Trialling the International Common Assessment of Numeracy (ICAN) Tool with Hearing Impaired Learners and Children in Refugee Contexts

A presentation by Uwezo Uganda to the
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Background to the International Common Assessment of Numeracy (ICAN) Tool

Mozambique

Kenya

Tanzania

Uganda

Kenya

Citizen-Led Assessment (CLA) approach originated in India in 2005

Adopted and adapted in other Global South contexts

People's Action for Learning (PAL) Network formalised in 2015, now comprising members in 14 countries across 3 continents

CLA approach is relevant for the Global South

Core features of CLAs:

- Conducted in **households** to include all children irrespective of schooling status

- Implemented **orally and one-on-one** as many children cannot read

- Cover **foundational learning** content taught in early primary classes

- Administer **simple-to-use tools, processes** and produce **easy-to-understand data** to ensure wider engagement

- Ensure **collaboration with local stakeholders** to create awareness and fuel local action

Global goal for education: SDG 4

- SDG 4 focuses on ensuring "inclusive and equitable quality education and lifelong learning opportunities for all."

- Within Target 4.1, the first indicator (SDG 4.1.1) tracks the "proportion of children and young people achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex"

  (a) in Grade 2 or 3 ➔ **Critical to measure learning early so that corrective measures can be implemented**

- Robust and regular data on learning outcomes are needed over time and across countries

- Limited relevance of existing data to track progress towards SDG 4.1.1 for grades 2 or 3

ICAN - A comparable assessment for the Global South

The minimum proficiency level descriptor for numeracy under SDG 4.1.1 for primary class 2 or 3 requires children to demonstrate skills in number sense and computation, shape recognition and spatial orientation.

Overview of domains and tasks in the ICAN assessment tool

50%

NUMBER KNOWLEDGE

- Counting, comparing number of objects
- Number recognition
- Operations (without and with carry-over, borrow and remainder)
- Real world problems

50%

GEOMETRY

- Position and direction
- Shapes and figures

MEASUREMENT
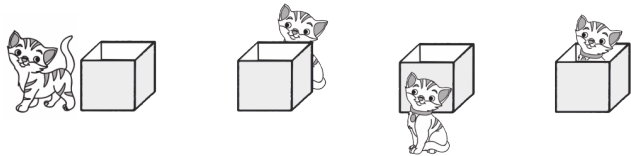
- Length and capacity
- Time and calendar

DATA DISPLAY
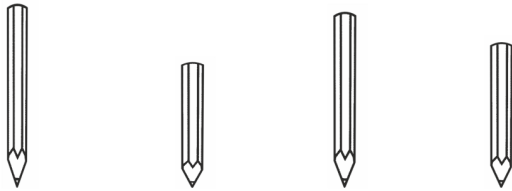
- Retrieving simple information

Sample tasks from the ICAN assessment tool

Space, shape and measurement tasks

Q1 In this picture, which cat is inside the box?

Q3 In this picture, which is the shortest pencil?

Q11 Which of these is a straight line?

Number knowledge tasks
(recognition, operation and word problems)

Q15 Recognize numbers.

3		2
	8	
0		9

At least 4 out of 5 numbers must be correct

Solve the following questions.
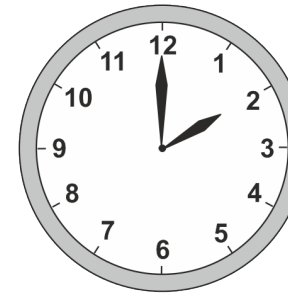
Q17

$$46 - 21$$

Q22

$$78 - 29$$

Q25 Listen to the question carefully, solve and answer.

There were 43 children in the park. Out of these, 25 of them have gone home. How many children are left in the park now?
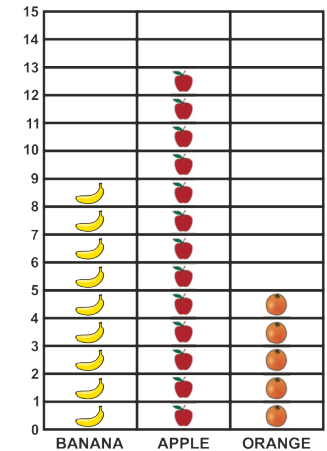
Applied tasks
(Telling time, telling day and date from a calendar, data display)

Q7 What is the time in this clock?

Look at the chart given below carefully.

BANANA   APPLE   ORANGE

Q5 How many apples are there?

Q6 How many more bananas are there than oranges?

Look at the calendar given below.

MARCH 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Q9 What is the day on 5th March?

Q10 What is the date on the second Monday of March?

Within the region, ICAN assessment was conducted in 4 languages i.e. English, Kamba, Kiswahili and Portuguese

ICAN 2019: Large-scale household-based implementation

- Proof of concept - feasibility of using common tools across different country contexts

- ICAN 2019 retained all core features of the CLA architecture

- Translation, training, data collection procedures based on PAL Network's Data Quality Standards Framework (DQSF) in all participating countries

- Implementation by PAL member organisations in collaboration with local partners

Conducted in 13 countries

60 randomly sampled rural communities in 1 district per country

District not an outlier in terms of learning outcomes

Administered in randomly sampled households

to children in the age-group of 5-16 years

Each child assessed orally, one-on-one

Trialling the ICAN Tool with Special Education Needs Children (SEN) in Uganda

Rationale

- Education for all = assessment for all

- Leave no child behind

- Establish suitability of the ICAN tool for children with special needs

Selected Special Needs:

- Hearing Impairment

- Refugee status

ICAN Trialling Sample

Conducted in **September 2020** following Covid-19 SOPs

02 Districts (Mukono & Yumbe)

80 children assessed

- 20 with hearing impairment

- 20 without hearing impairment

- 20 located in a refugee settlement

- 20 located in the host community

Distribution of the sample by Gender

District	Boys	Girls	Total
Mukono	19	21	40
Yumbe	24	16	40
Total	43	37	80

Illustrative findings from Trialling ICAN with SEN Children

- The purpose of this exercise was to test the feasibility of the tool in SEN contexts and to **showcase the kinds of comparisons that the use of ICAN could facilitate**
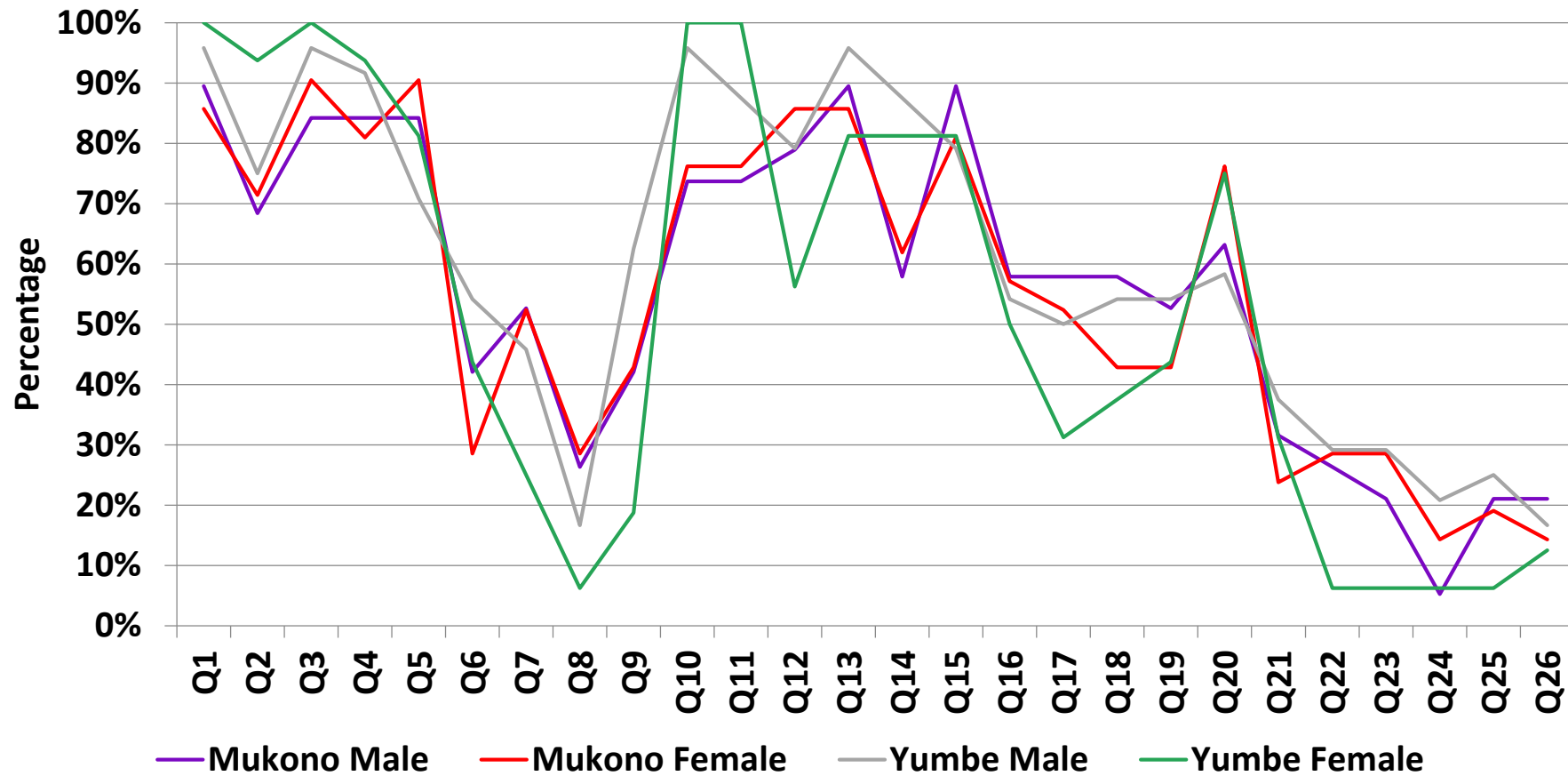
Number of children that answered correctly on each question – Irrespective of age and class
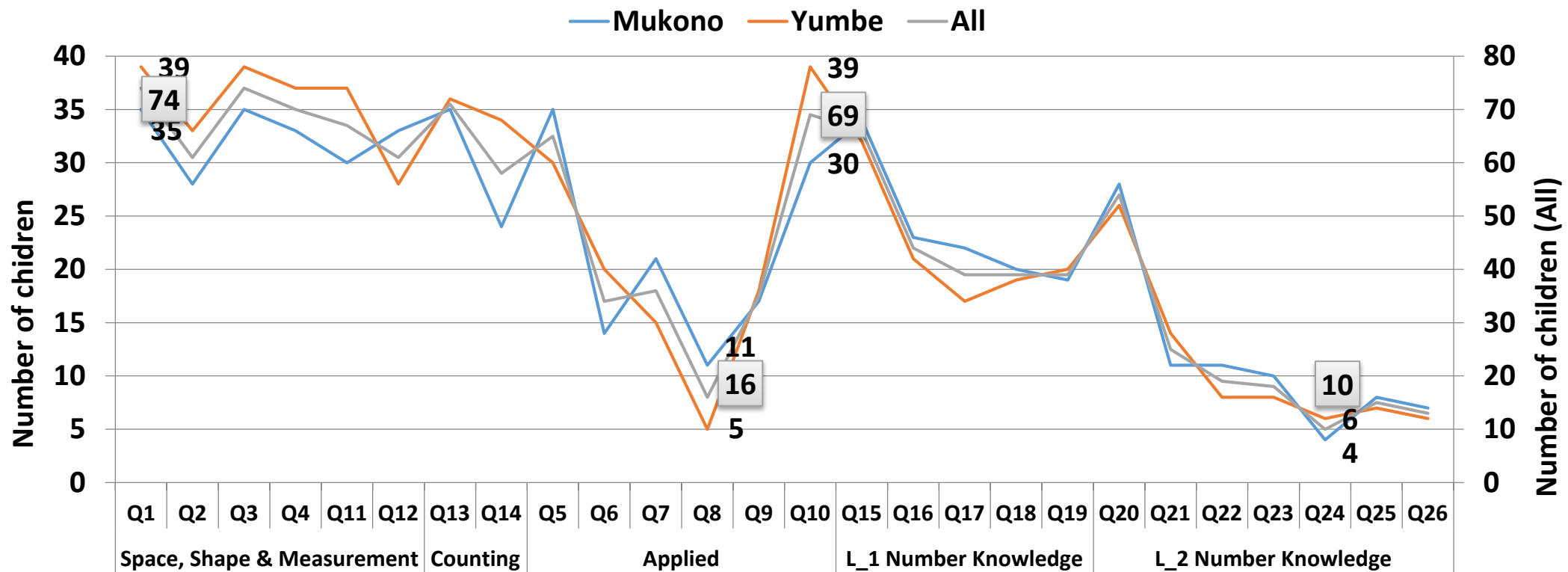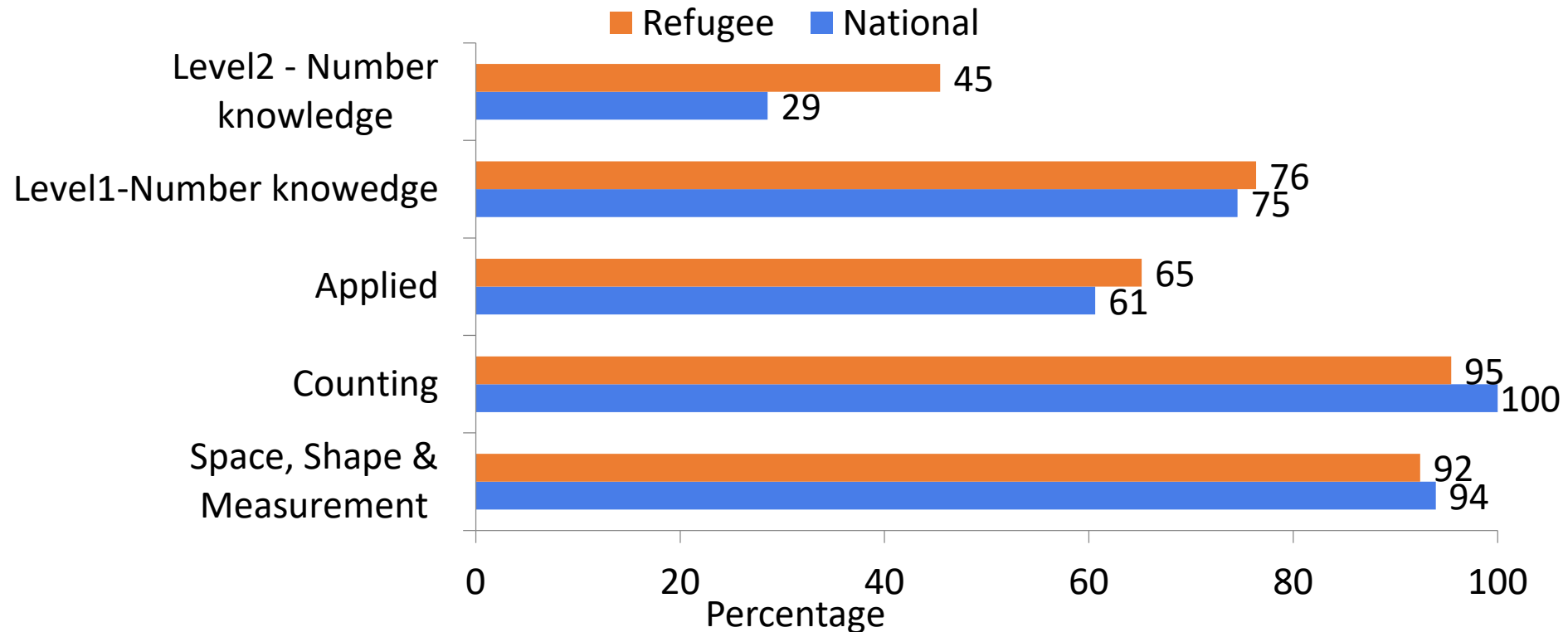
Comparison of female and male (P3-7)

The trend in performance generally follows a similar pattern

N=46

Comparison by Hearing Status- Mukono (P3-7)
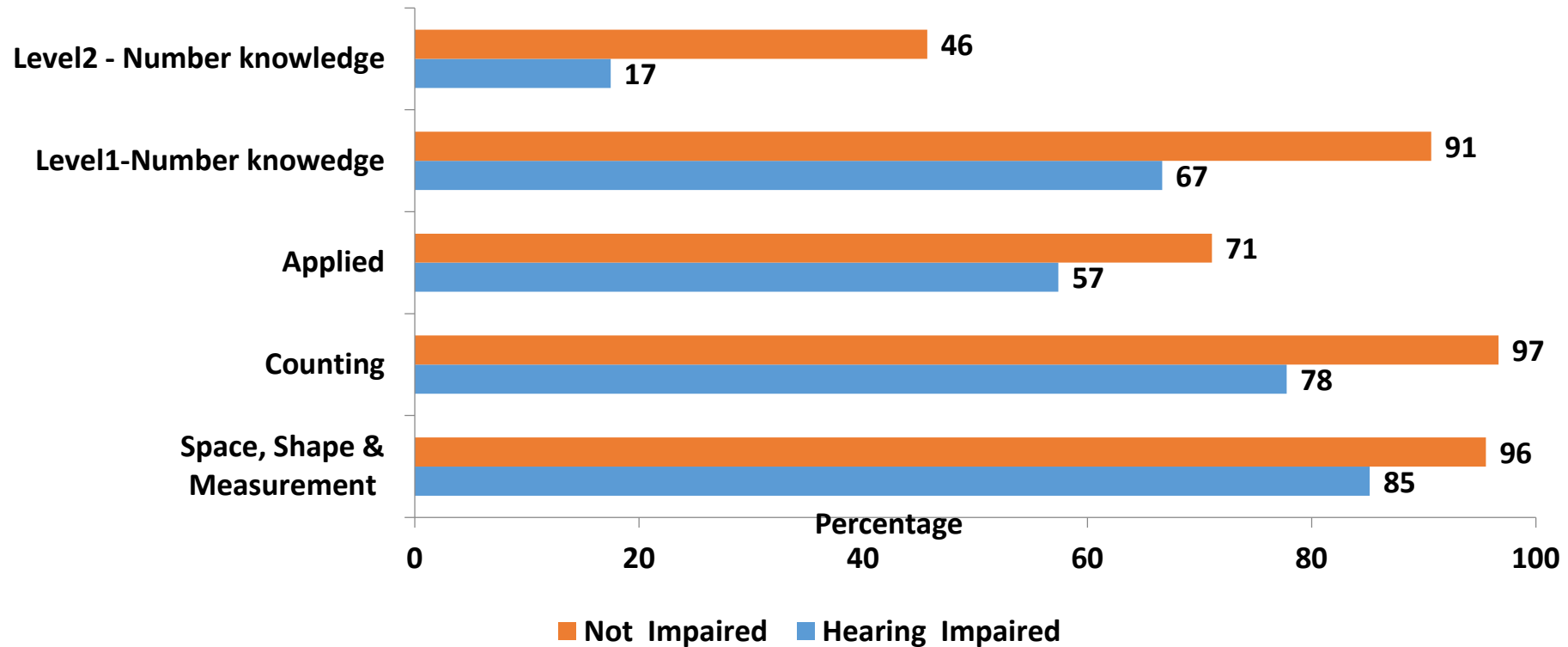
N=24

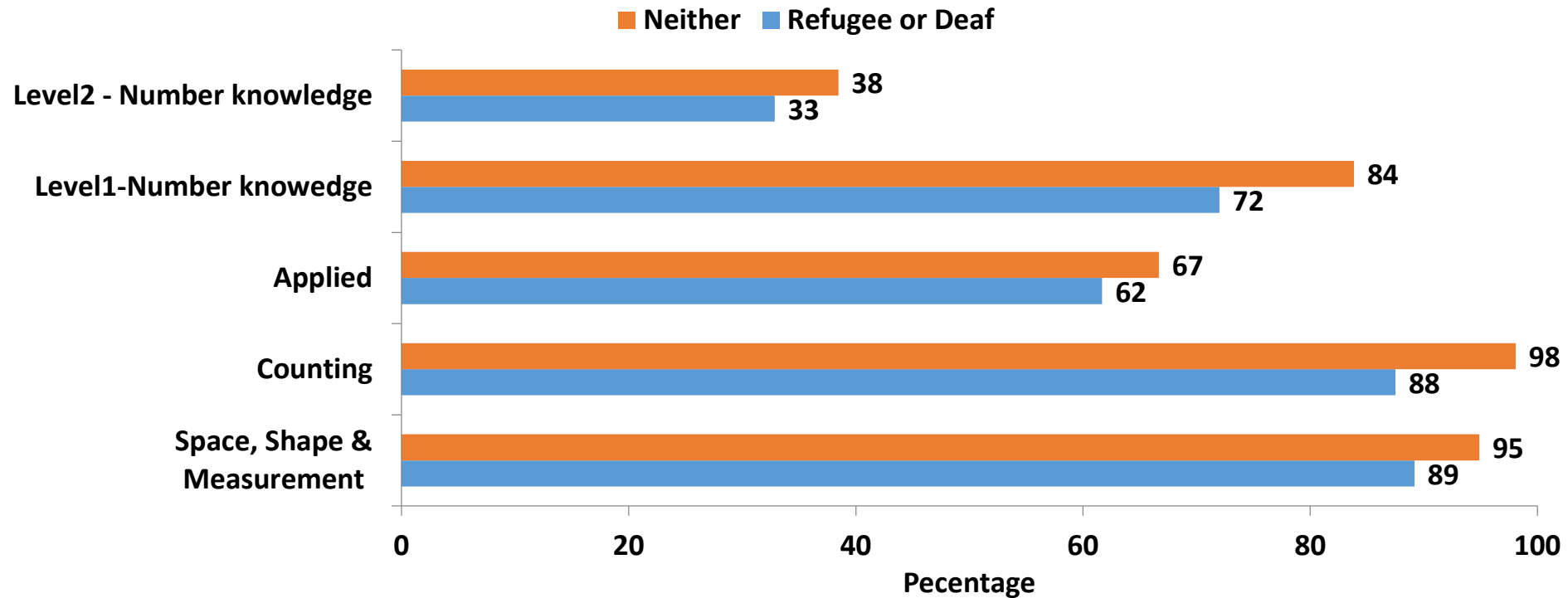Generally, children without any hearing impairment were more proficient at all tasks compared to those with hearing impairment.

Comparison of refugee or deaf children vs neither (P3-7)

N=46

Children who were neither in a refugee settlement nor had hearing difficulty performed slightly better than their counterparts who had either difficulty hearing or living in a refugee settlement.

As the clock ticks to 2030 . . .

We need less top-down and more granular measurements of foundational learning that can lead to rapid corrective action

ICAN is:

- Open source; currently available in English in Uganda (but 11 languages across 13 countries)

- Most tasks are aligned to primary grade 3 or lower of the UNESCO Global Proficiency Framework: https://www.edu-links.org/sites/default/files/media/file/Global%20Proficiency%20Framework_01032020.pdf

- Suitable for use in both household and school settings and children with Special Needs

- Simple and quick to administer and understand, therefore easy to scale

Prayer to the BEWG

- Make use of the ICAN tool as a measure of foundational learning to enable corrective action. The tool is applicable to a variety of contexts, including those with children with special needs

- Support the scaling up of ICAN in Uganda and utilise the evidence to inform policy and practice

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Thank you!

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