



Southern and Eastern Africa Consortium  
for Monitoring Educational Quality

## Quality of Primary School Inputs in Zambia

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### Introduction

This paper highlights the quality of three primary school inputs in Zambia in relation to the nation's defined benchmarks. The three inputs are: basic learning materials, mathematics textbooks, and class size.

These three indicators are described in the section titled Selected Indicators, where it is also shown how they are related to the quality of education. The data used in this paper were collected in 2007 from 2,895 Grade 6 pupils in 157 primary schools in all the nine provinces of Zambia. This was as part of a major international study known as the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) III Project. The SACMEQ III Project sought to examine the quality of education provided in primary schools in Zambia and 14 other African school systems.

The results in this paper cover Zambia as a whole and are then further disaggregated by province, school location (rural versus urban), and type of school (government versus private). The results from the SACMEQ II Project (2000) are also provided, to enable monitoring the general trend in the provision of the selected inputs in primary schools in Zambia between 2000 and 2007.

### Background

In 2002, the Zambian Government introduced Free Primary Education (FPE) in an effort to realize Universal Primary Education (UPE) and to attain the goal of Education for All (EFA) and the Millennium

Development Goals (MDG). The FPE initiative was seen as good strategy to attain these goals, because it was considered that most parents were failing to enroll their children in schools due to poverty. Consequently, all fees were waived in all government (public) schools. In addition, rules governing school uniforms were relaxed, and it was no longer compulsory for pupils to have uniforms to access education. Schools were instructed to unconditionally re-admit pupils who had dropped out from school. This meant that no child, especially from poor families, would be denied access to education, because of a lack of school fees, school uniform or for any other reasons.

Before the introduction of FPE, schools were responsible for collecting funds from parents for learning materials and other operational expenses, while the government was mainly responsible for the salaries of teaching staff. The government also provided some grants to schools to cater for basic operational expenses. In addition, schools were allowed to recruit extra teachers – paid by parents through Parent-Teachers Associations (PTA) – to cater for shortages. However, under the FPE policy, schools receive grants from the government and they are discouraged from collecting funds from parents. Moreover, the government took over the responsibility of providing schools with teaching and learning materials, such as posters, maps, teachers' guides, exercise books, pencils, and erasers.

The amount of funds provided to public schools under FPE varies from school to school and depends on several factors, such as enrolments, distance of school from the district headquarters, and gender parity. The Ministry of Education (MoE) has engaged a consultant

to determine the unit cost per pupil at the different levels of education. On average, K5,400 – about 1.3 United States dollars (US\$) – is allocated to each primary school pupil for books and other materials per year. Private schools in Zambia do not receive any funds from the government.

Apart from the provision of the grants mentioned above, and the payment of teachers' salaries, the government is also mainly responsible for the improvement of the existing school facilities, the construction of new classrooms, and new schools through the Infrastructure Development Plan (IDP). Schools can also access government funds for rehabilitation and construction through the Constituency Development Fund (CDF), a kitty that is managed by the area member of parliament.

If a school wishes to charge additional levies, for example, to employ additional teachers or to build teachers' houses, the school head has to convince the parents to agree to the additional fees, and then get approval from the education authorities through the District Education Board Secretary (DEBS) and the Provincial Education Office (PEO).

In Zambia, the procurement of textbooks and other learning materials is decentralized. Funds for the procurement of books and other learning materials are channeled through the DEBS. Schools identify the books and materials that they need and then the DEBS procure these items for the schools. However, in some cases, the DEBS disburses the funds to the schools, which procure the learning materials directly. For textbooks, book publishers have also been allocated zones in which to supply the required textbooks. This has facilitated easy and quick procurement of books and other learning materials. However, there are still challenges that need to be

sorted out in order to ensure efficiency and effectiveness in the whole procurement process.

The introduction of the FPE policy resulted in a high influx of new pupils into schools, exerting pressure on the existing resources. The enrolment of primary school pupils increased from 1,589,544 in 2000 to 2,822,759 in 2007 (MoE, 2000 and 2007). Consequently, there are concerns that this huge increase in pupil enrolment has not been matched by a sufficient increase in budgetary allocation to the education sector. In particular, there are concerns that the quality of the public primary schools in Zambia has declined under FPE, because of congestion in classes, high pupil-teacher ratios, and inadequate school teaching and learning materials. Most of these concerns, however, are based on anecdotal evidence.

The SACMEQ data are ideal for examining these concerns about the quality of school inputs based on research evidence, for at least two reasons. Firstly, the data were collected using modern scientific sampling techniques that are known to be reliable. Secondly, for Zambia, the data were already available before the introduction of FPE (SACMEQ II data, 2000) and then after the introduction of FPE (SACMEQ III, 2007). This made it possible to monitor the quality of school inputs in Zambia before and after the introduction of FPE.

## Selected Indicators

The three selected indicators of the quality of school inputs are: (a) basic learning materials, (b) mathematics textbooks, and (c) class size. The descriptions of these three indicators are provided in Table 1 below together with the set benchmarks for Zambia.

**Table 1: National Benchmarks for the Selected Indicators of the Quality of Education**

Selected Indicator	Description of the Indicator	National Benchmark
Basic learning materials	Pupil has at least one exercise book, a pencil or a pen, and a ruler	100%
Mathematics textbooks	Pupil has sole use of a mathematics textbook (or pupil shares a mathematics textbook with one other pupil) during mathematics lessons	100%
Grade 6 class size	Average number of Grade 6 pupils per class	40

SOURCE: MoE, 1987.

Basic learning materials (that is, possession of at least one exercise book, something to write with, and a ruler) are considered crucial to ensure that the pupils participate reasonably in learning activities in the classrooms. Therefore, it is desirable for all pupils to have these materials. A ruler is especially important for mathematics and science lessons, particularly for the upper primary school classes (Grades four to eight). Likewise, it is desirable for each pupil to have sole use of a textbook (especially for the core subjects, such as reading, mathematics, and science), because research evidence has shown that sole use of textbooks is essential for effective teaching and learning in the classroom. Sole use of textbooks is also preferable, because it enables pupils to undertake academic activities at home, such as doing homework and revising school work.

Concerning class size, research evidence shows that lower values are desirable for better quality education. It is thought that, to a certain limit, lower values on this indicator are associated with more interaction between teachers and pupils, resulting in better quality education. Class size is also a key indicator for checking if expansion in participation rates is accompanied by adequate provision of classrooms. The recommended class size for primary schools in Zambia is 40 pupils per class.

The pupil-teacher ratio is an indicator that is closely associated with class size — though the former provides information about the adequacy of the provision of teachers, while the latter gives information about the adequacy of the provision of classrooms. However, for the current study, data on Zambian pupil-teacher ratios in 2007 were not available for technical reasons.

## Key Findings

The data on the three selected inputs were analyzed and the results are depicted in Figures 1 to 4.

### Basic Learning Materials

In 2007, only 59 percent of Grade 6 pupils had at least one exercise book, a pencil or a pen, and a ruler. In

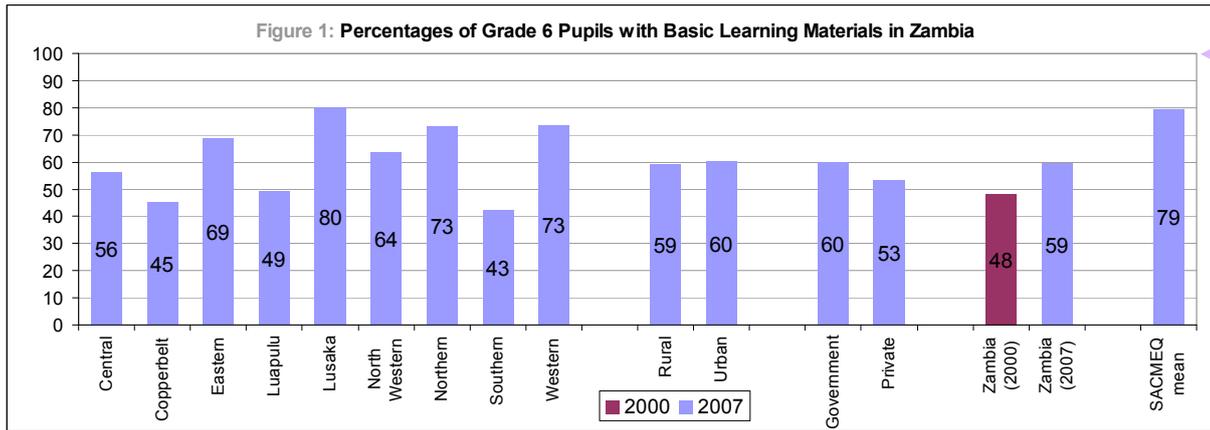
other words, around two in every five pupils (41%) did not have all the three basic learning items that were considered necessary for effective participation in classroom activities. There were considerable variations among provinces. Lusaka (80%) and Southern (43%) provinces recorded the highest and lowest percentages, respectively. There was little variation between pupils in rural (59%) and urban schools (60%). However, there was a notable difference between government (60%) and private schools (53%) in the provision of these three basic learning materials.

On average, 79 percent of the pupils in all the SACMEQ countries had basic learning materials. This implied that the overall situation in SACMEQ countries was generally better than in Zambia. Between 2000 and 2007, the percentage for Zambia went up by 11 points, which meant that the situation had improved substantially.

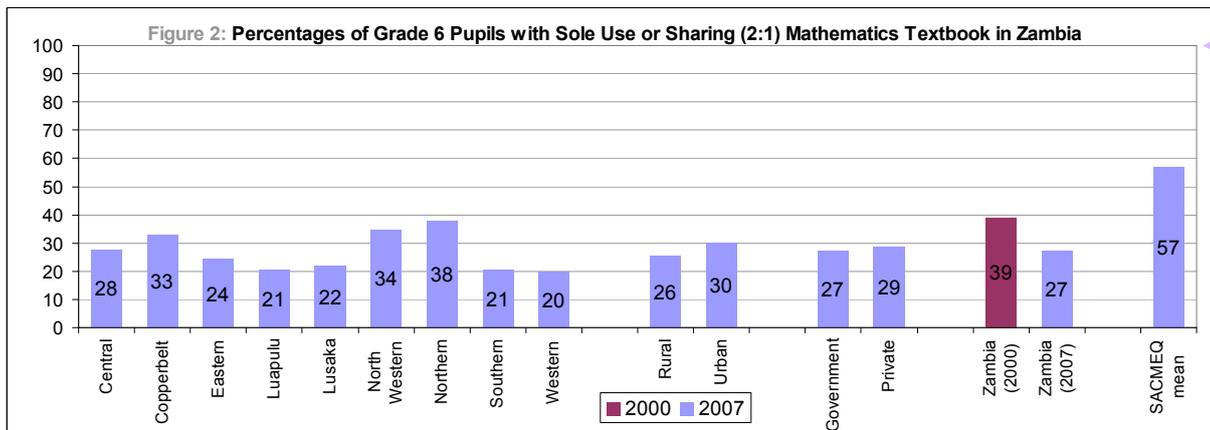
### Mathematics Textbooks

The government's target is for each pupil to have sole use of a textbook per subject or for one textbook to be shared between two pupils at most. It is therefore worrying, that only 27 percent of the Grade 6 pupils in 2007 had sole use of mathematics textbooks (or shared one mathematics textbook between two pupils). It is also troubling that the percentage of Grade 6 pupils with mathematics textbooks dropped from 39 percent in 2000 to 27 percent in 2007. The textbook situation among SACMEQ countries in 2007 (57%) was generally better than the situation in Zambia.

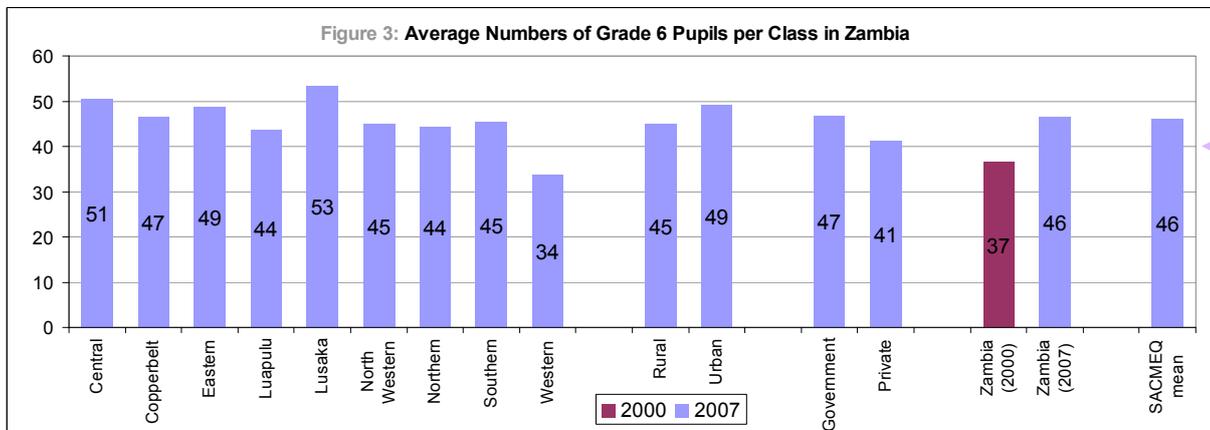
There were no large variations among the provinces in the provision of mathematics textbooks, but Western (20) and Northern (38) recorded the lowest and the highest percentages. The textbook situation in urban schools (30%) was slightly better than that in rural schools (26%). The situation of textbooks in government (27%) and private schools (29%) was about the same.



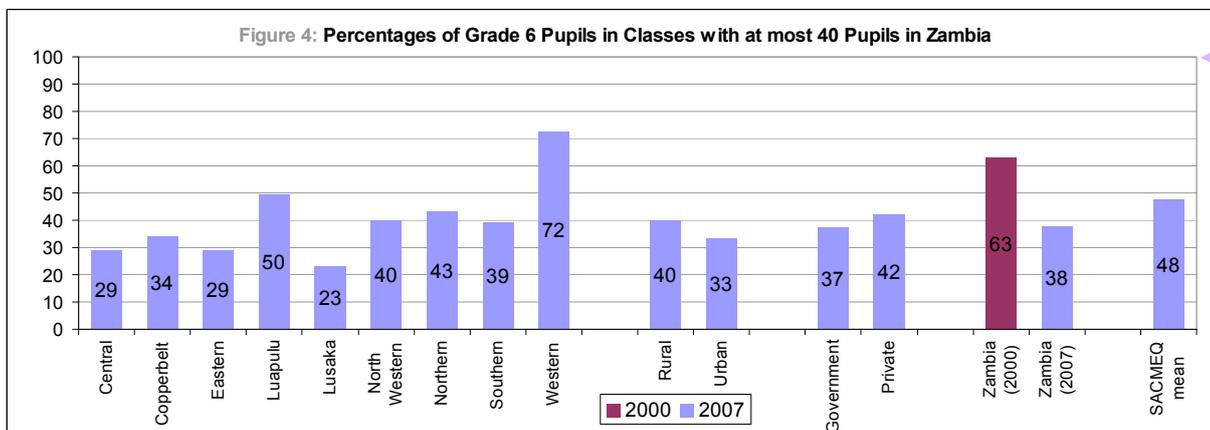
**National Benchmark:**  
Each primary school pupils in Zambia is expected to have basic learning materials (**100%**)



**National Benchmark:**  
Each primary school pupils in Zambia is expected to have a mathematics textbook or share this textbook with one other pupil (**100%**)



**National Benchmark:**  
40 pupils per class in primary schools



**National Benchmark:**  
All primary school pupils in Zambia are expected to be in classes with 40 pupils or less (**100%**)

## Class Size

The average numbers of Grade 6 pupils per class are displayed in Figure 3. The percentages of Grade 6 pupils in classes in which the number of pupils was within the national set benchmark of 40 pupils per class are displayed in Figure 4.

From Figure 3, it can be seen that in 2000 the average number of Grade 6 pupils per class among primary schools in Zambia was 37. This number was within the country's set benchmark of 40 pupils per class. However, in 2007, the number had risen to 46 pupils per class. Thus, the number was no longer within the set benchmark. Nevertheless, the number for private schools (41) was just above the set national benchmark by a single point, and much better than the number for public schools (46). The overall average for Zambia was the same as that of SACMEQ (46).

Except in Western province (34), where the average number of Grade 6 pupils was within the set national benchmark, the numbers of all the other eight provinces exceeded the set national benchmark. However, as demonstrated in Figure 4, this did not mean that in Western province, for example, there were no classes exceeding the national benchmark of 40 pupils. Lusaka, which recorded an average of 53 Grade 6 pupils per class, was the worst out of all the provinces, exceeding the benchmark by 13 pupils. The average number of Grade 6 pupils in rural schools (45) was slightly lower (hence, better) than the number in urban schools (49).

From Figure 4, it is clear that Western by far, out of all the nine provinces, had the largest percentage (72%) of Grade 6 pupils in classes within the set national benchmark of 40. It is also clear that Lusaka (23%) was the worst off, because out of all the nine provinces, it had the lowest percentage of pupils in classes not exceeding 40.

## Summary of Findings

This study showed that around two in every five pupils did not have all the three basic learning

materials needed for effective participation in classroom activities. Furthermore, at least seven in every ten pupils did not have sole use of mathematics textbooks or at least the possibility of sharing a textbook at a ratio of two pupils per textbook.

This study also revealed that the average number of Grade 6 pupils per class (46) exceeded Zambia's benchmark of 40 in 2007. Furthermore, with the sole exception of Western province, where the average number of Grade 6 pupils per class was well within the benchmark, in all the other provinces, the average numbers of Grade 6 pupils exceeded the national benchmark. In fact, in all the provinces, the percentages of Grade 6 pupils in classes exceeding 40 pupils per class were high.

## Suggestions

Regarding the problems with the provision of basic learning materials and textbooks in Zambian primary schools, the following policy options could be considered:

1. The Directorate of Standards and Curriculum should review the current textbook procurement procedures with the aim of putting in place mechanisms to improve the process, so as to ensure that all pupils have access to textbooks as stipulated.
2. The Directorates of Standards and Curriculum and Planning should conduct a follow-up audit of the availability of textbooks in schools, to establish whether the situation has changed since 2007.
3. The Directorate of Standards and Curriculum should regularly monitor the numbers of basic learning materials and textbooks in schools at the district and provincial levels. This monitoring can be achieved by regular visits to schools by Standard Officers.
4. Concerning the need to improve class sizes in Zambian primary schools, the Provincial Education Officers and school heads in all the provinces should endeavor to keep class sizes within the set national benchmark of 40 pupils per class. This,

however, might prove to be difficult under the FPE and EFA frameworks. Nevertheless, for the short-term, this could be partly achieved through the introduction of shifts (especially in the lower primary school classes). The long-term solution lies with the government building more classrooms and schools in the provinces with funding from the IDP and the CDF, or by convincing parents (through PTAs) to build more classrooms.

inputs can be linked to the introduction of FPE in Zambia in 2002. This shortage of school resources could also have had a negative impact on Grade 6 pupils' performances in reading and mathematics.

## Conclusions

This policy brief highlighted the quality of primary school inputs in Zambia using three indicators, namely: (a) basic learning materials, (b) mathematics textbooks, and (c) class size. Against the country's own set benchmarks, Zambia scored poorly in the provision of basic learning materials and textbooks. Moreover, on average, the country fared badly too in class size, although in Western province, the average class size was well within the national benchmark.

Concerning textbooks and class sizes, the results showed there was a decline in the quality of primary school inputs in Zambia between 2000 and 2007. It is likely that this overall decline in the quality of school

## References

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### Abbreviations and Acronyms

CDF	Constituency Development Fund
DEBS	District Education Board Secretary
EBS	Educational Statistical Bulletin
EFA	Education for All
FPE	Free Primary Education
IDP	Infrastructure Development Plan
MDG	Millennium Development Goals
MoE	Ministry of Education
PEO	Provincial Education Office
PTA	Parent- Teachers Association

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