

# Using Tablets to Improve Support for Teachers of Early Grade Reading

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## Challenge:

How do we improve reading outcomes in Uganda?

**NAPE 2012:** Only **5 in 10** Ugandan **P3 learners** proficient in Reading



**UWEZO 2012:** Only **1 in 10** **P3 learners** can read a P2 level text



## Background

In 2012, USAID and the Ugandan Ministry of Education embarked on an intensive reform of early grade reading.

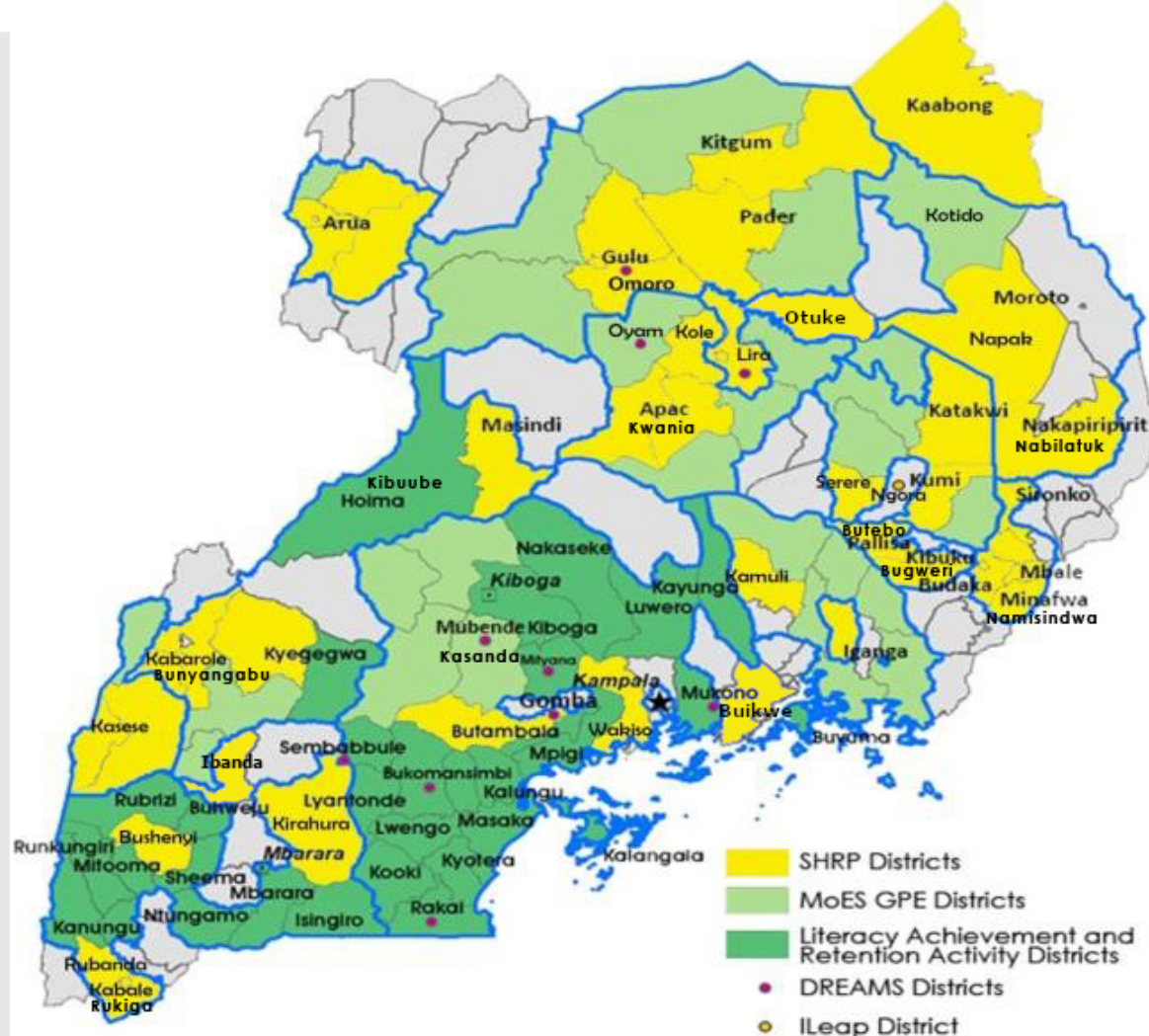
RTI Implemented Reading Programs sparked reform efforts.

Before the programs, we could see very few, if any, learners reading from printed material during reading lessons and reading scores were very low.



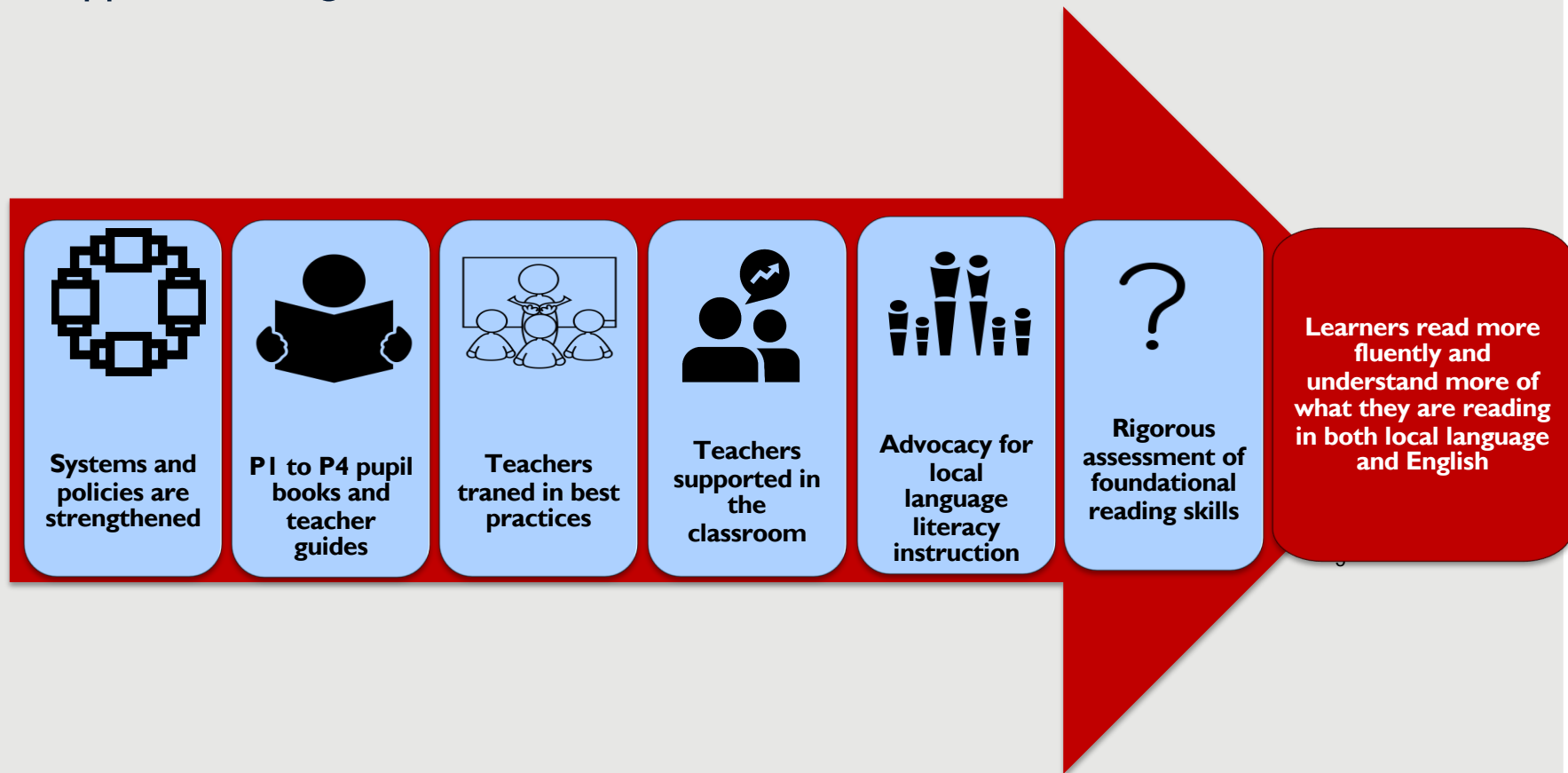
## Current reach of EGR Programs Across Uganda

- More than **10,000 UPE** schools (80% of total) and over **6 million P1-P4** learners reached
- **65,707 teachers and head teachers** trained
- Over **8.4 million pupil books and teachers guides** in 12 local language + English

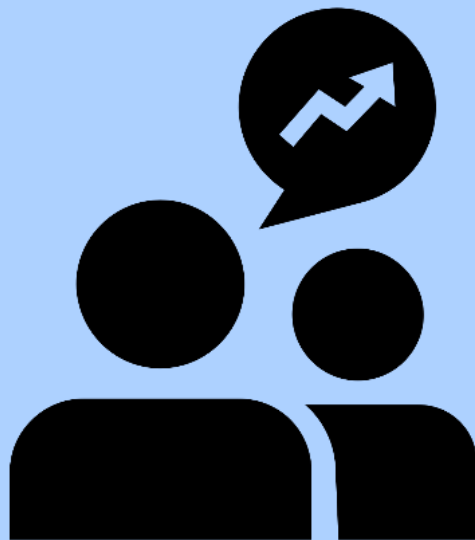




## EGR Approach in Uganda



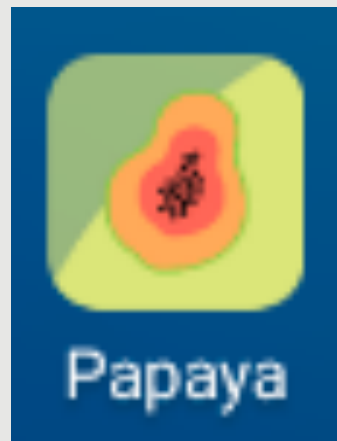
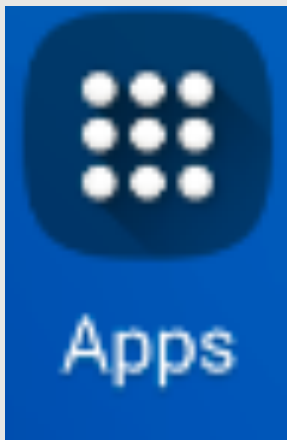
EGR Ap



**Teachers supported in the classroom**

learners read more  
fluently and  
understand more of  
what they are reading  
both local language  
and English

# Papaya



Select your  
language



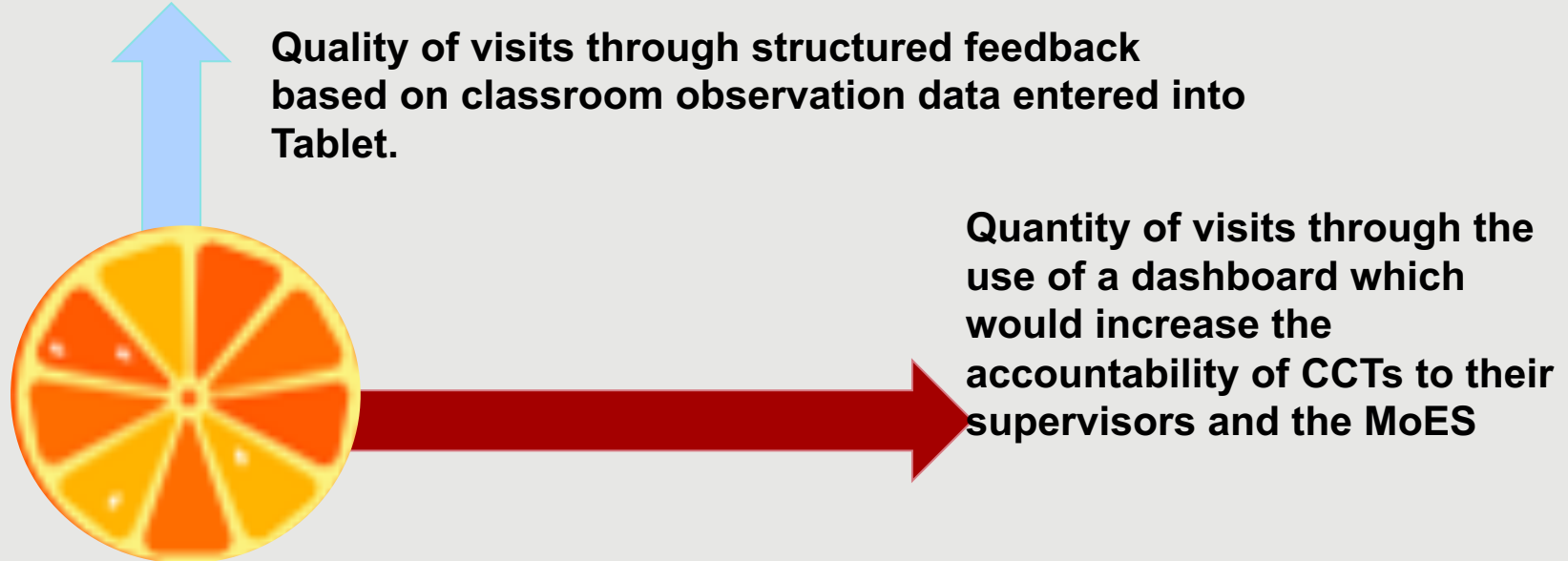
Tap a letter  
to play the  
sound



## Google Grant:

The aim of the Google grant tablet program was to improve the functionality of Tangerine Coach (an existing technology)

### **INCREASE:**



# Tangerine: Coach - Lesson Observation Tool

Small Dose

Step-by-step

Concrete

## Step-by-Step Teacher's Activity

### Step 4: Before Reading - Reviewing Vocabulary and Asking the Guiding Question (3 minutes)

- a. Read the three vocabulary words for the story that are written on the chalkboard. Move your finger or pointer under the words as you read them.
- b. Ask learners to repeat the words after you a second time.

\* 4.a) Does the teacher Read the 3 vocabulary words for the story, while pointing at the word?

Select only One

☐ Yes

☐ No

\* 4.b) Does the teacher Ask learners to repeat the words?

Select only One

☐ Yes

☐ No

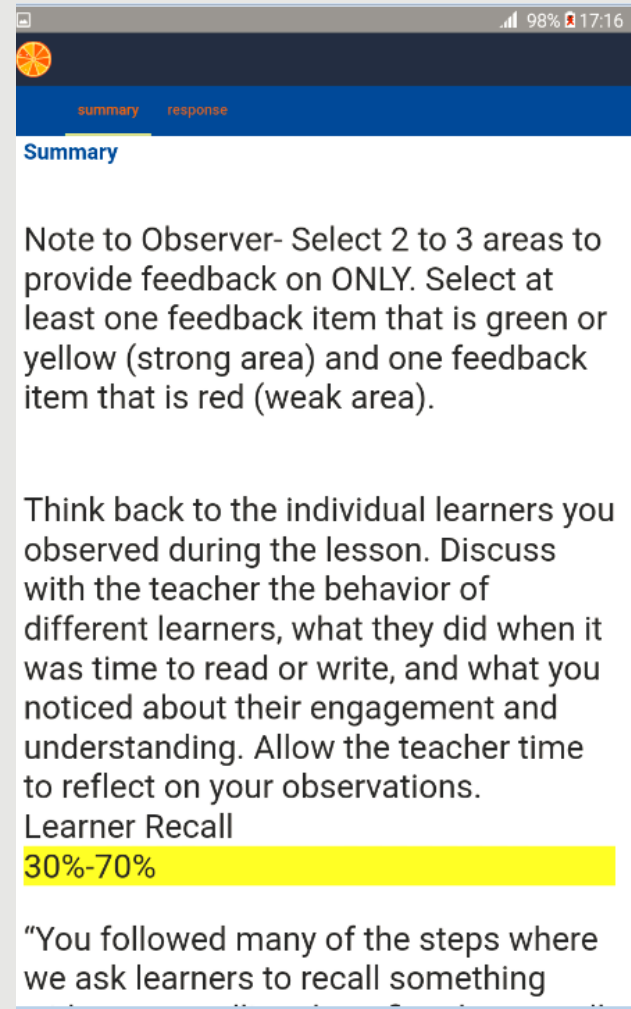
# Tangerine:Coach

## Lesson Observation Feedback

Each question in the tool is tagged to a feedback category

Tangerine software automatically calculates scores for each feedback category based on what CCTs enter into tool (offline)

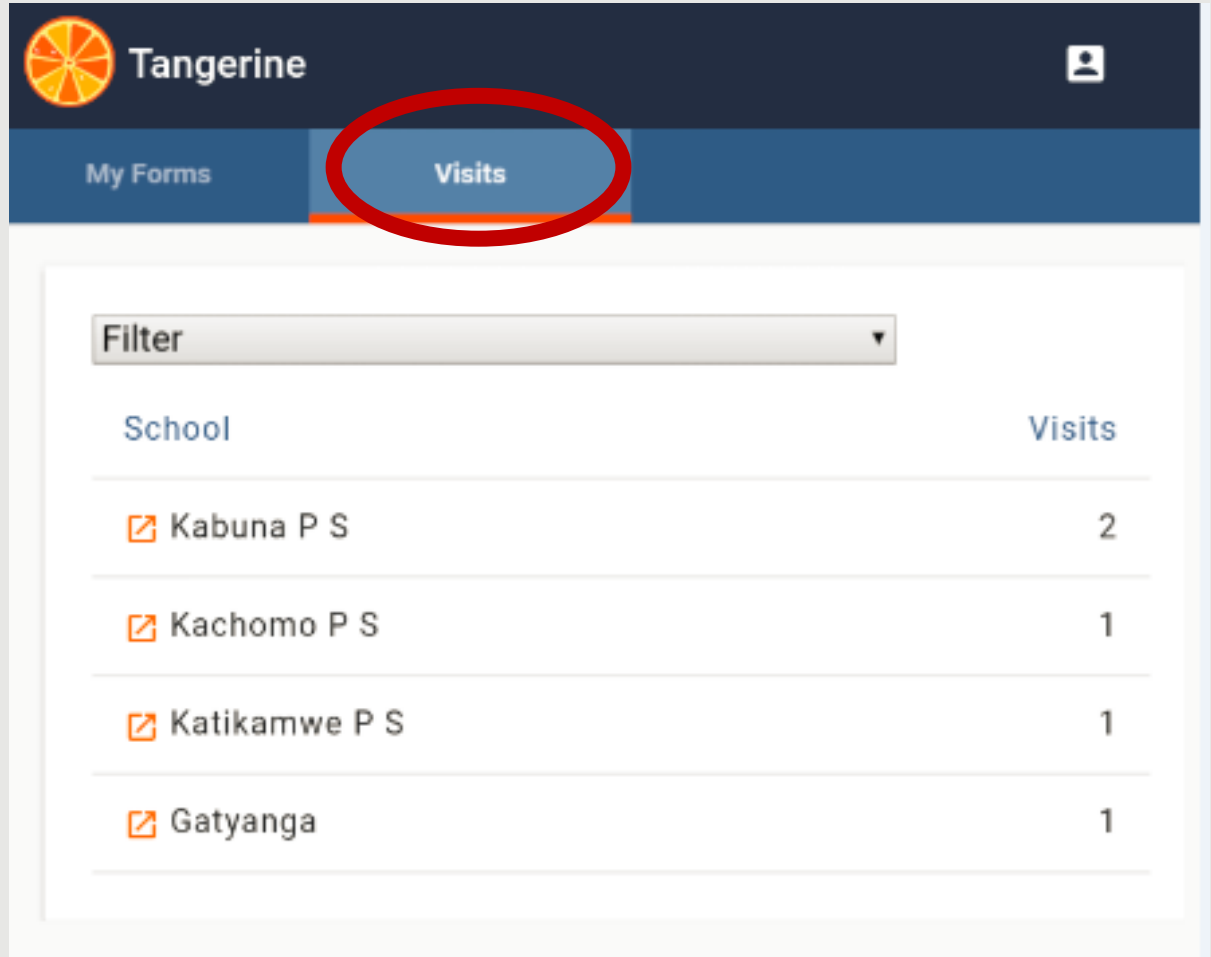
Feedback referring to additional coaching tools (apps and videos) is then generated



# Tangerine:Coach

Additionally, lesson observations and feedback for each school are saved to CCT tablets

This enables them to pull up previous observations and scaffold their coaching.



The screenshot shows the Tangerine Coach interface. At the top, there is a dark blue header with the Tangerine logo (an orange slice) and the text 'Tangerine'. To the right of the header is a user profile icon. Below the header is a navigation bar with two tabs: 'My Forms' and 'Visits'. The 'Visits' tab is highlighted with a red circle. Below the navigation bar is a white content area. At the top of this area is a 'Filter' dropdown menu. Below the filter is a table with two columns: 'School' and 'Visits'. The table contains four rows of data, each with a checkbox icon next to the school name.

School	Visits
<input checked="" type="checkbox"/> Kabuna P S	2
<input checked="" type="checkbox"/> Kachomo P S	1
<input checked="" type="checkbox"/> Katikamwe P S	1
<input checked="" type="checkbox"/> Gatyanga	1



# Tangerine: Monitoring Dashboard



Uganda CCT School Visit and teacher and learner attendance dashboard



real\_observation.keyword: "1" doc.formId.keyword: "cct-lesson-observation" Add a filter + Actions ▶

Filter Controls

Year: 2019 x v Month: Jan x v District: Wakiso x v Coordination Center: Masulita x v

School

Select... v

- Bukondo-Chance-School
- Buwambo-P-S
- Buwembo-P-S
- Kazo-Mixed-P-S
- Kireka-Cou-P-S
- Kiziba-Mixed-P-S
- Kyengeza-Umea

Observations in

Visits and Observations by Day

Filters allow Teacher College and MoES officials to select the District, Coordinating Centre, and Time Period to retrieve monitoring data from

# Tangerine: Monitoring Dashboard

## Districts Most Visited During Timeframe

District name ▾	Schools Visited ▾	Schools in the District ▾	Percent Visited ▾
Wakiso	133	271	49 %
Mbarara	91	219	42 %
Serere	80	95	84 %
Kasese	77	253	30 %
Apac	68	137	50 %
Kiruhura	66	138	48 %
Mbale	52	132	39 %
Bushenyi	46	150	31 %
Arua	39	211	18 %
Kyenjojo	38	128	30 %

Export: [Raw](#)  [Formatted](#) 

Data includes number of visits to each School, Coordinating Center and District, including most- and least- visited

# Tangerine: Monitoring Dashboard

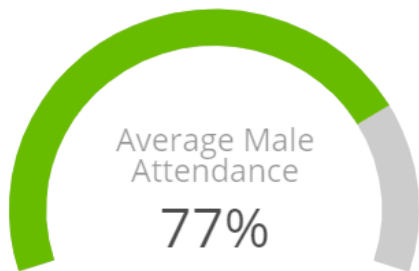
## Learner and Teacher Attendance

### Learner Enrollment and Attendance in Timeframe

**104.6**

Average Number of Males  
Present

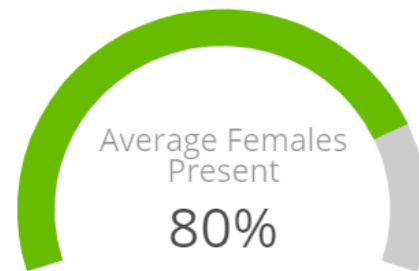
Male Attendance



**107.3**

Average Number of Females  
Present

Female Attendance



**135.9**

Average Number of Males  
Enrolled

**134.5**

Average Number of Females  
Enrolled

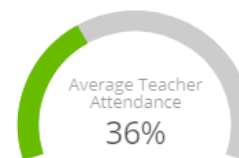
### Teacher Attendance in Timeframe

**10.5**

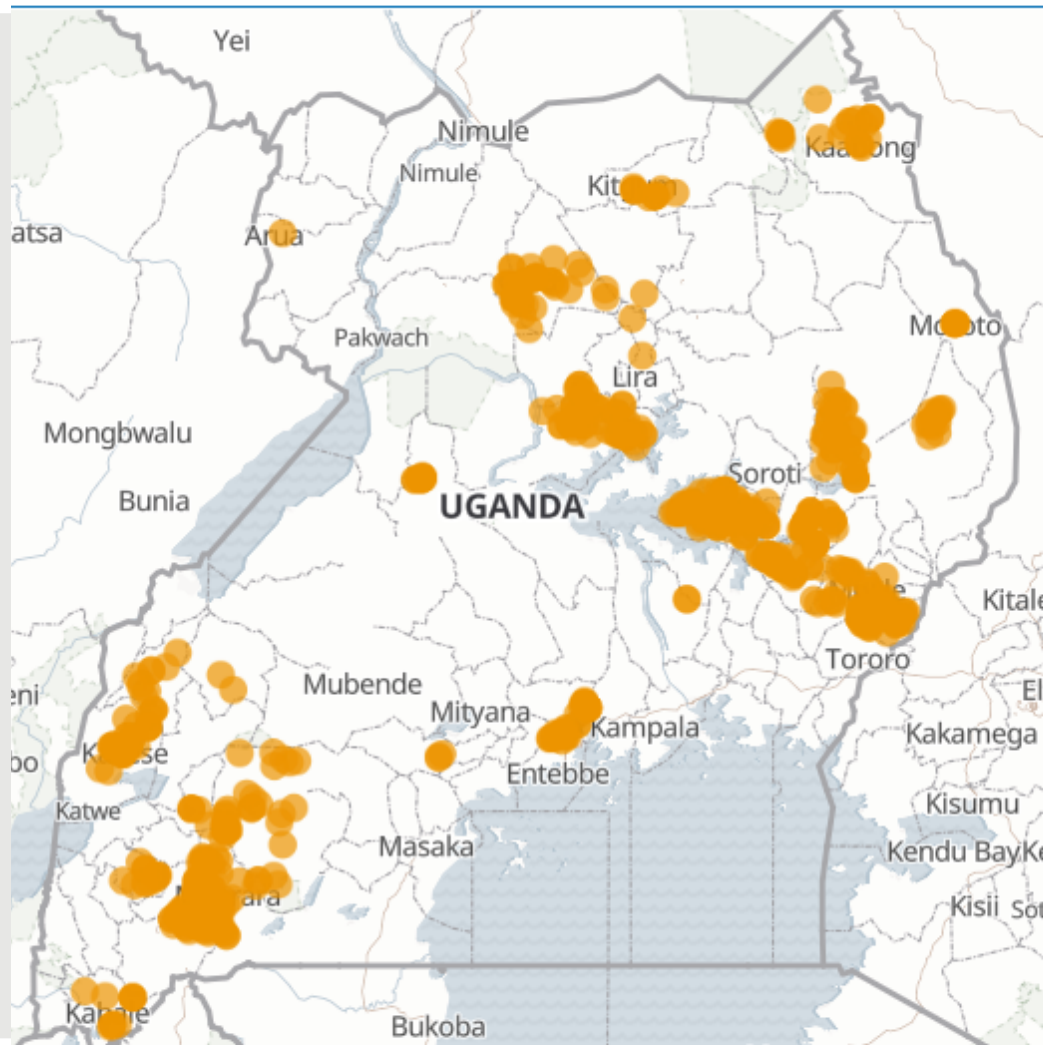
Average Number of Teachers Present

**29.1**

Average Number of Teachers Stationed



# Tangerine: Monitoring Dashboard – Interactive Map





## Key Outputs

- Number of tablets distributed: **376**
- Number of Coordinating Centre Tutors (CCTs) trained: **154**
- Total number of stakeholders trained: **350**
- Number of classroom observations uploaded since August 1, 2018: **1,402**
- Number of Tangerine support group members led by Information Technology (IT) coordinators: **12**
- Percentage of School Health and Reading Program (SHRP) districts covered through the Google.org grant program: **100%**



## Findings- No Change in Quantity –YET!

<b>Term 3</b>	<b>2017 (Baseline) (Percentage) from Program FAs Data (Sample)</b>	<b>2018 (Endline) (Percentage) from FA Data (Sample)</b>	<b>2018 (Endline) (Number) from the Tutor Download (Percentage)</b>
<b>Schools visited</b>	46% of schools	42% of schools	885 out of 4,081 schools=22%
<b>CCTs visiting schools</b>	89%	115 out of 144 CCTs=80%	134 out of 166 CCTs=81%

## Findings- Quality of Feedback Improved

Guidance Provided	Pilot		Non-Pilot	
	Number	Percentage (%)	Number	More
Learner assessment*	27	6	48	2
Lesson planning and preparation*	18	4	62	2
Following the teaching steps*	12	3	19	1
Specific reading-related guidance*	15	3	54	2
General support (areas not previously mentioned)	45	10	133	4
No blue book or no entry in blue book	287	63	2,586	80

## Linking it back to existing systems

- Use of teacher training college ICT staff to train and provide support
- Whatsapp group among teacher training college ICT staff
- Working with Ministry of Education to take over server maintenance



# Audio Computer Assisted Self Interview (ACASI)



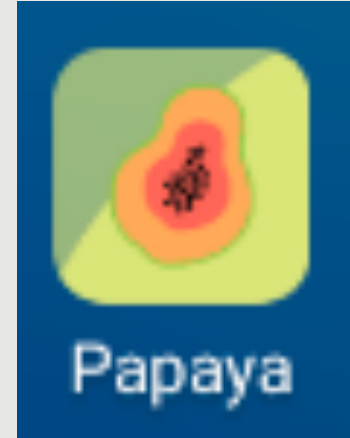
RTI has introduced the use of tablets for research studies using ACASI to collect data from students divulging sensitive information like that of harassment, bullying and violence

For more information

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



Google Play Store





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