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
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

- Systems and policies are strengthened
- P1 to P4 pupil books and teacher guides
- Teachers trained in best practices
- Teachers supported in the classroom
- Advocacy for local language literacy instruction
- Rigorous assessment of foundational reading skills

Learners read more fluently and understand more of what they are reading in both local language and English.
Teachers supported in the classroom
Papaya
Select your language

Tap a letter to play the sound

Record & listen to your own voice — or the teachers!
Google Grant:
The aim of the Google grant tablet program was to improve the functionality of Tangerine Coach (an existing technology)

**INCREASE:**

- Quality of visits through structured feedback based on classroom observation data entered into Tablet.
- Quantity of visits through the use of a dashboard which would increase the accountability of CCTs to their supervisors and the MoES
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 as you read them 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.
Filters allow Teacher College and MoES officials to select the District, Coordinating Centre, and Time Period to retrieve monitoring data from.
Tangerine: Monitoring Dashboard

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

<table>
<thead>
<tr>
<th>District name</th>
<th>Schools Visited</th>
<th>Schools in the District</th>
<th>Percent Visited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wakiso</td>
<td>133</td>
<td>271</td>
<td>49 %</td>
</tr>
<tr>
<td>Mbarara</td>
<td>91</td>
<td>219</td>
<td>42 %</td>
</tr>
<tr>
<td>Serere</td>
<td>80</td>
<td>95</td>
<td>84 %</td>
</tr>
<tr>
<td>Kasese</td>
<td>77</td>
<td>253</td>
<td>30 %</td>
</tr>
<tr>
<td>Apac</td>
<td>68</td>
<td>137</td>
<td>50 %</td>
</tr>
<tr>
<td>Kiruhura</td>
<td>66</td>
<td>138</td>
<td>48 %</td>
</tr>
<tr>
<td>Mbale</td>
<td>52</td>
<td>132</td>
<td>39 %</td>
</tr>
<tr>
<td>Bushenyi</td>
<td>46</td>
<td>150</td>
<td>31 %</td>
</tr>
<tr>
<td>Arua</td>
<td>39</td>
<td>211</td>
<td>18 %</td>
</tr>
<tr>
<td>Kyenjojo</td>
<td>38</td>
<td>128</td>
<td>30 %</td>
</tr>
</tbody>
</table>
Learner Enrollment and Attendance in Timeframe

- **Male Attendance**
  - Average Number of Males Present: 104.6
  - Average Male Attendance: 77%

- **Female Attendance**
  - Average Number of Females Present: 107.3
  - Average Females Present: 80%

Teacher Attendance in Timeframe

- Average Number of Teachers Present: 10.5
- Average Number of Teachers Stationed: 29.1
- Average Teacher Attendance: 36%
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!

<table>
<thead>
<tr>
<th>Term 3</th>
<th>2017 (Baseline) (Percentage) from Program FAs Data (Sample)</th>
<th>2018 (Endline) (Percentage) from FA Data (Sample)</th>
<th>2018 (Endline) (Number) from the Tutor Download (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools visited</td>
<td>46% of schools</td>
<td>42% of schools</td>
<td>885 out of 4,081 schools=22%</td>
</tr>
<tr>
<td>CCTs visiting schools</td>
<td>89%</td>
<td>115 out of 144 CCTs=80%</td>
<td>134 out of 166 CCTs=81%</td>
</tr>
</tbody>
</table>
Findings - Quality of Feedback Improved

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

Google Play Store