ARE OUR CHILDREN LEARNING?
Uwezo learning assessment in refugee contexts in Uganda

July 2018

THE UWEZO AT TWAWEZA INITIATIVE IS SUPPORTED BY:

THE WILLIAM AND FLORA HEWLETT FOUNDATION, UK DEPARTMENT FOR INTERNATIONAL DEVELOPMENT (TANZANIA & UGANDA) AND WELLSPRINGS PHILANTHROPIC FUND

THIS PILOT WAS FUNDED THROUGH THE HUMANITARIAN EMERGENCY REFUGEE RESPONSE IN UGANDA (HERRU), UK's DEPARTMENT FOR INTERNATIONAL DEVELOPMENT, UGANDA

To cite this report

Uwezo (2018*): Are our children learning? Uwezo learning assessment in refugee contexts in Uganda. K*ampala: Twaweza East Africa

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ABBREVIATIONS

ARCOD	Approaches to Rural Community Development
DFID	Department for International Development
EAs	Enumeration Areas
HERRU	Humanitarian Emergency Refugee Response in Uganda
JMP	Joint Monitoring Program
MoES	Ministry of Education and Sports
NAPE	National Assessment of Progress in Education
NCDC	National Curriculum Development Centre
NDP	National Development Plan
NER	Net Enrolment Rate
OPM	Office of the Prime Minister
PAL	People's Action for Learning
PWD	People with Disabilities
RWCs	Refugee Welfare Councils
SDG	Sustainable Development Goals
SHRP	School Health and Reading Programme
UBOS	Uganda Bureau of Statistics
UN	United Nations
UNEB	Uganda National Examinations Board
UNHCR	United Nations High Commission for Refugees
UNICEF	United Nations Children's Fund
UPHC	Uganda Population and Housing Census
USAID	United States Agency for International Development
WASH	Water, Sanitation and Hygiene
WFP	World Food Programme
WHO	World Health Organization

ACKNOWLEDGEMENTS

Uwezo is a programme of Twaweza East Africa. We appreciate the various units of Twaweza for overall quality assurance and management support.

We thank Uwezo and Twaweza staff, including Faridah Nassereka, Ismail Sentamu, David Mugurusi, Judith Tumusiime, Judith Nakayima, Bob Wandera, Wahab Muhumuza, Marie Nanyanzi, Martha Chemutai and Amos Kaburu, that participated in the pilot assessment training and monitoring process. We appreciate Dr Lubaale Yovani A. Moses who supported the data entry process, and Dr James Ciera for overseeing the data management process, preparing the first set of tables and providing overall data quality oversight. We appreciate the technical advice we received from Uganda Bureau of Statistics (UBOS) especially Mr Vincent Ssennono and Mr James Muwonge in relation to the pilot methodology and sampling. Thanks to Dr James Wokadala, Dr Benjamin Matthew Alcott and Dr James Urwick for quality assuring the data analysis and report writing process. Risha Chande supported the report edit and layout. We acknowledge the strategic leadership and guidance of Aidan Eyakuze, Executive Director of Twaweza.

We are deeply indebted to the 240 Uwezo volunteers and 12 Village Coordinators who visited 2,186 households and surveyed 5,473 children in 120 villages to get a true picture of learning outcomes and conditions for refugee children and their peers in host communities.

We thank the head teachers of the 103 primary schools and Local Council leaders / Refugee Welfare Council leaders of the villages we visited for granting us entry into their communities. To the heads of the surveyed households, thank you for welcoming us into your homes.

The heads and district coordinators of the four Uwezo district partner organisations worked tirelessly to recruit volunteers, attend trainings, and coordinate the assessment and communication activities. A team of two lead facilitators, and four co-trainers coordinated the training of volunteers and supported the secretariat in monitoring the assessment process.

We recognize the tremendous contribution made by our test development panellists and curriculum experts. Our National Advisory Committee members including Professor Albert James Lutalo-Bosa, Mr James Tweheyo, Dr Daniel Nkaada, Mr James Muwonge, Mr Patrick Kaboyo, Dr Ronald Bisaso, Dr Sarah N. Ssewanyana, Associate Professor Joyce Ayikoru Asiimwe, Professor Albert Byamugisha and Mrs Grace Kanyiginya Baguma guided us selflessly through the pilot assessment. We are grateful for the support from the Ministry of Education and Sports (MoES), most especially Dr Daniel Nkaada (Commissioner for Basic Education), which enabled us to gain entry into the districts and schools. We thank the former Commissioner for Refugees in the Office of the Prime Minister (OPM) Mr Apollo David Kazungu, for granting us entry into the refugee settlements. Thanks to the district and refugee settlements' leadership in Arua, Adjumani, Isingiro and Yumbe for the support we received from them. We also appreciate the advice received at critical moments from other key actors in the surveyed refugee settlements including UNHCR and the Windle Trust. To everyone who contributed in one way or another to concluding the refugee pilot learning assessment and report, accept our heartfelt gratitude.

This pilot was funded through the Humanitarian Emergency Refugee Response in Uganda (HERRU), UK Department for International Development (DFID). We appreciate the support and guidance we received from Ed Barnett, Erlend Linklater, Bright Malere and Catherine Kawamara. Twaweza takes full responsibility for the content of this report.

Mary Goretti Nakabugo, Twaweza Country Lead and Regional Manager, Uwezo East Africa

FOREWORD

The need for this special pilot study arises because of the intensified inflow of refugees that has affected Uganda since 2016. By the end of 2017 there were over half a million refugee children of primary and secondary school age in Uganda, together with 165,000 children of pre-primary age (3-5). By May 2018, children accounted for 60% of the 1, 462,886 refugees and asylum seekers in 30 refugee settlements in Uganda. Although the concentration of most refugees in special settlements has some advantages for the provision of education and other services, the financial, linguistic and cultural obstacles to school attendance and to learning are in general greater for refugee than for non-refugee children. The Government's *Education Response Plan for Refugees and Host Communities* (MoES 2018) is a response to the great challenge of providing more equitable life chances to refugee children. Uwezo at Twaweza in Uganda in partnership with the UK Department for International Development hopes to play its part by including refugee children in its future national assessments of learning and by giving due attention to their interests.

The Uwezo Assessments of children's literacy and numeracy in East Africa have well established procedures, but these have been designed for settled, non-refugee populations. This pilot study therefore applies, and where necessary adapts, these procedures to the context of refugee settlements. It is also comparative in design, comparing the learning outcomes and learning contexts of refugee children with those of non-refugee children in the host communities. The intention is that, through the experience of the pilot study, the processes of assessment, data collection and analysis in the main national assessment shall be adapted and extended so that it effectively monitors the learning of refugee children, as well as those of the more settled population.

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FACTS ABOUT LEARNING IN REFUGEE CONTEXTS IN UGANDA

Unless otherwise stated the literacy and numeracy competencies being reported refer to children's ability to read a Primary 2 level English story and answer one of two comprehension questions about it and their ability to perform Primary 2 level division.

There are three main sections to the results:

PART 1: Levels of learning are poor across refugee and non-refugee contexts, although in some cases, refugee communities perform better than the host communities

- In the lower grades (P3), learning outcomes are equally low for refugee and non-refugee children (more than 90% are unable to read, comprehend, and divide).
- Refugee and non-refugee children performed better in numeracy than in English literacy. About 50% of refugee and non-refugee children had acquired full numeracy competence compared to just about 30% who had acquired full literacy competence.
- In both refugee and non-refugee households, children from female-headed households tend to have higher competencies than their counterparts in male-headed households.
- There are age-related differences in learning outcomes. Within the age group of 9-13 years old, non-refugee children were almost twice more likely to be able to read, comprehend and divide than their refugee counterparts in the same age group.
- Boys generally outperform girls in the settlements and host communities However, in Adjumani and Isingiro, girls in host communities fair badly while their counterparts in the settlements are ahead of, or at least less far behind, their male peers.
- Refugee children whose household has lived in Uganda for more than a year are more likely to be able to read and comprehend, and divide than their counterparts whose households have just settled in Uganda.
- Somali children in settlements are more likely to have basic literacy and numeracy skills than refugees from other countries of origin.

PART 2: Refugee households get better services than their Ugandan counterparts, although in some cases, they face challenging home conditions

- 45% of Ugandan households and 36% of refugees use boreholes as their main source of water.
- Refugees (35%) are more likely to use piped water than their hosts (13%).
- More refugees use clean and sustainable sources of energy: solar energy is the main source of lighting for both refugees (66%) and non-refugees (40%).
- 77% of refugees in the four surveyed districts live in houses made of either mud/stick or polythene compared to 61% of non-refugees who live in stone/brick houses.
- Refugees are more likely to have two meals or less per day compared to non-refugees.

PART 3: School conditions and services are generally poor and dire in refugee contexts, save in a few instances

- Schools in refugee settlements have almost double the pupil-teacher ratio (113:1) of schools outside refugee settlements (57:1)
- The pupil to English textbook ratio is 51:1 within refugee settlements and 2:1 outside the settlements.
- In Arua the pupil to classroom ratio is 350:1 in schools inside refugee settlements and 127:1 in schools in host communities
- More schools outside refugee settlements (46%) have supplementary learning materials such as charts and other visual aids than schools within refugee settlements (28%)
- Teacher attendance is better in schools within refugee settlements (at 79%) than in schools outside refugee settlements (75%).

BACKGROUND

PRIMARY EDUCATION IN UGANDA

The Government of Uganda has been offering universal primary education to all Ugandan (and refugee) children in government schools since 1997. Primary access rates for Uganda are high, with a Net Enrolment Rate (NER) of 96% as of financial year 2016/17, and gender parity is almost a reality at primary school level (MoES 2017). However, there are major problems of late entry, delayed progression and dropout (Uwezo 2015, 19-21), and of insufficient learning, as shown by all the Uwezo reports on Uganda to date. Of those who do complete primary education, many do not master the intended basic skills. The 2016 Uwezo Assessment, for example, shows that, on average, 8 out of 10 Primary 3 pupils and 2 out of 10 Primary 7 pupils are unable to read a Primary 2 level story (Uwezo 2016, 20). Similarly, according to the National Assessment of Progress in Education (NAPE) results of 2015, 33% of Primary 3 pupils who were assessed could read a story of Primary 3 level and only about 54% of these could comprehend it (UNEB 2015).

When these learning outcomes are documented and presented, teachers, education sector authorities and parents often respond with suggestions for more educational inputs of many different kinds, ranging from teacher training to computers: but there is not enough attempt to establish priorities among inputs and not enough reference to what works (and has been shown to work) in improving learning. Uwezo reports have sought to promote a relevant debate and also to recognise the multiple influences on learning outcomes.

EDUCATION FOR REFUGEES IN UGANDA

For decades, Uganda has hosted refugees and asylum seekers from conflict-affected countries in East and Central Africa, especially the Democratic Republic of Congo, Somalia, South Sudan, Rwanda, Burundi and Eritrea. Since achieving its independence in 1962, the country has been host to an average of approximately 161,000 refugees per year (World Bank 2016). But this number has increased dramatically due to recent civil conflict in South Sudan. As a result, Uganda is currently facing Africa's largest refugee crisis with a total number of 1,462,886 refugees as of May 2018, with children constituting 60% of the refugee population (UNHCR 2018). The refugees are hosted in 12 districts[1] located mainly in the northern, southern, and southwestern regions of the country.

Uganda's refugee laws are among the most progressive in the world. Refugees and asylum seekers are entitled to work; have freedom of movement; are allocated plots of land within a settlement; and can access Ugandan social services, such as health and education (World Bank 2016). Nevertheless, refugee-affected areas face a number of challenges including underlying poverty, vulnerability, and limited resilience to shock, further exacerbated by the presence of refugees. The Government of Uganda, in collaboration with the United Nations High Commission for Refugees (UNHCR) and partners, has taken steps to strengthen the self-reliance and resilience of refugees and their host communities. The government has included refugee issues in its national development planning as part of the National Development Plan II (NDP II 2015/16–2019/20), led by the Office of the Prime Minister for the Government of Uganda (World Bank 2016). The Uganda Refugee Policy (2016) recognises education for

[1] Adjumani, Arua, Hoima, Isingiro, Kampala, Kamwenge, Kiryandongo, Koboko, Kyegegwa, Lamwo, Moyo, and Yumbe

refugees as a core facet of humanitarian support. Uganda Vision 2040 also promotes measures that ensure the rights of refugees in all areas, particularly in education. To promote peaceful co-existence, the Government of Uganda and UNHCR adopted a policy of providing the host community with 30% of the services intended to benefit the refugees, with the other 70% being given to the refugee community directly (World Bank 2016). This approach is reflected in a specific Education Response Plan (MoES 2018).

As far as education is concerned, the government provides primary education to refugees under the provision of the Refugees Act requiring that refugees receive the same treatment as nationals. Therefore, primary education is provided in the settlements 'free of fees', in line with Uganda's Universal Primary Education Policy, and refugee schools also serve host communities. There is integration of education services as opposed to separate schools that had been previously set up for refugees and local residents, which were exclusively attended by each group with minimal interaction between them (World Bank 2016, 32-33). The funding for the infrastructure, equipment and recruitment and payment of the teaching staff for the settlement schools is provided through UNHCR and other agencies, with contributions from a range of international partners. The role of the Government of Uganda is to provide the curriculum – and therein lies one of the major challenges for refugee education in Uganda.

Under the provisions of Uganda's 'Thematic Curriculum' of 2009 for lower primary education, the most widely used local language in the district should, in principle, be used as the medium of instruction in Primary 1-3, with transition to English following in Primary 4. As recent research shows, however, a strict application of this policy is not feasible in the main areas of refugee settlement and schools need to adopt strategies suited to the varied and complex language situations that they face (British Council, forthcoming). Language problems are thought to have contributed to dropout among refugee children at the lower primary level (World Bank 2016, 33). Some language assistants have been provided, but in practice tend to be used as class teachers because of the acute shortage.

In the Ugandan context, another major challenge is that while access and quality are meant to be complementary, in practice, more focus has been put on access to education for refugees than on quality (learning outcomes) (Sandall, 2016). Previous assessments of education provision in refugee settlements have also mainly focused on visible aspects such as enrolment, infrastructure, administration, resources, content, practices and quality of instruction such as training of teachers, use of mobile phones and radios to deliver lessons (World Bank 2016:29). Although the general perception of parents and the education ministry is that learning outcomes in schools in refugee settlements are low, particularly numeracy and literacy (Sandall 2015: 74), there has been no independent assessment of literacy and numeracy competencies in refugee contexts to provide conclusive data on this.

Therefore, this learning assessment pilot sought to answer the following questions:

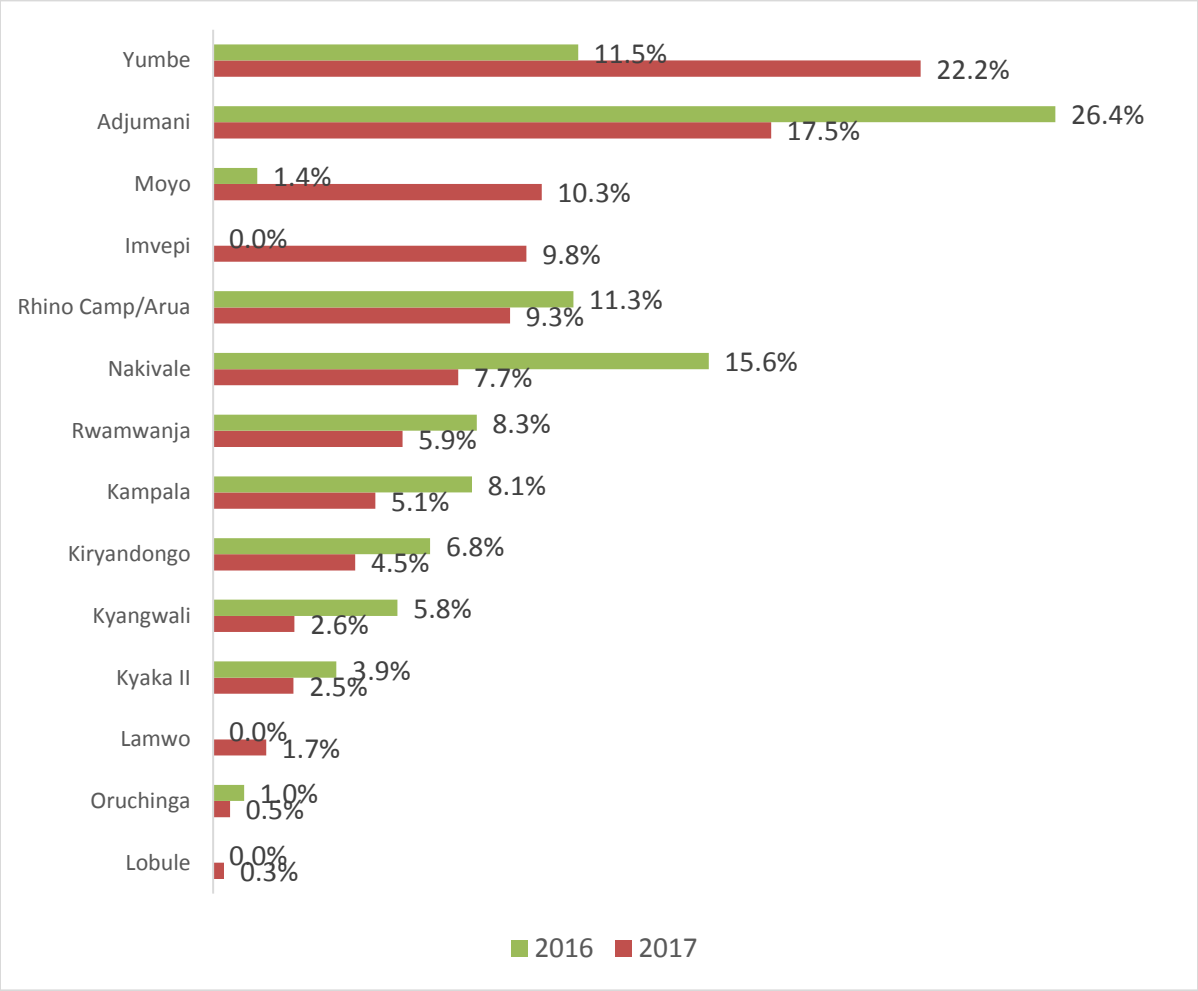
1. Are children in refugee settlements learning effectively in school? How does their learning compare with that of children outside the refugee settlements?
2. What are the school and household conditions that influence children's learning inside and outside refugee settlements?
3. How can this pilot study inform future learning assessments in refugee settlements?

METHODOLOGY

SELECTION OF DISTRICTS

The districts selected for this pilot learning assessment were the four with the largest numbers of refugees in 2016 (the most up-to-date statistics available at the time the study was designed): Adjumani, Isingiro (Nakivale), Yumbe and Arua. As **Figure 1** shows, however, these figures vary significantly across the years and in 2017 Isingiro moved from hosting the second largest refugee population in the country to the sixth largest.

Figure 1: Refugees in Uganda by location and year *(% of total population of refugees)*



Source: Office of the Prime Minister (OPM)

The purposive selection of Isingiro (Nakivale) also afforded us the opportunity to test the Uwezo citizen-led learning assessment model in a settlement of diverse nationalities. Of the 99,408 refugees in Nakivale (Isingiro) settlement, 45% are from the Democratic Republic of Congo (DRC), 28% from Burundi, 17% from Somalia, 9% from Rwanda. The remaining 1% are from Eritrea, Ethiopia, Sudan and South Sudan.

In contrast, almost all refugees in Yumbe, Adjumani and Arua districts are from South Sudan (see **Table 1**).

Table 1: Refugees by nationality in the four sampled refugee-hosting districts

Country of origin	Adjumani		Arua		Nakivale		Yumbe	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Burundi	4	0	15	0	27,484	27.6	0	0
DR Congo	29	0	1,570	1.3	44,779	45.0	0	0
Eritrea	0	0	0	0	750	0.8	0	0
Ethiopia	9	0	0	0	784	0.8	0	0
Rwanda	0	0	3	0	8904	9.0	0	0
Somalia	0	0	0	0	16,559	16.7	0	0
South Sudan	226,034	99.9	118,523	98.4	101	0.1	287,087	100
Sudan	280	0.1	280	0.2	19	0	0	0
Other	0	0	15	0	28	0	0	0
Total	**226,356**	**100**	**120,406**	**100**	**99,408**	**100**	**287,087**	**100**

Source: Office of the Prime Minister, 31 December 2017

SAMPLING FRAME

The sampling frame[2] for the pilot study targeted both refugee and non-refugee households. The purpose was to understand the realities of learning in refugee settlements and host communities and compare the two groups.

The sampling frame used for households of the general population was the frame for the Uganda Population and Housing Census conducted in August 2014 (UBOS 2014). The sampling frame contains a complete list of Enumeration Areas (EAs), created for the census, covering the whole country. According to the Uganda Population and Housing Census of 2014, Uganda is divided into 112 administrative districts. Each district is sub-divided into (from the largest to the smallest unit) sub-counties, parishes, villages and EAs. The frame file contains the number of households for each EA at the time of the census operation.

The sampling frame that was used for the selection of households in the refugee settlements was the list of refugee settlements in Uganda that is available from the Office of the Prime Minister as shown in **Annex I**. These settlements are arranged by settlement, zone, village, block and sometimes clusters. The arrangement differs from district to district and from settlement to settlement. The refugee sampling frame excluded collection centres as it was assumed that the people there had not yet settled into households.

For the purposes of this study, the four districts were divided into eight strata/study domains to represent refugee and non-refugee populations from which households were sampled independently **(Table 2)**.

[2] A sampling frame is a complete list of all sampling units (households) that entirely covers the target population

Table 2: The eight study domains in the four districts

	District	Strata/Study domain
1	Adjumani	i) Non-refugee population in Adjumani
		ii) Refugee population in Adjumani: The refugee settlements in Adjumani included the following: Ayilo I, Ayilo II, Alere 2, Baratuku, Boroli, Elema, Maaji I, Maaji II, Maaji III, Mirieyi, Mungula I, Mungula II, Nyumanzi, Oliji, Olua I, Olua II, Pagrinya, Agojo II
2	Arua	iii) Non-refugee population in Arua
		iv) Refugee population in Arua: The refugee settlements in Arua included Rhino Camp and Imvepi
3	Isingiro	v) Non-refugee population in Isingiro
		vi) Refugee population in Isingiro: The refugee settlements covered in Isingiro included Nakivale and Oruchinga
4	Yumbe	vii) Non-refugee population in Yumbe
		viii) Refugee-population in Yumbe: Only one settlement, Bidibidi, was covered

SAMPLING PROCEDURE

The sample size for this pilot was based on evidence from previous Uwezo learning assessments, which showed that, for the measurement of key variables such as English reading and numeracy competences, 300 households per district yielded a sufficient sample.

In order to be able to compare literacy and numeracy competences of children in refugee settlements with competences of their counterparts outside refugee settlements, households were sampled in two stages. In the first stage 15 refugee blocks and 15 non-refugee EAs were selected within each district, as shown in **Table 3**. In the second stage, 20 households were selected from each of the selected blocks and EAs.

Table 3: Sample allocation of blocks/EAs and of households by district

	Refugee		Non-refugee	
	Blocks	**Households**	**EAs**	**Households**
Adjumani	15	300	15	300
Yumbe	15	300	15	300
Arua	15	300	15	300
Isingiro	15	300	15	300
Total	60	1200	60	1200

In order to carry out the second stage, a household listing operation was carried out in all of the selected EAs/blocks before the main survey. A fixed number of 20 households was selected from the newly established household listing for each selected block/EA, using a table of random numbers. The citizen

volunteers were required to visit and interview only the selected households. There were no replacements and no changes of the selected households in the implementation stages, in order to prevent bias. Within the selected households, however, all children in the age range 6-16 who regularly resided in the selected households were assessed and relevant information both on the children and on their households was collected.

In areas where the blocks in refugee settlements were further subdivided into 'clusters' that were comparable to EAs, a three-stage sampling strategy was used, i.e. by randomly selecting a block, thereafter selecting a cluster, listing all households in the cluster and randomly selecting 20 households.

SELECTION OF SCHOOLS

One primary school per EA / block was selected for a survey of school resources. The school selected was the one attended by the largest proportion of children residing in the EA, irrespective of its type of ownership (government, private or community) and whether it was located inside or outside the EA. The selection of the school was done with the help of local council / refugee welfare council leaders.

INSTRUMENTS: THE SURVEY TOOL AND THE LITERACY AND NUMERACY TESTS

Data were collected at enumeration area (EA) / block, school and household levels using a structured survey tool (https://www.twaweza.org/go/refugee-uwezo-assessment-2017). The tool was adapted from the usual Uwezo survey tool to include items suited to refugee contexts. Some basic items on water and sanitation were adapted from the harmonized SDG Indicators and Questions for Monitoring Water, Sanitation and Hygiene (WASH) in Schools developed by the World Health Organisation (WHO) and UNICEF Joint Monitoring Program (JMP) for Water Supply and Sanitation.

Each child aged 0-16 in each of the sampled households was surveyed and those aged 6-16 assessed orally one-on-one from their homes[3] on basic English literacy[4] and numeracy (visit https://www.twaweza.org/go/refugee-uwezo-assessment-2017 to view examples of the literacy and numeracy tests that were administered). The literacy and numeracy tasks used in the assessment were a product of a carefully designed process of test development resulting in three samples of tests with the same level of difficulty for each subject. Four samples were initially developed per subject. Following a rigorous pre-test and review process, three samples were selected for use in the assessment and one retained to be refined and used in future assessments.

Test developers included primary school teachers, book authors and teacher educators, supported by experts from the National Curriculum Development Centre (NCDC) and a psychometrician**.** The Uganda Primary 2 curriculum and textbooks were referenced in the development of these tests, to ensure they were pitched at the right level.

[3] Pen and paper assessments assume that children can already read, and citizen-led assessments hesitate to make that assumption. We assess children in their home because we believe home is the best place to find a representative sample of all children, whether they are in school or not. Home is also the best place to find disadvantaged children whose school attendance may be irregular or who may have dropped out of school altogether. We believe that no child should be left behind in the education system.

[4] Although the medium of instruction in lower primary in Uganda is the common local language of the area, English is taught as a subject

To ensure reliability and validity of the assessment items, three pre-tests were conducted in different socio-economic environments and review meetings held after each pre-test to assess the suitability of each item. A test tracking tool was used in each round to record the status and changes in the items. The English items were subjected to a 'readability test' using the Flesch Kincaid readability test to ensure that the text in each sample was appropriate at P2 level where children had been exposed to English as a subject for one year and a few months. The English stories were further subjected to the Type Token Ratio (TTR) statistic in order to keep track of difficulty across the samples and across the years. Readability is affected by the word size e.g. words with more than one syllable would make the text appear difficulty. Another cause of difficulty would be repetition of words in a text. Some words (particularly one syllable words such as CAT, RAT and articles such as A, AN & THE make texts easy while repetition of long words such as NEIGHBOUR could make texts to be difficult to read). We introduced TTR to ensure that all paragraphs and stories had a variety of words and repeated words where necessary. The readability test and TTR helped ensure standardization and comparability across the samples.

In addition to assessment of literacy and numeracy competencies, data were collected on learning environments such as enrolments, class size, teaching materials and other factors that may have a direct link to children's learning including feeding, water and sanitation, sexual reproductive health, and inclusive education with a focus on disability. The tool was also used to gauge access to school among children in refugee settlements.

ASSESSMENT AND SURVEY PERSONNEL

The survey was conducted in October 2017 in partnership with four district-based organisations[5]. The survey team in each district consisted of one district coordinator, a co-trainer and three village coordinators. Either the co-trainer or one of the village coordinators per district had to be a refugee from one of the sampled refugee settlements to support, attend to or advise on any unique needs of refugee participants that could arise during the course of the study. Two volunteers of a minimum of lower secondary (Senior 4) certificate were recruited in every sampled EA/block and trained to do the assessment. This team of 65 district-based partners was supported by a group of eight Uwezo staff / trainers (two per district) who served as trainers of trainers and supported and supervised the pre-assessment and assessment processes to ensure the assessment was conducted in accordance with Uwezo standards and procedures. To address the language issue, volunteers were recruited from the assessed communities and spoke the languages widely spoken in the area. In refugee settlements, the volunteers recruited were themselves refugees, and in a few instances interpreters were engaged to support the training team.

RESPONSE RATES

The assessment exercise and household survey reached all the intended EAs and refugee blocks or clusters. A total of 2,184 households out of 2,400 targeted (91%) provided data. Of these, 1,080 were in refugee settlements and 1,104 in host communities (90% and 92% of those targeted). Within each of the eight strata, household response rates were in the range 88-93%, as shown in **Table 4**. The main reasons

[5] In Adjumani, we collaborated with Global Aim, and in Arua, we worked with Approaches to Rural Community Development – ARCOD. In Isingiro and Yumbe districts, we worked with Integrated Development Options - I-DO and Needy Kids Uganda, respectively.

for the cases of non-response were that households had moved, that members were not available on two occasions, or that there was no adult to give informed consent.

Table 4: Response rates at household level by district and by refugee status

District	Refugee status	Household response rate
Adjumani	Refugee	89%
	Non-Refugee	93%
Arua	Refugee	90%
	Non-Refugee	93%
Isingiro	Refugee	88%
	Non-Refugee	92%
Yumbe	Refugee	91%
	Non-Refugee	93%
Total		**91%**

Within the households providing data, a total of 4,156 children aged 6-16 were assessed (see **Annexes II & III**). Of these, 2,257 (54% were in refugee settlements and 1,899 (46%) in the host communities: an acceptable distribution.

Some of the schools selected for inclusion in the school survey served more than one EA or block. As a result, the number of schools included was limited to a total of 103, consisting of 46 in refugee settlements and 57 in host communities. All the EAs and blocks of the household survey were represented by the selected schools.

REVIEW OF THE IMPLEMENTATION PROCESS

In order to evaluate the procedures used in refugee contexts, five criteria were considered: (1) ease of access, (2) ability to recruit volunteers, (3) applicability of the assessment procedures, (4) ability to complete the task within the time frame and (5) production of usable data. Comments on each of these aspects follow.

Ease of access to refugee settlements

Buy-in for the pilot and easy entry were secured at all levels (national, district and community level). At the national level, approval for the pilot was granted by the Commissioner for Refugees in the Prime Minister's Office through an endorsed introductory letter to all Refugee Desk Officers and Settlement Commandants. This made approval at district level and entry into refugee settlements easy. Support for the pilot was also secured from the Commissioner for Basic Education through an introduction letter to district leaders, who in turn granted permission to implement the pilot in their respective districts. This eased entry into schools and enumeration areas. It is only in one Enumeration Area in Yumbe district and

one school in Adjumani district that volunteers were first barred from undertaking the household-based learning assessment and school survey. This was caused by gaps in communication during the pre-assessment exercise at the EA level and the fact that Uwezo or her representatives do not communicate with surveyed schools prior to the assessment. However, Uwezo district partners and district officials mediated the process and the survey was conducted within the stipulated time. For future assessments, we may wish to find a way to communicate with the relevant actors earlier to avoid this.

Ability to recruit and train volunteers in refugee settlements

Working with Uwezo district partners, we successfully recruited and trained two volunteers per sampled EA (60 volunteers per district) who resided within the community or sub-county to undertake the learning assessment. The main challenge experienced in refugee settlements was the verification of volunteer qualifications as some potential candidates had left their academic papers in their country of origin during the emergency transition. In instances where there was no qualifying volunteer with verifiable credentials, reference was sought from the Refugee Welfare Council (RWC) chairpersons and Settlement Commandants. In one isolated case in Yumbe district, the local volunteer in a refugee settlement was paired with a non-refugee volunteer who was qualified and fluent in the local language spoken in the refugee settlement due to the lack of a second qualifying candidate. Overall, although there were no major challenges experienced in getting qualified volunteers to do the assessment, it was important to adapt the volunteer recruitment criteria to suit an emergency context.

Use of the Uwezo survey instrument and tests in refugee and non-refugee contexts

We successfully used the same survey tool and tests that had been rigorously pretested and reviewed to guarantee their validity and reliability (as described in the methodology chapter), to assess in refugee settlements and host communities, save for a few items:

- Two items were added specifically to capture the nationality of refugee households and when they had settled in Uganda (month and year).
- Three items related to water quality testing specific to the host communities were also added as a way of piloting if Uwezo volunteers could collect data on other development indicators beyond education. Through consultations with relevant ministries, indicators on WASH and nutrition, among others, were included in the survey tool, including a simple water quality test to check presence of bacteria.

During the training and pre-testing of the tools, we realised we had not made sufficient effort to introduce the water quality test to the various actors in the water sector in refugee settlements ahead of the assessment. Due to the sensitivity of the matter and prevailing time constraints we made the decision to only do the water quality test in the host communities. Ample time is needed to prepare different actors if sensitive issues such as water safety and health are to be surveyed in emergency contexts.

Regarding the learning assessments, we demonstrated the ability to use the established Uwezo items in both refugee settlements and in host communities.

Ability to complete the assessment within the set time frame

The assessment was conducted as scheduled, except in Adjumani district. We faced a challenge when the previous Uwezo district partner pulled out due to what they considered unfavourable financial terms. The process of identifying and orienting a new partner meant that Adjumani lagged behind the other districts – and the assessment had to be conducted two weeks later there. Despite this delay, the assessment was completed within reasonable time, indicating that the Uwezo assessment can easily be implemented in a refugee context within the same time frame as in non-refugee contexts.

Production of usable data to compare learning outcomes of refugee and non-refugee children

Data collection in all four districts was effectively completed and data entry and analysis were accomplished without major technical problems. As we have shown above, the response rates were similar in both contexts and the levels of performance, in relation to grade level, were comparable. The main challenges are in the interpretation of the comparative data and comments will be made on these in the concluding section.

FINDINGS

The analysis and presentation of findings is divided into three parts.

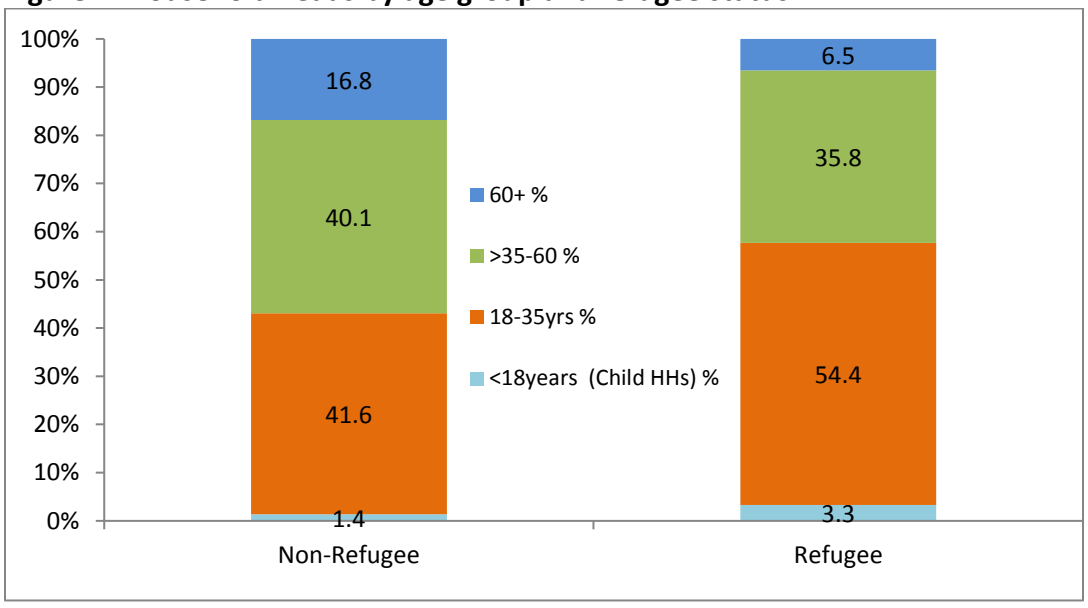
- Part I presents the distribution and characteristics of the main respondents to provide context for the learning outcomes findings.
- Part II presents findings on the levels of literacy and numeracy of children in refugee settlements and how these compare with those of children outside the refugee settlements. Variations by grade level, district and other characteristics are also considered.
- Part III analyses selected characteristics of schools and households that form part of the context for children's learning inside and outside refugee settlements. The analysis provides some useful insights about the school and household conditions for children inside refugee settlements and in the host communities.

PART I: DISTRIBUTION AND CHARACTERISTICS OF RESPONDENTS

Household heads

A total of 2184 households were surveyed: In 1,993 instances the household heads were the actual respondents while for the rest of the households it was either the spouse or another adult left in charge. The majority of the household heads responding to the survey (54.4% refugees and 41.6% non-refugees) were between 18 and 35 years, followed by those between 35 and 60 **(Figure 2)**. About 1% and 3% of non-refugee and refugee households respectively were child-headed households (with household heads below 18 years old).

Figure 2: Household heads by age group and refugee status



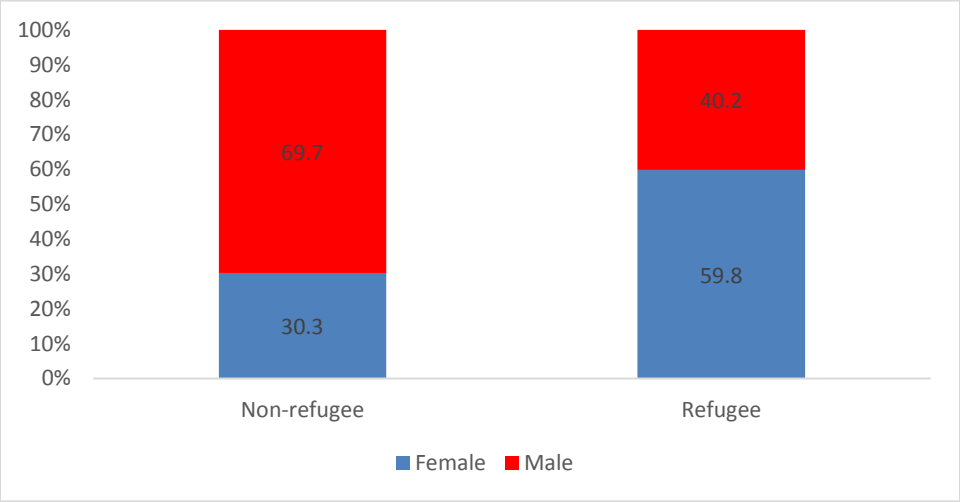
N=1,993

One anticipated risk at the outset of the pilot was that there would be many cases of child-headed households in refugee settlements unable to provide informed consent. In fact there were few of these (**Figure 2**) households and in these cases, informed consent to participate in the survey was secured from the respective Refugee Welfare Council leaders (RWCs).

Distribution of household heads by sex, level of education and refugee status

Most of the household heads in the host community, as indicated by the survey, were men (69.7%) while in the refugee settlements the majority of the household heads were women (59.8%) **(Figure 3).** This can be expected, given the high proportion of women and children in the settlements generally (86%) (UN Women 2017)**.**

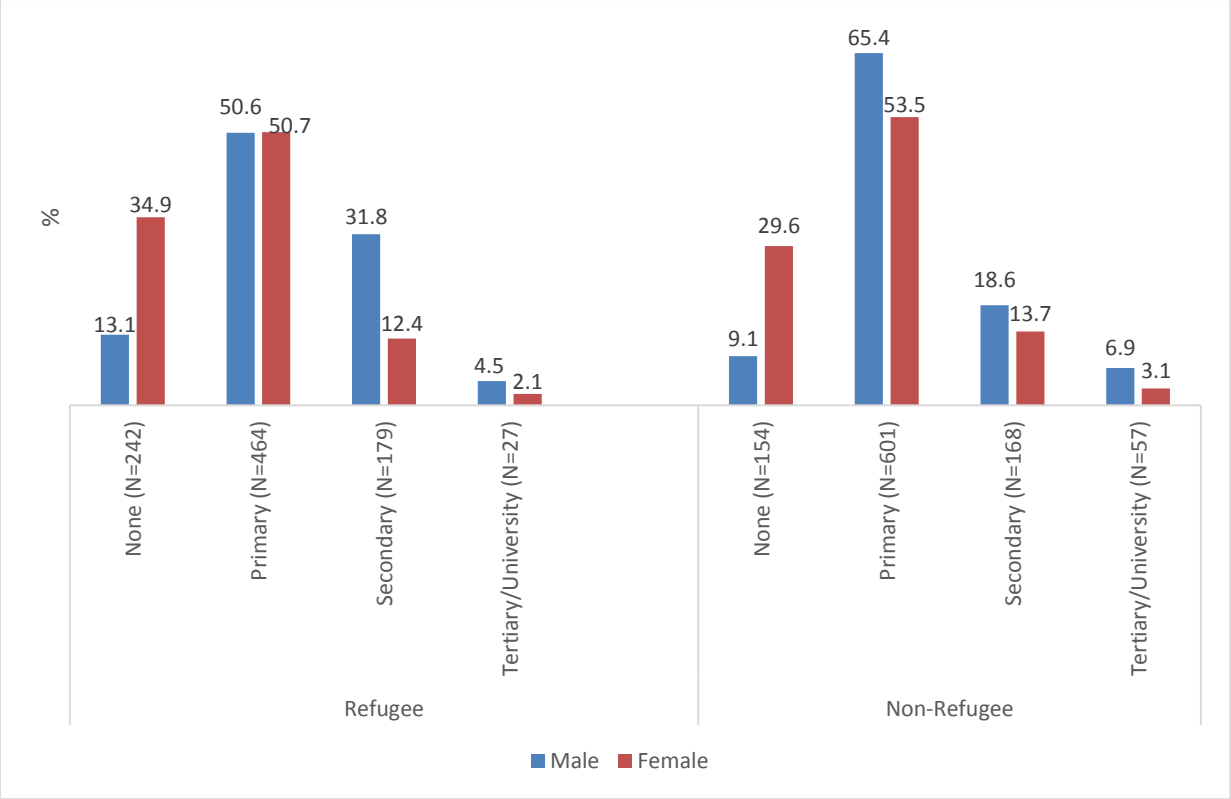
Figure 3: Household heads by gender



N=1,993

In terms of education, most household heads had completed primary education **(Figure 4).** In refugee contexts, equal proportions of male and female household heads had primary education. About one-third of refugee female household heads had no education at all (compared to only 13% of their male counterparts), and few had attained post-primary education compared to their male counterparts. These differences were similar among non-refugee household heads. It is a global tendency that gender-related barriers to education are more pronounced at the secondary and tertiary levels than in primary education (King and Winthrop 2015).

Figure 4: Household heads by level of education, gender and refugee status



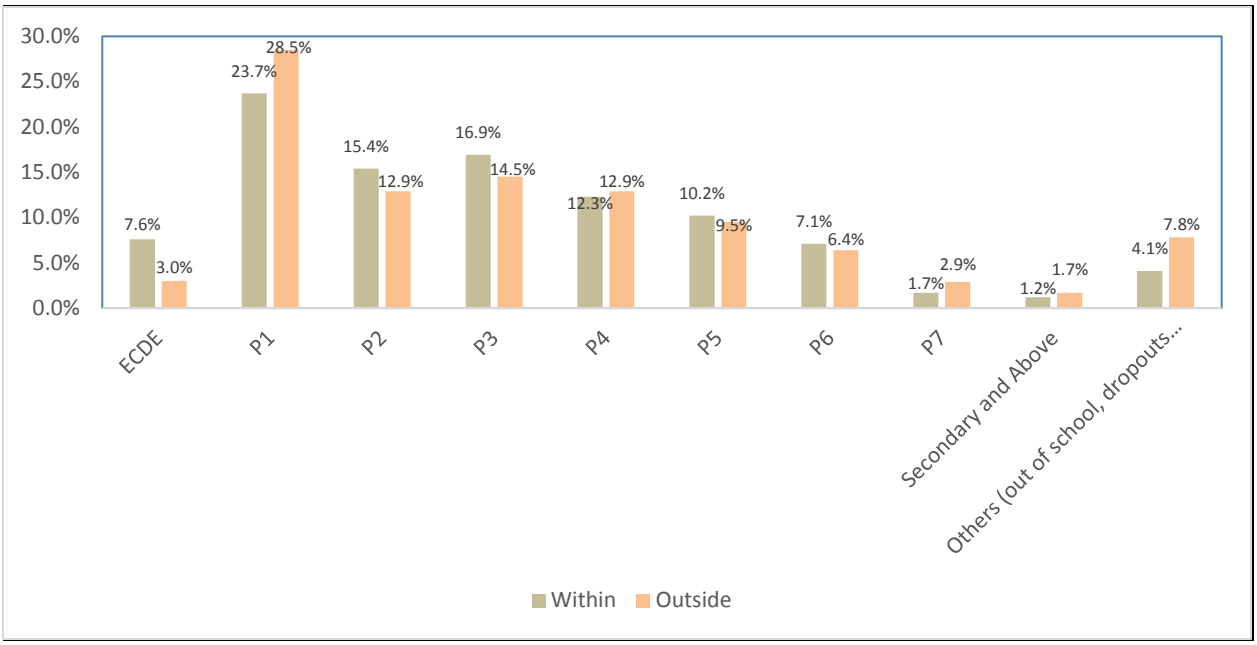
N= 1,993

Figure 4 further shows that there is a larger proportion of male refugee household heads with secondary education than that of non-refugees with this level of education. In times of emergency, educated individuals tend to be more mobile than their less educated counterparts (Bartolini, Triandafyllidou and Gropas 2015); however, this kind of difference is not evident for females.

Distribution of Children Surveyed

A total of 5,473 children aged 3-16 were surveyed for their pre-school and school status (**Figure 5)**. Out of these, 4,156 aged 6-16 were assessed in literacy and numeracy **(Figure 6).**

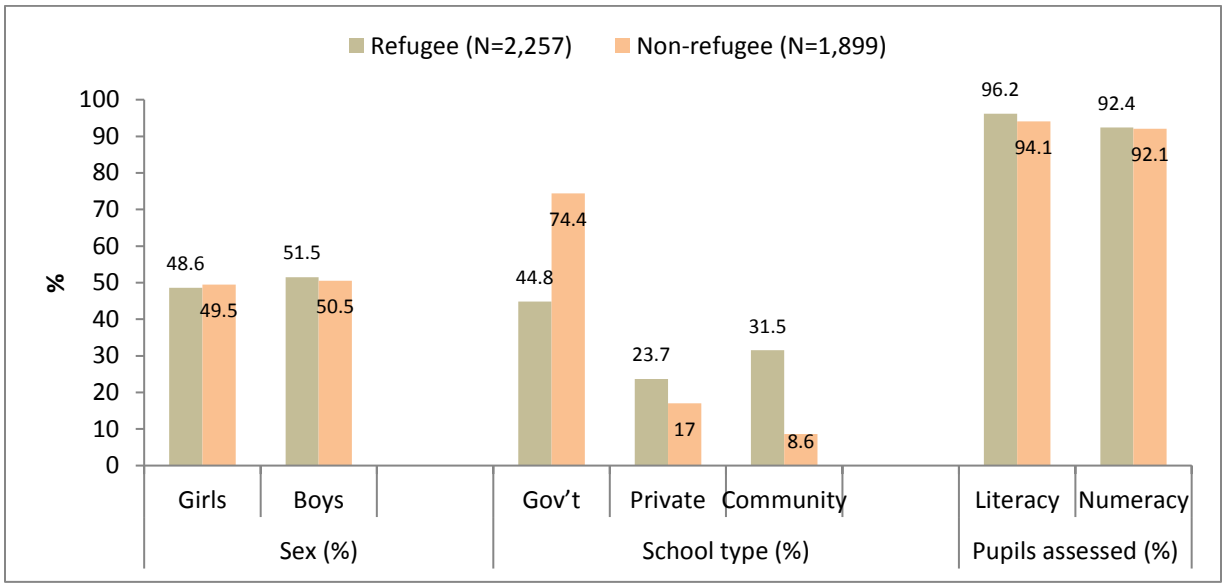
Figure 5: Education levels of children (age 3-16) within and outside refugee settlements



N=5,473

Figure 5 shows that there were more children attending pre-school in refugee settlements (8%) than outside refugee settlements (3%) among the surveyed children. This could be attributed to the variety of education interventions, including pre-school facilities, implemented by international development agencies in refugee settlements. Apart from P1 and P7, there were more children enrolled in school within refugee settlements than outside. However, there were more out of school children within refugee settlements (8%) than outside refugee settlements (4%). The issue of expanding access to school for refugee children alongside ensuring their learning is critical.

Figure 6: Assessed children (age 6-16) district, refugee status and gender



N=4,156

Figure 6 indicates that the pupils assessed were evenly distributed across genders (49.5% girls and 50.5% boys). By school type, majority of the pupils assessed were attending government schools. A substantial proportion of children in refugee settlements attended private (23.7%) and community schools (31.5%). About 95% and 92% of the children sampled were assessed in literacy and numeracy, respectively. The majority of the pupils assessed (54%) were from refugee settlements. Similarly, the percentage of children assessed were evenly distributed across districts (**Annexes II & III**).

These statistics show that there are several broad similarities between refugee and non-refugee households in their educational background and in their use of schools. The most notable differences are the larger proportion of female household heads in the refugee households, the unusually large proportions of refugee children attending non-government primary schools, and the slightly larger proportion of children inside refugee settlements attending pre-school and those out of school. Because of special circumstances and a relative shortage of government schools, large proportions are attending community schools in Adjumani District and private schools in Yumbe District (**Annex III)**. In host commmunities, private schools tend not to be affordable to the poorer households, although they are popular in Isingiro District (Uwezo 2015).

PART II: LEARNING LEVELS IN REFUGEE SETTLEMENTS AND HOST COMMUNITIES

The focus of analysis in this section is on the refugee and non-refugee children who were assessed and were attending Primary 3 to 7 (P3-7). This is because the highest levels of literacy and numeracy that were assessed correspond to educational targets for Primary 2 (P2). We shall examine the levels of competence according to refugee status, grade level, sex, age, district and other selected characteristics. The numbers of children in the sample that were assessed and attending P3-7 are shown in **Table 5.**

Table 5: Percentages of assessed children (P3-7), by district and by grade
N=1,856

District	Refugee status	P3	P4	P5	P6	P7
Adjumani	Non-refugee (N=261)	32.4%	30.2%	22.6%	11.4%	3.4%
	Refugee (N=315)	27.0%	37.1%	19.3%	13%	3.7%
Arua	Non-refugee (N=183)	28.3%	28.6%	23.3%	12.5%	7.3%
	Refugee (N=254)	37.8%	19.3%	23.%	17.9%	2.0%
Isingiro	Non-refugee (N=165)	30.4%	27.3%	13.3%	18.2%	10.8%
	Refugee (N=178)	39.2%	25.4%	22.7%	8.1%	4.6%
Yumbe	Non-refugee (N=214)	37.9%	23.0%	23.7%	13.6%	1.7%
	Refugee (N=286)	31.3%	29.4%	16.7%	16.8%	5.8%
Total	Non-refugee (N=823)	31.4%	27.4%	20.9%	13.9%	6.4%
	Refugee (N=1,033)	35.1%	25.4%	21.1%	14.8%	3.6%

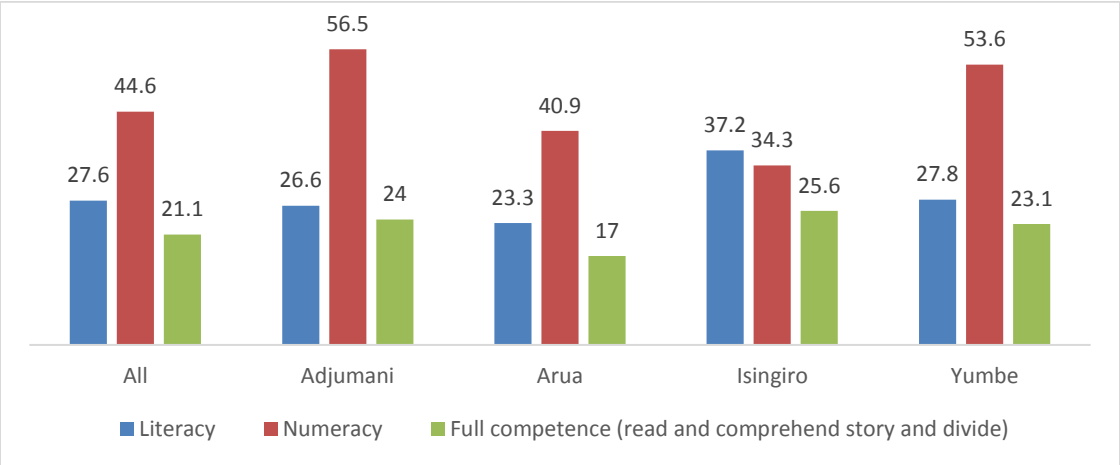
The assumption is that, if the goals of the curriculum were being achieved, nearly all of these children would be able to successfully perform all the reading and numerical tasks assessed. These tasks represent basic skills that are necessary for many areas of education and types of employment.

FULL COMPETENCE IN NUMERACY AND ENGLISH READING LITERACY

Full competence in this report implies that a child was able to solve Primary 2 numeracy problems up to division level and read and comprehend a Primary 2 level English story.

The results in **Figure 7** reveal that 45% of assessed refugee pupils in P3-7 were able to complete P2 level numeracy tasks up to division level and 28% could read and comprehend a Primary 2 story. And only 2 out of 10 refugee pupils (21%) had attained full competence in literacy and numeracy.

Figure 7: Refugee pupils' (P3 – P7) literacy and numeracy competencies



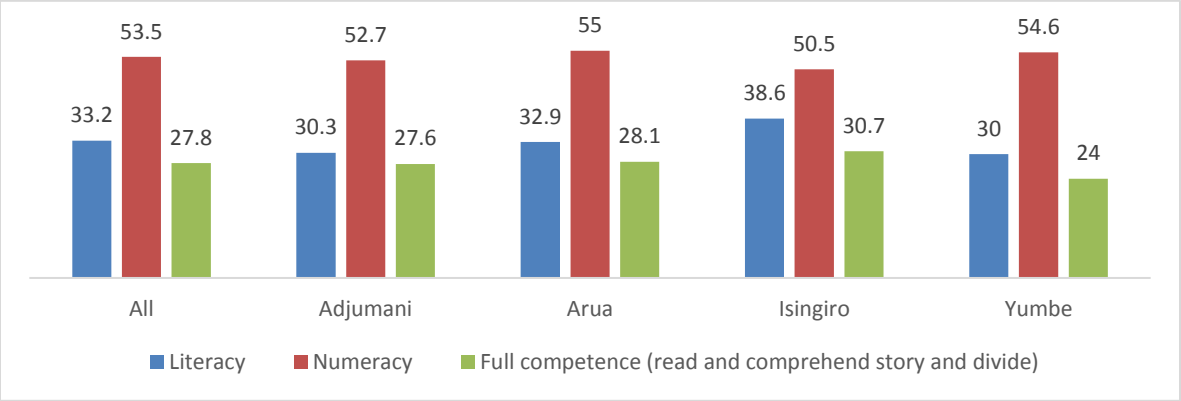
N=1,033

Numeracy competence was lowest in Isingiro. The variation in learning outcomes across districts could be attributed to the variation in key quality indicators as well as presence or absence of private schools. For

example, there are fewer private schools in Arua district compared to Yumbe and Adjumani. Previous Uwezo learning assessments indicate that children in private schools tend to have higher literacy and numeracy skills compared to pupils in government-aided schools (Uwezo 2014). Also, as the data will show later, Arua has the highest pupil-teacher and pupil-classroom ratios - key education quality indicators. Furthermore, on average, the literacy competencies of refugee pupils were lower by about 17 percentage points than numeracy. This could be due to challenges refugee children face when learning in the host community local language in lower primary, which likely also delays their acquisition of English literacy competencies even when English is taught as a subject from P1. In addition, some refugees originate from non-Anglophone countries including, Somalia, the Democratic Republic of the Congo and Sudan.

Grade level comparison of data further shows that in some cases refugee pupils are just as or even more likely to be learning in school as Ugandan pupils (**Figures 8 and 9**).

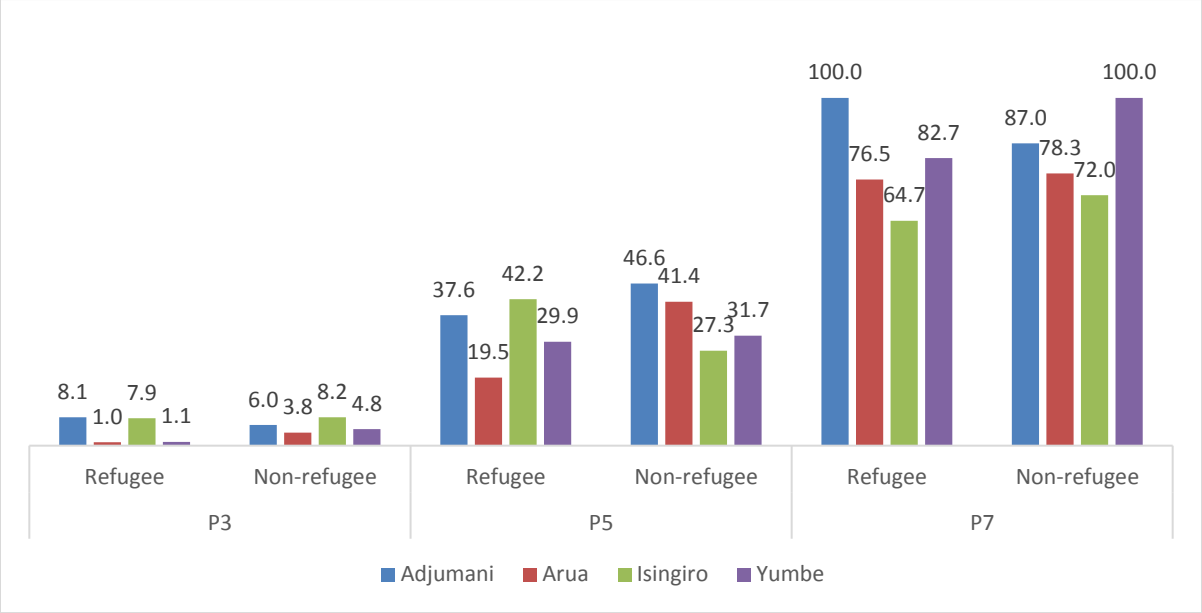
Figure 8: Non-refugee pupils' (P3 – P7) literacy and numeracy competencies



N = 823

Figures 7 and **8** above show that on average non-refugee children in P3-7 do better on literacy, numeracy and full competence by between 6-9 percentage points. In P3, however, the learning outcomes are equally low for refugee and host community children (more than 90% are unable to read and comprehend and divide) **(Figure 9)**. In Isingiro and Adjumani, there are more refugee children attaining full competency in P5 and P7 respectively than non-refugee children while the reverse is true in Arua and Isingiro. As noted above, this variation could be mainly due to children attending or not attending private schools.

Figure 9: Pupils (P3, P5, and P7) with full literacy and numeracy competence by refugee status

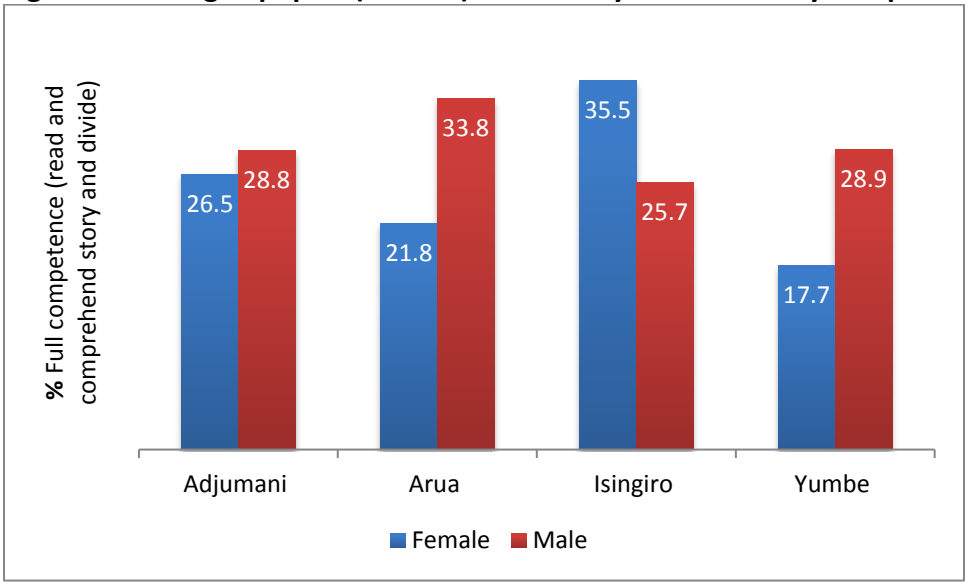


N=1,101

Full Competency by sex, P3-7

However, a comparison of learning outcomes of refugee and non-refugee children by sex **(Figures 10 and 11)** and age (**Figure 12**) reveals differences between boys and girls and between refugees and non-refugees.

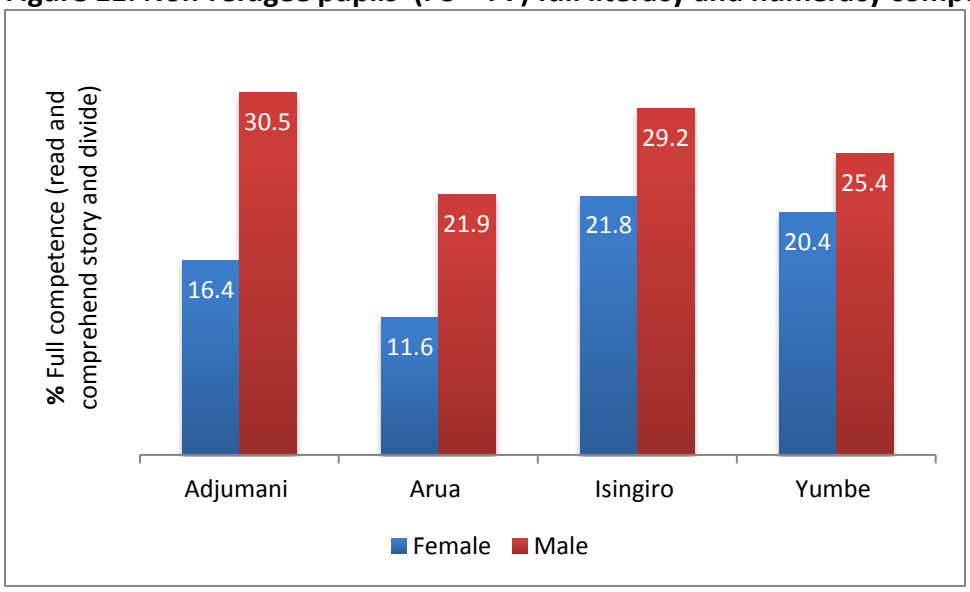
Figure 10: Refugee pupils' (P3 – P7) full literacy and numeracy competencies by gender



N=1,033

Figure 10 shows that among refugee children, there is a gender disparity in every district. In the three West Nile districts of Adjumani, Arua and Yumbe, the disparity is in favour of boys. In Isingiro (located in Western Uganda) girls have higher learning levels than boys.

Figure 11: Non-refugee pupils' (P3 – P7) full literacy and numeracy competencies by gender



N = 823

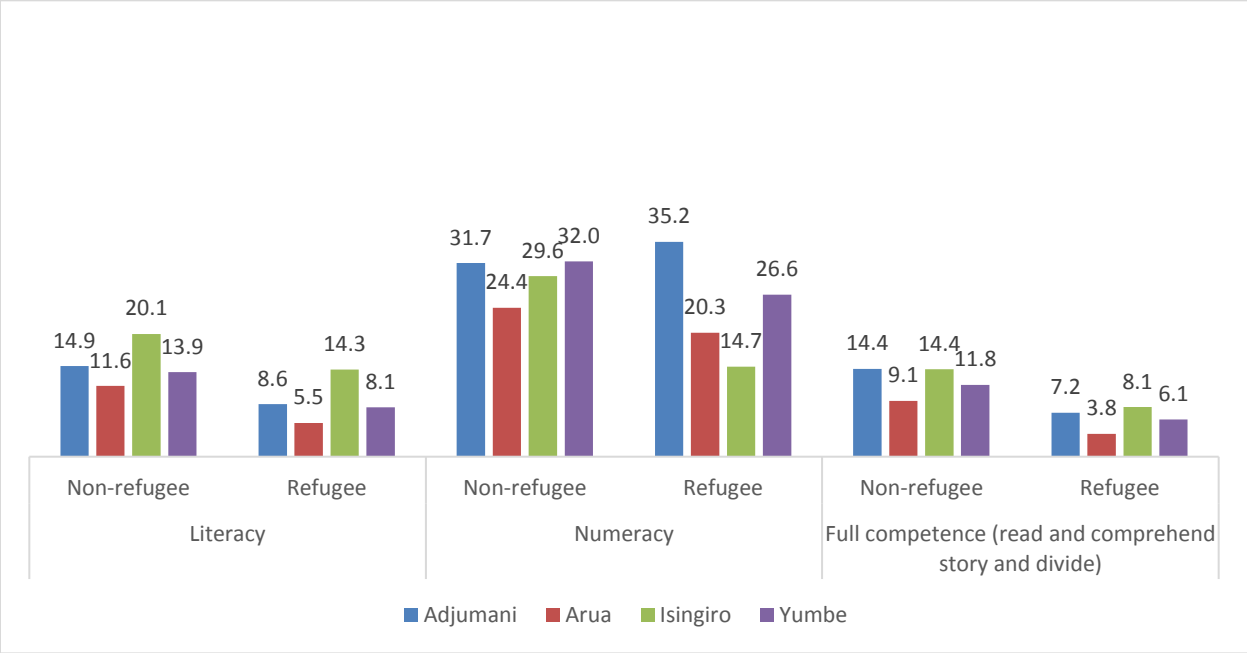
In non-refugee contexts **(Figure 11)**, boys consistently outperform girls in all four districts. When comparing gender disparities between refugee and non-refugee in each district (**Figures 10 and 11)**, within Adjumani and Isingiro girls are further behind boys outside settlements than within refugee settlements. In Adjumani the girls are behind boys by 14 percentage points outside refugee settlements and by only 2 percent points inside refugee settlements. In Isingiro, girls are ahead of boys by 10 percentage points within refugee settlements and behind boys by 7 percentage point outside refugee settlements. In Arua, the gender gap is similar across refugees and non-refugees, while in Yumbe the gap is smaller for children in non-refugee areas.

There are gender differences in learning outcomes among refugee and non-refugee pupils, mostly in favour of boys. Gender-related factors affecting girls' learning in all districts (and working against boys in refugee settlements in Isingiro), need to be identified through further research and appropriate action taken by key stakeholders to ensure that all children learn.

Full Competency by age, 9-13 years

We also looked at differences in learning outcomes by age between refugee and non-refugee children aged 9-13 years (**Figure 12)**. There were 1,954 of them surveyed (1059 refugees and 895 non-refugees).

Figure 12: Non-refugee and refugee pupils' full literacy and numeracy competencies by age (9-13 years)



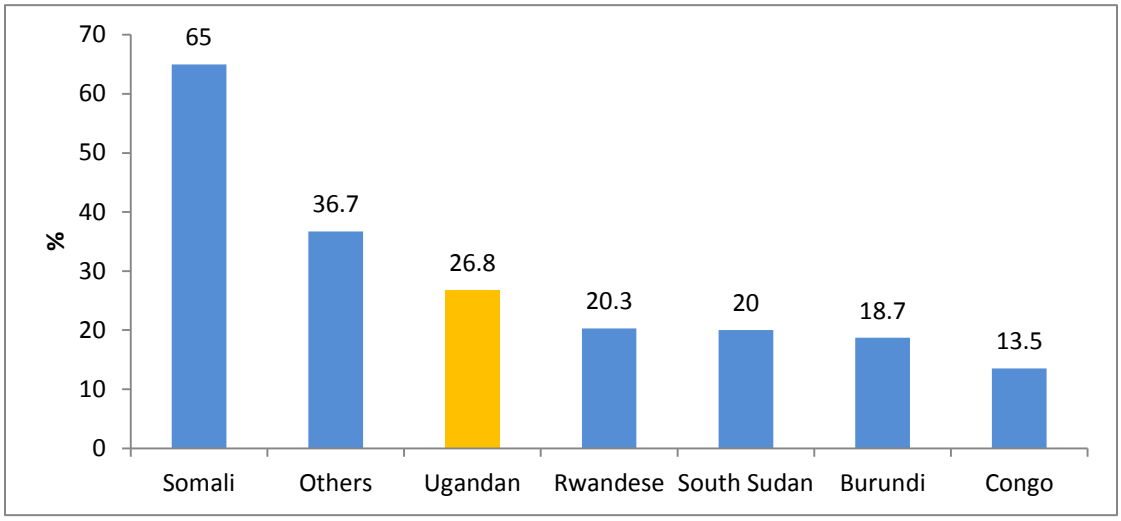
N=1954

The findings indicate that**,** generally, refugee children aged 9-13 have lower literacy and numeracy competencies than non-refugee children in the same age group. Children in the settlements face disadvantages: their schooling has been interrupted and they are more likely to be over age for their class and have repeated more grades. The only exception is Adjumani where refugee children perform better than non-refugee children in numeracy by four percentage points.

Full Competency by nationality/country of origin, P3-7

The data show that some refugee children are far more likely to be learning than others; 65% of Somali pupils were able to read, comprehend and divide compared to fewer than 30% of pupils from Rwanda, South Sudan, Burundi, DRC and Ugandan children in the host community - who could read, comprehend and divide **(Figure 13)**.

Figure 10: Pupils (P3 - P7) with full literacy and numeracy competence by nationality

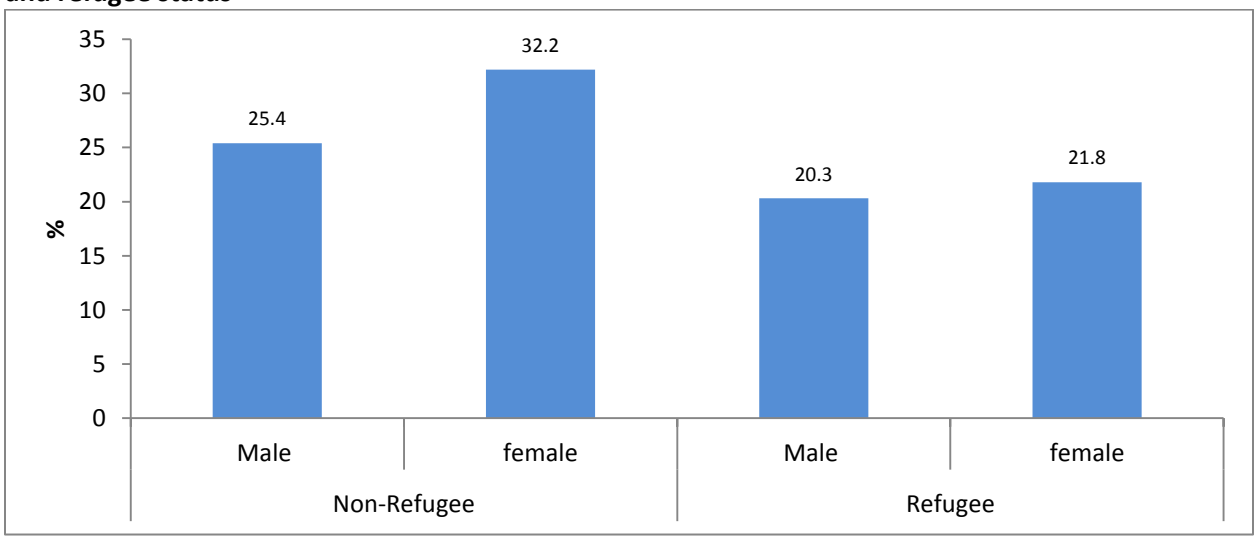


**Others include Kenya, Eritrea, Ethiopia and Sudan

Full competence by gender, school attended and refugee status of household head

In both refugee and non-refugee households children from female-headed households tend to have higher competences than their counterparts in male-headed households **(Figure 14)**.

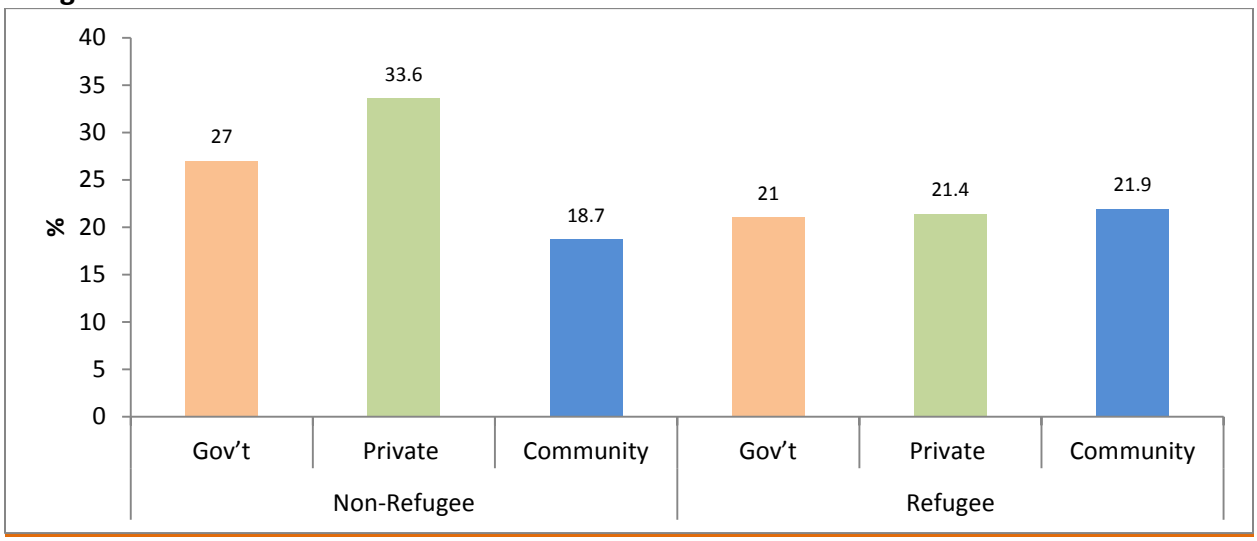
Figure 11: Pupils (P3 – P7) with full literacy and numeracy competence by gender of household head and refugee status



N=1,779

For Ugandan pupils, the percentage of competent pupils significantly differs among the three categories of schools; government-aided, private and community, with children enrolled in private schools having the advantage **(Figure 15)**. The percentage of children attaining full competence among refugee pupils did not vary much by school type, possibly because of the additional support to all schools in refugee settlements (irrespective of type) by various donor agencies.

Figure 12: Pupils (P3 – P7) with full literacy and numeracy competence by school type and refugee status



N=1856

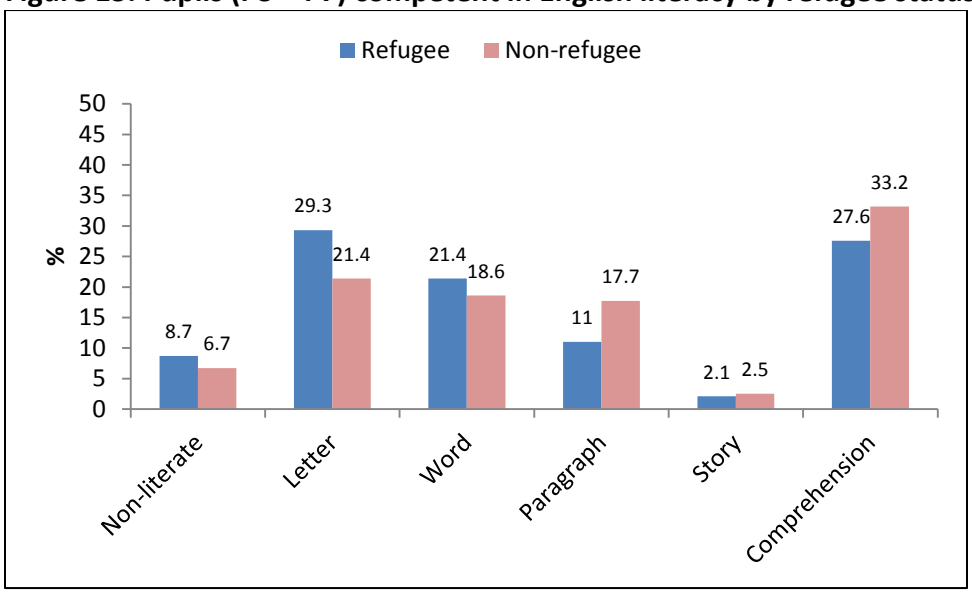
LITERACY

The English reading assessment placed children on one of five levels, ranging from 'non-reader' to being able to comprehend a short story. The tasks were given in the assumed order of difficulty, starting from the simplest (letter identification), and those unable to perform a task were placed at the previous level in the sequence and not assessed further. In addition, those who successfully read the story were asked two comprehension questions based on the content. If the child answered at least one of these questions correctly, he or she was considered to have achieved full competence in English literacy at the Primary 2 level (the 'Comprehension' category in **Figure 16**). If not, he or she was placed at the 'Story' level. Previous Uwezo Uganda assessments have used the same literacy measure.

It should be noted that due to the diversity of countries of origin and languages in refugee settlements, assessing literacy skills in English was considered the most appropriate strategy. Although Uwezo also does some assessment in local languages in the national assessment, this would not help much in refugee contexts due to the language diversity. Despite the fact that the thematic curriculum in use in P1-P3 in Uganda requires teaching around themes that are familiar to the learner and using the predominant local language as the medium of instruction (which poses a learning challenge in refugee contexts), English is taught as a subject right from P1. For purposes of comparing literacy outcomes of refugee and non-refugee children assessing literacy skills in English was considered the most appropriate. Nevertheless, recruitment of volunteers from within the settlements to do the assessment was mandatory to ensure children were assessed by individuals who spoke the same language as them.

The analysis of the findings indicates that literacy levels in English are low among refugee and host community pupils, but lowest among refugee pupils **(Figure 16).** There were more refugee children reading at the lower levels of letters and words than the higher levels of paragraphs and stories and comprehension. This was to be expected, given the language situation of refugee children described above. Overall, there were almost 3 out of 10 refugee and host community pupils achieving full competency in English literacy (27.7% and 33.2% respectively).

Figure 13: Pupils (P3 – P7) competent in English literacy by refugee status

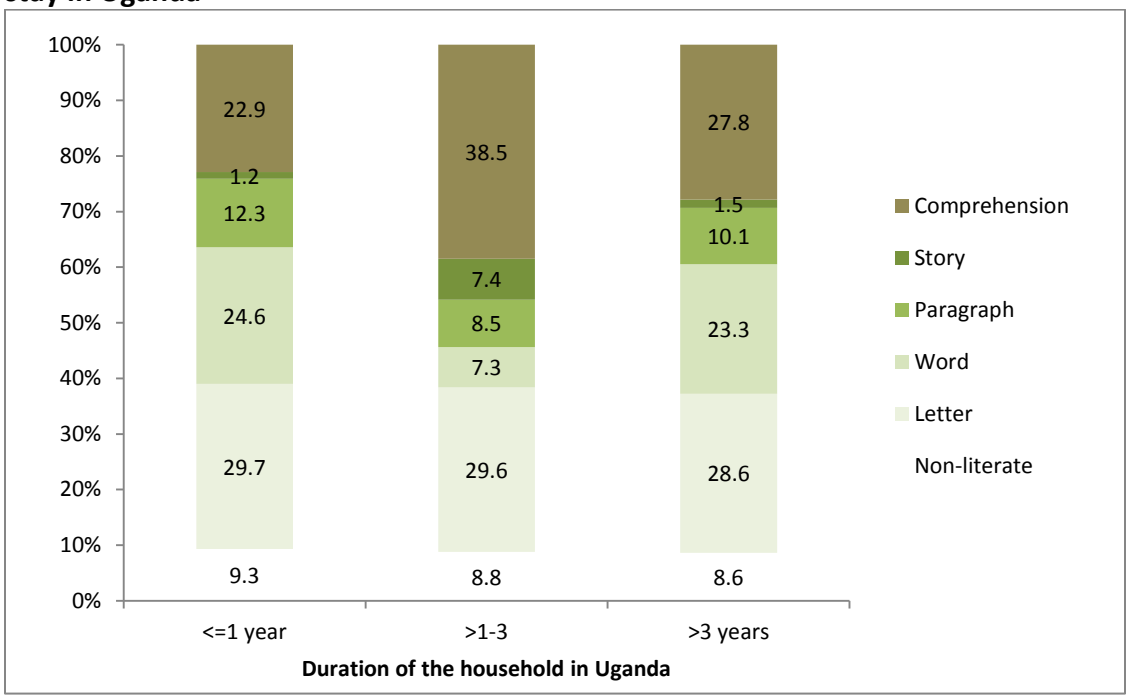


N=1856

On a positive note, the majority of the children who read up to story level were also able to comprehend what they read. **Figure 16** shows that only 2.1% of refugee and 2.5 of non-refugee children who could read the story could not comprehend it.

There were slight variations in literacy levels among refugee children based on the duration of their household's stay in Uganda. **Figure 17** below clusters reading performance in relation to whether the child's household had been in Uganda for less than a year, between 2 and 3 years or for more than 3 years.

Figure 14: Pupils (P3 – P7, refugee settlements) competent in English literacy by duration of stay in Uganda



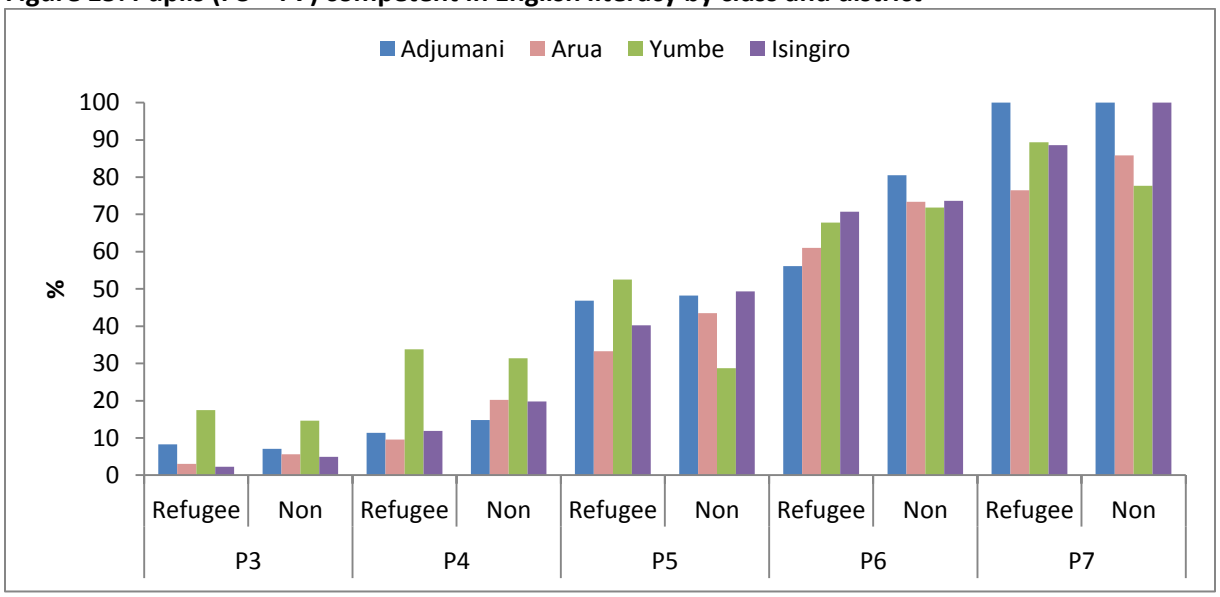
N=1,033

The findings indicate that although reading levels are low across the board, refugee children whose household had lived in Uganda for more than a year were more likely to reach the highest literacy level of reading and comprehending a P2 level story than their counterparts whose households had just settled in Uganda. These pupils are more likely to feel more settled and to have had more exposure to English in and out of school than the new entrants. Beyond three years, the refugee children's learning outcomes decline.

Literacy competence of refugee and Ugandan pupils by class and district

The analysis reveals that refugee children are as likely to be competent in literacy as their counterparts in host communities. **Figure 18** indicates that all pupils are developing the intended reading skills relatively late. It is only by P6 that more than half can read and understand a short P2 level story in English.

Figure 15: Pupils (P3 – P7) competent in English literacy by class and district



N=1,856

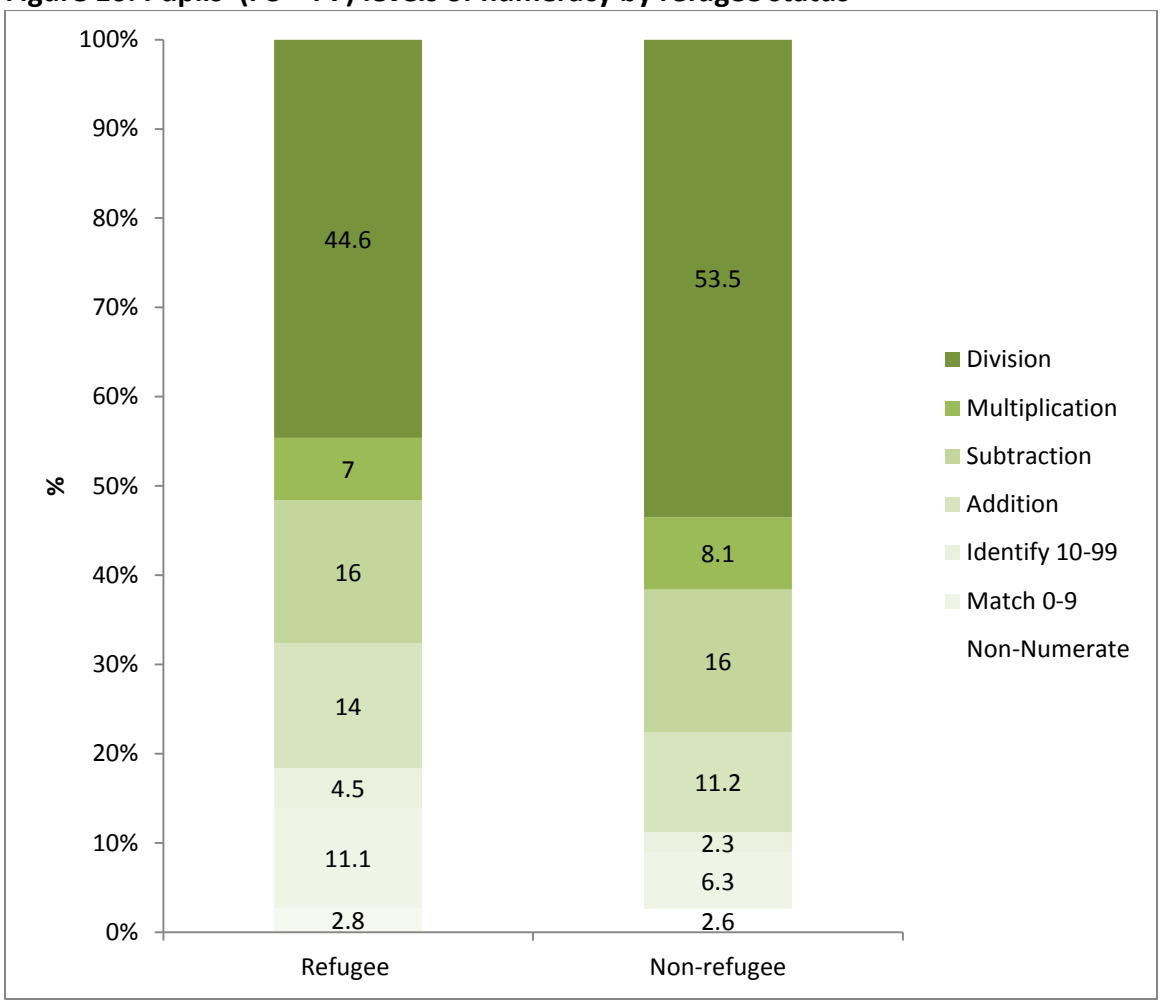
There are variations among districts: more children in P3 in Yumbe could read and comprehend than other districts and all P7 children in Adjumani, inside and outside settlements, could read and comprehend a P2 story. To some extent these differences may reflect the varied language situations in the classroom(see British Council, forthcoming). Also, Arua seems to perform consistently poorly in relative terms. As explained earlier, this could be due to the variation in school quality indicators such as pupil-teacher and pupil-classroom ratios as well as presence or absence of private schools.

NUMERACY

The numeracy tool assessed children on number recognition and in the four basic arithmetic operations (addition, subtraction, multiplication and division). A complete numeracy tool can be accessed at https://www.twaweza.org/go/refugee-uwezo-assessment-2017 . As was the case with literacy, the numeracy tasks were given in the assumed order of difficulty, again starting with the simplest level (number recognition), and those unable to perform a task were placed at the previous level in the sequence and not assessed further. Therefore, those who were assessed on 'division' had already performed the addition, subtraction and multiplication tasks successfully. Successful performance in division was treated as the indicator of full numeracy competency.

The findings in **Figure 19** indicate that about 50% of refugee and non-refugee children had acquired full numeracy competence. This contrasts starkly with the percentage of those who had acquired the basic literacy competences (about30%). The data further show that the levels of numeracy are distributed in a similar manner for refugee and non-refugee pupils.

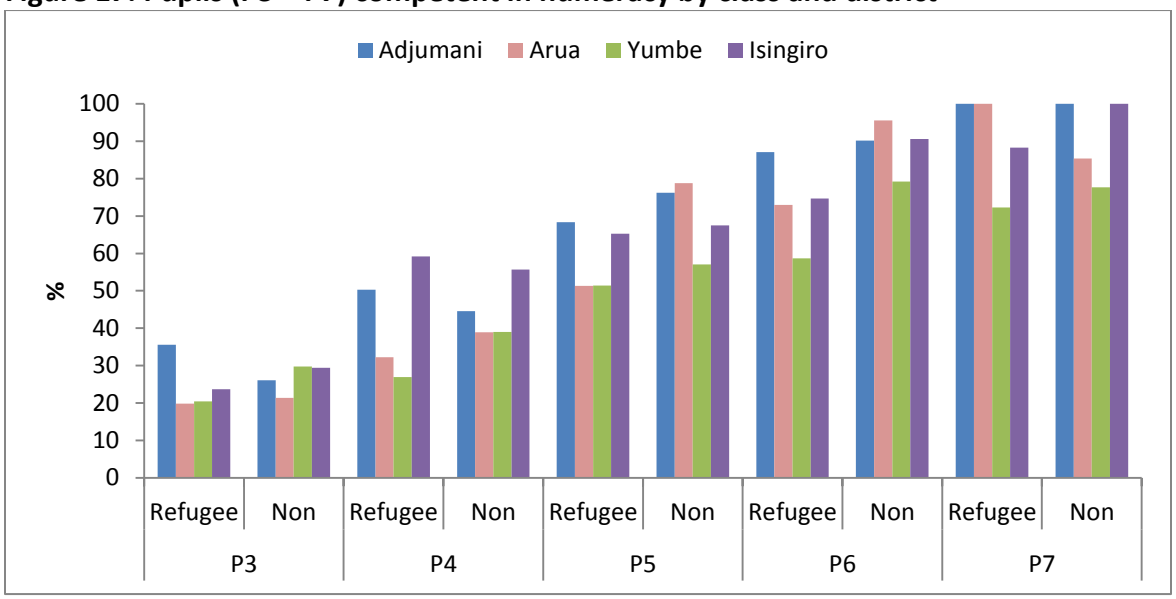
Figure 16: Pupils' (P3 – P7) levels of numeracy by refugee status



N=1856

Even when compared across districts and classes **(Figure 20)**, the data show that refugee pupils are as likely to be competent as Ugandan pupils in numeracy. In some cases there are more refugee than non-refugee pupils reaching the highest numeracy level (division), e.g. in Adjumani District at P3 and in Arua District at P7. However, numeracy achievement is relatively poor in Yumbe District, especially for refugee pupils.

Figure 17: Pupils (P3 – P7) competent in numeracy by class and district



N=1856

PART III. HOUSEHOLD AND SCHOOL CONDITIONS

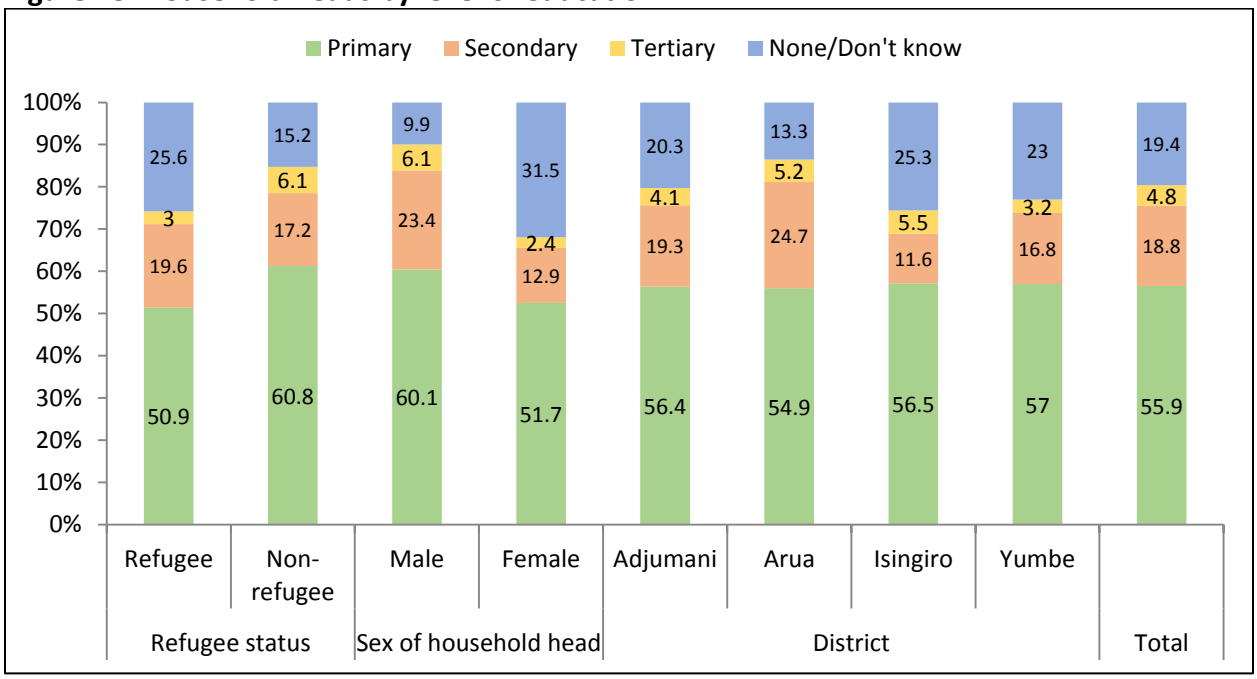
HOUSEHOLD FACTORS

Previous analysis of household characteristics such as building utilities and water and food quality shows that the relationships between these household characteristics and learning outcomes are potentially important (Uwezo 2016: 24). The large-scale survey that we conducted in 2015 in 112 districts in Uganda supported the assumption that learning outcomes, both for English reading and for numeracy, are moderately affected by socioeconomic status, of which household characteristics such as those discussed below are one aspect. We shall consider various factors that affect refugee and non-refugee households differently, though not all of these are negative for the refugees.

Education: refugee children are more likely to come from homes with less educated household heads

Education is a key tool for development and previous research indicates that the there is a strong relationship between parents' level of education and children's educational achievement. Overall, the study revealed that about two in every ten surveyed household heads had no formal education. More refugee (25.6%) than non-refugee (15.2%) household heads had no formal education at all. More than half of the respondents (among refugees and host community members) had completed primary education **(Figure 21).**

Figure 18: Household heads by level of education

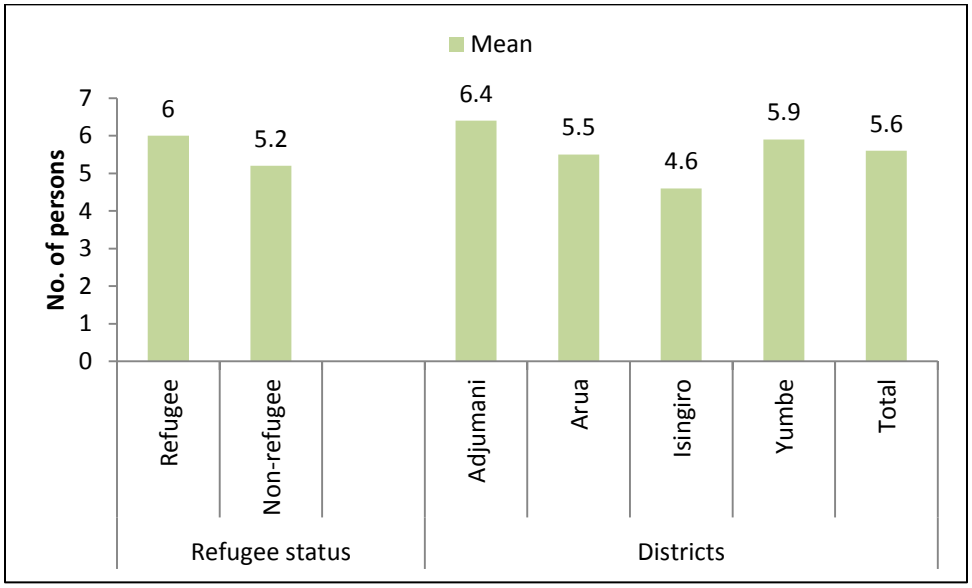


N=1,993. (Although 2,186 households were surveyed, in 1,993 households the actual household heads were the main respondents. In 193 cases, those interviewed were a spouse or other adult left in-charge.)

Household size: refugee households are relatively large

On average, there were more than five persons per household. Refugee households had six persons per household on average **(Figure 22)**. Adjumani district had the highest number of persons per household, and Isingiro had the lowest. Household size is an important demographic attribute that defines a family socioeconomic structure and could relate to learning. Household size may determine how much individual attention parents can give children to support their education, limit the number of children educated due to financial pressures, and affect the number of household tasks children are required to perform. The Uwezo East Africa report, which compared learning outcomes across Uganda, Kenya and Tanzania for the 2011-2015 assessments noted that the larger the household size the lower the chances of children reaching the highest literacy and numeracy levels in the three countries (Uwezo 2017:24).

Figure 19: Mean household size by refugee status and by district

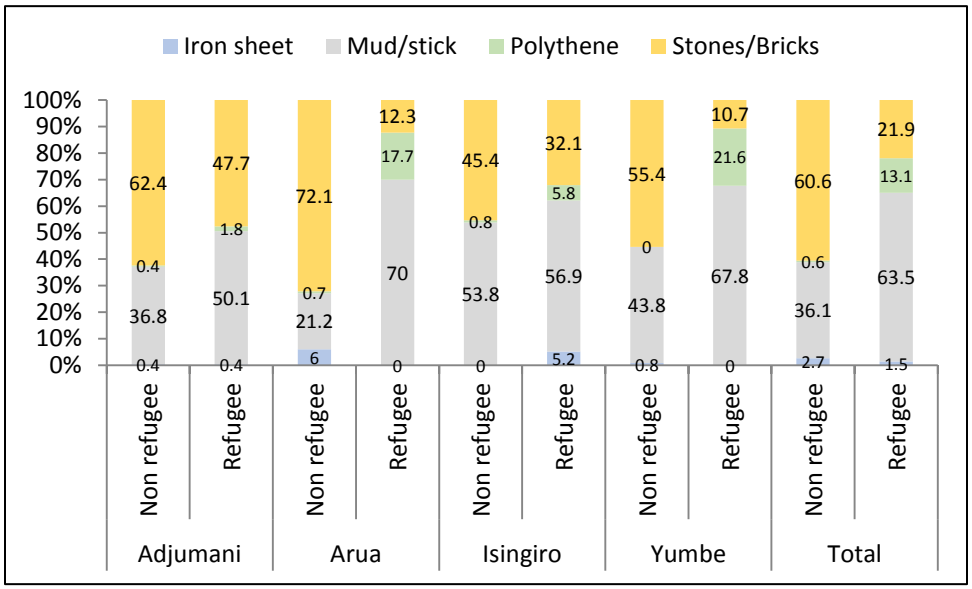


N= 2,186

House quality: refugees are more vulnerable

The survey results indicate that refugees live in houses with poorer conditions than non-refugees in host communities do. Almost 77% of the refugees in the four surveyed districts live in temporary structures made of either mud/stick or polythene **(Figure 23)**. These are typical of the temporary shelters used in emergency contexts. The majority of non-refugees (about 61%) live in stone/brick houses, which are permanent and all-weather houses.

Figure 20: Type of walls of main house by refugee status



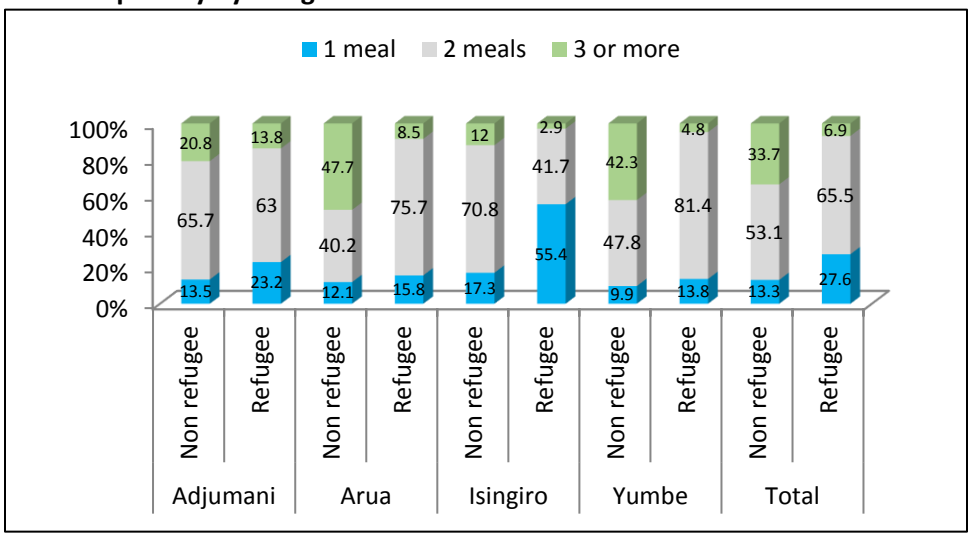
N=2018

Housing conditions in host communities also varied across districts. Citizens in Arua appear better off: 72% live in stone or brick houses. However, housing quality for the refugees in Arua and Yumbe leave them the most vulnerable.

Meals: Refugees are more likely to have two meals or fewer a day

The majority of the refugees in the four districts eat one or two meals per day **(Figure 24).** In all the districts surveyed, only 7% of refugees compared to 34% of the non-refugees eat three or more meals. In Arua, just 9% of the refugees (compared to 48% of non-refugees) eat three or more meals per day. In Isingiro, the refugees are most vulnerable: only 3% eat three or more meals and 55% of them eat only one meal per day.

Figure 21: Meals per day by refugee status and district

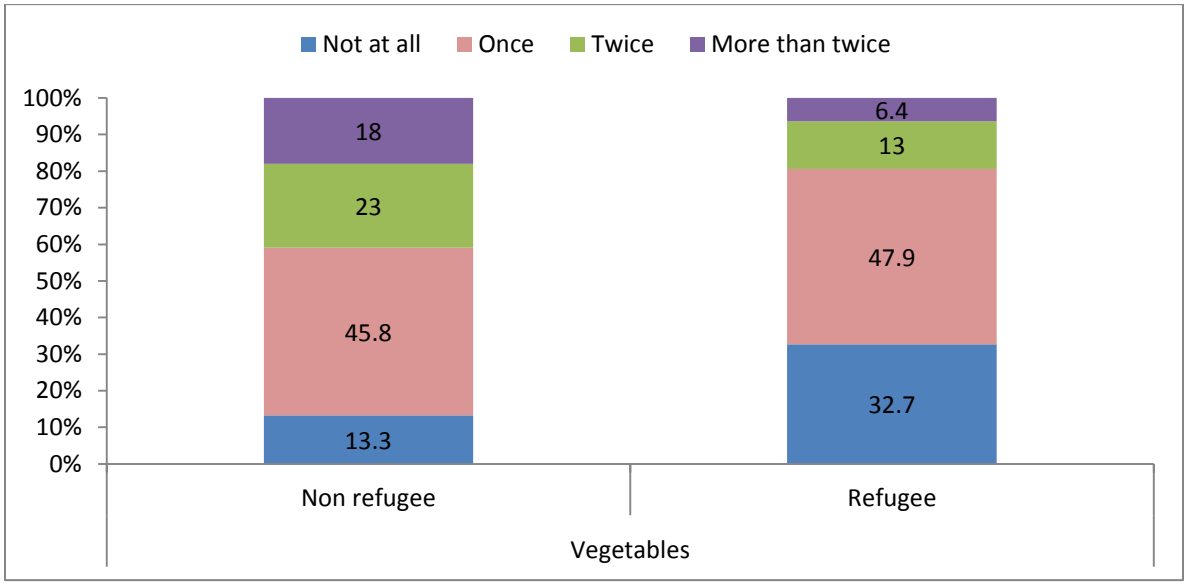


N=2,032

Nutrition: refugees consume less vegetables

Vegetables are an important part in any diet, without which the person is prone to nutrition-related diseases. More than twice refugees (33%), compared to 13% of non-refugees , had no vegetables in their diet all (**Figure 25**).

Figure 22: Number of times vegetables are eaten in the household per day, by refugee status

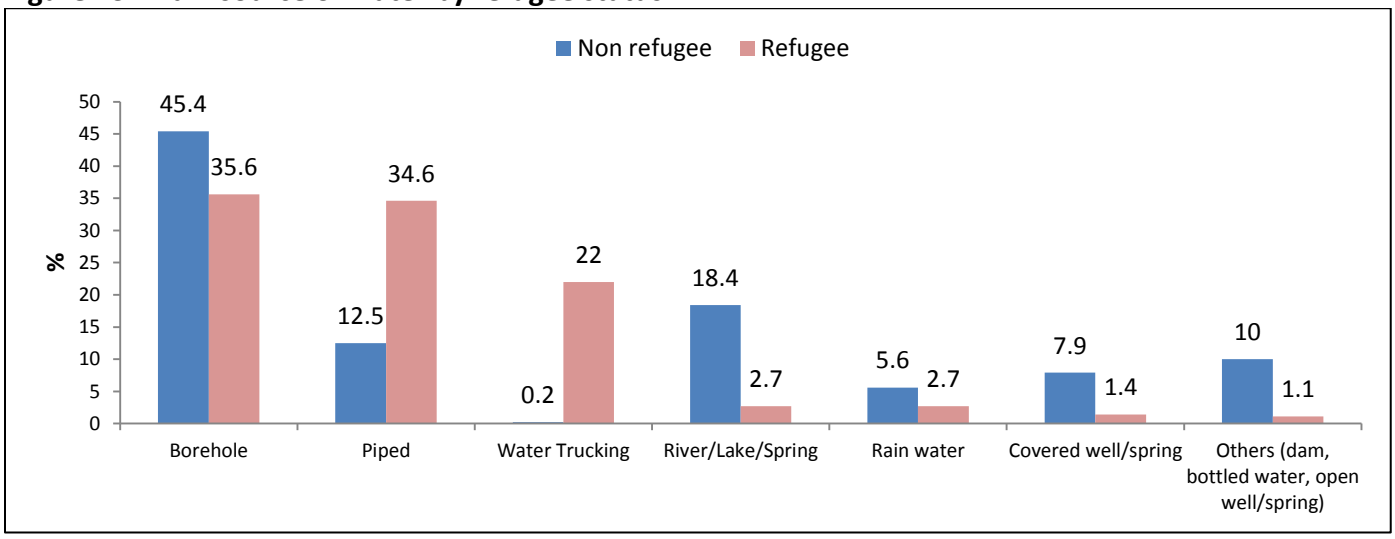


N=2,028

Water: refugees have better access to improved sources than host communities

The survey results on the main source of water for the household reveal that 45% of non-refugees and 36% of refugees use boreholes as their main source of water. Most likely due to the various interventions in refugee settlements, more refugees (35%) access piped water than non-refugees (13%) did. More refugees use water trucks (22%) compared to non-refugees (0.2%) and more non-refugees (18%) make use of a river/lake/spring compared to their refugee counterparts (3%) (**Figure 26**).

Figure 23: Main source of water by refugee status



N=2,066

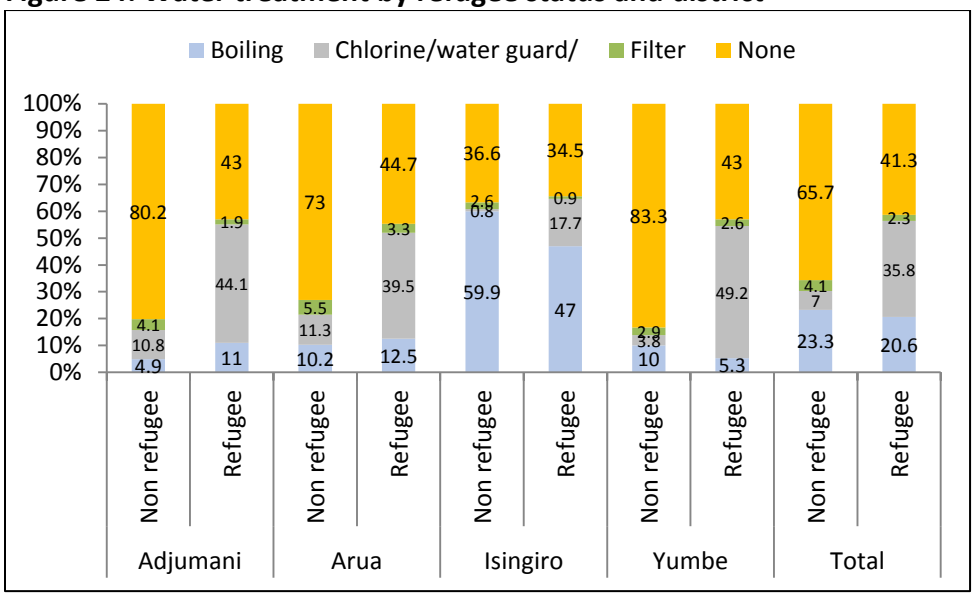
Further analysis indicates that there are variations in access to improved water sources for refugees across districts. Adjumani and Yumbe residents are more likely to use boreholes than residents of other districts, whereas piped water is more accessible for reufgees in Isingiro than in other districts.

Refugee households are more likely to treat water for safe drinking

The study further obtained information from respondents on how water was made safe for drinking (**Figure 27**), and the results reveal that 66% of those in host communities and 41% of refugee respondents do not do anything to make water safe. Other respondents seem to adopt several methods and the responses varied across districts. For instance, whereas the majority of refugees in Yumbe use chlorine / Water Guard (49%), around the same proportion (47%) in Isingiro district boil their water. Most non-refugee households in Adjumani (80%) and Yumbe (83%) do not treat their water while most refugees in the same districts boil their water. This could be attributed to the fact that health, water, sanitation and hygiene matters are emphasised by the agencies managing settlements and are highly important in emergency contexts due to the concentration of households.

Although methods may vary, overall refugee households are much less likely not to treat their water at all. In Isingiro, however, similar numbers of refugees and non-refugees do not treat their water at all.

Figure 24: Water treatment by refugee status and district

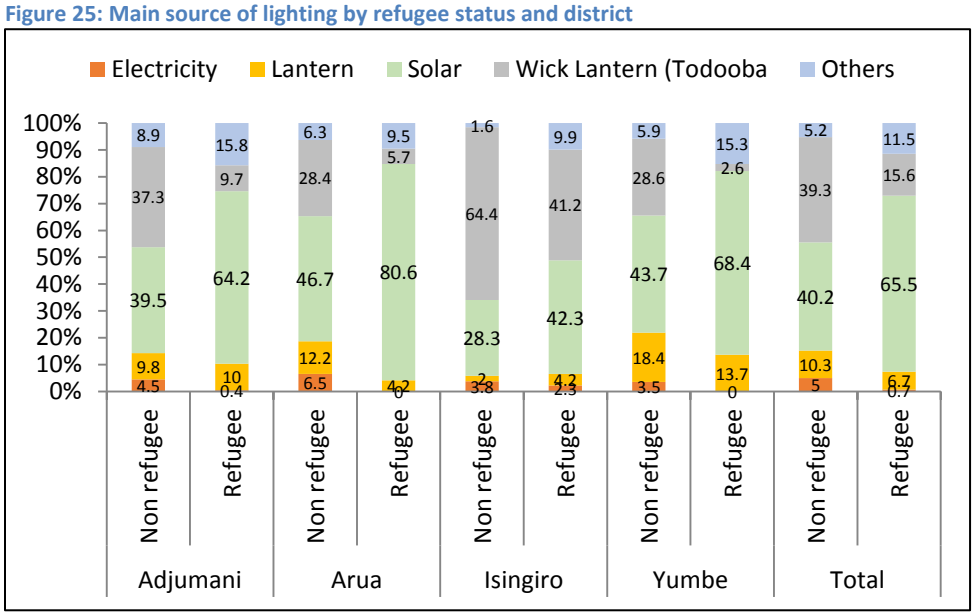


N=2,013

Lighting: refugees are more likely to use clean and sustainable sources of energy

Solar energy is used most as the main source of lighting among households inside (65.5%) and outside (40%) of settlements (**Figure 28**). The second most used source of lighting are wick lanterns. Solar energy is cleaner, cheaper and more sustainable than wick lanterns, which use paraffin. It can therefore be argued that in terms of lighting refugees have the advantage, mainly because of the emergency relief items they receive through UNHCR, World Food Programme and other partners.

Figure 25: Main source of lighting by refugee status and district

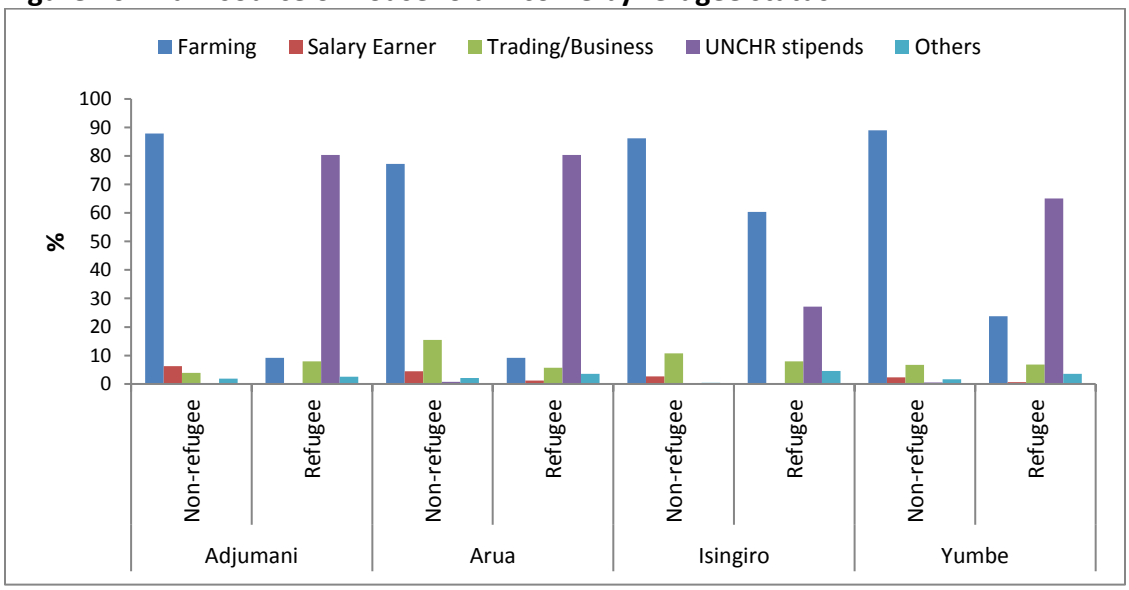


N=2,018

Household economics: farming and stipends

Refugees and host community households differ sharply (as may be expected) in terms of their main source of income: most refugees depend on stipends from UNHCR while most host community members are farmers **(Figure 29).** However, there is some fruit from the Government of Uganda's emphasis on refugees being allowed to be mobile, cultivate land and work in creating greater self-sufficiency among refugee populations, as approximately one in four refugee households depend on farming as their main source of income. There are more farming refugees in Isingiro and Yumbe compared to Adjumani and Arua.

Figure 26: Main source of household income by refugee status



N=1,955

The findings presented above on household factors show considerable success from the efforts to provide safe water and sources of energy in the refugee settlements. The main areas of concern for refugee households are the low level of education of many household heads and the inadequate level of nutrition of many families. It is well known that all these conditions can adversely affect children's learning and the Uwezo report of 2016 provided some further evidence.

SCHOOL FACTORS

While the main focus of the pilot is on children's learning levels, data were collected to provide an overview of the conditions in primary schools that children typically attend, inside and outside the refugee settlements. The purpose is to provide an independent review of the resources available in these schools, in order to give a fuller account of the circumstances surrounding children's learning in emergency contexts.

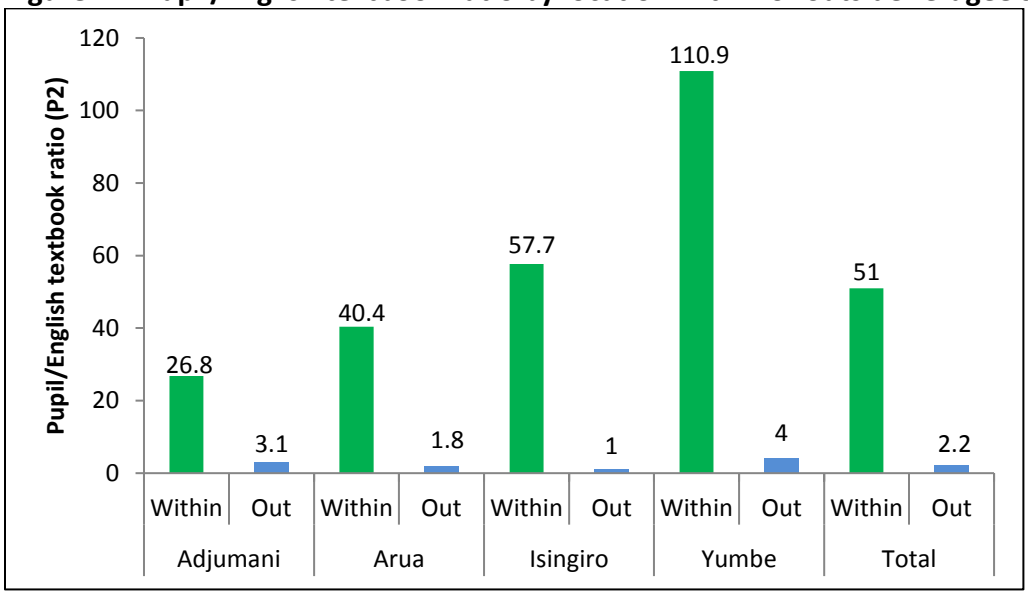
In every enumeration area (EA) selected for the household survey, information was obtained on the primary school serving the largest number of pupils in the area, irrespective of ownership (103 schools were surveyed in total). With the help of the head teacher or his/her representative, a record was compiled of the school's ownership, enrolment by grade and gender, numbers of teaching and non-teaching staff, academic support services, provisions for health and safety, and physical facilities of all

kinds. Furthermore, a head count was done in all classes/streams to monitor pupil and teacher attendance. In addition, a sample Primary 2 classroom was observed and a record was made of the learning resources and facilities in the classroom.

Pupil-textbook ratio: textbooks offer opportunities to learn more, better

The pupil-textbook ratio (English textbooks) was estimated for Primary 2 classrooms. Generally, Primary 2 pupils in settlements have fewer textbooks **(Figure 30)**. On average, for the four districts, the pupil-textbook ratio was 51:1 within refugee settlements, and about 2:1 outside the settlements. Within refugee settlements, the ratio ranged from 27 to 111 pupils per textbook compared to a range of between one and four pupils sharing a book in schools outside refugee settlements. The scarcity of textbooks is worst in Yumbe, where there is one textbook available per 111 pupils inside the settlements. This could be attributed to the large number of private and community schools in the district. Distribution of textbooks by Ministry of Education and Sports gives priority to government-aided schools.

Figure 27: Pupil/English textbook ratio by location within or outside refugee settlements



N=103

The challenge of inadequate textbook supply is well known in Uganda (Wane and Martin 2013; Uwezo 2015) despite a number of recent textbook interventions such as the one championed by the MoES/USAID School Health and Reading Programme (SHRP). The current evidence shows that the challenge is more acute in emergency refugee contexts. The task of ensuring adequate supplies of textbooks and tracking their use in refugee contexts deserves particular attention if we are to provide good quality education to the thousands of refugee children enrolled in Ugandan schools. Research shows textbook availability as a predictor of learning outcomes (Hungi 2011a, 16-17). How textbooks are utilized to support learning is however the most critical aspect. Despite the large gap between refugee and non-refugee schools in terms of pupil-textbook ratio, the learning outcomes are quite similar across the two groups.

Tools for learning: libraries, electricity and space for play are essential for environments that are more conducive to learning

The adequacy of school facilities and the quality of services provided are part of a good learning environment that contributes to better academic achievement and skills development. This pilot survey considered availability of library services, electricity, and playing fields, the presence of a school fence, and useable classrooms as some of the basic school facilities/services. Other facilities and services surveyed related to water, health and hygiene.

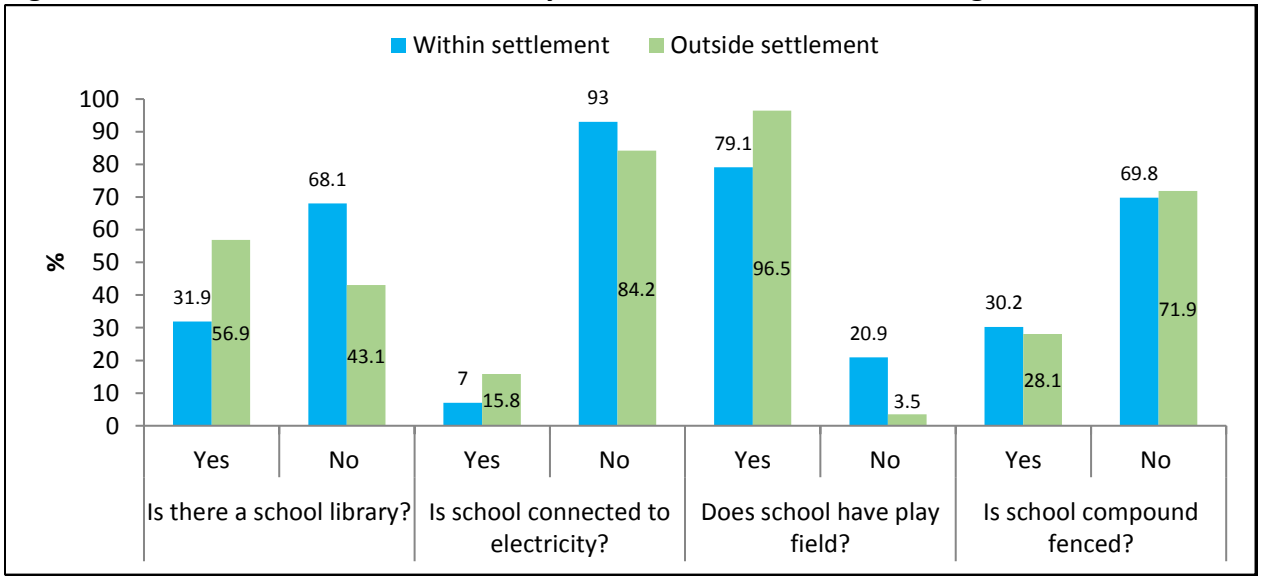
Six out of ten schools in host communities have a library (57%) compared to three out of ten schools (32%) in refugee settlements (**Figure 31**). Libraries benefit teachers as well as pupils.

Over 90% of schools within refugee settlements are not connected to electricity. This situation is almost the same in schools outside the settlements, where 84% have no electricity. Electricity is important for lighting, facilitates the use of ICT in teaching and learning and is an important socioeconomic indicator for schools.

Almost all schools outside refugee settlements have playgrounds, compared to 21% of schools within settlements that do not have this facility. Playing fields are important in supporting children's physical welfare. Their absence in schools may also limit pupils who would like to explore alternative skills and talents through games.

Schools in settlements and outside are insecure: approximately 7 out of 10 are not fenced. Pupils in these schools are vulnerable to insecurity or may escape from school without notice by teachers. Furthermore, as we noted in the sixth Uwezo report, the lack of fencing could lead to encroachment on school land by farmers and by livestock and (in urban areas especially) to theft (Uwezo 2016: 31). Children thrive in secure environments**.**

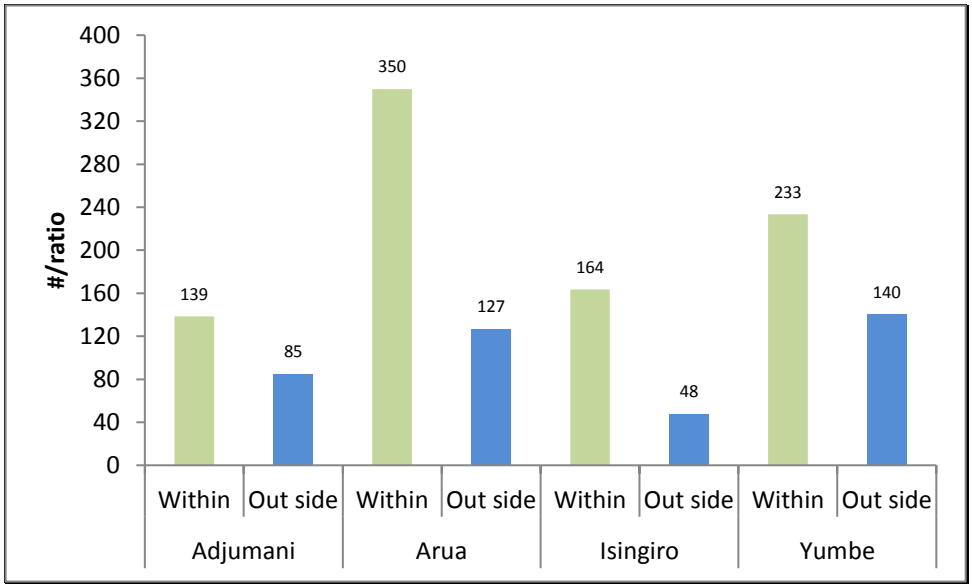
Figure 28: School facilities and services by location within or outside refugee settlements



N=103

Furthermore, Uwezo volunteers were asked to observe and enumerate the number of 'safe and usable' classrooms in every surveyed school to enable us estimate the pupil-classroom ratio. **Figure 32** shows that the shortage of classrooms is a serious problem in refugee contexts.

Figure 29: Pupil to classroom ratio by location, within or outside refugee settlements



N=103

Although teachers in Uganda have been encouraged to adapt to large classes, and some make good efforts to do so (Nakabugo et al 2008), extreme shortages of teachers and classrooms necessarily reduce learning opportunities. Classroom shortages are present in all four surveyed districts but worst in schools inside refugee settlements. On average, the pupil-classroom ratio within refugee settlements is 221:1 compared to 100:1 outside refugee settlements. The refugee settlements in Arua and Yumbe have the most pupils per classroom but the difference between refugee settlements and host communities is starkest in Isingiro.

Health and hygiene services: ensuring pupils' well-being

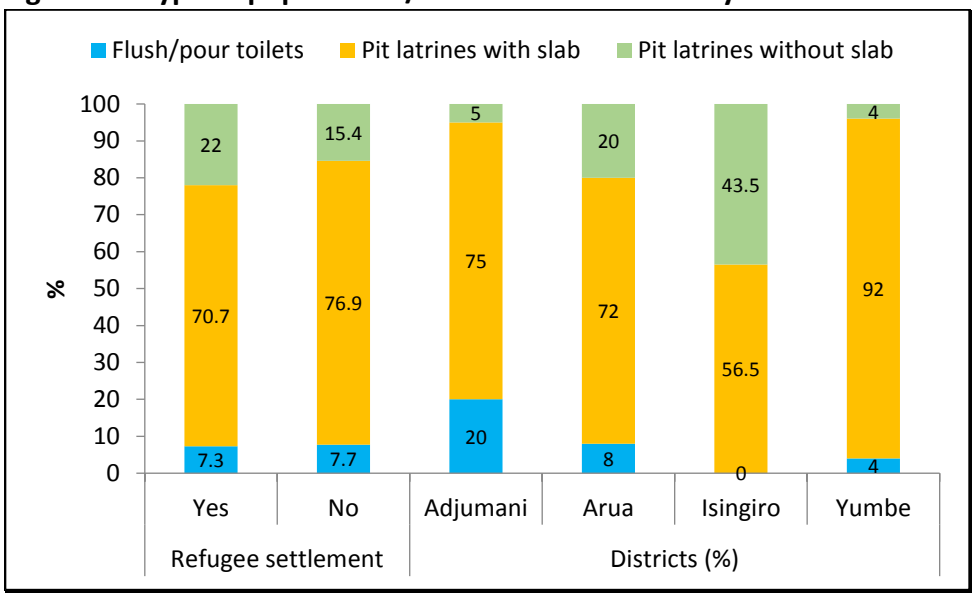
The survey also sought evidence on the extent to which primary schools in and outside refugee settlements support children's welfare in terms of water supply, health, sanitation and hygiene (WASH). The following sections provide data related to proportions of schools inside and outside of refugee settlements with basic WASH facilities.

Uwezo volunteers were asked to observe the number of 'safe and usable' toilets for pupils [and staff] in the schools, inside and outside refugee settlements **(Figure 33)**. The survey also recorded whether there was a toilet within the school accessible to people with limited mobility (**Figure 34**)**.** Without good sanitation or sanitary practices at school, children are vulnerable to diseases and poor health.

Despite the fact that most refugees have access to basic latrine facilities, 22% of schools within settlements and 15% outside the settlement are using latrines without slabs. Across the four districts, use

of pit latrines without a slab is most common in Isingiro (43.5%) and Arua (20%). This increases the risks of disease in the schools concerned.

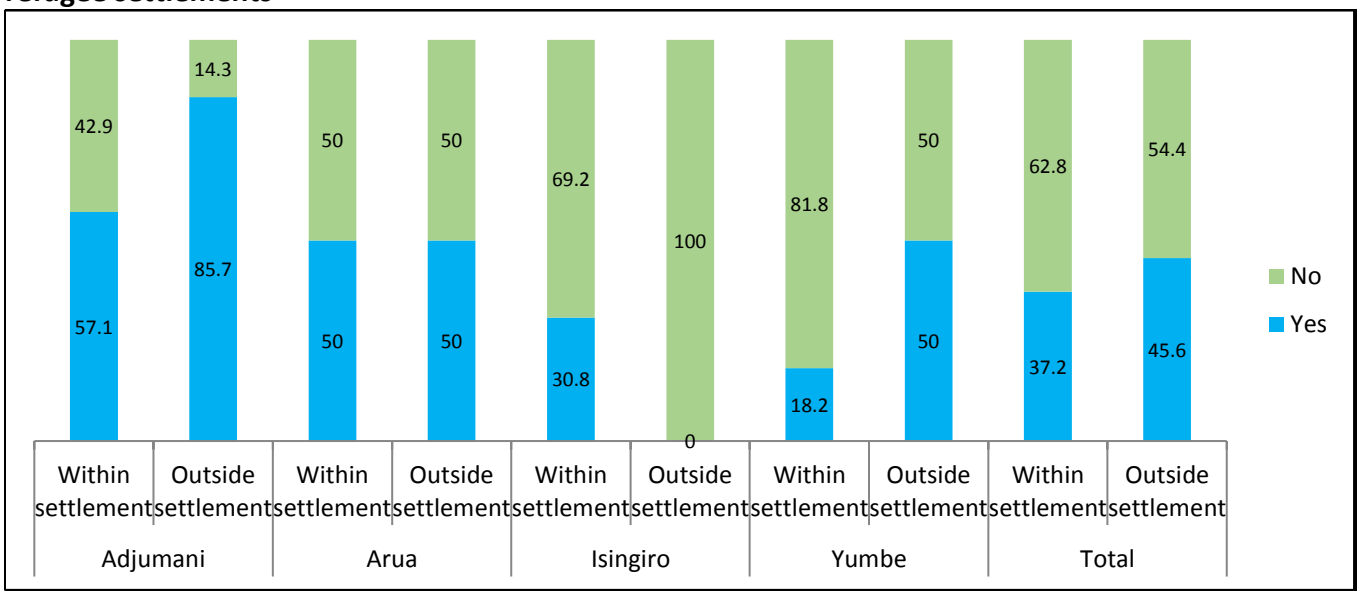
Figure 30: Type of pupil toilets/latrines in the school by location and district



N=103

The survey further investigated whether there was at least one toilet in the school that was accessible to people with limited mobility / those with physical disabilities. People with disabilities need user-friendly latrines, generally equipped with a ramp and or/rails, among other support accessories. Overall, the coverage of schools with at least one accessible latrine is less than 50%, within and outside refugee settlements (**Figure 34**). Schools inside refugee settlements are most affected except in Isingiro where there was no surveyed school outside the settlements with a toilet for people with limited mobility. Catering for the needs of people with disability is not only a fundamental human right, but also necessary to ensure inclusive education.

Figure 31: Percentage of accessible toilets by district and by location within or outside refugee settlements



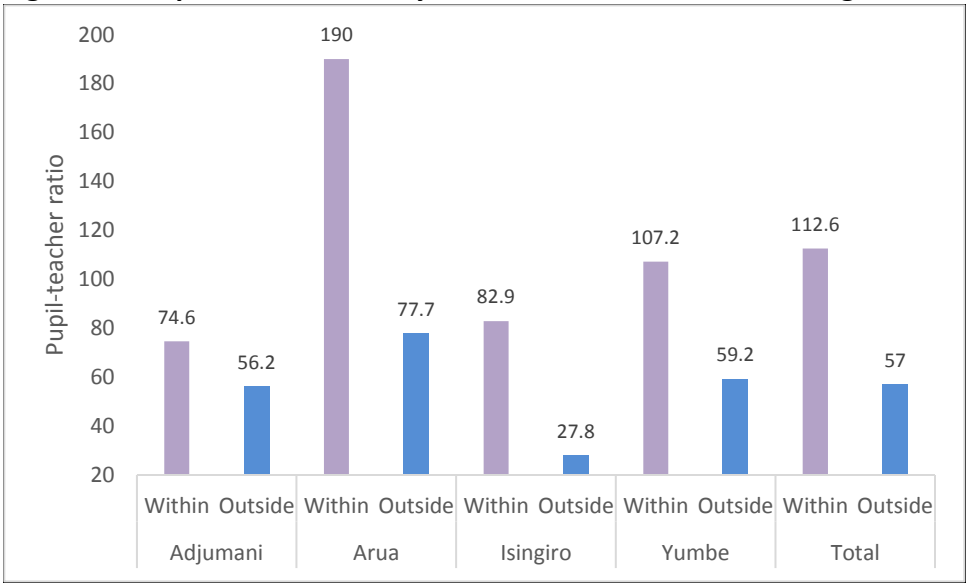
N=103

Teachers: the centre of learning

Three important indicators of teaching quality i.e. the school's pupil-teacher ratio, proportion of trained teachers and teacher attendance are considered in this report.

The first point to note is that schools in refugee settlements have larger pupil-teacher ratios than schools outside refugee settlements (**Figure 35**). Refugee schools in Arua district had the highest pupil to teacher ratio, followed by Yumbe, Isingiro and then Adjumani. Within refugee settlements, on average one teacher attends to 113 pupils compared to 57 pupils per teacher outside the settlements.

Figure 32: Pupil-teacher ratio by location within or outside refugee settlements

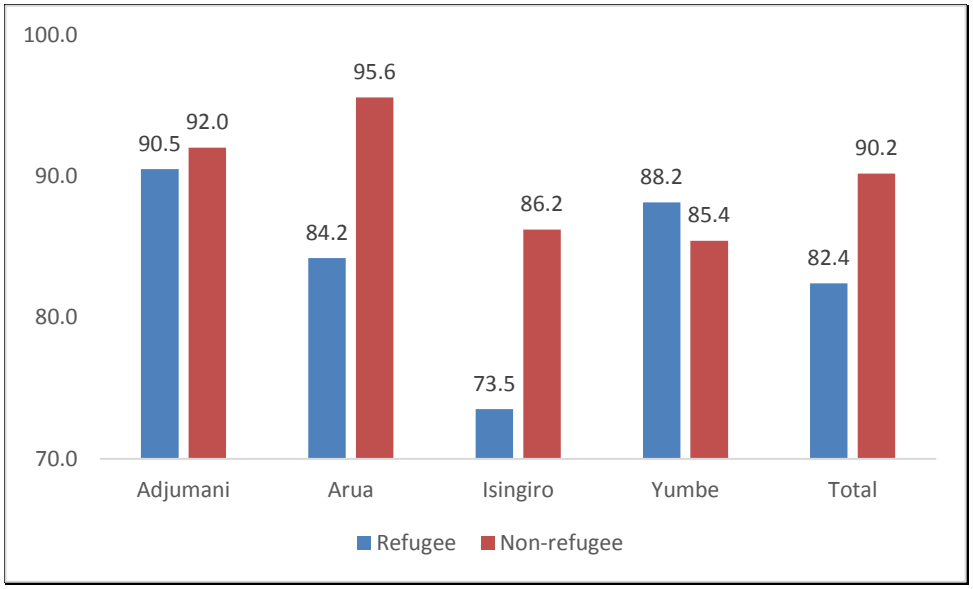


N=103

The recorded pupil-teacher ratios above are way beyond the government of Uganda's target of at most 40:1, and ideal international standards of up to 25:1. In addition, as the recent *National Service Delivery Survey* shows, class sizes tend to be much larger in the lower primary grades than in the upper grades (MoPS 2015, p30). This is a potential factor in delayed learning: teachers struggle to pay individual attention to the pupils who need learning support. This is more critical in refugee contexts where refugee children are likely to face a number of psychosocial challenges requiring individualised attention from teachers.

With regard to the proportion of trained teachers, the survey recorded that there were 1,958 teachers in total in the four surveyed districts, out of which 1,608 were trained teachers spread across schools within and outside refugee settlements. **Figure 36** indicates that there was a slightly higher percentage of trained teachers outside refugee settlements than inside refugee settlements. It is expected that trained teachers possess better skills of facilitating teaching and learning than non-trained teachers.

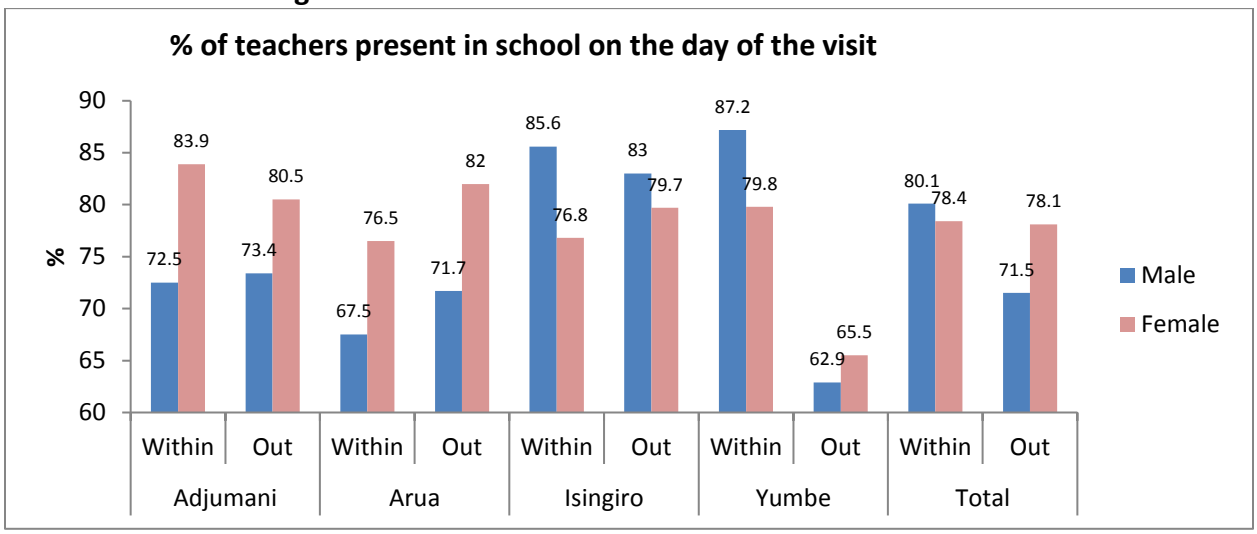
Figure 33: Trained teachers by location and district (within and outside refugee settlements)



N=1,958

Teacher attendance and absenteeism has been noted in previous research as a potentially important influence on learning (see Uwezo 2015, 32-33). The proportion of teachers who were present on the day of the research visit was taken as an estimate of daily teacher attendance. Overall, about 8 out of 10 teachers were present in school, implying that 2 out of 10 teachers are absent from school every day. These figures are similar to the 2013 Service Delivery Indicators study which found that 1 in 4 (24 percent) teachers were not in school on the day of the survey (World Bank, 2013, 6). **Figure 37** indicates that teacher attendance is better in schools within refugee settlements (at 79%) than in schools outside refugee settlements (75%). Teacher absenteeism is most acute in Yumbe district in schools outside refugee settlements, at 64% on average implying that about 4 out of 10 teachers are absent from school each day.

Figure 34: % of Teachers present in school on the day of the visit by district and by location within or outside refugee settlements



N=103

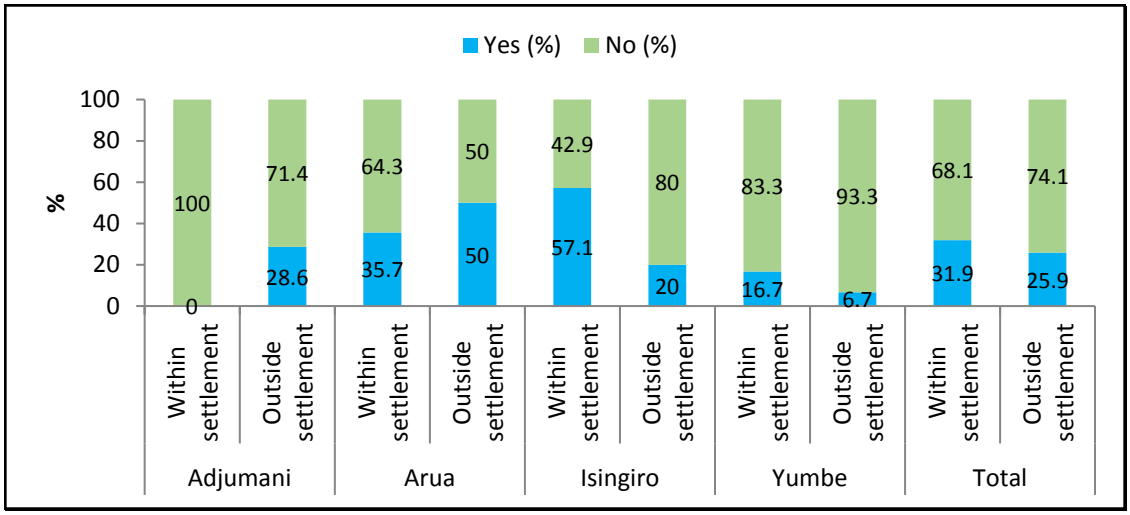
As there are considerable differences between districts, and between locations, in teacher presence overall, it may be worthwhile, in future assessments, to look more closely at the relationship between teacher presence and learning outcomes. Arua District, for example, has relatively low indicators for both.

With regard to gender, female teachers are more present at school than male teachers in Adjumani and Arua districts, both within and outside refugee settlements. In Isingiro and Yumbe districts, it is the contrary – male teachers are more present at school than females. Female teachers are more present at school than their male counterparts in schools outside refugee settlements.

School feeding programmes

In Adjumani, there was no school within refugee settlements with a school feeding programme. It should be noted that school feeding programmes are not catered for by government and therefore are more likely in areas receiving food aid, such as emergency contexts where World Food Programme (WFP) assistance is common. This could explain why on average, there were more schools in refugee settlements (32%) with a school feeding programme than in schools outside refugee settlements (26%) (**Figure 38**).

Figure 35: School-feeding programmes by location and district



N=103

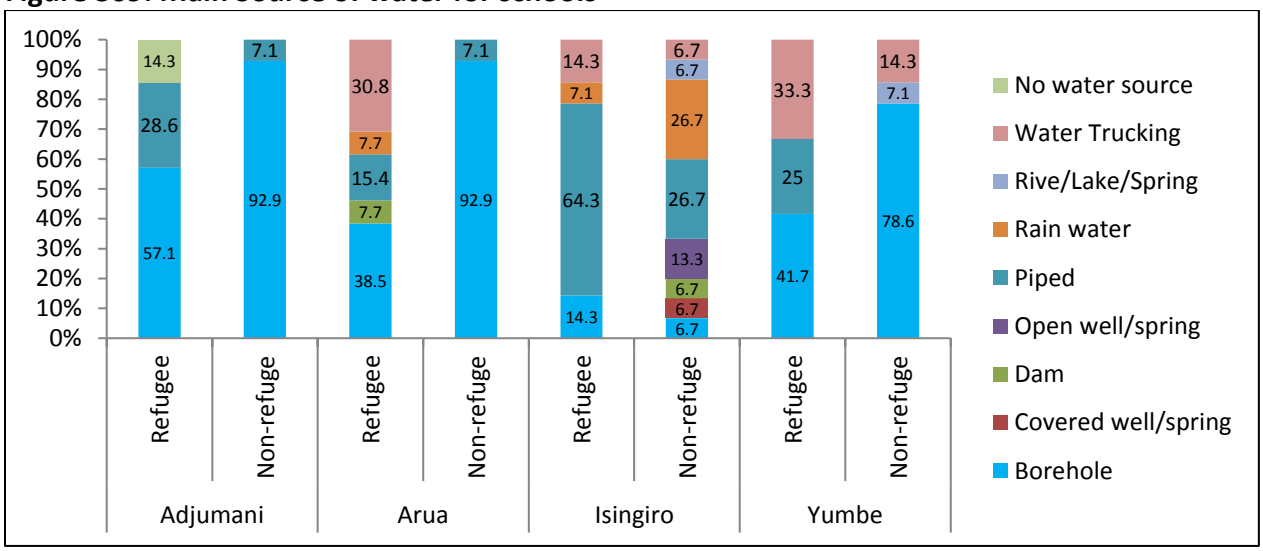
Arua is the only district in which more schools in host communities provide meals at school. Overall, the proportion of schools with feeding programmes is low; possibly, because they are not funded by government grants to schools and it is necessary for parents or service providers to organise such programmes themselves. Lack of a school feeding programme contributes to factors that hamper learning, such as low pupil attendance. Hunger and food shortages were among the reasons given for pupil absence from school during the sixth Uwezo learning assessment conducted in 2015 (Uwezo 2016, 32).

Water sources, seasonality and quality

Schools in the four surveyed districts access water from multiple sources. The most common water sources for schools in refugee settlements are boreholes and piped water (**Figure 39**). Water trucks are also a common source for refugee schools in Arua and Yumbe districts. With the exception of Isingiro District, where schools outside refugee settlements use a variety of water sources (the main ones being piped and rainwater), boreholes are the main sources of water for schools outside refugee settlements.

One out of ten refugee schools (14%) in Adjumani indicated that they did not have any water source, a situation that poses a health challenge to the school community. Elsewhere, as with household supply, trucking was a more common source in refugee settlements than elsewhere.

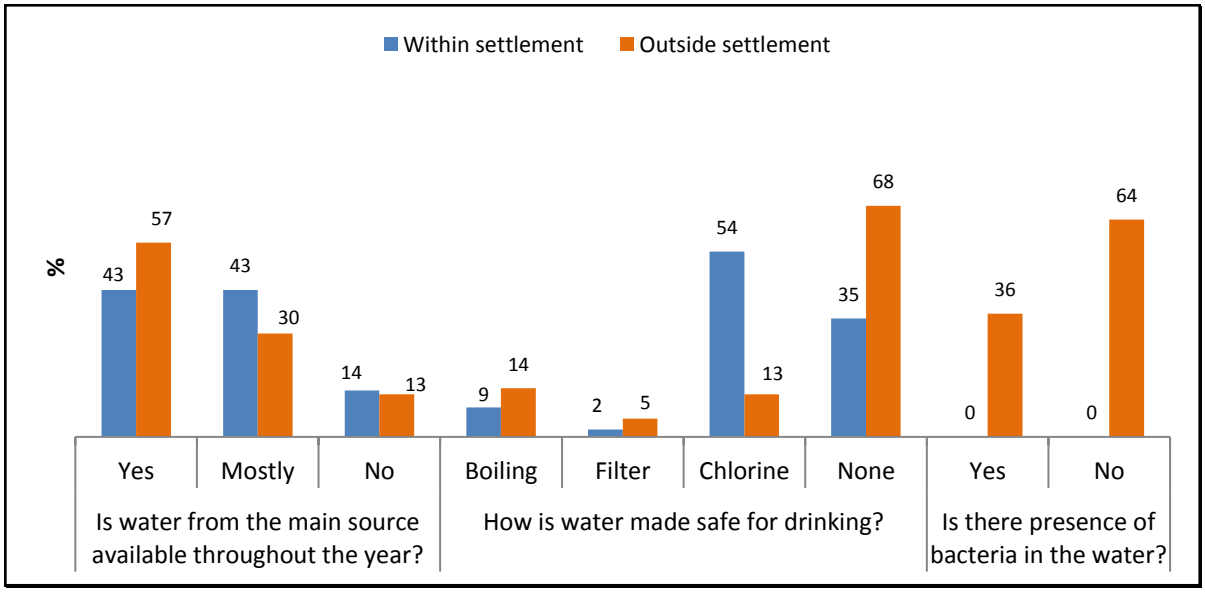
Figure 369: Main Source of water for schools



N=103

In terms of seasonality (**Figure 40**), water in the schools within and outside settlements is available most of the year, save for about 14% of schools in refugee settlements and 13% of schools in host communities.

Figure 37: Seasonality and safety of water in schools by location



N=103

Schools in refugee settlements are twice as likely to treat their water (65%) than schools in host communities (32%). By implication, there is a health risk to children in government schools in these four districts. A water quality test done on the main drinking water source in schools outside refugee

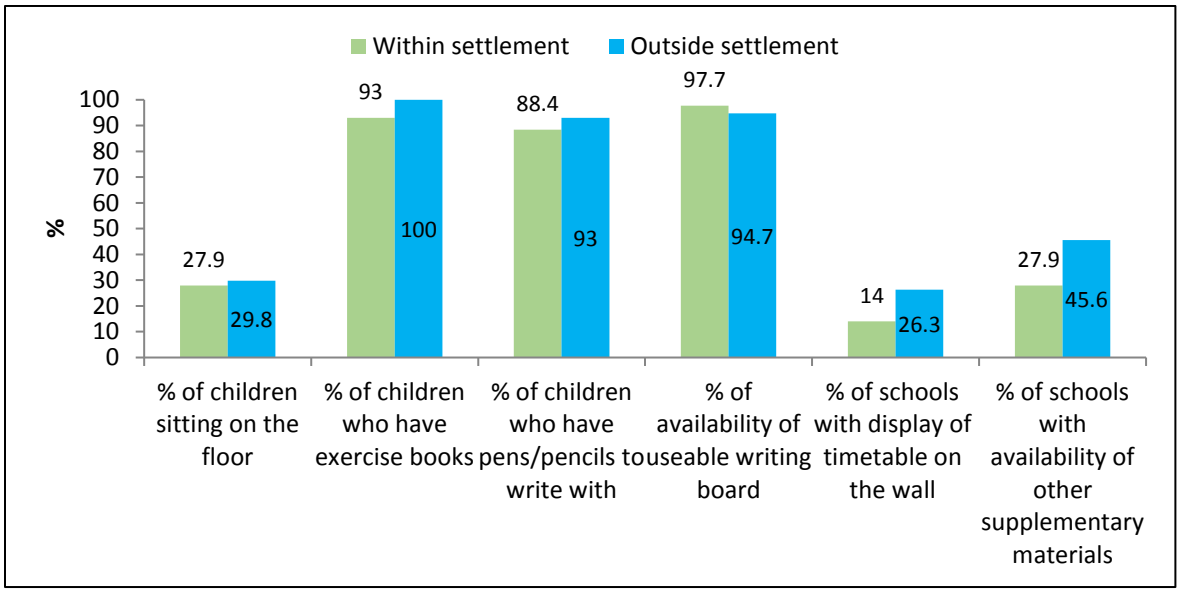
settlements found the presence of bacteria in the water in 36% of the schools[6]. No water quality test was undertaken in schools inside refugee settlements.[7]

Classroom environments: (de-)motivating teachers and pupils

As part of the survey, one Primary 2 classroom was observed in every school visited and the class teacher interviewed, to provide an illustration of the resources available at classroom level. In instances where there was more than one Primary 2 stream, one stream was randomly selected for the survey.

This section provides evidence about selected aspects of the classroom environment including the provision of furniture, writing materials, and the state of the chalkboard and availability of other learning aids. These inputs help us to understand the environment in which children in refugee settlements and host communities learn, and what tools and resources are available to them**. Figure 41** provides a summary of the conditions observed in these classrooms.

Figure 38: Conditions in Primary 2 classrooms by location



N=103

The availability of classroom materials is very important for learning. Overall, possession of writing materials such as exercise books, pencils and useable chalkboards was generally satisfactory, though there are more children in refugee settlements that had no writing materials than outside refugee settlements. The provision of sufficient furniture in refugee contexts generally appears to be a challenge, possibly due to the high influx of refugee children. Children in nearly 30% of the observed Primary 2 classrooms sat on

[6] We used the H2S TEST KIT**;** which is a simple kit for a first testing of bacteriological contamination. The kit tests only for the presence of bacteria but does not reveal which type or the extent of its presence. The test is useful for indicating whether the water is safe for drinking or not. Any contaminated water is not safe for human consumption.
[7] During the training and pre-testing of the survey tools, we realized we had not made sufficient effort to introduce the water quality test to the various actors in the water sector in refugee settlements ahead of the assessment. Due to the sensitivity of the matter and prevailing time constraints we made the decision to only do the water quality test in the host communities.

the floor due to a shortage of furniture. The results also indicate that more schools in host communities have supplementary learning materials such as charts and other visuals, making the learning environment richer in these contexts than in schools inside refugee settlements. The situation differs from district to district; the absence of supplementary learning materials is most prevalent in Yumbe District (inside and outside settlements).

CONCLUSION

This pilot study applies the Uwezo Learning Assessment in four refugee-hosting districts. The study sought to obtain evidence about the effectiveness of educational provision in refugee settlements and about the adaptability of the Uwezo learning assessment methodology and tools to crisis contexts such as refugee settlements. The research questions were concerned with (1) the comparison of children's learning within and outside the refugee settlements, (2) identifying school and household conditions that account for differences in learning outcomes in these contexts and (3) the implications of the pilot study for future assessments in refugee settlements.

Overall, the pilot study enabled the production of comparative data on learning outcomes and learning conditions in refugee settlements and host communities. The response to our first research question is that, while there are certain notable differences between refugees and their counterparts in the host communities in terms of facilities, learning outcomes are similar. For example, while on average, 51 children shared one textbook in schools in refugee settlements; two pupils shared a book in the host community. On the other hand, there was a larger proportion of schools in refugee settlements with a school feeding programme (32%) than outside refugee settlements (26%), compensating slightly for the poorer levels of nutrition in refugee households. Despite some differences in services and facilities, the learning outcomes are in general low both for refugee and non-refugee children, with more than 90% of children assessed in P3 unable to read, comprehend and divide. However, as only 4 out of the 12 refugee hosting districts were purposively included in the learning assessment, these findings may not be fully representative of the learning situation of the refugee population in Uganda. Given resources, future Uwezo learning assessments may consider obtaining a representative sample of the refugee population in Uganda to produce more generalisable learning outcomes data.

Where learning outcomes are compared within grade levels, it may be noted that, by P6, the relative disadvantage of refugee pupils in English literacy level, for those who have been retained in primary school, has largely disappeared: but more evidence is needed in future assessments and analyses about late entry, dropout and repetition among refugee pupils. An age-based comparison of refugee and non-refugee children's achievement of those aged 9-13 years indicates that, generally, refugee children perform more poorly than non-refugee children. This could be due to the fact that the schooling of some refugee children has been interrupted, and that they are overage for their class, and more have repeated grades, which further demoralizes them.

With regard to the second research question, the findings indicate some challenges of delivering services and ensuring quality learning that are specific to refugee contexts and others that are the same for refugee and non-refugee pupils and their teachers. Textbook supply and home nutrition have already been mentioned as being notably inferior in refugee settlements – and this also applies to classroom provision.

On the other hand, teacher absenteeism and shortage of furniture are problems with similar indicators in both contexts.

With regard to the third research question, various lessons can be drawn from the pilot study to inform future learning assessments in refugee contexts, as outlined below.

Sampling frames and entry issues

While it is possible to do the learning assessment in a refugee context, issues of sampling would need to be carefully thought through if it were to be implemented within a national Uwezo assessment. Currently, there are no census enumeration areas in refugee settlements, save for refugee settlements in Isingiro which are part of the national census frame. We had to identify the smallest unit e.g. block or cluster within refugee settlements which could serve as an equivalent to the census EAs, a process which was not standardised. Refugee settlements are organised into settlements, zones, villages, blocks and sometimes clusters, and the arrangement differs from district to district and from settlement to settlement. Further consultations with UBOS or other sampling experts ought to happen to uncover the most efficient way to integrate refugee settlements within an Uwezo national assessment and understand the implications of oversampling EAs/blocks within refugee settlements in refugee host districts. It might also require expanding the Uwezo assessment to other refugee hosting districts to get a fuller picture of the intricacies of sampling and undertaking the survey in varied refugee contexts before full integration in a national learning assessment happens. Regarding entry, with advance planning and communication to key actors in refugee contexts gaining entry and access can be easily secured for the assessment.

Volunteer recruitment, quality and training

Flexible criteria for recruiting and validating volunteer qualifications in refugee settlements and other emergency contexts is necessary. Several qualifying volunteers lacked their actual paper credentials, and reference checks with their leaders were used as an alternative to verification of academic certificates. This, combined with oral interviews to gauge their fluency in the English language (language of the survey instruments), proved sufficient.

It was not hard to recruit and train volunteers from refugee settlements. In emergency contexts, individuals that are more educated can more quickly relocate to other countries than the less educated. In terms of volunteer quality, refugee volunteers and nationals can deliver the same quality of work. Evidence from the pilot indicates that common errors made by volunteers during the assessment e.g. missing to assess both literacy and numeracy are equally shared among the two groups and in some cases fewer among refugee volunteers as **Table 6** below indicates:

Table 6: Percentage of pupils aged 6-16 assessed in literacy and numeracy

	Refugee areas (% assessed)		**Non-refugee areas (% assessed)**	
	Literacy	**Numeracy**	**Literacy**	**Numeracy**
Adjumani	98.9	98.0	98.7	99.0
Arua	93.6	89.8	97.7	91.2
Isingiro	89.9	89.1	92.4	88.5
Yumbe	97.1	95.6	95.8	95.2
Total	94.1	92.1	96.2	92.4

Though no major language barriers were experienced during the assessment, given the fact that volunteers were recruited from within the assessed communities, there was desire by some district partners to have survey tools and tests translated into local languages. Our experience from this pilot and previous Uwezo assessment indicates that where quality volunteers are recruited and trained well, language problems can be handled adequately. Nevertheless, in refugee contexts there is a need for two trainers: one from refugee settlements and the other from the host community.

Instrumentation: survey tools and assessment tools

The pilot has shown that using the same literacy and numeracy assessment tools for refugee and non-refugee children in Uganda is possible. This is evidenced in the comparability of learning data recorded for refugee and non-refugee children. However, the survey tool needs to be adapted to include items relevant to refugees, e.g. nationality and duration of stay in Uganda and languages used in the home. A part of the context that is challenging to observe or measure is the language situation in the classroom and other qualitative aspects of teaching and learning. The structured Uwezo survey tool is well suited for gathering simple and quickly observable classroom processes and school resources. It would require inclusion of less-structured items in the tool and further training of volunteers to capture the more qualitative dimensions of teaching and learning. For example, there would be need for items that go beyond recording whether the teacher is in class, to analysing whether s/he is teaching, what s/he is teaching and how s/he is teaching it.

Additional costs for learning assessments in refugee contexts

Conditions in refugee contexts vary from settlement to settlement and district to district. In refugee contexts with multiple nationalities there may be additional interpretation expenses to be incurred. Movement to and from refugee settlements is also quite challenging, requiring a flexible transport budget. There is also need to consider expenses of recruiting two trainers in refugee host districts to include a trainer from refugee settlements to attend to the needs of refugee volunteers. Finally, financial expectations of partners and volunteers in refugee hosting districts tend to be higher than in other districts due to other competing initiatives in refugee contexts, which sometimes come with higher remuneration.

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ANNEXES

ANNEX I: List of refugee settlements in Uganda as of 2017

DISTRICT	NAME	TYPE
Bundibugyo	Bubukwanga TC	Refugee transit centre
Adjumani	Alere 2	Refugee location
Adjumani	Ayilo I	Refugee settlement
Adjumani	Ayilo II	Refugee settlement
Adjumani	Baratuku	Refugee settlement
Adjumani	Bidibidi	Refugee settlement
Adjumani	Boroli	Refugee settlement
Adjumani	Elegu CP I	Collection point
Adjumani	Elegu CP II	Collection point
Adjumani	Elema	Refugee location
Adjumani	Maaji I	Refugee settlement
Adjumani	Maaji II	Refugee settlement
Adjumani	Maaji III	Refugee settlement
Adjumani	Mirieyi	Refugee location
Adjumani	Mungula I	Refugee location
Adjumani	Mungula II	Refugee location
Adjumani	Nyumanzi	Refugee settlement
Adjumani	Nyumanzi TC	Refugee transit centre
Adjumani	Oliji	Refugee location
Adjumani	Olua I	Refugee location
Adjumani	Olua II	Refugee location
Adjumani	Pagrinya	Refugee settlement
Adjumani	Pagrinya RC1	Reception centre
Adjumani	Pagrinya RC2	Reception centre
Adjumani	Agojo II	Refugee settlement
Adjumani	Dzaipi	Refugee transit centre
Arua	Imvepi RC	Reception centre
Arua	Kuluba CP	Collection point
Arua	Ocea RC	Refugee transit centre
Arua	Rhino Camp	Refugee settlement
Arua	Imvepi	Refugee settlement
Hoima	Kyangwali	Refugee settlement
Isingiro	Nakivale	Refugee settlement
Isingiro	Oruchinga	Refugee settlement
Kampala	Kampala	Refugee urban location
Kamwenge	Rwamwanja	Refugee settlement
Kiryandongo	Kiryandongo	Refugee settlement
Kiryandongo	Kiryandongo RC	Refugee transit centre
Kisoro	Nyakabande TC	Refugee transit centre

Koboko	Lobule	Refugee settlement
Kyegegwa	Kyaka II	Refugee settlement
Lamwo	Lokung	Collection point
Lamwo	Madi Opei	Collection point
Lamwo	Ngomoromo	Collection point
Lamwo	Waligo	Collection point
Lamwo	Palabek	Refugee settlement
Lamwo	Palabek RC	Reception centre
Lamwo	Aweno – Olwi	Collection point
Moyo	Kerwa	Collection point
Moyo	Laufori	Collection point
Moyo	Metu	Collection point
Moyo	Moyo	Dispersed refugee location
Moyo	Palorinya	Refugee settlement
Moyo	Palorinya RC	Reception centre
Rukungiri	Matanda	Refugee transit centre
Yumbe	Bidibidi RC	Reception centre
Yumbe	Menzere	Collection point

ANNEX II: Assessed children (6-16) by district and age levels

District	Refugee status	**Age 6**	**Age 7**	**Age 8**	**Age 9**	**Age 10**	**Age 11**	**Age 12**	**Age 13**	**Age 14**	**Age 15**	**Age 16**
Adjumani	Refugee (N=657)	10.6	9.8	9.7	8.2	9.0	7.5	8.9	11.0	9.9	8.3	7.2
	Non-refugee (N=555)	9.3	9.9	11.4	9.4	12.2	7.4	9.4	7.7	8.8	6.0	8.5
Arua	Refugee (N=537)	10.3	7.5	7.8	10.1	13.5	7.3	10.4	9.6	7.8	7.1	8.7
	Non-refugee (N=422)	9.6	10.5	10.9	9.4	8.8	8.4	10.0	10.2	8.5	7.2	6.6
Isingiro	Refugee (N=472)	9.0	10.6	10.0	9.0	12.3	6.7	9.4	9.2	9.7	7.1	7.0
	Non-refugee (N=378)	10.7	13.5	9.4	8.3	12.0	9.2	11.9	7.6	6.3	5.1	6.1
Yumbe	Refugee (N=591)	10.5	7.6	8.5	9.0	10.3	6.5	10.4	11.1	9.6	8.0	8.7
	Non-refugee (N=544)	11.3	12.1	8.9	11.9	10.9	6.8	9.8	8.9	7.0	7.3	5.0
Total	Refugee (N=2,257)	10.1	8.7	8.8	9.3	11.9	7.0	9.9	10.0	8.9	7.4	8.0
	Non-refugee (N=1899)	10.2	11.5	10.2	9.7	10.5	8.1	10.3	8.9	7.7	6.6	6.4

(N=4,156)

ANNEX III: Assessed children (age 6-16) by district, refugee status, gender, school type and subject

	Resident Status	Sex %		School type %			Pupils assessed (%)	
		Girls	Boys	Gov't	Private	Community	Literacy	Numeracy
Adjumani	Refugee (N=657)	47.4	52.6	30.8	13.2	56.0	98.7	99
	Non-refugee (N=555)	50.2	49.8	76.7	12.3	11	98.9	98
Arua	Refugee (N=537)	50	50.1	60.2	4.8	35	97.7	91.2
	Non-refugee (N=422)	49.3	50.7	87.4	7.4	5.2	93.6	89.8
Isingiro	Refugee (N=472)	49.8	50.2	57.5	28.6	13.9	92.4	88.5
	Non-refugee (N=378)	53.1	46.9	41.2	42.9	15.9	89.9	89.1
Yumbe	Refugee (N=591)	44.8	55.2	7.7	64.4	27.9	95.8	95.2
	Non-refugee (N=544)	45.2	54.8	87.4	7.9	4.8	97.1	95.6
Total	Refugee (N=2,257)	48.6	51.5	44.8	23.7	31.5	96.2	92.4
	Non-refugee (N=1,899)	49.5	50.5	74.4	17	8.6	94.1	92.1

N=4,156

ANNEX IV: Uwezo Partners in 2017

Uwezo Uganda ADVISORY COMITTEE MEMBERS 2017		
	NAME	**INSTITUTION /ORGANIZATION/ DESGINATION**
1	Professor Albert James Lutalo-Bosa	Vice Chancellor, Team University
2	Associate Professor Joyce Ayikoru	Senior Lecturer and Dean Faculty of Education, Kyambogo University
3	Dr Sarah N Ssewanyana	Executive Director, Economic Policy Research Center (EPRC)
4	Mr Patrick Kaboyo	Executive Director, Coalition of Uganda Private School Teachers 'Association
5	Dr Ronald Bisaso	Dean East African School of Higher Education studies and Development, College of Education and External Studies, Makerere University
6	Mr James Tweheyo	Former Secretary General, Uganda National Teachers Union (UNATU)
7	Mrs. Grace Kanyiginya Baguma	Executive Director, National Curriculum Development Centre (NCDC)
8	Dr Daniel Nkaada	Commissioner for Basic Education, Ministry Of Education and Sports, Uganda
9	Mr. James Muwonge	Director, Socioeconomic Surveys, Uganda Bureau of Statistics (UBoS)
10	Professor Albert Byamugisha	Senior Consultant, Government of Uganda, Office of the Prime Minister
Uwezo Secretariat		
1	Dr Mary Goretti Nakabugo	Twaweza Lead and Regional Manager, Uwezo
2	Faridah Nassereka	Senior Program Officer, Uwezo
3	Judith N. Tumusiime	Assistant Communications Officer, Uwezo
4	David Mugurusi	Program Officer, Research
5	Ismail Sentamu	Assistant Program Officer, Research
6	Judith Nakayima	Program Assistant
Twaweza/Uwezo - PAL Network Fraternity		
1	Aidan Eyakuze	Executive Director, Twaweza East Africa
2	Dr John Mugo	Former Director, Data and Voice, Twaweza East Africa
3	Dr. Emmanuel Manyasa	Manager, Uwezo Kenya
4	Zaida Mgalla	Manager, Uwezo Tanzania
5	Dr Wilima Wadhwa, Dr Suman Bhattacharjea and Dr Rukmini Banerji	ASER/Pratham, India
6	Dr Sara Ruto	Director, People's Action for Learning (PAL) Network
7	All staff and associates in the 14 countries conducting citizen-led assessments under the PAL Network	

Uwezo District Partners				
	District	**Partner institution**	**District Coordinator**	**Co-trainer**
1	Arua	Approaches to Rural Community Development (ARCOD) Executive Director: Manasseh Acidri	Maandebo Moses	Jamba Emmanuel
2	Adjumani	Global Aim. Executive Director: James Addu	Onzimai Henry	Eruaga Patrick
3	Isingiro	Integrated Development Options (I-DO) Executive Director: Dan Namanya	Nimusiima Albert	Natukunda Fortunate
4	Yumbe	Needy Kids Uganda Executive Director: Muzamil Achema	Aluma Swali	Ondoga Karim
Lead Facilitators				
1		Jackson Atria		
2		Sabiiti Fenekansi		
Test Developers				
1		Francis Egadu	English, retired educationalist	
2		Charity Karungi	English, teacher	
3		Elly Musana Wairagala	English, NCDC	
4		Richard Mutebi Kizito	Mathematics, teacher	
5		Dr Gertrude Namubiru	Mathematics, NCDC	
6		Hatinda Lujja	Mathematics, teacher	
7		Dr Kizito Omala	Psychometrician, Makerere University	