

## **Introduction**

In October 2007 the Department of Education conducted the second cycle of Systemic Evaluations at the Foundation Phase (Grade 3) level, with technical support from an independent agency – JET Educational Services. A random sample of 53 972 grade 3 learners from 2 327 primary schools participated in the survey. In a replica of the 2001 study, which enables a comparison over time, the learners were assessed through standardised written exercises to measure their levels of achievement in respect of the grade appropriate curriculum outcomes for literacy and numeracy.

The report shows a positive improvement in the performance of learners in both literacy and numeracy levels. The overall mean performance in literacy improved by 6 percent (from 30% to 36%) and the numeracy levels by 5 percent (from 30% to 35%). Although the levels of performance are still too low for any degree of complacency, it does show a significant increase in the abilities of our grade 3 learners. The Organisation for Economic Co-operation and Development (OECD) Review Team, in South Africa for the launch of their report, noted that “this represents an unprecedented shift at a systemic level”, and was one which the country could justifiably be proud of. They also expressed the hope that the Foundations for Learning Campaign, launched earlier this year, would build on these trends and see further improvements.

Some of the features of the report include:

- a wide range of performance levels across provinces, ranging from 24% in Limpopo to 49% in the Western Cape;
- the fact that girls tended to do better than boys in both literacy and numeracy;
- a good spread of schools and learners that were functioning at outstanding levels of performance in literacy and numeracy.

This second round of Systemic Evaluations provides the Department, as well as schools and teachers, who will be given extensive feedback on their results, with the necessary information to guide our ongoing interventions aimed at laying solid foundations for learning in the Foundation Phase by 2011.

### **The purpose of the report**

Baseline measures at grades 3 and 6 were established in 2001 and 2004, respectively. The survey covered in this report was a second cycle at the grade 3 level, and was conducted late in 2007. This report covers the first phase of reporting, which relates specifically to learner achievement. It is released to provide timely feedback to schools, to teachers and to the system, with a view to initiating prompt and appropriate interventions to improve the foundations for quality education.

The second phase will be a comprehensive report in March 2009. This report will provide the context within which learner performance should be understood. Previous surveys suggested that learner performance was influenced by:

- the language in which learning was experienced;
- poverty levels, as manifested by proxies such as the number of books available at home, level of education of parents, and the nutritional status of learners;
- the nature and duration of time-on-task in the school; and
- the level and use of resources at the school.

The comprehensive report will either confirm or deny the impact of such influences, and will therefore indicate some of the areas where current interventions by the Department need to be strengthened, or where different strategies should be considered.

### **Instruments**

Systemic evaluation tests are based on the National Curriculum Statement and focus on skills and competencies that can be assessed through paper-and-pencil exercises. To ensure the comparability of the results for tracking progress over time, the essential design, instruments and general methodology used in the baseline study of 2001 were retained in the 2007 survey. Where necessary, careful modifications were made with due consideration to retaining the integrity of both the process and the instruments. JET Education Services provided technical assistance while curriculum specialists from

national and provincial levels of the Department served as a reference group in the modification process.

### Sample Design

The “desired target population” were all learners at grade 3 level during September/October 2007 who were attending registered mainstream public schools. The “excluded population” were learners in independent schools, special schools and public mainstream schools with grade 3 enrolments less than 15 learners. The difference between the “desired” and the “excluded” populations then formed the “defined target population” from which the sample was drawn.

Table 1 shows the achieved school and learner sample sizes per province and overall.

**Table 1: Sample Size per Province and Overall**

As shown in Table 1, 54 449 learners from 2 355 schools participated in the survey. The participation rate was around 96% for schools and 89% for learners.

### Data collection, coding, capturing and analysis

Personnel who had received thorough training for this purpose collected the data in the sampled schools. The collected data was

Province	No. of Schools	No. of Learners
Eastern Cape	565	12473
Free State	132	3055
Gauteng	196	4863
KwaZulu-Natal	516	12338
Limpopo	307	7190
Mpumalanga	228	4737
Northern Cape	116	2767
Northwest	132	3137
Western Cape	136	3392
<b>South Africa</b>	<b>2328</b>	<b>53952</b>

coded and scored with strict continuous quality assurance provided by JET. JET also facilitated, supervised and assured the quality of capturing the coded data. Rigorous data analysis techniques based on both classical and modern (item-response) theories were used to analyze the data.

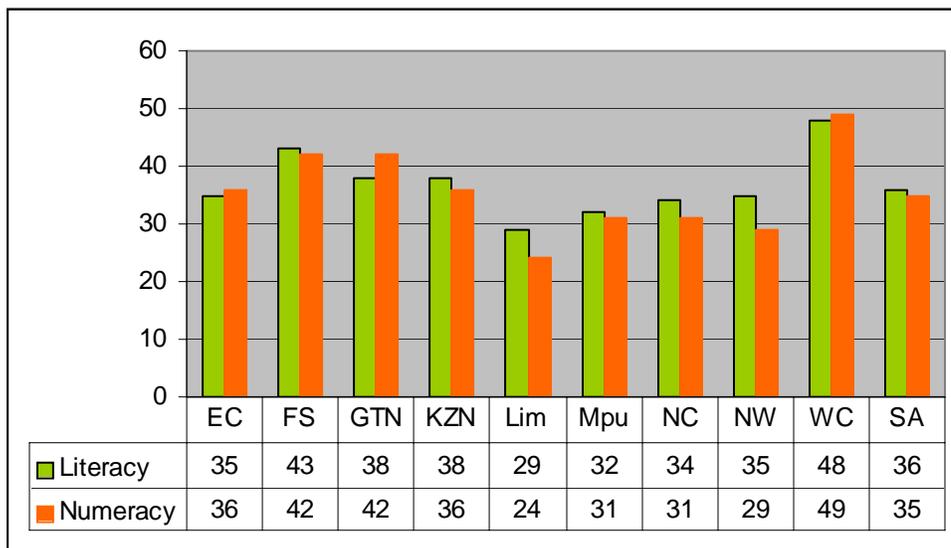
## Outline of the Report

In this report key findings on achievement of learning outcomes have been reported mainly in descriptive statistics such as mean or average scores and frequencies and are presented in tables, graphs and text for easy access to end-users of this information.

## Key Findings

### Overall achievement

Overall achievement in 2007 for each province and national has been summarized in Figure 1.



**Figure 1: Overall Achievement for Each Province and National (%)**

The overall mean scores at national level were 36% for literacy and 35% for numeracy. At provincial level the highest achievement was in Western Cape at 48% in literacy and 49% in numeracy, followed by Free State at 43% in literacy and 42% in numeracy and third was Gauteng at 38% in literacy and 42% in numeracy. For the rest of the provinces the scores ranged from 38% in literacy in KwaZulu-Natal to 24% in numeracy for Limpopo. As reflected in Figure 1, overall mean scores tended to be similar for literacy and numeracy in all but three provinces.

Individual school and learner performance ranged from “not achieving” the learning outcomes (mean scores less than 35%) to “outstanding performance” (mean scores equal to or greater than 70%). The following breakdown illustrates the range of performance among the schools and the learners.

### **Number of Schools and Learners Who Achieved the “50% Benchmark”**

One of the goals in the Foundations for Learning Campaign launched by the Minister of Education in March 2008 is to ensure that by 2011 no learner in the primary school sector should function below the minimum achievement level, which is set as 50% in standardized national assessments. This study could provide helpful indications of where the campaign should focus in pursuing this goal. The number of whole sampled schools and individual learners who achieved mean scores of 50% and above has been shown in Table 2.

**Table 2: Schools and Learners Achieving the 50% Benchmark**

From Table 2, 16 570 learners distributed among 455 schools are performing at or above the minimum achievement level in either literacy, or numeracy or in both. Further analysis of		<b>No. of Schools</b>	<b>No. of Learners</b>
	Literacy	50	4057
	Numeracy	115	3976
	Both literacy and numeracy	290	8537
	<b>Total</b>	<b>455</b>	<b>16570</b>

categories of performance (percentiles) indicated that performance in numeracy was more variable than in literacy. Thus learners at the 50<sup>th</sup> percentile or bottom half of the performance scale are functioning relatively better in literacy than in numeracy while for the learners at the top end this variation was reduced significantly.

### **Number of Schools and Learners Who Achieved Outstanding Performance**

According to the National Protocol on Assessment, “outstanding performance” for grade 3 learners is a mean score of 70% and above. Using this categorization as a guide, the

numbers of schools and individual learners who are functioning at the “outstanding performance” level have been shown in Table 3.

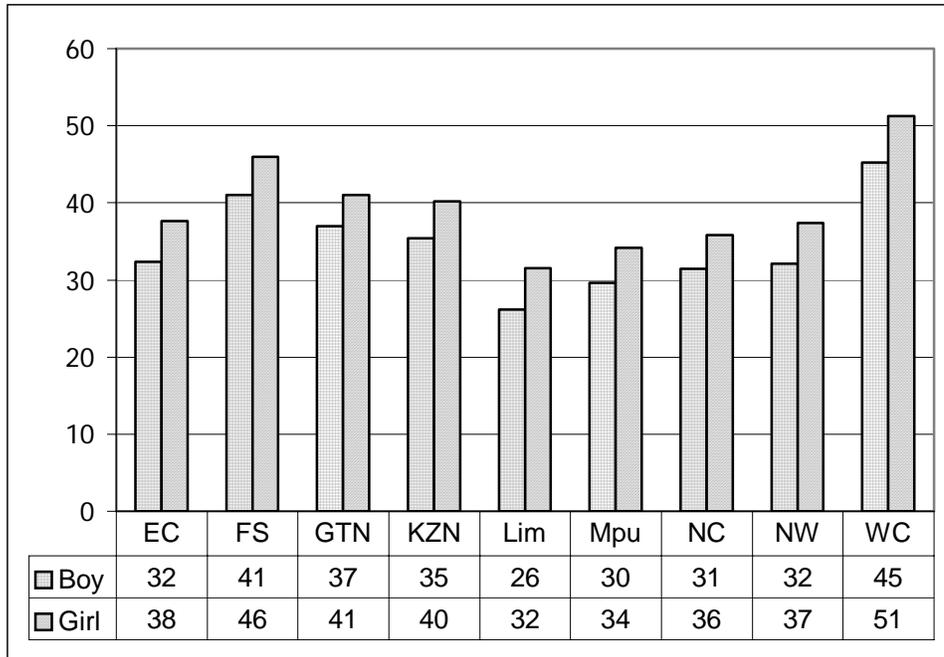
**Table 3: Outstanding Performance**

	No. of Schools	No. of Learners
Literacy	4	626
Numeracy	80	2706
Both literacy and numeracy	61	2091
<b>Total</b>	<b>145</b>	<b>5423</b>

The totals in the last row of Table 3 translate to 148 schools (about 6 percent of the sample) performing excellently. For individual learners the number was 5 423 (about 10% of the sample). There was, therefore, a higher percentage of excellent individual performers than excellent whole schools. Stated differently, this means that there were noticeably many individual learners who performed excellently even in schools that were not necessarily excellent performers as institutions.

**Provincial mean scores by gender**

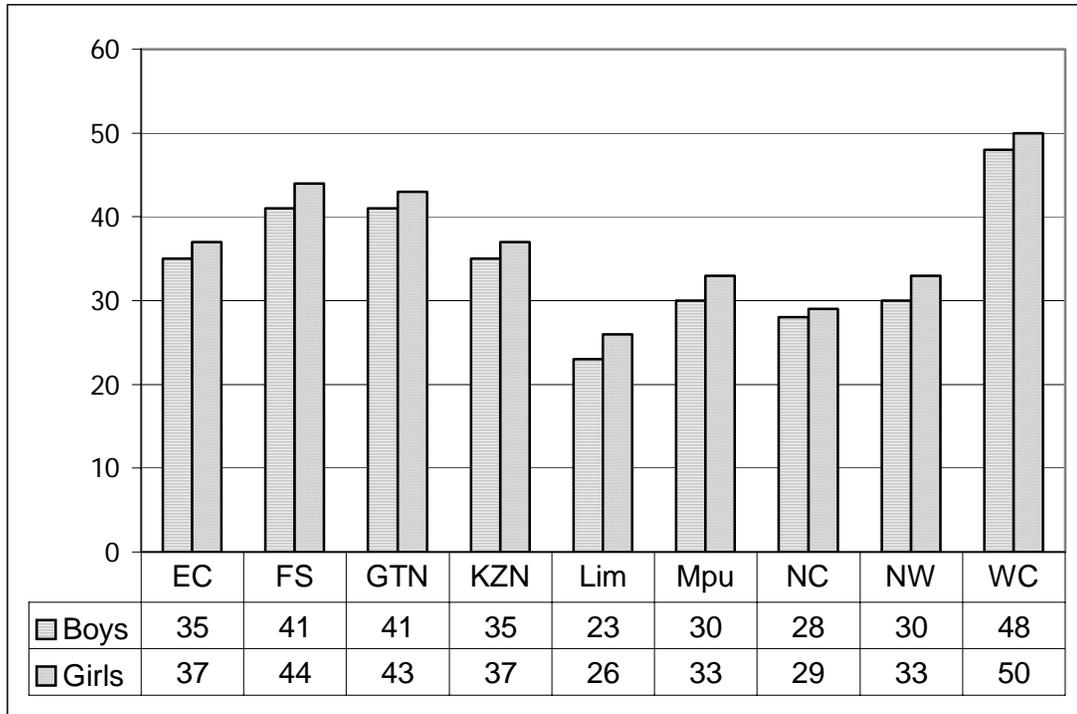
In Figure 2, literacy achievement mean scores have been summarized by gender for each province.



**Figure 2: Literacy Mean Scores by Gender (%)**

Generally, girls tended to achieve higher scores than boys in literacy. The highest mean scores for girls were 51% in Western Cape and 46% in Free State. For boys the highest mean scores were 45% in Western Cape and 41% in Free State. The lowest mean score in literacy was for boys at 26% in Limpopo.

Performance by gender in numeracy, as shown in Figure 3, followed a similar pattern as in literacy above although the mean differences were much lower.



**Figure 3: Numeracy Mean Scores by Gender (%)**

### **Skills Audit: What Were Learners Able/Unable to Do?**

The systemic evaluation assessment frameworks specify the competencies or skills that learners were expected to demonstrate in answering the test questions. The competencies, also defined as assessment standards, are grouped according to the broad learning outcomes in the National Curriculum Statement. The literacy competencies that learners were expected to demonstrate have been shown below.

### **Key Literacy competencies at Grade 3**

<b>Learning Outcome</b>	<b>Learners had to demonstrate in writing: -</b>
Reading and Viewing	Ability to make meaning from visual cues (pictures). Ability to read pictorial information on their own and respond to written questions. Knowledge of concepts such as: quantity, size, direction, colour, time, etc.
Creative Writing	Ability to formulate own text – with appropriate

<b>Learning Outcome</b>	<b>Learners had to demonstrate in writing: -</b>
Thinking and Reasoning	language conventions - using pictures as a prompt. Ability to interpret and write text in own words to show comprehension. Understanding and use of language for logic and reasoning.

Learner performance varied widely across the nine provinces. In all provinces performance in skills relating to “Reading and Viewing” was the highest at 56% in Western Cape and the lowest was 34% in Limpopo. The lowest performance was in high order skills of “Thinking and Reasoning” where learners were required to read and write independently in a logical fashion using correct language conventions such as grammar, punctuation marks and tense. Mean scores in this category of skills ranged from 34% in the Western Cape to 18% in Limpopo

Numeracy competencies that learners were expected to demonstrate have been shown below.

### **Key Numeracy competencies at Grade 3**

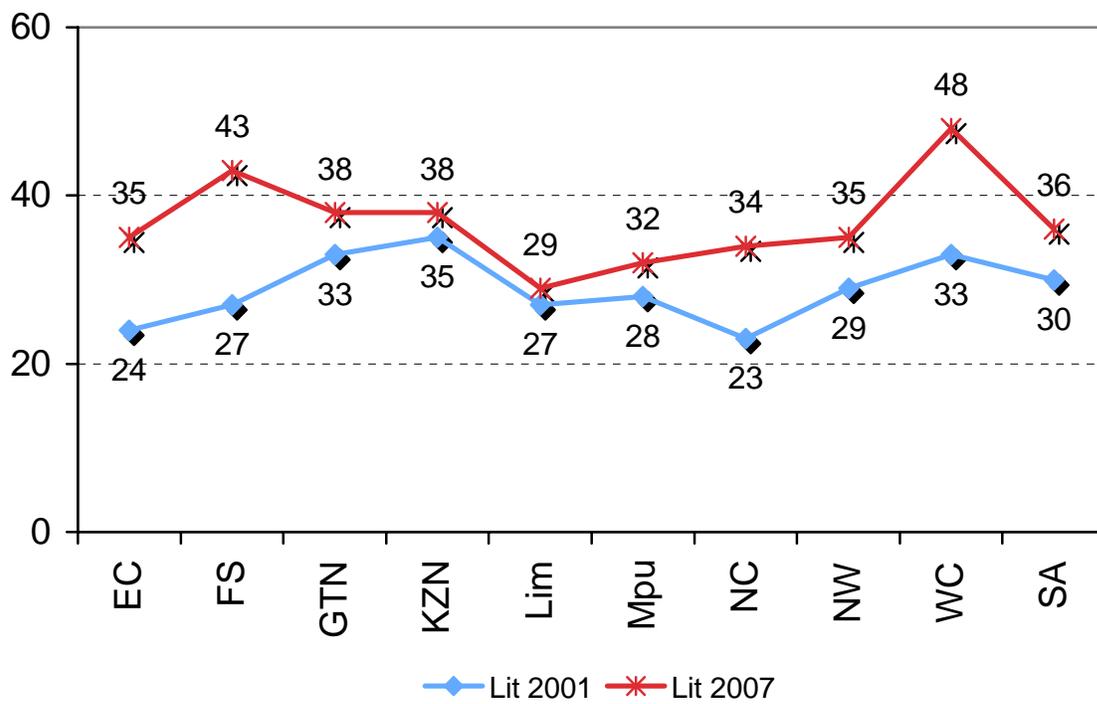
<b>Learning Outcome</b>	<b>Learners had to demonstrate in writing: -</b>
Numbers, Operations and Relationships	Ability to count objects in multiples. Recognition of number patterns and place value of digits. Knowledge of how to represent fractions. Ability to perform basic calculations (i.e. add, subtract, multiply and divide). Ability to solve simple problems that involve money.
Patterns, Functions and Algebra	Ability to extend simple patterns represented by numbers, pictures of objects and shapes.
Space and Shape	Describe, sort and compare two-dimensional shapes.

<b>Learning Outcome</b>	<b>Learners had to demonstrate in writing: -</b>
Measurement	Ability to carry out calculations that involve measures of time, including converting between hours and minutes.
Data Handling	Ability to read and interpret data in bar graphs.

The findings show that performance in numeracy competencies on “Space and Shape” for all the provinces was the highest. Mean score percentages on these competencies ranged from 65% in Western Cape to 35% in Limpopo. The lowest performance was in the knowledge of “Patterns, Functions and Algebra” - and this applied to all the provinces - with

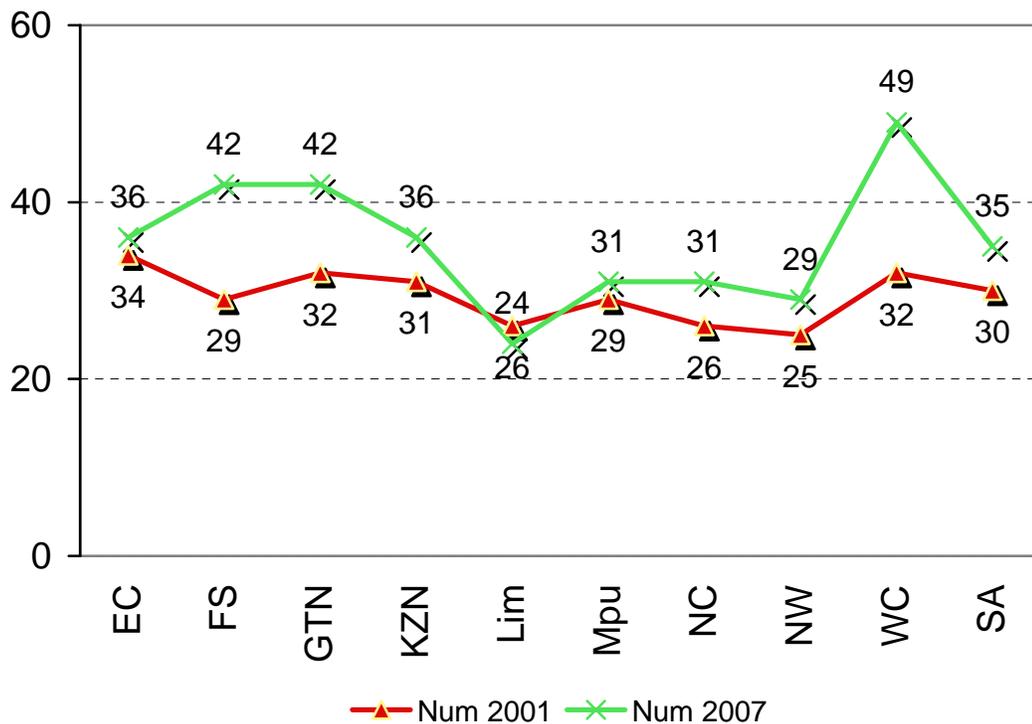
#### **Some of the observed changes since 2001**

Some of the observed changes in performance, measured in mean score percentages, between the 2001 and 2007 surveys have been shown in Figures 4 and 5 for literacy and numeracy, respectively. The comprehensive report will provide some insight into contextual factors that could explain the observed patterns.



**Figure 4: Mean Literacy Scores in 2001 and 2007 (%)**

The overall mean literacy scores increased from 30% in 2001 to 36% in 2007. From Figure 4, performance in literacy improved in all provinces with margins ranging from 2 percent in Limpopo to 15% in Western Cape.



### **Figure 5: Mean Numeracy Scores in 2001 and 2007 (%)**

From Figure 5 overall mean scores in numeracy increased by 5 percent between 2001 and 2007. With the exception of a 2 percent dip in Limpopo, performance in individual provinces generally improved by a maximum of 17% in the Western Cape between the two surveys.

Overall, the mean percentage scores improved by 6 percent in literacy and 5 percent in numeracy. Except for the numeracy mean scores which dipped by 2 percent in Limpopo, provincial mean scores in each of literacy and numeracy showed unequal improvements. Comparative analysis of contextual factors in the comprehensive report could show whether the apparent changes could be associated with any specific conditions or activities.

### **Conclusion**

The report shows a wide ranging performance pattern in grade 3 literacy and numeracy. The overall mean performance in both literacy and numeracy was still low at 36% and 35%, respectively. Although there is improvement on the 2001 performance, there is still urgent need to improve performance in these critical foundational skills.

In addition to providing an overview of performance in the schools, the study also identifies specific critical competencies that need to be emphasized in order to improve performance in the foundational skills of literacy and numeracy.

The survey findings provide a valuable benchmark for monitoring progress in learning outcomes in the General Education and Training band.