11,1	41,3	0,046
		STD	4,4	0,9	0,018
Vhembe	142	Min	2,9	38,9	0,011
		Max	25,6	43,6	0,109
		Mean	13,1	41,2	0,054
		STD	5,0	0,9	0,022
Waterberg	164	Min	0,0	37,5	0
		Max	31,8	46,2	0,137
		Mean	6,2	40,5	0,025
		STD	3,7	2,1	0,016

Source: SAMPI based on Census 2011 data

⁶ Schools with reliable GIS which could be linked with the education districts and ward-based SAMPI data.

⁷ South African Multiple Poverty Index (SAMPI) is a composite index based on four dimensions: health, education, standard of living and economic activity. These four dimensions in turn are subdivided into 10 indicators.

Table 3.4: Key SAMPI indicators per educational district and percentage for intermediate, combined and secondary schools with feeder areas below poverty line

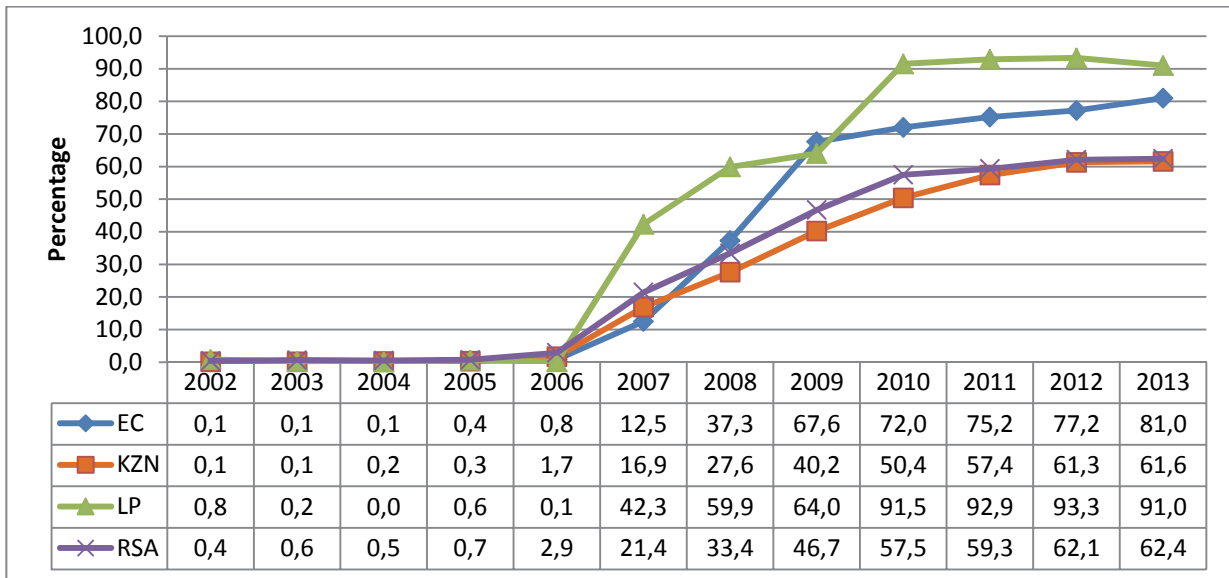
Education district	Number of schools included in analysis ⁸	Statistic	Headcount: % households in feeder ward who suffer from a third or more deprivations	Intensity: % indicators for which households in feeder ward are deprived	SAMPI ⁹ for feeder wards
Lebowakgomo	105	Min	0,3	38,7	0,001
		Max	17,9	43,5	0,075
		Mean	10,1	41,2	0,042
		STD	3,5	0,9	0,015
Mogalakwena	107	Min	0,7	38,7	0,003
		Max	12,6	43,1	0,052
		Mean	7,8	41,0	0,032
		STD	2,3	1,0	0,010
Mopani	172	Min	0,0	37,0	0,000
		Max	25,0	43,5	0,105
		Mean	13,1	41,1	0,054
		STD	5,1	0,9	0,021
Polokwane	257	Min	0,1	38,3	0,001
		Max	15,2	45,2	0,063
		Mean	7,5	41,2	0,031
		STD	3,0	1,2	0,013
Riba Cross	92	Min	5,1	39,7	0,021
		Max	20,8	45,8	0,087
		Mean	14,4	41,7	0,060
		STD	3,4	1,1	0,014
Sekhukhune	264	Min	0,4	37,1	0,002
		Max	21,9	44,6	0,090
		Mean	11,0	41,2	0,046
		STD	3,7	1,1	0,016
Tshipise–Sagole	58	Min	2,2	37,8	0,009
		Max	32,9	43,6	0,141
		Mean	19,2	41,5	0,080
		STD	7,5	1,3	0,032
Tzaneen	80	Min	0,4	38,4	0,002
		Max	18,4	44,9	0,076
		Mean	11,1	41,0	0,046
		STD	4,8	1,1	0,020
Vhembe	506	Min	2,9	38,9	0,011
		Max	25,6	43,6	0,109
		Mean	13,0	41,2	0,054
		STD	5,0	0,9	0,021
Waterberg	117	Min	0,0	37,5	0,000
		Max	11,4	46,2	0,049
		Mean	5,9	41,0	0,024
		STD	2,7	1,8	0,011

Source: SAMPI based on Census 2011 data

⁸ Schools with reliable GIS which could be linked with the education districts and ward-based SAMPI data.

⁹ South African Multiple Poverty Index (SAMPI) is a composite index based on four dimensions: health, education, standard of living and economic activity. These four dimensions in turn are subdivided into 10 indicators.

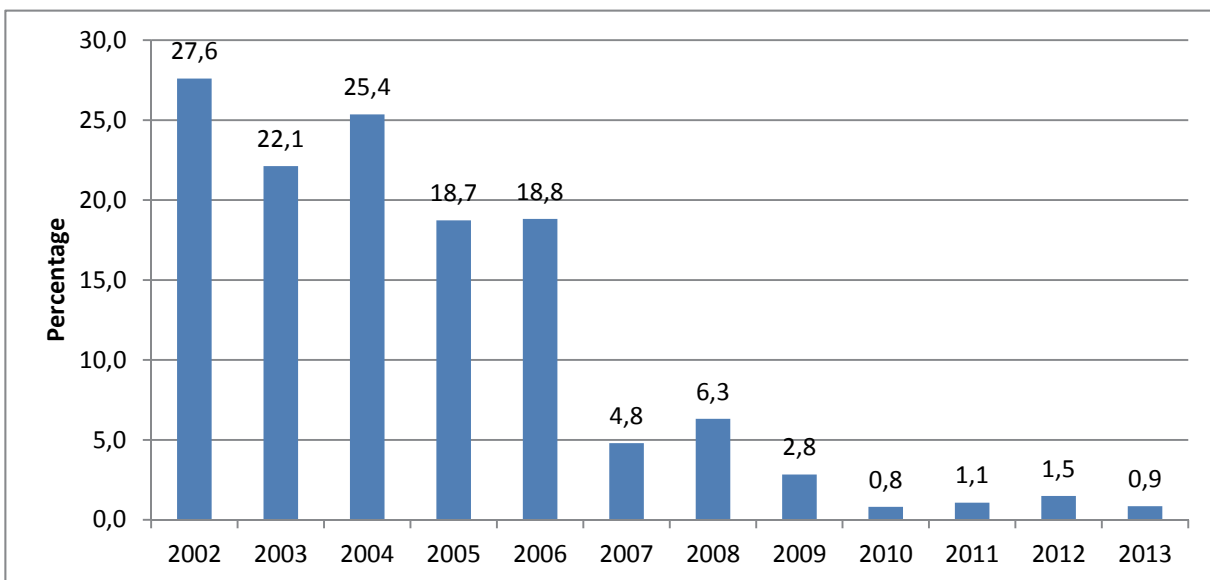
Figure 3.11: Percentage of learners attending schools who indicate that they do not pay any school fees, Limpopo, Eastern Cape, KwaZulu-Natal and RSA (2002–2013)



Source: General Household Survey 2002–2013

Findings from the GHS confirm that the percentage of learners benefiting from the no fee and fee exemption policies increased significantly since 2006, when especially the no fee policy was introduced. In 2013 Limpopo had the highest percentage of learners in the country that did not pay school fees (91%). This is significantly higher than the national average (62,4%) and the Eastern Cape (81,0%), which is also very poor and shares a similar education history.

Figure 3.12: Percentage of those attending school who indicated that high school fees were a problem they experienced during the 12 months preceding each survey, Limpopo, 2002–2013



Source: General Household Survey 2002–2013

According to the General Household Survey findings, the percentage of learners who indicate that high school fees are a problem they experienced decreased significantly since the introduction of no fee schools.

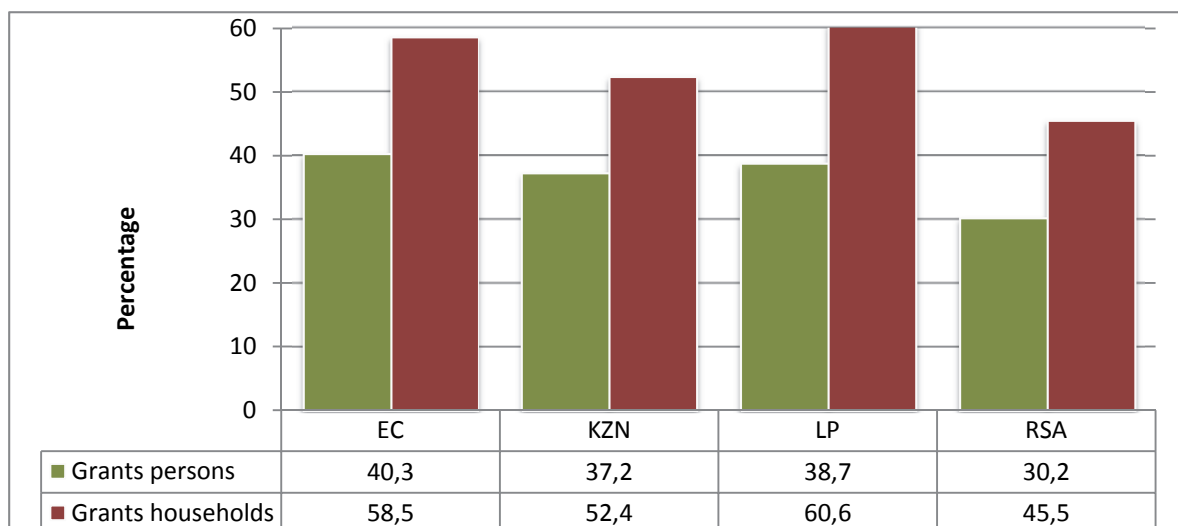
3.3.4 Social grants and the child support grant

Since 1994 and more particularly during the past five years, the social grants system has expanded significantly. The introduction of the Child Support Grant (CSG) and the gradual extension of the qualifying age limit is probably the single most important contributor towards the incremental expansion in the uptake and use of the social grants system. The Social Assistance Act addresses social security by regulating access to social grants for children living in poverty. Although seven types of grants are provided for, the Child Support Grant (CSG), Foster Care Grant (FCG) and Care Dependency Grant (CDG) accounted for 38% of the total grant expenditure during 2007/08. The CSG accounted for 31% of all expenditure on its own and is widely recognised for improving children's access to food, education and basic services (Presidency, 2009:5; Hall, 2010:107). Although the CSG was initially made available to children aged 0–6 years in 1998, it was slowly extended to children under 15 years in 2009. An amendment to the Social Assistance Act in 2009 removed the CSG age restriction and made it accessible to caregivers of children born after 31 December 1993, while at the same time prolonging their eligibility until the age of 18 years (Hall, 2010:107).

A number of studies have been conducted in relation to social grants. Several authors investigated the merits and demerits of the social grants approach to poverty alleviation, as well as other issues surrounding the targeting of social grants recipients (e.g. Barnes and Noble 2006, ODI 2006, Meth 2002). In terms of the effectiveness of the system, most researchers have argued that the system has made an important contribution towards alleviating poverty. Several studies (Posel et al. 2004; Duflo, 2000; Case and Deaton, 1998; Ardington and Lund, 1994) found that old-age pensions were an important source of income for the poor and elderly and also had other benefits such as improved access to credit and cash delivery to remote areas. The Economic Policy Research Institute (ODI 2006) describes South Africa's social security system as effective in terms of targeting and benefiting poor households. Booysen and Van den Berg (2006) argued that social grants reduced inequality and decreased the prevalence, depth and severity of poverty of households affected by HIV/AIDS in two Free State communities. The ten-year review (Woolard 2003), 15-year review (Presidency 2008) as well as the 20-year review (Presidency 2014) all concluded that the Social Assistance Programme had a significant impact on reducing poverty, redistributing income and reducing inequality in South Africa. According to the Social Profile of Vulnerable Groups Report (Stats SA 2013), children in child-inclusive female-headed households were consistently more likely to access CSGs than children in child-inclusive male-headed households. This partially reflects the generally lower incomes of female-headed households as opposed to male-headed households and that they are probably more likely to qualify for the grant than male-headed households based on the means test. In relation to the Child Support Grant specifically: an impact assessment done by the Department of Social Development, SASA and UNICEF in 2012 concluded that the CSG is an important investment in building capacities and reducing inequality. When considering children younger than five years, the study concluded that mothers who receive grants are more likely to take their children to attend growth monitoring, and improves height for age scores of recipient children whose mothers have achieved more than Grade 8 as their highest level of education. Children evaluated at age 10 and who received CSG since birth completed a significantly higher number of grades of schooling and better mathematics scores when compared with children who started CSG at age 6 or later. It was also found to reduce the impact of the mother's schooling on children by narrow the schooling gap between children whose mothers have less schooling when compared to children whose mothers have more. Furthermore, early enrolment in CSG decreased the likelihood of illness and therefore potential absenteeism from school with a higher impact on boys (UNICEF 2012). Using panel data,

Eyes and Woolard (2013) found that grant receipt amongst older children is associated with a higher probability of enrolment.

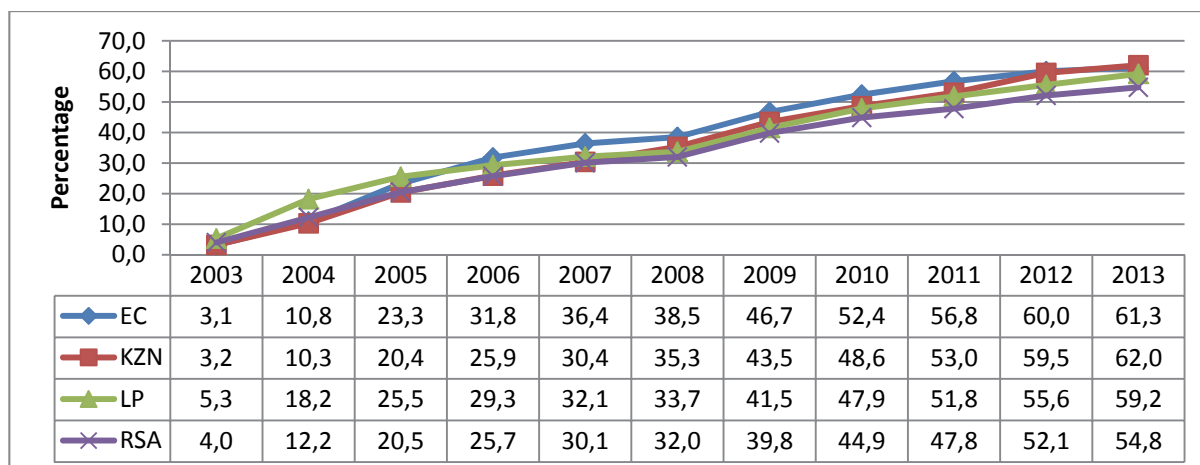
Figure 3.13: Percentage of individuals and households benefitting from social grants for selected provinces, 2013



Source: General Household Survey 2013

In 2013, Limpopo had the highest percentage of households and Eastern Cape the highest percentage of individuals who received social grants. All three provinces with large rural and child populations have significant higher proportions of grant recipients than the country as a whole.

Figure 3.14: Percentage of individuals aged 5 years and older who attend school and receive child support grants in selected provinces, 2003–2013



Source: General Household Survey 2003-2013

Figure 3.14 shows that since 2003 the percentage of individuals aged 5 years and older who attend school and receive social grants increased from 4% to 54,8% in 2013. This is commensurate with the introduction and expansion of the qualifying ages for the Child Support Grant. The proportion receiving grants in Limpopo is higher than for RSA (59,2% compared with 54,6%), but lower than that noted for Eastern Cape (61,3%) and KwaZulu-Natal (62,0%).

3.4 Transport

Table 3.5: Main mode of travel to the educational institution for learners attending school, by district municipality, 2013

Mode of travel	Statistics (numbers in thousands)	District municipality					
		(per cent within district municipality)					
		Mopani	Vhembe	Capricorn	Waterberg	Sekhukhune	Limpopo
Bus	Number	12	14	9	5	5	45
	Per cent	3,2	3,0	2,5	2,7	1,3	2,5
Taxi	Number	22	34	26	21	24	127
	Per cent	5,9	7,2	7,1	11,2	6,4	7,2
Car/truck passenger	Number	23	31	34	12	28	128
	Per cent	6,1	6,6	9,3	6,4	7,5	7,2
Walking all the way	Number	312	390	295	149	317	1 462
	Per cent	83,0	83,2	81,0	79,3	84,5	82,5
Other	Number	6	*	*	*	*	9
	Per cent	1,6	*	*	*	*	0,5
Total	Number	376	469	364	188	375	1 772
	Per cent	100,0	100,0	100,0	100,0	100,0	100,0

Other modes of transport include: train, aircraft etc.

Percentage calculated across municipalities, within Limpopo.

*Un-weighted numbers of 3 and below per cell are too small to provide reliable estimates.

Source: NHTS 2013

According to the National Household Travel Survey, 82,5% of students attending school walk all the way to get to their school. The only instances where significant percentages of learners used alternatives modes were in Waterberg, where 11,2% used taxis and Capricorn where 9,3% arrived at school as passengers of a car or truck. Buses are rarely used and the highest percentage of bus-using scholars was found in Mopani (3,2%) and Vhembe (3%).

Table 3.6: Travel time in minutes by main mode of travel to the educational institution for learners attending school, by district municipality, 2013

Mode of travel	Statistics (numbers in thousands)	Capricorn			Total	Sekhukhune			Total	Mopani			Total
		1-30	31-60	61 plus		1-30	31-60	61 plus		1-30	31-60	61 plus	
Bus	Number	1	2	5	9	1	4	1	5	5	5	2	12
	Per cent	15,2	25,1	59,7	-	16,0	66,4	17,6	-	44,6	42,6	12,8	-
Taxi	Number	10	9	5	25	11	8	5	24	10	7	4	21
	Per cent	42,0	37,3	20,6	-	46,3	34,3	19,4	-	46,0	35,3	18,7	-
Car/ truck passenger	Number	18	9	6	33	18	6	4	28	18	3	1	22
	Per cent	55,0	26,2	18,8	-	63,8	22,0	14,2	-	81,0	15,6	3,4	-
Walking all the way	Number	234	46	12	293	236	62	17	315	215	77	16	307
	Per cent	80,0	15,9	4,2	-	74,8	19,7	5,4	-	70,0	24,9	5,1	-
Other	Number	0	0	0	1	1	0	0	1	5	1	0	6
	Per cent	42,0	58,0	0,0	-	100,0	0,0	0,0	-	76,5	18,7	4,8	-
Total	Number	265	67	29	360	266	80	27	372	252	94	22	368
		Vhembe			Total	Waterberg			Total	Limpopo			Total
		1-30	31-6	61 plus		1-30	31-6	61 plus		1-30	31-6	61 plus	
Bus	Number	2	3	8	14	1	3	1	5	11	18	17	46
	Per cent	16,8	23,3	59,9	-	16,9	64,9	18,3	-	23,8	38,8	37,4	-
Taxi	Number	17	11	6	34	9	10	2	21	57	45	21	124
	Per cent	51,2	32,2	16,6	-	44,3	46,2	9,6	-	46,4	36,5	17,1	-
Car/ truck passenger	Number	18	10	3	30	9	3	0	12	81	31	14	126
	Per cent	57,6	32,7	9,8	-	74,6	21,7	3,7	-	64,1	24,5	11,4	-
Walking all the way	Number	288	73	25	386	97	43	6	145	1 070	301	75	1 446
	Per cent	74,6	19,0	6,4	-	66,7	29,4	3,9	-	74,0	20,8	5,2	-
Other	Number	0	0	0	0	1	0	0	1	6	2	*	8
	Per cent	0,0	0,0	100	-	81,3	18,7	0,0	-	74,2	20,1	*	-
Total	Number	325	97	42	465	116	58	9	184	1 225	396	128	1 750

Cases with unspecified transport modes and travel times were excluded from the totals.

* Un-weighted numbers of 3 and below per cell are too small to provide reliable estimates.

Source: NHTS 2013

3.5 Summary

This chapter was divided into three parts: The demographic imperatives; Social safety nets that impact on children, their wellbeing and potentially on education; and Transport.

The demographic imperatives

The population growth rate was 1,8% in the five-year period between 1996 and 2001 and 0,8% in the ten-year period between 2001 and 2011. This decline was observed in all the districts in the province except Greater Sekhukhune, which remained the same between 1996–2001 and 2001–2011. The highest population growth rates during the past ten years were recorded in Waterberg (1,2%) and Greater Sekhukhune (1,1%). There is a distinct reduction in the population per age distribution for young people aged 5–19 years, and this might have been caused by higher rates of migration to other provinces, lower fertility rates and/or higher rates of mother to child HIV/AIDS transmission prior to the rollout of anti-retrovirals.

Children aged 7–18 years living in Limpopo are less likely to be orphaned than children in other rural provinces and the country as a whole. Only 4,4% are double orphans as compared to 6% nationally. However, children aged 7-15 years are more likely live in households where neither of their biological parents are present (24,8% v. 17,7% in RSA) or households where only their biological mother live (41% v. 34,4%). They are also more likely to live in either extended (68,0%) or nuclear families (30,5%). More than two-fifths (43,9%) of the children aged 7–18 years live in households that contain at least two generations, whereas less than two-fifth (39,8%) of the children live in households that consist of three or more generations. Four out of ten children aged 7–18 years live with only their biological mothers, while 23,9% of children live with both their biological parents.

Social safety nets that impact on children

The government has established several programmes and policies such as the NSNP, school fee exemption policy, Child Support Grant, right of children to basic nutrition with direct impacts on children, and others which impact children indirectly (free basic water policy, free primary health care and housing subsidy scheme). The aims of these policies and programmes are to improve the well-being of the poor, encourage children to attend school and improve their concentration and learning capacity. The number of learners benefiting from this NSNP increased over time: 1 586 343 learners benefited in the 2012–2013 period and 3 848 schools in the 2011–2012 period. About 94% of learners in Limpopo attended a school that offers a nutrition programme and 90% of them actually benefit from it. This programme might be one of the contributing factors towards the decline in the percentage of individuals attending school who reported living in households where children aged 17 years or younger experienced hunger (from 31,7% in 2002 to 4% in 2013). Other possible factors may include social grants as the individuals aged 5 years and older who attend school and receive a child support grant increased from 5,3% to 59,2% between 2003 and 2013. Compared to other rural provinces and the country as a whole, Limpopo had the highest percentage of learners that did not pay school fees (91%).

Transport

The most commonly used mode of transport for the learners attending school in Limpopo is walking; 82,5% of these learners walk all the way to their respective schools.

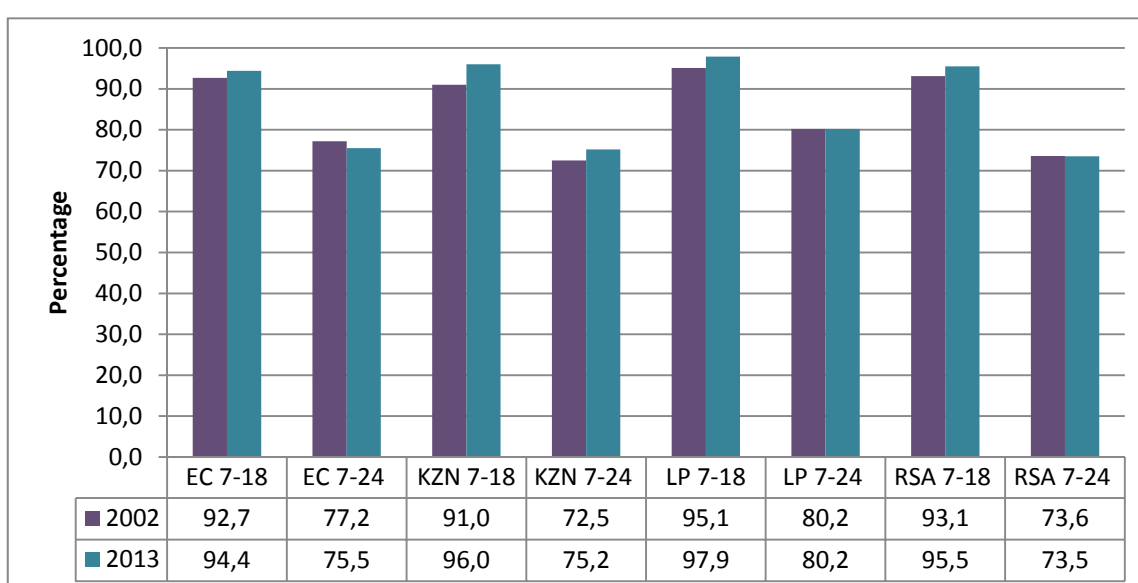
Chapter 4: General patterns of educational institution attendance

4.1 Introduction

In addition to EMIS, a number of different sources provide an insight into the general educational institution attendance patterns in the province. The General Household Survey as well as the Limpopo Census of Learners, Educators and Schools will be the primary data sources used in this chapter. The chapter focusses on general attendance, Net Adjusted Enrollment Rates (NERA), the gender dynamics of attendance, grade age transition and reasons for non-attendance.

4.2 Attendance

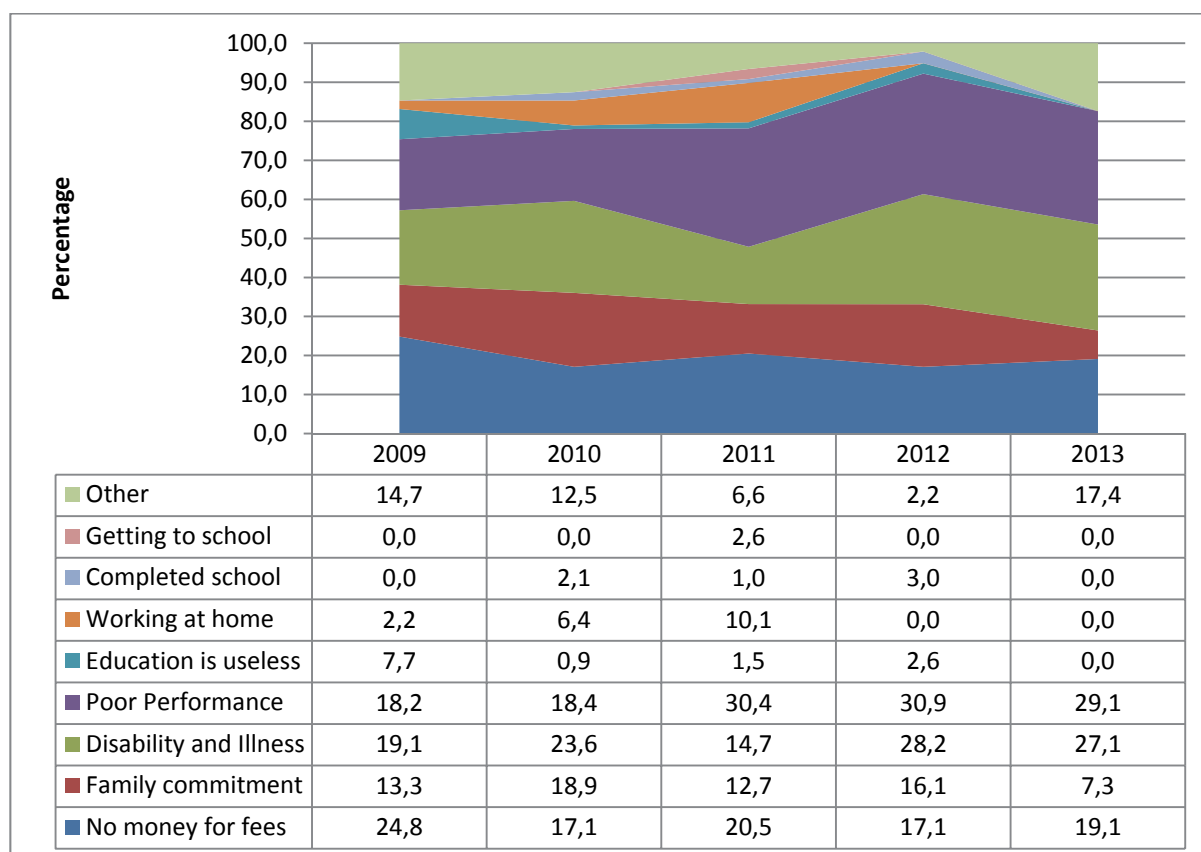
Figure 4.1: Percentage of persons aged 7–18 and 7–24 years who attend educational institutions for selected provinces, 2002 and 2013



Source: General Household Survey 2002–2013

According to the GHS, individuals aged 7–24 years are more likely to attend educational institutions than their counterparts in other rural provinces, such as the Eastern Cape and KwaZulu-Natal, as well as the country as a whole. Between 2002 and 2013 the proportion of individuals attending institutions remained stable in the province in spite of increases in Eastern Cape and KwaZulu-Natal during the same time period.

Figure 4.2: Reasons for not attending education institutions for persons aged 7–18 years, Limpopo, 2009-2013

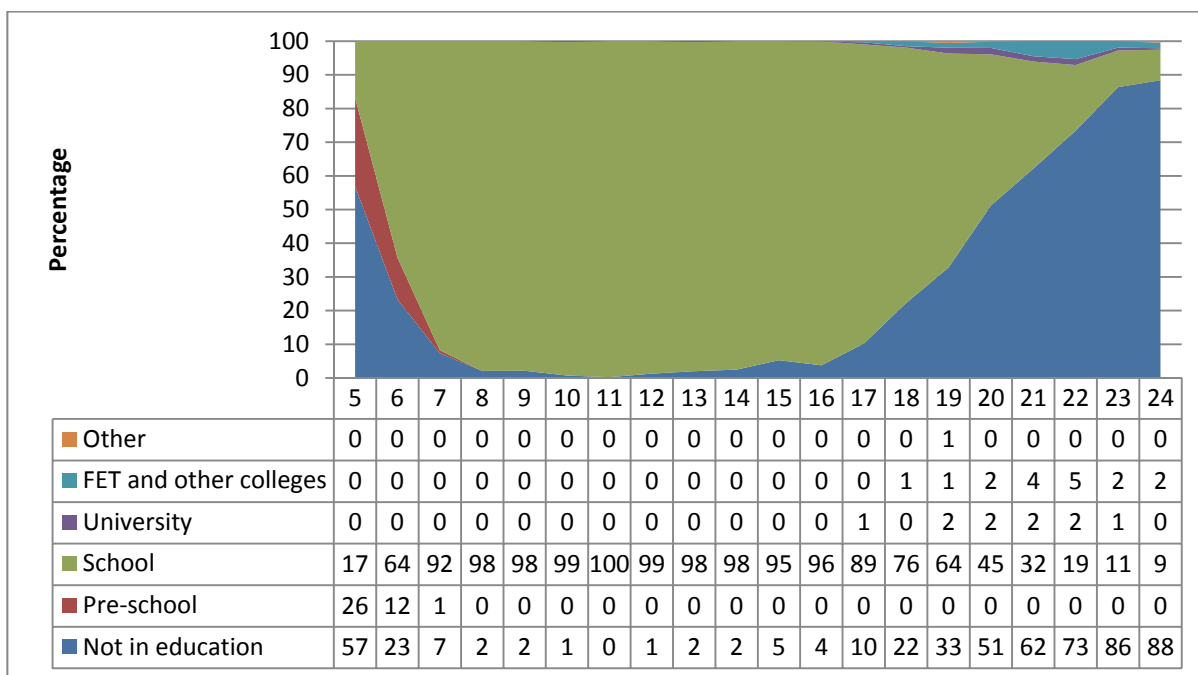


Source: General Household Survey 2009–2013

Individuals aged 7–18 years who were not attending educational institutions mostly indicated that poor performance and disability or illness were the primary reasons for not attending. However, “No money for fees” was mentioned by a significant proportion of non-attendees in most years, with one in five individuals not attending educational institutions providing this reason in 2013.

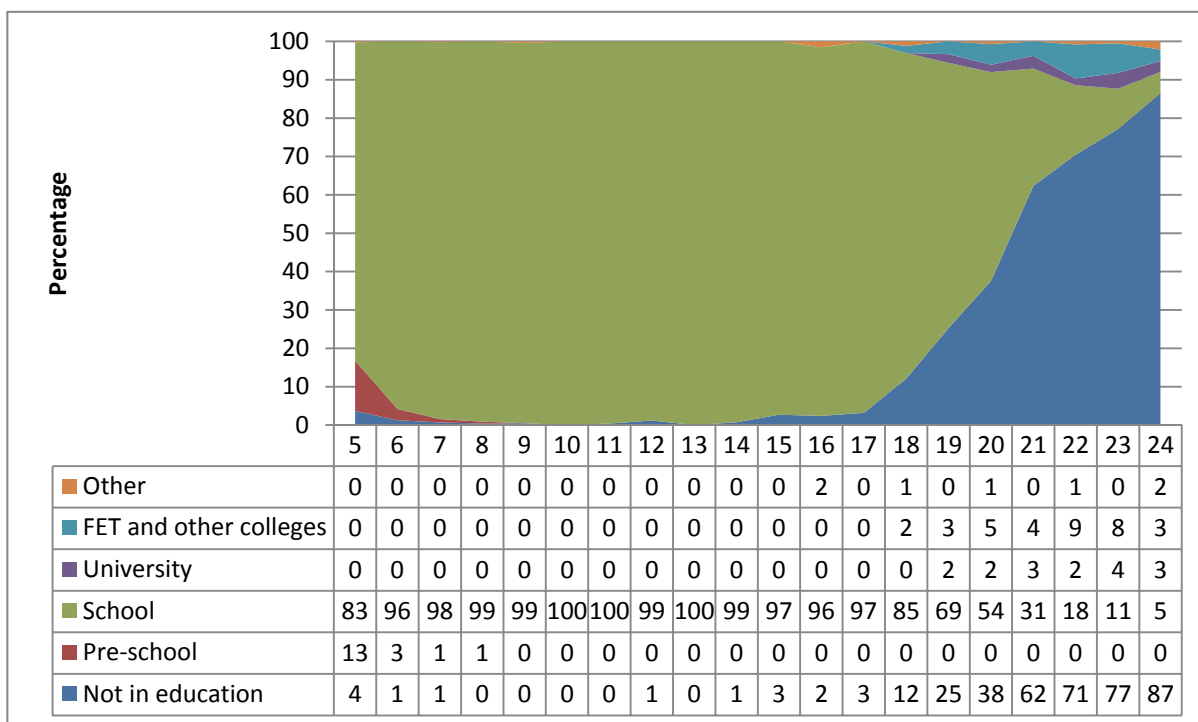
Figure 4.3 and Figure 4.4 confirm that the grade age transition in the province is still slower than expected, with more than half (54%) of the individuals attending educational institutions by age 20 indicating that they attend school. However, some improvement has been noted over time. In 2013 it was found that by the age of 24, only 5% of those still attending indicated that they attend school – this is significantly lower than the 9% in the same situation in 2002. Significantly more learners aged 5 and 6 entered the school system in 2013 compared to 2002.

Figure 4.3: Percentage of persons aged 5–24 years and type of educational institutions attended by age, 2002



Source: General Household Survey 2002

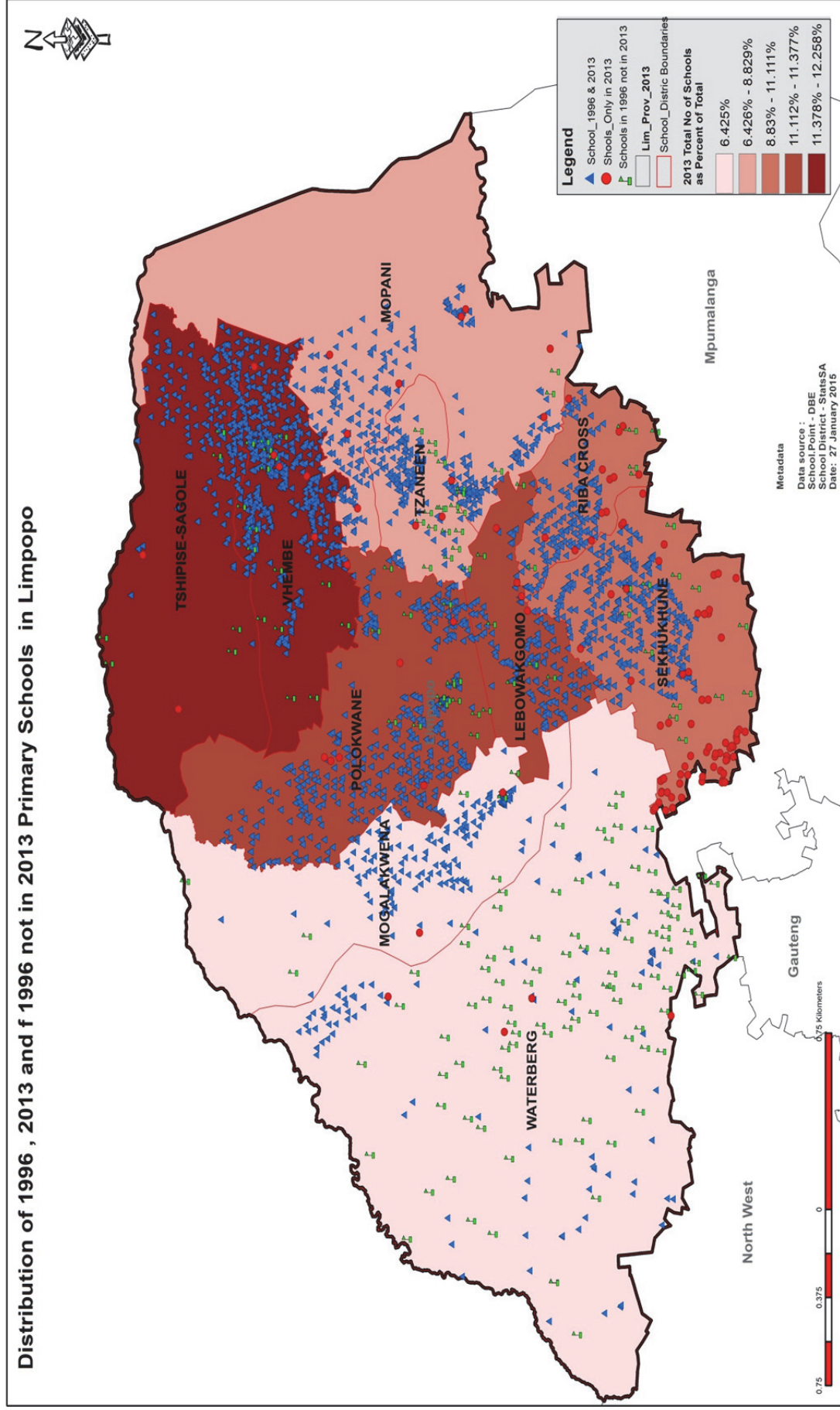
Figure 4.4: Percentage of persons aged 5–24 years and type of educational institutions attended by age, 2013



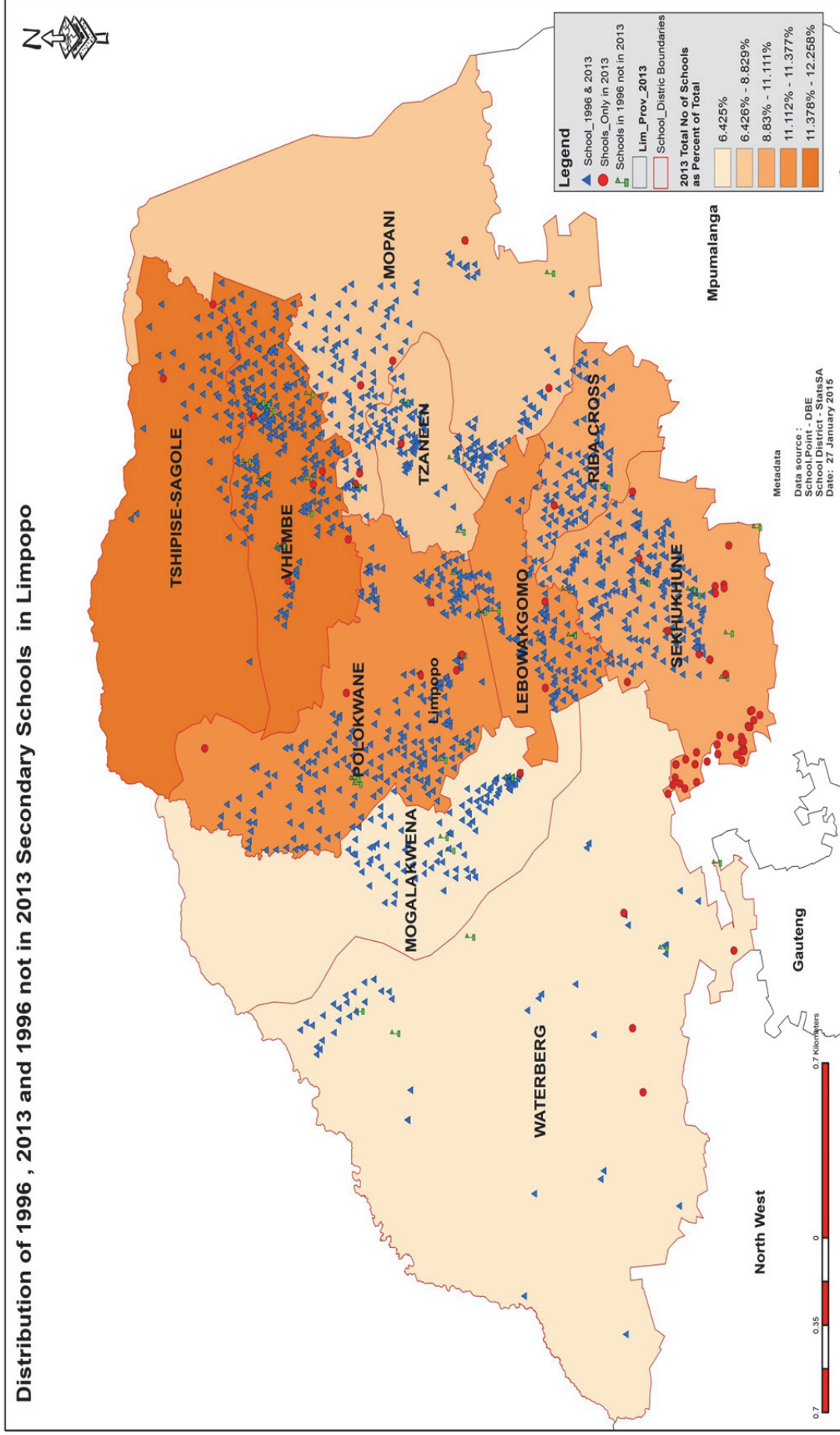
Source: General Household Survey 2013

Maps 4.1 and 4.2 show the distribution of primary and secondary schools in Limpopo provinces in 1996 and 2013. The green flags indicate schools that existed in 1996, but not in 2013 and the red dots schools that were constructed in the interim.

Map 4.1: Distribution of primary schools in the province in 1996 and 2013

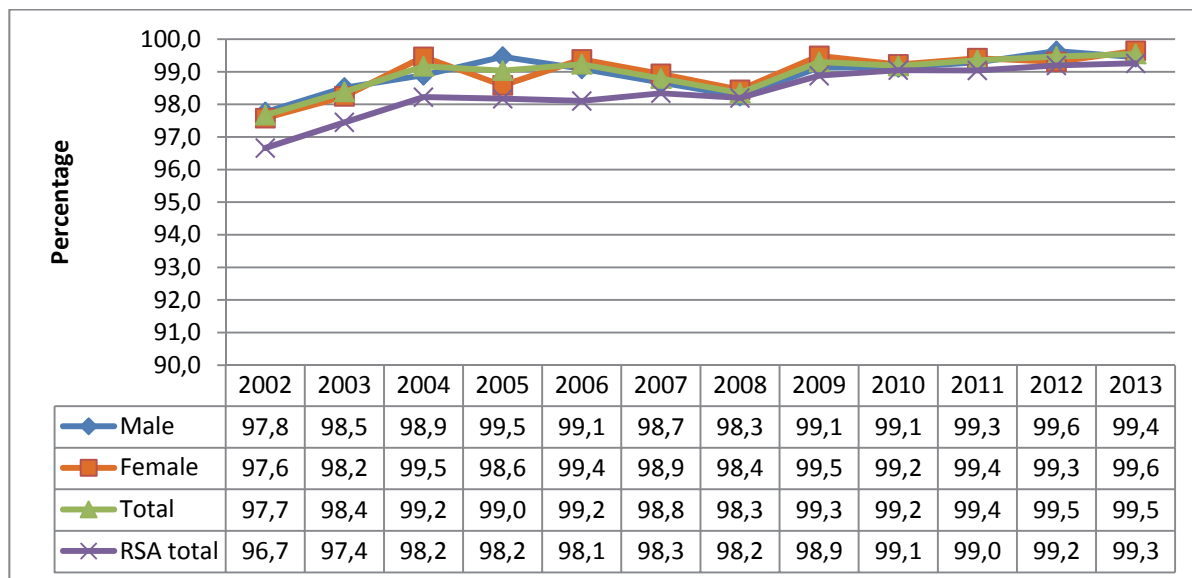


Map 4.2: Distribution of secondary schools in the province in 1996 and 2013



It is evident that a large number of primary schools in the Waterberg education district have been closed since 1996. Most of these were situated on commercial farm land and represent small farm schools that were constructed and subsidized prior to 1994. Most primary and secondary school construction in the province took place in Sekhukhune district.

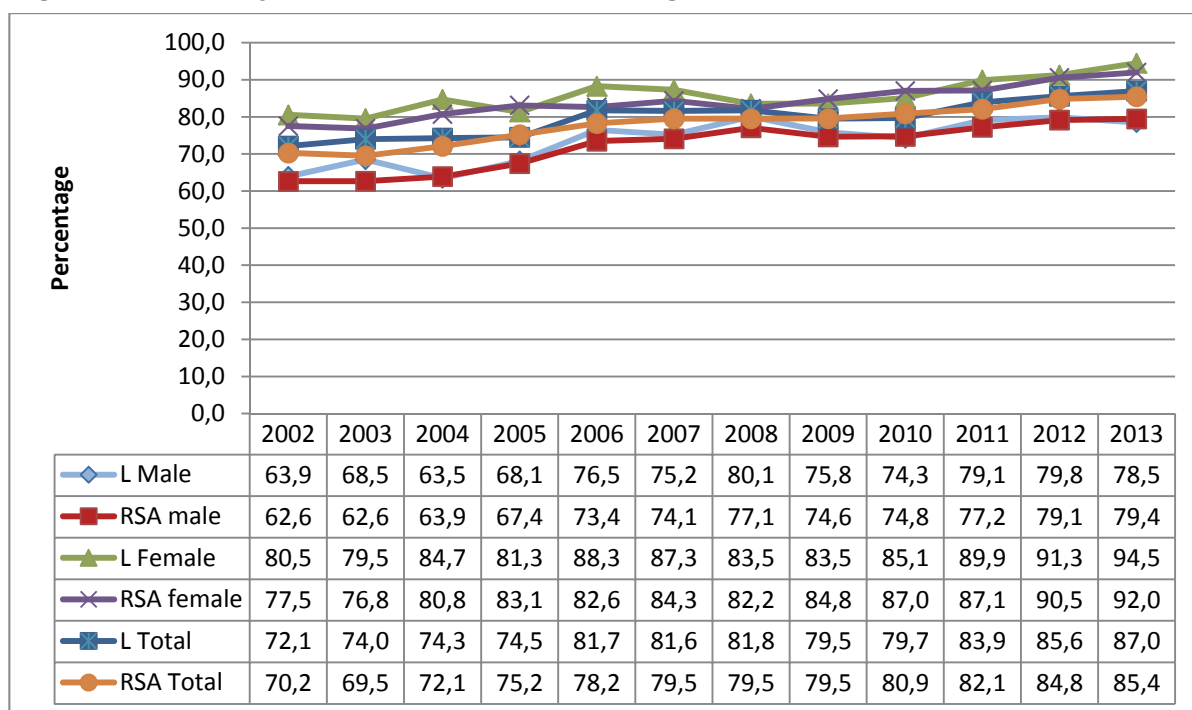
Figure 4.5: Net Adjusted Enrolment Rate (NERA) in primary school (children aged 7–13 years), 2002–2013



Source: General Household Survey 2002–2013

The adjusted net enrollment rates in 2013 were close to 100% in Limpopo and slightly higher than for the country as a whole. There were no significant differences between male and female NERAS in the province.

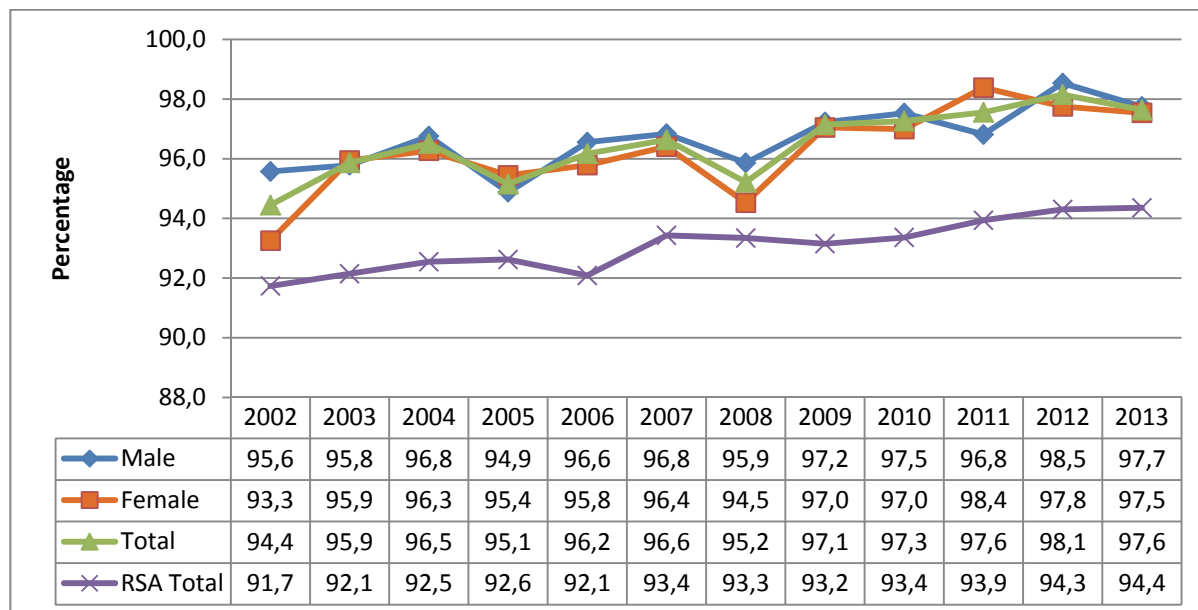
Figure 4.6: Primary school completion rate at age 15, 2002–2013



Source: General Household Survey 2002–2013

In contrast to the NERA, the primary school completion rates in the province differ significantly by gender (Figure 4.6). Female students are more likely than their male counterparts to complete primary school by age 15. Male and female completion rates improved significantly between 2002 and 2013. Even though still big, the gap between male and female completion rates decreased slightly from 16,6 percentage points in 2002 to 16 percentage points in 2013. In 2013 the male primary school completion rates in Limpopo were similar to that in the country as a whole. However, Limpopo females were more likely than RSA females in general to complete their primary school education.

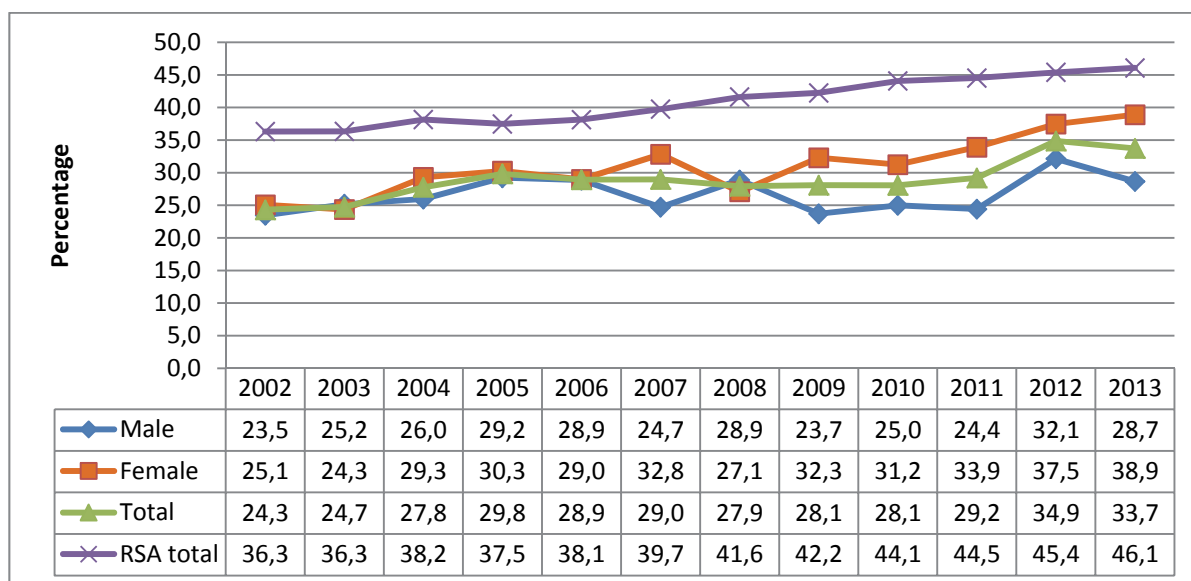
Figure 4.7: Net Adjusted Enrolment Rate (NERA) in secondary school (children aged 14–17 years), 2002–2013



Source: General Household Survey 2002–2013

The NERA for children aged 14–17 indicates once more higher enrollment rates for children in Limpopo than for the country as a whole. A total of 97,6% of children aged 14–17 were enrolled in 2013 compared to 94,4% in the country as a whole. Differences between male and female enrollment were negligible.

Figure 4.8: Secondary school completion rate at age 20–24, 2002–2013



Source: General Household Survey 2002–2013

When secondary completion rates for individuals aged 20–24 years¹⁰ are considered, the situation in Limpopo no longer looks better than that of the country as a whole. Only 33,7% of Limpopo individuals completed secondary school compared with 46,1% in the country as a whole. There is a 10-percentage point difference between male and female completion rates, with approximately four in 10 females and three in 10 males completing secondary school by age 24. However, Figure 4.8 also shows that there has been an improvement in completion rates between 2002 and 2013 from 24,3% to 33,7%, which represents a change of nearly 10 percentage points. In the case of female students the improvement was even higher, with a change of 13,8 percentage points (from 25,1% to 38,9% during the reference period).

According to Figure 4.8, the age grade transition takes place relatively smoothly until Grade 9 when a much wider band of ages are present in a given Grade and the number of students 20 years and older increase significantly. This is confirmed by the LLECS learner data (Table 4.1) which shows similar trends with significantly older learners in Grades 9, 10 and 11, with a sudden drop in older students between Grade 11 and 12.

¹⁰ Number of individuals between 20 and 24 years who completed secondary school, divided by the number of individuals aged 18 years.

Table 4.1: Age per grade transition

Age	Grade															Total
	0	1	2	3	4	5	6	7	8	9	10	11	12	Other		
4	36 594	541	0	0	0	0	0	0	0	0	0	0	0	0	17	37 152
5	70 863	36 836	412	0	0	0	0	0	0	0	0	0	0	0	21	108 132
6	3 248	81 290	28 403	411	0	0	0	0	0	0	0	0	0	0	31	113 383
7	655	13 685	69 595	24714	415	0	0	0	0	0	0	0	0	0	26	109 090
8	271	1 845	19 881	60179	20 177	331	0	0	0	0	0	0	0	0	44	102 728
9	801	456	3 853	20305	48 417	18 596	458	0	0	0	0	0	0	0	67	92 953
10	0	556	870	6063	21 664	45 921	16 908	318	0	0	0	0	0	0	62	92 362
11	0	0	2 422	1748	8 763	21 671	43 974	16 864	182	0	0	0	0	0	82	95 706
12	0	0	0	2 219	3 432	10 286	22 442	43 418	15 225	177	0	0	0	0	126	97 325
13	0	0	0	0	2 976	4 469	11 027	22 444	44 198	13 091	401	0	0	0	134	98 740
14	0	0	0	0	0	3 721	5 059	11 546	23 864	43 467	7 093	160	0	0	185	95 095
15	0	0	0	0	0	0	4 948	6 051	14 450	36 156	36 095	2156	86	191	100 133	
16	0	0	0	0	0	0	0	2 935	8 326	27 657	36 207	22 008	1 734	223	99 290	
17	0	0	0	0	0	0	0	1 314	4 622	21 114	29 680	23 201	18 280	201	98 412	
18	0	0	0	0	0	0	0	1 653	2 268	14 267	23 447	19 584	20 009	144	81 372	
19	0	0	0	0	0	0	0	0	2 147	7 671	16 047	15 344	15 155	105	56 469	
20	0	0	0	0	0	0	0	0	0	5 512	8 756	10 941	10 018	74	35 301	
21	0	0	0	0	0	0	0	0	0	0	6 782	6 526	6 544	56	19 908	
22	0	0	0	0	0	0	0	0	0	0	0	5 991	3 648	27	9 666	
23	0	0	0	0	0	0	0	0	0	0	0	0	1 686	30	1 716	
24	0	0	0	0	0	0	0	0	0	0	0	0	619	13	632	
25	0	0	0	0	0	0	0	0	0	0	0	0	630	9	639	
Total	112 432	135 209	125 436	115 639	105 844	104 995	104 816	106 543	115 282	169 312	164 508	105 911	78 409	1 868	1 546 204	
Perc.	7,27	8,74	8,11	7,48	6,55	6,79	6,78	6,89	7,46	10,95	10,64	6,85	5,07	0,12	100,0	

Source: LLECS, learner data 2013

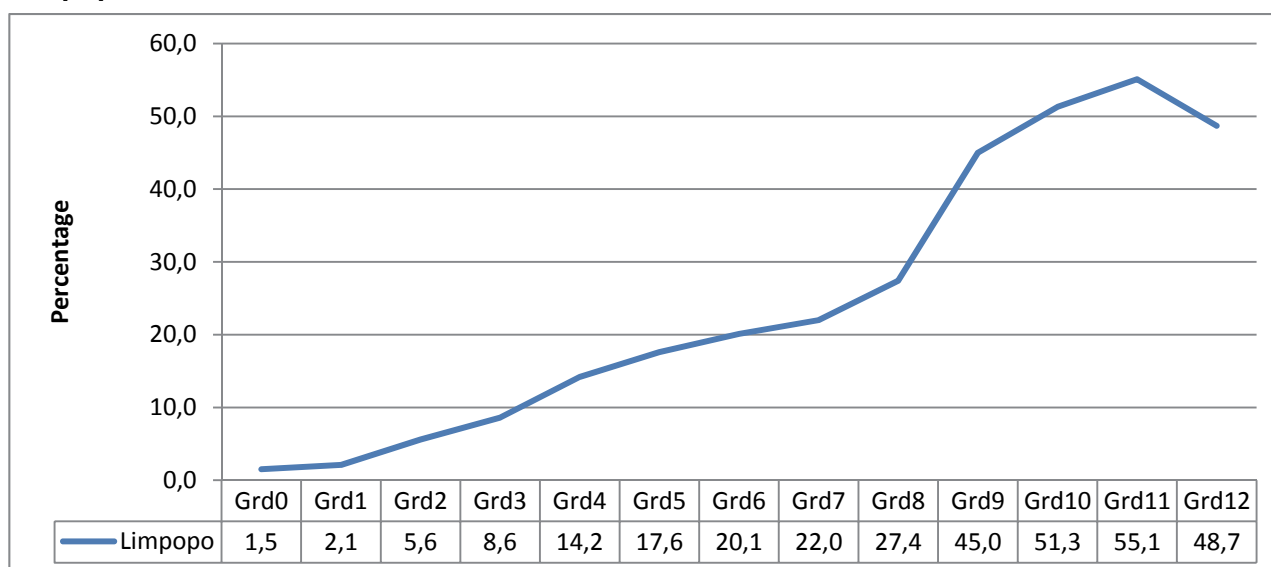
Table 4.2: Percentage of learners per grade who are older than their grade average¹¹

Education district	Current grade												
	0	1	2	3	4	5	6	7	8	9	10	11	12
Lebowakgomo	1,8	1,5	4,0	6,4	10,2	12,7	15,9	18,9	23,9	41,8	44,1	47,7	45,5
Mogalakwena	1,2	1,6	4,0	5,3	10,6	12,3	13,7	15,9	19,7	39,6	48,4	52,4	45,4
Mopani	1,1	2,1	5,6	9,7	16,1	19,9	24,1	26,1	31,6	51,1	56,3	60,8	53,8
Polokwane	1,5	1,6	5,2	7,0	10,3	12,7	14,8	17,3	21,0	37,8	44,2	48,8	44,1
Riba Cross	1,8	2,4	5,4	7,0	12,6	15,7	17,8	20,7	26,0	48,5	52,9	58,9	54,8
Sekhukhune	1,5	2,1	5,4	8,7	14,8	18,8	21,8	24,2	31,2	48,4	55,5	60,5	55,6
Tshipise–Sagole	1,4	3,4	7,7	11,7	18,8	22,0	23,2	23,9	33,2	48,0	53,0	55,2	43,6
Tzaneen	1,3	1,7	4,8	7,1	11,9	15,5	18,2	20,6	26,0	44,4	51,4	55,2	48,8
Vhembe	1,6	2,1	5,9	9,3	15,8	20,1	21,7	23,1	28,5	45,0	53,1	56,4	48,1
Waterberg	2,2	3,7	9,6	14,3	21,1	23,9	26,2	25,7	33,0	47,6	47,8	52,2	41,4
Limpopo	1,5	2,1	5,6	8,6	14,2	17,6	20,1	22,0	27,4	45,0	51,3	55,1	48,7

Source: LLECS, learner data 2013

Table 4.2 and Figure 4.9 show that by the time they reach Grade 9, four or more out of ten learners in Limpopo are older than the norm. This is true for all districts except Polokwane district (37,8%). Figure 4.9 shows that there is a steady upward trend for overage learners until Grade 11, with a slight decline in Grade 12 to levels similar or below that found for Grade 10 in most districts. The decline in Grade 12 can most probably be attributed to dropout that occurs after Grade 11 and would partly explain the decline in the number of students that sit for their NSC exams over time, whilst the increase in the number of over age pupils per level suggests a relatively high repetition rate. This is confirmed by trends observed in the age per grade transition (Table 4.1) which indicates a significant number of learners older than 20 still attending school in Grade 10 and 11, but not transitioning to Grade 12.

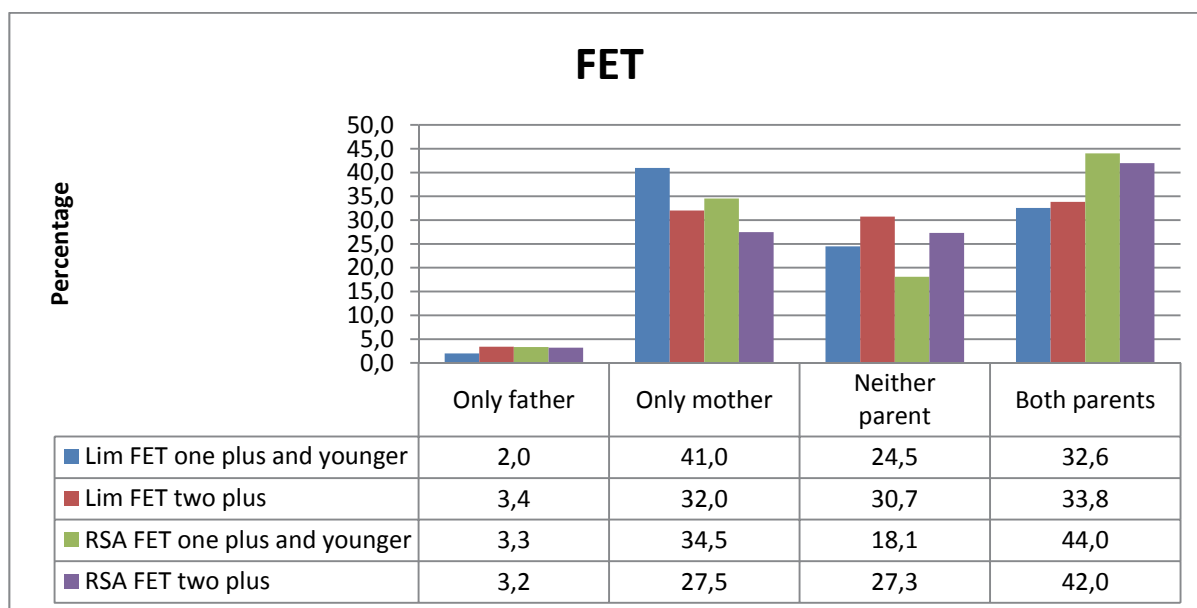
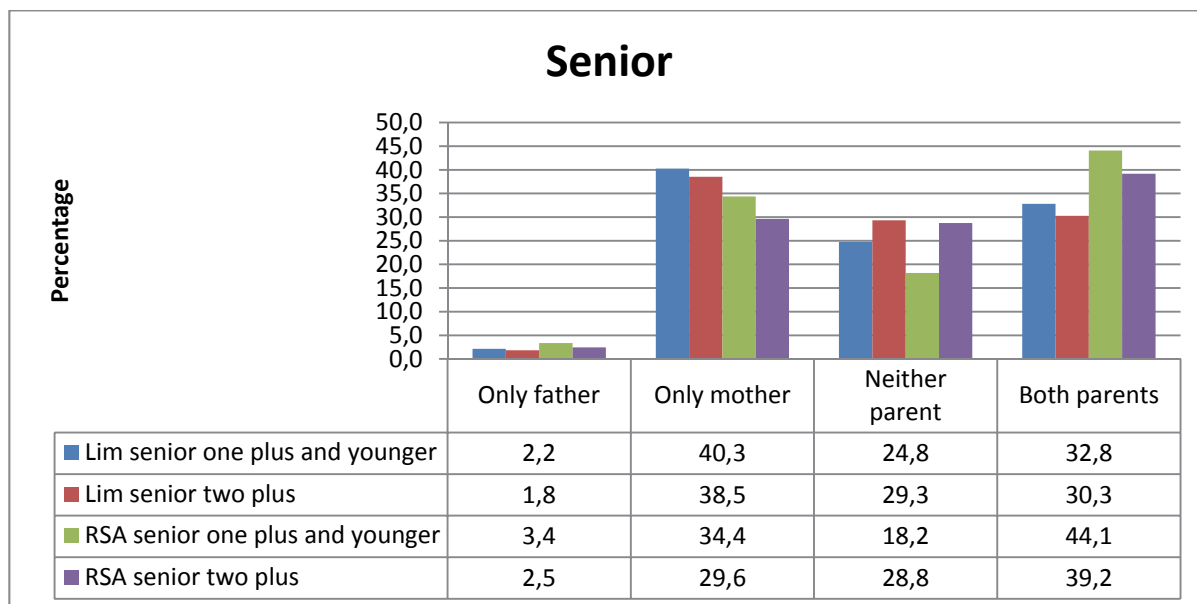
Figure 4.9: Percentage of learners per grade who are older than the expected age for grade, Limpopo, 2013



Source: LLECS, learner data file 2013

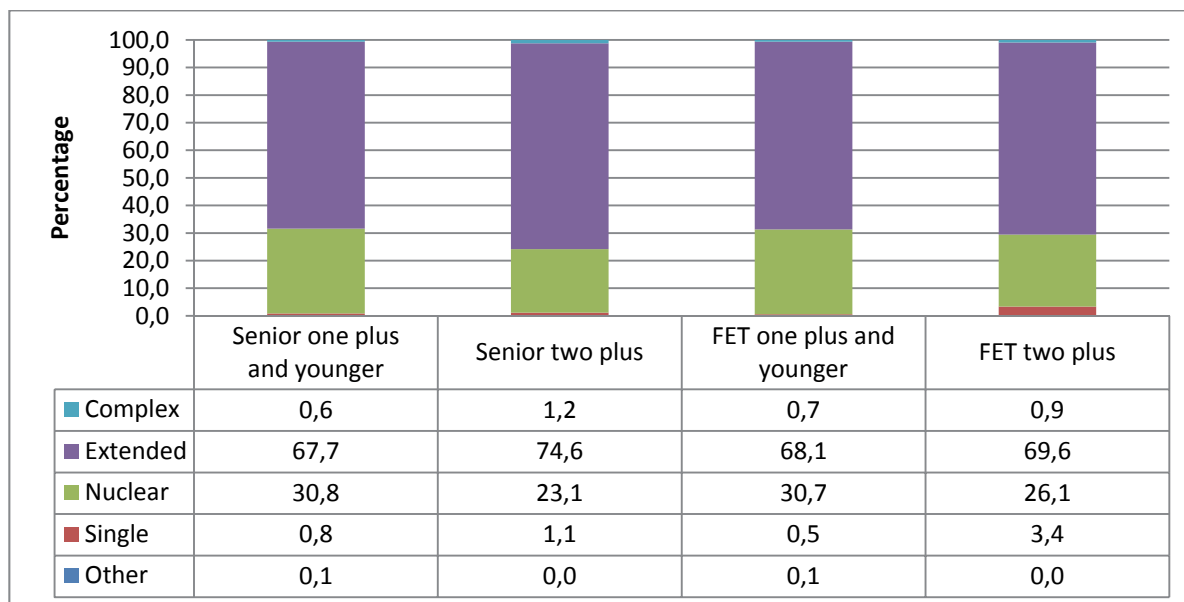
¹¹ The standards used were: Grade 0: 6 years; Grade 1: 7 years; Grade 2: 8 years; Grade 3: 9 years; Grade 4: 10 years; Grade 5: 11 years; Grade 6: 12 years; Grade 7: 13 years; Grade 8: 14 years; Grade 9: 15 years; Grade 10: 16 years; Grade 11: 17 years; Grade 12: 18 years.

Figure 4.10: Percentage of learners attending school living with one, both or none of their biological parents who are one year older or at the expected age for their grade and those who are two years or older for their grade, senior and FET phases, Limpopo and RSA 2013



Generally learners in the senior and FET phases in Limpopo are less likely than students in South Africa in general, to live with both their biological parents. Limpopo and RSA learners attending the senior (Grades 7-9) and FET (Grade 10-12) phases, who are two years or more older than the expected age for their grade, are more likely to live with neither their biological parents than those who are at the expected age for their grade or one year older.

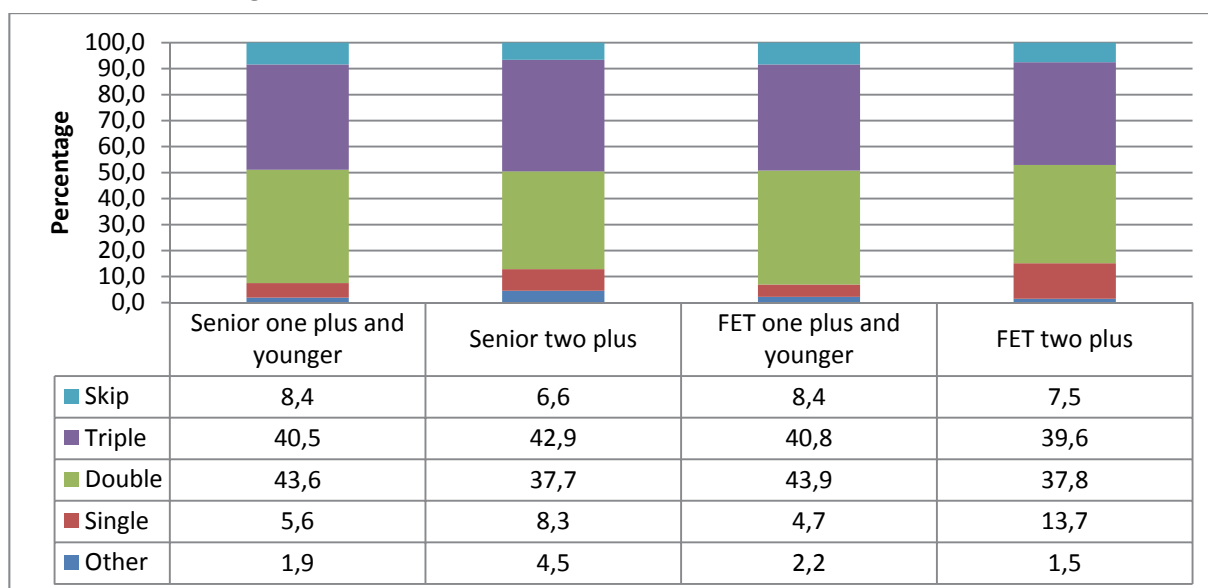
Figure 4.11: Household living arrangements of individuals attending school who are one year older or at the expected age for their grade plus one year and those who are two years or older for their grade, senior and FET phases, Limpopo, 2013



Source: General Household Survey, 2013

According to Figure 4.11 individuals attending school, who are at the correct age for their grade plus one year and attending senior phase, are more likely to live in nuclear families and extended families than their counterparts who are two years or older for their grade. Likewise are those who are older for their grade and who are attending FET classes are more likely to live in single member households.

Figure 4.12: Living arrangements according to generations present of individuals attending school who are at the correct age plus one year for their grade and those who are two years or older for their grade, senior and FET phases, Limpopo 2013



Source: General Household Survey 2013

Individuals attending Grades 7, 8 or 9 and who are two years or more older than the expected age for their grade, are more likely to live in a triple and single generation households. Once students, who are two years or more behind, reach the FET phase they are even more likely to live in a single generation household than their counterparts who are at the expected age for grade or one year older.

Table 4.3: Main income sources and sex of the household head for students who are at or older than expected age for their grade and individuals who have not completed school and are not attending at present, 2013

Indicator		Main source of household income						Sex of household head	
		Salaries/wages/commission	Income from business	Remittances	Pensions	Grants	Sales of farm products	Male	Female
Attending Senior (Grd 7,8,9)	Over age by one year or not	32,7	6,6	15,8	0,5	44,0	0,5	41,8	58,2
	Over age by two years or more	24,8	4,0	17,6	0,9	51,7	1,1	37,7	62,3
Attending FET (Grd 10,11,12)	Over age by one year or not	32,5	6,7	15,0	0,5	44,7	0,6	41,1	58,9
	Over age by two years or more	29,0	4,7	22,6	0,6	42,9	0,3	44,5	55,5
Age 15-20: Did not complete school	Attend school	31,5	5,4	19,2	0,3	43,1	0,6	40,3	59,8
	Do not attend school	29,8	2,8	20,5	0,0	46,3	0,6	36,0	64,0

Source: General Household Survey 2002–2013

According to Table 4.3 learners who are attending the senior phase or those age 15-20 years who dropped out are more likely to come from households whose main source of income is social grants and whose household is headed by a female. Those learners, who are two years or more behind and in the FET phase are more likely to live in households whose main source of income is remittances and male headed households than those who are at the expected age or one year older.

4.3 Gender parity

Even though the links between poverty, gender disadvantage and education outcomes remain largely unexplored, gender inequality tends to be more acute amongst poorer households (Hossain et al. 2013). The two biggest and most basic challenges that have to be overcome in relation to gender parity in education in Africa is to enroll more girls in school and once they are there, to retain them (Aikman and Unterhalter 2007). Even though this is a problem elsewhere in Africa, the preceding section indicated that females are nearly as likely as males to attend educational institutions and that once they attend they are more likely than males to complete primary and secondary school.

Table 4.4 uses the LLECS data and summarises key gender indicators based attendance and age per grade. It shows that boys tend to start school earlier than girls, but once they reach secondary school girls are more likely to remain at school. The same is true for the age grade transitions. Throughout their school years, girl learners are more likely than boys to be of the appropriate age per grade. However, in secondary school girls also begin to fall behind and the gap between them and boys in terms of appropriate age per grade begin to narrow.

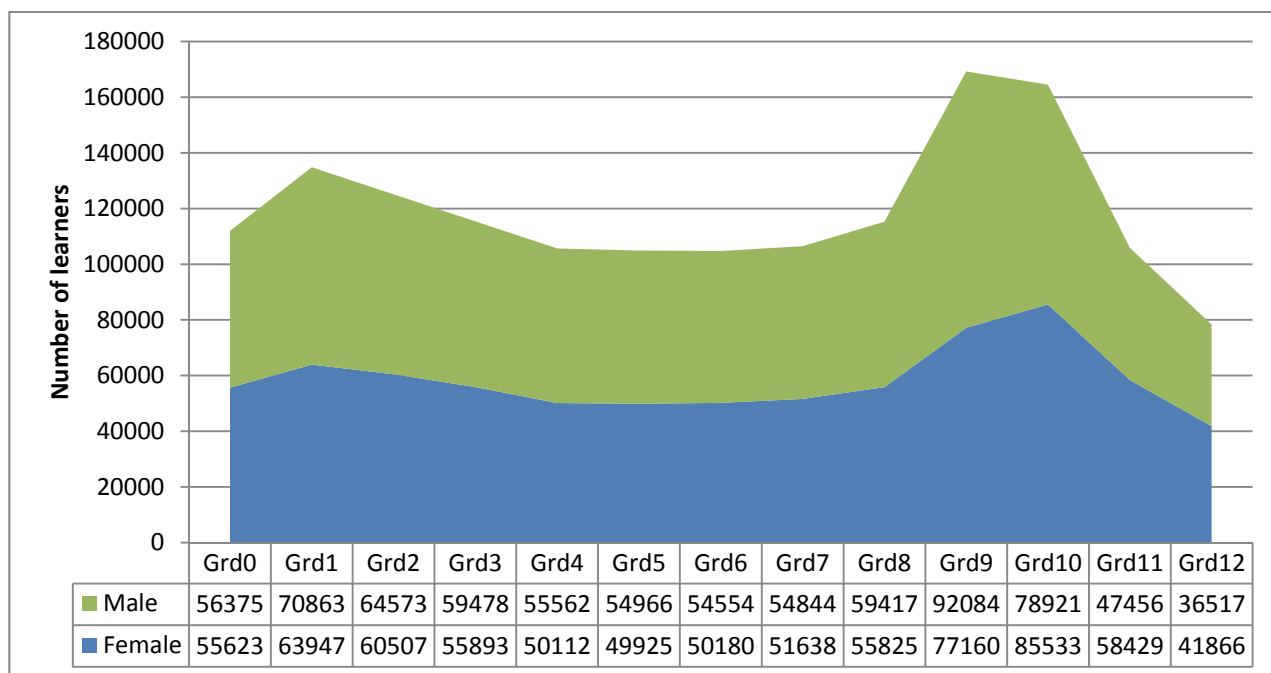
Table 4.4: Gender and gender parity indexes per grade and age per grade, 2013

Grade	Number of females	% of females older than expected age ¹²	Number of males	% of males older than expected age	Total	% of total older than expected age	Gender parity	Gender parity on % older than expected age
0	55 623	1,4	56 375	1,7	111 998	1,5	0,99	0,86
1	63 947	1,7	70 863	2,5	134 810	2,1	0,90	0,68
2	60 507	4,4	64 573	6,9	125 080	5,7	0,94	0,63
3	55 893	6,0	59 478	11,1	115 371	8,7	0,94	0,54
4	50 112	9,1	55 562	19,0	105 674	14,3	0,90	0,48
5	49 925	10,7	54 966	23,8	104 891	17,6	0,91	0,45
6	50 180	12,6	54 554	27,0	104 734	20,1	0,92	0,47
7	51 638	14,0	54 844	29,6	106 482	22,1	0,94	0,47
8	55 825	18,3	59 417	36,3	115 242	27,6	0,94	0,50
9	77 160	34,3	92 084	54,2	169 244	45,1	0,84	0,63
10	85 533	44,2	78 921	59,4	164 454	51,5	1,08	0,74
11	58 429	50,3	47 456	61,1	105 885	55,1	1,23	0,82
12	41 866	42,9	36 517	55,7	78 383	48,8	1,15	0,77

*Statistics exclude cases with unreported age and or grades.

Source: LLECS, learner data 2013

Figure 4.13: Male and female enrollment numbers per grade, Limpopo, 2013

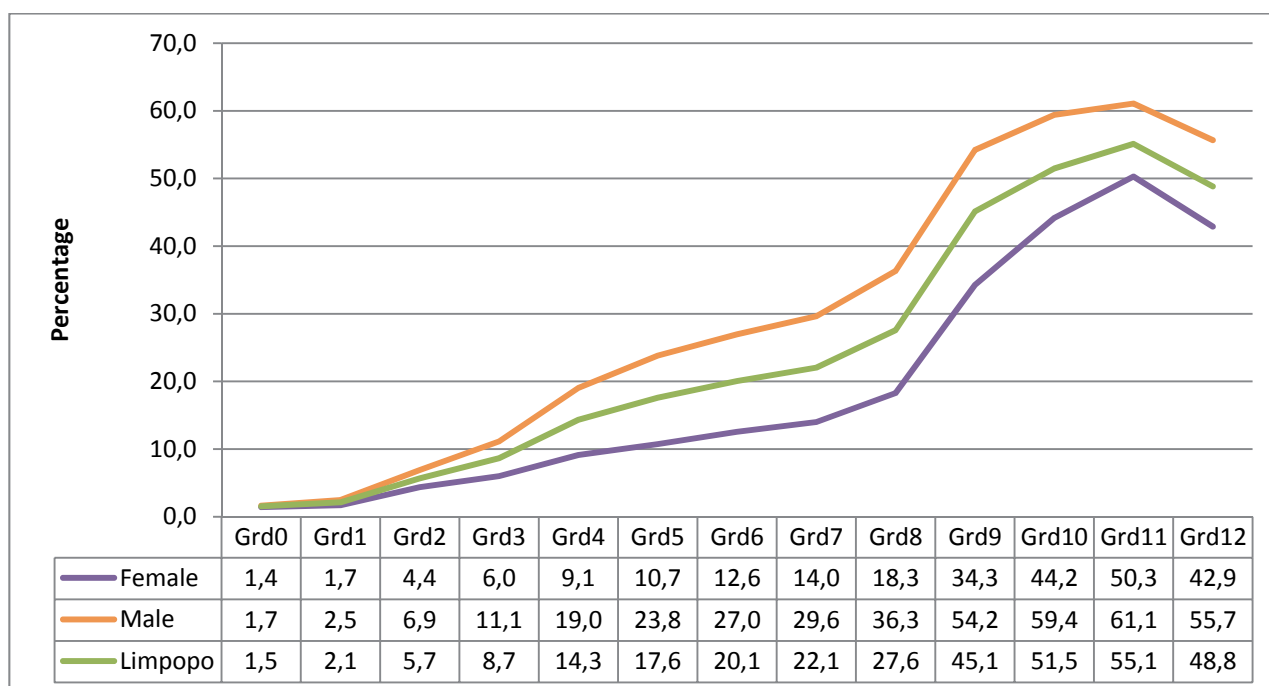


Source: LLECS, 2013

According to Figure 4.13 more males than females are enrolled until Grade 9. However, this changes in Grade 10 when more girls than boys are enrolled accompanied by a sharp decline in absolute numbers for both groups for Grades 11 and 12. Throughout their school careers, girls are more likely than boys to be of an appropriate age per grade, even though the gap between them reduces slightly after Grade 10.

¹² The following ages were considered average for the LLECS period February–March 2013: Grade 0, 5 yrs; Grade 1, 6 yrs; Grade 2, 7 yrs; Grade 3, 8 yrs; Grade 4, 9 yrs; Grade 5, 10 yrs; Grade 6, 11 yrs; Grade 7, 12 yrs; Grade 8, 13 yrs; Grade 9, 14 yrs; Grade 10, 15 yrs; Grade 11, 16 yrs; Grade 12, 17 yrs.

Figure 4.14: Percentage males and females older than expected age per grade, Limpopo, 2013



Source: LLECS 2013

Table 4.5: Percentage of males and females older than expected age per education for the foundation and intermediate phases per education district, Limpopo, 2013

Education district	Number of females	% of females older than expected age ¹³	Number of males	% of males older than expected age	Total	% of total older than expected age	Gender parity on number in grade	Gender parity on % older than expected age
Foundation phase								
Unspecified district	10 410	4,6	11 147	7,4	21 557	6,1	0,93	0,62
Lebowa-kgomo	12 853	2,7	13 712	4,0	26 565	3,4	0,94	0,68
Mogala-kwena	12 890	2,4	13 572	3,6	26 462	3,0	0,95	0,67
Mopani	32 973	3,3	35 139	5,8	68 112	4,6	0,94	0,57
Polokwane	36 605	3,1	38 821	4,5	75 426	3,8	0,94	0,69
Riba Cross	13 020	3,0	13 928	5,0	26 948	4,0	0,93	0,60
Sekhukhune	38 161	3,2	40 357	5,4	78 518	4,4	0,95	0,59
Tshipise-Sagole	9 612	4,1	10 460	7,7	20 072	5,9	0,92	0,53
Tzaneen	13 398	2,9	13 943	4,3	27 341	3,6	0,96	0,67
Vhembe	44 595	3,3	47 988	5,8	92 583	4,6	0,93	0,57
Waterberg	11 453	5,9	12 222	8,9	23 675	7,5	0,94	0,66
Limpopo Foundation	235 970	3,3	251 289	5,5	487 259	4,4	0,94	0,60
Intermediate phase								
Unspecified district	6 938	12,4	7 574	23,6	14 512	18,2	0,92	0,53
Lebowa-kgomo	8 059	7,2	8 658	18,1	16 717	12,9	0,93	0,40
Mogala-kwena	8 291	7,9	8 879	16,2	17 170	12,2	0,93	0,49
Mopani	21 312	12,9	23 537	26,6	44 849	20,1	0,91	0,48

¹³ The following ages were considered average for the LLECS period February–March 2013: Grade 0, 5 yrs; Grade 1, 6 yrs; Grade 2, 7 yrs; Grade 3, 8 yrs; Grade 4, 9 yrs; Grade 5, 10 yrs; Grade 6, 11 yrs; Grade 7, 12 yrs; Grade 8, 13 yrs; Grade 9, 14 yrs; Grade 10, 15 yrs; Grade 11, 16 yrs; Grade 12, 17 yrs.

Education district	Number of females	% of females older than expected age ¹³	Number of males	% of males older than expected age	Total	% of total older than expected age	Gender parity on number in grade	Gender parity on % older than expected age
Polokwane	23 367	7,3	25 488	17,5	48 855	12,6	0,92	0,42
Riba Cross	7 412	8,9	8 453	21,0	15 865	15,4	0,88	0,42
Sekhukhune	23 415	11,7	25 506	24,5	48 921	18,4	0,92	0,48
Tshipise–Sagole	6 514	14,4	7 383	27,5	13 897	21,3	0,88	0,52
Tzaneen	8 516	9,1	9 232	20,9	17 748	15,2	0,92	0,44
Vhembe	28 746	11,5	32 412	26,1	61 158	19,2	0,89	0,44
Waterberg	7 647	16,7	7 960	30,3	15 607	23,6	0,96	0,55
Limpopo intermediate	150 217	10,8	165 082	23,2	315 299	17,3	0,91	0,47

Source: LLECS 2013

Table 4.5 shows that in the foundation phase, relatively small numbers of both female and male students are likely to be older than their age per grade, with boys in all districts more likely to be older than their female counterparts. The districts with the highest percentage of learners older than the expected age in the foundation phase were Waterberg (7,5%) and Tshipise–Sagole (5,9%).

Transition of learners to the intermediate phase reveals that the differences between the two genders as well as between districts becomes significantly bigger. Waterberg (23,6%), Tshipise–Sagole (21,3%) and Mopani (20,1%) have the highest proportions of learners older for their age per grade, whilst Mogalakwena (12,2%), Polokwane (12,6%) and Lebowakgomo (12,9%) had the lowest.

When learners move to the senior and FET phases, the general rates of over age do not only increase significantly for both girls and boys, but the gaps between districts also widen.

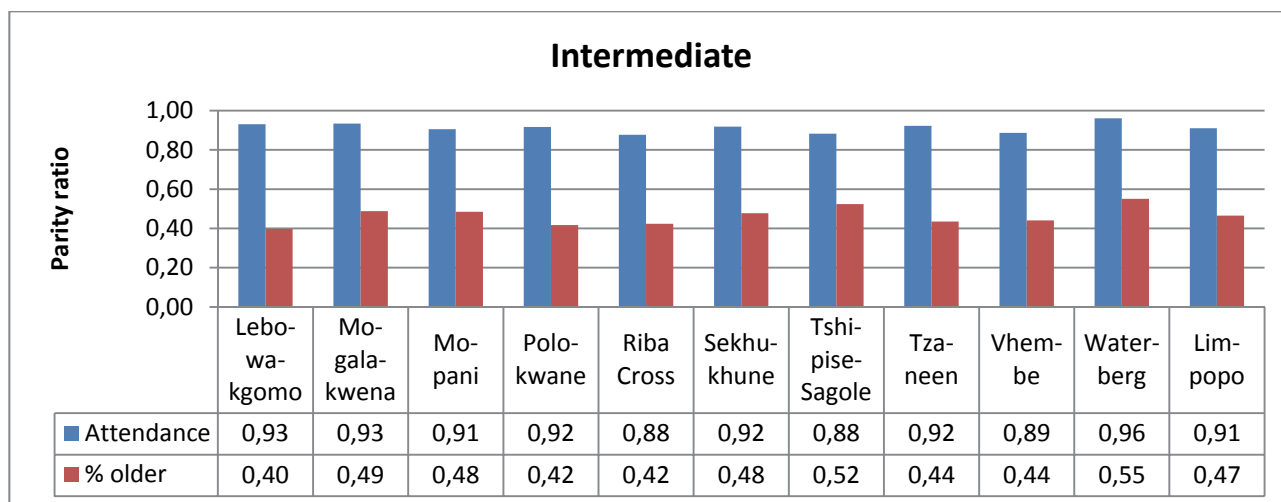
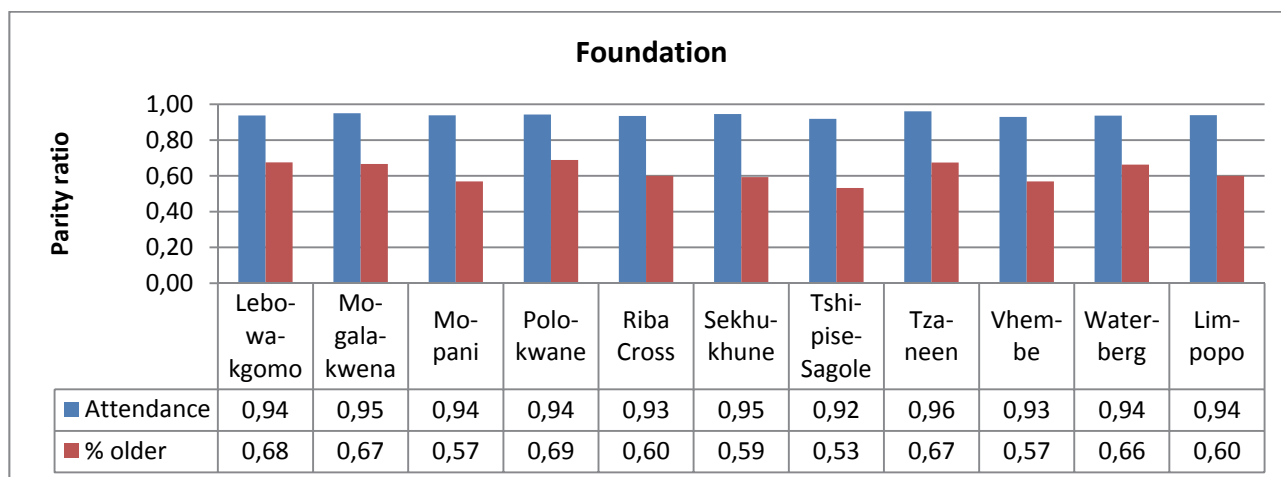
Table 4.6: Percentage of males and females older than expected age for the senior and FET phases per education district, Limpopo, 2013

Education district	Number of females	% of females older than expected age ¹⁴	Number of males	% of males older than expected age	Total	% of total older than expected age	Gender parity on number in grade	Gender parity on % older Than expected age
Senior phase								
Unspecified district	10 131	26,5	11 978	44,9	22 109	36,5	0,85	0,59
Lebowa-kgomo	9 727	20,1	11 134	39,6	20 861	30,5	0,87	0,51
Mogala-kwena	9 819	18,9	10 968	35,0	20 787	27,4	0,90	0,54
Mopani	25 763	28,0	28 500	47,9	54 263	38,4	0,90	0,58
Polokwane	30 654	18,2	33 958	35,6	64 612	27,3	0,90	0,51
Riba Cross	9 157	24,6	10 436	43,4	19 593	34,6	0,88	0,57
Sekhukhune	25 612	24,9	29 600	46,6	55 212	36,6	0,87	0,53
Tshipise–Sagole	8 496	28,0	9 284	45,4	17 780	37,1	0,92	0,62
Tzaneen	10 918	22,1	12 162	41,5	23 080	32,3	0,90	0,53
Vhembe	36 934	24,6	40 586	42,7	77 520	34,1	0,91	0,58
Waterberg	7 412	27,8	7 739	45,2	15 151	36,7	0,96	0,62

¹⁴ The following ages were considered average for the LLECS period February–March 2013: Grade 0, 5 yrs; Grade 1, 6 yrs; Grade 2, 7 yrs; Grade 3, 8 yrs; Grade 4, 9 yrs; Grade 5, 10 yrs; Grade 6, 11 yrs; Grade 7, 12 yrs; Grade 8, 13 yrs; Grade 9, 14 yrs; Grade 10, 15 yrs; Grade 11, 16 yrs; Grade 12, 17 yrs.

Education district	Number of females	% of females older than expected age ¹⁴	Number of males	% of males older than expected age	Total	% of total older than expected age	Gender parity on number in grade	Gender parity on % older Than expected age
Limpopo Senior	184 623	23,8	206 345	42,5	390 968	33,7	0,89	0,56
Further Education and Training phase								
Unspecified district	11 250	46,8	10 330	61,0	21 580	53,6	1,09	0,77
Lebowakgomo	11 025	39,2	9 541	53,0	20 566	45,6	1,16	0,74
Mogalakwena	9 954	42,6	8 721	56,3	18 675	49,0	1,14	0,76
Mopani	24 842	51,6	21 281	63,5	46 123	57,1	1,17	0,81
Polokwane	31 634	38,5	29 001	53,6	60 635	45,7	1,09	0,72
Riba Cross	9 004	49,2	7 662	62,2	16 666	55,2	1,18	0,79
Sekhukhune	24 902	49,7	21 104	65,6	46 006	57,0	1,18	0,76
Tshipise–Sagole	7 689	46,6	6 677	57,5	14 366	51,6	1,15	0,81
Tzaneen	11 319	46,2	9 692	58,7	21 011	52,0	1,17	0,79
Vhembe	38 458	47,4	33 901	59,1	72 359	52,9	1,13	0,80
Waterberg	5 751	42,9	4 984	53,7	10 735	47,9	1,15	0,80
Limpopo FET	185 828	45,8	162 894	59,1	348 722	52,0	1,14	0,77

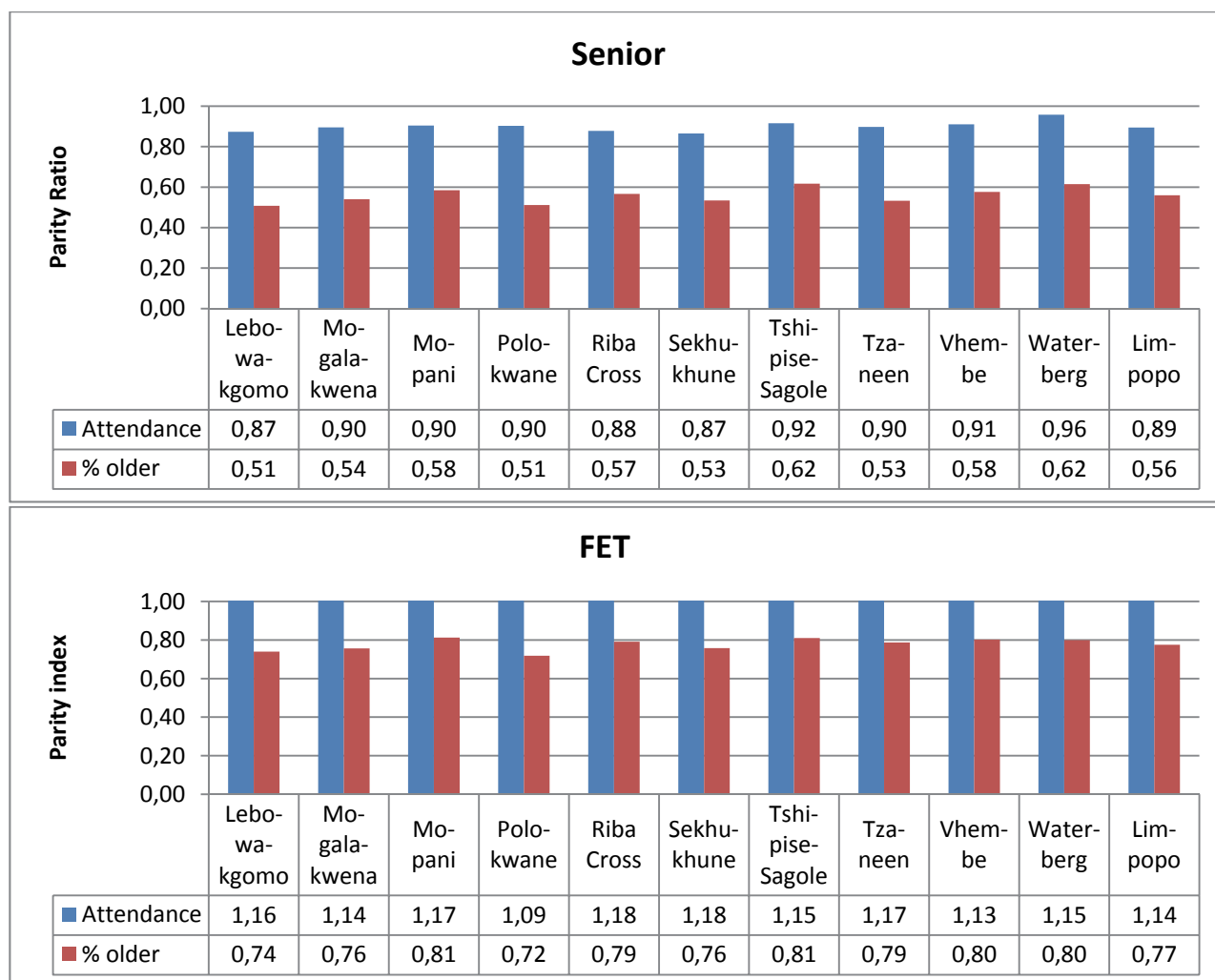
Figure 4.15: Gender parity index for foundation and intermediate phase students per education district, Limpopo, 2013



Source: LLECS, learner data, 2013

Figure 4.15 shows that attendance parity indexes of male and female learners in the foundation and intermediate phases are very similar across districts with proportionally more males and females attending. Greater variation begins to emerge in the intermediate phase, with the parity gap between boys and girls widening even further in Riba Cross, Thsipise Sagole and Vhembe. For both phases boys are nearly twice as likely as girls to be above the expected age for their grade.

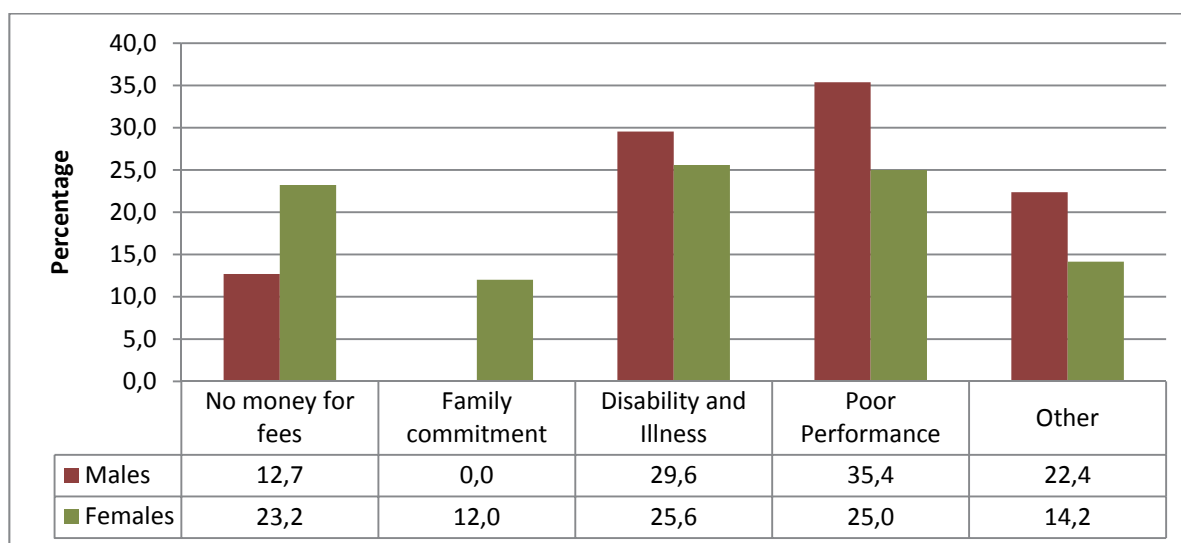
Figure 4.16: Gender parity index for senior and FET phase students per education district, Limpopo, 2013



Source: LLECS, learner data, 2013

In relation to attendance, gender parity declines slightly in the senior phase with boys more likely to attend than girls. However, once they enter the FET phase girls are more likely to attend than boys. Even though girls were less likely than boys to be older than their grades up to senior phase, the likelihood of them falling behind increases as they enter the FET phase and becomes closer to that of boys.

Figure 4.17: Reasons why individuals aged 7–18 years were not attending school by gender, Limpopo, 2013



Source: General Household Survey 2013

Even though school completion rates for females are higher than for males, six out of ten individuals aged 7–18 years who were not attending school in 2013 were females. Aikman and Unterhalter (2007) found that the opportunity cost of education elsewhere in Africa does influence girl participation in education significantly, as they often have to perform important household chores such as collecting water and fetching wood. Girls also often provide care to their younger siblings (2007).

4.4 Summary

In this chapter the focus was on: general attendance, net adjusted enrolment rates (NERA), the gender dynamics of attendance, age distribution per grade and reasons for non-attendance. The data was sourced from the EMIS system, as well as other sources like the General Household Survey (GHS) and the Limpopo Census of Learners, Educators and Schools.

Individuals aged 7–24 were more likely to attend educational institutions than their counterparts in other rural provinces such as Eastern Cape and KwaZulu-Natal, and the country in general. The principal reasons for non-attendance were lack of money for fees, followed by poor performance, disability and illness.

NERA and completion rates

The Net Adjusted Enrolment Rates (NERAs) in 2013 were close to 100% and there’s no significant difference between the NERAs of males and females. However, the primary school completion rates in the province differed significantly by gender, with female pupils more likely than their male counterparts to finish primary school by age 15. Nonetheless, the completion rates of both genders improved significantly between 2002 and 2013.

When considering the secondary school completion rates for individuals aged 20–24 years, the situation in the province no longer looks better than that of the country as a whole. Only 33,7% of these individuals have completed secondary school, compared to 46,1% nationally. However, there has been an improvement in secondary school completion rates between 2002 and 2013 from 24,3% to 33,7%.

Age per grade

Regarding age per grade, by the time learners reach Grade 9, four or more out of ten learners are older than the norm. It is true for all districts in the province, but one (Polokwane at 37,8%). There is an upward trend until Grade 11 which then slightly drops in Grade 12. When these trends are looked at against the backdrop of higher secondary school completion rates and in combination with the population pyramid, they reflect a decline in the number of learners in the age groups that were in secondary school at the time of the study in 2013.

Additional analysis, comparing learners who have fallen two or more years behind the expected age or their grade, found that they are more likely to come from female headed households. For those in the senior grades their households are also more dependent on social grants as their main source of income and are more likely to be extended and triple generation households. Those attending the FET phases tend to be more reliant on remittances as their main income source and have a bigger likelihood than their counterparts, who are not two or more years behind, to live in single generation households.

Considering the male and female enrolment numbers per grade, more males than females were enrolled until Grade 9, and then vice versa in Grade 10 due to higher dropout rates of males after Grade 9. In addition to this, both gender groups experienced a sharp decline in absolute numbers in Grades 11 and 12.

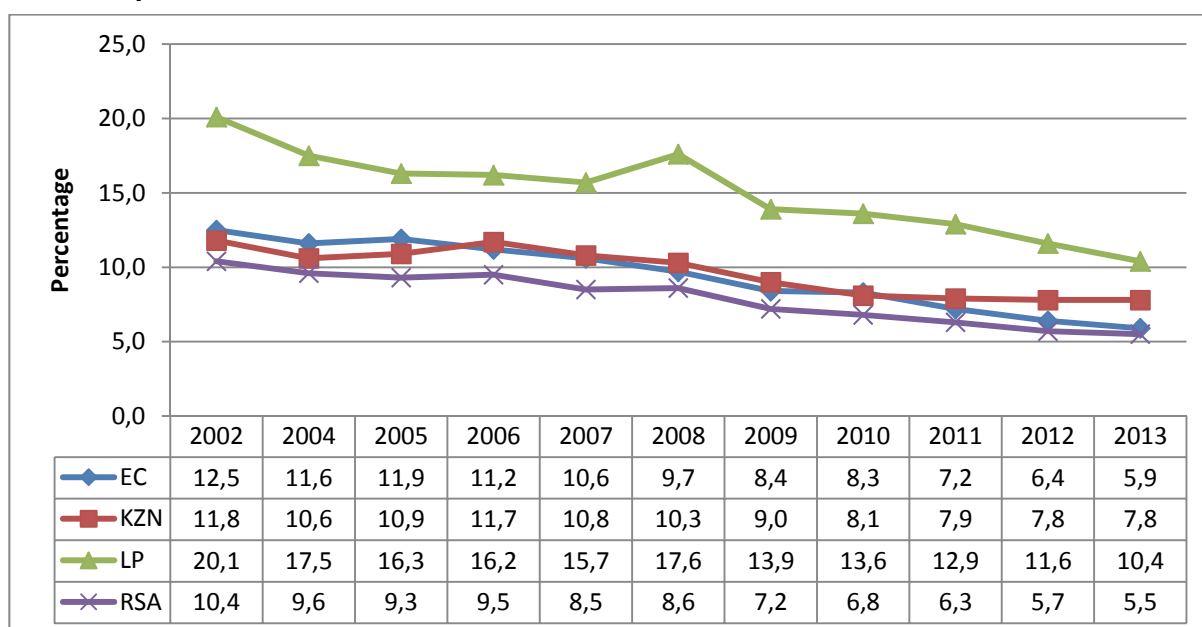
Chapter 5: Educational attainment

5.1 Introduction

This chapter summarises general educational attainment in the province in relation to literacy rates and performance as measured through the Annual National Assessment (ANA) tests and the National Senior Certificate (NSC) exams. The final section looks at the correlation between key variables and NSC outcomes, both from the perspective of the secondary schools that enrolled students for NSC and from the perspective of the primary schools that feed into these secondary schools.

5.2 General educational attainment

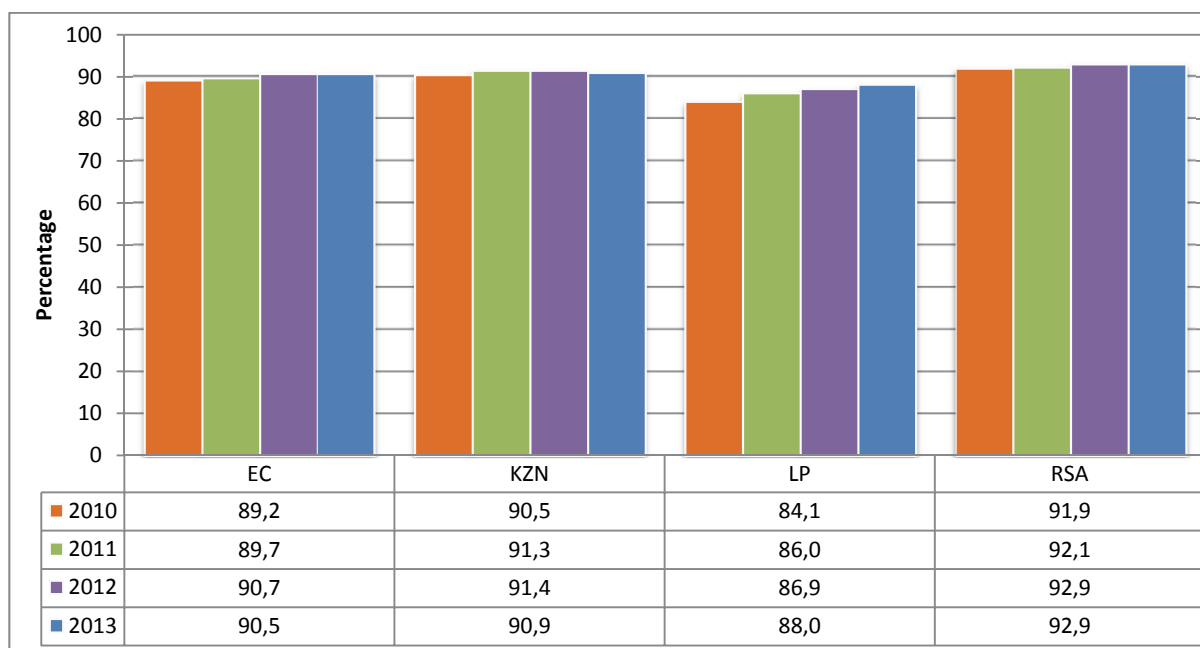
Figure 5.1: Percentage of persons aged 20 years and older with no formal education for selected provinces, 2002–2013



Source: General Household Survey 2002–2013

Figure 5.1 shows the evolution of persons aged 20 years and older with no formal education in Eastern Cape, KwaZulu-Natal, Limpopo and the rest of South Africa between 2002 and 2013. Compared to the other two provinces with relatively high rural populations and the country as a whole, Limpopo had the highest percentage of people aged 20 years and older with no formal education in 2002, with 20%. Even though the numbers fluctuated over time, the overall decline between 2002 and 2013 of those with no formal education was nearly 10 percentage points in Limpopo. Eastern Cape and KwaZulu-Natal started at a better base with 12,5% and 11,8% in 2002 and further reduced to 5,9% and 7,8% respectively by 2013. In RSA as a whole the percentage of individuals aged 20 years and older with no formal education decreased by 5 percentage points during the same time period.

Figure 5.2: Adult literacy for selected provinces, 2010–2013



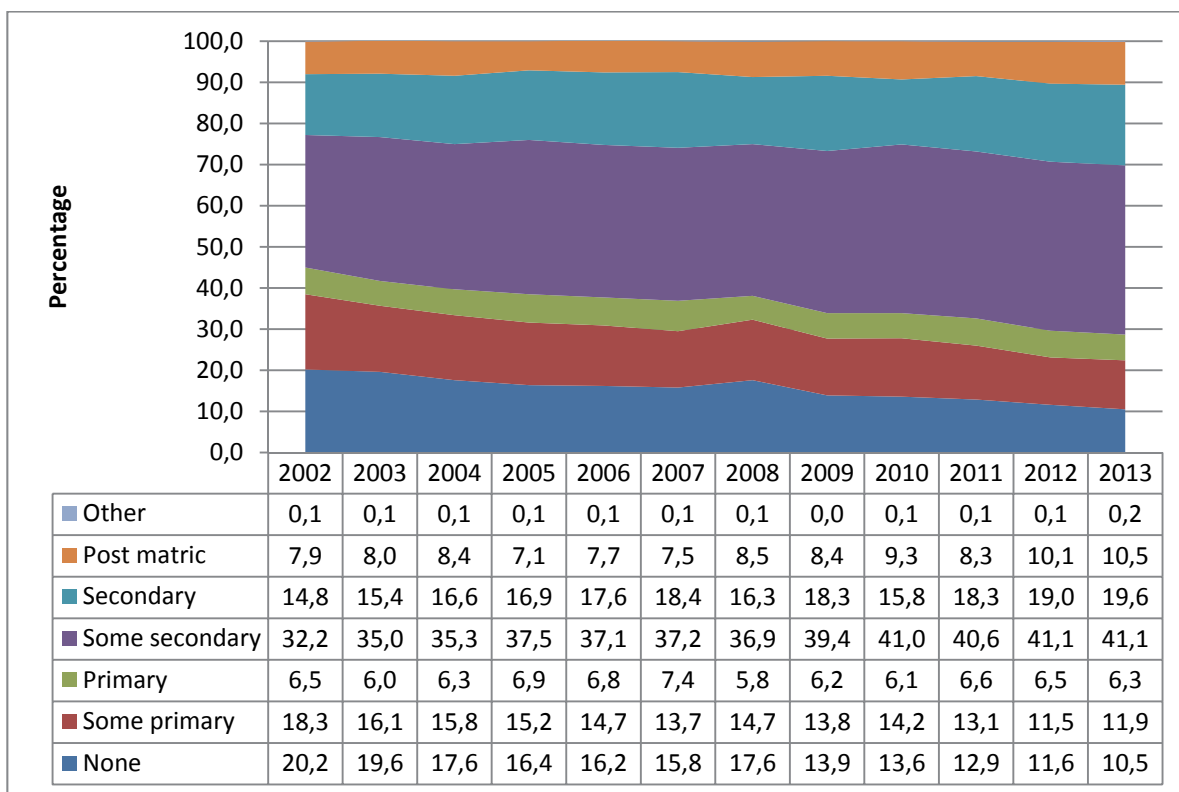
Source: General Household Survey 2010–2013

According to the General Household Survey the overall adult literacy rate in the province is above 90% and this percentage increased between 2010 and 2012, and remained the same between 2012 and 2013. The adult literacy rate¹⁵ is defined as the percentage of self-reported people ages 15 years and older who can read and write a short sentence.

Regarding the three provinces with high rural populations, Limpopo had the lowest literacy rate in 2010 and 2013. The percentage of adult literates in KwaZulu-Natal remained stable between 2010 and 2013 at approximately 91%, whilst the situation has improved in Limpopo by approximately four percentage points from 84,1% to 88,0%.

¹⁵ This particular question was first included in the questionnaire in 2009 and further refined in 2010. For comparison purposes only the 2010 and 2013 data is therefore presented.

Figure 5.3: Highest educational achievement for individuals aged 20 years and older, Limpopo, 2002–2013



Source: General Household Survey 2002–2013

Between 2002 and 2013 there has been a slow decline in the percentage of people who have no education, some primary and primary level as their highest level of education. The percentage of individuals with some secondary and secondary level as their highest form of education increased by approximately ten and five percentage points respectively during the reference period. In 2013 more than two-fifths (around 40%) of the Limpopo people have reached secondary and less than one-fifth achieved secondary.

For the past 11 years (from 2002 to 2013), less than 20% of people in Limpopo have achieved their secondary education level and less than 10% have achieved post matric as their highest educational achievement.

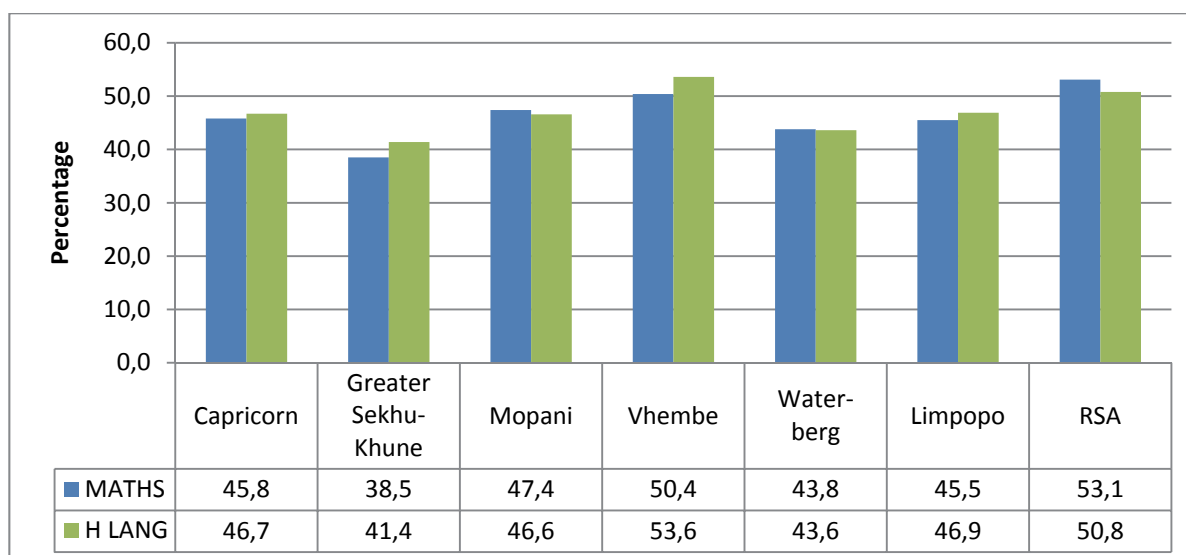
5.3 Annual national assessment results

Table 5.1: Average percentage marks for ANA by district,¹⁶ Grade 3, 2012–2013

District	Mathematics		Home Language	
	2012	2013	2012	2013
Capricorn	34,4	45,8	49,2	46,7
Greater Sekhukhune	30,0	38,5	45,0	41,4
Mopani	36,3	47,4	48,4	46,6
Vhembe	37,4	50,4	50,0	53,6
Water berg	33,6	43,8	46,1	43,6
Limpopo	34,4	45,5	47,9	46,9
RSA	41,2	53,1	52,0	50,8

Source: ANA 2013 report

Figure 5.4: Average ANA percentage marks for mathematics and home language for Grade 3, 2013



Source: ANA 2013 report

Figure 5.4 shows the evolution of the average ANA percentage marks for mathematics and home language in Limpopo and RSA for Grade 3 pupils between 2012 and 2013. In 2012, the average ANA percentage marks for mathematics was poor in all the districts (with an average ANA percentage of less than 40%). The lowest performance in mathematics was found in Greater Sekhukhune with 30%, followed by Waterberg with 33,6%. Vhembe district had the highest average ANA of 37,4%. In 2013 the average ANA attainment increased across all districts, except Greater Sekhukhune district, with more than ten percentage points. Vhembe district had the highest attainment in 2013 with 50,4%, followed by Mopani with 47,4% and Capricorn with 45,8%.

¹⁶ Prior to 2012 the administrative districts were used as school districts in the province. The 2013 ANA results were still published using these boundaries and the tables related to ANA were done accordingly. However, all the LLECS analysis in the report are based on the new education district boundaries.

According to the ANA report, Limpopo observed a 1% decrease of the average percentage mark for home language for learners in Grade 3 between 2012 and 2013. This decrease was observed throughout all districts in the province except Vhembe, which registered an increase of 3,6 percentage points. The district which had the greatest decline was Greater Sekhukhune at 3,6%. In Limpopo in 2013 the average percentage mark for home language in Grade 3 was slightly less than the national average of 50,8%. The overall ANA achievement in 2013 in Limpopo was lower than in RSA by 3,9 percentage points.

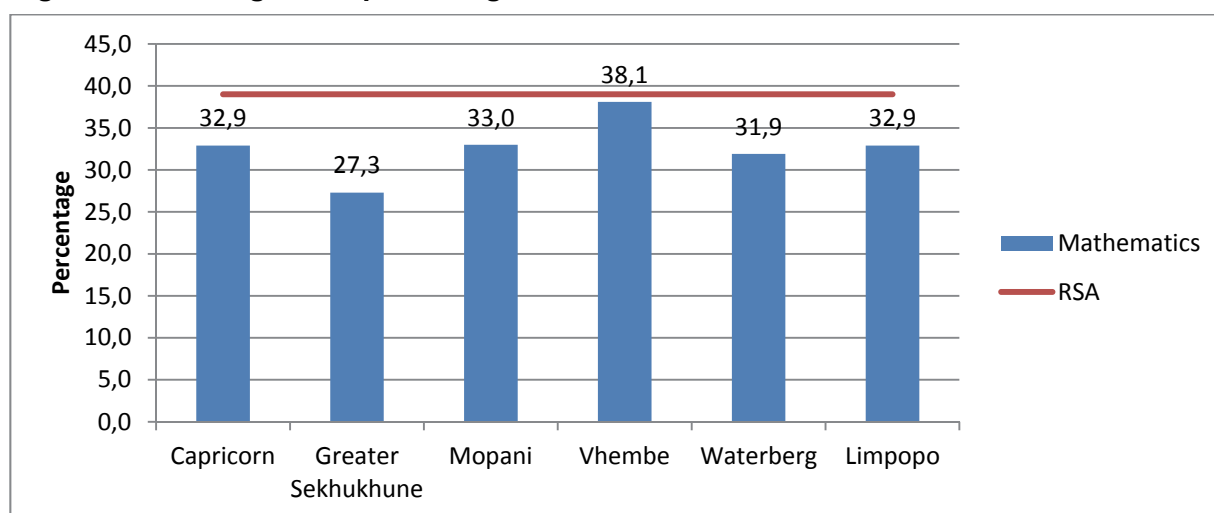
Table 5.2: Average percentage marks for ANA, Grade 6, 2013

District	Subject					
	Mathematics		Home Language		First Additional Language	
	2012	2013	2012	2013	2012	2013
Capricorn	22,8	32,9	32,6	49,5	34,4	44,6
Greater Sekhukhune	17,8	27,3	22,7	46,0	28,0	38,0
Mopani	21,1	33,0	28,4	51,8	32,6	43,8
Vhembe	23,8	38,1	26,1	55,0	31,9	47,3
Waterberg	20,2	31,9	34,0	55,9	31,3	38,9
Limpopo	21,4	32,9	28,2	51,6	31,7	43,2
RSA	26,7	39,0	42,8	58,8	35,6	45,7

Source: ANA 2013 report

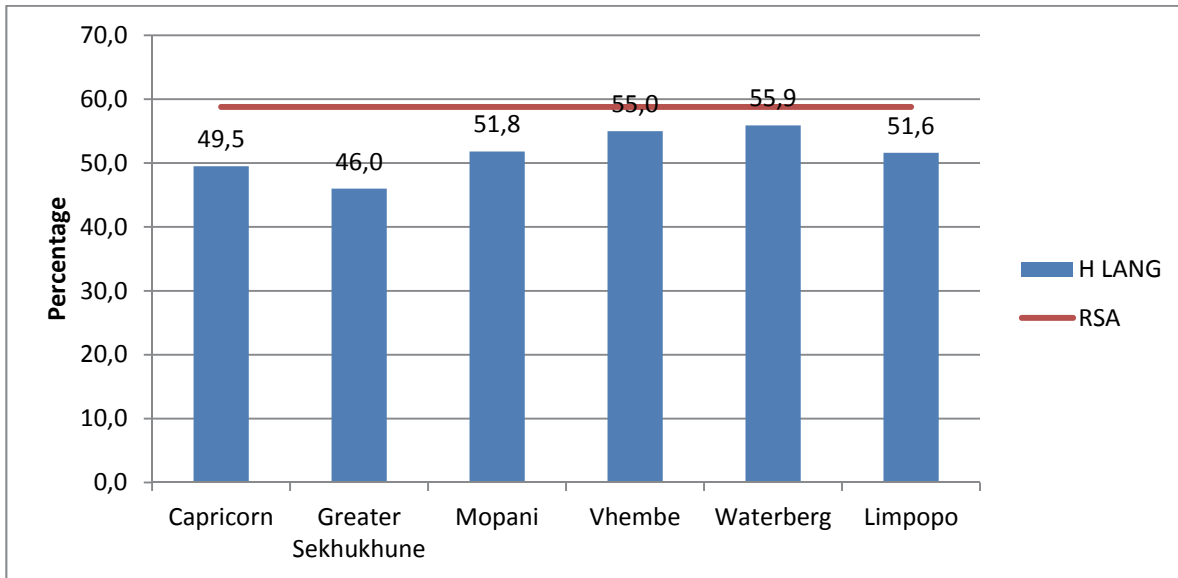
The average percentage mark for mathematics for Grade 6 increased from 2012 to 2013. There was a 11,5 percentage point increase in Limpopo, which is slightly less than the national increase of 12,3 percentage points. Vhembe was the best performing district with an 38,1% average, 5,1% higher than Mopani which follows at 33,0%. The lowest performing district was Greater Sekhukhune with 27,3%.

Figure 5.5: Average ANA percentage marks for mathematics for Grade 6, 2013



Source: ANA 2013 report

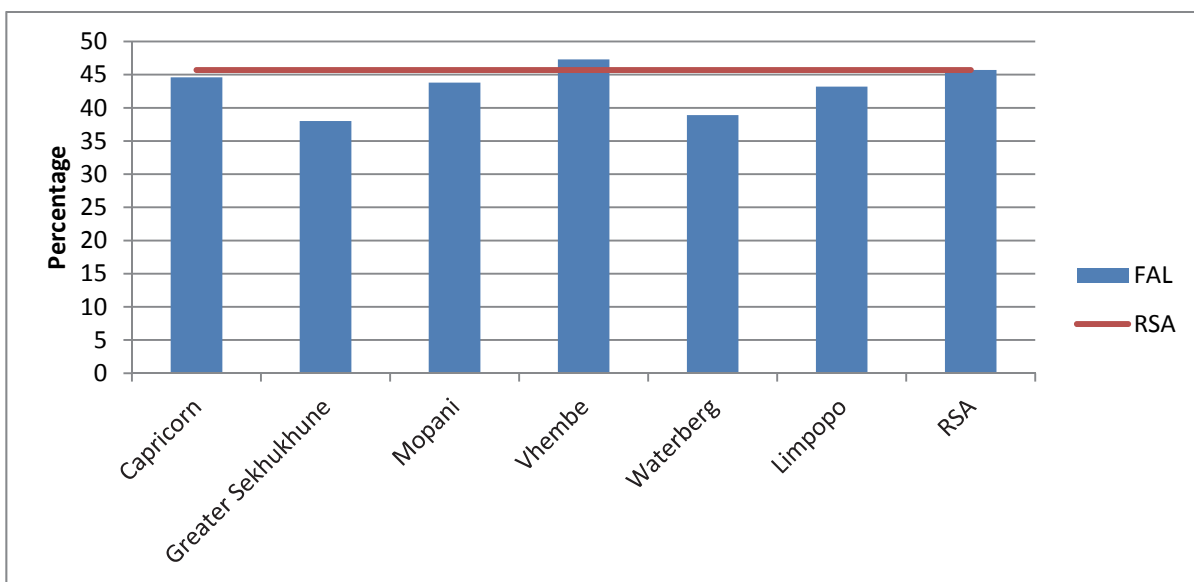
Figure 5.6: Average ANA percentage marks for home language for Grade 6, 2013



Source: ANA 2013 report

The average percentage mark for home language in Grade 6 increased between 2012 and 2013 for all districts (Table 5.2). The Limpopo average percentage mark increased significantly with 23,4 percentage points from 28,2% in 2012 to 51,6% in 2013, though it is still lower than the national average of 58,8%. In this instance Waterberg district performed best in the province with an average percentage mark of 55,0%. The lowest performing district is Greater Sekhukhune with 46,0% for home language for Grade 6.

Figure 5.7: Average ANA percentage marks for first additional language for Grade 6, 2013



Source: ANA 2013 report

There has been an increase in the average mark for first additional language for Grade 6 (Table 5.2) across all districts in the province and the country as a whole between 2012 and 2013. The Limpopo average percentage for first additional language increased by 11,5 percentage points from 31,7% in 2012 to 43,2% a year later. This is 1,4% higher than the average increase observed nationally, as the national average increased from 35,6% to 45,7% during the same period. Like in most of the preceding figures, the district of Vhembe was the highest performing district in 2013, with an average percentage of 47,3% for first additional language in Grade 6, followed by Capricorn district with an average of 44,6%. The Greater Sekhukhune district is the lowest performing district with an average of 38,0%.

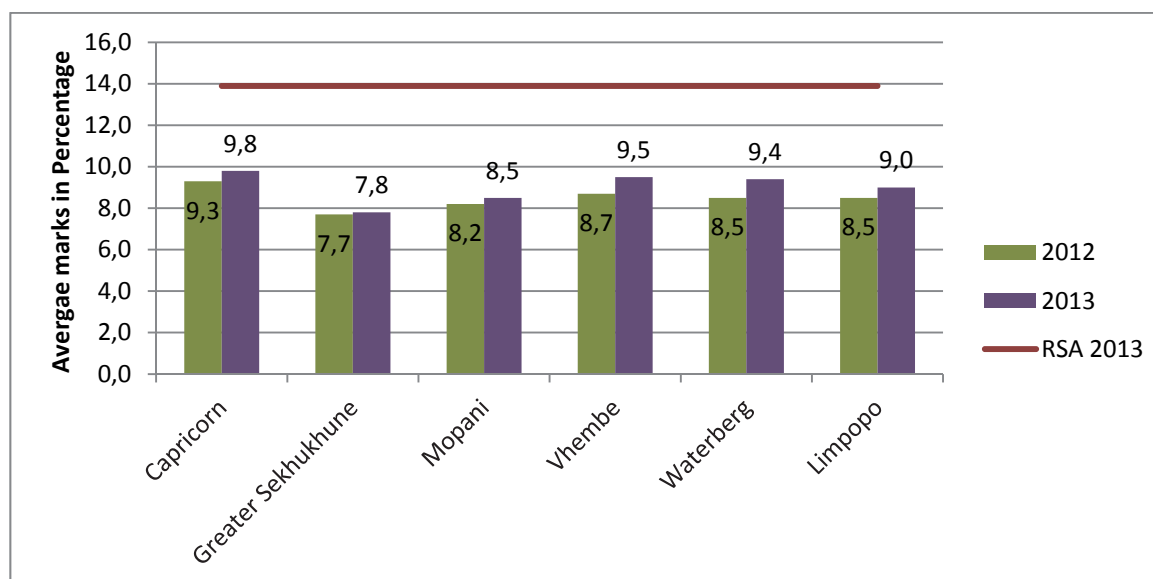
Table 5.3: Average percentage marks for ANA, Grade 9, 2013

Average % marks for Grade 9	Mathematics		Home Language		First Additional Language	
	2012	2013	2012	2013	2012	2013
Capricorn	9,3	9,8	37,2	34,0	31,9	31,9
Greater Sekhukhune	7,7	7,8	29,9	31,6	28,7	27,1
Mopani	8,2	8,5	30,1	31,6	29,2	29,7
Vhembe	8,7	9,5	28,5	33,3	29,0	29,6
Waterberg	8,5	9,4	33,3	38,9	29,9	29,4
Limpopo	8,5	9,0	31,2	33,7	29,8	29,6
RSA	12,7	13,9	43,4	43,1	34,6	33,2

Source: ANA 2013 report

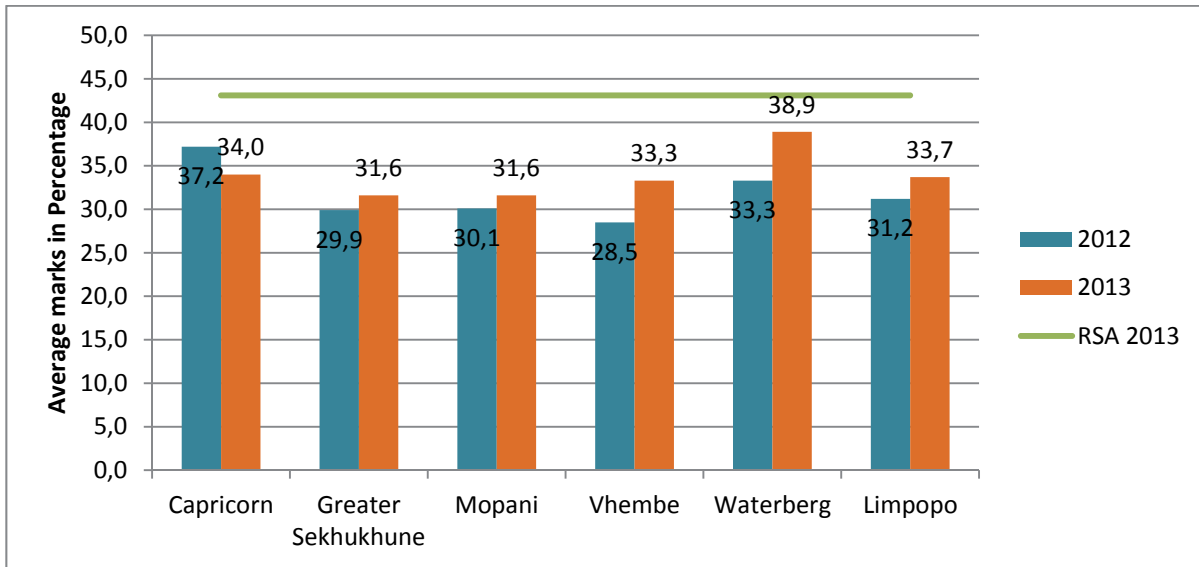
Table 5.3 shows the average ANA percentage marks for mathematics, home language and first additional language (FAL) for Grade 9 in 2012 and 2013. The average marks for mathematics improved by 1,2 percentage points in 2013 compared to 2012 in the country as a whole. The improvement in the average marks was echoed in Limpopo with a 0,5 percentage point increase overall, a 0,5 percentage point increase in Capricorn, 0,1 percentage point increase in Greater Sekhukhune, 0,3 percentage points in Mopani, 0,8 percentage points in Vhembe and 0,9 percentage points in Waterberg. All districts in the province are well below the 13,9% national average for mathematics (Figure 5.8).

Figure 5.8: Average ANA percentage marks for mathematics for Grade 9, 2012–2013



Source: ANA 2013 report

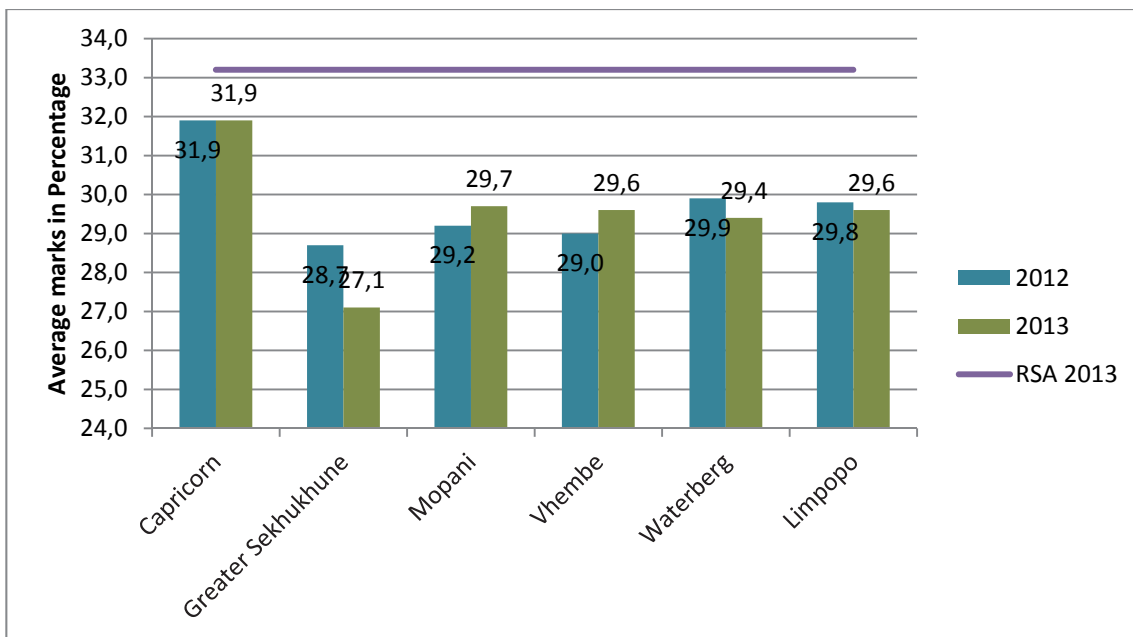
Figure 5.9: Average ANA percentage marks for home language for Grade 9, 2012–2013



Source: ANA 2013 report

In the country as a whole, the average marks for home language has dropped slightly with 0,3 percentage points in 2013. Limpopo had an improvement of 2,5 percentage points in the average marks for home language for Grade 9 in 2013. Respective districts of Limpopo had an increase in the average marks for home language (1,7 percentage points in Greater Sekhukhune; 1,5 percentage points in Mopani; 4,8 percentage points in Vhembe and 5,6 percentage points in Waterberg), except for Capricorn that had a decrease of 3,2 percentage points in the average marks for home language.

Figure 5.10: Average ANA percentage marks for first additional language for Grade 9, 2012–2013

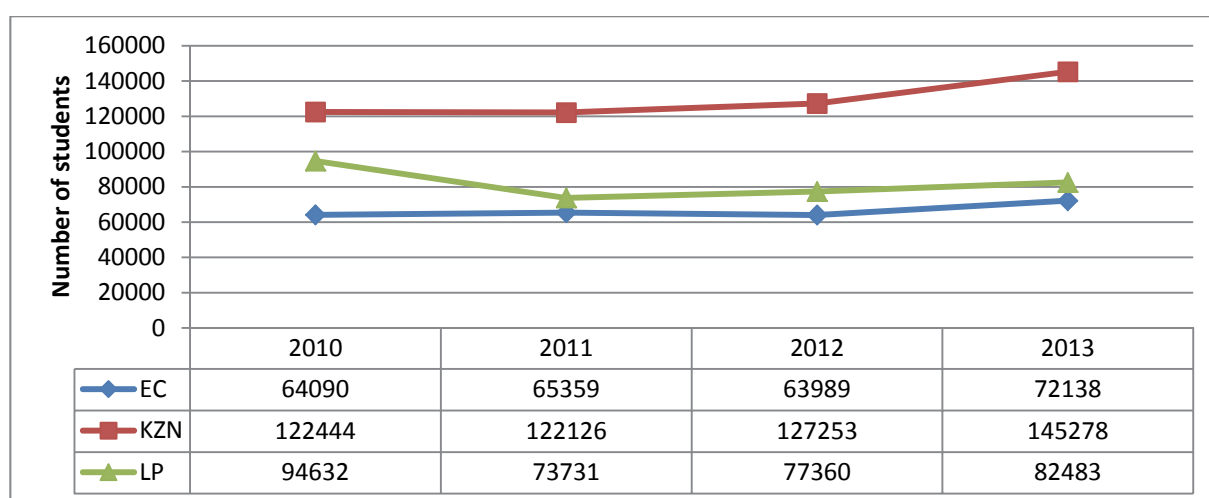


Source: ANA 2013 report

Figure 5.10 shows that the average marks for first additional language have dropped nationally, in Limpopo, and in certain districts of Limpopo. Nationwide, the average marks for first additional language for Grade 9 decreased from 34,6% to 33,2% in 2013. In Limpopo, the average marks for first additional language decreased slightly from 29,8% to 29,6% in 2013. Of all the five districts in Limpopo, Capricorn district managed to maintain the same average marks. Two districts (Greater Sekhukhune and Waterberg) had a decrease of less than 1% in the average marks for first additional language in Grade 9. The other two remaining districts (Mopani and Vhembe) had an improvement of 0,5% and 0,6% respectively in the average marks for first additional language for Grade 9 in 2013.

5.4 National senior certificate results

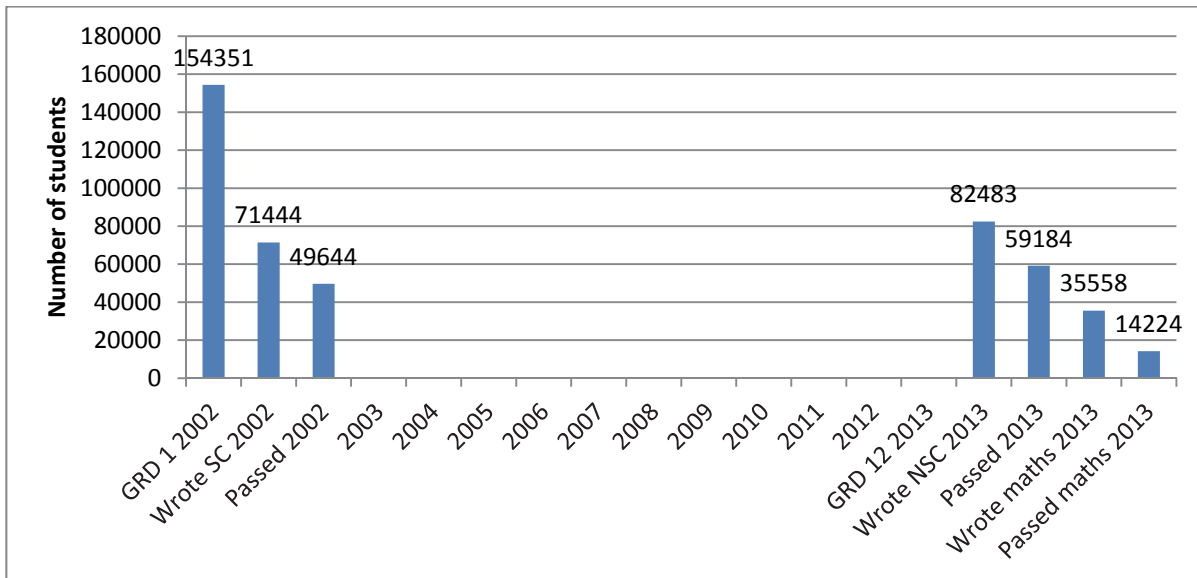
Figure 5.11: Number of learners who wrote the NSC exams for selected provinces, 2010–2013



Source: NSC technical report 2013

The number of learners that actually wrote the NSC exams between 2010 and 2013 for the three provinces with large rural populations is depicted in Figure 5.11. In 2013, all provinces registered a greater number of learners for the NSC exam writing when compared to the three previous years. In Eastern Cape, the number of learners increased by 1 269 between 2010 and 2011, decreased by 1 370 in 2012 and increased again by 8 149 in 2013. Between 2010 and 2011 the number of learners who wrote the NSC exams decreased by 318 in KwaZulu-Natal and from 94 632 to 73 731 in Limpopo province. From 2011 onwards there has been an increase in the number of learners who sat to write the exams. In the case of Limpopo, the annual increase was modest, but in KwaZulu-Natal the number of students registered to write the NSC increased significantly, especially between 2012 and 2013 (by 18 025 learners).

Figure 5.12: Progression from Grade 1 in 2002 to Grade 12 in 2013 in terms of the number of students and changes in number of students who passed NSC in 2002 and 2013



Source: NSC 2002 and 2013 technical reports

Figure 5.12 considers the number of students who were enrolled in Grade 1 in the province in 2002 and juxtaposes this against the number of students who sat to write the NSC exams 12 years later (2013). Even though some provincial boundary changes took place between 2002 and 2013 and many students repeated grades, only approximately 53,4% of the students who entered Grade 1 in 2002 and who could potentially have written the NSC in 2013 actually sat to write the exams, and only 38,3% of them passed those exams. Less than a quarter of the 2002 Grade 1 intake wrote the NSC mathematics exams (23,0%) and only 9,2% passed.

Map 5.1 shows the geographic distribution of NSC hot spots i.e. areas with high (red) and low (blue) NSC pass rates. It is evident that there is a high degree of clustering of good and poor pass rates in the province, with the best pass rates in Vhembe and the poorest in Polokwane, Mogalakwena, Sekhukhune and Riba cross.

Map 5.1: Hot and cold spot analysis for NSC pass rates in Limpopo for 2013

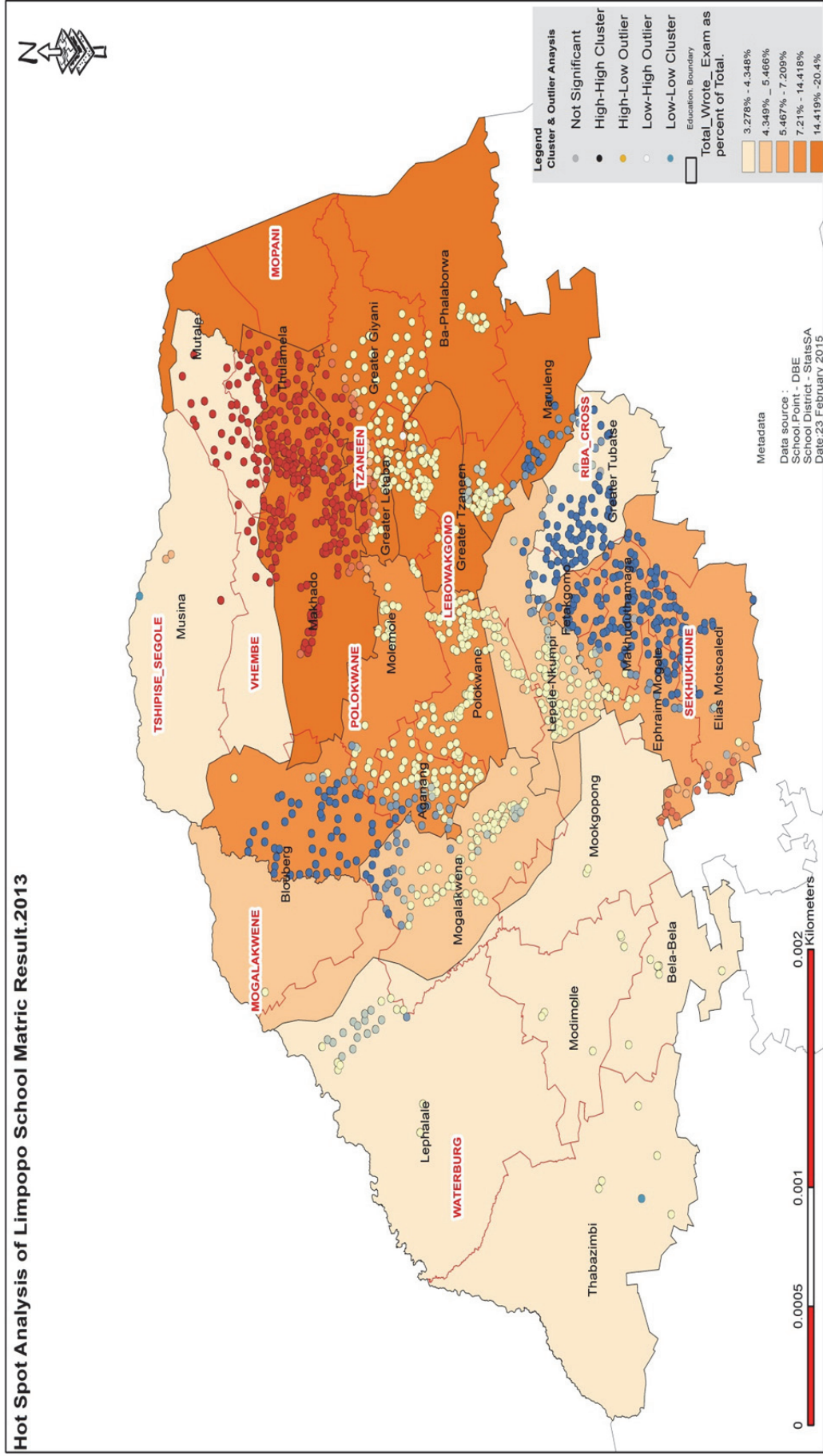
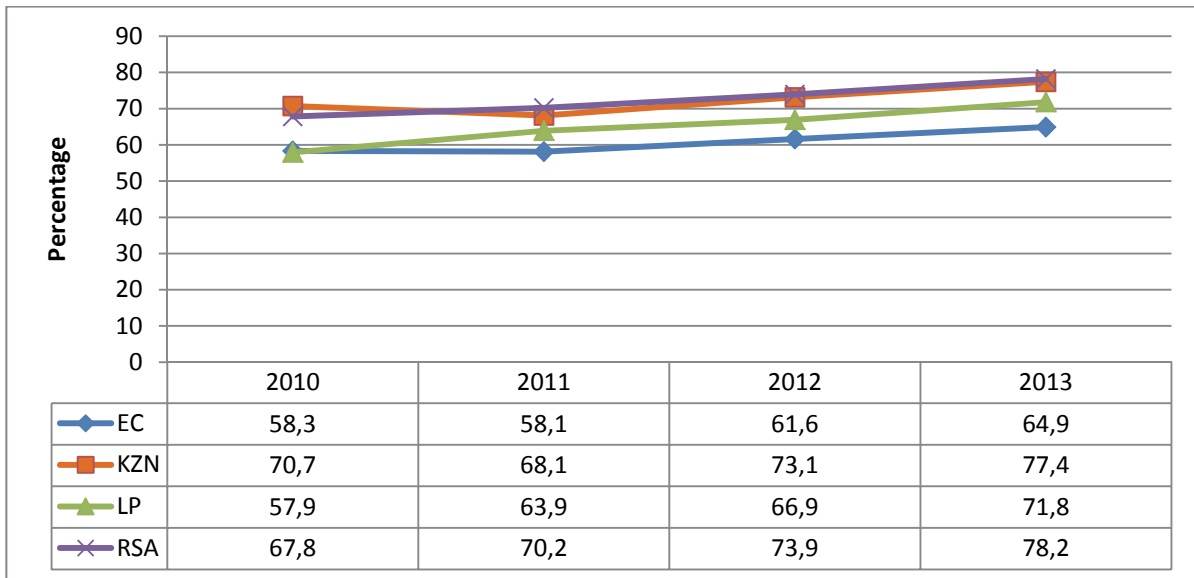


Figure 5.13: Percentage of learners who passed the NSC exams for selected provinces, 2010–2013



Source: NSC technical report 2013

Figure 5.13 depicts the percentage of learners who passed the NSC exams in three provinces from 2010 to 2013. For the past five years, the proportion of learners who passed the NSC exams increased significantly. Since 2010, the percentage of learners who passed the NSC exams nationwide increased with 10,4 percentage points from 67,8% to 78,2% in 2013. Between 2010 and 2013, the percentage of learners who passed the NSC exams increased by 6,6 percentage points in Eastern Cape, 6,7 percentage points in KwaZulu-Natal and 13,9 percentage points in Limpopo.

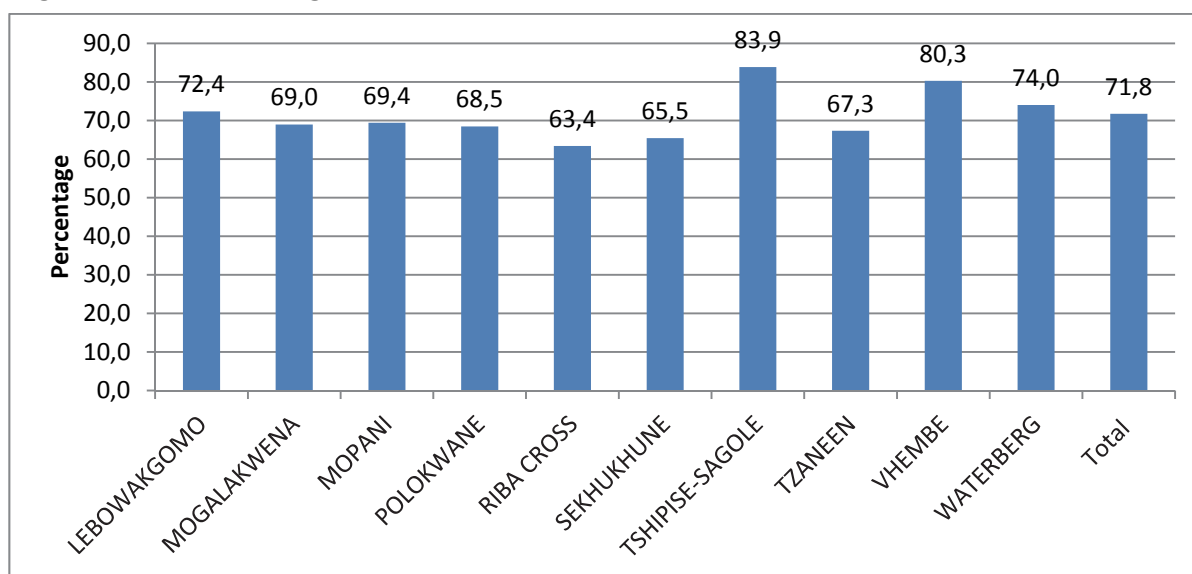
Table 5.4: NSC overall pass rates by district, 2013

District	Total Entered	Total Wrote	Total Achieved	Percentage
Unspecified district ¹⁷	3 498	3 416	2 773	81,2
Lebowakgomo	5 487	5 402	3 910	72,4
Mogalakwena	4 375	4 310	2 972	69,0
Mopani	11 044	10 909	7 574	69,4
Polokwane	16 398	16 195	11 089	68,5
Riba Cross	3 501	3 447	2 186	63,4
Sekhukhune	11 585	11 376	7 446	65,5
Tshipise–Sagole	2 991	2 974	2 494	83,9
Tzaneen	5 720	5 642	3 799	67,3
Vhembe	16 353	16 227	13 027	80,3
Waterberg	2 609	2 585	1 914	74,0
Limpopo	83 561	82 483	59 184	71,8

Source: NSC data 2013, own calculations

According to table 5.4 a total of 82 483 learners wrote the NSC in 2013. Slightly more than 7 out of ten learners who wrote passed the exam. The lowest overall pass rates were recorded for Riba Cross (63,4%), Sekhukhune (65,5%) and Tzaneen (67,3%).

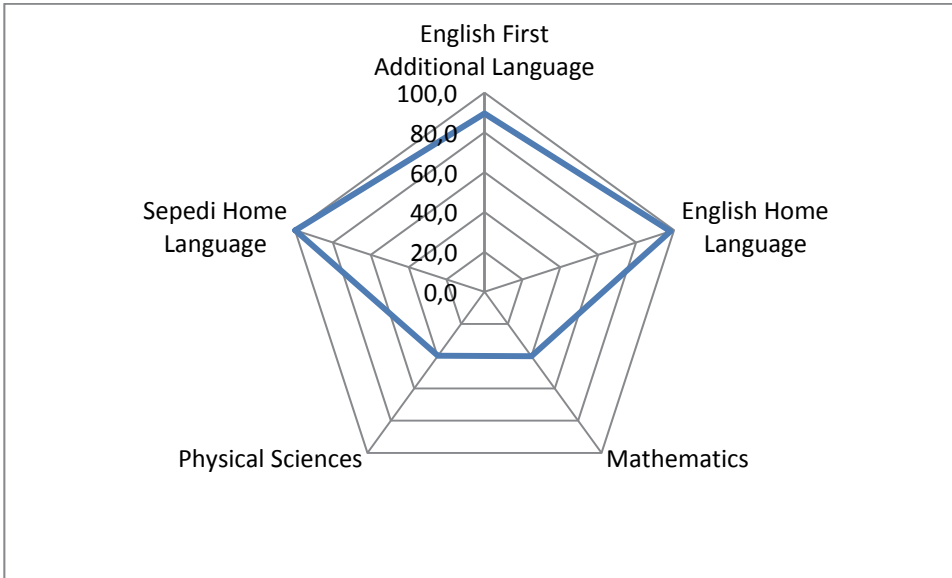
Figure 5.14: Percentage of learners who passed the NSC exams, per district, 2013



Source: NSC data 2013, own calculations

¹⁷ The new education districts were not yet linked to the exam centres at the time of the study. Those at secondary/combined schools could be positively linked to the new education districts.

Figure 5.15: Percentage of learners who passed the NSC exams for selected subjects, 2013



Source: NSC data 2013, own calculations

According to figure 5.15 Physical sciences and mathematics are the only two subjects of the core NSC subjects that have poor provincial pass rates. The 2013 pass rate for mathematics was 40% and for physical science 39,8%.

The districts with the poorest mathematics pass rates (see table 5.5) were:

- Mogalakwena (28,2%)
- Sekhukhune (34,7%)
- Riba Cross (34,9%)
- Lebowakgomo (37,0%)

Tshipise-Sagole (47,4% and 61,1%) and Vhembe (46,9% and 52,5%) were the best performing districts in mathematics and science respectively.

Table 5.5: NSC overall pass rates for specific subjects by district, 2013

District	Subject	Total number learners wrote	Total number achieved 40-100	Percentage of learners achieved
Unspecified district	English FAL	2 393	2 133	89,1
	Mathematics	1 725	894	51,8
	Physical Sciences	1 477	780	52,8
	Sepedi Home Language	918	907	98,8
Lebowa-Kgomo	English FAL	5 417	4 857	89,7
	Mathematics	2 442	904	37,0
	Physical Sciences	1 879	774	41,2
	Sepedi Home Language	5 421	5 413	99,9
Mogala-Kwena	English FAL	4 284	3 881	90,6
	Mathematics	2 049	578	28,2
	Physical Sciences	1 863	586	31,5
	Sepedi Home Language	4 185	4 166	99,6
Mopani	English FAL	10 906	9 701	89,0
	Mathematics	3 468	1 357	39,1
	Physical Sciences	3 331	1 185	35,6
	Sepedi Home Language	5 470	5 458	99,8
Polokwane	English FAL	15 963	14 367	90,0
	Mathematics	7 257	2 720	37,5
	Physical Sciences	6 542	2 224	34,0
	Sepedi Home Language	15 500	15 482	99,9
Riba Cross	English FAL	3 453	2 814	81,5
	Mathematics	1 295	452	34,9
	Physical Sciences	1 333	403	30,2
	Sepedi Home Language	3 452	3 448	99,9
Sekhukhune	English FAL	11 334	9 876	87,1
	Mathematics	5 059	1 755	34,7
	Physical Sciences	4 641	1 616	34,8
	Sepedi Home Language	10 463	10 460	100,0
Tshipise-Sagole	English FAL	2 935	2 660	90,6
	Mathematics	1 457	690	47,4
	Physical Sciences	971	593	61,1
	Sepedi Home Language	43	43	100,0
Tzaneen	English FAL	5 563	4 937	88,8
	Mathematics	1764	708	40,1
	Physical Sciences	1831	618	33,8
	Sepedi Home Language	3648	3643	99,9
Vhembe	English FAL	16146	14807	91,7
	Mathematics	7979	3739	46,9
	Physical Sciences	5973	3133	52,5
	Sepedi Home Language	16	16	100,0
Waterberg	English FAL	2342	2221	94,8
	Mathematics	1063	427	40,2
	Physical Sciences	917	321	35,0
	Sepedi Home Language	1377	1372	99,6

Source: NSC data 2013, own calculations

Note: Some exam centers could not be positively linked to the new education districts and appear in the table as unspecified districts.

The study also investigated the correlation between the NSC overall pass rates of secondary and combined schools and some of the characteristics of the primary schools that could be considered feeder schools for these secondary schools by virtue of being in the same wards. The findings per districts for the overall results are summarised in Table 5.6 and the findings for selected subjects in Table 5.6. Based on the correlation coefficients, no clear patterns can be distinguished at district level in relation to primary feeder schools. However, in the province as a whole the mean number of years' experience of the school manager, the mean number of facilities at the feeder schools, the percentage of school managers that are female, the quintile of the secondary school as well as the size of the secondary school, are all positively statistically significantly correlated (at a 95% confidence level) with higher pass rates. The mean classroom learner ratio and number of facilities and services, the school quintile as well as the number of Grade 12s who wrote Grade 12 in the secondary school associated with the primary feeder schools are all statically significantly related to good performance in English FAL, mathematics and physical science.

Table 5.6: Correlation between NSC overall pass rates¹⁸ of secondary and combined schools and the means of selected characteristics of the primary schools and their managers in the same ward (feeder schools) by district, 2013

District	Mean learner-educator ratio of school	Mean learner-classroom ratio of schools in ward	Mean number of years school managers in position	Mean number of facilities at schools in ward*	Female school manager ratio for the ward	School Quintile	Total number who wrote NSC in school
Lebowakgomo	-0,05010	0,02891	-0,01329	0,07488	-0,06957	-0,02944	0,05573
	0,6170	0,7730	0,8945	0,4545	0,4872	0,7689	0,5780
	102	102	102	102	102	102	102
Mogalakwena	0,00378	0,10400	0,14287	0,04816	0,12130	0,16327	0,03420
	0,9699	0,2982	0,1520	0,6308	0,2246	0,1011	0,7329
	102	102	102	102	102	102	102
Mopani	0,02838	0,14193	0,02214	0,08207	0,01676	0,01859	0,08391
	0,7158	0,0673	0,7764	0,2917	0,8298	0,8110	0,2795
	167	167	167	167	167	168	168
Polokwane	0,04772	0,09496	-0,15324	0,14206	0,18841	0,27405	0,21049
	0,4507	0,1327	0,0149	0,0241	0,0027	<,0001	0,0007
	252	252	252	252	252	254	254
Riba Cross	-0,09816	0,10556	0,02515	-0,02202	-0,06333	0,02932	-0,05521
	0,3573	0,3221	0,8140	0,8368	0,5532	0,7826	0,6032
	90	90	90	90	90	91	91
Sekhukhune	0,04445	0,08752	0,03145	0,14026	0,07232	0,22046	0,15313
	0,4996	0,1831	0,6329	0,0323	0,2716	0,0007	0,0191
	233	233	233	233	233	234	234
Tshipise-Sagole	0,28219	0,16752	-0,06403	-0,01942	0,16937	0,07293	-0,09528
	0,0406	0,2305	0,6488	0,8902	0,2253	0,6002	0,4931
	53	53	53	53	53	54	54
Tzaneen	-0,09175	-0,06300	-0,09662	-0,08495	-0,14964	0,29602	0,05622
	0,4534	0,6071	0,4262	0,4844	0,2163	0,0128	0,6439
	69	69	70	70	70	70	70

¹⁸ The NSC results per exam center were used for this analysis. It is important to note that not all exam centers are at secondary/combined schools and not all secondary/combined schools are exam centers. The analysis was only based on the results that could be directly linked to secondary/combined schools.

District	Mean learner-educator ratio of school	Mean learner-classroom ratio of schools in ward	Mean number of years school managers in position	Mean number of facilities at schools in ward*	Female school manager ratio for the ward	School Quintile	Total number who wrote NSC in school
Vhembe	-0,05595	-0,08619	-0,01842	-0,09748	0,10573	0,14090	0,19563
	0,4005	0,1947	0,7820	0,1423	0,1114	0,0335	0,0030
	228	228	228	228	228	228	228
Waterberg	-0,08608	-0,16719	0,08980	0,28248	0,12290	0,33183	0,28349
	0,5522	0,2458	0,5351	0,0469	0,3952	0,0186	0,0460
	50	50	50	50	50	50	50
Limpopo	0,01651	0,03708	0,05852	0,06265	0,05724	0,20687	0,13935
	0,5451	0,1739	0,0318	0,0215	0,0357	<,0001	<,0001
	1 346	1 346	1 347	1 347	1 347	1 353	1 353

Source: NSC 2013, LLECS 2013

*Facilities and services included are: computer laboratory, access to internet, library, administrative block, nutrition programme, transport programme, fencing, access to piped water, electricity, toilets.

In the case of Sepedi home language, the NSC outcomes were statistically significantly correlated with higher ratios of female school managers and the school quintiles whilst no relationships were found between performance in English home language and the indicators tested.

Table 5.7: Correlation between NSC outcomes for secondary and combined schools for selected subjects and the means of selected characteristics of the primary schools and their managers in the same ward (feeder schools), 2013

Subject	Mean learner-educator ratio of school	Mean learner-classroom ratio of schools in ward	Mean number of years school managers in position	Mean number of facilities at schools in ward	School manager gender ratio for the ward *	School Quintile	Total number who wrote NSC in school
English FAL	0,01074	0,09414	-0,00576	0,18979	0,06456	0,06154	0,14399
	0,6936	0,0005	0,8323	<,0001	0,0176	0,0212	<,0001
	1348	1344	1352	1352	1352	1401	1401
English HL	-0,13686	-0,02660	0,03412	-0,14604	0,15696	-0,20267	0,14824
	0,5142	0,8996	0,8714	0,4861	0,4537	0,1341	0,2756
	25	25	25	25	25	56	56
Mathematics	-0,02205	0,09919	0,01565	0,14263	-0,05495	0,07303	0,15262
	0,4324	0,0004	0,5768	<,0001	0,0499	0,0077	<,0001
	1270	1266	1274	1274	1274	1331	1331
Physical Science	-0,04208	0,05778	0,01598	0,12449	-0,00199	0,05790	0,14371
	0,1441	0,0451	0,5787	<,0001	0,9449	0,0395	<,0001
	1206	1203	1210	1210	1210	1265	1265
Sepedi HL	-0,00937	-0,00512	0,01696	0,00455	-0,06529	-0,08784	-0,01702
	0,7723	0,8747	0,5996	0,8881	0,0431	0,0057	0,5930
	956	952	960	960	960	988	988

Source: NSC 2013, LLECS 2013

*Facilities and services included are: computer laboratory, access to internet, library, administrative block, nutrition programme, transport programme, fencing, access to piped water, electricity, toilets.

Table 5.8: Correlation between general NSC outcomes (pass rate) ¹⁹ and selected characteristics of the schools and their managers, by education district of secondary and combined schools, by district, 2013

District	Number of years manager in position	Learner-educator ratio of school	Learner-classroom ratio of school	Mean number of facilities at school	Quintile of school	Total number who wrote NSC
Lebowakgomo	0,28171	0,11924	0,24292	0,25235	-0,02944	0,05573
	0,0041	0,2472	0,0159	0,0105	0,7689	0,5780
	102	96	98	102	102	102
Mogalakwena	-0,00881	0,03321	0,17426	0,23098	0,16327	0,03420
	0,9300	0,7442	0,0845	0,0195	0,1011	0,7329
	102	99	99	102	102	102
Mopani	0,22251	0,05934	0,13793	0,13389	0,01859	0,08391
	0,0037	0,4504	0,0773	0,0836	0,8110	0,2795
	168	164	165	168	168	168
Polokwane	0,00339	0,06024	0,10787	0,22306	0,27405	0,21049
	0,9571	0,3498	0,0934	0,0003	<,0001	0,0007
	253	243	243	254	254	254
Riba Cross	0,04356	-0,26164	0,07669	-0,10415	0,02932	-0,05521
	0,6818	0,0144	0,4907	0,3258	0,7826	0,6032
	91	87	83	91	91	91
Sekhukhune	0,04929	-0,05961	0,21923	0,19107	0,22046	0,15313
	0,4530	0,3811	0,0012	0,0033	0,0007	0,0191
	234	218	214	234	234	234
Tshipise-Sagole	-0,04012	-0,11346	-0,13860	-0,07457	0,07293	-0,09528
	0,7733	0,4279	0,3271	0,5920	0,6002	0,4931
	54	51	52	54	54	54
Tzaneen	0,10105	-0,02297	-0,14432	0,15616	0,29602	0,05622
	0,4052	0,8514	0,2333	0,1967	0,0128	0,6439
	70	69	70	70	70	70
Vhembe	-0,03015	-0,05674	0,03598	0,20398	0,12688	0,19284
	0,6506	0,3980	0,5931	0,0019	0,0552	0,0034
	228	224	223	229	229	229
Waterberg	-0,05869	-0,40397	-0,10695	0,34184	0,33183	0,28349
	0,6856	0,0040	0,4645	0,0151	0,0186	0,0460
	50	49	49	50	50	50
Limpopo	0,07283	-0,03348	0,12459	0,18590	0,08389	0,13813
	0,0074	0,2276	<,0001	<,0001	0,0020	<,0001
	1 353	1 301	1 297	1 355	1 355	1 355

Source: NSC 2013, LLECS 2013

*Facilities and services included are: computer laboratory, access to internet, library, administrative block, nutrition programme, transport programme, fencing, access to piped water, electricity, toilets.

¹⁹ The NSC results per exam center were used for this analysis. It is important to note that not all exam centers are at secondary/combined schools and not all secondary/combined schools are exam centers. The analysis was only based on the exam centers that could be directly linked to secondary/combined schools. It should therefore be noted that some of the learners reflected at a specific exam center may not have attended school at that specific center.

Tables 5.8 and 5.9 also compare the same variables with NSC outcomes. However, instead of looking at the primary feeder schools, it only considers the secondary schools for which results were available. It was found that the classroom–learner ratio has a statistically significant positive correlation with NCS pass rates in Lebowakgomo, Mogalakwena, Mopani, Polokwane and Sekhukhune. In all these cases, the more learners per class the higher the pass rates are. The mean number of facilities are positively correlated with NSC pass rates in Lebowakgomo, Mogalakwena, Mopani, Polokwane, Sekhukhune, Vhembe and Waterberg, whilst the school quintile played a significant role in Polokwane, Sekhukhune, Tzaneen, Vhembe and Waterberg. When the province as a whole is considered, the number of years of experience of the school manager, the mean number of facilities at the school, the school quintile as well as the number of students who wrote NSC all had a statistically positive relationship with NSC outcomes. The learner–educator ratio had a statistically significantly negative relationship with NSC pass rates in that smaller learner–educator ratios in secondary schools were associated with higher pass rates.

In relation to specific subjects, statistically significant positive relationships were found between English FAL, NSC mathematics and physical sciences outcomes and learner classroom ratios, mean number of facilities at the school, quintile of the school and the total number who wrote matric. No significant patterns emerged for English and Sepedi home language, except for the school quintile in the case of the latter.

Table 5.9: Correlation between NSC outcomes for specific subjects and selected characteristics of secondary and combined schools and their managers, 2013

Subject	Number of years manager in position	Learner–educator ratio of school	Learner–classroom ratio of school	Mean number of facilities at school *	Quintile of school	Total number who wrote NSC
English FAL	0,01436	0,00777	0,11619	0,18565	0,06154	0,14399
	0,5978	0,7797	<,0001	<,0001	0,0212	<,0001
	1352	1300	1296	1354	1401	1401
English HL	-0,05555	-0,37100	0,01841	0,05810	-0,20267	0,14824
	0,7920	0,0743	0,9320	0,7827	0,1341	0,2756
	25	24	24	25	56	56
Mathematics	-0,00218	0,00171	0,16820	0,15489	0,07303	0,15262
	0,9381	0,9523	<,0001	<,0001	0,0077	<,0001
	1274	1229	1224	1276	1331	1331
Physical Sciences	0,03488	-0,00640	0,12282	0,15790	0,05790	0,14371
	0,2254	0,8274	<,0001	<,0001	0,0395	<,0001
	1210	1165	1161	1212	1265	1265
Sepedi HL	0,03820	-0,01370	-0,01414	0,03339	-0,08784	-0,01702
	0,2371	0,6783	0,6694	0,3012	0,0057	0,5930
	960	919	914	961	988	988

Source: NSC 2013, LLECS 2013

*Facilities and services included are: computer laboratory, access to internet, library, administrative block, nutrition programme, transport programme, fencing, access to piped water, electricity, toilets.

5.5 Summary

This chapter focused on the educational achievements of the population of Limpopo between 2002 and 2013, primarily using GHS, ANA, NSC and LECS data.

General education attainment

Firstly, the chapter looked at the general educational achievement of the Limpopo population, which was analysed by looking at the proportion of the population aged 20 years and older with no formal education, the proportion of adults who are literate and the highest educational level achieved by those aged 20 years and older. The chapter found that the majority of the population completed at least some secondary school and that there have been significant improvements in both primary and secondary school completion rates between 2002 and 2013. However, Limpopo had the lowest adult literacy rates (88%) when compared to the two other provinces with similarly high rural populations (KwaZulu-Natal and Eastern Cape) and the country as a whole.

ANA results

An analysis of the Annual National Assessment (ANA) results for the province indicate that achievement in mathematics (45,5%) and home language (46,9%) for Grade 3 pupils improved between 2012 and 2013, but was lower than the national average. Achievement at Grade 6 level in 2013 was also well below the national average for all subjects, although there was significant improvement between 2012 and 2013. Districts with the lowest mathematics scores were Greater Sekhukhune (27,3%), Waterberg (31,9%) and Capricorn (32,9%). The poorest performance in home language was found in Greater Sekhukhune (46,0%) and Capricorn (49,5%). Based on the age per grade findings reported on in the previous chapter, Grade 9 is a watershed year both in terms of repeating rates and gender parity rates for the FET grades that follow. In Grade 9 the ANA achievement gap between Limpopo and national averages for home language as well as FAL increases. The average mathematics marks was 9% in 2013 for learners in Limpopo, with the poorest marks found in Greater Sekhukhune (7,8%) and Mopani (8,5%). The average achievement for home language and FAL were 33,7% and 29,6% respectively.

National Senior Certificate (NSC)

The final section of the chapter investigates the NSC pass rates and the correlation between the NSC pass rates and the characteristics of the primary schools that are in the same wards as the secondary schools where the NSC exams were written. It was found that (when compared to the other three provinces with large rural populations) the percentage of learners who passed the NSC exams increased more in Limpopo than in the other provinces (by 13,9 percentage points). However, these findings are tempered by the fact that the actual number of learners who wrote the exams in Limpopo declined significantly between 2010 and 2011 and increased marginally until 2013, whilst a province such as KwaZulu-Natal experienced progressive and significant increases in the percentage of learners who sat to write the exam and at the same time achieving higher overall pass rates, with rates similar to that of the country as a whole.

The characteristics of primary schools in the same wards as secondary schools, such or example as the mean number of years of experience of the school manager, the mean number of facilities at the feeder schools, the percentage school managers that are female, the quintile of the secondary school as well as the size of the secondary school, are all positively statistically

significantly correlated (at a 95% confidence level) with higher pass rates. The mean classroom–learner ratio and number of facilities and services, the school quintile as well as the number of Grade 12s who wrote Grade 12 in the secondary school associated with the primary feeder schools are all statically significantly related to good performance in English FAL, mathematics and physical science.

In terms of the secondary schools themselves, the number of years' experience of the school manager, the learner classroom ratios, the mean number of facilities at the school, the school quintile as well as the number of students who wrote NSC all had a statistically positive relationship with NSC outcomes. The fact that higher learner–classroom ratios were associated with better NSC performance appears counter intuitive. However, it is possible that larger schools not only attract better teachers, but also more learners that are likely to succeed. Relative to Grades 9-11 learner classroom ratios, the ratios for the final school year tend to be lower across the province given the high failure rates in Grades 10 and 11.

Chapter 6: Learning environment

6.1 Introduction

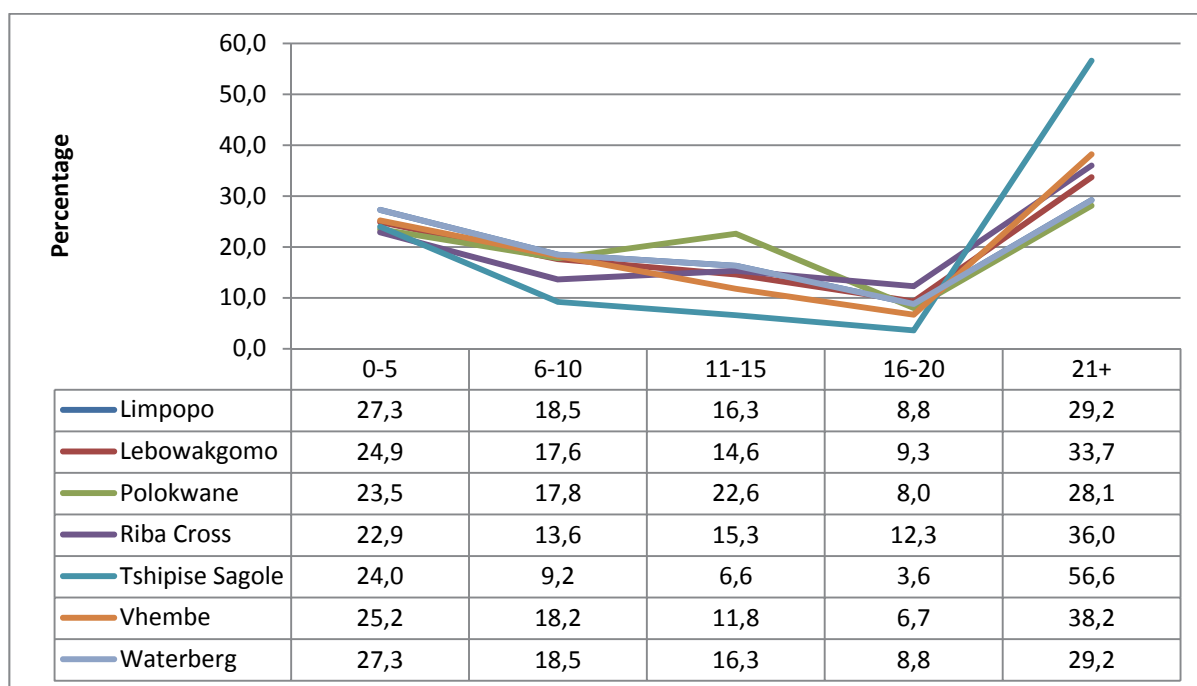
Hess and Kelly (2005) compared school managers with ‘small business executives’ who are responsible for increasing the effectiveness and efficiency with which the schools are managed. Bush (2007) argues that the quality and effectiveness of educational leadership and management has a significant influence on the outcomes, results and performance of schools and their learners. The impact of educators and the general learning environment on school outcomes has also been well documented.

This section explores the demographic characteristics and level of education of Limpopo school managers and teachers, access to workbooks and exposure to violence as well as access to general facilities and services at schools. The final section covers the development and findings of a learning environment index.

6.2 General profile of school managers in Limpopo

Approximately a third of school managers in Limpopo are female (31,2%). The districts with the highest female manager ratios are Lebowakgomo (39,8%), Waterberg (38,8%), Mogalakwena (35,8%) and Mopani (34,8%). Most school managers are black African and the only district where more than 10% of the managers are from another population group is Waterberg, with 14,0% white school managers. The employment status of most school managers is permanent (90,8%). Mogalakwena (35,8%) and Mopani (34,8%) had the highest proportions of temporary managers with 10,2% and 11,9% respectively.

Figure 6.1: Distribution of the number of years of experience of managers for Limpopo and the districts with the highest proportions of managers with 20 years or more experience, 2013



Source: LLECS, school manager data 2013

Table 6.1: Selected characteristics of school managers, 2013

District	Statistics	Sex		Population group						Employment status				Number of years' experience				
		Male	Female	African	Coloured	Indian	White	Other	Permanent	Temporary	Substitute	Other	0-5	6-10	11-15	16-20	21+	
Lebowakgomo	Frequency	148	98	245	0	1	1	0	215	25	3	2	51	36	30	19	69	
	District %	60,2	39,8	99,2	0,0	0,4	0,4	0,0	87,8	10,2	1,2	0,8	24,9	17,6	14,6	9,3	33,7	
Mogalakwena	Frequency	174	97	262	0	2	6	1	229	32	2	7	81	55	39	18	54	
	District %	64,2	35,8	96,7	0,0	0,7	2,2	0,4	84,8	11,9	0,7	2,6	32,8	22,3	15,8	7,3	21,9	
Mopani	Frequency	307	164	457	2	3	9	0	418	25	9	9	146	99	80	36	84	
	District %	65,2	34,8	97,0	0,4	0,6	1,9	0,0	90,7	5,4	2,0	2,0	32,8	22,3	18,0	8,1	18,9	
Polokwane	Frequency	457	209	650	1	0	14	2	620	38	2	6	140	106	135	48	168	
	District %	68,6	31,4	97,5	0,2	0,0	2,1	0,3	93,1	5,7	0,3	0,9	23,5	17,8	22,6	8,0	28,1	
Riba Cross	Frequency	186	66	247	0	1	2	0	223	16	4	2	54	32	36	29	85	
	District %	73,8	26,2	98,8	0,0	0,4	0,8	0,0	91,0	6,5	1,6	0,8	22,9	13,6	15,3	12,3	36,0	
Sekhukhune	Frequency	475	178	637	0	2	7	8	585	39	7	17	172	123	106	67	126	
	District %	72,7	27,3	97,4	0,0	0,3	1,1	1,2	90,3	6,0	1,1	2,6	29,0	20,7	17,9	11,3	21,2	
Tshipise-Sagole	Frequency	163	55	214	0	0	4	0	202	12	1	0	47	18	13	7	111	
	District %	74,8	25,2	98,2	0,0	0,0	1,8	0,0	94,0	5,6	0,5	0,0	24,0	9,2	6,6	3,6	56,6	
Tzaneen	Frequency	147	69	211	0	0	6	0	193	17	1	2	56	38	39	24	46	
	District %	68,1	31,9	97,2	0,0	0,0	2,8	0,0	90,6	8,0	0,5	0,9	27,6	18,7	19,2	11,8	22,7	
Vhembe	Frequency	523	215	727	1	1	5	2	677	43	6	9	166	120	78	44	252	
	District %	70,9	29,1	98,8	0,1	0,1	0,7	0,3	92,1	5,9	0,8	1,2	25,2	18,2	11,8	6,7	38,2	
Waterberg	Frequency	104	66	142	1	2	24	2	150	10	5	3	51	25	23	18	38	
	District %	61,2	38,8	83,0	0,6	1,2	14,0	1,2	89,3	6,0	3,0	1,8	32,9	16,1	14,8	11,6	24,5	
Special schools	Frequency	8	6	13	0	0	1	0	12	2	0	0	6	3	1	1	2	
	Frequency	2 692	1 223	3 805	5	12	79	15	3 524	259	40	57	970	655	580	311	1 035	
Limpopo	Provincial %	68,8	31,2	97,2	0,1	0,3	2,0	0,4	90,8	6,7	1,0	1,5	27,3	18,5	16,3	8,8	29,2	

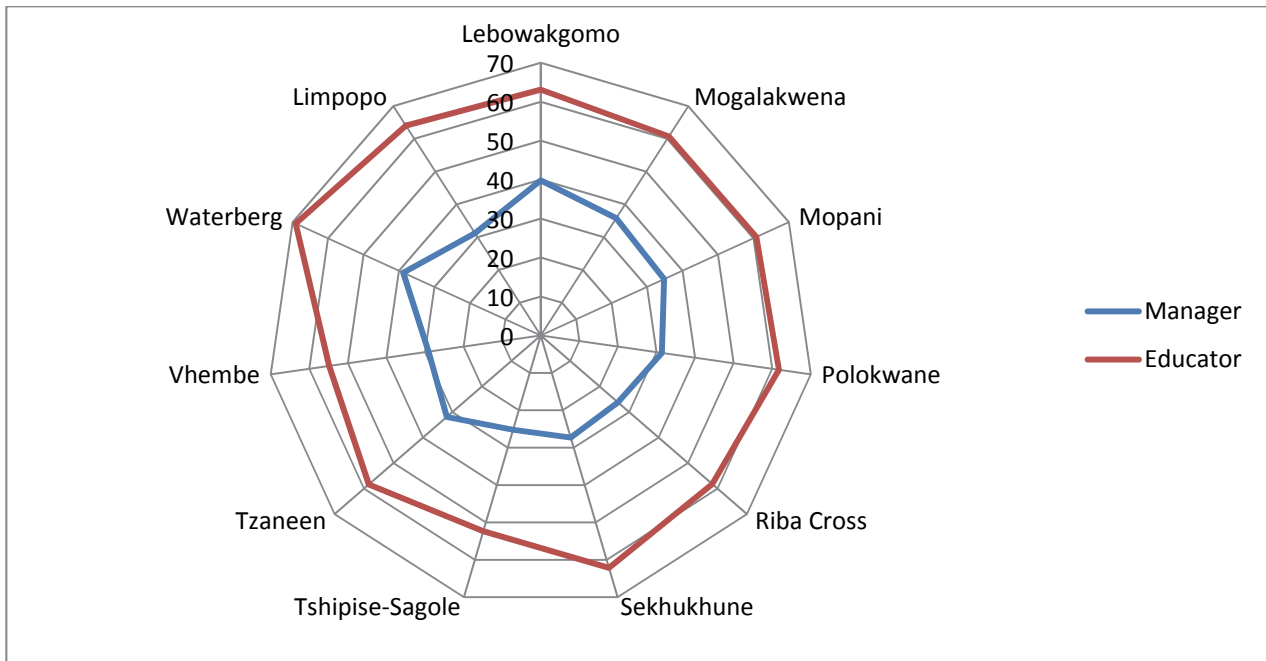
Source: LLECS, school manager data 2013

Slightly more than a quarter (27,3%) of school managers in the province have 5 or less years of experience, whilst a further 29,2% have more than 20 years of experience. Districts with the highest proportions of school managers with less than 5 years of experience include: Mogalakwena, Mopani and Waterberg, all with a third of their managers with 5 or less years of experience and Sekhukhune with 29,0%. Tshipise–Sagole has an exceptionally high proportion of managers with more than 20 years of experience (56,6%), followed by Vhembe (38,25) and Lebowakgomo (33,7%).

6.3 Teaching and teachers

Most of the teachers (96,6%) in the province are black African (Table 6.2). The only education district where there are significant proportions of teachers from other population groups is Waterberg where 17,2% of the teachers are white. Approximately a third of the teachers (32,5%) in the province have 10 or less years’ experience. The educational districts with proportions of younger teachers, with 10 years of less experience, that are higher than the provincial average are: Waterberg (44,5%), Mopani (38,3%), Tzaneen (37,1%) and Riba Cross (35,6%).

Figure 6.2: Percentage of managers and educators who are female, Limpopo, 2013



Source: LLECS, school manager and educator data 2013

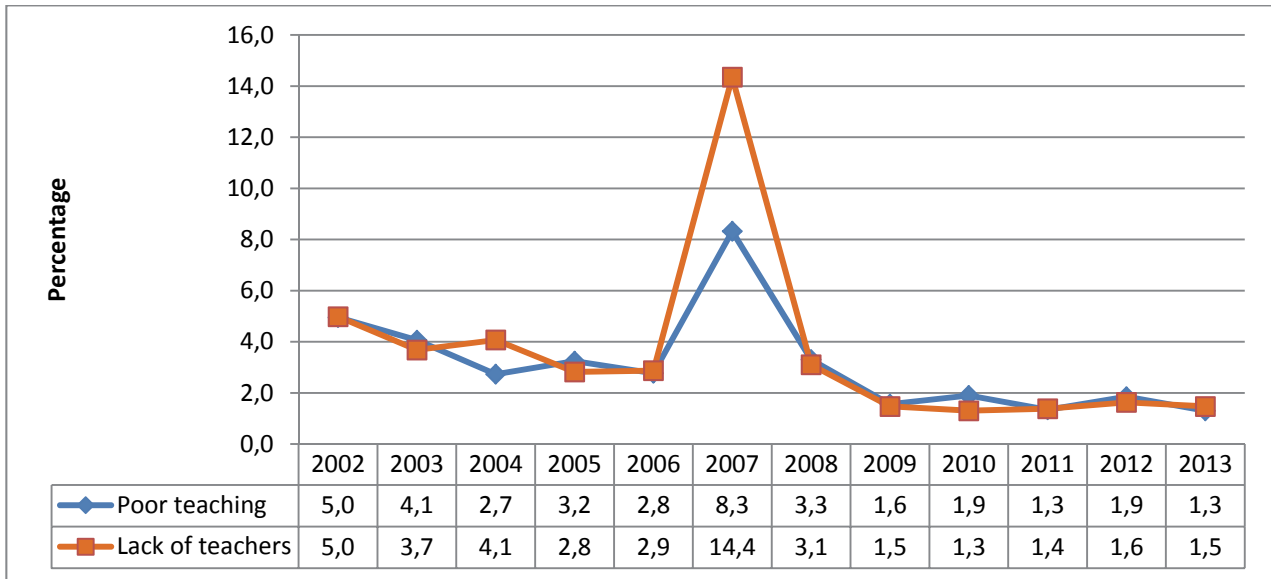
In contrast to the school managers, who are predominantly male, six out of ten educators (59,9%) in the province are female. According to Figure 6.2, only Waterberg and Lebowakgomo have significant percentages of female school managers, whereas Tshipise–Sagole (52,3% female), Vhembe (54,9% female) and Tzaneen (58,4% female) are the closest to achieving teacher gender parity.

Table 6.2: Selected characteristics of school educators, 2013

District	Statistics	Sex		Population group						Employment status				Number of years' experience				
		Male	Female	African	Coloured	Indian	White	Other	Permanent	Temporary	Substitute	Other	0-5	6-10	11-15	16-20	21+	
Lebowakgomo	Frequency	896	1 532	2 418	1	4	3	1	2 268	105	22	22	235	384	78	414	1 206	
	District %	36,9	63,1	99,6	0,0	0,2	0,1	0,0	93,8	4,3	0,9	0,9	10,1	16,6	3,4	17,9	52,1	
Mogalakwena	Frequency	1 090	1 688	2 683	2	2	91	1	2 566	165	21	25	304	406	69	456	1 441	
	District %	39,2	60,8	96,6	0,1	0,1	3,3	0,0	92,4	5,9	0,8	0,9	11,4	15,2	2,6	17,0	53,9	
Mopani	Frequency	2 717	4 219	6 779	0	10	133	3	6 554	262	14	33	1 270	1 285	252	1 428	2 434	
	District %	39,2	60,8	97,9	0,0	0,1	1,9	0,0	95,5	3,8	0,2	0,5	19,0	19,3	3,8	21,4	36,5	
Polokwane	Frequency	2 601	4 196	6 459	16	17	291	0	6 249	367	62	85	868	1 168	241	1 109	3 142	
	District %	38,3	61,7	95,2	0,2	0,3	4,3	0,0	92,4	5,4	0,9	1,3	13,3	17,9	3,7	17,0	48,1	
Riba Cross	Frequency	883	1 231	2 101	1	9	9	0	1 947	126	24	13	349	366	54	318	923	
	District %	41,8	58,2	99,1	0,1	0,4	0,4	0,0	92,3	6,0	1,1	0,6	17,4	18,2	2,7	15,8	45,9	
Sekhukhune	Frequency	2 477	4 066	6 389	8	21	101	2	5 904	496	50	22	986	984	336	1 153	2 766	
	District %	37,9	62,1	98,0	0,1	0,3	1,6	0,0	91,2	7,7	0,8	0,3	15,8	15,8	5,4	18,5	44,4	
Tshipise-Sagole	Frequency	866	951	1 789	0	0	30	1	1 703	74	17	18	279	270	16	225	948	
	District %	47,7	52,3	98,3	0,0	0,0	1,7	0,1	94,0	4,1	0,9	1,0	16,1	15,5	0,9	13,0	54,6	
Tzaneen	Frequency	1 265	1 773	2 883	4	6	147	0	2 858	124	7	26	550	545	125	603	1 127	
	District %	41,6	58,4	94,8	0,1	0,2	4,8	0,0	94,8	4,1	0,2	0,9	18,6	18,5	4,2	20,4	38,2	
Vhembe	Frequency	3 750	4 558	8 163	2	4	124	3	7 866	304	51	69	1 030	1 196	159	1 455	4 211	
	District %	45,1	54,9	98,4	0,0	0,1	1,5	0,0	94,9	3,7	0,6	0,8	12,8	14,9	2,0	18,1	52,3	
Waterberg	Frequency	677	1 516	1 793	7	8	375	4	1 877	205	18	81	485	427	93	342	703	
	District %	30,9	69,1	82,0	0,3	0,4	17,2	0,2	86,1	9,4	0,8	3,7	23,7	20,8	4,5	16,7	34,3	
Unspecified schools	Frequency																	
Limpopo	Frequency	17 222	25 730	41 457	41	81	1 304	15	39 792	2 228	286	394	6 356	7 031	1 423	7 503	18 901	
	Provincial %	40,1	59,9	96,6	0,1	0,2	3,0	0,0	93,2	5,2	0,7	0,9	15,4	17,1	3,5	18,2	45,9	

Source: LLECS, school educator data 2013

Figure 6.3: Percentage of learners attending school who indicated that poor teaching or a lack of teachers was a problem they experienced during the 12 months preceding the survey, 2002–2013

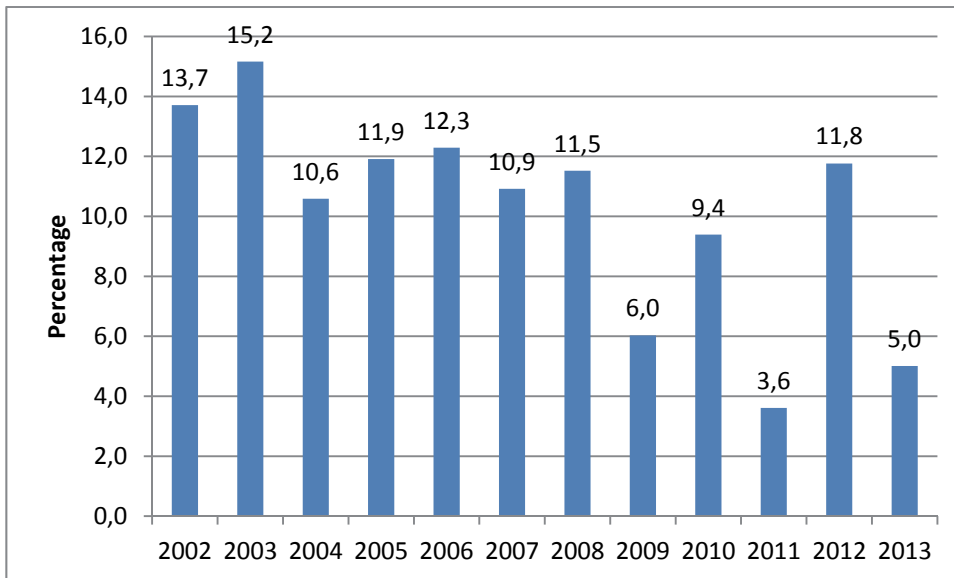


Source: General Household Survey 2002–2013

With the exception of 2007, when there was a general teacher strike in the country, less than 2% of learners consider poor teaching or a lack of teachers as an educational problem in the province.

6.4 Access to workbooks

Figure 6.4: Percentage of learners attending school who indicated that a lack of books was a problem they experienced during the past 12 months, Limpopo, 2002–2013



Source: General Household Survey 2002–2013

One of the questions asked in the General Household Survey is about the general problems that learners experience and one of the options in this question is to access to books. The findings of this question, as it relates to access to books between 2002 and 2013, is summarised in the graph above. It shows that since 2008, with the exception of 2012, there have generally been fewer problems than in the preceding years with access to books.

Table 6.3: Percentage of persons aged 5 years and older attending Grade 1–9 in a public school who had access to workbooks by province, 2013

Province	Percentage access to workbooks				
	All his/her subject	Most of his/her subjects	Some of his/her subjects	None of his/her subjects	Do not know
Western Cape	85,2	4,6	5,3	4,5	0,3
Eastern Cape	90,0	6,7	2,7	0,7	0,0
Northern Cape	91,4	5,2	2,3	1,0	0,2
Free State	95,3	2,1	1,5	0,6	0,5
KwaZulu-Natal	69,1	23,5	5,3	2,0	0,1
North West	82,1	11,0	5,3	1,3	0,3
Gauteng	90,3	5,9	2,7	0,9	0,2
Mpumalanga	80,0	13,8	5,7	0,5	0,0
Limpopo	89,5	6,6	2,1	1,7	0,1
RSA	83,6	10,9	3,8	1,5	0,1

Source: General Household Survey, 2013

An additional question was added to the GHS questionnaire in 2013 specifically directed at finding out whether workbooks and textbooks were available for specific grades. The findings of this study are summarised in Tables 6.3 and 6.4. For Grades 1–9 the recipient status of Limpopo (89,5%) was well above the national average of 83,6% and that of KwaZulu-Natal (69,1%), where the most problems were experienced for these particular grades.

Table 6.4: Percentage of persons attending Grade 10–12 in a public school who had access to textbooks by province, 2013

Province	Percentage access to textbooks				
	All his/her subject	Most of his/her subjects	Some of his/her subjects	None of his/her subjects	Do not know
Western Cape	83,9	5,8	6,9	3,0	0,4
Eastern Cape	79,3	10,1	8,7	1,9	0,0
Northern Cape	87,7	6,8	3,0	2,5	0,0
Free State	93,6	4,8	1,6	0,0	0,0
KwaZulu-Natal	65,4	24,0	8,4	2,1	0,1
North West	78,7	11,3	7,5	2,0	0,6
Gauteng	90,2	6,7	2,7	0,2	0,2
Mpumalanga	82,7	13,9	2,7	0,8	0,0
Limpopo	88,0	7,9	2,7	1,1	0,3
RSA	80,9	12,0	5,5	1,5	0,2

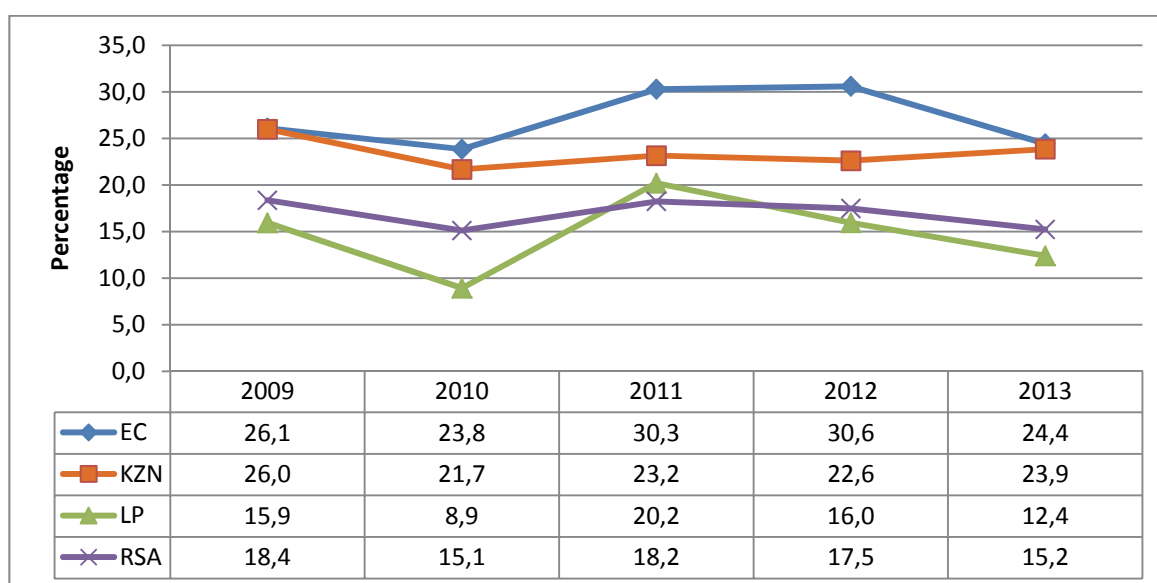
Source: General Household Survey, 2013

In the FET phase, the Limpopo learners (88,0%) were well above the national average of 80,9% in relation to having received all their textbooks. In comparison to other provinces, only the Free State (93,6%) and Gauteng (90,2%) had higher access rates. Provinces where FET learners were most likely to have only received some or none of their subjects included Western Cape (9,9%), Eastern Cape (10,6%) and KwaZulu-Natal (10,5%).

6.5 Experience of violence at school

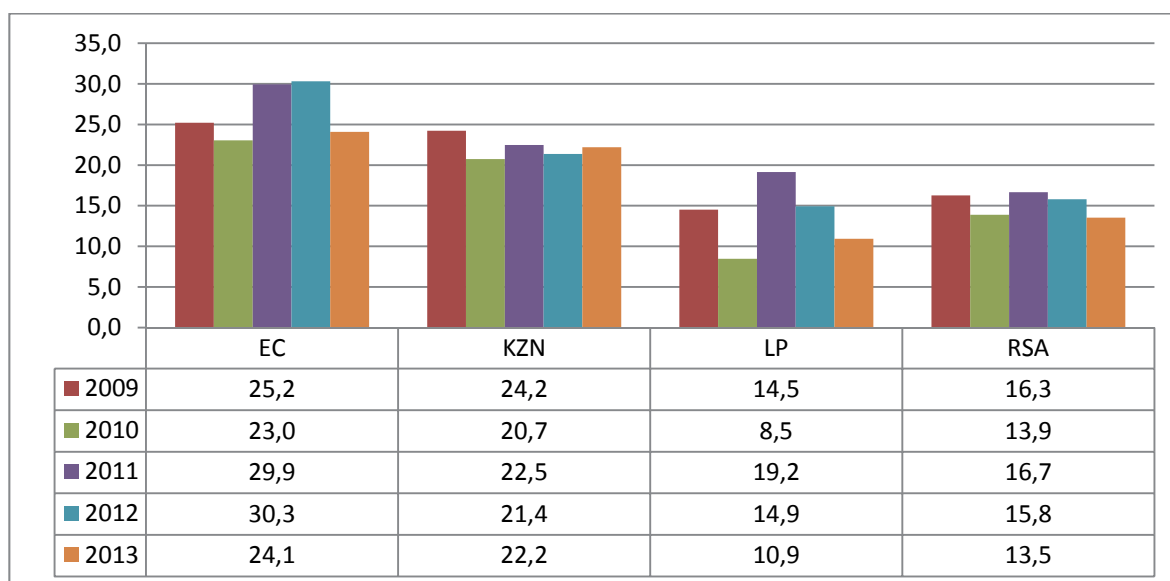
A series of questions aimed at measuring the experience of learners in relation to violence, corporal punishment and/or verbal abuse were included for the first time in the GHS 2009 questionnaire. The findings for the three provinces with large rural populations, namely Limpopo, KwaZulu-Natal and Eastern Cape, are summarised in Figure 6.5. It shows that between 2009 and 2013 learners in Limpopo were less likely to be exposed to violence, corporate punishment and verbal abuse at school than their counterparts in KwaZulu-Natal and the Eastern Cape. The same is true for the country as a whole with the exception of 2011, when 20,2% of the Limpopo learners had problems as opposed to 18,2% of learners in RSA.

Figure 6.5: Percentage of individuals aged 5 years and older and attending school who experienced some form of violence, corporal punishment or verbal abuse at school, 2009–2013



Source: General Household Survey 2009–2013

Figure 6.6: Percentage of learners attending school who experienced corporal punishment, 2009–2013

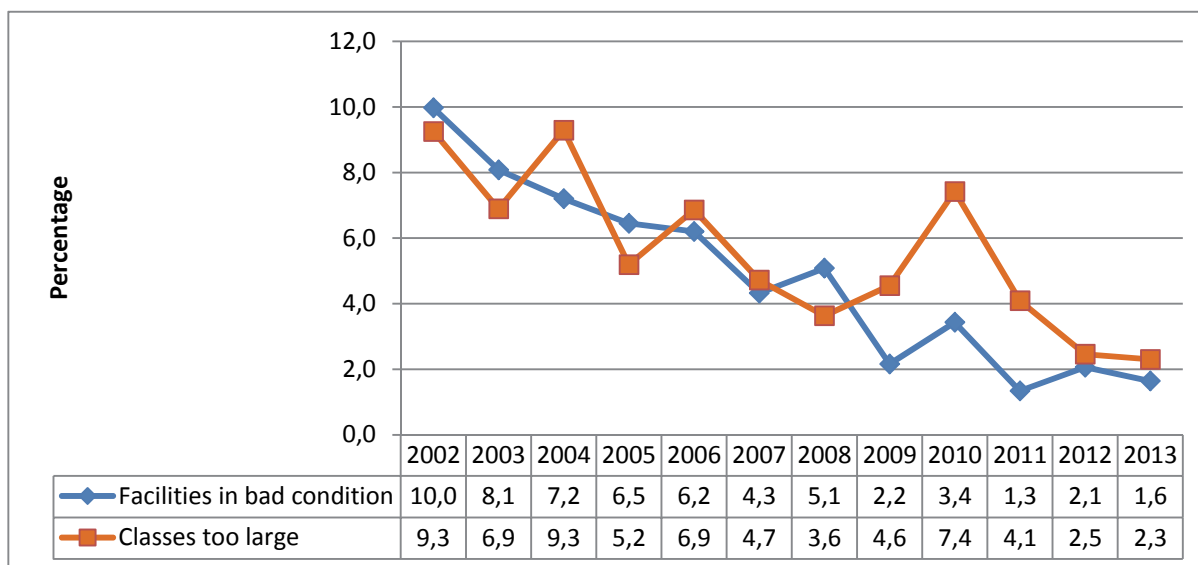


Source: General Household Survey 2009-2013

According to Figure 6.6, Limpopo learners were less likely than those in Eastern Cape and KwaZulu-Natal to receive corporal punishment between 2010 and 2013. In 2010 approximately one in ten learners received corporal punishment in Limpopo compared to more than double that in Eastern Cape (24,1%) and KwaZulu-Natal (22,2%). Approximately 13,5% of learners in RSA indicated that they received corporal punishment during the same year.

6.6 Educational infrastructure and facilities

Figure 6.7: Percentage of learners attending school who indicated that the facilities were in a bad condition or classes were too large a part of problems they experienced during the 12 months preceding the survey, 2002–2013



Source: General Household Survey 2002–2013

The LLECS 2013 collected extensive information about the kinds of services and facilities available at schools in the province (see Table 6.4). In addition to this, the GHS also measures general problems related to education of which facilities in a bad condition and classes too large are presented as two of the response options. From the perspective of households, less than 3% experienced problems with either of these two aspects during 2013 and since 2002 there has been an overall declining trend in the percentage of learners who feel that their school facilities are in a bad condition or the classes are too large (Figure 6.7).

According to the LLECS, only 21,2% of schools in the province have access to computer laboratories and 16,2% have access to the internet. A further 10,8% have access to libraries and 7,8% to a laboratory. Districts that are relatively well serviced in terms of these four amenities include: Waterberg, Polokwane, Mogalakwena and Sekhukhune.

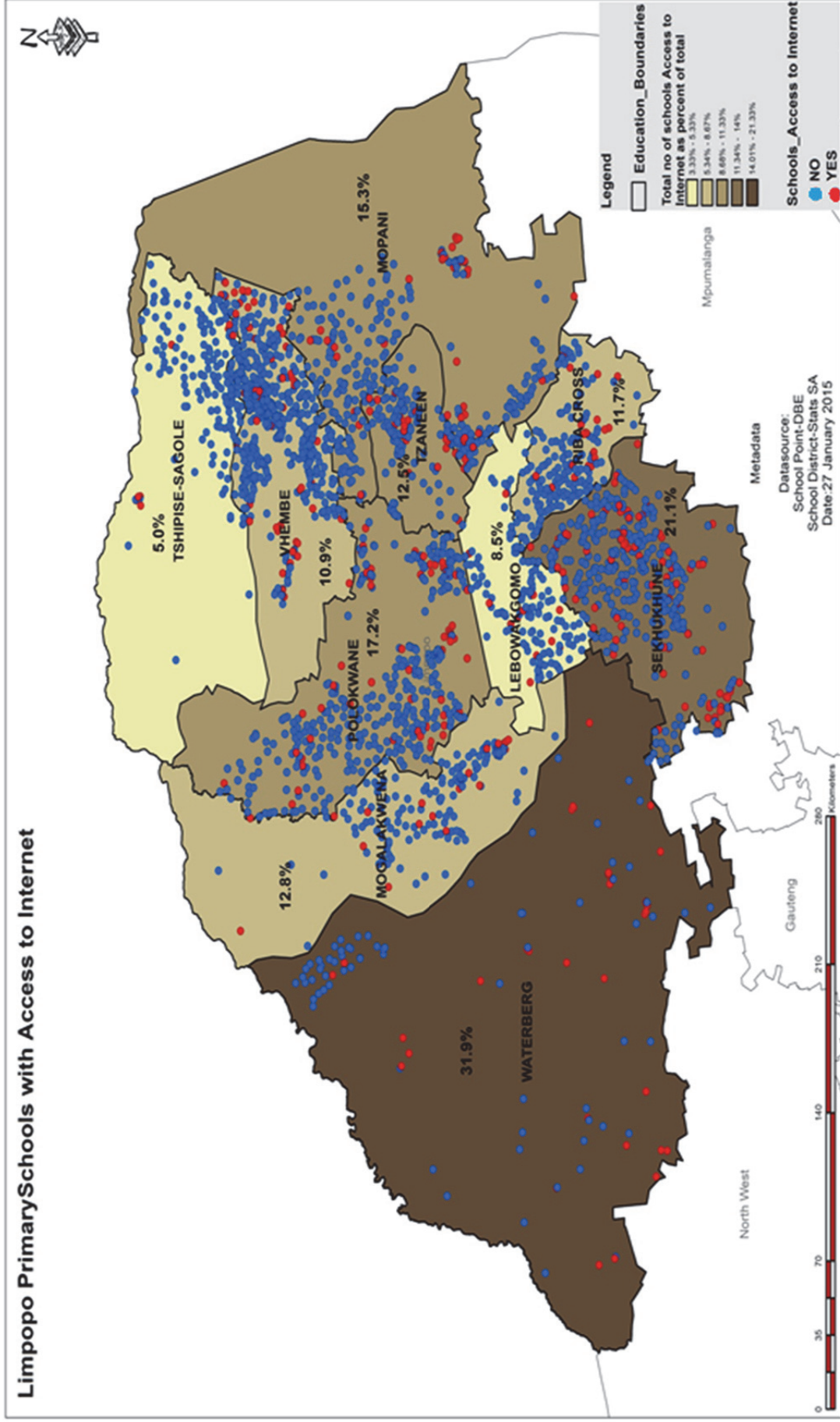
Map 6.1 shows the access to internet of primary schools in the province with a relatively even spread throughout the province but in relation to the number of schools a proportionally high access in the Waterberg district and relatively lower in the districts in the north and east of the province.

Table 6.5: General school amenities and programmes by district

District	Statistics	Computer lab	Access to Internet	Library	Admini- stration block	Laboratory	Nutrition programme	Scholar transport programme	Fencing	Access to piped water	Electricity	Toilets
Lebowakgomo	Frequency	46	30	17	35	17	244	20	208	143	234	144
	District %	18,6	12,2	6,9	14,2	6,9	99,2	8,2	84,2	57,9	94,7	58,3
Mogalakwena	Frequency	67	38	30	65	24	264	35	217	151	254	182
	District %	24,7	14,0	11,1	24,0	8,9	97,4	13,0	80,1	55,7	93,7	67,2
Mopani	Frequency	72	71	67	117	38	461	42	411	285	453	397
	District %	15,3	15,0	14,2	24,8	8,1	98,5	9,1	87,1	60,4	96,0	84,1
Polokwane	Frequency	184	115	85	159	51	647	87	575	490	643	467
	District %	27,5	17,2	12,7	23,8	7,6	97,2	13,2	86,0	73,2	96,1	69,8
Riba Cross	Frequency	50	27	23	55	15	247	24	234	164	238	197
	District %	19,7	10,6	9,1	21,7	5,9	98,4	9,7	92,1	64,6	93,7	77,6
Sekhukhune	Frequency	127	136	92	177	68	635	95	584	351	604	453
	District %	19,4	20,7	14,0	27,0	10,4	98,3	14,8	89,0	53,5	92,1	69,1
Tshipise-Sagole	Frequency	49	24	14	56	13	216	28	193	163	209	165
	District %	22,5	11,0	6,4	25,7	6,0	99,1	13,1	88,5	74,8	95,9	75,7
Tzaneen	Frequency	47	32	19	45	11	211	40	195	143	212	183
	District %	21,6	14,7	8,7	20,6	5,1	97,2	18,7	89,5	65,6	97,3	83,9
Vhembe	Frequency	142	101	41	205	36	733	59	610	613	720	559
	District %	19,2	13,7	5,5	27,7	4,9	99,2	8,1	82,4	82,8	97,3	75,5
Waterberg	Frequency	42	56	37	65	33	148	40	141	135	160	142
	District %	24,6	32,8	21,6	38,0	19,3	87,1	23,7	82,5	79,0	93,6	83,0
Special schools	Frequency	7	8	1	5	2	11	2	13	12	13	12
	Frequency	833	638	426	984	308	3 817	472	3 381	2 650	3 740	2 901
 Limpopo	Provincial %	21,2	16,2	10,8	25,0	7,8	97,7	12,2	86,0	67,4	95,2	73,8

Source: LLECS, School manager data, 2013
 Unspecified responses for all variables except nutrition and scholar transport were imputed to 'no'. Unspecified nutrition and scholar transport excluded from denominator for percentage calculations.

Map 6.1: Access to internet in primary schools



6.6 Learning environment deprivation index

6.6.1 Introduction

Limpopo, like many other provinces in South Africa, has a complex history that to this day influences the learning environment of learners. Further interrogation of existing data indicates that it will be difficult to prioritise interventions related to the learning environment of learners in the province without constructing a more complex index that captures the various facets that encapsulate learning in Limpopo, as well as the factors that historically may influence present-day learning outcomes. Since Limpopo is the amalgamation of the former Transvaal province and three Bantustan administration systems namely Gazankulu, Lebowa, and Venda, the province had to integrate these administrative systems post-1994. The former Bantustan education systems were constructed along tribal and racial lines, encouraging the use of the vernacular in education. Given that English is the language of secondary education and the NSC exam system, the home language of learners becomes an important part of the educational context.

To informatively analyse the Limpopo Learner and Educator Census of Schools 2013 (LLECS-2013) for the measurement of the learning environment in the province, a literature review of some of the education policies in South Africa was done. The following basic information related to the structure of South Africa’s educational system was taken into consideration:

- Academic Year: January to December
- Primary School: Reception to Grade 6
- Secondary School: Junior Secondary, Grades 7–9;
- Further Education and Training (10–12)
- Higher Education
 - Certificates and Diplomas (generally 1–2 years of study)
 - Bachelors’ Degrees (from 3–6 years of study, depending on course)
 - Honours Degrees (1 further year of undergraduate study, requiring a thesis)
 - Master’s Degree (2 years of post-graduate study)
 - Doctorate (variable in duration with a minimum of 2 years, following a Master’s) [02].

The South African Education System (SAES) is further divided into four education phases as indicated in Table 6.6 below:

Table 6.6: Division of the South African Education System into education phases: National Curriculum Statement Grades R–12

Education Phase	Grades
Foundation Phase	Grade R and Grades 1–3
Intermediate Phase	Grades 4–6
Senior Phase	Grades 7–9
Further Education and Training (FET) Phase	Grades 10–12

Source: National policy pertaining to the programme and promotion requirements of the national curriculum statement Grades R–12.

A school can be considered as a cluster of educators or learners, depending on the level of analysis. It can also be considered as a cluster of resources and basic services critical for effective teaching and learning. Three different questionnaires were used in the LLECS: the school information questionnaire, the educator information questionnaire, and the learner information questionnaire.

The challenge is to bring the manager, educator and learner clusters to the level of school together and form one index of wellness using the main link between the learners and the educator, namely the school. The phase of the school is also an important aspect of classification as some facilities like science laboratories are not required in primary schools because of the hazardous nature of some chemicals used in science laboratories. The environment for learning and teaching dimension entails resources like science and computer laboratories, libraries, internet, sporting facilities, reliable piped water, flush toilets, reliable source of energy like electricity and solar energy, big classrooms with manageable number of learners, enough supporting staff like security guards and clerks, and involvement of the community in the smooth running of the school.

Indicators concerning learners include key subjects a learner is taking, sporting codes the learner is involved in, disability status of the learner, and test scores the learner achieved in different subjects.

The list of resources necessary for effective teaching and learning is large and as a result, a composite indicator will be effective in the analysis of the quality of education in Limpopo.

One of the dimensions that was considered during the development of the index was the subjects considered compulsory for each education phase and the weekly time allocation to these subjects. However, from 2012 onwards all learners in Grades 1–3 are required to take four subjects namely home language, FAL, numeracy and life skills. All learners whose language of learning and teaching will be English from Grade 4 onwards will be required to take English as a subject from Grade 1. What this means is that the teaching of English will occur alongside home language instruction for those learners who choose English as a language of learning and teaching in later grades. One of the main considerations for this was the time allocation prescribed for each subject per phase as it gives an important insight into the relative weight attached to each subject from a policy perspective. A detailed description of the education phases can be obtained from the “National Curriculum Statement Grades R–12”.

In this study, given available data sets, the most important dimensions selected for the construction of a learning environment index were:

- access to facilities and basic services critical for effective teaching and learning;
- using home language as a language of teaching and learning and the dominant language used at the school;
- learner–class ratios as a measure of overcrowding and time a teacher can spend with learners;
- adequate and relevant subjects taken by learners;
- participation of learners in sporting activities; and
- financial involvement of parents in contributing towards the running of the school (SGB-funded posts) i.e. if there are no SGB posts, learner–classroom ratios will be high and learners will be affected negatively.

More details about the dimensions, indicators and weights associated with the index can be found in Appendix A.

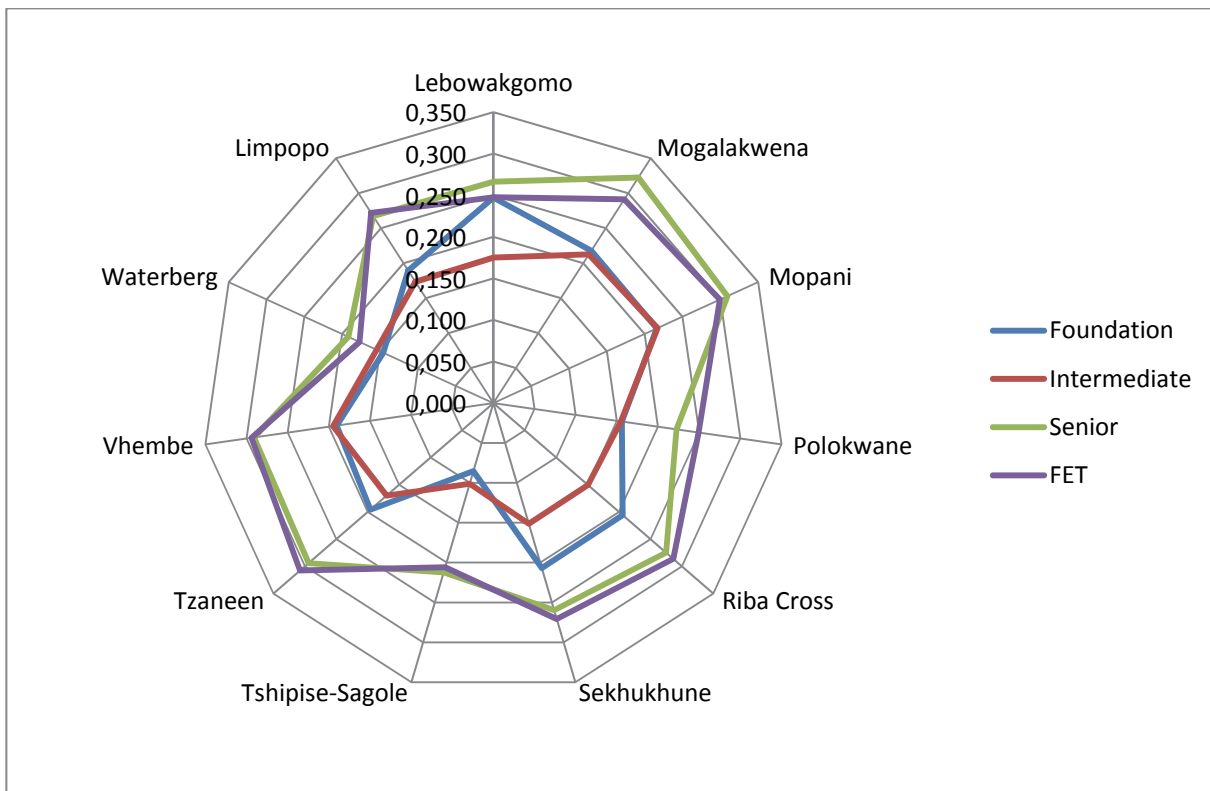
The methodology used to calculate the index is similar to the one used for the South African Multidimensional Poverty Index (SAMPI). The eight dimensions of learning environment deprivation and their associated indicators received a binary value with a value 1 if the learner was considered deprived in that respect. The indicators were then multiplied with the weights and all

values were added to arrive at a headcount. The percentage of individuals who were deprived, based on a cut-off of 50% (headcount), were then calculated.

These indicators were in turn used to calculate the following MPI measures:

1. **Headcount (H)** – the percentage of learners that are deprived according to the multidimensional deprivation index. The index defines a learner as multi-dimensionally deprived if the composite score for all the indicators is above 50%.
2. **Intensity (A)** – the intensity of deprivation for the deprived learners as indicated by the headcount is measured by the proportion of deprivations those deprived people are experiencing.
3. **Index (HxA)** – a product of the headcount and the intensity.

Figure 6.8: Learning environment deprivation index per district, 2013



Source: LLECS, 2013

According to Figure 6.8 there is a significant difference between the different phases and education districts in their deprivation rankings. For most districts, learners in the FET phases are more deprived than those in the senior, intermediate and foundation phases. With the exception of Mogalakwena and Mopani learners in grades 7-9 are the second most likely to have high levels of environmental deprivation compared to the other grades. In the case of Mogalakwena and Mopani the senior phase learners were more likely to be deprived than their counterparts in all other phases.

Table 6.7: Learning environment deprivation index per education district for the foundation and intermediate phases

Phase	Education districts	Number of learners	Sum of deprived pupils	Deprivation ratio (H)	% Deprived	Mean deprivation intensity (A)	Intensity (% of indicators deprived)	Deprivation index (H*A)
Foundation Phase	No Emis number	349	94	0,269	26,9	0,383	38,3	0,103
	Lebowakgomo	26643	13640	0,512	51,2	0,483	48,3	0,247
	Mogalakwena	26605	12259	0,461	46,1	0,473	47,3	0,218
	Mopani	68253	31573	0,463	46,3	0,467	46,7	0,216
	Polokwane	75679	26512	0,350	35,0	0,446	44,6	0,156
	Riba Cross	26997	12162	0,450	45,0	0,457	45,7	0,206
	Sekhukhune	78751	35052	0,445	44,5	0,465	46,5	0,207
	Tshipise–Sagole	20104	4414	0,220	22,0	0,389	38,9	0,085
	Tzaneen	27414	11679	0,426	42,6	0,460	46,0	0,196
	Vhembe	92848	38734	0,417	41,7	0,456	45,6	0,190
	Waterberg	23731	8191	0,345	34,5	0,422	42,2	0,146
	Limpopo	467374	194310	0,416	41,6	0,456	45,6	0,189
Intermediate Phase	No Emis number	360	92	0,256	25,6	0,414	41,4	0,106
	Lebowakgomo	16743	6286	0,375	37,5	0,466	46,6	0,175
	Mogalakwena	17180	7782	0,453	45,3	0,469	46,9	0,212
	Mopani	44893	20285	0,452	45,2	0,481	48,1	0,217
	Polokwane	48910	17059	0,349	34,9	0,444	44,4	0,155
	Riba Cross	15862	5375	0,339	33,9	0,444	44,4	0,151
	Sekhukhune	48964	16480	0,337	33,7	0,450	45,0	0,151
	Tshipise–Sagole	13917	3415	0,245	24,5	0,413	41,3	0,101
	Tzaneen	17763	6529	0,368	36,8	0,462	46,2	0,170
	Vhembe	61238	25296	0,413	41,3	0,471	47,1	0,195
	Waterberg	15623	5725	0,366	36,6	0,421	42,1	0,154
	Limpopo	301453	114324	0,379	37,9	0,457	45,7	0,173

Source: LLECS, 2013

Table 6.7 shows the distribution of the deprivation Intensity, deprivation headcount and deprivation index per district for a cutoff of 0,50 (50%) for the foundation and intermediate phases. In the foundation phase more than a third of learners in all districts are identified as deprived, except for Tshipise–Sagole where only 22,0% were considered deprived using the 50% cutoff. The highest proportion of deprived learners attend schools in Lebowakgomo (51,2%) followed by Mogalakwena, Mopani (with approximately 46% each) and Riba Cross and Sekhukhune (with approximately 45% each). In terms of the depth or intensity of deprivation, Lebowakgomo (48,3%) and Mokalakwena, Sekhukhune (approximately 47% for both) and Tzaneen (46,0%) had the highest intensity and Tshipise–Sagole (38,9%) education district the lowest.

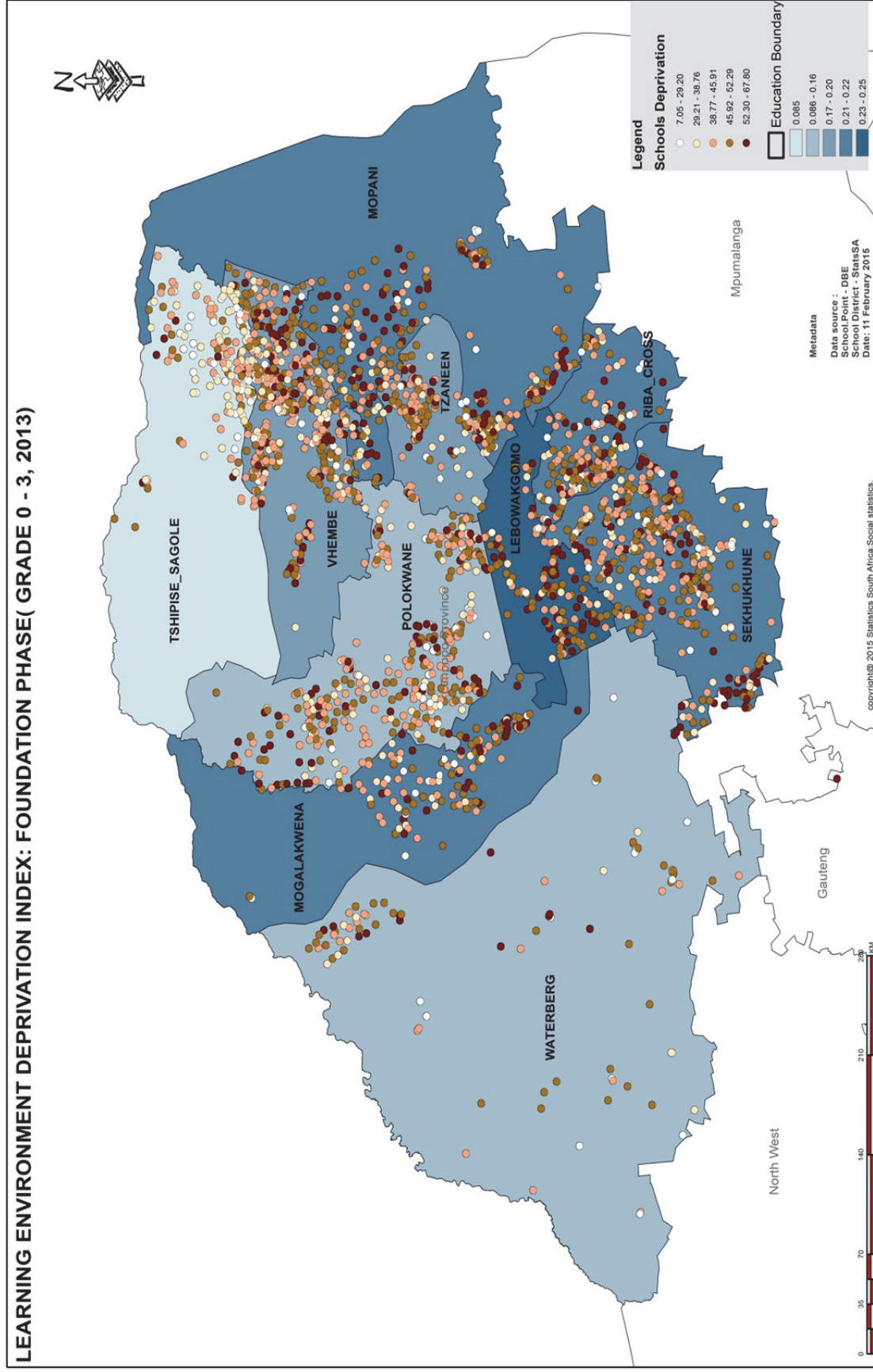
In relation to the intermediate phase, more than one-third of the registered learners in Limpopo province (37,9%) are deprived from a learning environment perspective. Mogalakwena (45,3%), Mopani (45,2%) and Vhembe (41,3%) had the highest breadth of deprivation, whilst Tshipise–Sagole (24,5%) had the lowest percentage of learners considered deprived. The average deprivation intensity amongst the deprived learners for education districts ranges from 41,3% for Tshipise–Sagole and the highest values that were found in: Lebowakgomo (46,6%), Mogalakwena (46,9%) and Mopani (48,0%).

When the head count and intensity of deprivation are combined into the deprivation index the most deprived learners for Grades R-3 can be found in Lebowakgomo (0,247) and Mogalakwena (0,218) and the least in Tshipise–Sagole (0,085). For the intermediate phase the most deprived learners were found in Mopani (0,217) and Mogalakwena (0,212) and the least deprived in Tshipise–Sagole (0,101).

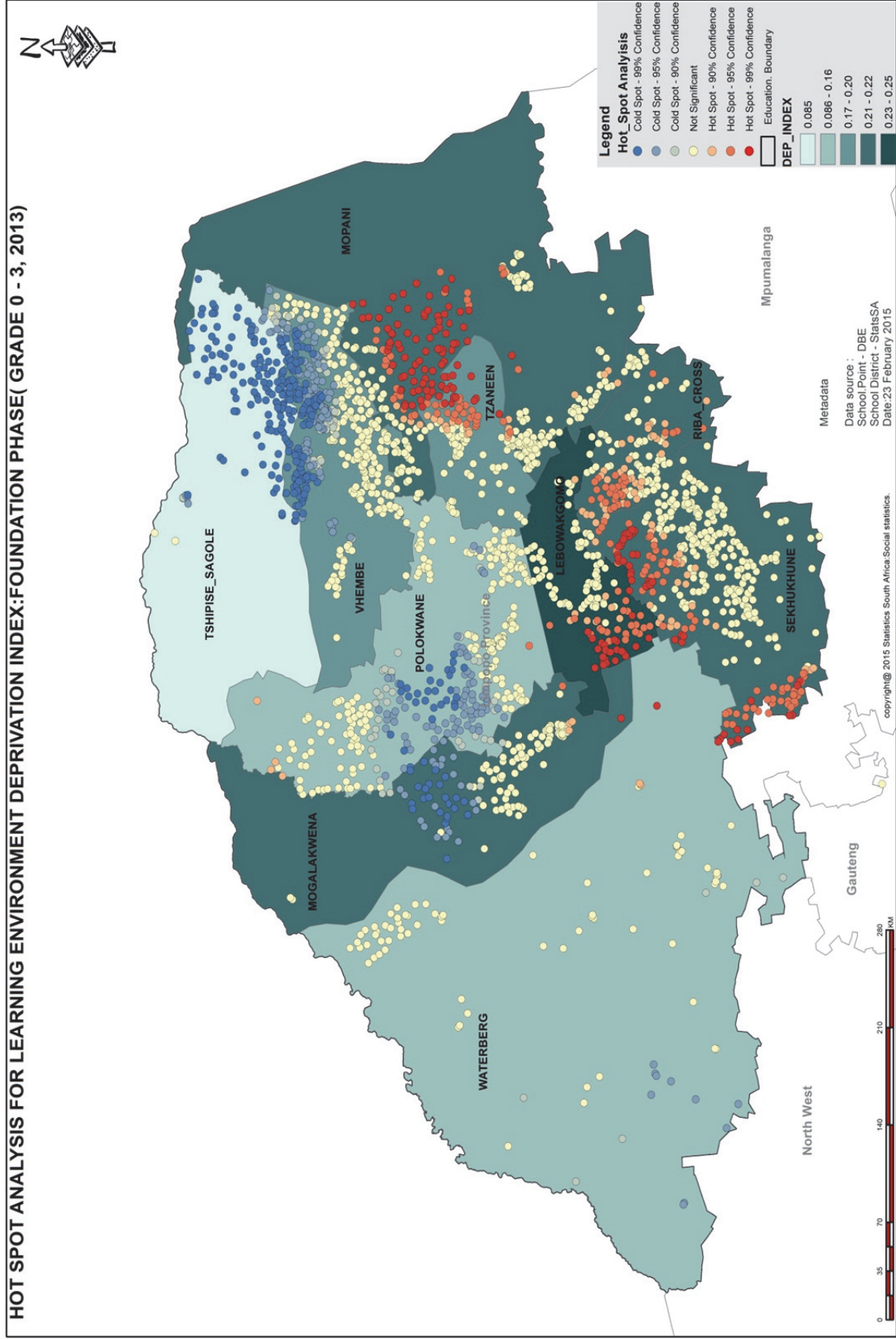
Maps 6.2 and 6.3 summarize the deprivation index and hot spot analysis for individual schools for the foundation phase. Once again it is predominantly the schools along the south eastern side of the province that have the highest deprivation scores (dark red dots).

However, when looking at the hot spot analysis (Map 6.3) much clearer patterns emerge. There are clearly pockets of neighbouring schools in Tshipise–Sagole, Mogalakwena, Waterberg and Polokwane (blue dots) that score relatively low on the deprivation index. However, all the eastern districts have several hot spots. Education districts such as Vhembe, Lebowakgomo, Mopani, Sekhukhune and Riba Cross have several clusters of schools where there are schools in close proximity to each other with high values on the deprivation index scores (red dots).

Map 6.2: Learning environment deprivation index: foundation phase



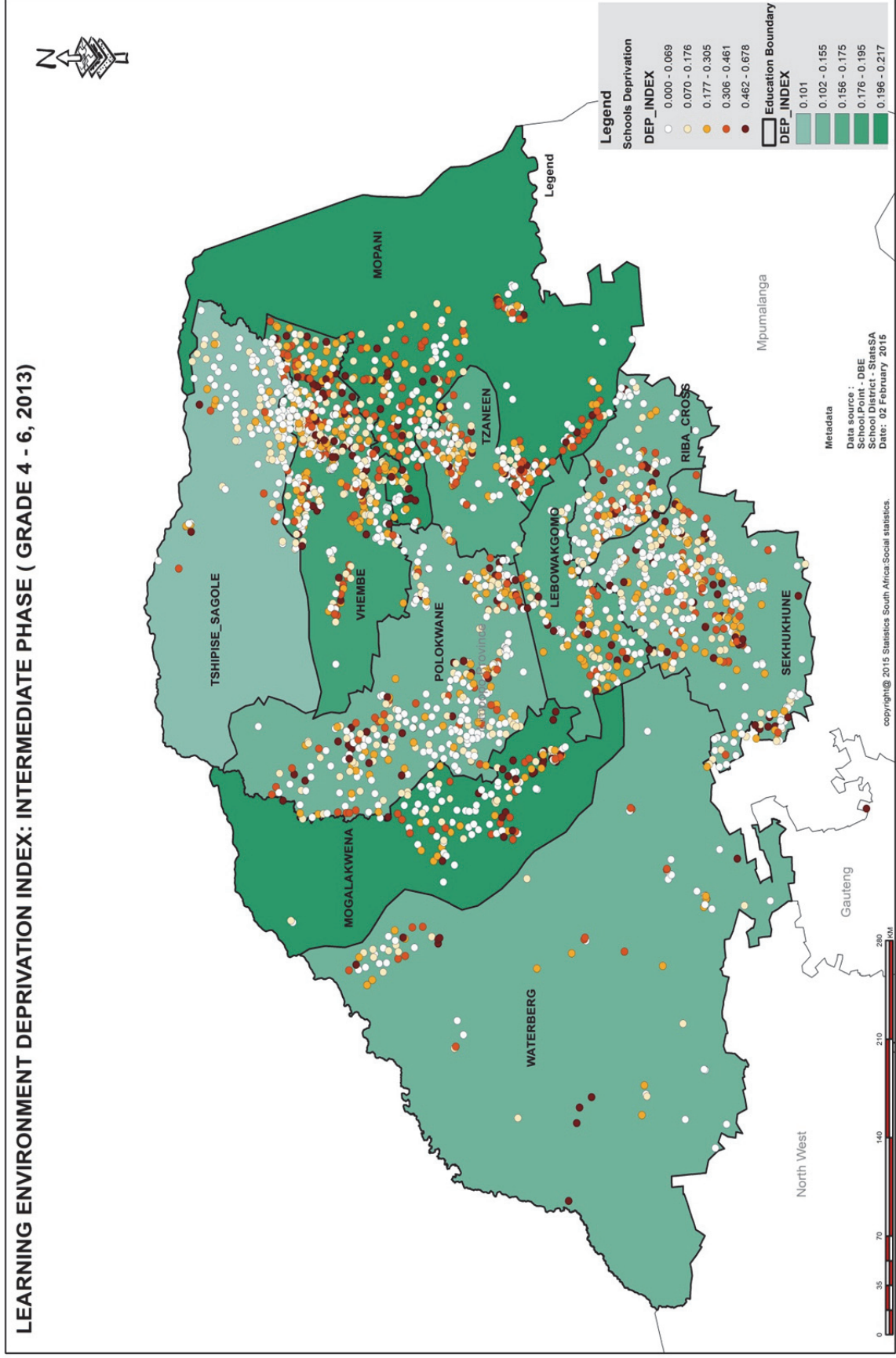
Map 6.3: Hot spot analysis for the learning environment deprivation index: foundation phase



Maps 6.4 and 6.5 on the next two pages summarize the deprivation index and hot spot analysis for individual schools in the intermediate phase. Even though the intermediate phase general deprivation scores are spread in a similar manner to the foundation phase across educational districts along the south eastern side of the province (red spots), the hot spot analysis (Map 6.5) has distinctly different patterns.

There are still pockets of schools in Tshipise–Sagole and Polokwane (blue dots) that score relatively low on the deprivation index, but no such pockets are seen in Waterberg anymore. The number of hot spots have also reduced across the province: for the intermediate phase the hot spots are primarily located in Mopani, Vhembe and Mogalakwena. These districts have several clusters of schools where there are schools in close proximity to each other with high values on the deprivation index scores (red dots).

Map 6.4: Learning environment deprivation index: intermediate phase



Map 6.5: Hot spot analysis for the learning environment deprivation index: intermediate phase

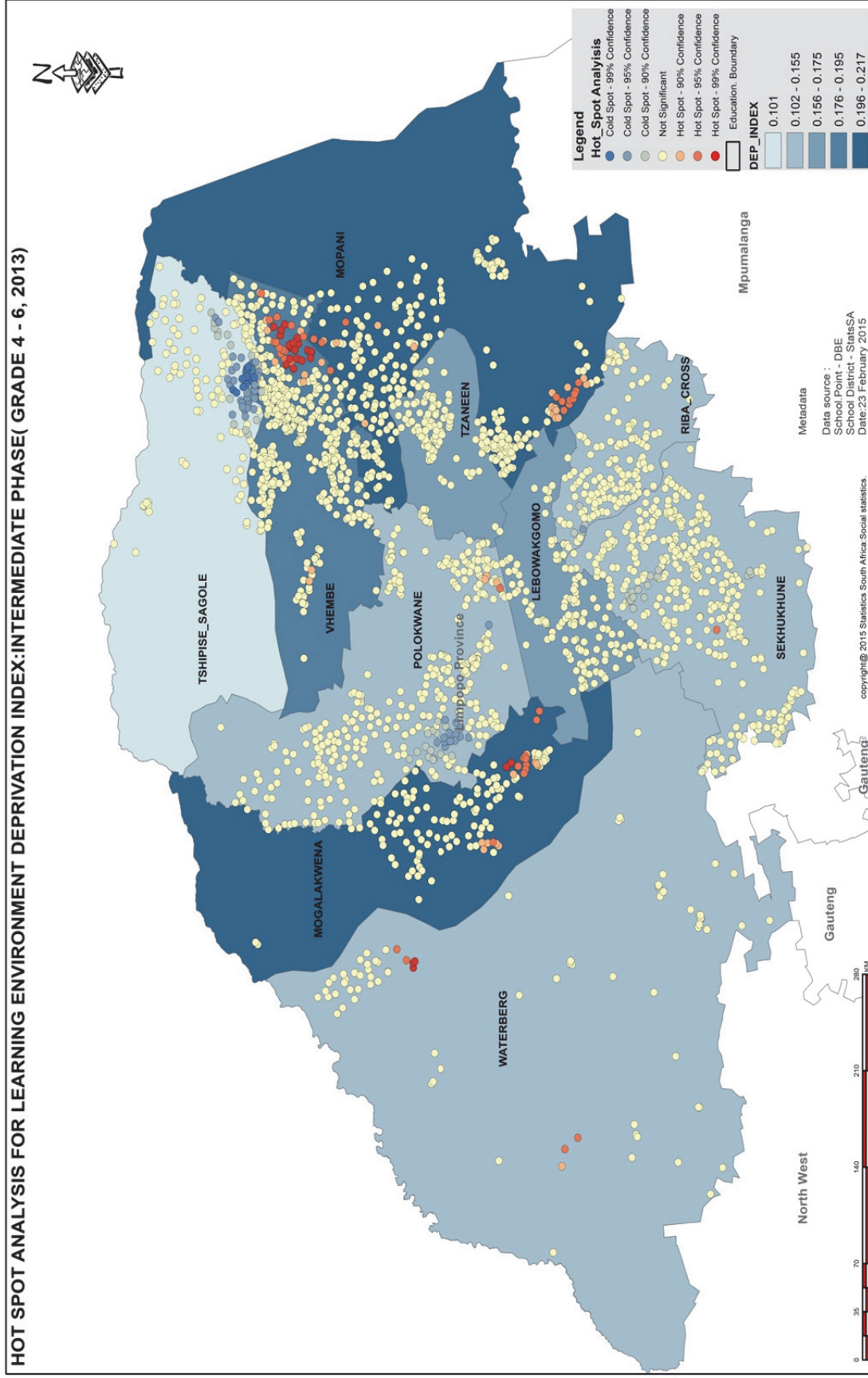


Table 6.8 Learning Environment Deprivation index per education district for the senior and FET phases

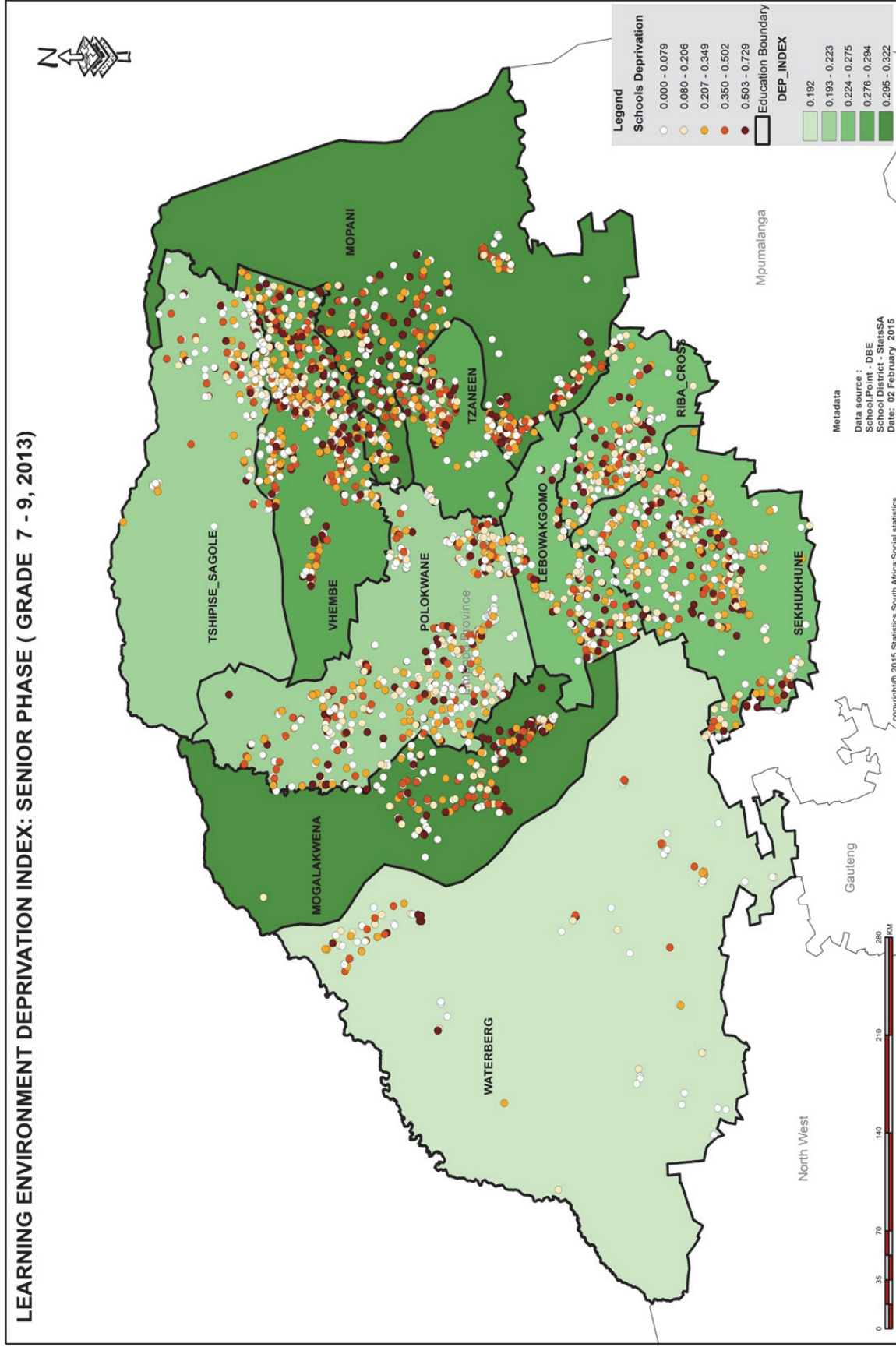
Phase	Education districts	Number of learners	Sum of deprived pupils	Deprivation ratio (H)	% Deprived	Mean deprivation intensity (A)	Intensity (% of indicators deprived)	Deprivation index (H*A)
Senior phase	No Emis number	458	98	0,214	21,4	0,366	36,6	0,078
	Lebowakgomo	20870	10925	0,523	52,3	0,509	50,9	0,266
	Mogalakwena	20799	12726	0,612	61,2	0,527	52,7	0,322
	Mopani	54277	31896	0,588	58,8	0,526	52,6	0,309
	Polokwane	64650	29771	0,460	46,0	0,483	48,3	0,223
	Riba Cross	19598	10443	0,533	53,3	0,516	51,6	0,275
	Sekhukhune	55242	28394	0,514	51,4	0,505	50,5	0,260
	Tshipise–Sagole	17784	7930	0,446	44,6	0,476	47,6	0,212
	Tzaneen	23089	13060	0,566	56,6	0,520	52,0	0,294
	Vhembe	77542	43619	0,563	56,3	0,517	51,7	0,291
	Waterberg	15165	6474	0,427	42,7	0,449	44,9	0,192
	Limpopo	369474	195336	0,529	52,9	0,506	50,6	0,268
FET phase	No Emis number	143	46	0,322	32,2	0,385	38,5	0,124
	Lebowakgomo	20568	9920	0,482	48,2	0,513	51,3	0,248
	Mogalakwena	18679	10558	0,565	56,5	0,515	51,5	0,291
	Mopani	46131	26272	0,570	57,0	0,526	52,6	0,299
	Polokwane	60655	30690	0,506	50,6	0,493	49,3	0,249
	Riba Cross	16674	9128	0,547	54,7	0,523	52,3	0,286
	Sekhukhune	46022	24360	0,529	52,9	0,511	51,1	0,271
	Tshipise–Sagole	14376	6267	0,436	43,6	0,472	47,2	0,206
	Tzaneen	21012	12435	0,592	59,2	0,520	52,0	0,308
	Vhembe	72381	41307	0,571	57,1	0,515	51,5	0,294
	Waterberg	10743	4331	0,403	40,3	0,439	43,9	0,177
	Limpopo	327384	175314	0,535	53,5	0,508	50,8	0,272

Source: LLECS, 2013

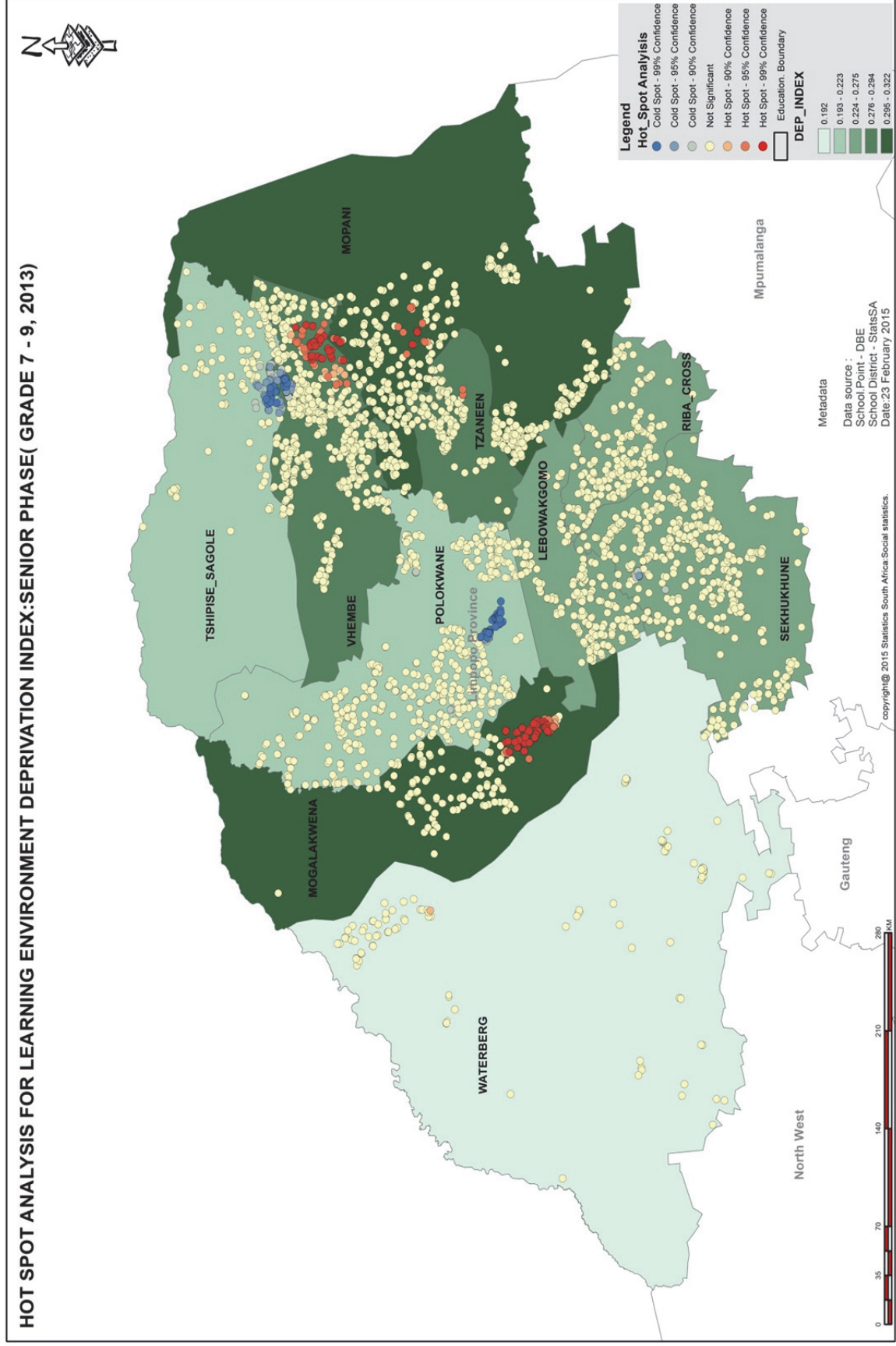
The table above shows the deprivation intensity, headcount and index per district for the senior phase (Grades 7-9) at a cutoff of 50%. Mogalakwena had the highest score of 61,2% whilst Mopani (58,8%), Tzaneen (56,6%), Vhembe (56,3%) and Riba Cross (53,3%) had head counts higher than the provincial average of 52,9%. In relation to the intensity of deprivation, the highest scores were found in Mogalakwena (52,7%), Mopani (52,6%) and Tzaneen (52,0%). The lowest intensity was observed in Waterberg with 44,9%.

For learners in the FET phase (Grades 10-12), headcount scores above the provincial average of 53,5% were found for Tzaneen (59,2%), Vhembe (57,1%), Mopani (57,0%), Mogalakwena (56,5%) and Riba Cross (54,7%). Headcount scores were lowest in Waterberg and Tshipise_Sagole. The intensity was highest in Mopani, Riba Cross, Tzaneen, Mogalakwena and Vhembe all with approximately 52%.

Map 6.6: Learning environment deprivation index: senior phase



Map 6.7: Hot spot analysis for the learning environment deprivation index: senior phase

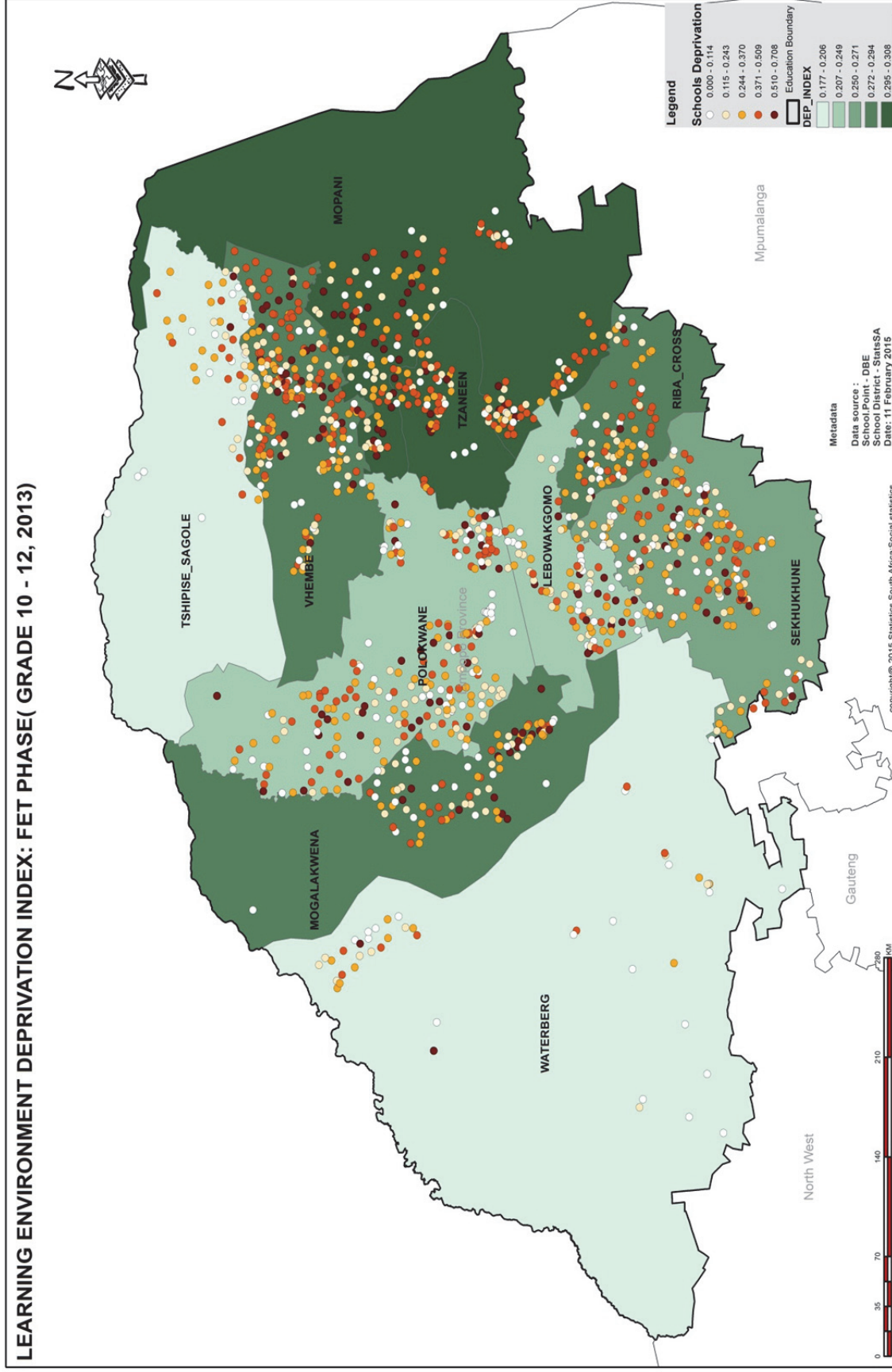


The deprivation index and hot spot analysis for individual schools for the senior phase are summarized in Maps 6.6 and 6.7 on the previous two pages. The general deprivation scores for the senior phase are spread in a similar manner to the foundation and intermediate phases across educational districts along the south eastern side of the province as well as Mogalakwena (red spots).

However, the hot spot analysis (Map 6.7) has distinctly different patterns. Tshipise–Sagole and Polokwane a (blue dots) continue to have pockets that score relatively low on the deprivation index. The number of hot spots have also reduced across the province: for the senior phase the hot spots are primarily located in eastern Vhembe, western parts of Mopani and in the south of Mogalakwena. These districts have several clusters of schools where there are a number of schools in close proximity to each other with high values on the deprivation index scores (red dots) for the senior phase.

When considering the deprivation index and hot spot analysis for individual schools for the FET phase yet another picture emerges (Maps 6.8 and 6.9). Instead of detecting a large number of red spots for the general index distribution in certain districts, these are approximately evenly spread across the province. This pattern is further confirmed when considering the hot spot analysis (Map 6.8). No hot or cold spots are visible in any of the educational districts except Vhembe (one hot spot) and Polokwane (one cold spot) signifying that there are no significant clusters of schools with either cold (schools with low values of the index next to each other) or hot spots (schools with high values for the deprivation index next to each other).

Map 6.8: Learning environment deprivation index: FET phase



Map 6.9: Hot spot analysis for the learning environment deprivation index: FET phase

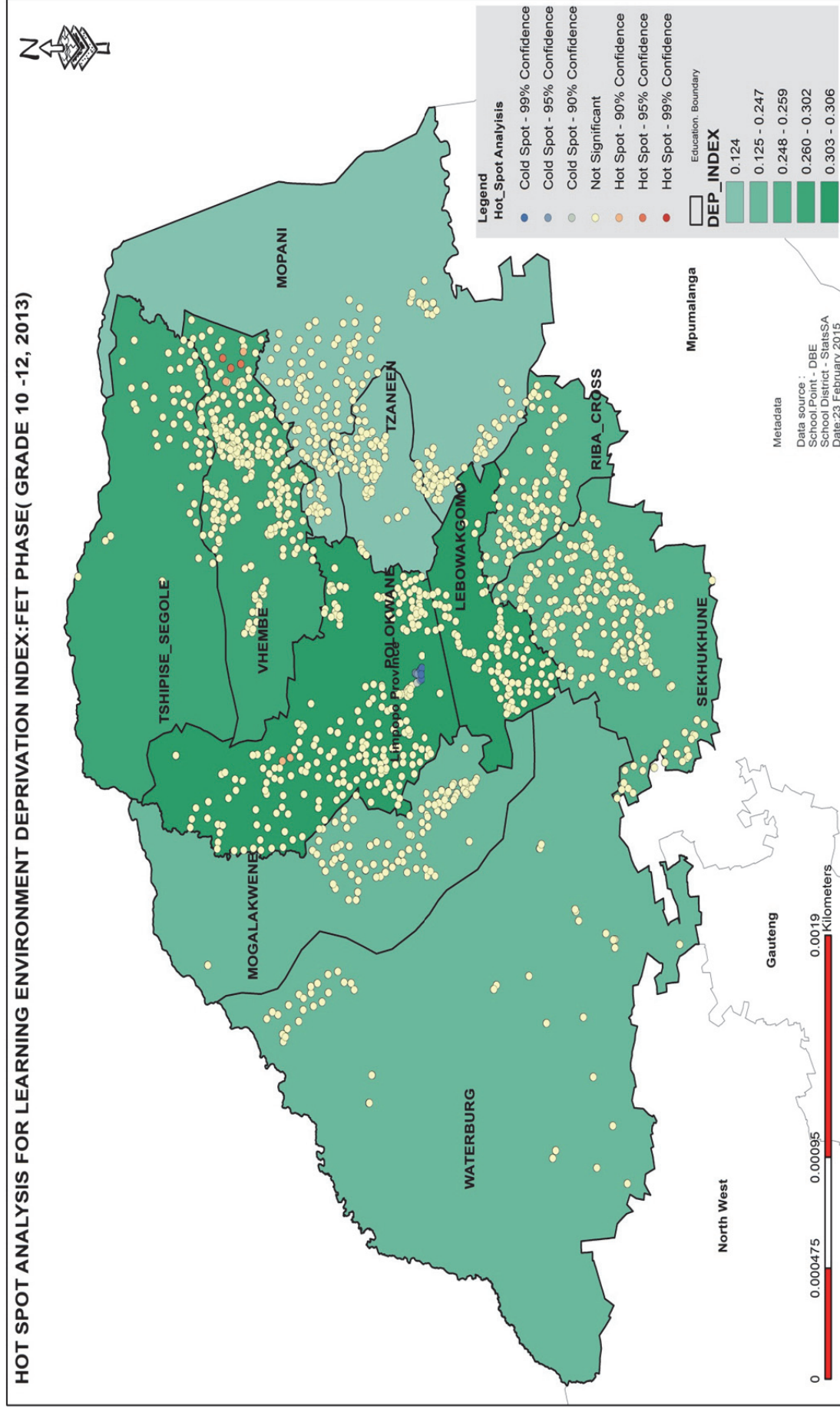


Table 6.9: Number of schools²⁰ with the highest learning environment deprivation index scores per district and phase, 2013

District	No of highly deprived schools per education phase				Total	Rank amongst districts for 200 most deprived schools in province
	Foundation	Intermediate	Senior	FET		
Lebowakgomo	3	2	5	7	17	6
Mogalakwena	3	4	8	7	22	5
Mopani	9	4	14	8	35	2
Polokwane	6	8	5	10	29	3
Riba Cross	1	1	2	2	6	8
Sekhukhune	14	6	4	4	28	4
Tshipise–Sagole	1	0	0	0	1	10
Tzaneen	3	1	2	4	10	7
Vhembe	9	21	9	8	47	1
Waterberg	1	3	1	0	5	9
Limpopo	50	50	50	50	200	-

Source: LLECS, 2013

According to Table 6.9 schools from Tshipise-Sagole, Waterberg and Riba Cross were the least likely to have schools amongst the top 200 most deprived schools in the province, whilst Vhembe, Mopani, Polokwane and Sekhukhune had the most schools in the top 200.

Table 6.10: Correlation between NSC overall pass rates of secondary and combined schools and the learning environment deprivation index by district, 2013

District	Pearson Correlation Coefficient	P value	Number of schools*	Rank amongst districts for 200 most deprived schools in province
Lebowakgomo	-0,06	0,58	93	6
Mogalakwena	-0,21	0,04	96	5
Mopani	0,06	0,45	166	2
Polokwane	-0,12	0,06	242	3
Riba Cross	-0,10	0,36	81	8
Sekhukhune	0,00	0,94	209	4
Tshipise–Sagole	0,13	0,36	54	10
Tzaneen	-0,16	0,20	67	7
Vhembe	-0,26	<,0001	223	1
Waterberg	-0,29	0,05	46	9
Limpopo	-0,09	0,00	1278	-

Source: LLECS, 2013

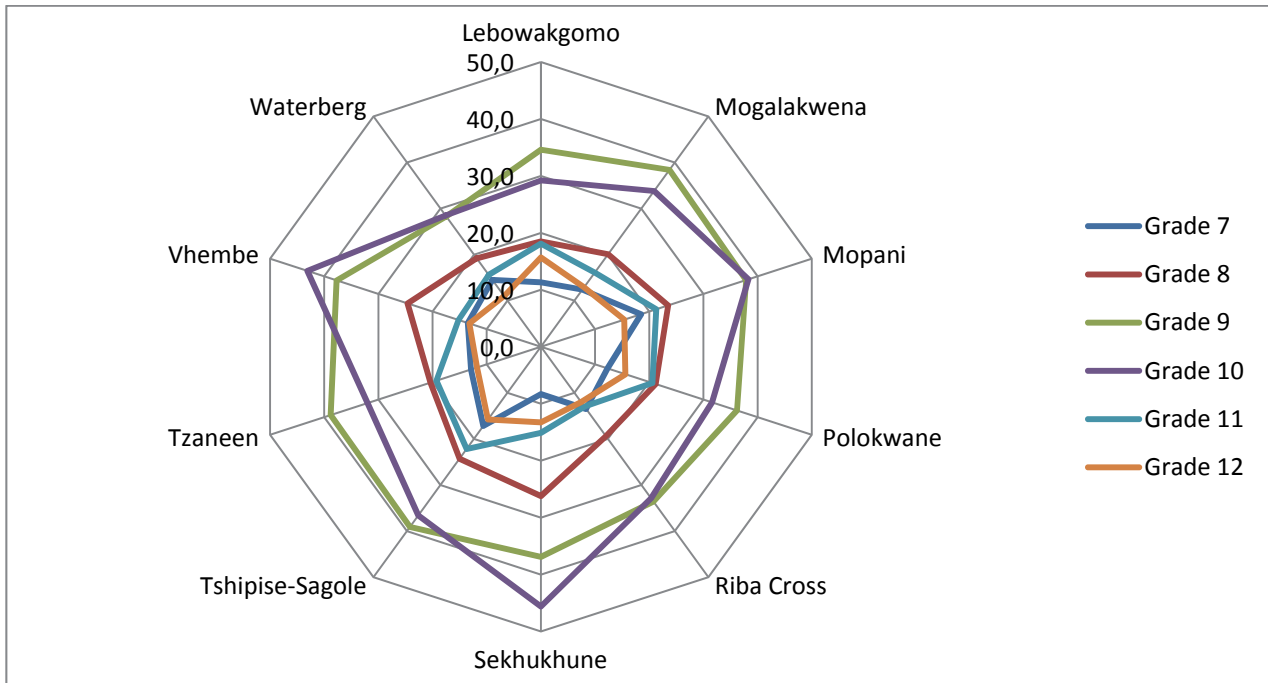
*Only schools for which all the index variables were available and the deprivation index was calculated were included in the analysis.

An analysis of the correlation between general NSC pass rates and the learning environment deprivation index (Table 6.10) shows that in the province as a whole there is a statistically significant negative correlation between the NSC pass rates and the deprivation index ($p=0,00$) at a 99% confidence level. Thus, higher levels of deprivation are associated with lower NSC pass

²⁰ The 50 schools with the highest deprivation index scores in each phase across Limpopo were selected. This table summarizes the number of schools in each district per phase that were the most deprived according to the index.

rates. At education district level the emerging patterns are not that clear. However, statistically significant correlations were found in Mogalakwena ($p=0,04$), Vhembe ($p<.0001$) and Waterberg ($p=0,05$).

Figure 6.9: Learner classroom deprivation index per district, Grade 7–12, 2013



Tables C1 to C4 in the Appendix summarise the percentage of schools per district that are deprived for each of the indicators that were used to compose the index. For most phases and most districts more than 50% of the schools are deprived in terms of school language, sports, internet access, class–learner ratios and services and facilities. The percentage schools in a district that are deprived in terms of the recommended cutoffs are shown in Figure 6.9. It shows that in the critical phases of Grade 8, 9 and 10 more than two out of ten learners in most districts are in classes that have more than 40 learners per class. This tapers off in Grades 11 and 12, mostly because of the high dropout ratios. Grade 8 learners are marginally better off than learners in Grade 9 and 10 insofar as learner–class ratios are concerned. Districts with the biggest problems include Sekhukhune, Vhembe, Mopani, Tshipise-Sagole and Tzaneen. Overcrowding for Grade 9s are most severe in Tshipise-Sagole, Tzaneen and Mogalakwena. Learners studying for Grade 10 in Sekhukhune, Vhembe, Mopani and Polokwane are the most likely to have problems with overcrowding.

6.7 Summary

This chapter took a closer look at the learning environment of Limpopo learners. In relation to the number of years of experience of school managers, certain districts such as for example Tshipise-Sagole (56,6%) and Vhembe (38,2%) have significant numbers of school managers with more than 20 years of experience as school managers. As seen in the previous chapter, there is a negative correlation between the years of experience of school managers and NSC outcomes at both primary and secondary school levels. Perceptions about teachers as measured by the GHS are generally good with less than two percent of learners regarding this as their main problem.

Even though there were textbook and workbook delivery problems in the province in 2012, the GHS data suggests that in 2013 Limpopo was amongst the top three provinces when it comes to learners having received all their workbooks (Grades 1-9) and textbooks (Grades 10-12). Limpopo learners, when compared to other provinces with high rural populations and the RSA average, are the least likely to have been victims of violence, corporal punishment and verbal abuse at school.

Even though significant progress has been made during the past 20 years to improve services and facilities in the province, most schools in Limpopo still do not have adequate facilities and services, especially in relation to science laboratories, libraries, computer laboratories and internet connections. Negative perceptions about poor facilities and overcrowding in classrooms have shown a downward trend between 2002 and 2013, which is probably reflective of the positive gains made in the areas of school construction, and provision of electricity, water and sanitation at schools.

The learning environment deprivation index developed for the study is positively correlated to NSC outcomes. It has identified districts in each phase that are the most deprived. Lebowakgomo, Mogalakwena and Mopani experienced more problems than the other districts for the foundation phase. Mogalakwena, Vhembe and Mopani had the biggest challenges for the intermediate and FET phases. In the senior phase Mogalakwena, Mopani, Vhembe and Tzaneen were consistently performing poorly. The hotspot analysis which identifies clustering of schools with high deprivation indexes showed that highly deprived schools are evenly spread throughout the education districts for the FET phase and no significant clustering can be observed. For the senior phase less clustering than in the foundation and intermediate phases was identified. Mopani, Vhembe and Mogalakwena had the most clustering of highly deprived schools for this phase.

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Concepts and definitions

Combined school: A school that offers a selection of grades between Grade R and Grade 12 and usually encompasses the whole range from Grade R to Grade 12.

Intermediate school: A school that offers a selection of grades between Grade R and Grade 12, but such a selection is not on line with the grade limits of either a primary or secondary school.

Marital status refers to the personal status of each individual in relation to the marriage laws or customs of a country.

Marriage is the act, ceremony or process by which the legal relationship of husband and wife is constituted.

Maternal orphans are children whose mothers have passed away, but whose fathers are still alive.

Multiple households occur when two or more households live in the same dwelling unit.

Note: If there are two or more households in the selected dwelling unit and they do not share resources, all households are to be interviewed. The whole dwelling unit has been given one chance of selection and all households located there were interviewed using separate questionnaires.

Non-orphans are children whose biological parents are alive.

Nuclear households are households consisting of heads of households, and/or their spouses and/or offspring.

Old-age grant refers to financial assistance provided by the government to elderly people who comply with the means test.

Older persons are individuals aged 60 years and older.

Ordinary school: A school that is not a special school.

Orphans are children whose mother, father or both biological parents have died.

Paternal orphans are children whose fathers have passed away, but whose mothers are still alive.

Piped water in dwelling or onsite is piped water inside the household's own dwelling or in their yard. It excludes water from a neighbour's tap or a public tap that is not on site.

Poor or low-income households refers to households that earn less than R765 per month per capita and which fall into the lowest two income quintiles.

Primary school: Institution that offers formal schooling between the range of Grades R to 7.

Public school: A school as defined in Chapter 3 of the South African Schools Act No. 84 of 1996.

Relationship to the head of acting head of the household refers to relationships through blood, marriage, adoption or other circumstances.

School: A public school or an independent school which enrolls learners in one or more grades from Grade R (reception) to Grade 12.

School site refers to the actual physical location of a school. It also entails the total space a school requires to adequately accommodate all its facilities.

Secondary school: Institutions offering a lowest level of Grade 8 and a highest level of Grade 12. There are also institutions included in this group that offer only a selection of grades within these limits.

Separated refers to a situation where a married couple have parted without divorcing, thus allowing for reuniting if they wish at some time in the future.

Single refers to a person who is not married or cohabiting.

Special Needs Education (SNE): Education that is specialised in its nature and addresses barriers to learning and development experienced by learners with special education needs (including those with disabilities) in special as well as ordinary schools.

Special schools: Schools resourced to deliver education to learners requiring high intensity educational and other support on either a full-time or a part-time basis. The learners who attend these schools include those who have physical, intellectual or sensory disabilities or serious behavioural and/or emotional problems, and those who are in conflict with the law or whose health-care needs are complex.

Traditional dwelling is a dwelling/hut/structure made of traditional materials.

Widowed refers to the marital status of a person whose spouse has died and who has not married again.

Youth refers to young persons between the ages of 15 and 24 or 34 or as specified in the specific analysis.

Appendix A: Dimensions, indicators and weights used for the South African Multidimensional Poverty Index

Table A1: The dimensions, indicators and deprivation cutoffs for SAMPI

Dimension	Indicator	Deprivation cutoff	Weight
Health	Child mortality	If any child under the age of 5 has died in the past 12 months	$\frac{1}{4}$
Education	Highest level of education	Years of schooling if no household member aged 15 or older has completed 5 years of schooling	1/8
	School attendance	If any school-aged child (aged 7–15) is out of school	1/8
Standard of living	Fuel for lighting	If household is using paraffin/candles/nothing/other	1/28
	Fuel for heating	If household is using paraffin/wood/coal/dung/other/none	1/28
	Fuel for cooking	If household is using paraffin/wood/coal/dung/other/none	1/28
	Water access	If no piped water in dwelling or on stand. Sanitation type if not a flush toilet	1/28
	Dwelling type	Dwelling type if an informal shack/traditional dwelling/caravan/tent/other	1/28
	Asset ownership	Asset ownership if household does not own more than one of radio, television, telephone or refrigerator and does not own a car	1/28
Economic activity	Unemployment	If all adults (aged 15–64) in the household are unemployed	$\frac{1}{4}$

Appendix B: Dimensions, indicators and weights used for the learning environment deprivation index

Table B1: The dimensions, indicators and weights used for the learning environment deprivation index for foundation phase

Dimension	Total weight for dimension		Indicator	Total weight for indicator
Age	0,125	1	Age > 9	0,125
Subjects	0,125	2	Not taking Maths	0,031
		3	Not taking Life Skills	0,031
		4	Not taking Home Language and FAL as subjects	0,031
		5	Taking less than 3 subjects including compulsory subjects	0,031
Learner–class ratio	0,125 Only one applicable to each learner	6	Grade R class ratio >30 learners per class	0,125
		7	Grade 1 class ratio >40 learners per class	0,125
		8	Grade 2 class ratio >40 learners per class	0,125
		9	Grade 3 class ratio >40 learners per class	0,125
Home language	0,125	10	Not using home language as language of teaching and learning	0,125
Sport	0,125	12	Deprived in sport	0,125
Basic services	0,125	13	No gardener in school	0,016
		14	No cleaner in school	0,016
		15	No admin clerk in school	0,016
		16	No security guard in school	0,016
		17	No piped water in school	0,016
		18	No toilet facility in school	0,016
		19	No electricity in school	0,016
		20	Internet	0,016
Infrastructure	0,125	21	No library	0,031
		22	No admin block	0,031
		23	No computer laboratory	0,031
		24	No fencing	0,031
Financial contribution of SGB	0,125	25	No teachers paid by SGB	0,125
	1,000			1,001

Table B2: The dimensions, indicators and weights used for the learning environment deprivation index for intermediate phase

Dimension	Total weight for dimension		Indicator	Total weight for indicator
Age	0,125	1	Age > 12	0,125
Subjects	0,125	2	Not taking Maths	0,021
		3	Not taking Life Skills	0,021
		4	Not taking Home Language and FAL as subjects	0,021
		5	Not taking NST	0,021
		6	Not taking social science	0,021
		7	Taking less than 5 subjects including compulsory subjects	0,021
		Learner–class ratio	0,125 Only one applicable to each learner	8
9	Grade 5 class ratio >40 learners per class			0,125
10	Grade 6 class ratio >40 learners per class			0,125
Home language	0,125	11	Not using home language as language of teaching and learning	0,063
		12	Language of instruction not Afrikaans or English	0,063
Sport	0,125	13	Deprived in sport	0,125
Basic services	0,125	14	No gardener in school	0,016
		15	No cleaner in school	0,016
		16	No admin clerk in school	0,016
		17	No security guard in school	0,016
		18	No piped water in school	0,016
		19	No toilet facility in school	0,016
		20	No electricity in school	0,016
Infrastructure	0,125	21	Internet	0,016
		22	No library	0,031
		23	No admin block	0,031
		24	No computer laboratory	0,031
Financial contribution of SGB	0,125	25	No fencing	0,031
		26	No teachers paid by SGB	0,125
	1,000			1,003

Table B3: The dimensions, indicators and weights used for the learning environment deprivation index for senior phase

Dimension	Total weight for dimension		Indicator	Total weight for indicator
Age	0,125	1	Age > 15	0,125
Subjects	0,125	2	Not taking Maths	0,014
		3	Not taking Life Orientation	0,014
		4	Not taking Home Language and FAL as subjects	0,014
		5	Not taking Natural Science	0,014
		6	Not taking Technology	0,014
		7	Not taking Creative Arts	0,014
		8	Not taking Social Science	0,014
		9	Not taking Economics and Management Science	0,014
		10	Taking less than 8 subjects including compulsory subjects	0,014
Learner–class ratio	0,125 Only one applicable to each learner	11	Grade 7 CL ratio>40 learner per class	0,125
		12	Grade 8 CL ratio>40 learner per class	0,125
		13	Grade 9 CL ratio>40 learner per class	0,125
Home language	0,125	14	Not using home language as language of teaching and learning	0,063
		15	Language of instruction not Afrikaans or English	0,063
Sport	0,125	16	Not taking part in any form of sport	0,125
Basic services	0,125	17	No gardener in school	0,016
		18	No cleaner in school	0,016
		19	No admin clerk in school	0,016
		20	No security guard in school	0,016
		21	No piped water in school	0,016
		22	No toilet facility in school	0,016
		23	No access to Internet	0,016
		24	No electricity in school	0,016
Infrastructure	0,125	26	No library	0,025
		27	No admin block	0,025
		28	No science laboratory	0,025
		29	No computer laboratory	0,025
		30	No fencing	0,025
Financial contribution of SGB	0,125	31	No teachers paid by SGB	0,125
	1,000			1,008

Table B4: The dimensions, indicators and weights used for the learning environment deprivation index for the FET phase

Dimension	Total weight for dimension		Indicator	Total weight for indicator
Age	0,125	1	Age > 18	0,125
Subjects	0,125	2	Not taking Maths/maths literacy	0,031
		3	Not taking Life Skills	0,031
		4	Not taking Home Language and FAL as subjects	0,031
		5	Taking less than 3 subjects including compulsory subjects	0,031
Learner–class ratio	0,125 Only one applicable to each learner	6	Grade 10 class ratio >40 learners per class	0,125
		7	Grade 11 class ratio >40 learners per class	0,125
		8	Grade 12 class ratio >40 learners per class	0,125
Home language	0,125	9	Not using home language as language of teaching and learning	0,063
		10	Language of instruction not Afrikaans or English	0,063
Sport	0,125	11	Deprived in sport	0,125
Basic services	0,125	12	No gardener in school	0,016
		13	No cleaner in school	0,016
		14	No admin clerk in school	0,016
		15	No security guard in school	0,016
		16	No piped water in school	0,016
		17	No toilet facility in school	0,016
		18	No electricity in school	0,016
Infrastructure	0,125	19	Internet	0,016
		20	No library	0,025
		21	No admin block	0,025
		22	No computer laboratory	0,025
		23	No fencing	0,025
Financial contribution of SGB	0,125	24	No teachers paid by SGB	0,125

Appendix C: Deprivation scores for each indicator per education phase and district

Table C1: Percentage of learners considered deprived for each of the indicators included in the indexes for the foundation education phases

Indicator	Lebo-wa-kgomo	Mo-gala-kwe-na	Mo-pani	Polo-kwane	Sekhu-khun	Tshi-pise Sagole	Tza-noon	Riba Cross	Vhem-be	Water-berg	Total
Over age	2,0	1,7	2,9	2,0	3,1	5,0	1,9	2,6	3,2	4,2	13 111
Maths	1,1	0,7	0,7	0,9	0,8	0,7	0,8	0,8	1,6	0,9	4 452
Life skills	0,7	1,0	1,2	1,5	0,8	0,7	0,8	0,6	1,0	1,1	4 671
Languages	1,1	0,9	1,0	1,6	1,4	1,3	1,4	0,9	1,3	1,0	5 804
Less subjects	1,7	1,3	1,8	2,3	1,7	1,4	1,8	1,2	2,2	1,7	8 714
Home language	19,6	22,5	18,5	18,0	28,4	22,9	20,6	11,7	19,7	28,5	98 235
Sports	94,0	88,5	93,1	89,8	90,1	58,5	92,6	95,5	83,0	82,3	410 557
Internet access	98,7	98,2	98,2	96,2	94,7	98,9	96,7	98,6	99,2	87,8	452 775
Grade R	19,1	17,8	19,9	17,6	17,1	14,7	18,4	19,1	18,8	14,9	356 481
Grade 1	13,0	12,7	17,9	15,0	13,9	10,1	15,3	18,1	14,3	13,6	243 655
Grade 2	13,4	12,9	16,5	12,7	11,3	9,2	13,7	13,7	13,0	14,7	233 383
Grade 3	11,6	11,7	12,3	10,5	10,8	5,9	11,3	11,8	10,3	11,1	209 054
Gardener	80,3	62,0	79,7	51,8	58,9	40,4	77,6	59,4	54,1	64,0	288 645
Admin clerk	89,9	69,2	74,3	69,1	49,1	51,0	62,0	76,5	75,1	60,8	316 013
Cleaner	78,2	81,4	67,8	57,6	58,9	72,2	72,8	72,0	67,8	59,7	309 741
Security guard	63,1	79,5	27,9	68,4	70,5	63,4	29,7	73,0	67,7	87,6	288 562
Computer Lab	80,7	68,2	86,2	61,8	76,5	75,5	74,3	74,3	76,5	69,4	348 597
Library	97,2	85,1	81,5	85,2	79,6	94,4	86,5	84,2	94,6	76,8	402 831
Admin Block	88,5	74,8	77,5	72,5	66,9	72,2	80,4	75,6	72,9	47,5	339 835
Fencing	8,9	12,2	10,6	10,5	10,9	12,0	7,3	4,2	10,8	12,3	47 870
Piped water	42,2	41,4	37,8	20,9	45,2	18,3	28,4	34,0	14,6	17,3	137 749
Electricity	3,7	4,9	4,6	3,5	5,9	2,4	2,3	3,0	0,9	3,5	16 239
Toilet	29,9	26,9	14,3	22,7	24,2	15,6	11,5	16,2	20,7	13,4	94 151
SGB	17,6	9,3	23,1	17,3	13,5	25,1	17,2	21,1	13,0	33,6	384 805

Table C2: Percentage of learners considered deprived for each of the indicators included in the indexes for the intermediate education phases

Indicator	Lebo-wa-kgo-mo	Mo-gala-kwe-na	Mo-pani	Polo-kwane	Sekhu-khun	Tshi-pise Sagole	Tza-noon	Riba Cross	Vhem-be	Water-berg	Total
Over age	7,6	7,2	12,5	8,4	11,7	16,0	8,9	10,1	12,5	13,2	33 087
Maths	3,1	1,9	1,5	2,7	2,3	2,4	2,2	1,8	2,1	2,2	6 641
Life skills	7,7	7,2	7,7	10,1	7,1	12,6	12,2	6,8	11,7	9,1	27 908
Languages	3,8	2,5	2,1	4,2	3,2	3,3	2,7	3,0	3,2	3,4	9 533
NST	7,6	9,5	12,9	13,0	10,8	16,1	18,0	9,5	11,6	10,5	36 012
Social Sciences	7,5	5,1	5,9	5,8	6,5	4,9	4,8	5,0	5,8	6,3	17 633
Less subjects	16,8	16,4	20,9	20,4	18,5	26,0	24,6	17,2	22,3	21,2	61 724
Home language	96,4	91,3	88,4	91,4	89,3	96,1	91,1	92,8	88,8	84,0	271 697
School language	6,9	11,6	15,1	10,0	14,6	5,9	10,7	9,9	14,3	13,8	37 219
Sports	47,0	53,5	59,6	48,8	48,3	31,6	51,3	49,2	52,7	49,7	152 679
Internet access	94,8	95,1	96,1	90,0	91,8	95,9	94,7	95,7	95,5	79,9	280 606
Grade 4	16,2	15,4	19,0	15,9	14,7	9,5	16,5	14,7	15,6	18,1	135 001
Grade 5	14,9	14,5	21,3	17,6	14,3	12,5	18,7	14,2	17,3	17,5	143 862
Grade 6	13,9	16,9	20,7	15,7	14,1	14,0	17,6	17,0	16,4	15,8	141 544
Gardener	79,8	64,5	79,3	54,1	60,5	40,6	77,8	60,3	54,0	61,3	187 809
Admin clerk	89,9	71,4	74,0	69,3	49,7	49,3	64,3	78,1	74,4	60,4	204 417
Cleaner	77,7	82,0	68,3	57,5	59,4	72,1	74,9	71,2	69,1	61,0	201 421
Security guard	65,3	80,4	27,1	68,9	71,6	62,7	29,8	71,6	67,0	89,4	185 954
Computer lab	79,9	67,4	85,7	62,7	76,1	75,6	75,0	72,4	75,9	69,2	223 964
Library	97,1	84,5	80,1	84,0	79,6	93,9	87,0	83,8	93,3	75,2	257 487
Admin Block	87,1	73,8	76,0	72,2	66,8	71,4	79,6	74,5	73,4	47,8	217 653
Fencing	9,8	12,6	9,9	10,3	10,7	11,4	7,6	4,5	13,6	9,1	31 964
Piped water	43,6	42,6	38,3	19,9	43,1	17,6	30,4	34,8	14,5	16,2	87 443
Electricity	6,3	4,9	4,3	3,3	6,1	2,1	3,8	3,8	1,9	3,3	11 695
Toilet	31,9	27,9	14,4	24,5	24,9	15,6	10,6	15,8	22,4	12,9	63 065
SGB	83,0	89,7	77,6	82,4	86,7	76,4	84,5	78,6	86,7	66,1	248 394

Table C3: Percentage of learners considered deprived for each of the indicators included in the indexes for the senior education phases

Indicator	Lebo-wa-kgomo	Mogala-kwena	Mo-pani	Polo-kwane	Sekhu-khun	Tshi-pise Sagole	Tza-noon	Riba Cross	Vhem-be	Water-berg	Total
Over age	22,9	20,9	28,9	21,2	28,0	31,7	23,5	28,8	26,1	26,6	94 949
Languages	6,2	8,4	6,1	7,9	7,6	8,7	5,7	6,6	7,5	7,7	26 765
Maths	2,5	2,2	1,7	2,8	2,6	3,6	1,9	2,4	2,8	2,5	9 283
NS	6,1	9,9	7,9	6,6	8,5	7,0	13,9	6,9	7,2	10,7	29 635
Social sciences	3,6	4,2	3,6	4,4	4,2	4,7	2,8	3,7	3,7	4,1	14 385
Technology	6,8	10,1	8,7	7,4	9,2	8,2	15,2	8,0	7,6	10,4	32 171
EMS	9,2	10,1	8,1	8,3	10,0	10,4	7,6	10,6	8,3	9,9	32 874
Art	51,6	46,7	44,5	42,0	34,9	39,5	26,3	37,6	40,8	36,3	148 711
Life orientation	3,6	3,2	3,2	3,3	3,4	4,5	3,7	3,8	3,6	4,8	13 085
Less subjects	58,7	59,2	53,8	51,4	47,4	50,1	43,7	46,5	49,2	47,6	186 634
Home language	98,5	94,9	96,0	95,4	95,6	97,4	96,0	97,2	95,3	88,8	352 759
School language	5,2	7,9	7,8	6,5	8,0	6,6	5,9	5,5	7,8	6,9	26 302
Sports	38,3	45,8	48,7	39,4	40,2	33,6	47,4	38,7	50,2	36,7	160 625
Grade 7	11,3	12,4	18,5	12,3	13,5	8,3	17,2	12,9	13,5	14,5	54 083
Grade 8	18,5	20,1	23,5	21,2	19,4	26,2	24,3	20,4	24,6	19,2	199 951
Grade 9	34,6	38,4	37,9	36,2	33,6	36,9	39,1	38,8	37,7	28,3	224 410
Gardner	70,7	77,2	82,1	61,6	61,4	56,8	77,6	76,8	53,8	62,6	243 423
Admin clerk	72,9	71,1	65,4	63,9	45,9	45,0	73,8	57,1	52,8	55,2	217 647
Cleaner	72,6	83,4	61,2	59,6	60,7	64,2	59,1	66,9	50,0	63,0	224 201
Security guard	57,4	76,9	26,1	63,7	69,8	39,4	30,5	65,7	43,7	91,2	196 481
Piped water	44,3	42,9	36,4	20,9	48,9	16,7	33,5	33,3	14,0	14,2	108 714
Electricity	3,2	2,1	2,2	3,0	7,6	2,3	1,8	5,9	2,4	1,0	12 427
Toilet	37,3	27,4	13,9	25,6	30,7	26,4	15,0	21,5	19,9	11,5	84 016
Internet access	77,7	74,6	72,2	78,3	75,6	72,4	68,5	80,9	67,5	55,3	268 567
Fencing	17,4	17,8	12,8	9,1	8,2	11,0	10,8	8,6	14,3	10,7	43 520
Computer lab	72,1	67,9	81,5	62,3	74,9	67,3	67,6	76,7	75,7	63,3	266 012
Library	79,1	85,9	79,6	77,5	83,4	88,7	90,7	91,4	91,0	66,2	308 871
Admin block	71,4	66,3	60,8	59,5	61,3	54,6	66,1	66,8	56,6	40,2	222 052
Laboratory	79,1	80,7	84,3	81,8	81,9	74,5	87,7	90,9	85,6	60,4	304 012
SGB	93,0	93,2	86,5	84,1	90,8	76,0	89,0	90,5	91,7	77,6	324 969

Table C4: Percentage of learners considered deprived for each of the indicators included in the indexes for the FET education phase

Indicator	Lebo-wa-kgo-mo	Mo-gala-kwe-na	Mo-pani	Polo-kwane	Sekhu-khun	Tshi-pise Sagole	Tza-noon	Riba Cross	Vhem-be	Water-berg	Total
Over age	27,4	26,3	35,5	28,2	36,2	32,4	31,6	34,8	30,8	28,4	103 114
Languages	1,6	1,6	1,9	1,8	1,9	2,0	2,0	2,4	1,9	2,6	21 030
Maths or Maths literacy	3,1	1,9	2,7	2,6	2,6	3,3	2,6	2,8	3,1	4,4	6 240
Life Orientation	6,3	6,8	6,6	7,0	6,0	5,9	6,2	7,1	5,4	11,6	9 245
Less subjects	9,6	8,9	9,5	9,9	8,5	9,3	9,2	10,4	8,5	15,4	30 727
Home language	97,8	96,9	95,6	95,9	96,3	97,7	95,9	97,1	95,3	87,6	313 579
School language	6,0	5,0	9,1	6,4	7,6	6,0	5,9	5,9	7,6	6,5	23 079
Sports	55,1	52,9	56,6	51,8	54,6	51,4	58,3	48,9	64,2	47,2	183 211
Grade 10	29,2	33,8	38,3	31,6	32,9	45,6	36,6	32,0	43,1	28,5	246 569
Grade 11	18,1	16,1	21,3	20,6	13,0	15,1	22,2	19,3	15,2	15,6	184 655
Grade 12	15,7	12,9	15,4	15,6	12,0	13,3	15,8	11,8	13,2	11,0	211 798
Gardner	64,5	80,4	84,1	64,5	60,9	56,6	73,7	80,7	58,0	60,8	219 796
Admin clerk	65,2	72,3	61,2	61,8	43,6	39,0	73,0	48,0	44,7	56,3	180 050
Cleaner	69,1	83,4	60,8	59,7	63,1	56,9	52,2	64,1	45,2	65,9	192 657
Security guard	55,2	74,8	25,4	63,5	67,6	30,2	29,9	63,5	37,1	89,9	164 336
Piped water	41,5	48,1	37,8	22,6	54,7	17,8	30,6	35,1	12,5	10,6	98 812
Electricity	1,7	1,2	1,9	3,3	7,2	2,7	1,4	8,0	3,2	0,0	11 094
Toilet	40,4	27,6	15,6	26,7	36,7	21,8	18,9	24,1	20,1	11,4	80 653
Internet access	64,2	55,2	53,7	72,3	60,8	46,3	44,8	70,8	43,3	35,9	183 200
Fencing	20,6	20,0	12,8	10,1	8,8	11,2	12,4	12,2	15,8	10,7	42 878
Computer lab	69,4	66,3	79,2	62,1	72,0	66,0	68,0	76,1	75,3	57,5	231 045
Library	73,5	84,1	81,1	75,7	83,0	84,7	93,6	93,8	91,5	61,7	272 679
Admin block	66,8	65,8	56,3	56,6	60,0	48,6	56,5	64,6	48,2	37,3	182 434
Laboratory	72,4	76,6	80,5	77,6	74,9	66,2	83,8	93,6	81,8	50,6	255 188
SGB	95,8	94,8	90,1	85,3	93,1	72,7	90,8	95,4	92,6	78,7	294 476

Appendix D: The 50 schools in each phase that had the highest learner environment deprivation index scores²¹

LEBOWAKGOMO					
Number	NatEmis	phase	% deprived	% of indicators (intensity)	Deprivation Index
1	921230443	FOUNDATION	100,0	61,1	0,611
2	923260543	FOUNDATION	100,0	59,9	0,599
3	921261942	FOUNDATION	100,0	59,8	0,598
4	921231026	INTERMEDIATE	100,0	63,0	0,630
5	923260666	INTERMEDIATE	100,0	60,4	0,604
6	923261218	SENIOR	100,0	70,8	0,708
7	923260796	SENIOR	100,0	67,4	0,674
8	923261041	SENIOR	100,0	66,4	0,664
9	923246693	SENIOR	100,0	65,8	0,658
10	923261096	SENIOR	100,0	65,5	0,655
11	923261218	FET	100,0	68,0	0,680
12	923261812	FET	100,0	66,8	0,668
13	921230207	FET	100,0	65,4	0,654
14	923261188	FET	100,0	65,3	0,653
15	923261201	FET	99,2	65,4	0,648
16	923261096	FET	99,2	65,1	0,646
17	923260796	FET	97,6	65,7	0,642
MOGALAKWENA					
Number	NatEmis	phase	% deprived	% of indicators (intensity)	Deprivation Index
1	921142249	FOUNDATION	100,0	62,0	0,620
2	921140120	FOUNDATION	100,0	60,7	0,607
3	921120843	FOUNDATION	100,0	59,4	0,594
4	906120645	INTERMEDIATE	100,0	62,5	0,625
5	921121396	INTERMEDIATE	100,0	62,5	0,625
6	921120249	INTERMEDIATE	100,0	59,6	0,596
7	921121249	INTERMEDIATE	100,0	59,5	0,595
8	921120881	SENIOR	100,0	72,9	0,729
9	921121464	SENIOR	100,0	70,0	0,700
10	921120027	SENIOR	100,0	68,7	0,687
11	921141116	SENIOR	100,0	66,3	0,663
12	921140731	SENIOR	100,0	66,0	0,660
13	921120751	SENIOR	98,1	67,3	0,660

²¹ Schools for which no or fewer than 20 learners participated in the LLECS were excluded from the analysis.

14	921120898	SENIOR	99,7	66,2	0,660
15	906120645	SENIOR	100,0	65,5	0,655
16	906121556	FET	100,0	66,5	0,665
17	921142773	FET	100,0	66,4	0,664
18	921120577	FET	100,0	66,0	0,660
19	921120690	FET	100,0	65,2	0,652
20	921120898	FET	100,0	65,1	0,651
21	906120409	FET	100,0	62,5	0,625
22	921140984	FET	100,0	62,0	0,620

MOPANI

Number	NatEmis	phase	% deprived	% of indicators (intensity)	Deprivation Index
1	926541068	FOUNDATION	100,0	65,5	0,655
2	912520580	FOUNDATION	100,0	62,6	0,626
3	912520443	FOUNDATION	97,5	62,8	0,612
4	913420253	FOUNDATION	100,0	61,0	0,610
5	916420468	FOUNDATION	100,0	60,7	0,607
6	916420727	FOUNDATION	100,0	60,1	0,601
7	916420536	FOUNDATION	100,0	60,0	0,600
8	915541112	FOUNDATION	98,5	59,7	0,588
9	994402301	FOUNDATION	99,2	58,6	0,581
10	926541068	INTERMEDIATE	99,6	64,7	0,644
11	916411129	INTERMEDIATE	98,4	62,8	0,618
12	916410577	INTERMEDIATE	97,4	62,2	0,606
13	919341919	INTERMEDIATE	100,0	59,9	0,599
14	918521309	SENIOR	100,0	72,5	0,725
15	918520764	SENIOR	100,0	70,3	0,703
16	921410065	SENIOR	99,2	69,4	0,688
17	916410393	SENIOR	100,0	68,4	0,684
18	916410805	SENIOR	99,6	66,7	0,665
19	916410911	SENIOR	98,6	67,1	0,661
20	916411310	SENIOR	99,7	66,2	0,660
21	916410744	SENIOR	100,0	65,9	0,659
22	918512138	SENIOR	100,0	65,9	0,659
23	915540089	SENIOR	95,6	68,9	0,659
24	916410898	SENIOR	100,0	65,8	0,658
25	916410553	SENIOR	100,0	65,8	0,658
26	916411136	SENIOR	100,0	65,7	0,657
27	918521408	SENIOR	100,0	65,7	0,657
28	915530013	FET	100,0	68,4	0,684

29	915540348	FET	100,0	64,8	0,648
30	918521309	FET	96,7	66,0	0,639
31	915530297	FET	98,2	64,3	0,631
32	916410393	FET	95,4	65,5	0,625
33	919341619	FET	100,0	61,8	0,618
34	915530129	FET	94,0	65,6	0,617
35	916411013	FET	100,0	61,5	0,615
POLOKWANE					
Number	NatEmis	phase	% deprived	% of indicators (intensity)	Deprivation Index
1	920211459	FOUNDATION	100,0	63,0	0,630
2	922221416	FOUNDATION	100,0	59,1	0,591
3	920210647	FOUNDATION	96,2	61,1	0,588
4	922220798	FOUNDATION	99,7	58,4	0,582
5	923240426	FOUNDATION	100,0	58,0	0,580
6	992201503	FOUNDATION	100,0	57,9	0,579
7	923240259	INTERMEDIATE	100,0	64,5	0,645
8	992201503	INTERMEDIATE	100,0	64,5	0,645
9	923241399	INTERMEDIATE	98,5	63,4	0,624
10	922220576	INTERMEDIATE	100,0	60,8	0,608
11	920210227	INTERMEDIATE	99,7	60,6	0,604
12	923240242	INTERMEDIATE	100,0	59,7	0,597
13	904242309	INTERMEDIATE	97,3	61,3	0,596
14	920211145	INTERMEDIATE	100,0	59,3	0,593
15	922250676	SENIOR	100,0	71,0	0,710
16	922220880	SENIOR	100,0	66,9	0,669
17	920211664	SENIOR	100,0	66,3	0,663
18	919341152	SENIOR	100,0	66,1	0,661
19	922250126	SENIOR	100,0	65,5	0,655
20	992201502	FET	100,0	70,8	0,708
21	923241108	FET	100,0	66,7	0,667
22	920211541	FET	97,2	67,6	0,657
23	920211664	FET	100,0	64,8	0,648
24	922250096	FET	100,0	64,7	0,647
25	919341152	FET	100,0	64,4	0,644
26	922251020	FET	99,4	64,7	0,643
27	922250126	FET	99,7	64,5	0,643
28	920210630	FET	99,2	62,1	0,616
29	920211671	FET	100,0	61,4	0,614

RIBA CROSS					
Number	NatEmis	phase	% deprived	% of indicators (intensity)	Deprivation Index
1	925620361	FOUNDATION	100,0	60,4	0,604
2	925631145	INTERMEDIATE	100,0	61,5	0,615
3	925621049	SENIOR	100,0	68,7	0,687
4	925631527	SENIOR	99,4	68,2	0,678
5	925620541	FET	97,1	65,8	0,640
6	925621186	FET	99,6	62,4	0,621
SEKHUKHUNE					
Number	NatEmis	phase	% deprived	% of indicators (intensity)	Deprivation Index
1	996606628	FOUNDATION	100,0	67,8	0,678
2	924651545	FOUNDATION	100,0	64,4	0,644
3	924640507	FOUNDATION	100,0	62,0	0,620
4	996606622	FOUNDATION	100,0	61,3	0,613
5	996606804	FOUNDATION	100,0	60,6	0,606
6	996606830	FOUNDATION	100,0	60,4	0,604
7	925660990	FOUNDATION	100,0	59,8	0,598
8	996603302	FOUNDATION	99,3	59,2	0,588
9	925610520	FOUNDATION	100,0	58,7	0,587
10	925610445	FOUNDATION	99,5	58,8	0,584
11	925660198	FOUNDATION	100,0	58,4	0,584
12	924651576	FOUNDATION	97,9	59,6	0,583
13	996606632	FOUNDATION	100,0	57,8	0,578
14	996606612	FOUNDATION	94,7	61,0	0,578
15	925660501	INTERMEDIATE	100,0	67,8	0,678
16	996606624	INTERMEDIATE	100,0	63,7	0,637
17	924650368	INTERMEDIATE	100,0	61,8	0,618
18	996606605	INTERMEDIATE	99,7	60,8	0,606
19	925661030	INTERMEDIATE	100,0	60,0	0,600
20	925660341	INTERMEDIATE	100,0	60,0	0,600
21	925661702	SENIOR	100,0	70,9	0,709
22	924640439	SENIOR	100,0	70,9	0,709
23	925661337	SENIOR	100,0	67,0	0,670
24	924640897	SENIOR	100,0	65,9	0,659
25	925660037	FET	99,2	65,5	0,650
26	925660327	FET	100,0	63,8	0,638
27	924640897	FET	99,1	63,9	0,634
28	925661160	FET	100,0	63,2	0,632

TSHIPISE-SAGOLE					
Number	NatEmis	phase	% deprived	% of indicators (intensity)	Deprivation Index
1	928310011	FOUNDATION	99,7	60,7	0,605
TZANEEN					
Number	NatEmis	phase	% deprived	% of indicators (intensity)	Deprivation Index
1	915531306	FOUNDATION	100,0	63,3	0,633
2	905340548	FOUNDATION	100,0	61,9	0,619
3	918511104	FOUNDATION	100,0	58,7	0,587
4	915530938	INTERMEDIATE	95,2	63,6	0,605
5	918510941	SENIOR	100,0	68,4	0,684
6	918510422	SENIOR	100,0	68,2	0,682
7	918512220	FET	100,0	64,1	0,641
8	918510941	FET	100,0	62,7	0,627
9	918510422	FET	100,0	62,1	0,621
10	915530099	FET	94,8	65,4	0,620
VHEMBE					
Number	NatEmis	phase	% deprived	% of indicators (intensity)	Deprivation Index
1	911360115	FOUNDATION	99,2	62,9	0,624
2	911360474	FOUNDATION	98,6	62,9	0,620
3	928331216	FOUNDATION	100,0	60,4	0,604
4	928330602	FOUNDATION	100,0	59,9	0,599
5	912521088	FOUNDATION	96,0	61,8	0,593
6	911361279	FOUNDATION	99,3	59,6	0,592
7	930351737	FOUNDATION	99,7	59,2	0,590
8	911360283	FOUNDATION	98,8	59,5	0,588
9	911361545	FOUNDATION	100,0	57,8	0,578
10	905332066	INTERMEDIATE	100,0	66,4	0,664
11	912520993	INTERMEDIATE	99,3	65,9	0,655
12	928330602	INTERMEDIATE	100,0	65,2	0,652
13	930321394	INTERMEDIATE	100,0	64,1	0,641
14	930321929	INTERMEDIATE	100,0	63,6	0,636
15	911361583	INTERMEDIATE	100,0	63,6	0,636
16	911360146	INTERMEDIATE	100,0	63,4	0,634
17	911361507	INTERMEDIATE	99,3	63,8	0,633
18	928332097	INTERMEDIATE	100,0	62,7	0,627
19	911360238	INTERMEDIATE	100,0	62,3	0,623
20	912520726	INTERMEDIATE	100,0	62,2	0,622

21	912520658	INTERMEDIATE	99,2	62,5	0,619
22	911360726	INTERMEDIATE	100,0	61,7	0,617
23	912520429	INTERMEDIATE	100,0	61,4	0,614
24	912520719	INTERMEDIATE	96,6	63,5	0,613
25	928330206	INTERMEDIATE	99,6	61,3	0,610
26	911361491	INTERMEDIATE	99,0	61,5	0,609
27	911361309	INTERMEDIATE	100,0	60,6	0,606
28	905360160	INTERMEDIATE	99,1	61,1	0,605
29	930351197	INTERMEDIATE	100,0	60,3	0,603
30	911361750	INTERMEDIATE	100,0	59,5	0,595
31	905332066	SENIOR	100,0	70,4	0,704
32	912520153	SENIOR	100,0	69,7	0,697
33	912520719	SENIOR	100,0	68,4	0,684
34	931341015	SENIOR	100,0	68,3	0,683
35	928331230	SENIOR	100,0	67,7	0,677
36	911321660	SENIOR	98,8	68,1	0,673
37	911361828	SENIOR	99,4	67,3	0,669
38	993304501	SENIOR	97,1	68,1	0,662
39	928332011	SENIOR	100,0	65,7	0,657
39	930351470	FET	99,7	69,1	0,688
40	912520153	FET	100,0	66,3	0,663
41	905361637	FET	99,2	65,8	0,653
42	905321592	FET	100,0	64,9	0,649
43	912520160	FET	100,0	63,7	0,637
44	931341015	FET	99,5	62,7	0,624
45	930350071	FET	96,8	64,5	0,624
46	931322029	FET	98,6	62,6	0,617
WATERBERG					
Number	NatEmis	phase	% deprived	% of indicators (intensity)	Deprivation Index
1	921110846	FOUNDATION	100,0	62,2	0,622
2	921111085	INTERMEDIATE	95,6	64,8	0,619
3	991103401	INTERMEDIATE	100,0	61,7	0,617
4	910130802	INTERMEDIATE	100,0	60,5	0,605
5	991103401	SENIOR	100,0	65,9	0,659