



## **EAST AFRICAN QUALITY IN EARLY LEARNING (EAQEL)**

**African Population and Health Research Center  
(Aphrc)**

### **BASELINE FINDINGS REPORT**



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# **1 Executive summary**

This is a baseline report of an independent impact evaluation of the Aga Khan Foundation's (AKF) East African Quality in Early Learning (EAQEL) initiative to determine whether the initiative improves learning outcomes in the early grades (1-3) in two districts in Kenya and two districts in Uganda. The districts covered by the study are Kwale and Kinango in Kenya and Amolatar and Dokolo in Uganda. The four districts were selected by AKF because they were consistently performing poorly in the national examinations in both countries. The EAQEL initiative has two components: Core model and Core model plus. The Core model involved a 'new' instructional model implemented by teachers in selected schools and the Core model plus is a combination of Core model activities and parental component. The parental component includes story telling for children, supplying books and asking parents to regularly read for their children among others. The baseline covered by this report was undertaken between the months of July and August 2009 for grades 1 and 2 of 2009 and in the months of February and March for grade 1 of 2010.

## **1.1 Numeracy assessment findings**

- There is a slight difference in the results of the treatment and control groups in Kenya although we do not anticipate this to affect the outcome of the RtL impact evaluation.
- We note that there is no difference in pupil scores by gender indicating that this slight difference between treatment and control may not be an outcome of gender differences.
- Kenya is scoring better than Uganda in numeracy- scores in Kenya are above 50% mark while those in Uganda are below.
- In Kenya, Kwale district outperformed Kinango district while in Uganda Amolatar and Dokolo have low but comparable results.
- We did not detect the effect of KENSIP in Kenyan case.
- Grade 1 scores are not as normally distributed as those of grade 2 in both countries.

## **1.2 Written literacy assessment findings**

- Overall, there is small difference in written literacy scores between treatment and control in both countries. For instance, in Kenya, there is a 1.6 percentage points

difference in grade 1-2010; and a 5 percentage point difference in grade 2-2009 - both in favour of control groups.

- There is no significant difference in the written literacy scores by gender.
- Kenya pupils scored better in written literacy than their counterparts in Uganda. The differences are larger in grade 1- 2009 (25 percentage points).
- In Kenya, Kwale performed better than Kinango, while in Uganda Amolatar scored better in the control group than Dokolo control group – while the Dokolo treatment did better than Amolatar treatment.
- Written literacy scores were not normally distributed in both grades in both countries.

### **1.3 Oral literacy assessment findings**

- Overall, there is a small difference in oral literacy scores between treatment and control in both countries; that is about 3 percentage points in both grades in favour of control groups.
  - There is no significant difference in the oral literacy scores by gender in Kenya, although a small difference of 2 to 3 percentage points in favour of boys is observed in Uganda.
  - We do not observe large differences in the oral literacy scores between pupils in Kenya and Uganda.
  - In Kenya, as in the other assessments, Kwale performed better than Kinango but in Uganda, the two districts performed almost the same in this assessment.
- Except for grade 2-2009 in Kenya, the oral literacy scores were normally distributed and coalesced around the mean.

### **1.4 Oral literacy item analysis**

- Under the listening domain, in both grades, pupils in Uganda scored higher than their counterparts in Kenya in sound discrimination and listening comprehension.
- In both countries, items on sound discrimination were the worst performed.
- Under the speaking domain, large differences were observed between pupils in Uganda and Kenya in describing objects and story composition, with pupils in Kenya

scoring higher. Although telling direction was poorly performed by pupils in both countries, those from Uganda scored better.

- In reading, pupils scored highly on items involving vowels, consonants and simple words in that order. However, pupils in Kenya had higher scores than those in Uganda.

## **1.5 Teacher characteristics**

Most of the teachers in Kenya (72.3%) have not received any special training to teach early grades. Head teacher support is minimal within the study schools. A good number of teachers especially in Kenya (30.99%) report not to be supported by their head teachers and 33.69% in Uganda to be rarely supported. Three in every four teachers have not received in-service training in the last 18 months.

## **1.6 Household characteristics**

The average household size in both countries is 7.4. About 58% of Kenya household members reported that they do not tell stories to their schooling children. Almost two thirds of household members in both countries have visited a school where the sampled child attends. More than 75% of the households reported that they do not have reading books for their children in the household.

## 2 Introduction

This is a baseline report of an independent impact evaluation of the Aga Khan Foundation's (AKF) East African Quality in Early Learning (EAQEL) initiative to determine whether the initiative improves learning outcomes in the early grades (1-3) in two districts in Kenya and two districts in Uganda. The objectives in undertaking this impact evaluation of EAQEL were as follows: (i) to determine whether the intervention leads to improved learning outcomes in mathematics and reading among children enrolled in primary grades 1, 2 and 3; (ii) to determine if there is a critical difference in the learning outcomes of children enrolled in grades 1, 2 and 3 attributable to the two different treatment models (Core model and Core model plus) as was proposed by AKF; (iii) to determine the key contributing factors that lead to improvements, if any, in numeracy and literacy in grades (1, 2, and 3). These factors may include but are not limited to the following: teachers' effective implementation of the Reading to Learn Approach; availability and use of instructional materials; in-classroom functioning libraries; head teacher active support; the presence and effectiveness (how engaged/involved and influential) of School Management Committee (SMC); the level of priority given to lower grades in the allocation of school resources (there may not be an effective SMC but the school head prioritizes early grade and vice versa); uptake in parents borrowing books and using them with their children; proximity of functioning library; parental support for attendance; class size; family literacy and education levels, among others.

Kenya and Uganda have taken the initiative to provide free quality universal primary education (UPE) through their Free Primary Education (FPE) policies. By undertaking impact evaluation of RtL intervention as proposed by AKF, we aim to provide solid information on what works, and in doing so, help in setting a pattern where trials are first used before a major policy rollout. If we can achieve to set this pattern through the impact evaluation of RtL and use the findings of the evaluation to inform AKF, Ministries of Education in Kenya and Uganda and Hewlett Foundation who are supporting the intervention, then we shall have made a significant step towards encouraging the use of evidence to inform education policy. If all children can competently read and do mathematics at the required level as a result of participating in the proposed interventions (*Core module* or *Core module plus*), then there shall have been solid evidence upon which to recommend to AKF, Ministry of Education (MoE) and Hewlett

Foundation the need for a larger study. The sole aim of recommending further and larger study would be to provide robust evidence on the benefits of RtL over the current practices.

This report covers EAQEL baseline I findings conducted in the months of July and August 2009 for grades 1 and 2 and baseline II findings conducted in the months of February and March 2010 for the incoming 2010 grade 1. As noted earlier, the impact evaluation covers three grades (1, 2 and 3) but since grade 3 would have moved to grade 4 by 2010 it was felt that they would have had very limited exposure to the intervention. It was therefore agreed that the baseline for 2009 should only cover grades 1 and 2 who by 2010 will be in grades 2 and 3; and that the incoming grade 1 of 2010 be covered in 2010, leading to a complete set of three grades to be assessed during the end line.

## **3 Sampling**

### **3.1 Selection of schools**

Randomization was used to assign schools to different arms of the interventions. The benefit of a randomized design is its simplicity in interpreting the results and to clearly isolate the impact of the intervention through the counterfactual made possible by the control group, while at the same time avoiding selection bias problems that exist in evaluation designs. First, we grouped schools into clusters for Kenya and sub-counties for the case of Uganda. Randomization design was then used to assign zones into either treatment or control group. By doing so, all schools within each selected cluster were automatically included into the sample and could fall either into treatment or control group. Sampling at cluster level was mainly to eliminate bias that may result if both treatment and control schools were to be in the same zone. Special attention was paid to schools located in Kinango district of Kenya where the Kenya School Improvement Support Programme (KENSIP) had been in place. KENSIP had not been systematically evaluated to our knowledge. Using the same design, we took clusters where KENSIP program had been implemented and randomised them at control and treatment. Figures 1 and 2 illustrate the sampling procedures.

### **3.2 Selection of pupils**

The design of the study was such that it was not possible to assess all pupils in the sampled schools. We therefore undertook to randomly select a sample of 20 pupils in each grade, and the random sampling was done by first grouping pupils by gender and selecting each sex based on their proportion in the class. Based on our baseline I experience, we increased the sample size to 25 pupils for the 2010 grade 1 in our baseline II in order to cater for any possible attrition due to absenteeism and school transfers. The same pupils will be followed at the end line planned for October/November 2010.

Figure 1: Sampling frame in Kenya

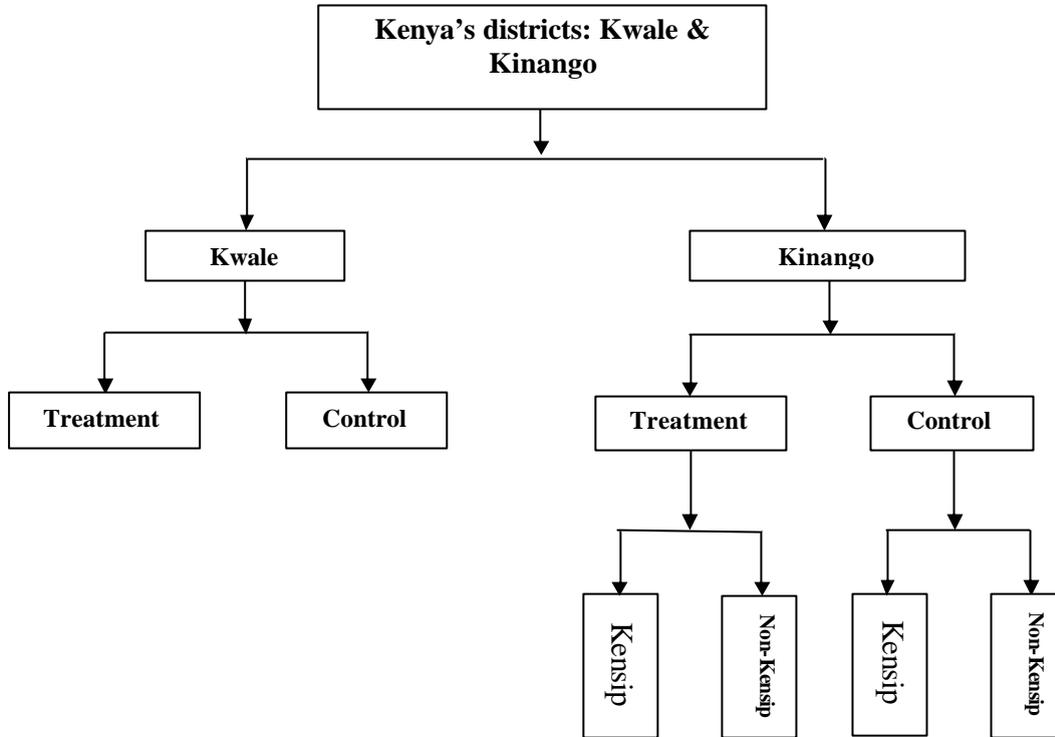
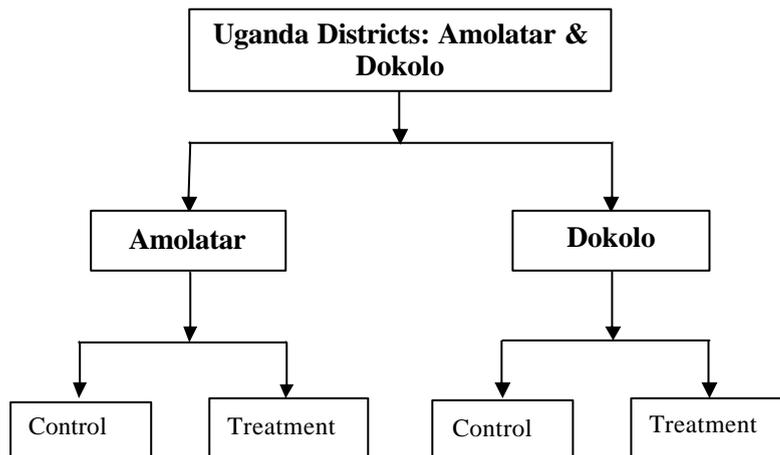


Figure 2: Sampling frame in Uganda



## **4 Study tools**

To undertake the impact evaluation, several tools were developed. They included the following:

1. Pupil assessment tools:- Literacy and Numeracy
2. Teacher characteristics questionnaire
3. Classroom observation checklist
4. School characteristics questionnaire
5. Household characteristics questionnaire.

### **4.1 Pupil assessment tools**

The RtL teaching approach focuses on literacy and numeracy in early grades 1, 2 and 3. In developing standardized assessment tests to assess the impact of RtL, several consultation meetings with key stakeholders and experts were held. The stakeholders included RtL implementing agency (AKF), APHRC, National assessment experts, National Curriculum experts, Academics, and Practitioners in numeracy and literacy assessment. These experts came from Kenya and Uganda as well as internationally. Several stages were involved in developing the assessment tools. First, a pool of questions was developed drawing from curriculum from both countries. For instance, in numeracy, the team came up with a pool of 50 test items in each of the grades. The competencies and skills for grade 1 were examined and agreed upon by the team. In the case of grades 2 and 3 the competency and skills domains were repeated but the level of complexity or difficulty of test items required higher order thinking.

Second, the pool was refined and final test items to assess competency levels of pupils in grades 1-3 in numeracy and literacy selected. Third, the test items were translated into both Kiswahili and Lang'o, which are the languages of instruction in Kenya and Uganda study sites respectively. These languages are also widely spoken in the catchments area of these schools.

## 4.2 Other survey questionnaires

Other instruments that were developed by APHRC and agreed on by both partners included questionnaires to gather information on the schools, teacher's characteristics and household characteristics. These were mainly borrowed from ongoing APHRC research work that collects similar information.

## 4.3 Scoring

There was one test tool for numeracy and another test tool for literacy for all the three grades. The rationale for having one assessment tool covering the three grades was to permit determination of how pupils in higher grades scored on items for lower grades (for instance to determine how competent grade 2 pupils would be on grade 1 items in both numeracy and literacy). Scoring of the literacy and numeracy assessment test was done by grade using the sum of the items scores which that grade was supposed to attempt as the denominator and expressed into a percentage. For example, a grade 1 pupil who correctly scored all the 15 grade 1 numeracy items scored 100%, while a pupil in grade 2 who scored all the 30 numeracy items for grade 2 (i.e.15m items from grade 1 and another 15 at grade 2 level) scored 100%. [Appendix A](#) shows the different sections and their score as included in the literacy assessments, this is also summarised in Table 1 below.

Table 1: Number of test items and total score per grade

<i>Item</i>	<i>Grade</i>	<i>Items</i>	<i>Total score</i>
Oral literacy	1	52	76
	2	83	120
	3	94	155
Written literacy	1	38	50
	2	53	71
	3	74	144
Numeracy	1	15	20
	2	30	48
	3	45	75

\* For example if the pupil was asked to read 5 letters then these are five separate items.

## 5 Results

Before we can present the results we first provide a brief description of our sample and its distribution.

### 5.1 Description of the sample

This study is being undertaken in two districts in Kenya (Kinango and Kwale) and two in Uganda (Amolatar and Dokolo). These districts were selected by AKF for RtL intervention because they have consistently performed poorly in national examinations. On the basis of our sample design described above this study included a total of 229 schools distributed as shown in Table 2 below.

Table 2: Distribution of schools

District	Controls		Treatment	
	No	%	No	%
Kinango	33	45.83	39	54.17
Kwale	22	45.83	26	54.17
Amolatar	24	48.98	25	51.02
Dokolo	31	51.67	29	48.33
Total	110	48.03	119	51.97

Baseline was conducted in July and August 2009 and targeted 9160 pupils in both grades 1 and 2 and in February and March 2010 for incoming grade 1 and targeted 5725 pupils. However, in the actual test, the number (14404) of pupils who were assessed was less than the target (14885). The reasons for the difference between the target and actual are: 1) some classes had fewer pupils below the target sample size of 20 pupils in 2009 and 25 in 2010; 2) during the testing time, a few pupils disappeared from the test venues and some were also absent during call backs. Table 3 shows the number of pupils who sat for each of the assessments.

Table 3: Distribution of pupils by grade and test administered

	Grade 1 -2010			Grade 1 - 2009			Grade 2 - 2009		
	Numeracy	Written Literacy	Oral Literacy	Numeracy	Written Literacy	Oral Literacy	Numeracy	Written Literacy	Oral Literacy
Overall (Both KE & UG)	5251	5239	5234	4590	4573	4507	4560	4563	4508
Kenya	2727	2727	2716	2424	2414	2418	2407	2409	2403
Uganda	2524	2512	2518	2166	2159	2089	2153	2154	2105
Treatment	2753	2754	2758	2401	2395	2356	2389	2394	2366
Control	2498	2485	2476	2189	2178	2151	2171	2169	2142
Boys	2610	2607	2598	2259	2251	2209	2268	2270	2236
Girls	2641	2632	2636	2331	2322	2298	2292	2293	2272

We targeted all teachers of numeracy and literacy in grades 1 of 2010, and 1 and 2 of 2009 for this baseline. In total 556 teachers who were teaching grades 1-3 were reached and their distribution is as shown in table 4. From table 4 it can be seen that there are more male teachers in the Uganda study districts. In contrast, Kenya had more female teachers with Kwale district having a significantly higher number. On average each school had 2.4 teachers assigned to grades 1, 2 and 3.

Table 4: Distribution of teachers interviewed

District	Female		Male	
	No	%	No	%
Kinango	104	52.26	95	47.74
Kwale	91	76.47	28	23.53
Amolatar	39	35.14	72	64.86
Dokolo	43	33.86	84	66.14
Total	277	49.82	279	50.18

Data was collected on school characteristics and management from 216 head teachers or their deputies (DHT) in the absence of the school head teacher. Overall, 91.67% of the head teachers or DHTs were male. Disintegrated by country, Uganda had more male school heads (96.69%) compared to Kenya (87.39%)

Household data was collected from parents or guardians of the sampled pupils in the Core model plus districts – Kinango in Kenya and Amolatar in Uganda. The study targeted a total of 7260 households based on the pupil sample. We however were able to capture 5611 households. The

difference was mainly to poor turnout by parents especially in Uganda. Of all the households captured, 13.88% were headed by a female; in Kenya 14.68% of household heads were females, while in Uganda 12.39% of the household heads were females.

## 5.2 Results of the assessment

### 5.2.1 Numeracy assessment

Table 5: Mean score (%) in numeracy by grade and gender in Kenya

Country: Kenya	Grade 1-2010			Grade 1-2009			Grade 2-2009		
	No. of pupils	Mean	st. dev	No. of pupils	Mean	st. dev	No. of pupils	Mean	st. dev
Treatment	1507	63.44	19.06	1326	61.71	20.06	1314	48.29	19.72
Control	1220	63.65	18.80	1098	65.97	19.66	1093	53.57	19.34
Boys	1365	63.60	19.47	1190	63.79	20.59	1203	51.61	20.08
Girls	1362	63.47	18.40	1234	63.50	19.40	1204	49.77	19.33
Treatment -none-Kensip	1076	64.20	19.15	952	63.60	19.81	937	51.76	19.76
Control-none-Kensip	860	63.78	18.79	780	65.19	19.95	774	52.08	19.14
Treatment -Kensip	431	61.55	18.71	374	56.90	19.92	377	39.65	16.76
Control-Kensip	360	63.35	18.87	318	67.89	18.83	319	57.20	19.38

As shown in Table 5, in Kenya all the first graders scored more than 50%. We also note that the incoming 2010 grade 1 had similar mean scores with grade 1-2009. In contrast not all the groups in grade 2-2009 scored more than 50% with treatment-KENSIP scoring a mean of 39.65%. What is surprising is the difference in scores between the treatment and control groups in both grades 1- and 2 of 2009. The treatment groups scored lower than the control groups both in grades 1 and 2 of 2009. At this stage we do not know what accounts for this difference but for purposes of impact evaluation, this difference will not affect the results because we shall use the gain score for each group. At this stage we also do not see the effect of KENSIP on the scores, neither do we detect any gender differences.

As shown in Table 6, the scores in Uganda are below the 50% mark in all grades. The scores for the treatment and control groups are closely comparable unlike in the Kenya case. This means that, at baseline, the treatment and control groups are similar on the outcome variable. There are also no gender differences in the scores of grade 1 of 2009 and those of grade 1 of 2010, although in grade 2, boys scored slightly higher than girls.

Table 6: Mean score (%) in numeracy by grade and gender in Uganda

Country: Uganda	Grade 1-2010			Grade 1-2009			Grade 2-2009		
	No. of pupils	Mean	st. dev	No. of pupils	Mean	st. dev	No. of pupils	Mean	st. dev
Treatment	1246	38.17	22.59	1075	38.58	22.20	1075	40.05	14.88
Control	1278	42.63	24.79	1091	37.68	23.83	1078	40.11	15.33
Boys	1245	41.80	24.34	1069	38.99	22.67	1065	41.35	15.31
Girls	1279	39.08	23.25	1097	37.28	23.37	1088	38.85	14.79

Figure 3 and 4 shows the mean scores of the 2009 and 2010 grade 1. The result shows that the treatment (T) and control (C) groups for grade 1 of 2010 in Kwale and Kinango are very closely comparable, and that Kwale is also doing better than Kinango. In Uganda both districts are scoring almost equally. In the four districts of the study, Uganda is doing worse than Kenya.

Figure 3: Mean score (%) in numeracy by district and country, grade 1-2010

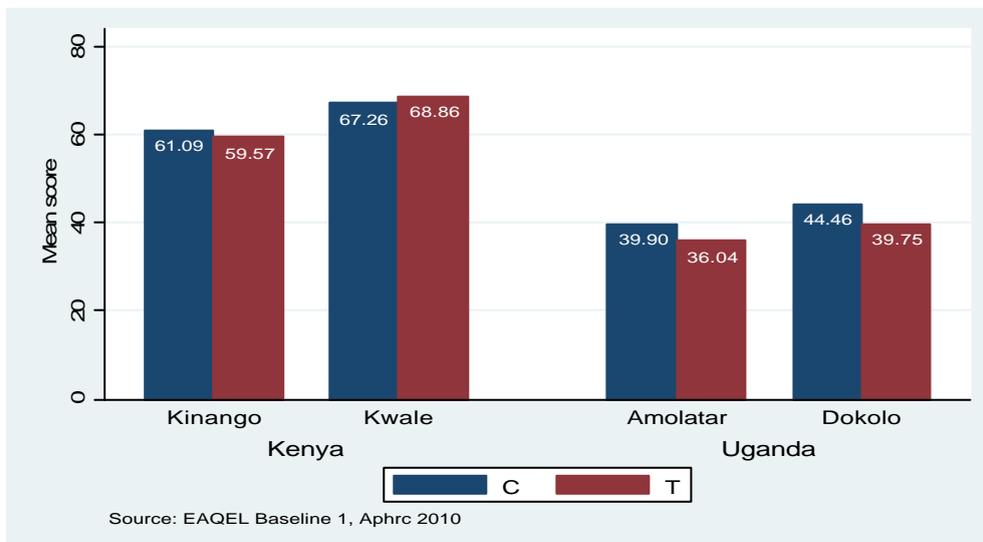


Figure 4: Mean score (%) in numeracy by district and country, grade 1-2009

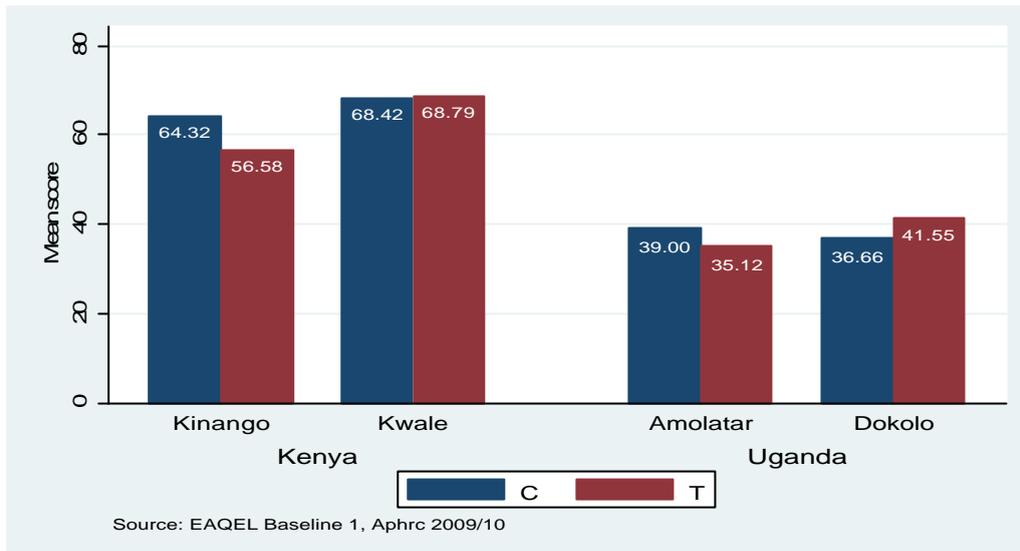


Figure 5 shows numeracy summary results for grade 2. The following are apparent: 1) control group in Kinango, Kenya is scoring higher than the treatment by 10 percentage points while for Kwale both groups are comparable.; 2) the Kinango control group in Kenya scored above 50% while the treatment group scored below the 50% mark; 3) In Uganda, Dokolo district has slightly better scores compared to Amolatar but in both districts the scores are below 50%.

Figure 5: Mean score (%) in numeracy by district and country, grade 2-2009

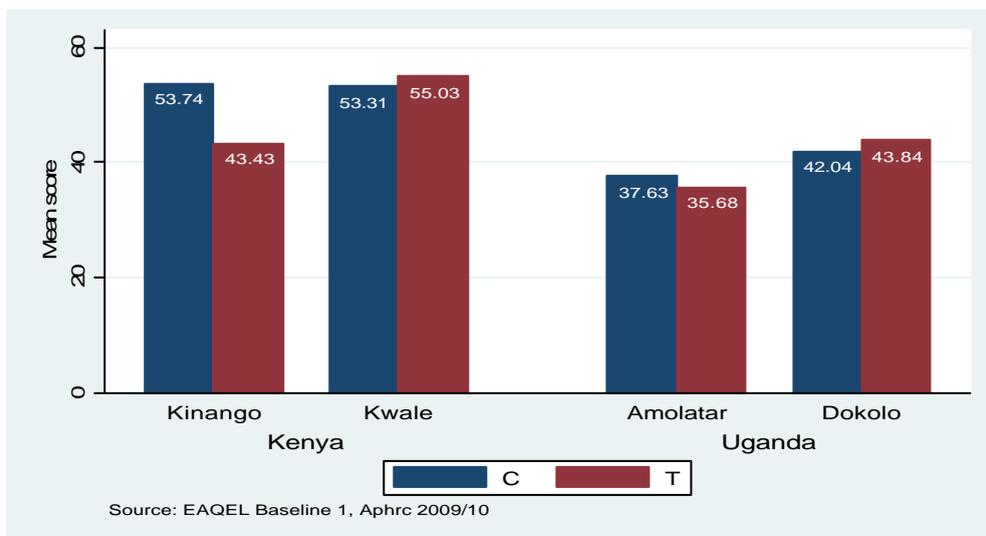


Figure 6 and 7 shows the distribution of Grade 1 scores in numeracy. The graphs show that the score distribution is close to normal with a slight skewedness to the left in both cases; and with majority scoring above the mean.

Figure 6: Distribution of Numeracy scores, grade 1-2010 Kenya

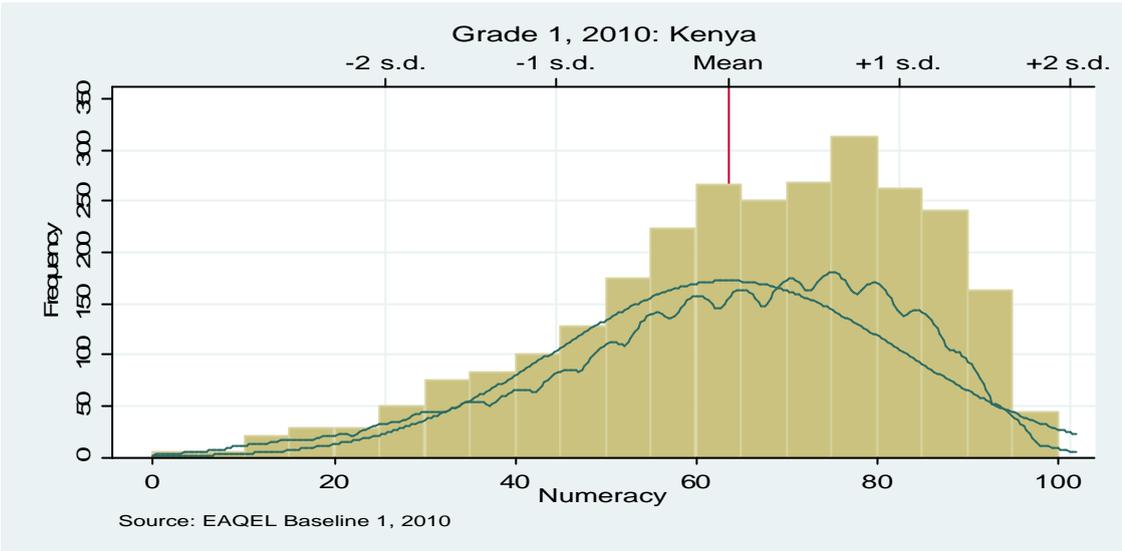
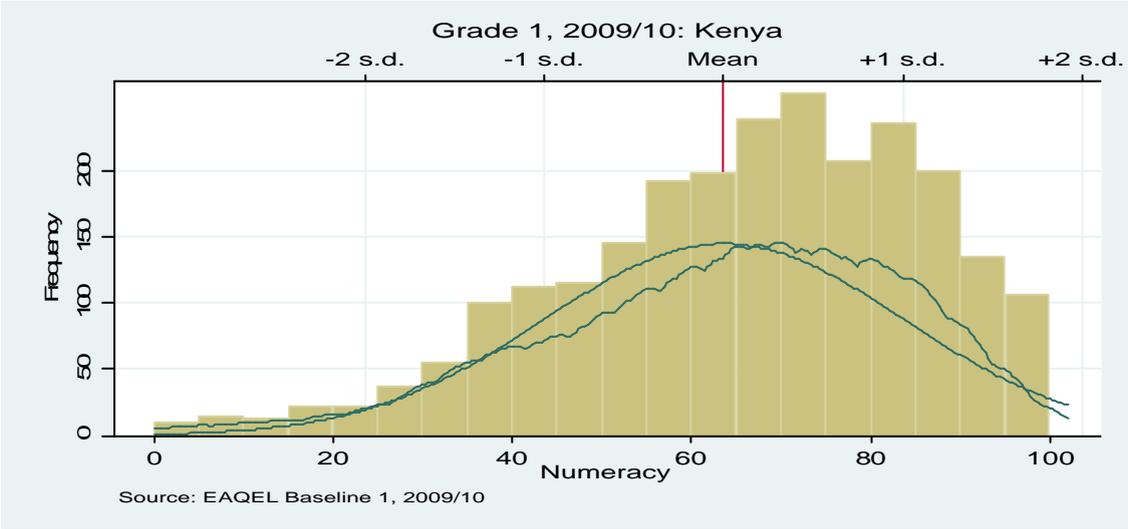


Figure 7: Distribution of Numeracy scores, grade 1-2009, Kenya



In the Uganda case shown in Figure 8 and 9, the distribution for grades 1 is also close to normal with a slight skewedness to the right (negative). What this means is that majority of the pupils score below the 50% mark.

Figure 8: Distribution of numeracy scores, grade 1-2010 Uganda

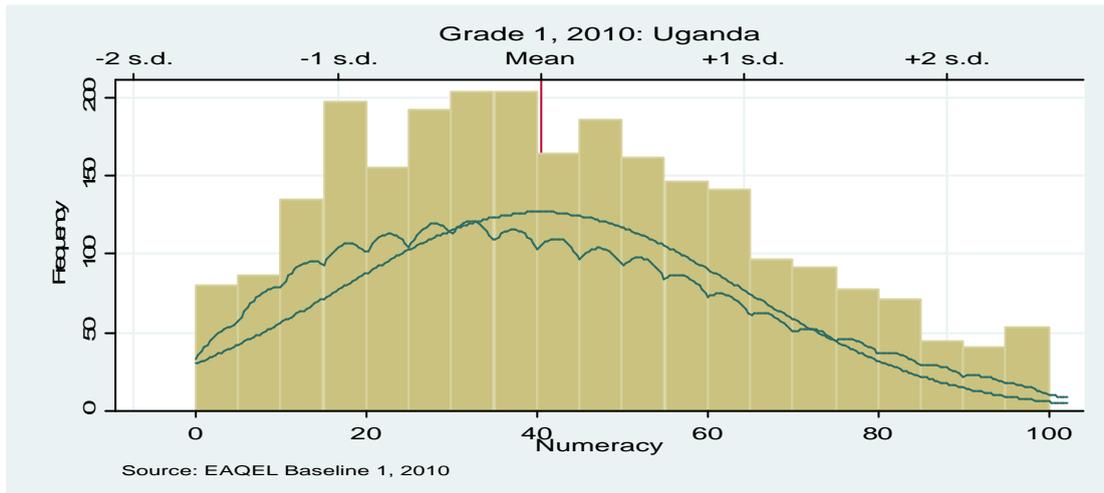
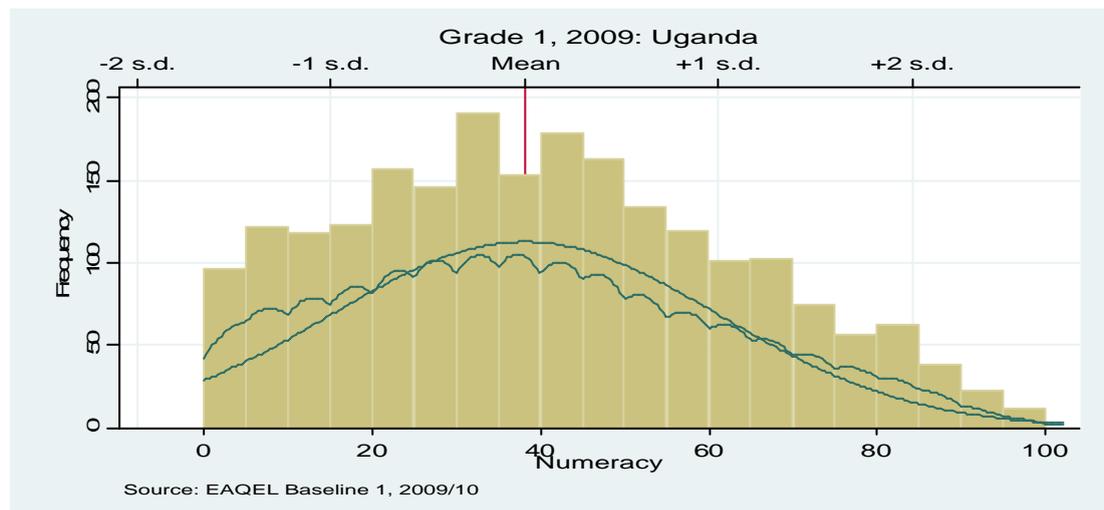


Figure 9: Distribution of numeracy scores, grade 1-2009 Uganda



Figures 10 and 11 present similar results for grade 2 in Uganda and Kenya respectively. For this grade, distribution in the score is more normal than those seen in grade 1 and the spread is a smooth distribution rather than a peaked one from the mean.

Figure 10: Distribution of numeracy scores, grade 2-2009 Uganda

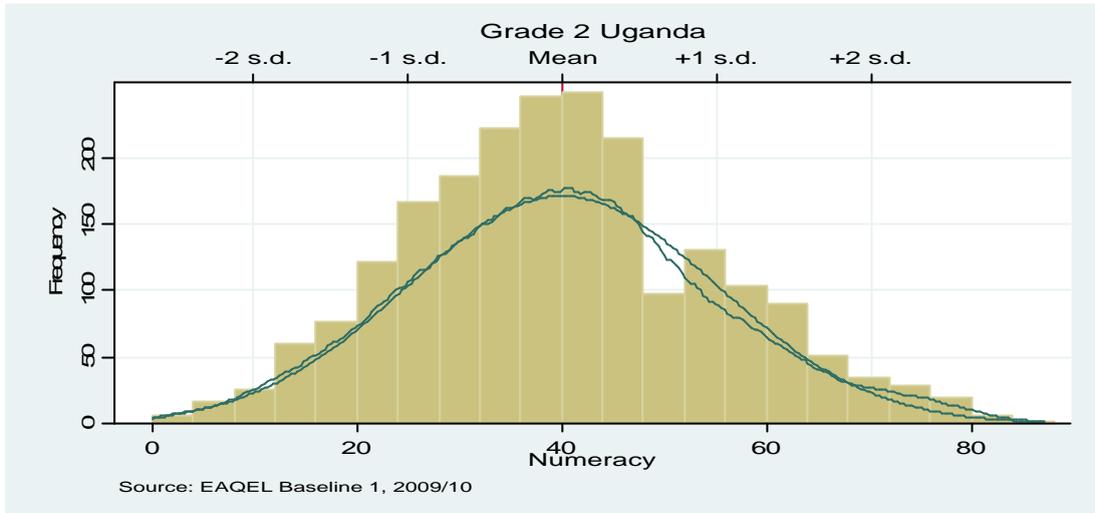
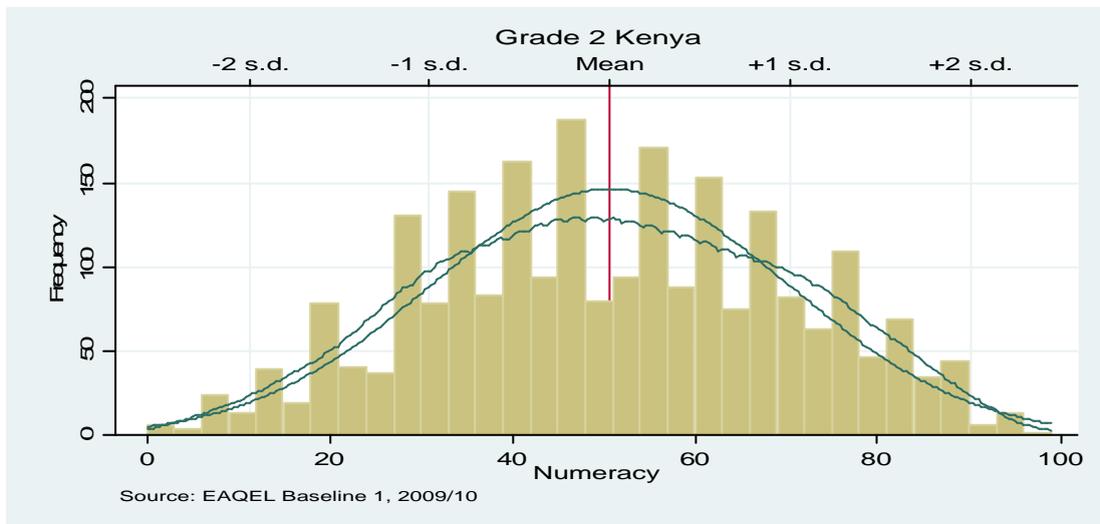


Figure 11: Distribution of numeracy score, grade 2-2009 Kenya



*Summary of the numeracy assessment findings*

- There is a slight difference in the results of the treatment and control groups in Kenya although we do not anticipate this to affect the outcome of the RtL impact evaluation.
- We note that there is no difference in pupil scores by gender indicating that this slight difference between treatment and control may not be an outcome of gender differences.
- Kenya is scoring better than Uganda in numeracy- scores in Kenya are above 50% mark while those in Uganda are below.
- In Uganda, the mean score in the two grade 1 (grade 1 of 2009 and grade 1 of 2010) is approximately 40% meaning that there were no differences in numeracy competency levels between the 2009 and 2010 grade 1. In Kenya, Kwale district slightly outperformed Kinango district while in Uganda Amolatar and Dokolo have low but comparable results.
- We did not detect the effect of KENSIP in the performance of pupils in Kenya.
- Grades 1 scores are not as normally distributed as those of grade 2 in both countries.

### 5.2.2 Written Literacy

Written literacy required pupils to write alphabetical letter sounds, short words, simple sentences, and short paragraph. In the following paragraphs we present the combined score for all items.

Table 7: Mean score (%) in written literacy

	Grade 1-2010			Grade 1-2009			Grade 2-2009		
	No. of pupils	Mean	st. dev	No. of pupils	Mean	st. dev	No. of pupils	Mean	st. dev
Overall (Both KE & UG)	5239	12.63	17.71	4573	19.11	23.73	4563	33.46	27.48
Kenya	2727	22.76	19.40	2414	31.65	25.14	2409	48.35	27.39
Uganda	2512	1.63	3.61	2159	5.08	10.64	2154	16.81	15.34
Treatment	2754	12.42	17.18	2395	18.80	23.58	2394	32.56	27.20
Control	2485	12.87	18.27	2178	19.44	23.89	2169	34.45	27.75
Boys	2607	12.55	17.74	2251	19.16	23.94	2270	34.19	27.55
Girls	2632	12.71	17.67	2322	19.06	23.53	2293	32.73	27.39

Table 7 shows the results of written literacy scores. The scores in this assessment are much lower compared to numeracy; and worse in Uganda. In Kenya, grade 1-2009, have outperformed grade 1-2010 as expected. For instance the mean score for grade 1-2009 in Kenya is 31.65% whereas that of grade 1-2010 is 22.76%; and for Uganda the results are 1.63% and 5.08% for grades 1-2010 and 1-2009, respectively. This difference can be explained by the fact that grade 1-2009 had been in primary school for close to 6 months by the time of test administration, while grade 1-2010 were hardly two months in primary school by the time they took the test. As would be expected, grade 2 in both countries has outperformed the two grades 1. The combined written literacy scores for both countries in treatment and control groups are comparable. There is also no gender difference in written literacy in both countries.

Table 8: Mean score (%) in written literacy by grade and gender in Kenya

Country: Kenya	Grade 1-2010			Grade 1-2009			Grade 2-2009		
	No. of pupils	Mean	st. dev	No. of pupils	Mean	st. dev	No. of pupils	Mean	st. dev
Treatment	1509	21.35	18.79	1319	30.93	24.96	1317	46.06	27.74
Control	1218	24.52	19.99	1095	32.52	25.34	1092	51.10	26.73
Boys	1365	22.35	19.68	1183	31.65	25.55	1203	48.59	27.47
Girls	1362	23.17	19.11	1231	31.65	24.76	1206	48.10	27.32
Treatment -non-Kensip	1077	22.63	19.60	947	33.46	26.08	939	49.60	27.50
Control-non-Kensip	857	24.33	20.00	776	32.70	25.71	774	50.04	27.43
Treatment -Kensip	432	18.14	16.18	372	24.48	20.53	378	37.26	26.38
Control-Kensip	361	24.95	19.99	319	32.11	24.46	318	53.68	24.79

Table 8 and 9 provides further analysis of the written literacy results by country. We do not observe a large difference between the control and treatment groups scores as shown in table 8. The scores for boys and girls are also comparable. However, we notice a large difference in score between treatment non-KENSIP and treatment KENSIP in grade 1 which at this stage we cannot attribute to KENSIP. We also observe large standard deviations within groups indicating a high variability between the pupils' scores (having high achieving and low achieving pupils in the same class).

Table 9: Mean score (%) in written literacy by grade and gender in Uganda

Country: Uganda	Grade 1-2010			Grade 1-2009			Grade 2-2009		
	No. of pupils	Mean	st. dev	No. of pupils	Mean	st. dev	No. of pupils	Mean	st. dev
Treatment	1245	1.59	3.38	1076	3.94	8.55	1077	16.05	14.45
Control	1267	1.68	3.82	1083	6.22	12.27	1077	17.56	16.14
Boys	1242	1.78	3.67	1068	5.33	10.99	1067	17.96	16.33
Girls	1270	1.49	3.54	1091	4.84	10.28	1087	15.68	14.21

Uganda situation is depressing with extremely very low scores in all the grades and between treatment and control as shown in table 9. There is no difference in the performance of boys and girls in the two grades 1. In grade 2 boys had a slight edge over the girls of approximately 2 percentage points.

Table 10: Mean score (%) in written literacy by gender

District	Gender	Grade 1-2010		Grade 1-2009		Grade 2-2009	
		Control	Treat	Control	Treat	Control	Treat
Kinango	Female	20.76	17.69	28.37	22.64	44.39	40.04
	Male	20.89	16.34	29.49	24.31	46.94	40.37
Kwale	Female	31.09	27.15	38.83	42.69	60.67	53.38
	Male	28.24	27.60	36.99	39.98	57.50	54.92
Amolatar	Female	1.64	0.97	8.84	3.21	18.00	13.33
	Male	1.48	0.91	10.33	3.44	21.69	14.71
Dokolo	Female	1.55	1.72	3.86	4.01	14.88	16.65
	Male	1.97	2.39	3.39	4.92	16.83	18.94

Table 10 shows the mean scores for written literacy by gender for each district. What we observe is that there are no significant differences between the control and treatment groups on this aspect. Because the scores are so low in written literacy in the Ugandan case we preferred not to undertake group comparisons similar to those we did for numeracy. A visual presentation of the results is as shown in figures 12, 13 and 14. In both grades Kwale is outperforming Kinango. This is consistent with the results of the numeracy scores presented earlier.

Figure 12: Mean % written literacy score by district and country, grade 1-2010

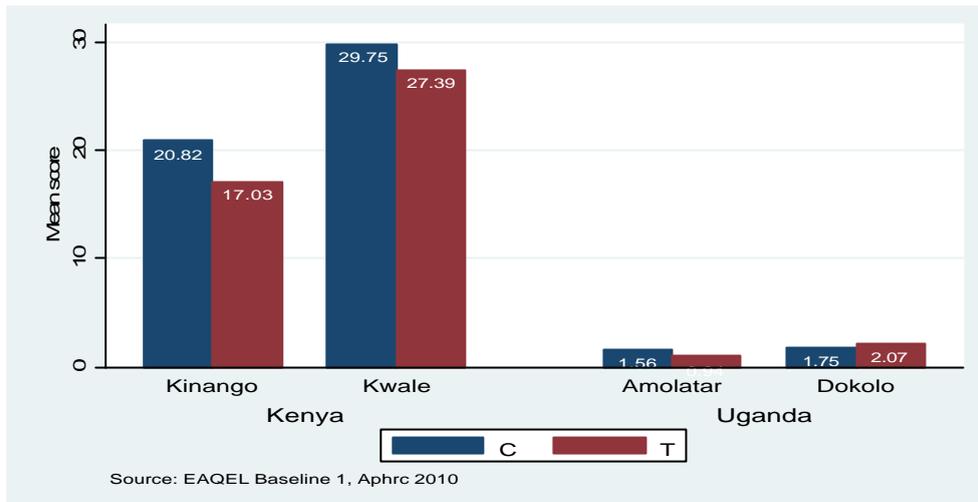


Figure 13: Mean % written literacy score by district and country, grade 1-2009

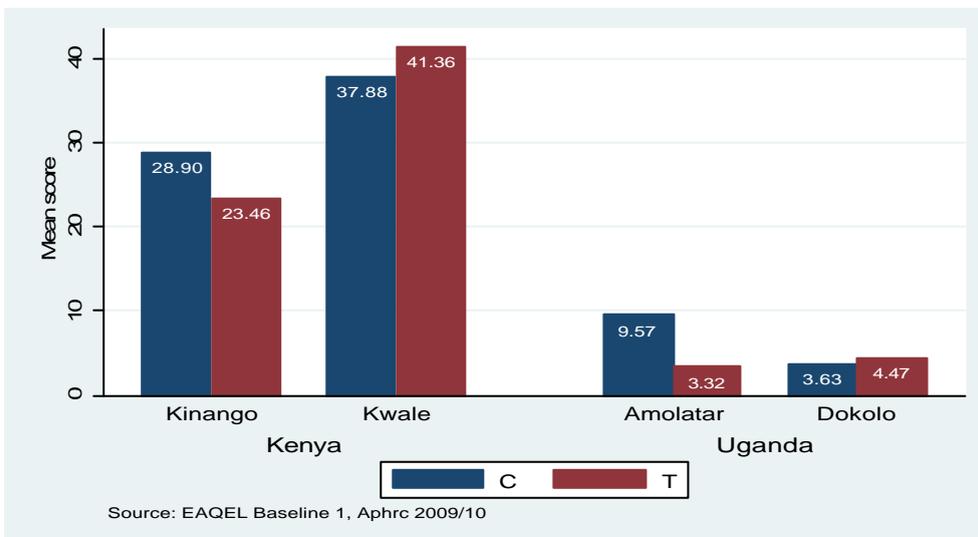
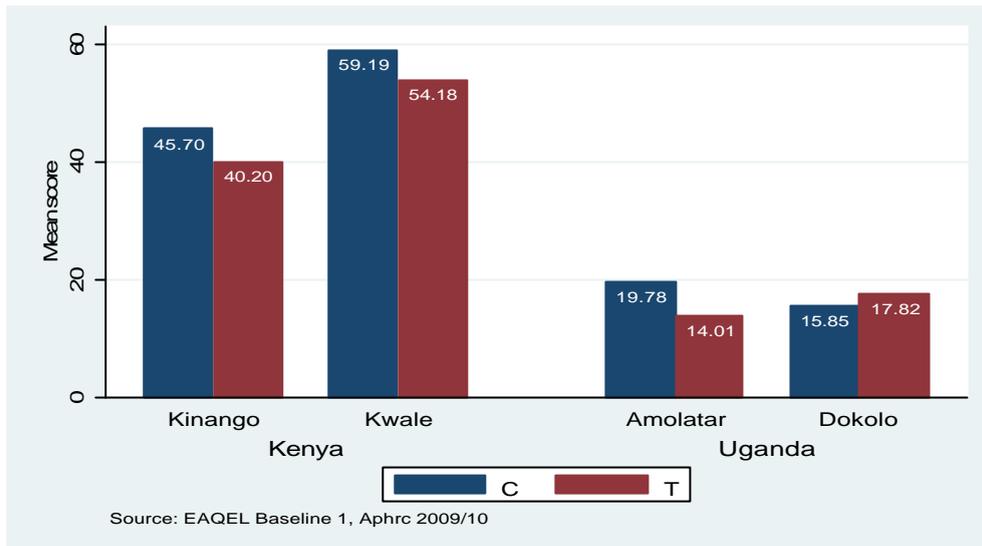


Figure 14: Mean % written literacy score by district and country, grade 2-2009



Another way to look at the results is a comparison of the scores of treatment and control groups within each district by gender as shown in figures 15, 16 and 17. There are no significant differences in the scores between males and females in both countries as noted earlier in written literacy and in the two grades 1. Kenya performed better than Uganda in written literacy.

Figure 15: Mean % written literacy score by gender and country, grade 1-2010

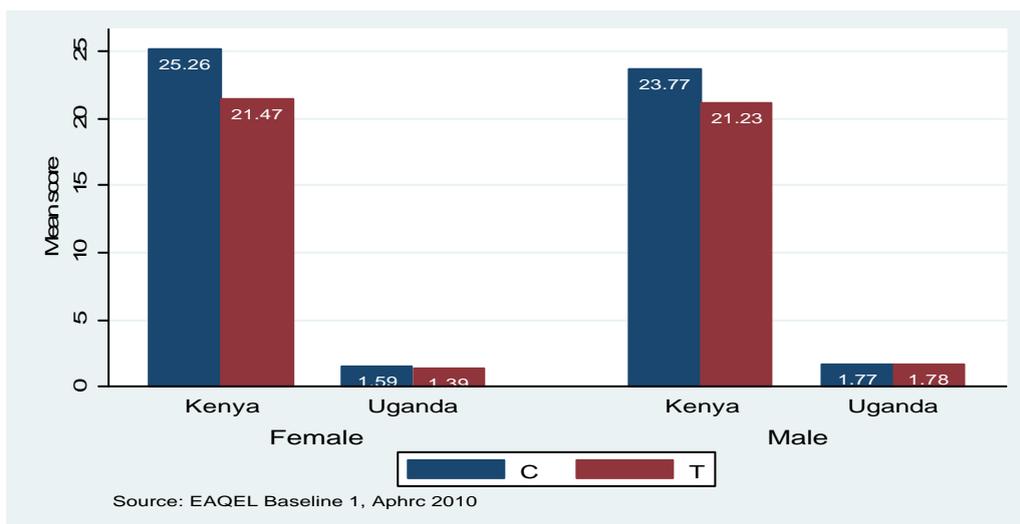


Figure 16: Mean % written literacy score by gender and country, grade 1-2009

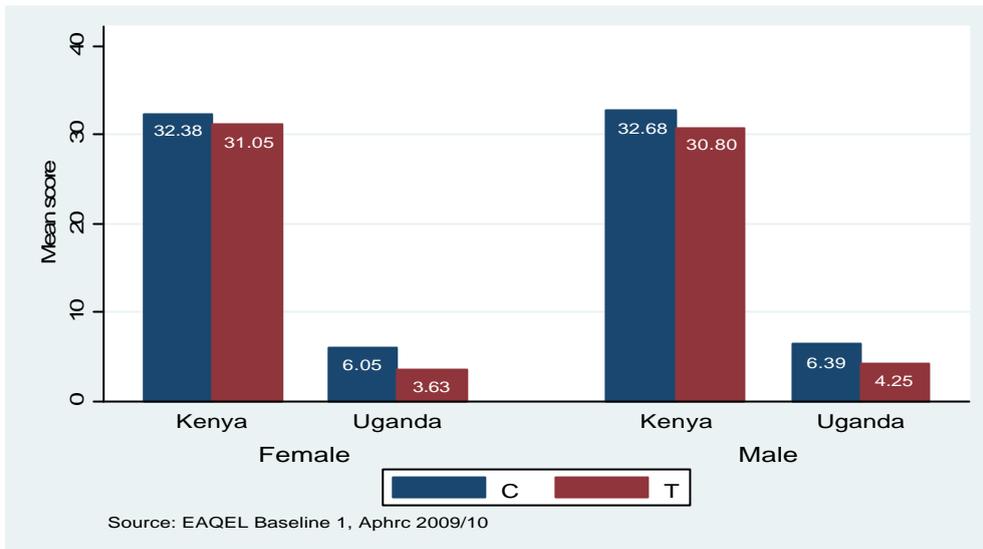
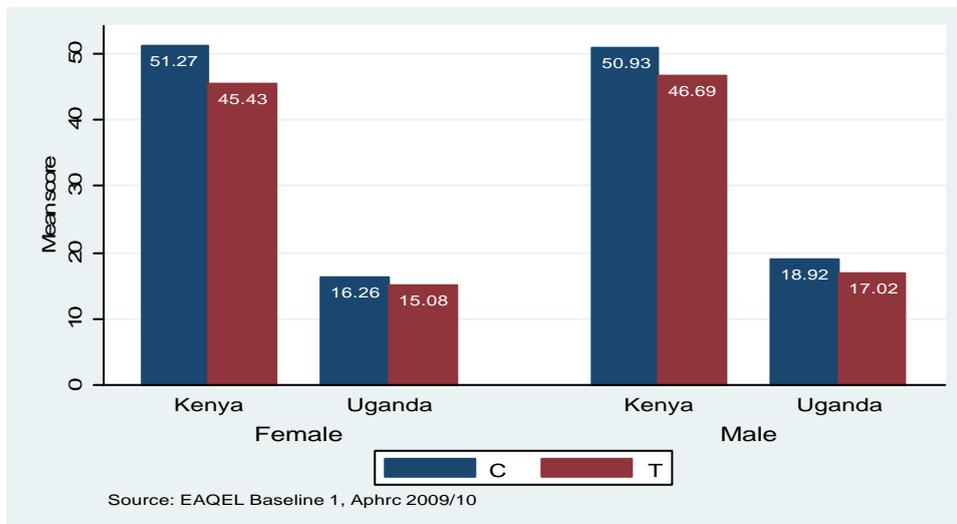


Figure 17: Mean % written literacy score by gender and country, grade 2-2009



We also assessed how the written literacy scores were distributed in both countries as presented in figures 18, 19 and 20. The distribution for grade 1 scores in Kenya is skewed to the right and majority of the pupils scored below the mean. This can be explained by the outliers who are pulling the mean upwards. For grade 2 in Kenya, the distribution is bimodal (has two peaks). This indicates a clustering of weak pupils and bright students within the country. The distribution

in Uganda is close to zero reinforcing the poor performance of the pupils in written literacy in the country.

Figure 18: Distribution of written literacy score in Kenya grades 1

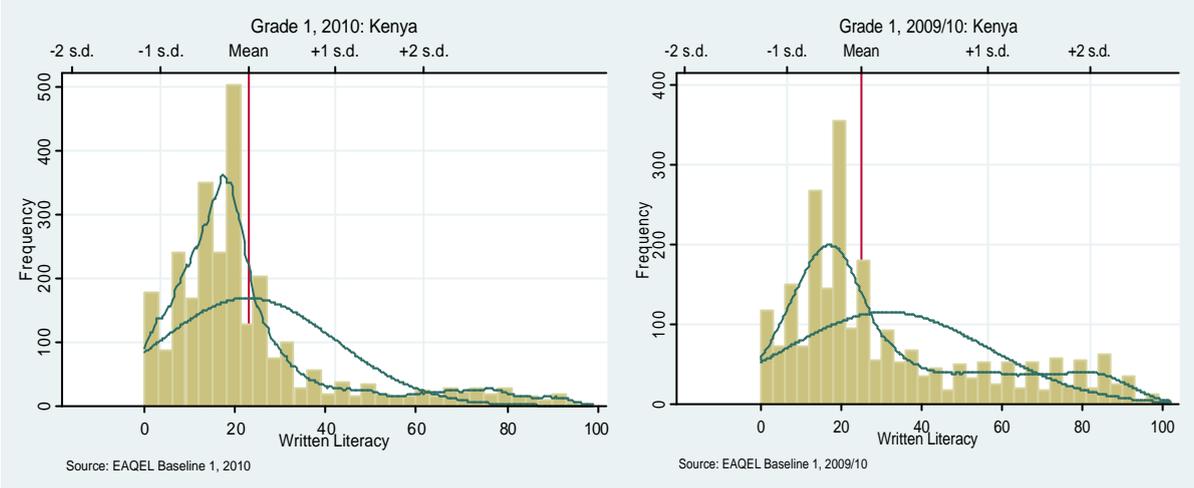


Figure 19: Distribution of written literacy score in Uganda both grades 1

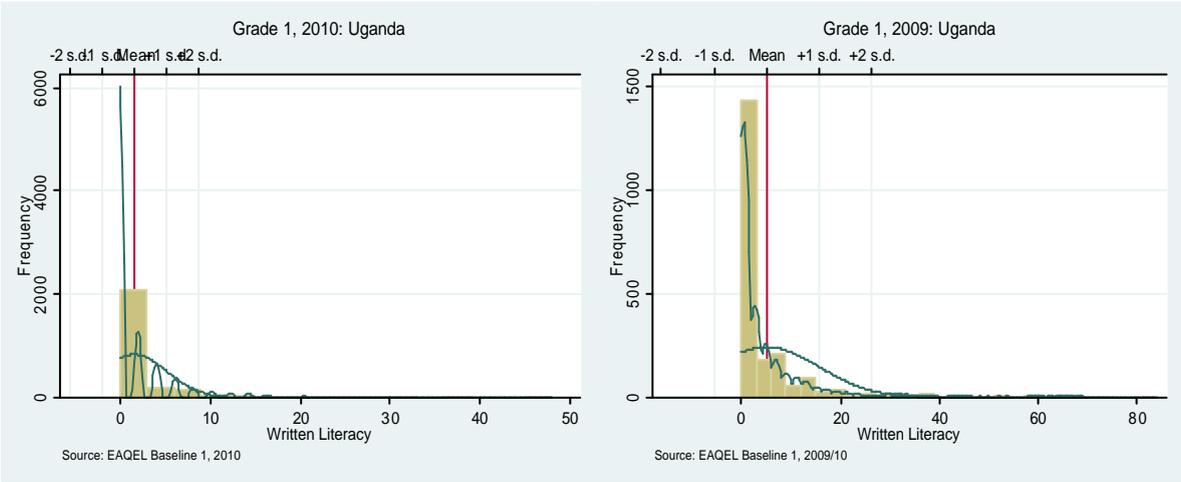
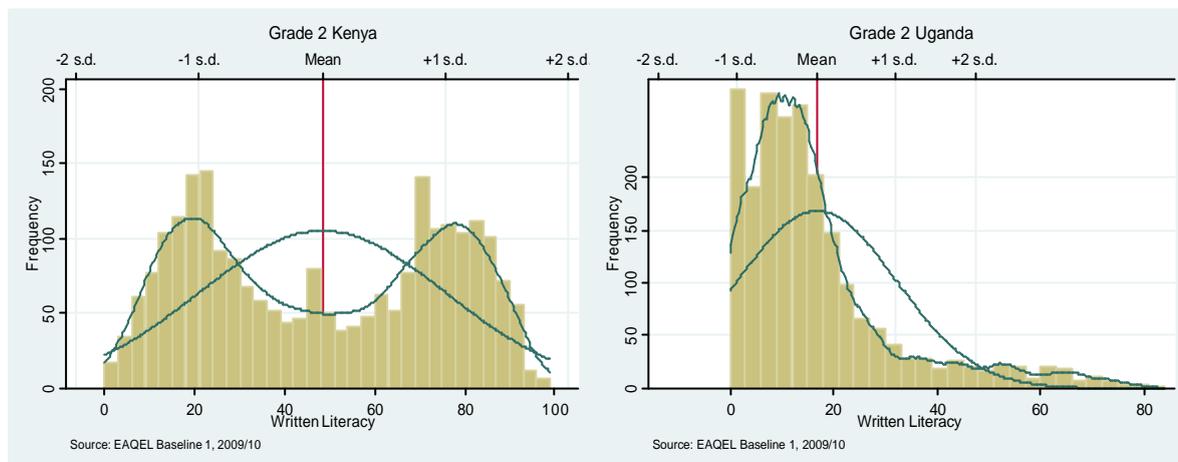


Figure 20: Distribution of written literacy score in Kenya and Uganda Kenya grade 2



The distribution for Uganda is quite different from that of Kenya. Majority of grade 1 pupils are clustered below 10% mark. For better illustration of the mean scores and the outliers, refer to Appendix B which shows the box and whisker graphs for written literacy scores by country and grade.

#### *Summary written literacy assessment findings*

- Overall, there is small difference in written literacy scores between treatment and control in both countries. For instance, in Kenya, there is a 1.6 percentage points difference in grade 1-2010; and a 5 percentage point difference in grade 2-2009 - both in favour of control groups.
- There is no significant difference in the written literacy scores by gender.
- Kenya pupils scored higher in written literacy than their counterparts in Uganda. The differences are larger in grade 1-2009 (25 percentage points).
- In Kenya, Kwale performed better than Kinango, while in Uganda Amolatar scored better in the control group than Dokolo control group, while the Dokolo treatment did better than Amolatar treatment.
- Written literacy scores were not normally distributed in both grades in both countries.

### 5.2.3 Oral Literacy

Oral literacy was a tool that was administered only to one child at a time by the interviewer. It included different domains that are shown in Appendix A. Pupils were required to respond to several questions asked by the interviewer and the interviewer scored the responses as either correct or wrong. The interviewers were given clear written instructions on the scoring procedures. The tool was administered using the local language. In Kenya, it was administered in Kiswahili and in Uganda it was administered in Lang'o.

The performance in oral literacy was far much better compared with the written literacy. That is, while the mean scores for oral literacy were above 50% mark, in written literacy they were below 40% with Uganda having less than 20% on average. Interestingly, while we have observed large differences in numeracy and written literacy between the two countries, the results of the scores for oral literacy only show very minimal differences.

Table 11: Mean score (%) in oral literacy

	Grade 1-2010			Grade 1-2009			Grade 2-2009		
	No. of pupils	Mean	st. dev	No. of pupils	Mean	st. dev	No. of pupils	Mean	st. dev
Overall (Both KE & UG)	5234	50.16	15.73	4507	55.88	16.80	4508	59.39	18.02
Kenya	2716	55.88	15.15	2418	60.38	16.72	2403	65.81	18.82
Uganda	2518	43.99	13.91	2089	50.67	15.33	2105	52.05	13.78
Treatment	2758	50.45	15.39	2356	55.27	16.99	2366	58.75	17.92
Control	2476	49.84	16.09	2151	56.55	16.57	2142	60.08	18.10
Boys	2598	50.35	15.70	2209	56.04	16.74	2236	59.84	18.09
Girls	2636	49.98	15.76	2298	55.73	16.87	2272	58.93	17.93

Table 11 shows very minimal differences between control and treatment groups in all the grades. It also shows that there are no differences between boys and girls. However, there is greater variability between the scores in some instances as shown by the high standard deviations of above 15 marks. This variability is more pronounced in grade 2.

We further stratified the above findings (Table 11) by country as shown in Tables 12 and 13. The variation between pupils in Kenya is still large and the standard deviations remain above 15 marks. In Kenya we also show the KENSIP schools. We notice a significant difference between the control KENSIP and treatment KENSIP, but of interest to us is the difference between KENSIP and non-KENSIP where we notice no difference. The mean score for treatment and control groups are comparable and that there is no difference in scores by gender.

Table 12: Mean score (%) in oral literacy by grade and gender in Kenya

Country: Kenya	Grade 1-2010			Grade 1-2009			Grade 2-2009		
	No. of pupils	Mean	st. dev	No. of pupils	Mean	st. dev	No. of pupils	Mean	st. dev
Treatment	1509	55.56	14.80	1321	60.07	16.94	1314	64.89	18.82
Control	1207	56.28	15.57	1097	60.76	16.46	1089	66.92	18.77
Boys	1357	55.96	14.88	1185	60.20	16.74	1198	66.04	19.07
Girls	1359	55.80	15.42	1233	60.55	16.71	1205	65.58	18.58
Treatment -none-Kensip	1074	56.27	14.63	949	61.84	17.22	936	67.71	18.92
Control-none-Kensip	841	55.62	15.08	778	60.61	17.09	774	65.60	19.08
Treatment -Kensip	435	53.82	15.10	372	55.55	15.30	378	57.91	16.67
Control-Kensip	366	57.78	16.57	319	61.13	14.83	315	70.17	17.60

Table 13 shows results for Uganda oral literacy. The mean scores for treatment and control groups are comparable in both grades. The score spread is however lower than that of Kenya, an indication that most pupils are coalescing around the mean.

Table 13: Mean score (%) in oral literacy by grade and gender in Uganda

Country: Uganda	Grade 1-2010			Grade 1-2009			Grade 2-2009		
	No. of pupils	Mean	st. dev	No. of pupils	Mean	st. dev	No. of pupils	Mean	st. dev
Treatment	1249	44.27	13.74	1035	49.15	14.98	1052	51.09	13.18
Control	1269	43.72	14.07	1054	52.16	15.53	1053	53.02	14.29
Boys	1241	44.21	14.20	1024	51.22	15.39	1038	52.70	13.80
Girls	1277	43.78	13.62	1065	50.14	15.26	1067	51.43	13.74

Figures 21, 22, 23 and 24 are an illustration of the distribution of the scores for the oral literacy in both countries and for all the grades. The distribution is normal for grades 1 in both countries and grade 2 in Uganda but bimodal for grade 2 in Kenya.

Figure 21: Distribution of the oral literacy score the two grades 1, Kenya

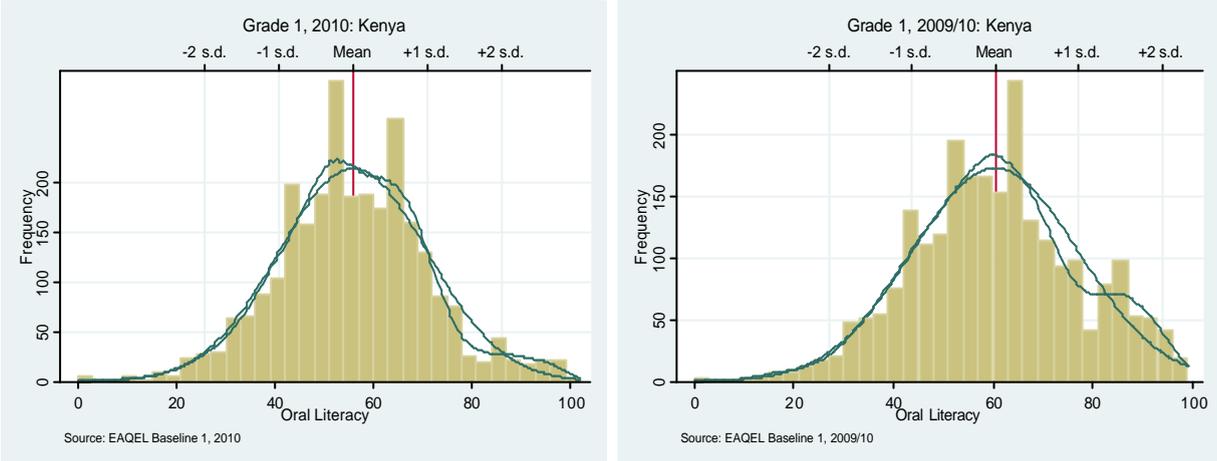


Figure 22: Distribution of the oral literacy score by grade 2-2009, Kenya

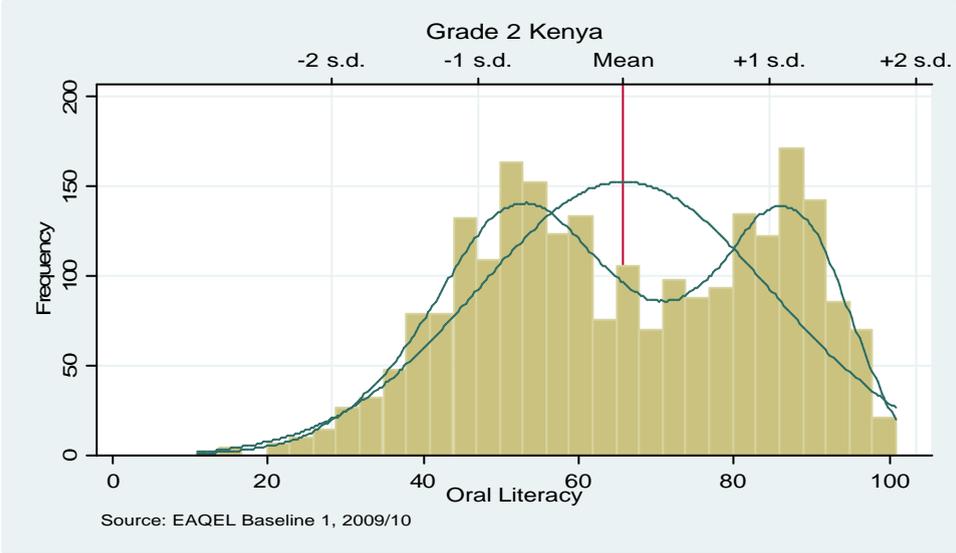


Figure 23: Distribution of the oral literacy score in the two grades 1, Uganda

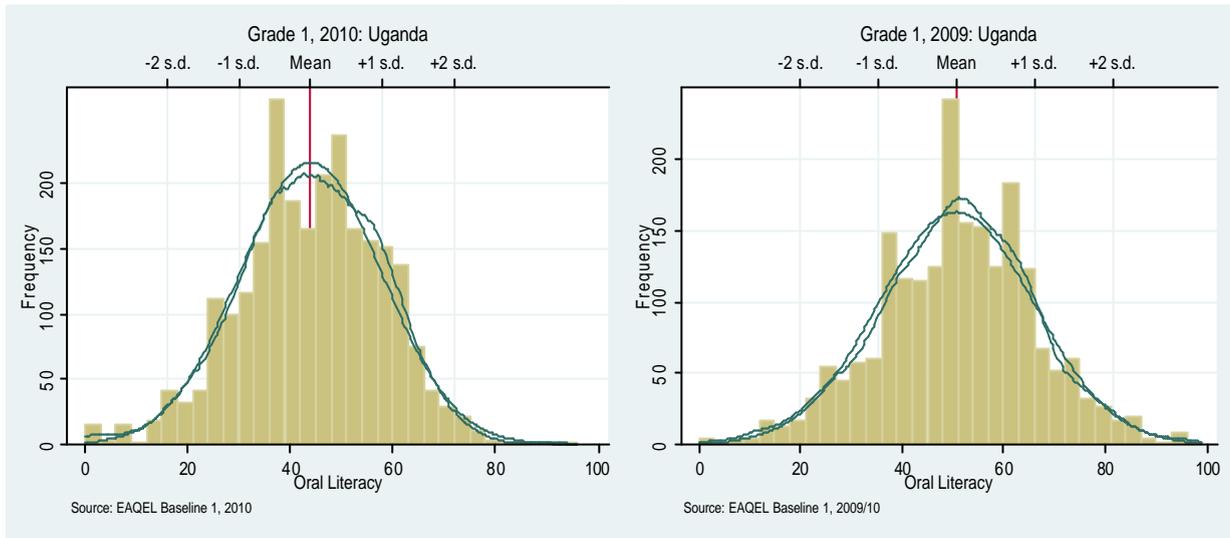
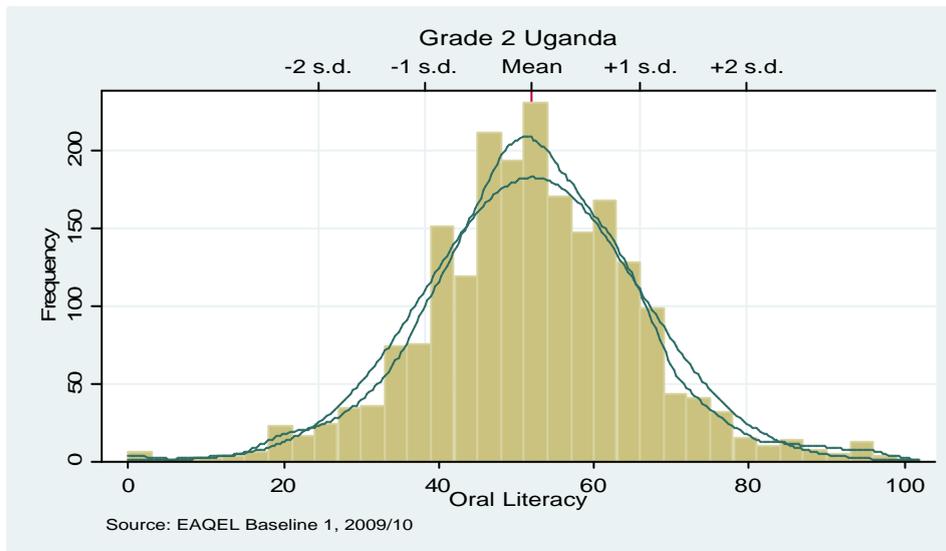


Figure 24: Distribution of the oral literacy score, grade 2-2009, Uganda



A visual presentation of the scores in oral literacy per district and gender is as shown in figures 25 to 30. In both grades Kwale is outperforming Kinango. This is consistent with the numeracy scores and written results presented earlier.

Figure 25: Mean score (%) in oral literacy by district and country grade 1-2010

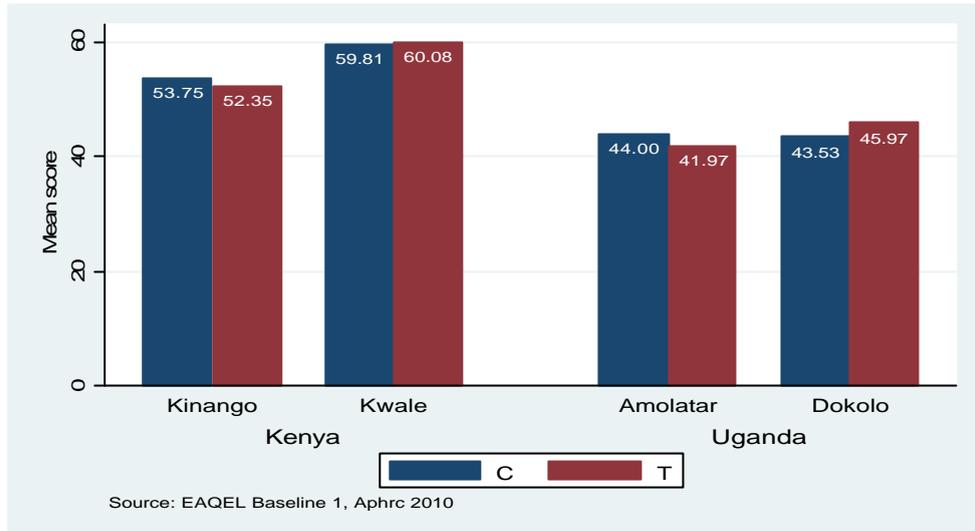


Figure 26: Mean score (%) in oral literacy by district and country, grade 1-2009

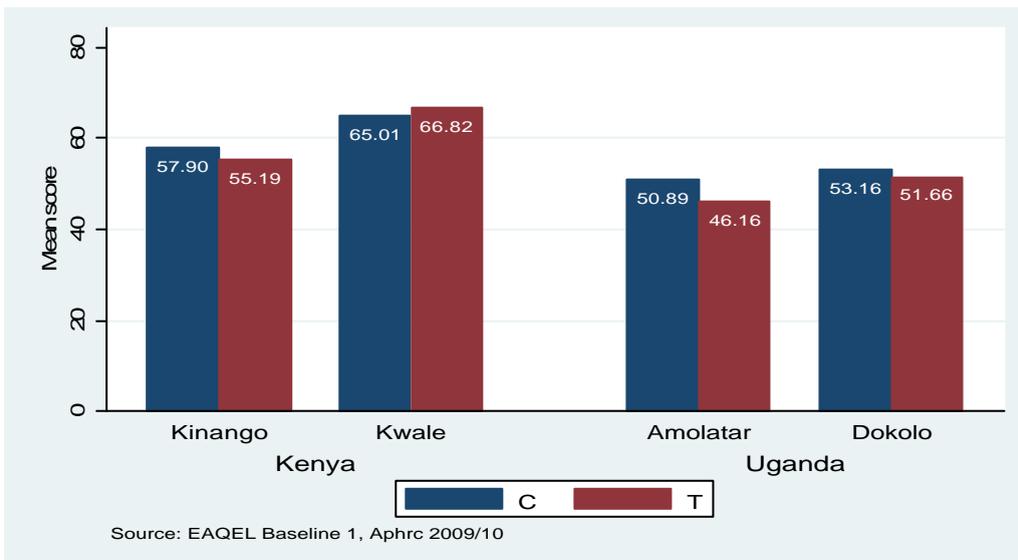


Figure 27: Mean score (%) in oral literacy by district and country, grade 2-2009

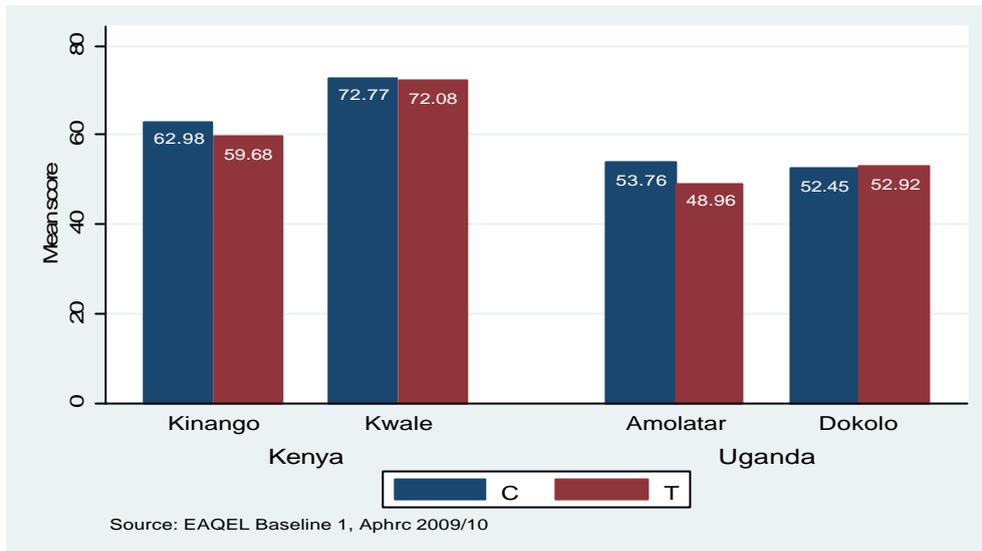


Figure 28: Mean score (%) in oral literacy by gender and country, grade 1-2010

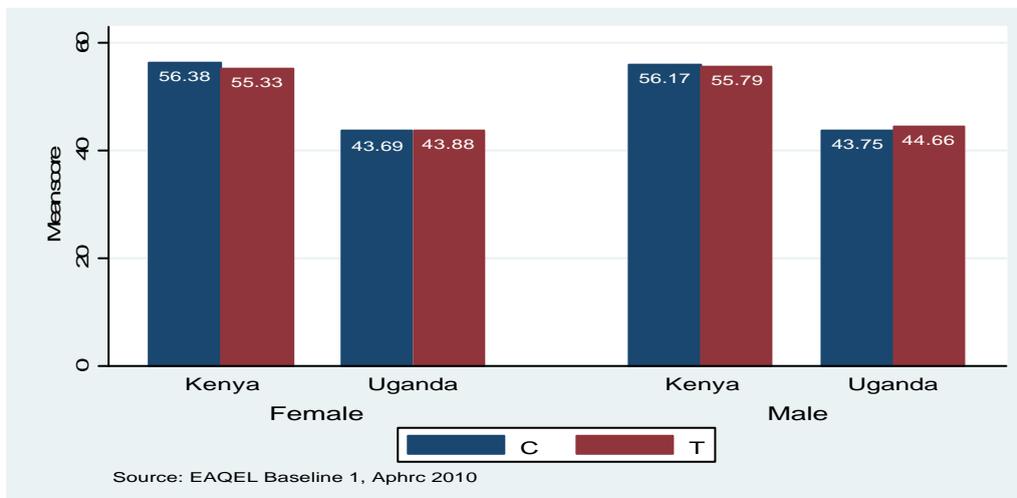


Figure 29: Mean score (%) in oral literacy by gender and country, grade 1-2009

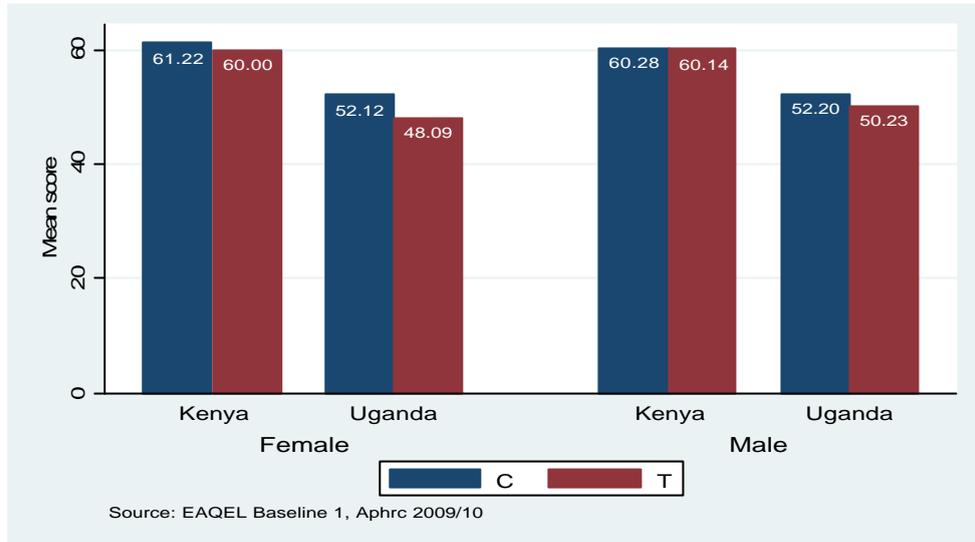
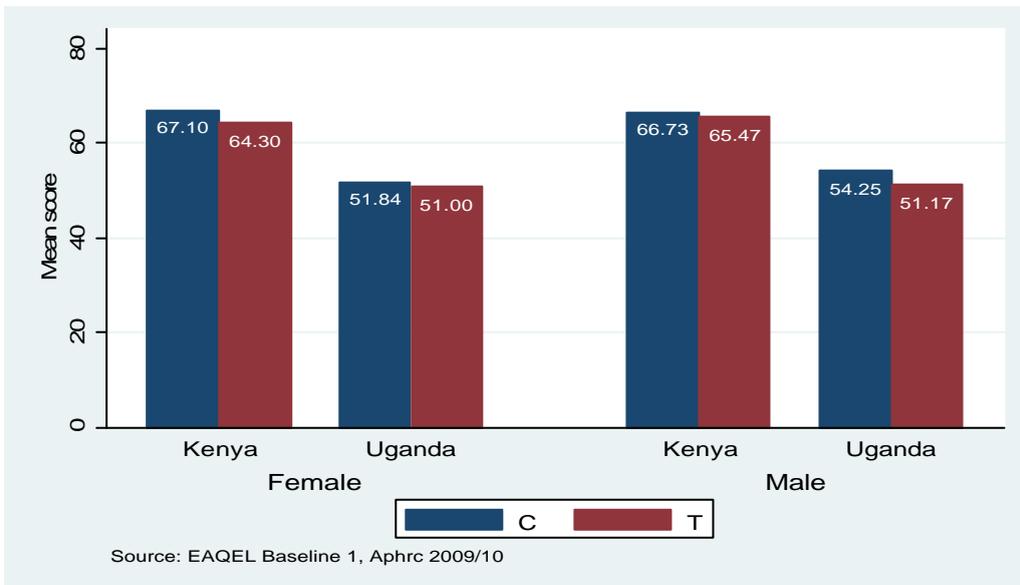


Figure 30: Mean score (%) in oral literacy by gender and country, grade 2-2009



*Summary of the oral literacy assessment findings*

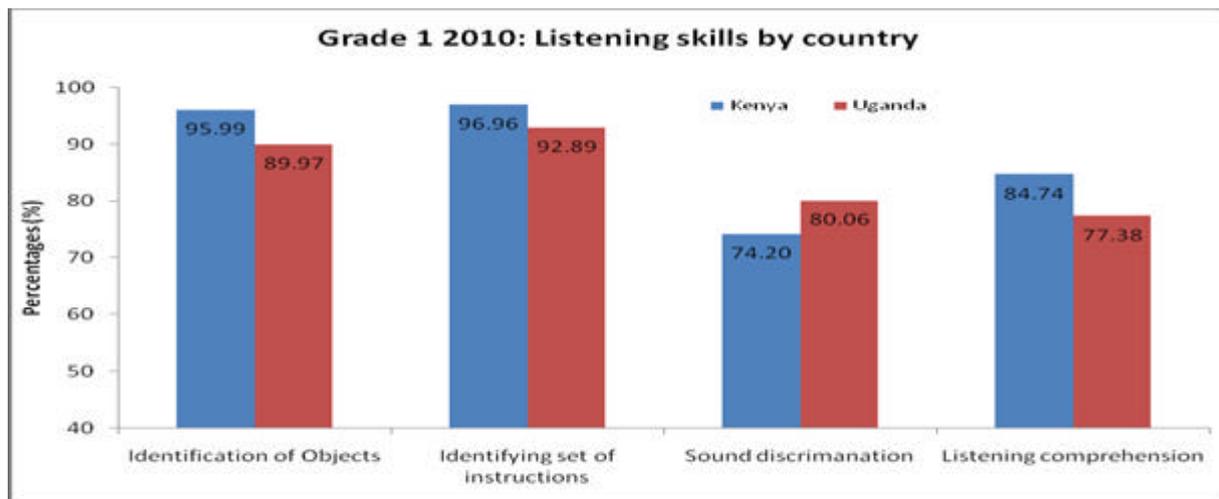
- Overall, there is a very small difference in oral literacy scores between treatment and control in both countries; that is an average of 3 percentage points in each of the grades in favour of control groups.
- There is no significant difference in the oral literacy scores by gender in Kenya, although a small difference of 2 to 3 percentage points in favour of boys is observed in Uganda.
- We do not observe large differences in the oral literacy scores between pupils in Kenya and Uganda. In Kenya, as in the other assessments, Kwale performed better than Kinango but in Uganda, the two districts performed almost the same in this assessment.
- Except for grade 2 in Kenya, the oral literacy scores were normally distributed and coalesced around the mean.
- Pupils perform better in oral literacy in the two countries than numeracy and written literacy.

## 5.3 Oral literacy items analysis

### 5.3.1 Listening

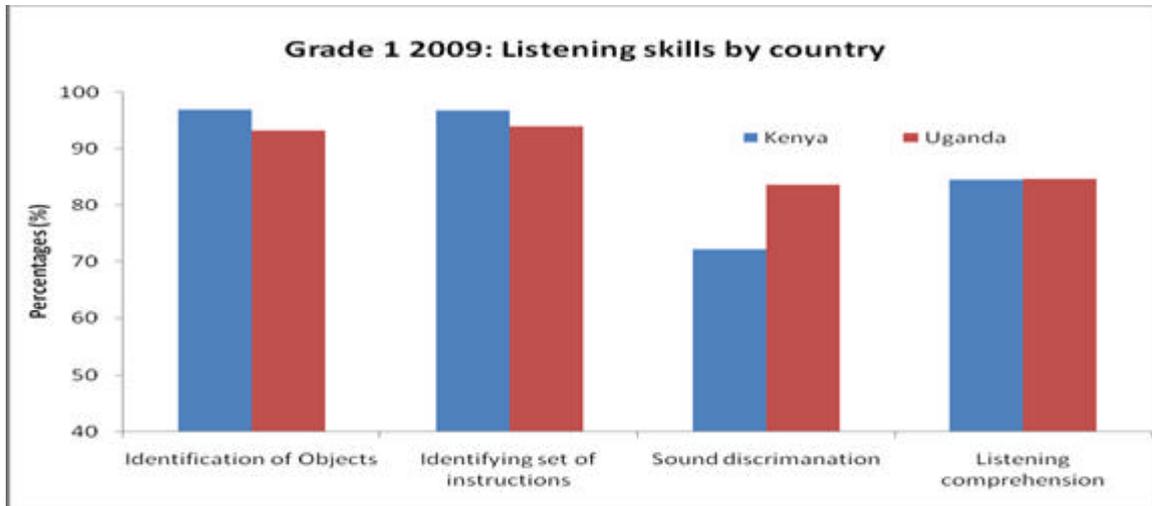
We calculated the mean scores for the different domains for oral literacy. The domains include listening, speaking, and reading skills. The results are presented in figures 31 to 39.

Figure 31: Listening skills by country, grade 1- 2010



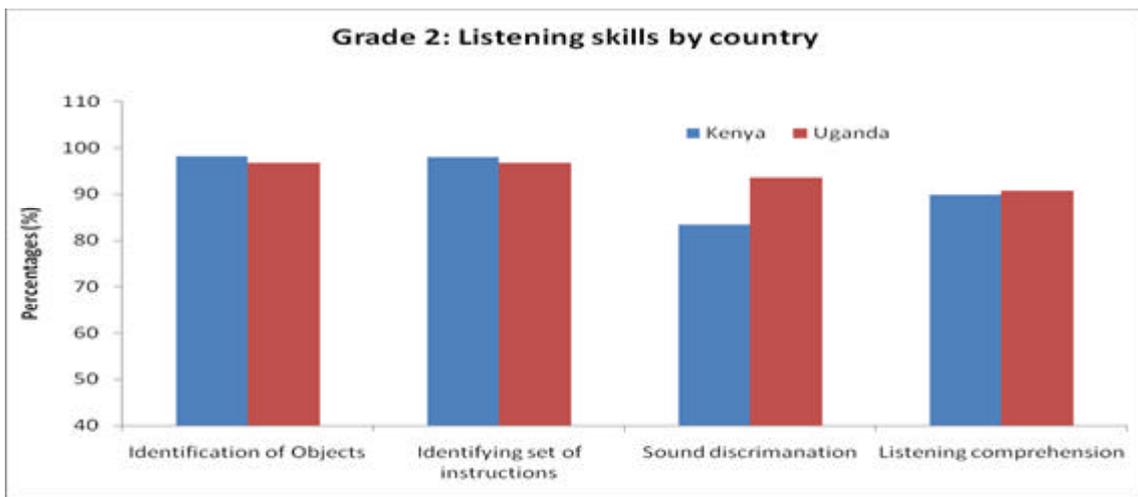
Generally, pupils in both countries had high scores in three of the four domains of listening skills (see figure 31, 32, & 33). However in sound discrimination which is the domain with the lowest score in both grades, Uganda outperformed Kenya. In grade 1-2010, Kenya performed better in identification of objects, identifying set of instructions, and in listening comprehension than Uganda. However, pupils in Uganda performed better in sound discrimination. Items on the identification of objects, and set of instructions were well performed across all groups, while items on sound discrimination were poorly performed in most of the groups.

Figure 32: Listening skills by country, grade 1- 2009



In grade 1-2009, Kenya performed better in identification of objects, identifying set of instructions than Uganda. Pupils in Uganda performed better in sound discrimination, but are at par with pupils in Kenya in listening comprehension. In grade 2, the performance of Uganda and Kenya is almost at par with the exception in sound discrimination where Uganda out- performs Kenya.

Figure 33: Listening skills by country, grade 2-2009



### 5.3.2 Speaking

Speaking was tested by asking the pupils to describe objects, give directions and story composition. The results presented in figures 34, 35 and 36 show that there were differences in the scores for grades 1 and 2.

From figure 34 and 35 we observe the following: 1) pupils in Kenya were better at describing objects and story composition than their counterparts in Uganda – the scores in Kenya are generally high; 2) the scores in telling direction are quite low in both countries; 3) in grade 1-2009 pupils in Uganda performed better than those in Kenya on items on telling direction.

Figure 34: Speaking skills by country, grade 1-2010

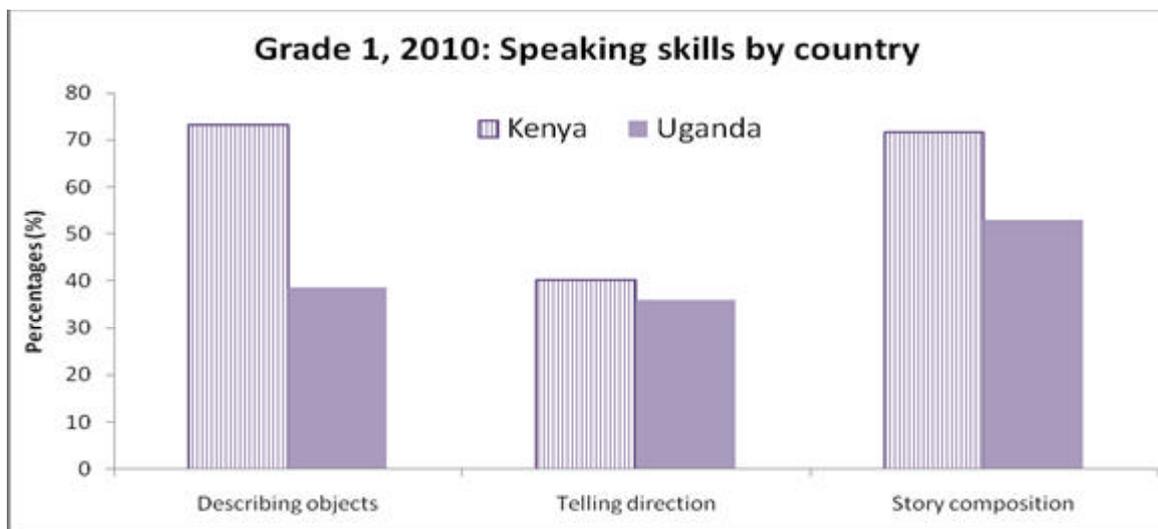
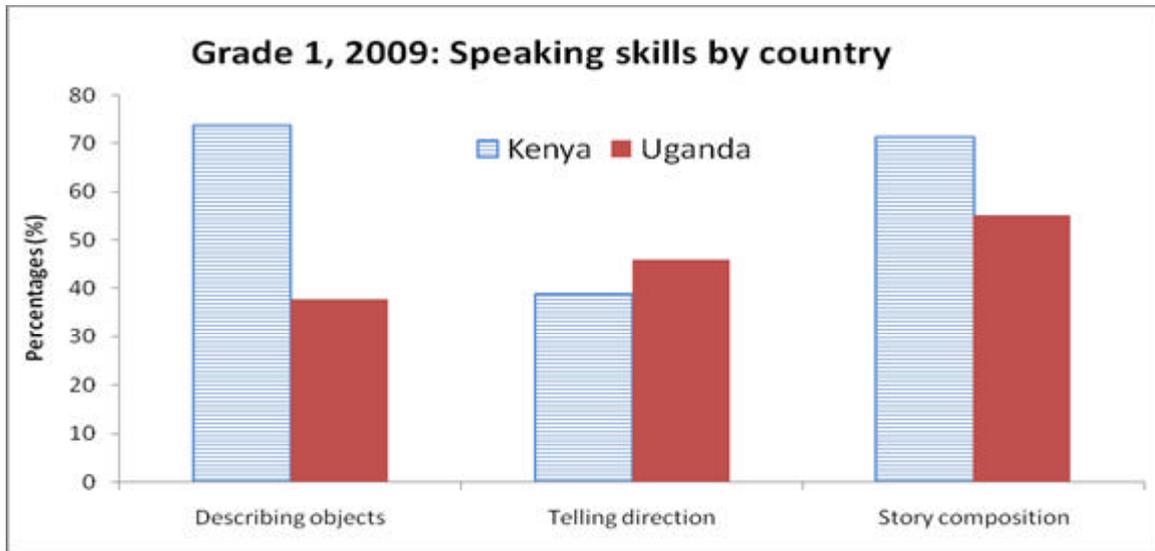
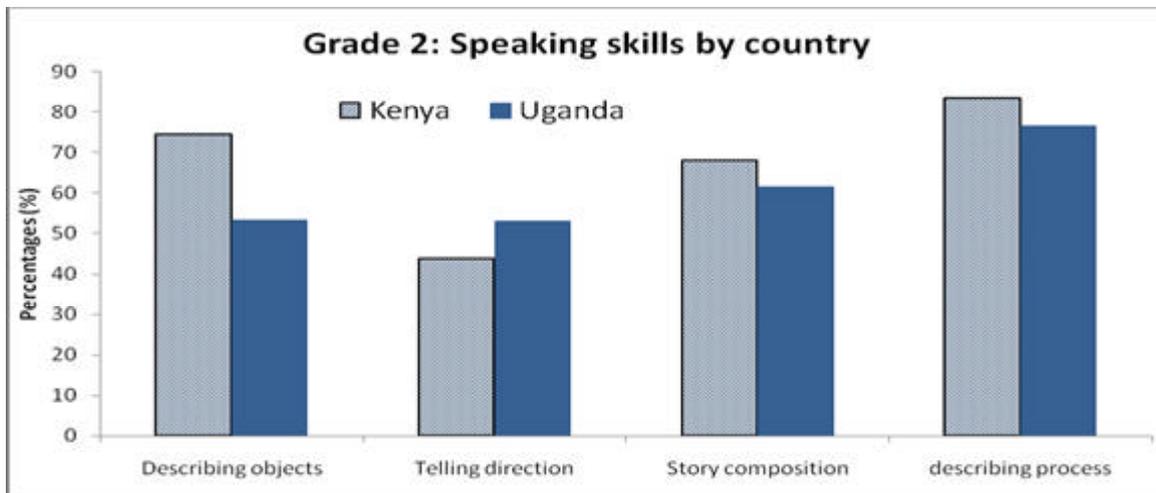


Figure 35: Speaking skills by country, grade 1-2009



Grade 2 pupils had an extra speaking domain – describing processes (see figure 36). The pattern in grade 2 is similar to that observed in grade 1.

Figure 36: Speaking skills by country, grade 2-2009



### 5.3.3 Reading skills

Reading skills was captured in two ways: 1) asking the pupils to read letters, words and simple sentences; 2) pre-reading skills where a pupil was asked to identify different letters, words and alphabets in given sentences and within a short story. There are variations in the score between

Kenya and Uganda in each grade (see figures 37, 38 and 39). Despite this, reading of words and simple sentences in both grades and both countries is very low.

Figure 37: Reading skills by country, grade 1-2010

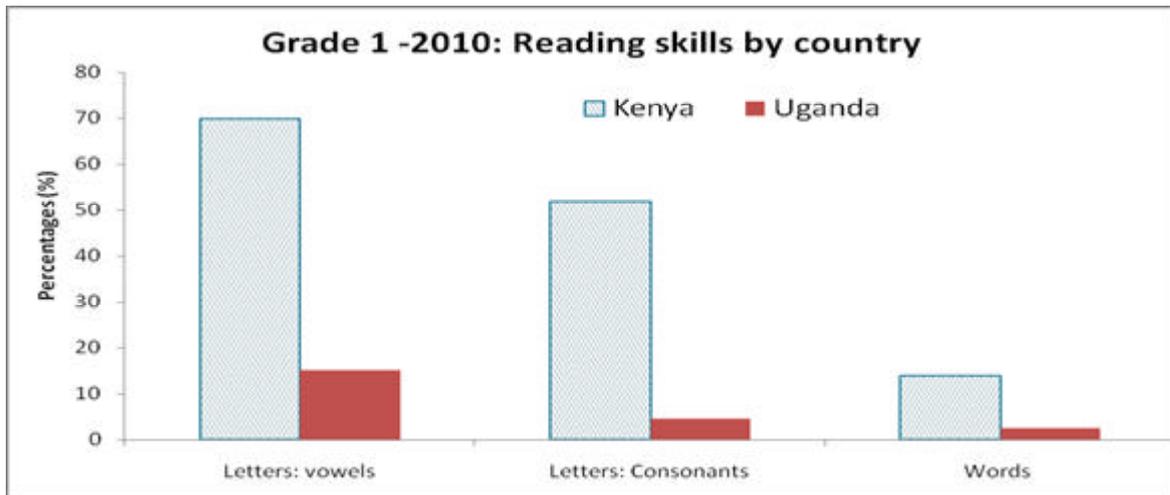


Figure 38: Reading skills by country, grade 1-2009

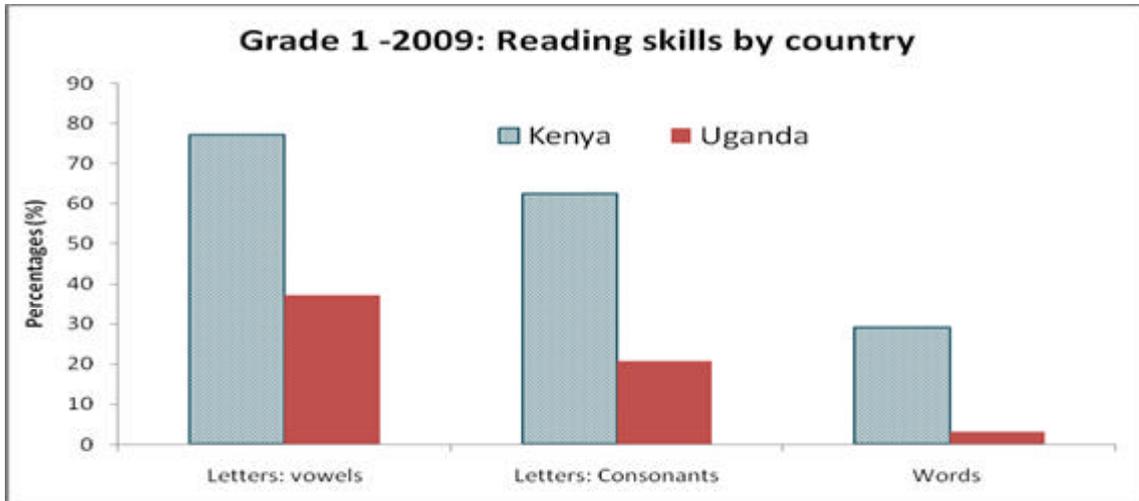
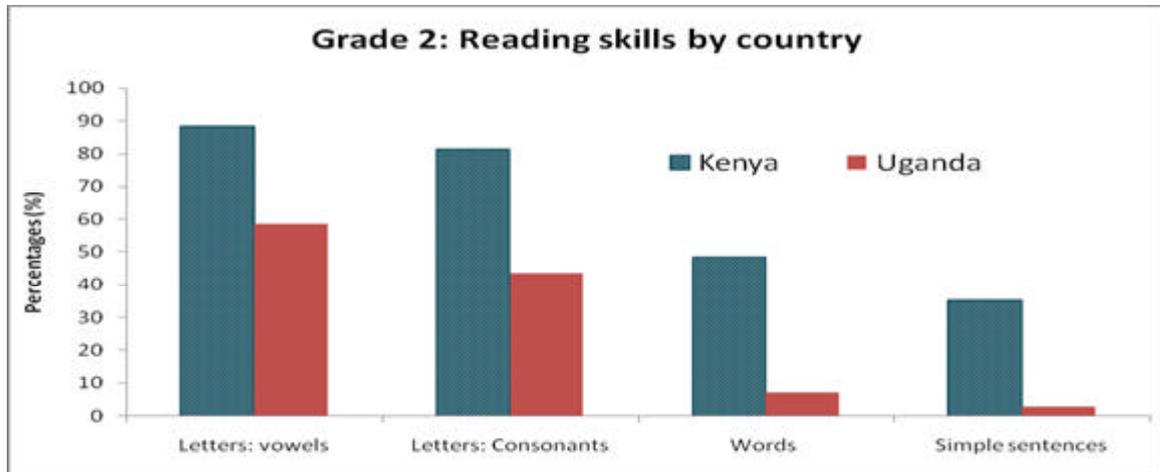


Figure 39: Reading skills by country, grade 2-2009



*Summary of findings of the oral literacy item analysis*

- Under the listening domain, in all grades, pupils in Uganda scored higher than their counterparts in Kenya in sound discrimination and listening comprehension.
- In both countries, items on sound discrimination were the worst performed.
- Under the speaking domain, large differences were observed between pupils in Uganda and Kenya in describing objects and story composition, with pupils in Kenya scoring higher. Although telling direction was poorly performed by pupils in both countries, those from Uganda scored better.
- In reading, pupils scored highly on items involving vowels, consonants and simple words in that order. However, pupils in Kenya had higher scores than those in Uganda.
- Ugandan pupils' performance in simple sentences as a component of reading is almost at zero in grade 2, which could suggest a dismal early preparation in reading skills.
- Grade 1 pupils in Uganda have performed relatively worse in the 3 reading areas (vowels, consonants, and words).

## 5.4 Analysis of competency levels by grade

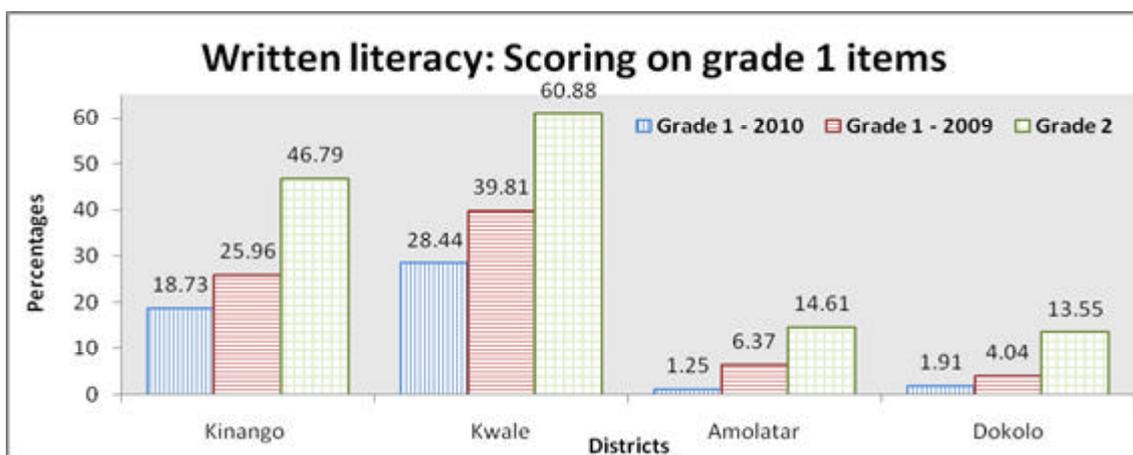
In this section we present the analysis of how grade 2 pupils performed on grade 1 test items, comparing the results with those of grade 1 pupils. Our aim in doing this is to determine whether pupils in grade 2 who do not demonstrate competency levels for this grade are able to do so for a lower grade.

### 5.4.1 Written literacy

Results presented in Figure 40 below indicate the following:

- Grade 2 pupils are performing better than grade 1 pupils on grade 1 literacy items as would be expected.
- Grade 2 pupils in the two districts in Kenya (Kwale and Kinango), on average scored 20 and 29 percentage points more than their counterparts in grade 1-2009 and grade 1-2010 respectively.
- The grade 2 pupils in Kwale are scoring above 50 percent as would be expected and outperforming Kinango.
- Uganda case is depressing with grade 2 pupils scoring on average only 8 percentage points more than grade 1 pupils. It needs to be noted here that the mean score for grade 2 on grade 1 test items is still below 15%. This means Ugandan pupils in grade 2 have written literacy levels which are much below what would be expected of a grade 1 pupil.

Figure 40: Written literacy: Comparing grade 2 with grade 1 on grade 1 items

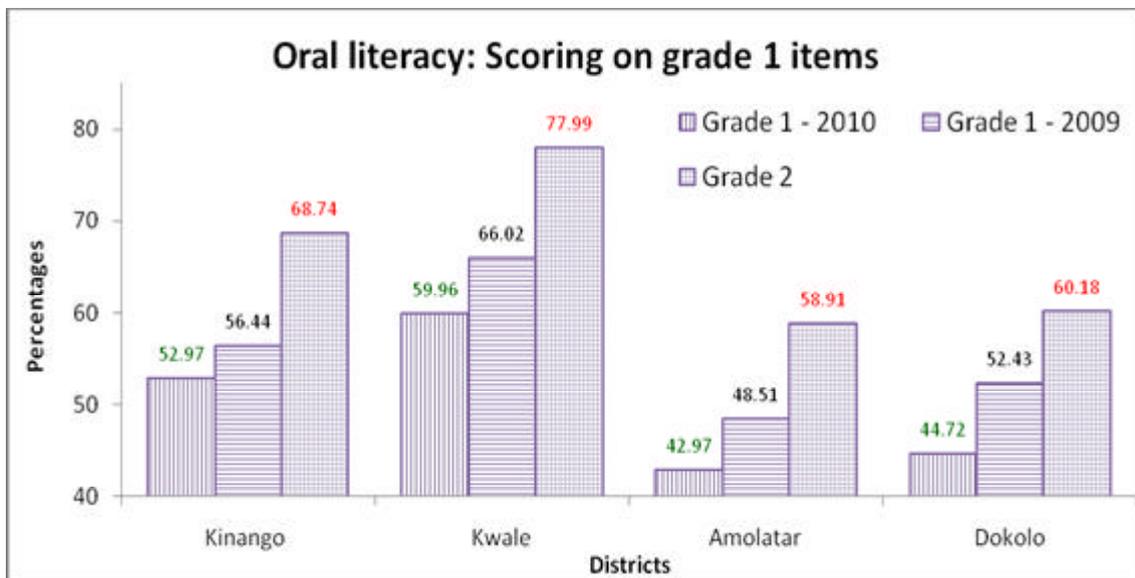


### 5.4.2 Oral Literacy

From Figure 41 we note the following:

- Scores on oral literacy are better in both countries.
- In Kenya grade 2 pupils scored on average 12 percentage points more than pupils in grade 1 of 2009 on grade 1 test items.
- In Kenya, pupil in grade 1-2009 scored on average 12 percentage points more than pupils in grade 1-2010.
- In Uganda grade 2-2009 pupils scored 9 percentage points more than pupils in grade 1 of 2009 on grade 1 test items.
- In both countries, grade 2-2009 pupils score 16 percentage points more than pupils in grade 1-2010 on grade 1 items.
- Of the four districts in the study, Amolatar has the lowest levels of oral literacy and Kwale has the overall highest levels of oral literacy.
- Kenyan pupils perform better than their Ugandan counterparts in oral literacy.

Figure 41 Oral literacy: Comparing grade 2 with grade 1 on grade 1 items

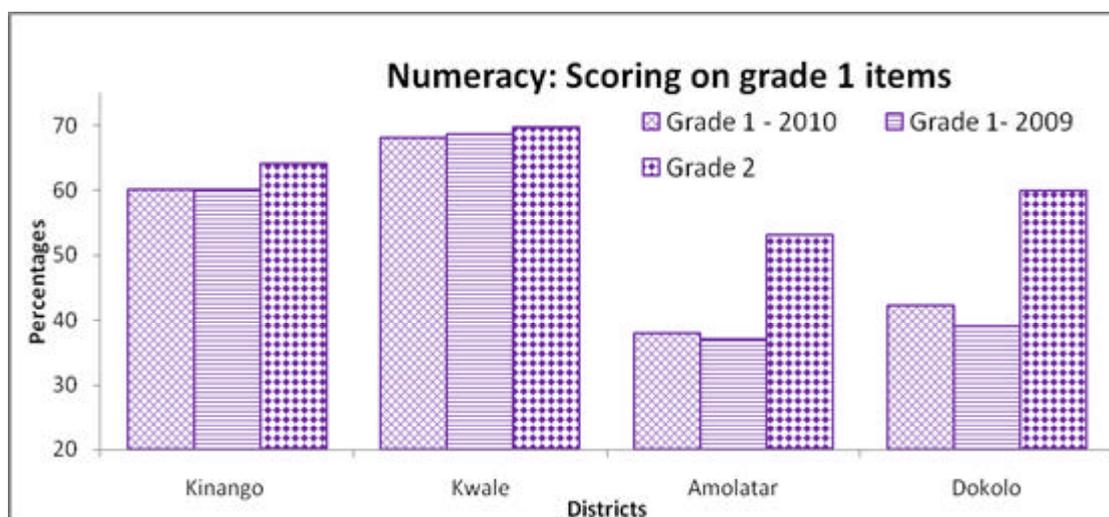


### 5.4.3 Numeracy

The results in figure 42 show the following:

- Pupils in grade 1 for both years (2009 and 2010) in the high performing Kwale district score equally as their counterparts in grade 2, on grade 1 numeracy test items. This is surprising. Even in Kinango the pattern is not any much different although grade 2 pupils are outperforming grade 1.
- In Uganda, grade 2 consistently outperformed grade 1. Pupils in grade 2 scored on average 16 percentage points more than grade 1 pupils.

Figure 42: Numeracy: Comparing grade 2 with grade 1 on grade 1 items



## 5.5 Correlation between the assessment tools

Table 14 shows the Pearson correlations between the scores in different assessments tools. The Pearson correlation helps us to understand whether pupils with high scores in one assessment tool are the same ones with high scores in another test. There is a high correlation between the literacy assessments in Kenya than in Uganda in both grades. In Kenya, pupils who scored high in the written literacy tool also scored high in the oral literacy (0.67, 0.720 and 0.83 for grades 1-2010, 1-2009 and 2-2009 respectively).

Table 14: Pearson correlations for pupil scores in different assessments

ASSESSMENT	Grade 1 - 2010			Grade 1 - 2009			Grade 2 - 2009		
	Written literacy	Oral Literacy	Numeracy	Written Literacy	Oral literacy	Numeracy	Written Literacy	Oral literacy	Numeracy
Kenya									
Written Literacy	1			1			1		
Oral literacy	0.6700*	1		0.7160*	1		0.8307*	1	
Numeracy	0.4734*	0.5202*	1	0.4970*	0.4557*	1	0.5478*	0.5137*	1
Uganda									
Written Literacy	1			1			1		
Oral literacy	0.2602*	1		0.3445*	1		0.3830*	1	
Numeracy	0.3801*	0.3460*	1	0.4360*	0.2824*	1	0.4666*	0.2134*	1

In Ugandan case, although there is a positive correlation between the different tools as expected, the correlations are weak. The only moderate correlation is between numeracy and literacy written (0.44 and 0.47) for grade 1-2009 and grade 2-2009 respectively. The results in Uganda are surprising when viewed in the light of those of Kenya, but we take consolation on the fact that the score levels in Uganda were extremely low and might be the explanation as to why the correlation between the test items are weak. Figures 43 to 48 further illustrate the relationships between the scores of the different assessments.

Figure 43: Grade 1-2010: Scatter plots between literacy assessment tools

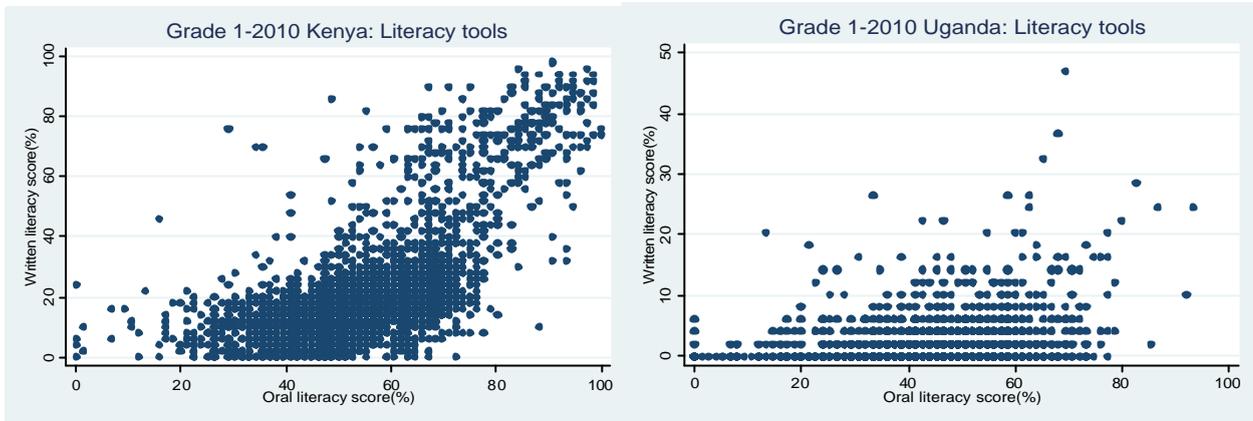


Figure 44: Grade 1-2009: Scatter plots between literacy assessment tools

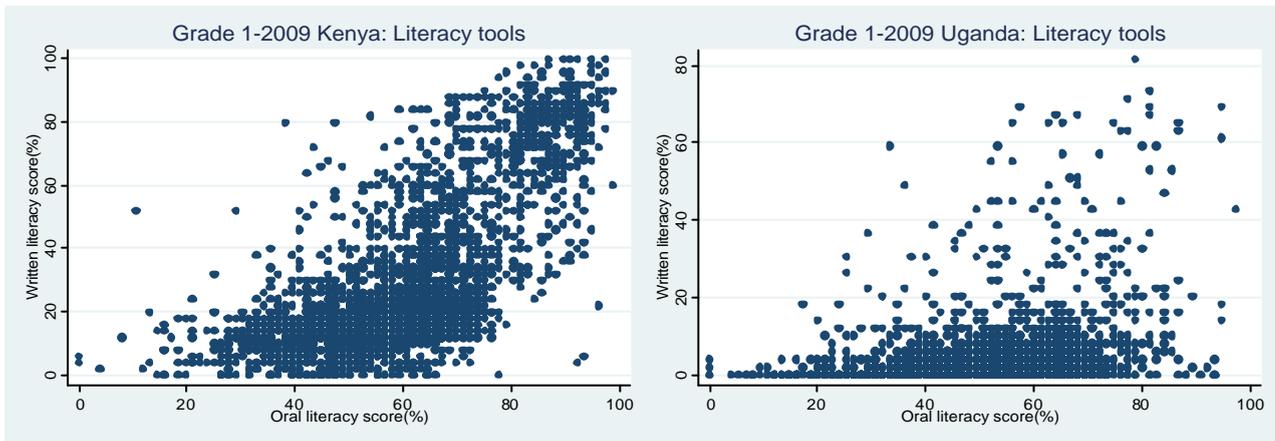


Figure 45: Grade 2-2009: Scatter plots between literacy assessment tools

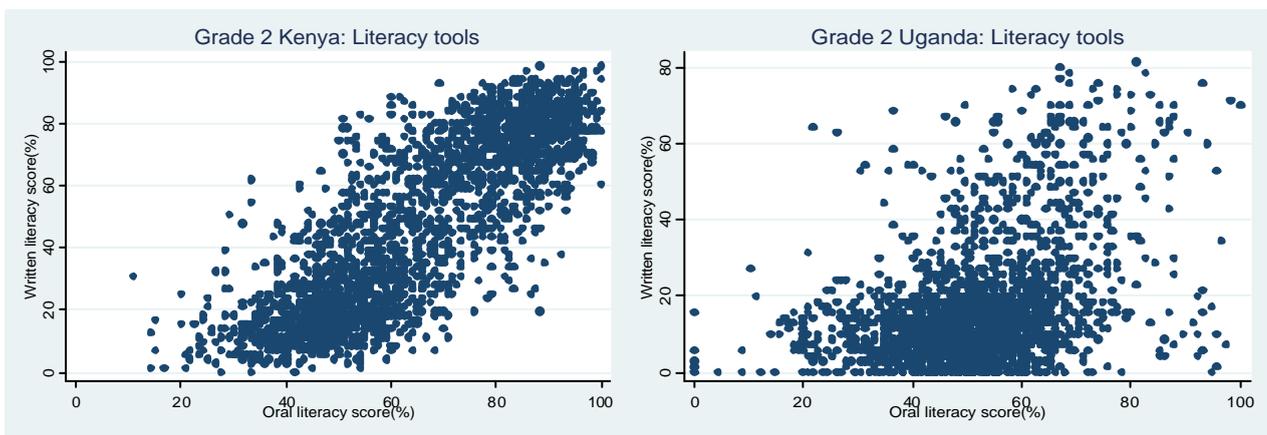


Figure 46: Grade 1-2010: Scatter plots between Numeracy and oral literacy assessment tools

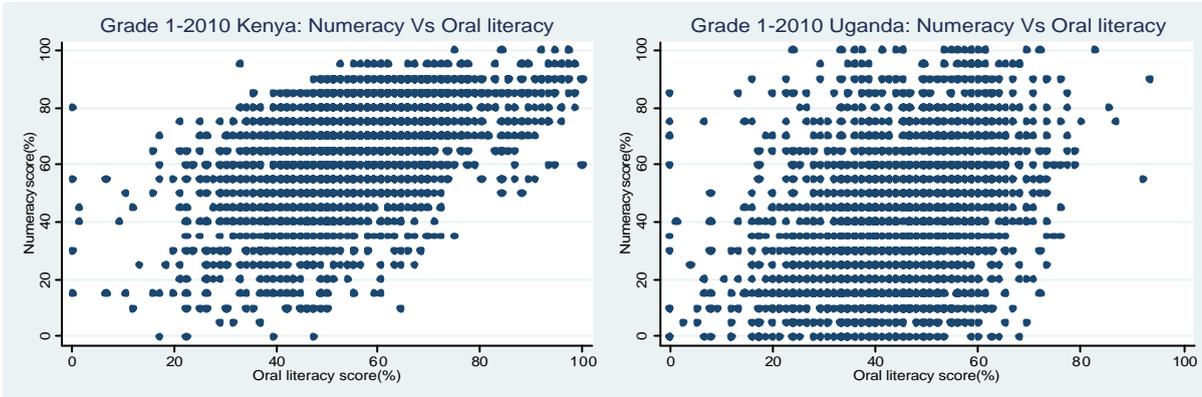


Figure 47: Grade 1-2009: Scatter plots between Numeracy and oral literacy assessment tools

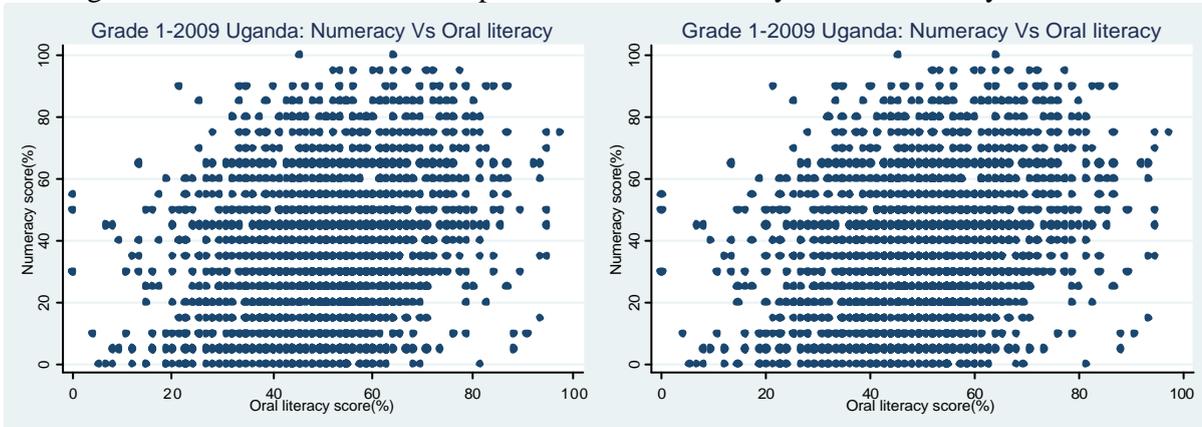
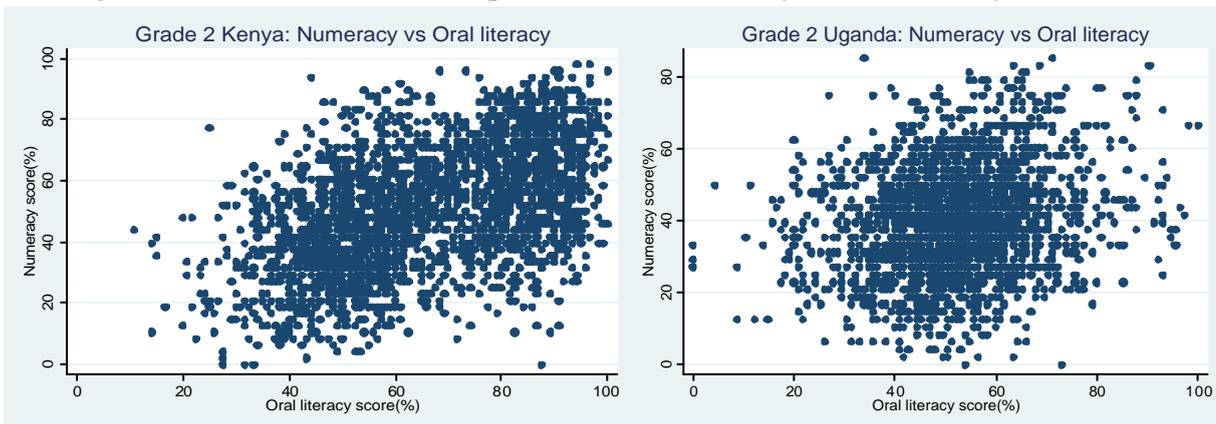


Figure 48: Grade 2-2009: Scatter plots between Numeracy and oral literacy assessment tools



*Summary of findings on correlations for different assessments*

- In Kenya, first graders who scored high scores in written literacy also had high scores in oral literacy. However, moderate and low correlations were observed between numeracy and written literacy, and between numeracy and oral literacy, respectively. For the second graders, except for the correlation between numeracy and oral literacy that was moderate, the rest of the correlations were similar to those observed in grade 1.
- In Uganda, correlations among different assessments scores were low in both grades.

## 5.6 Teacher characteristics

Table 15 shows the teacher characteristics by country. Most teachers in both countries have secondary education O-level (73.58% and 79.41% in Kenya and Uganda respectively) as their highest level of academic qualifications. About 70% of the teachers in each country have professional teacher qualifications. Another 25% of the sampled teachers in Kenya have no teacher training compared to about 4% of teachers in Uganda.

Table 15: Teacher characteristics by country

	Kenya		Uganda	
	No	%	No	%
<b>Academic qualification:</b> Primary	5	1.57	10	4.2
Junior secondary	13	4.09	4	1.68
Secondary Education (O – level)	234	73.58	189	79.41
Secondary Education (A –level)	56	17.61	22	9.24
Bachelors degree/Higher	2	0.63	1	0.42
Missing (Did not respond)	0	0	4	1.68
Other	8	2.52	8	3.36
<b>Teacher Training:</b> No training	80	25.16	9	3.78
Certificate	212	66.67	161	67.65
Diploma	22	6.92	64	26.89
Degree	3	0.94	1	0.42
PGDE	1	0.31	1	0.42
Other	0	0	2	0.84
<b>Training on Early grade:</b> No	241	75.79	77	32.35
Yes	77	24.21	161	67.65
<b>In-service training :</b> No	253	79.56	146	61.34
Yes	62	19.5	90	37.82
No response	3	0.94	2	0.84
<b>Head teacher support:</b> Often	31	9.75	46	19.33
Sometimes	131	41.19	88	36.97
Rarely	47	14.78	68	28.57
Never	100	31.45	33	13.87
No response	7	2.2	2	0.84
No head teacher	2	0.63	1	0.42

Most of the teachers in Kenya (75.79%) have not received any special training to teach early grades. Head teacher support is minimal within the study schools. A number of teachers particular in Kenya (31.45 %) report not to be supported by their head teachers and 28.57% in Uganda to be rarely supported. Three in every four teachers have not received in-service training in the last 18 months from the date of data collection.

## 5.7 Household characteristics

### 5.7.1 Household characteristics

Table 16 below shows household characteristics by country. The columns for each variable add up to 100%. About 40% of household heads in Kenya reported to have had no formal education.

Table 16: Household characteristics by country

	Kenya		Uganda	
	No	%	No	%
<b>HHH education:</b>				
Pre-primary/None	1251	38.48	287	18.41
Primary	1515	46.6	738	47.34
Secondary	311	9.57	292	18.73
Tertiary	74	2.28	67	4.3
No response	3	0.09	1	0.06
Other	4	0.12	4	0.26
Don't know	93	2.86	170	10.9
<b>Average HH size</b>	7.25		7.42	
<b>Tell story:</b> No	1835	56.44	355	22.77
Yes	1416	43.56	1204	77.23
<b>Visit school:</b> No	1205	37.07	794	50.93
Yes	2046	62.93	765	49.07
<b>Reading books:</b> No	2542	78.19	1291	82.81
Yes	709	21.81	268	17.19

The average household size in both countries is about seven members. About 56% of household respondents in Kenya reported that they do not tell stories to their schooling children. Almost two thirds of household members in both countries have visited a school where the sampled child attends. More than 75% of the households reported that they do not have reading books for their children in the household.

### 5.7.2 Homework

Table 17 shows household child support in homework. About 60% of the pupils in Kenya come home with homework compared to less than one-quarter of the pupils in Uganda. Among those with homework in Kenya, 53.87% are not helped by the respondent to do the homework, rather they are aided by someone else within the household, and this only happens sometimes. In Uganda, majority of those coming home with home work are always helped either by the respondent and or someone in the household.

Table 17: Homework as reported by respondent

	Kenya		Uganda	
	No	%	No	%
<b>Child comes with Home Work</b> No	1,393	40.10	1258	77.80
Yes	2,081	59.90	359	22.20
<b>Respondent helps child in homework:</b> Always	380	18.26	192	53.48
Sometimes	580	27.87	96	26.74
No	1,121	53.87	71	19.78
<b>Other HH member helps child with homework:</b> Always	580	27.87	149	41.50
Sometimes	853	40.99	85	23.68
No	648	31.14	125	34.82

Figure 49: Proportion of pupils attending pre-school by country

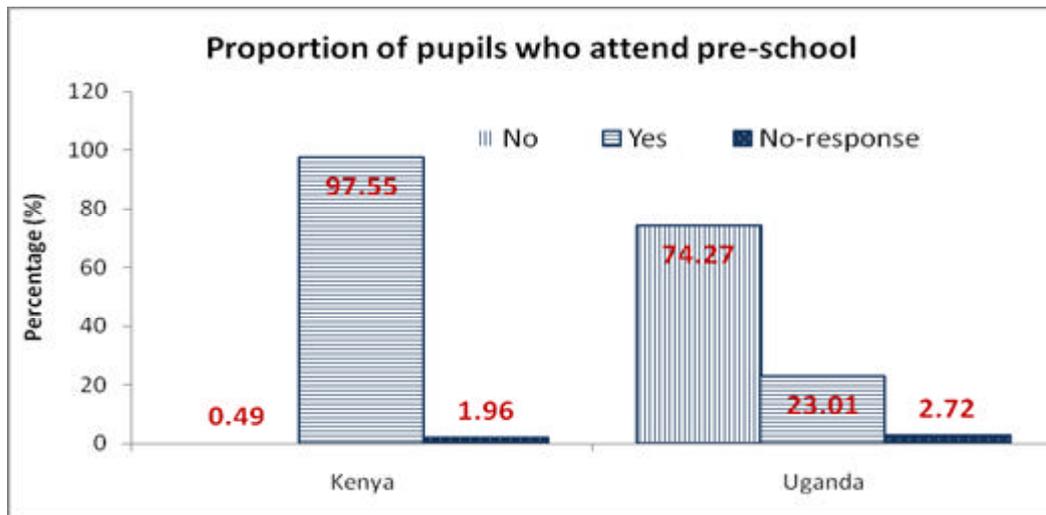


Figure 49 show that nearly all pupils in Kenya have attended preschool as compared to one in every four in Uganda. This could suggest that more children get an early head start for school in Kenya compared to the pupils in Uganda who get into grade 1 without prior preparation for grade 1. This could be one of the explanations for the higher test scores for Kenyan pupils in early grades compared with their peers in Uganda.

## 5.8 Classroom observation

A classroom observation checklist was used to capture the presence and use of basic and non-basic teaching and learning materials as well as teacher preparedness to teach. The checklist also collected data on enrolment and attendance on the interview date. The attendance data was collected through head count of the number of boys and girls present and the proportion calculated based on the number of pupils enrolled in that class.

### 5.8.1 Attendance

Table 18: Proportion of pupils present on the interview date by grade and district

District	Grade	Number of classes observed	Mean (%) - Present	Std. Dev	Min (%)	Max (%)
Kinango	1-- 2010	66	89.91	10.05	51.61	100
	1-- 2009	70	88.43	12.27	39.47	100
	2-- 2009	68	89.49	12.76	48.48	100
Kwale	1-- 2010	43	89.82	9.69	50.00	100
	1-- 2009	40	91.00	9.11	57.45	100
	2-- 2009	46	87.47	10.29	52.63	100
Amolatar	1-- 2010	45	76.00	21.29	9.77	100
	1-- 2009	48	74.13	18.07	20.37	100
	2-- 2009	48	75.90	17.58	17.27	100
Dokolo	1-- 2010	59	78.43	15.98	34.78	100
	1-- 2009	55	72.72	15.70	20.00	100
	2-- 2009	53	72.72	14.76	17.46	97.32

Table 17 shows that:

1. The mean attendance rate is high in Kenya than in Uganda and that it varies widely within each district. In some schools up to 90% of the pupils were absent while in others all the pupils were present.
2. Kwale district has the best attendance rate averaging of 90%.
3. In all the schools visited in Dokolo none had 100% attendance during the date of the interview.

### 5.8.2 Teacher preparedness to teach

Teacher preparedness was captured by collecting information on scheme of work, lesson plan, and record of work and lesson notes from the literacy and numeracy teachers. Field interviewers were required to code as either ‘available’ in cases where they were shown these items capturing teacher preparedness, ‘no’ if it was not available, and ‘yes but teacher could not show the item’ in cases where the teacher reported to have it. The results are shown in table 19. Generally, more teachers in Uganda were prepared for lessons than in Kenya. For instance, three quarters of the Uganda teachers had scheme of work, record of work and lesson plans compared to about two thirds of the teachers in Kenya.

Table 19: Teacher preparedness to teach

Scheme of work	Available	Kenya			Uganda		
		Grade 1-2010	Grade 1-2009	Grade 2-2009	Grade 1-2010	Grade 1-2009	Grade 2-2009
	Yes	167 (73.89)	147 (68.06)	168 (72.1)	154 (77.39)	154 (80.63)	135 (77.59)
	No	18 (7.96)	37 (17.13)	50 (21.46)	14 (7.04)	7 (3.66)	9 (5.17)
Record of work	Yes, cant show	41 (18.14)	32 (14.81)	15 (6.44)	31 (15.58)	30 (15.71)	30 (17.24)
	Yes	108 (47.79)	119 (55.09)	147 (63.09)	120 (60.3)	137 (71.73)	128 (73.56)
	No	64 (28.32)	58 (26.85)	56 (24.03)	40 (20.1)	23 (12.04)	13 (7.47)
Lesson plan	Yes, cant show	54 (23.89)	39 (18.06)	30 (12.88)	39 (19.6)	31 (16.23)	33 (18.97)
	Yes	158 (69.91)	128 (59.26)	160 (68.67)	156 (78.39)	149 (78.01)	138 (79.31)
	No	28 (12.39)	41 (18.98)	56 (24.03)	15 (7.54)	8 (4.19)	8 (4.6)
Lesson notes	Yes, cant show	40 (17.7)	47 (21.76)	17 (7.3)	28 (14.07)	34 (17.8)	28 (16.09)
	Yes	89 (39.38)	73 (33.8)	104 (44.64)	115 (57.79)	117 (61.26)	122 (70.11)
	No	96 (42.48)	103 (47.69)	91 (39.06)	48 (24.12)	34 (17.8)	25 (14.37)
	Yes, cant show	41 (18.14)	40 (18.52)	38 (16.31)	36 (18.09)	40 (20.94)	27 (15.52)

### 5.8.3 Basic and non basic teaching materials

Basic and non-basic teaching and learning materials were captured by confirming the presence and visibility of exercise books, recommended text books and chalkboard, chalk and duster, visual teaching aids, student made materials and wall charts within the classroom Tables 20 and 21 show the distribution of these items in terms of number and percentages of classrooms categorised by grade and country.

Table 20: Basic teaching and learning materials in the classroom

	Availability	Kenya			Uganda		
		Grade 1-2010	Grade 1-2009	Grade 2-2009	Grade 1-2010	Grade 1-2009	Grade 2-2009
Exercise books	Visible in classroom	202 (89.38)	181 (83.8)	198 (84.98)	110 (55.28)	115 (61.83)	101 (56.42)
	In classroom & not visible	2 (0.88)	8 (3.7)	4 (1.72)	9 (4.52)	13 (6.99)	7 (3.91)
	Not in classroom but available	12 (5.31)	21 (9.72)	26 (11.16)	13 (6.53)	36 (19.35)	44 (24.58)
	Not available	10 (4.42)	6 (2.78)	5 (2.15)	67 (33.67)	22 (11.83)	27 (15.08)
Recommended text books	Visible in classroom	172 (76.11)	160 (74.07)	175 (75.11)	42 (21.11)	56 (30.11)	67 (37.43)
	In classroom & not visible	12 (5.31)	12 (5.56)	15 (6.44)	20 (10.05)	8 (4.3)	4 (2.23)
	Not in classroom but available	34 (15.04)	37 (17.13)	40 (17.17)	44 (22.11)	45 (24.19)	42 (23.46)
	Not available	8 (3.54)	7 (3.24)	3 (1.29)	93 (46.73)	77 (41.4)	66 (36.87)
Chalkboard/Chalk/Duster	Visible in classroom	216 (95.58)	191 (88.43)	207 (88.84)	179 (89.95)	159 (85.48)	151 (84.36)
	In classroom & not visible	2 (0.88)	3 (1.39)	2 (0.86)	5 (2.51)	2 (1.08)	0 (0)
	Not in classroom but available	2 (0.88)	10 (4.63)	10 (4.29)	6 (3.02)	16 (8.6)	17 (9.5)
	Not available	6 (2.65)	12 (5.56)	14 (6.01)	9 (4.52)	9 (4.84)	11 (6.15)

Table 21: Non-basic teaching and learning materials in the classroom

	Availability	Kenya			Uganda		
		Grade 1-2010	Grade 1-2009	Grade 2-2009	Grade 1-2010	Grade 1-2009	Grade 2-2009
Visual teaching Aids	Visible in classroom	151 (66.81)	119 (55.09)	158 (67.81)	78 (39.2)	78 (41.94)	66 (36.87)
	In classroom & not visible	12 (5.31)	11 (5.09)	8 (3.43)	18 (9.05)	16 (8.6)	7 (3.91)
	Not in classroom but available	37 (16.37)	45 (20.83)	30 (12.88)	51 (25.63)	58 (31.18)	81 (45.25)
	Not available	26 (11.5)	41 (18.98)	37 (15.88)	52 (26.13)	34 (18.28)	25 (13.97)
Student made materials	Visible in classroom	56 (24.78)	64 (29.63)	89 (38.2)	25 (12.56)	17 (9.14)	20 (11.17)
	In classroom & not visible	15 (6.64)	18 (8.33)	20 (8.58)	19 (9.55)	8 (4.3)	6 (3.35)
	Not in classroom but available	32 (14.16)	25 (11.57)	17 (7.3)	9 (4.52)	18 (9.68)	25 (13.97)
	Not available	123 (54.42)	109 (50.46)	107 (45.92)	146 (73.37)	143 (76.88)	128 (71.51)
Wall charts	Visible in classroom	163 (72.12)	136 (62.96)	153 (65.67)	77 (38.69)	83 (44.62)	70 (39.11)
	In classroom & not visible	3 (1.33)	8 (3.7)	10 (4.29)	13 (6.53)	7 (3.76)	2 (1.12)
	Not in classroom but available	28 (12.39)	24 (11.11)	20 (8.58)	38 (19.1)	56 (30.11)	54 (30.17)
	Not available	32 (14.16)	48 (22.22)	50 (21.46)	71 (35.68)	40 (21.51)	53 (29.61)

#### 5.8.4 Picture and story books in the classroom

To facilitate learning in early grades the use of pictorial and story books is necessary. Table 22 shows the distribution of story and picture books in terms of number and percentages of classrooms categorised by grade and country.

Table 22: Availability of picture and story books in classroom

	Visibility	Kenya			Uganda		
		Grade 1-2010	Grade 1-2009	Grade 2-2009	Grade 1-2010	Grade 1-2009	Grade 2-2009
Picture books	Visible in classroom	22 (19.47)	25 (23.15)	31 (26.5)	16 (16.00)	24 (24.49)	17 (18.89)
	In classroom & not visible	13 (11.5)	14 (12.96)	12 (10.26)	8 (8.00)	1 (1.02)	3 (3.33)
	Not in classroom but available	13 (11.5)	10 (9.26)	15 (12.82)	25 (25.00)	30 (30.61)	24 (26.67)
	Not available	65 (57.52)	59 (54.63)	59 (50.43)	51 (51.00)	43 (43.88)	46 (51.11)
Story books	Visible in classroom	35 (30.97)	42 (38.89)	48 (41.03)	15 (15.00)	17 (17.35)	17 (18.89)
	In classroom & not visible	10 (8.85)	10 (9.26)	14 (11.97)	6 (6.00)	4 (4.08)	2 (2.22)
	Not in classroom but available	33 (29.2)	32 (29.63)	30 (25.64)	23 (23.00)	33 (33.67)	31 (34.44)
	Not available	35 (30.97)	24 (22.22)	25 (21.37)	56 (56.00)	44 (44.90)	40 (44.44)

# Appendices

## APPENDIX A: Items included in the literacy assessment tools

LITERACY ONE ON ONE: ITEMS AND THEIR SCORE						
			Items	Mark per item	Total	Cumulative
GRADE 1 & 2 & 3						
Q2.1	GREETINGS	Greeting: Conversation- ice breaking	6	1	6	6
Q3.1	LISTENING	Identifying objects	4	1	4	10
Q3.2	LISTENING	Listening	2	1	2	12
Q3.3	LISTENING	Listening	5	1	5	17
Q3.4	LISTENING	Listening	3	1	3	20
Q4.1	SPEAKING	Describing set of instructions	2	4	8	28
Q4.2	SPEAKING	Telling direction	1	3	3	31
Q4.3	SPEAKING	Story composition	2	2	4	35
Q5.1.1	READING	Reading vowels	5	1	5	40
Q5.1.2	READING	Reading consonants	9	1	9	49
Q5.2	READING	Single word reading	3	1	3	52
Q6.1	READING	Pre-reading skills	3	1	3	55
Q6.2	READING	Reading simple sentences	4	3	12	67
Q6.3	READING	Picture reading	3	3	9	76
GRADE 2 & 3						
Q7.1	RESPONDING TO INSTRUCTIONS	Responding To Instructions	4	1	4	80
Q8.1	SPEAKING	Describing objects/peoples/events	4	1	4	84
Q8.2	SPEAKING	Describing a process	5	1	5	89
Q8.3	SPEAKING	Story composition	4	(3*1) & (1*4)	7	96
Q8.4	READING	Single word reading	5	1	5	101
Q8.5	READING	Reading simple sentences	5	3	15	116
Q8.6	READING	Reading comprehension	4	1	4	120
GRADE 3						
Q9.1	SPEAKING	Oral story composition	1	5	5	125
Q10.1	READING	Reading a story and answering some questions about the story	6	(2*1) & (4*4)	18	143
Q11.1	EXPRESSIVE SKILLS	Dialogue/Conversation	4	3	12	155
LITERACY WRITTEN: ITEMS AND THEIR SCORE						
GRADE 1 & 2 & 3						
Q2.1	WRITING	Writing alphabets	10	1	10	10
Q2.2	WRITING	Writing sounds	6	1	6	16

Q2.3	WRITING	Writing	10	1	10	26
Q2.4	WRITING	Writing simple words	4	3	12	38
Q3.1	COMPOSITION	Writing sentences about a given picture	2	3	6	44
Q4.1	SPELLING	Word writing given a pictures	6	1	6	50
GRADE 2 & 3						
Q5.1	RESPONDING TO INSTRUCTIONS	writing names of given items/objects/animals	4	1	4	54
Q5.2	WRITING	Listening Comprehension	3	1	3	57
Q5.3	WRITING	Hand Writing	5	1	5	62
Q5.4	WRITING	Dictation	2	2	4	66
Q5.5	WRITING	Writing Composition	1	5	5	71
GRADE 3						
Q6.1	LISTENING	Listening and writing down words	10	2	20	91
Q6.2	LISTENING	Listening to a story and writing down responses	4	3	12	103
Q6.3	LISTENING	Listening and writing down words	6	6	36	139
Q6.4	LISTENING	Listening comprehension: Writing composition	1	5	5	144

APPENDIX B: Written literacy score distribution by country and grade

