

Southern and Eastern Africa Consortium
for Monitoring Educational Quality

Quality of Primary School Inputs in Botswana

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Introduction

This paper highlights the quality of four primary school inputs in Botswana in relation to the nation's defined benchmarks. The four inputs are: basic learning materials, mathematics textbooks, pupil-teacher ratios, and class size. These four 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 3,869 Standard 6 pupils in 160 primary schools in all seven regions in Botswana. This was 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 Botswana and 14 other African school systems.

The results in this paper cover Botswana as a whole, and are then further disaggregated by regions, 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 Botswana between 2000 and 2007.

Background

The Revised National Policy on Education (RNPE) 1994 emphasized increased access to quality primary education in Botswana. To achieve this, the Government of Botswana continued to build primary schools and provide basic education materials and stationery across the country, to enable Botswana children to access quality

education at this level. Primary education in government schools in Botswana has been free for more than four decades. Currently (2011), there are 811 primary schools in Botswana of which 750 are government schools and 61 are private schools.

Although primary education in Botswana is free, the net enrolment rates for children 6-12 years in primary schools have been fluctuating around 89 percent since 2002. This showed that at least 11 percent of primary, school-going-age children in Botswana were not accessing primary education. This constituted a challenge to the government's efforts in achieving universal primary education.

The education sector receives its funding from the government, donor agencies, and development partners. Parents' also contribute to primary education through sports and development fees. However, it should be noted that disadvantaged primary school pupils, whose parents cannot afford these fees, are exempted from paying the fees. Development partners such as the European Commission (EC), Botswana United States of America (BOTUSA), and UNICEF also play significant roles in budget support toward education.

The education sector in Botswana is one of the sectors that receives the highest proportion of the national budget for both the recurrent and development budgets. On average, the Ministry of Education and Skills Development is allocated around 19 percent of the total national development budget annually. In the last three years (2008-2010), the average recurrent expenditure on education was around 28 percent of total recurrent expenditure. However, money allocated to the education sector is hardly enough due to the high education demands in the country.

The responsibility of providing teaching and learning resources in government primary schools is shared between two ministries: the Ministry of Education and Skills Development (MoESD) and Ministry of Local Government (MoLG). The Ministry of Education and Skills Development is responsible for curriculum development, employment of teachers, teachers' salaries, teachers' general welfare, and the provision of textbooks for both pupils and teachers. The MoLG is responsible for providing infrastructure (for example, classrooms, hostels for boarding schools, administration blocks, teachers' quarters, and recreational facilities), pupils' feeding during school hours, stationery, and school furniture. The MoLG is also responsible for the salaries of non-teaching staff, such as school cooks and school cleaners. Private schools in Botswana are financed by the school owners. However, the private schools are monitored by the MoESD to ensure that they meet the set quality standards.

To ensure the quality of inputs at primary school level in Botswana, the RNPE 1994 stipulated that the Department of Curriculum Development and Evaluation (DCDE) should form a Textbook Evaluation Committee (TEC). The TEC comprises teachers' representatives, education officers, and representatives of teachers' trade unions. Before any teaching-learning materials and textbooks can be published or used in schools in Botswana, they have to be evaluated and approved by this committee.

The RNPE 1994 policy also recommended that all pupils should have a textbook for each core subject. In addition, this policy recommended that, in the short term, class sizes in primary schools should be

reduced to 40 pupils per class. The long-term aim was to reduce the class sizes in primary schools to 30 pupils per class.

Although the recommendations mentioned above are clearly stated in the policy, there are concerns that primary schools are still faced with shortages of textbooks, learning materials (such as exercise books, pens, pencils and rulers) and other instructional materials. In addition, there are concerns that class sizes are still very large in some areas despite the fact that the nation has an adequate supply of teachers.

The SACMEQ data are ideal for examining the progress made in achieving the recommendations of the RNPE 1994 and in addressing the above concerns, for at least two reasons. Firstly, the data were collected using modern scientific sampling techniques that are known to be reliable. Secondly, the data are available for two time points (2000 and 2007). This made it possible to monitor: the quality of school inputs in Botswana over time; and the progress made in achieving the RNPE recommendations.

Selected Indicators

The four selected indicators of the quality of school inputs are (a) basic learning materials, (b) mathematics textbooks, (c) pupil-teacher ratios, and (d) class size. The descriptions of these four indicators have been provided in Table 1 below together with the set benchmarks for Botswana.

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 during mathematics lessons	100%
Pupil-teacher ratios	Total number of pupils in a school divided by number of teachers in the school	30:1
Standard 6 class size	Average number of Standard 6 pupils per class	30

SOURCE: Botswana Government, 1994.

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 (Standards five to seven). Likewise, it is desirable for each pupil to have sole use of a textbook (especially for the core subjects, such as English, Setswana, 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 pupil-teacher ratios and 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 these two indicators are associated with more interaction between teachers and pupils, resulting in better quality education. Pupil-teacher ratios and class size are also key indicators for checking if expansion in participation rates is accompanied by adequate provision of teachers and classrooms.

The recommended pupil-teacher ratios and class size for primary schools in Botswana are 30 pupils per teacher and 30 pupils per class, respectively (RNPE, 1994).

Key Findings

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

Basic Learning Materials

In 2007, only 81 percent of Standard 6 pupils in Botswana had at least one exercise book, a pencil or a pen and a ruler. In other words, around one in every five (19%) pupils did not have all the three basic learning items that were considered necessary for effective participation in classroom activities.

There were some considerable variations between regions, with Northern (69%) recording the lowest percentage and Gaborone (88%) recording the highest percentage. In addition, there was considerable variation between pupils in rural schools (83%) and pupils in urban schools (79%). Moreover, there was a substantial difference between public (80%) and private schools (90%) in the provision of these three basic learning materials.

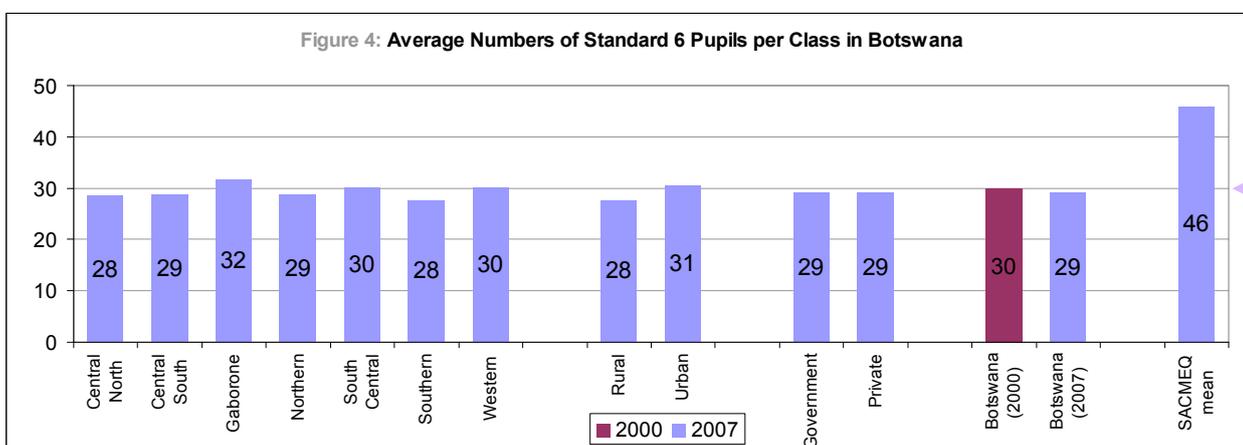
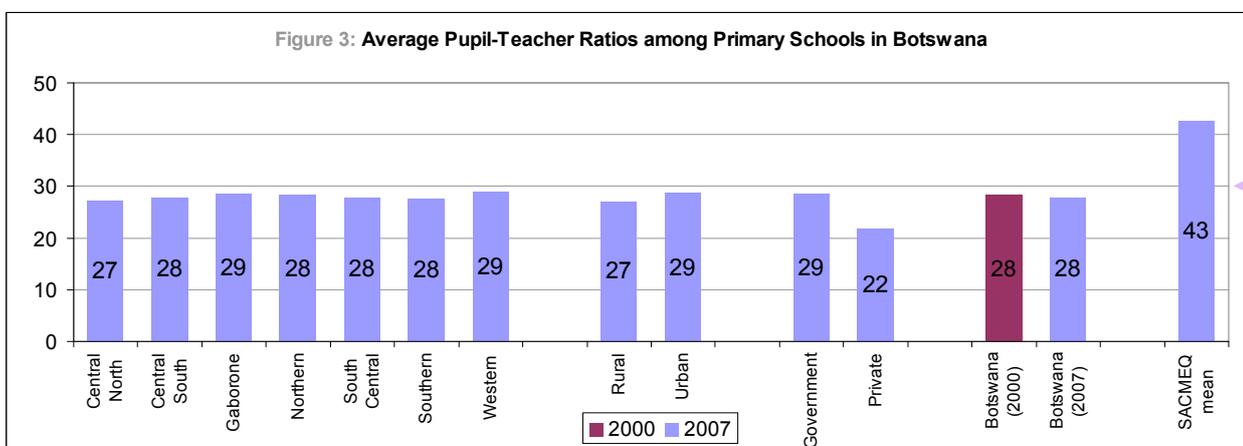
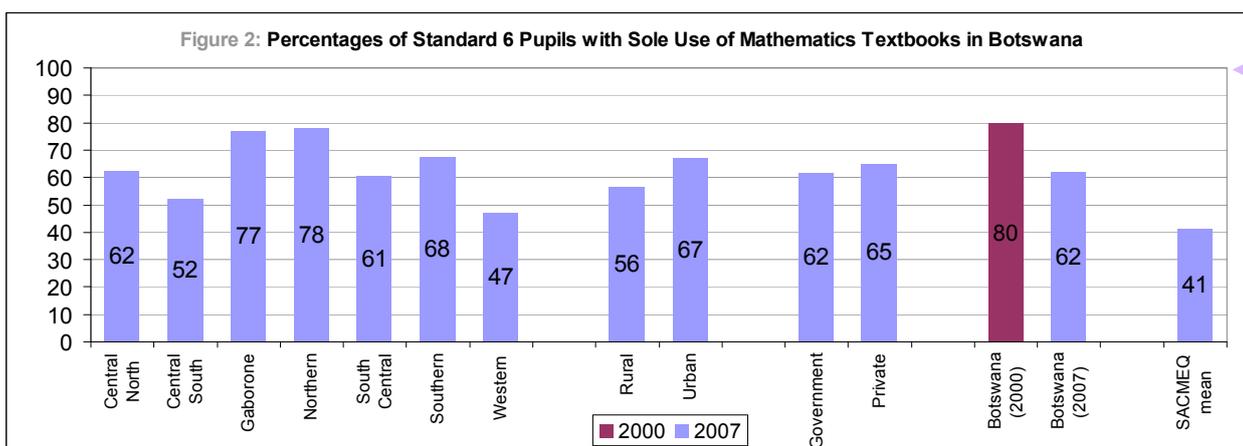
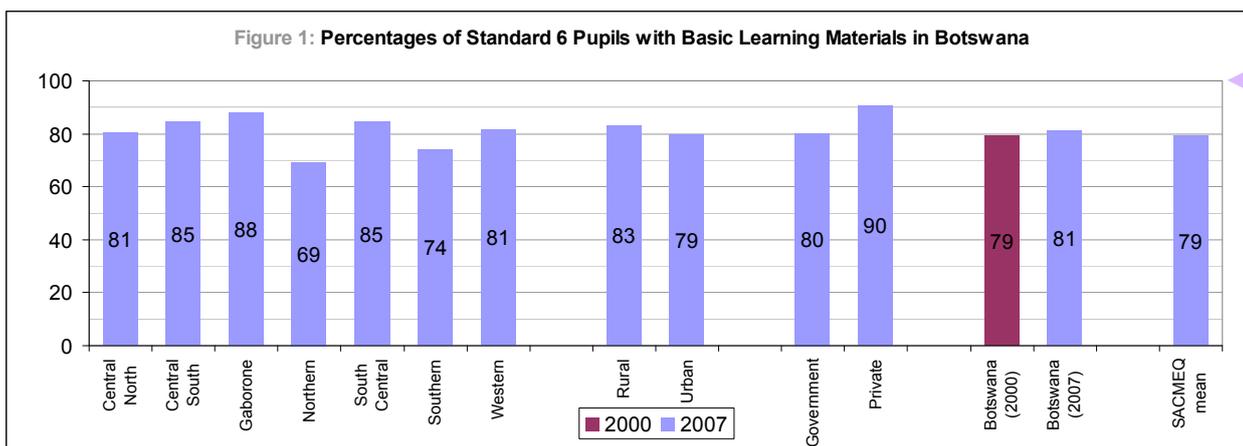
On average, 79 percent of the pupils in all the SACMEQ countries had basic learning materials. This implied that the situation in Botswana was marginally better than the overall situation in SACMEQ countries. Between 2000 and 2007, the percentage for Botswana went up by two points, which meant that the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

Mathematics Textbooks

The DCDE target is for each pupil to have sole use of a textbook per subject. It is, therefore, worrying that only about two-thirds (62%) of the Standard 6 pupils in 2007 had sole use of mathematics textbooks. It is also troubling that this figure had dropped since 2000, when the percentage of Standard 6 pupils with sole use of mathematics textbooks was 80 percent. However, it is consoling that the textbook situation in Botswana was generally better than the overall situation in SACMEQ countries (41%).

There were large variations among the regions in the provision of mathematics textbooks. Northern (78%) and Gaborone (77%) recorded the highest percentages while Western (47%) and Central South (52%) recorded the lowest percentages. The textbook situation in urban schools (67%) was notably better than the situation in rural schools (56%). Moreover, the textbook situation in private schools (65%) was slightly better than the situation in government schools (62%).

These results indicated that there is still a lot that has to be done to acquire the target of all pupils having sole use of mathematics textbooks. Budget limitations could to a large extent explain the textbook shortages observed in this study.



SOURCES of Figures 1 to 4: SACMEQ Data Archive.

Pupil Teacher Ratios

The mean pupil-teacher ratio among primary schools in Botswana was exactly the same (28 pupils per teacher) for both 2000 and 2007. This mean was well within the country's benchmark, which is 30. For 2007, it is interesting to note that the mean for the private schools (22) was even better than the mean for public schools (29). Of note, is that the overall mean for Botswana was much lower (therefore, better) than the mean for SACMEQ (43). These results depict a primary school system with a substantial teaching workforce.

In 2007, there were very small variations between regions, but all the mean values were below the intended national benchmark. In addition, the mean values of pupil-teacher ratios for schools located in towns and that for schools located in rural areas did not differ much.

Class Size

The mean number of Standard 6 pupils per class had decreased from 30 in 2000 to 29 in 2007. Importantly, this number was within the set national benchmark of 40 and much better than the SACMEQ mean of 46 pupils per class in 2007. Remarkably, the number for private schools was exactly the same as that for public schools (29).

Moreover, there were minimal variations among the regions. Gaborone (32) was the only region that recorded a mean which exceeded the set national benchmark. The mean for urban schools (31) was just slightly above the set national benchmark, but the mean for rural schools (28) was well within the benchmark.

Summary of Findings

This study showed that around one in every five pupils did not have all the three basic learning materials needed for effective participation in classroom activities. Furthermore, around one-third of the pupils did not have sole use of mathematics textbooks. Most of the pupils without these basic learning materials (or without mathematics textbooks) were in public schools, but substantial numbers were also in private schools.

This study also revealed that the mean pupil-teacher ratio (28), and the average number of Standard 6 pupils per class (29) were within the set benchmarks for Botswana. However, the mean numbers of Standard 6 pupils for schools located in urban areas (especially in Gaborone) slightly exceeded the set national benchmark.

Suggestions

Regarding the problems with the shortage of basic learning materials and mathematics textbooks in Botswanan primary schools, the following suggestions could be considered.

1. The MoLG should ensure that sufficient stationery is purchased and distributed to pupils, especially in urban schools and schools in those regions that recorded low levels of basic learning materials (for example, Northern and Southern). This would require an increase in the amount of funds allocated for stationery in the MoLG budget.
2. The Department of Pre-Primary and Primary Education (DPPE) should ensure that sufficient textbooks are purchased and distributed to schools as per the needs. The DPPE should particularly target schools in the regions that recorded substantial shortages of textbooks (for example, Central South and Western). This would require a substantial increase in the amount of funds allocated for textbooks in the DPPE budget.
3. Parents through Parent-Teachers Associations (PTA) should be urged to assist in ensuring that the pupils take care of their textbooks and other learning materials, so that these can last longer. Where the pupils lose the textbooks or other learning materials, parents should take responsibility for replacing them.
4. Concerning the need to reduce class sizes in urban schools (especially in Gaborone,) the MoLG could carry out a follow-up audit to determine whether the shortage of classrooms in Gaborone, recorded in 2007, has changed. If this shortage is confirmed, Gaborone should be

given priority when allocating funds for building new classes.

Conclusion

This policy brief highlighted the quality of primary school inputs in Botswana using four indicators, namely: (a) basic learning materials, (b) mathematics textbooks, (c) pupil-teacher ratios, and (d) class size. Against the country's own benchmarks, Botswana scored satisfactorily in the provision of basic learning materials, but scored rather disappointingly in the provision of mathematics textbooks. The country's score regarding the provision of teachers was quite impressive. On average, the country fared well with class sizes, although in Gaborone the average class size exceeded the national benchmark by two pupils.

The results show that between 2000 and 2007, Botswana improved on two indicators (basic learning materials and average class sizes), remained the same on one indicator (pupil-teacher ratios), and declined notably on one indicator (mathematics textbooks).

It is clear from the findings presented in this paper, that Botswana has been quite successful in implementing the RNPE 1994 recommendations on the provision of teachers and classes. However, Botswana needs to urgently address the RNPE recommendations on the provision of textbooks.

References

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Abbreviations and Acronyms

BOTUSA	Botswana United States of America
DCDE	Department of Curriculum Development and Evaluation
DPPE	Department of Pre-Primary and Primary Education
EC	European Commission
MoESD	Ministry of Education and Skills Development
MoLG	Ministry of Local Government
PTA	Parent-Teachers Association
RNPE	Revised National Policy on Education
TEC	Textbook Evaluation Committee
UNICEF	United Nations International Children's Fund

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