



## Southern and Eastern Africa Consortium for Monitoring Educational Quality

# Quality of Primary School Inputs in Kenya

[www.sacmeq.org](http://www.sacmeq.org)

## Introduction

This paper highlights the quality of four primary school inputs in Kenya 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 4,436 Standard 6 pupils in 193 primary schools in all eight provinces in Kenya. 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 Kenya and 14 other African school systems.

The results in this paper cover Kenya 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 Kenya between 2000 and 2007.

## Background

In 2003, Kenya introduced Free Primary Education (FPE) in an effort to realize Universal Primary

Education (UPE) and to attain the Education for All (EFA) goals. As a result, all fees were waived in all government (public) primary schools, which meant that no child, especially from poor families, would be denied access to primary education, because of an inability to pay school fees. 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. In addition, schools were allowed to recruit extra teachers (paid by parents) to cater for shortages. However, under the FPE policy, schools receive money from the central government and they are discouraged from collecting monies from parents.

From 2003 to 2009, public primary schools received Kshs1,020 (about United States dollars 12.5) from the government to cater for these expenses for each child per year. Part of this FPE money (Kshs650 per child per year) was set aside for instructional materials — deposited in the School Instructional Materials Bank Account, (SIMBA) — while the remaining part (Kshs370) was for operational expenses — deposited in the General Purpose Account (GPA). No funds are allocated to pupils in private schools (Ministry of Education, Science and Technology (MoEST), 2005).

In 2010, the government implemented a new formula for the disbursement of FPE funds for

instructional materials. Under this new formula, schools which had fewer textbooks per pupil (which meant more pupils sharing per textbook) were to receive greater amounts of money than those schools that had more textbooks (i.e., less pupils sharing per book). For schools to receive these funds, they are required to submit their Textbook-Pupil Ratios (TPR) data to the District Education Officers (DEO) and Municipal Education Officers (MEO) each term. In addition, in an effort to control the unethical supply of instructional materials, schools are required to purchase these materials from approved booksellers. Moreover, the DEOs and MEOs are required to monitor schools in their areas to ensure the prudent use of instructional materials (MoE, 2010).

Each public primary school in Kenya is required to have a School Instruction Material Selection Committee (SIMSC) that decides on which school materials should be prioritized each year. The SIMSC comprises eight class teachers, two parental representatives, and the chairperson of the School Management Committee (SMC). The SIMSC is chaired by the school head.

Apart from the provision of FPE funds, mentioned above, and the payment of teachers' salaries, the government is mainly responsible also for the improvement of existing school facilities, the building of new classrooms, and new primary schools through the School Infrastructure Improvement Programme (SIIP), which gives priority to schools serving communities in low rainfall areas and urban slums. Primary schools can also access government funding for construction and improvement of facilities 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 extra teachers to cater for shortages), the school head has to convince the parents to agree to the additional fees, and the SMC has to get approval from the education authorities through the District Education Board (DEB) and Provincial Director of Education (PDE), a fairly complicated and tedious process (Sifuna, 2005).

The introduction of the FPE policy resulted in a high influx of new pupils into schools, putting pressure on existing resources (see MoEST, 2005). Consequently, there are concerns that the quality of school inputs in public primary schools in Kenya has declined under FPE, because of congestion in classes, high pupil-teacher ratios, and insufficient 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 Kenya, the data were already available before the introduction of FPE in Kenya (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 Kenya before and after the introduction of the FPE.

## 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 Kenya.

**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	40:1
Standard 6 class size	Average number of Standard 6 pupils per class	45

SOURCES: MoEST, 2005 and TSC, 2005.

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 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 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 Kenya are 40 pupils per

teacher and 45 pupils per class, respectively (Teachers' Service Commission, 2005).

## 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 78 percent of the Standard 6 pupils had at least one exercise book, a pencil or a pen, and a ruler. In other words, around one in every five (22%) pupils did not have all the three basic learning items that were considered necessary for effective participation in classroom activities. There were no great variations among provinces, but Rift Valley and Eastern recorded the lowest percentages of 73 and 74 percent, respectively. In addition, there was little variation between pupils in rural schools (79%) and pupils in urban schools (77%). However, there was a large difference between public (77%) and private schools (90%) in the provision of these three basic learning materials. This should be troubling to the SIMSCs in public schools, because it was expected that they would have considered basic learning materials a top priority for their schools.

On average, 79 percent of pupils in all the SACMEQ countries had basic learning materials. This implied that the overall situation in SACMEQ countries was generally the same as that in Kenya.

Between 2000 and 2007, the percentage for Kenya went down by one point, which meant that the situation had not changed much.

‘One in every five (22%) pupils did not have all the three basic learning items that were considered necessary for effective participation in classroom activities’

### Mathematics Textbooks

The government's target is for each pupil to have sole use of a textbook per subject. It is, therefore, worrying that only 15 percent of the Standard 6 pupils in 2007 had sole use of mathematics textbooks. It is also troubling that numbers of available textbooks had dropped since 2000, when the percentage of Standard 6 pupils with sole use of mathematics textbooks was 23 percent. Furthermore, the textbook situation among SACMEQ countries in 2007 (41%) was generally better than the situation in Kenya.

‘Only 15 percent of the Standard 6 pupils in 2007 had sole use of mathematics textbooks’

Apart from Nairobi – which recorded by far the largest percentage of pupils with sole use of these textbooks (47%) – there were no large variations among the other provinces. Nevertheless, the percentage for Western (7%) and Rift Valley (9%) were considerably lower when compared to the other provinces. The textbook situation in rural schools (15%) was as bad as the situation in urban schools (16%). Just like for basic learning materials, the textbook situation in public schools (14%) was also much worse compared to that of private schools (29%).

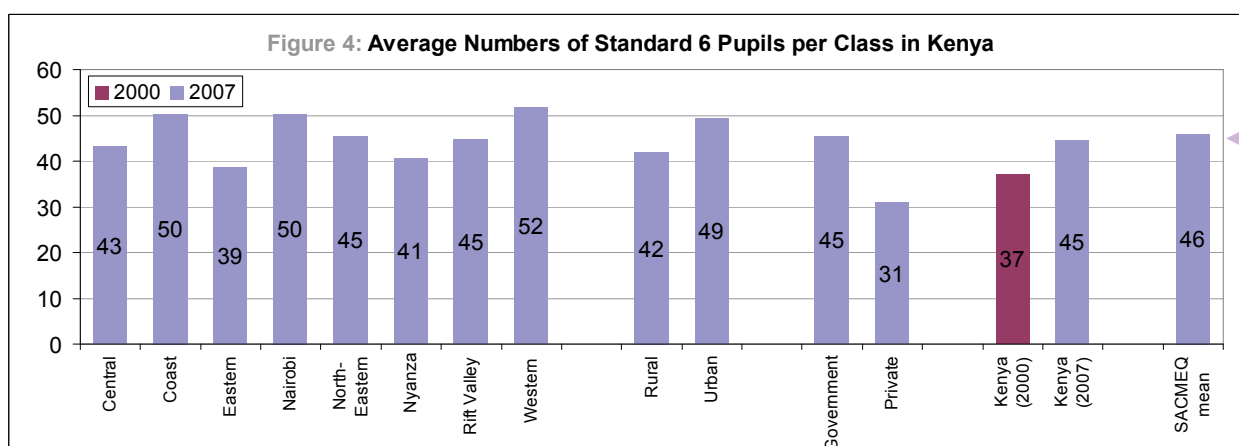
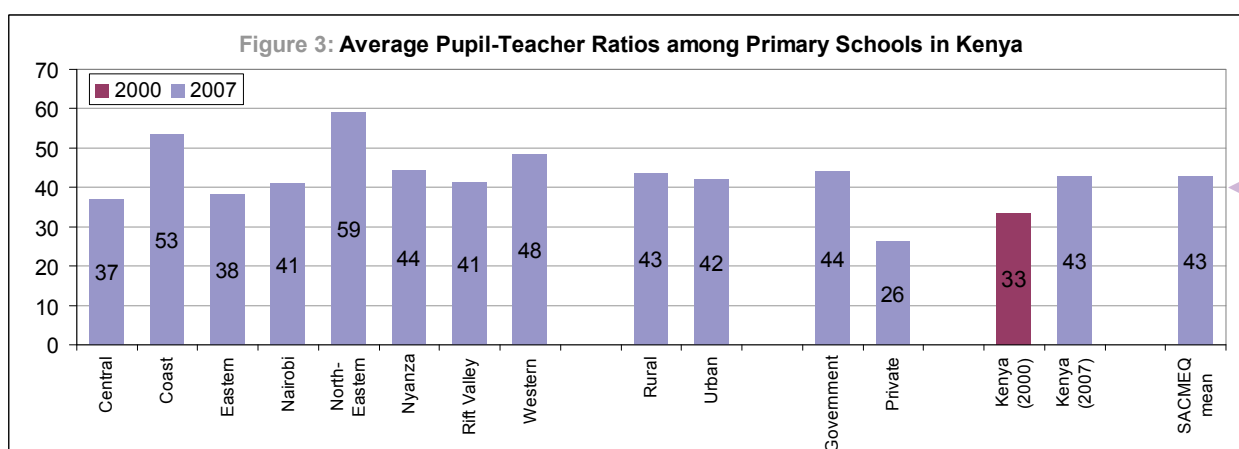
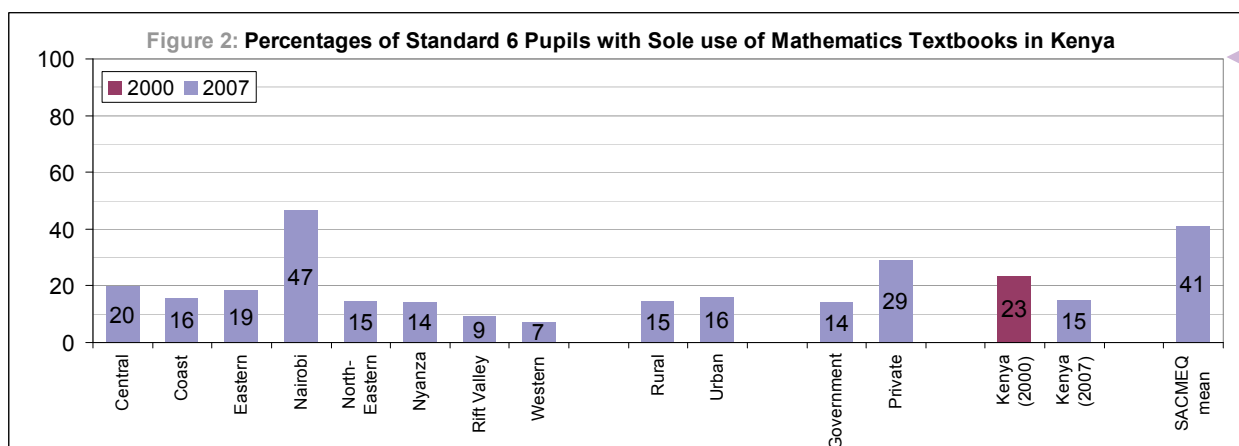
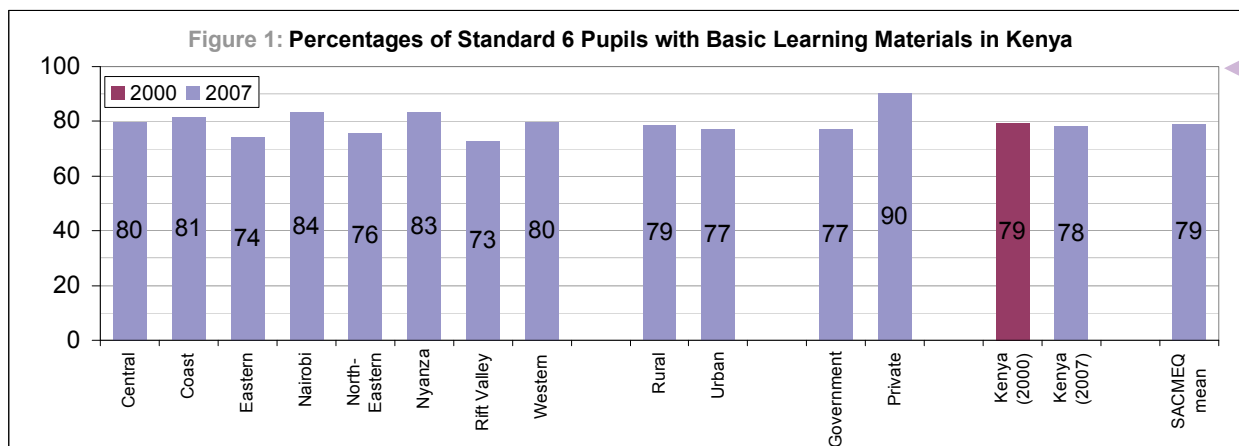
There have been allegations of corruption in the provision of textbooks in primary schools in Kenya. For example, textbook issues hit media headlines in Kenya in 2009, after it was reported that the British Government (through the Department for International Development, DFID) had given the Kenyan Government money for a programme aimed at purchasing textbooks for each primary pupil. Yet well into this programme, most pupils still had no textbooks. Moreover, a research study by Transparency International (2010) discovered numerous incidences of corruption involving FPE funds for the purchase of instructional materials in primary schools. Thus, it is likely that corruption issues could partly explain the low levels of mathematics textbooks observed in this paper among Standard 6 pupils. However, it should be noted that this study was carried out in 2007, and since then, the government has implemented some policies in an effort to fight corruption in the education sector.

### Pupil-Teacher Ratios

In 2000, the mean pupil-teacher ratio among primary schools in Kenya was 33. This mean was within the country's set benchmark, which is 40. However, in 2007, the mean had risen to 43 pupils per teacher, and thus was no longer within the set benchmark.

Nevertheless, the mean pupil-teacher ratio for private schools (26) was lower than the set national benchmark, and much better than the mean for public schools (44). The overall mean for Kenya was the same as that of SACMEQ (43).

In 2007, only two provinces (Central and Eastern) had mean values within the national benchmark. The mean value was worst in North Eastern (59), followed by Coast (53). On average, there was not much difference between the mean values of pupil-teacher ratios for schools located in towns and those in rural areas.



SOURCES of Figures 1 to 4: SACMEQ Data Archive.

## Class Size

Although the mean number of Standard 6 pupils per class had risen from 37 in 2000 to 45 in 2007, the number was still within the set national benchmark of 45 and also comparable to the SACMEQ mean of 46 pupils per class in 2007. However, the number for private schools (31) was far better than that of public schools (45).

In three provinces (Coast, Nairobi, and Western), the numbers of Standard 6 pupils per class exceeded the national benchmark by five to seven pupils, but in all the other provinces the numbers were within the benchmark figure. The numbers in rural schools was slightly lower (hence, better) than those in city and town schools.

The percentages of Standard 6 pupils in classes in which the number of pupils was within the national set benchmark of 45 pupils per class in 2007 are displayed in Figure 5. From Figure 5, it is clear that Coast, Nairobi and Western had the lowest percentages of Standard 6 pupils in classes within the set national benchmark of 45. It is also clear that the percentage of pupils in classes within the set benchmark in private schools (85%) was much better than the corresponding percentage for public schools (55%).

## 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, at least four in every five 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 in private schools.

This study also revealed that the mean pupil-teacher ratio (43) exceeded Kenya's benchmark of 40 pupils per teacher. In addition, in three provinces (Coast, Nairobi, and Western), the average number of Standard 6 pupils per class exceeded the national benchmark of 45.

## Suggestions

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

1. The Ministry of Education through DEBs could advise school heads and SIMSCs to always prioritize the use of FPE funds for the purchase of basic learning materials, and ensure that each child has at least one exercise book, a pencil or pen, and a ruler.
2. The Directorate of Quality Assurance and Standards (DQAS) could regularly monitor the quantity of basic learning materials and textbooks in primary schools. For individual schools, this monitoring can be achieved by regular visits to schools (at least once per term) by Quality Assurance and Standards Officers (QASO). The observations made by these officers should be considered by DEBs when approving budgets for the purchase of instructional materials for individual schools. (Currently, SIMCs can purchase material without the DEBs' approval.) At the provincial or national levels, the monitoring can be achieved through the use of updated and verified Education Management Information System (EMIS) data.
3. The government could consider allocating some FPE funds to private schools for the purchase of basic learning materials and textbooks, especially those private schools



serving poor communities, such as in urban slum areas. Alternatively, the government may wish to consider introducing or encouraging charity or donor programmes for providing pupils from poor backgrounds with basic learning materials and textbooks, irrespective of whether these pupils are in public or private schools.

‘The government could consider allocating some FPE funds to private schools for the purchase of basic learning materials and textbooks, especially those private schools serving poor communities, such as in urban slum areas’

4. The government may wish to re-evaluate and streamline the current textbook acquisition system to ensure that: (a) textbooks are actually purchased and, (b) the purchased textbooks actually get to the pupils. Currently, there are strong indications that some school heads and textbooks sellers are still colluding to appropriate FPE funds using all sorts of corrupt tricks (Transparency International, 2010). It would be wrong to portray every Kenyan school head or education official as corrupt, but it would be equally inaccurate to suggest that corruption is not an issue in the education sector in Kenya.
5. Concerning the need to improve pupil-teacher ratios and class sizes in Kenyan primary schools, the Teachers' Service Commission (TSC) could investigate the latest pupil-teacher ratios independently (especially in those provinces that recorded mean values that greatly exceeded the national benchmark, such as North Eastern and Coast). If confirmed, this should be taken

into consideration when employing new teachers and when transferring teachers across provinces.

6. The Provincial Directors of Education and school heads in Coast, Nairobi, and Western provinces should endeavor to keep class sizes within the set national benchmark of 45 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 would lie in the government targeting those three areas by building more classrooms and schools there through SIIP and CDF funding, or by convincing parents (through SMCs) to build more classrooms. The government could also employ more teachers.

‘It would be wrong to portray every Kenyan school head or education official as corrupt, but it would be equally inaccurate to suggest that corruption is not an issue in the education sector in Kenya’

## Conclusion

This policy brief highlighted the quality of primary school inputs in Kenya using four indicators, namely: (a) basic learning materials, (b) mathematics textbooks, (c) pupil-teacher ratios, and (d) class size. Against the country's own set benchmarks, Kenya scored poorly in the provision of basic learning materials and textbooks, and on pupil-teacher ratios (which is a sign of the inadequate supply of teachers). However, on

average, the country fared well on class size, although in Coast, Nairobi, and Western provinces the mean class size exceeded the national benchmark by five to seven pupils. The situation in public schools was much grimmer for all the four indicators than the situation in private schools.

Furthermore, concerning all four indicators, the results show that Kenya declined between 2000 and 2007. It is likely that this overall decline in the quality of school inputs can be linked with the introduction of FPE in Kenya in 2003.

## References

- MoEST (2005). *Education sector report*. Nairobi: Ministry of Education, Science and Technology. Retrieved May 11, 2010 from [http://siteresources.worldbank.org/INTKENYA/Resources/gok\\_education\\_sector\\_rpt.pdf](http://siteresources.worldbank.org/INTKENYA/Resources/gok_education_sector_rpt.pdf)
- MoE (2010). *Disbursement of 1<sup>st</sup> tranche of FPE funds into account 1 (tuition account) – 2009/2010 financial year*. Nairobi: Ministry of Education.
- Sifuna, D.N. (2005). *The illusion of universal free primary education in Kenya*. Wajibu, 20(4). Retrieved May 5, 2010 from [http://africa.peacelink.org/wajibu/indices/index\\_1581.html](http://africa.peacelink.org/wajibu/indices/index_1581.html)

Teachers' Service Commission (2005). *Study on teacher staffing norms*. Nairobi: Ministry of Education Science and Technology.

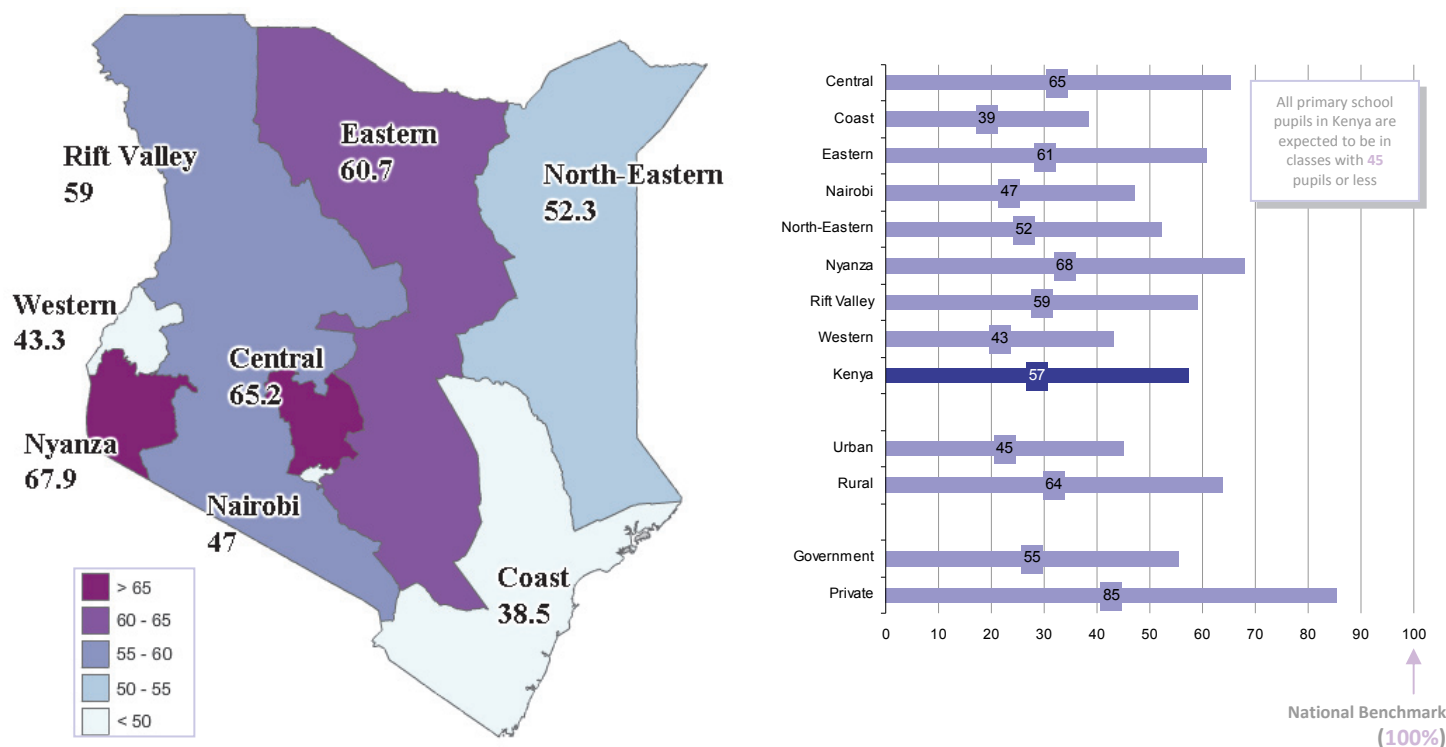
Transparency International (2010). *The Kenya education sector integrity study report*. Retrieved May 11, 2010 from <http://www.tikenya.org>.

## Abbreviations and Acronyms

CDF	Constituency Development Fund
DEB	District Education Board
DEO	District Education Officer
DFID	Department for International Development
DQAS	Directorate of Quality Assurance and Standards
EFA	Education for All
EMIS	Education Management Information System
FPE	Free Primary Education
GPA	General Purpose Account
MEO	Municipal Education Officer
MoEST	Ministry of Education, Science and Technology
PDE	Provincial Director of Education
QASO	Quality Assurance and Standards Officer
SIIP	School Infrastructure Improvement Programme
SIMBA	School Instructional Materials Bank Account
SIMSC	School Instruction Material Selection Committee
SMC	School Management Committee
TSC	Teachers' Service Commission
UPE	Universal Primary Education

SACMEQ wishes to acknowledge the generous financial assistance provided by the Ministry of Foreign Affairs of the Government of the Netherlands in support of SACMEQ's research and training programmes.

**Figure 5: Percentages of Standard 6 Pupils in Classes with at most 45 Pupils in Kenya**



This policy brief was written by Njora Hungi ([n.hungi@iiep.unesco.org](mailto:n.hungi@iiep.unesco.org); [hungi05@gmail.com](mailto:hungi05@gmail.com))

For more information about SACMEQ, visit website: [www.sacmeq.org](http://www.sacmeq.org)