National Level Classroom Monitoring: The Impact of Kenya Tusome on Learning Outcomes and Accountability

Dr. Benjamin Piper
Senior Director, Africa Education
RTI International
lake
face
rice
cold
say

Practice reading the common words.

Have say

Look at the picture. Read the story.
Principles for Selecting M&E Tools Using ICT

- Test Big Ideas rigorously
- Test usability consistently
- Plan for termly updates
- Focus on demand creation for the data
- Embed data availability in gov’t systems
- Focus on positive reinforcement
1. Tangerine Tutor
   – Cloud-based observational tool
   – Uploads tied to reimbursement
2. E-versions of instructional materials
3. Instructional videos
4. Papaya for letter sound practice
Tangerine Tutor

Tutor Menu

Workflows  Sync  Schools

- Classroom observation with pupils books
- Feedback
- Maths Teachers Observation Tool
- Observing CSO by MoEST/TSC/RTI
- SCDE Tool
- Feedback
- Tablet Assessment Study - control level - CDE/TSC CD tool
- Tablet assessment study - CSO tool
- Training Venue GPS mapping
- TSC forms

Type in details

Role  CSO
TSC or Employment Number
User Name
M-Pesa Phone
Year of birth
Password
Confirm Password
First name
Last name
County  Select...
Gender  Male
Phone
Email

Sign up
Lesson Observation A - Kiswahili/English - Full PRIMR

Lesson observation

As soon as the teacher has finished the lesson, hit NEXT below to capture the end time of the lesson, and to move to the general lesson follow-up questions, lesson review, and student assessments.

What Phonemic Awareness activities were modeled?
Thumbs up/thumbs down  Blending  Segmenting  This section was skipped

Did the teacher pronounce the sound correctly?
Yes  No

Was the activity oral only (nothing on the board)?
Yes  No
Tangerine Tutor – 3 Embedded Pupil assessments

Student 1

English Class 1 - Term 2

Start 44

Pat has a pet
and a mat. Pat
sits on the mat.
Sam then visits Pat.
Sam wants to chat.
Pat and Sam sit
on the mat and
chat.

Alert
Time. Please mark last item attempted.
OK
Based on your classroom observations and student assessment, the following are some of the areas the teacher needs to work on. You may focus your discussion on the top 3 items.
Lesson duration: 25 minutes

**Vocabulary**

The teacher did not support the children to make sentences that explain the words.

1. Say the word
2. Ask the pupils if they know the word.
3. Show or define the word in simple language.
4. Have pupils use the word in a sentence that shows the meaning.

Watch: Vocabulary Video with Teacher Maina

**I do / We do / You do Reading**

Children must have opportunities to read every day. With I do/We do/You do, the teacher reads first, then the teacher reads with the class, finally the pupils read on their own or with partners.

**Homework**

The students that were assessed in this class achieved on average per minute.

Remember that for Kiswahili, the end of grade benchmark is 17 correct items per minute in Class 1 and 45 correct items per minute in Class 2. For English, the end of grade benchmark is 30 correct items per minute in Class 1 and 65 correct items per minute in Class 2.

Use this information in your discussions with the teacher.

**TAC/Coach Notes:**

How did the feedback session go? What do you hope the teacher will do in their next planning time?

**Tap here to edit**
Tusome Classroom Observation Dashboard
# National Data

## TUSOME

### Year: 2018  |  Month: Feb

#### CSO Report (2018 Feb)

<table>
<thead>
<tr>
<th>County</th>
<th>Number of classroom visits</th>
<th>English - Class 1 Correct per minute</th>
<th>English - Class 2 Correct per minute</th>
<th>English - Class 3 Correct per minute</th>
<th>Kiswahili - Class 1 Correct per minute</th>
<th>Kiswahili - Class 2 Correct per minute</th>
<th>Kiswahili - Class 3 Correct per minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>14174 (57%)</td>
<td>12 (13%)</td>
<td>32 (19%)</td>
<td>65 (0%)</td>
<td>12 (47%)</td>
<td>21 (16%)</td>
<td>42 (0%)</td>
</tr>
<tr>
<td>Baringo</td>
<td>168 (25%)</td>
<td>8 (1%)</td>
<td>23 (3%)</td>
<td>65 (0%)</td>
<td>12 (55%)</td>
<td>18 (0%)</td>
<td>39 (0%)</td>
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<tr>
<td>Bomet</td>
<td>243 (39%)</td>
<td>9 (3%)</td>
<td>21 (4%)</td>
<td>41 (0%)</td>
<td>9 (16%)</td>
<td>17 (1%)</td>
<td>27 (0%)</td>
</tr>
<tr>
<td>Bungoma</td>
<td>367 (45%)</td>
<td>7 (2%)</td>
<td>27 (6%)</td>
<td>54 (0%)</td>
<td>7 (25%)</td>
<td>17 (13%)</td>
<td>35 (0%)</td>
</tr>
<tr>
<td>Busia</td>
<td>140 (31%)</td>
<td>7 (4%)</td>
<td>31 (19%)</td>
<td>62 (0%)</td>
<td>15 (59%)</td>
<td>19 (16%)</td>
<td>47 (0%)</td>
</tr>
<tr>
<td>Elgeyo Marakwet</td>
<td>292 (74%)</td>
<td>16 (23%)</td>
<td>34 (13%)</td>
<td>52 (0%)</td>
<td>10 (39%)</td>
<td>21 (9%)</td>
<td>37 (0%)</td>
</tr>
<tr>
<td>Embu</td>
<td>140 (36%)</td>
<td>8 (2%)</td>
<td>30 (6%)</td>
<td>63 (0%)</td>
<td>8 (16%)</td>
<td>26 (10%)</td>
<td>38 (0%)</td>
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</table>
### Homa Bay County Report

<table>
<thead>
<tr>
<th>Zone</th>
<th>Number of classroom visits (Percentage of Target Visits)</th>
<th>English - Class 1 (Correct per minute) (Percentage at KNEC benchmark)</th>
<th>English - Class 2 (Correct per minute) (Percentage at KNEC benchmark)</th>
<th>English - Class 3 (Correct per minute) (Percentage at KNEC benchmark)</th>
<th>Kiswahili - Class 1 (Correct per minute) (Percentage at KNEC benchmark)</th>
<th>Kiswahili - Class 2 (Correct per minute) (Percentage at KNEC benchmark)</th>
<th>Kiswahili - Class 3 (Correct per minute) (Percentage at KNEC benchmark)</th>
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<tbody>
<tr>
<td>Asego</td>
<td>51 (182%)</td>
<td>26 (61%)</td>
<td>52 (52%)</td>
<td>84 (0%)</td>
<td>22 (59%)</td>
<td>48 (0%)</td>
<td>48 (0%)</td>
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<tr>
<td>Atandi</td>
<td>68 (425%)</td>
<td>18 (80%)</td>
<td>45 (79%)</td>
<td>88 (0%)</td>
<td>28 (92%)</td>
<td>44 (69%)</td>
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<td>Awach</td>
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<td>no data</td>
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<td>Got Oyar</td>
<td>0 (0%)</td>
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<tr>
<td>Homa</td>
<td>10 (62%)</td>
<td>22 (33%)</td>
<td>34 (0%)</td>
<td>0</td>
<td>9 (33%)</td>
<td>13 (0%)</td>
<td>0</td>
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<tr>
<td>Kabunde</td>
<td>67 (609%)</td>
<td>18 (39%)</td>
<td>10 (0%)</td>
<td>63 (0%)</td>
<td>20 (84%)</td>
<td>20 (42%)</td>
<td>31 (0%)</td>
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<td>Kendie</td>
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<tr>
<td>Kibuyu</td>
<td>37 (231%)</td>
<td>23 (32%)</td>
<td>48 (41%)</td>
<td>65 (0%)</td>
<td>16 (50%)</td>
<td>13 (0%)</td>
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<td>Kigoto</td>
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<tr>
<td>Kobama</td>
<td>4 (12%)</td>
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<td>0</td>
<td>0</td>
<td>41 (66%)</td>
<td>34 (0%)</td>
<td></td>
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<tr>
<td>Kobodo</td>
<td>21 (91%)</td>
<td>32 (61%)</td>
<td>61 (56%)</td>
<td>83 (0%)</td>
<td>20 (75%)</td>
<td>39 (33%)</td>
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<td>Lambwe</td>
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<td>no data</td>
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<td>no data</td>
<td>no data</td>
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<tr>
<td>Mbita East</td>
<td>0 (0%)</td>
<td>no data</td>
<td>no data</td>
<td>no data</td>
<td>no data</td>
<td>no data</td>
<td>no data</td>
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<tr>
<td>Mbita West</td>
<td>14 (70%)</td>
<td>34 (50%)</td>
<td>44 (56%)</td>
<td>66 (0%)</td>
<td>46 (66%)</td>
<td>43 (0%)</td>
<td>70 (0%)</td>
</tr>
<tr>
<td>Mzima</td>
<td>8 (57%)</td>
<td>10 (57%)</td>
<td>22 (57%)</td>
<td>39 (0%)</td>
<td>16 (34%)</td>
<td>28 (40%)</td>
<td>76 (0%)</td>
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<td>Mzima East</td>
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<td>no data</td>
<td>no data</td>
<td>no data</td>
<td>no data</td>
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<tr>
<td>Mzima West</td>
<td>8 (57%)</td>
<td>34 (50%)</td>
<td>44 (56%)</td>
<td>66 (0%)</td>
<td>46 (66%)</td>
<td>43 (0%)</td>
<td>70 (0%)</td>
</tr>
<tr>
<td>Total</td>
<td>322 (100%)</td>
<td>113 (100%)</td>
<td>207 (100%)</td>
<td>347 (100%)</td>
<td>292 (100%)</td>
<td>338 (100%)</td>
<td>347 (100%)</td>
</tr>
</tbody>
</table>
June is the sixth month of the year. I go up to 30 days. Farmers get a lot of food when I come. Brothers have a lot of food to look too.

My name is July. I am the seventh month of the year. I go up to 31 days. People feel cold when I come. They put on heavy clothes. The clothes help them to keep warm.
GPS data

The minute is the calculated average out of all individual assessment results from all qualifying classroom visits in the selected month to date, divided by the number of assessments conducted.

KNEC benchmark is the percentage of those students that have met the KNEC benchmark for either Kiswahili or English, and for either class 1, class 2, or class 3, it is the percentage of all the students assessed for those subjects. The benchmarks for class 3 are yet to be defined.
Local level data

Correct per minute is the calculated average out of all individual assessment results from all qualifying classroom visits in the selected month to date, divided by the total number of assessments conducted.

Percentage at KNEC benchmark is the percentage of those students that have met the KNEC benchmark for either Kiswahili or English, and for either class 1, class 2, or class 3, out of all of the students assessed for those subjects. The benchmarks for class 3 are yet to be defined.
Data on Data Usage

- 2016/17 national survey
- 76% of the coach population
- 72% of the county director population
Coach ICT Tool Utilization

I Use This Tool During Every Coaching Session...

- Tangerine Tutor: 74.3%
  - Agree: 23.7%
  - Strongly agree: 50%

- PDF of materials: 50%
  - Agree: 42%
  - Strongly agree: 16.9%

- Instructional videos: 45.8%
  - Agree: 42.7%

- Papaya sound practice app: 14.5%
  - Agree: 42.7%
Data for Accountability Framework

Level 1 – Data is available

Level 2 – Data is used

Level 3 – Data is used to make changes
County Directors Use of Data for Accountability

- Trained on Tusome: 89.7%
- Issued a tablet: 89.7%
- Coaching data affected your county: 79.4%
- Received data via email: 66.9%
- Data affected supervisory visits: 65.7%
- Gave negative feedback to coaches: 52.2%
- Gave positive feedback to coaches: 50.7%
- Data affected decision to reassign or fire coaches: 28.4%
- Data affected resource allocation: 11.9%
- Data affected instructional materials: 16.4%
Tusome’s Impact on English Benchmarks

- Fluent: 65+ CWPM
  - Baseline: 2%
  - Midline: 7%
  - Class 1: 10%
  - Class 2: 12%
  - Midline: 27%

- Emergent: 30-64 CWPM
  - Baseline: 35%
  - Midline: 47%
  - Class 1: 23%
  - Class 2: 22%
  - Midline: 22%

- Beginning: 1-29 CWPM
  - Baseline: 53%
  - Midline: 38%
  - Class 1: 23%
  - Class 2: 28%
  - Midline: 28%

- Zero Reader: 0 CWPM
  - Baseline: 23%
  - Midline: 38%
  - Class 1: 12%
  - Class 2: 23%
  - Midline: 12%
Tusome External Evaluation Effect Sizes (SD)

Freudenberger & Davis (2017)

English
- Grade 1: 0.67
- Grade 2: 1.04

Kiswahili
- Grade 1: 0.63
- Grade 2: 0.76
Reflections

- Test the M&E system before roll out
- Focus on classroom support
- Get data to decision-makers
- Build demand for accountability data
- Find simple ways to access data
- The point - increase take-up and utilization
Thank you!
bpiper@rti.org
Impact of Tusome on Kiswahili Benchmarks

- **Fluent**
  - 45+ CWPM: 12% Baseline, 17% Midline, 12% Baseline, 17% Midline

- **Emergent**
  - 17-44 CWPM: 70% Baseline, 45% Midline, 54% Baseline, 54% Midline

- **Beginning**
  - 1-16 CWPM: 70% Baseline, 45% Midline, 43% Baseline, 43% Midline

- **Zero Reader**
  - 0 CWPM: 45% Baseline, 43% Midline, 15% Baseline, 15% Midline
## Tusome Effect Sizes (standard deviations)

<table>
<thead>
<tr>
<th>Subtask</th>
<th>English Class 1</th>
<th>English Class 2</th>
<th>Kiswahili Class 1</th>
<th>Kiswahili Class 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phoneme segmentation</td>
<td>1.07</td>
<td>2.57</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Letter sound knowledge</td>
<td>0.71</td>
<td>1.63</td>
<td>0.75</td>
<td>1.32</td>
</tr>
<tr>
<td>Syllable fluency</td>
<td>--</td>
<td>--</td>
<td>0.66</td>
<td>0.80</td>
</tr>
<tr>
<td>Invented/non-word decoding</td>
<td>0.52</td>
<td>0.68</td>
<td>0.45</td>
<td>0.50</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>0.48</td>
<td>0.41</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Passage reading (A)</td>
<td>0.67</td>
<td>0.72</td>
<td>0.75</td>
<td>0.71</td>
</tr>
<tr>
<td>Reading comprehension (A)</td>
<td>0.40</td>
<td>0.49</td>
<td>0.62</td>
<td>0.69</td>
</tr>
<tr>
<td>Passage reading (B)</td>
<td>0.73</td>
<td>0.86</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Reading comprehension (B)</td>
<td>0.75</td>
<td>0.94</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Listening comprehension</td>
<td>--</td>
<td>--</td>
<td>0.52</td>
<td>0.52</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>.67</strong></td>
<td><strong>1.04</strong></td>
<td><strong>.63</strong></td>
<td><strong>.76</strong></td>
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