1. Introduction

Huge investments have been poured into Kenya’s education sector since universal free primary education was introduced in January 2003. As a result, enrollment in primary schools has increased dramatically: between 2002 and 2007, the number of children in primary school went up from 6.1 million to 8.2 million (KNBS 2009) and net enrollment rates increased from 61% to 86% (UNESCO 2010). At the same time, many more children from the poorest households started to go to school (Bold et al. 2009), and with the abolition of school fees, children from all backgrounds – rich and poor, male and female – were in a position to enroll in primary education.

But is the increased enrollment leading to better learning? Are more Kenyans better prepared today than before? Do the increased investments and enrollments translate into a more literate, numerate and skilled nation?

To answer these questions, the Uwezo Initiative (www.uwezo.net) sought to establish actual levels of children’s literacy and numeracy through an unprecedentedly large household based survey. This brief discusses results from Uwezo’s household based survey, which demonstrates that two out of three Standard 3 children in Kenya cannot read a simple paragraph.

Ali and Hassan are friends. They play each day. Ali can run fast. He is on the school team.
like the one in the adjacent box. These dramatic results raise questions about the value of recent progress in education, and whether the reduction of inequalities in ‘access’ to education has resulted in creating another type of inequality: namely, inequality in learning.

The brief presents 12 facts derived from data collected by Uwezo in late 2009 and published in 2010.¹ For more information see www.uwezo.net.

2. The Uwezo survey and test
Uwezo is a new initiative focusing on education outcomes in Kenya, Uganda, and Tanzania. The approach involves a large scale household survey that measures actual levels of literacy and numeracy among children aged 6-16 years.² Uwezo believes that doing such a survey, that involves thousands of citizens and whose findings can be widely understood and debated, can be a powerful tool to generate public debate and increase pressure for accountability in education in East Africa. The Kenya survey was completed first, and similar studies in Tanzania and Uganda will be published by September, 2010. The Uwezo survey covered 70 (out of 158) districts in Kenya, reaching 2,029 villages and 40,286 households. School-level information was collected from 2,030 schools. In total, 68,945 children between the ages of 6 and 16 years old were tested. Just under 4,200 volunteer enumerators and 70 partner organizations helped to administer the survey.

The instrument itself was a Standard 2-level Kiswahili, English, and numeracy test. Standard 2 (also known as Class 2) tests were selected because of the international consensus that after completing two years of schooling a pupil is expected to have acquired basic competencies in literacy and numeracy, which are the foundations for learning in all other subjects. The test designs were carefully designed to be consistent with requirements of Kenya’s curriculum, which include that basic numeracy (addition, subtraction, multiplication, and division) and basic literacy in English and Kiswahili have been mastered by pupils at this point.

The Kiswahili and English tests were designed such that pupils could be graded into 6 levels, with level 1 as the lowest and level 6 the highest. Reading was tested by an incremental method, starting with a letter, followed by a word, then a paragraph, then a story, followed by a reading comprehension

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¹ The full report can be downloaded from http://www.uwezo.net/index.php?i=68. All Uwezo data on which the analysis in this brief is based can be downloaded from http://www.uwezo.net/index.php?i=77.
² The Uwezo approach is adapted from the Annual Status of Education Report (ASER) in India, pioneered by Pratham. For more information see www.asercentre.org and www.pratham.org
Numeracy was tested in a similar way: the six incremental levels were number recognition (1-9), number recognition (11-99), addition, subtraction, multiplication, and division. Children were also given a bonus “ethnomathematics” word problem, based on typical daily tasks and presented in the child’s preferred language. For samples of tests and more information on the methodology see www.uwezo.net.

3. Twelve facts about primary education in Kenya

Fact 1: 95% of children ages 6-13 are enrolled in primary schools.
The main objective of free primary education is to ensure that all children between the ages of 6 and 13 are enrolled in primary school. According to the Uwezo findings, this policy has been largely successful: an impressive 95% of children aged 6-13 are enrolled in primary school, implying almost universal access to primary education.

Fact 2: Most un-enrolled children come from poor families.
Even though enrollment is near universal, 5% of children aged 6 to 13 were not enrolled in primary school in 2009. Of these children, the majority (67%) came from poor households (Figure 2 below). This figure demonstrates that even when primary schooling is free, enrollment remains dependent upon household wealth: if a child is not enrolled in primary school, there is a very low (2%) probability that he or she comes from a wealthy family.
Fact 3: In worst-performing districts, over 30% of children never enrolled.
Inequalities in education enrollment are not only based on wealth; there are also clear regional disparities. The five lowest performing districts, displayed in Figure 3 below, have enrollment rates between 65% - 83%. In the top five districts, by contrast, almost 100% of children 6-16 have enrolled in school.
Fact 4: Over 35% of children are 7 years old when enrolling in Standard 1.
One of the objectives of free primary education is to ensure that children are enrolled at the right age. In Kenya, this means that children are expected to enroll in primary school when they are six. To test whether this is indeed the case, Figure 4 presents the age of children in Standard 1. Since the Uwezo test was administered in October 2009, and the Kenyan school year begins in January, some of the children who enrolled when they were six would have already turned seven by the time of the survey. But when one finds children aged 8 or older in Standard 1, it is an indication that children enroll late. As Figure 4 indicates, late enrollment is common: more than 35% of students in Standard 1 are already 8 years old or older (Note, however, that some of these children may be repeating Standard 1).

![Figure 4: Children enrolled in Standard 1 by age](chart)

Fact 5: Pupils in private schools come from wealthier backgrounds.
Despite the fact that public education is free of charge, a considerable number of children (9% of the total) do not go to public schools, but rather attend private schools instead. Most of these children come from wealthier backgrounds. 70% come from the top two wealth quintiles, while only 15% of children in private school come from households in the lowest two wealth quintiles.
Fact 6: Pupils in private schools perform better.
The Uwezo test is a Standard 2 test. Thus all students who have graduated to Standard 3 should be able to pass the test. Figure 6 presents the results for Standard 3 students, comparing students from public and private schools.

It demonstrates that children in private schools perform better than those who attend public schools on all three topics. One implication is that children from wealthier backgrounds do better than children from less wealthy backgrounds. In other words, wealthier parents get value for money by sending their children to private school, as the likelihood of their child performing adequately increases substantially.

While performance in private schools is better, it is still far from a 100% pass rate. Only two-thirds of children in Standard 3 in private schools are able to pass the Standard 2 test; these are undoubtedly disappointing results for parents who pay dearly to ensure their children receive better quality education.
**Fact 7: Students that receive private tuition do better in school.**

Many pupils (41%) receive private tuition, and those who receive tuition perform better than their counterparts who do not receive additional tuition. It is not possible to say from this data whether children do better because they learned much more at tuition, or whether students who receive private tuition also have other advantages that help them do better. (Private tutoring is much more common among private school students, for example.) Nonetheless, as Figure 7 shows, the gap between tutored and non-tutored students is large.
Fact 8: Pupils from wealthy households perform better.
Figure 8 considers performance on the Uwezo test according to the wealth grouping of the household. Analysis demonstrates that children from wealthier households do significantly better than those from poorer households. In fact, the likelihood of a child from the top wealth category passing any test is almost twice as high as that of a child from the poorest quintile. Therefore, considerable inequality in learning remains despite equality of enrollment. However, it is also striking that even among the wealthiest quintile, less than half of students can pass each subject test.

![Figure 8: Performance of Standard 3 pupils by wealth category](image)

Fact 9: Over 60% of Standard 3 pupils in public schools don’t have basic skills.
The majority of children in Standard 3 in public schools do not possess the skills required to enter that grade. Figure 9 shows that only 34% of pupils in Standard 3 can perform simple tasks that demonstrate numeracy, only 33% know how to read in Kiswahili, and only 25% can read in English. In private schools, 61% pass the numeracy test, 62% pass English, and 68% pass Kiswahili.
Fact 10: More than half of students in Standard 4 perform to Standard 2 level.

Figure 10 shows the results of students in a range of classes who took the same Standard 2 test. While the Standard 3 passing rates of the Standard 2 test are very low, higher percentages of pupils can perform up to standard in all three subjects when they are in Standard 4 or above. Yet the numbers are still disappointing: Only 53% of pupils in Standard 4 can pass the tests in all three subjects. This figure rises to 87% in Standard 8. Unfortunately, however, this also shows that more than one in ten pupils in Standard 8 was not competent at the Std 2 level in all three subjects.
Fact 11: Private school attendance, household wealth, mothers’ education, and extra tutoring are associated with a higher pass rate.

In addition to presenting the average performance of different groups on these exams, statistical analysis reveals the characteristics that are associated with better performance. Holding a wide range of factors constant, a pupil is more likely to pass the Uwezo exams in Kiswahili, English and Mathematics if he or she attends a private school, has an educated mother, receives extra tutoring, or comes from a wealthy family. Female students also pass at slightly higher rates than male students.

The chart below shows the variables that are statistically associated with the increased probability of passing each test, and the incremental probability of a passing score that each variable is associated with. For example, being in the top wealth quintile means that a student has a 14% higher chance of passing the math exam, a 16% higher chance of passing the English exam, and a 16% higher chance of passing the Kiswahili exam.

**Figure 11: Factors that increase the likelihood of passing the Uwezo exam**
Fact 12: A student’s success is proportional to a mother’s education.
The chart below shows the proportion of students in Standard 3 who passed all three portions of the Uwezo exam, according to the level of education of the student’s mother. While Figure 11 shows that, on average, students with more educated mothers do better, Figure 12 shows that the relationship between a mother’s education and a student’s performance is relatively weak if the student’s mother has not gone beyond primary school. If a mother reaches secondary school, however, the improvement in her child’s test scores is dramatic.

Figure 12: Proportion of Standard 3 students passing all 3 exams by years of mother’s schooling
4. Conclusion

The Uwezo survey provides a sobering reality check on the state of education in Kenya.

First, while enrollment has increased dramatically, it is not enough and should not be conflated with increased learning. The test results show that actual quality of learning is quite low. New efforts that focus on and provide incentives to improve learning outcomes in education are urgently needed.

Second, although access to primary education has improved for poorer Kenyans, there is still serious inequality in the education system. These disparities of wealth and geographic region affect enrollment rates, and are even more striking in their effect on educational outcomes. These inequalities are further exacerbated by the fact that wealthier children are likelier to attend private school and to receive private tuition – two factors that are associated with much higher test scores.

Third, the stronger performance of the private system suggests that with greater parental involvement and additional resources, much can be done to improve the performance of the education system.

At the same time, however, given that private schools are privately funded and that parents can choose among schools, the performance of private schools is still rather poor. These findings should serve as a warning signal for those believing that a single “silver bullet” reform or intervention, such as greater parental involvement or decentralized payment systems, would resolve many problems in Kenya’s school system. There is great potential in these innovations, but much more needs to be done to achieve acceptable quality measured in terms of improved abilities of children, rather than inputs. This will require grappling with numerous, overlapping accountability failures that prevent both public and private schools from ensuring Kenyan pupils can read and add and have the crucial foundational skills necessary for life. Real, concrete action is possible – the question is whether Kenyans and their Government will act to make the difference.