**ASSESSMENT PURPOSE**

Improving reading outcomes has been a central policy and program goal of the Government of Ghana and its partners. Since July 2021, T2E+ has been supporting transitional bilingual instruction for children from kindergarten 2 to Basic 3 (equivalent to primary grade 3) in 5,425 public schools in Ghana. The program is designed to enhance the development of English reading skills by first teaching children transferable language and reading skills in their mother tongues.

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**PROBLEM**

- Low reading performance among early grade learners
- Limited training opportunities for teachers
- Limited instructional resources at home and school

**SOLUTION**

- Transitional bilingual education combined with a national radio reading program
- Professional teacher training, coaching, mentoring in reading instruction
- Creating a print-rich school environment with ample reading materials and take-home readers

**APPLICATION**

- Provided instructional support and resources to teachers and learners across:
  - 16 regions
  - 257 districts
  - 5,300+ public schools
  - 700,000+ pupils
  - 22,000+ teachers

**RESULTS**

- Improved language and reading performance in English and Ghana’s national language
- Improved teacher instruction in early grade reading instruction

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*Figure 1: Core activities and intended outcomes of T2E+*
EVALUATION METHODS

The analysis presented is part of a larger impact evaluation of T2E+ conducted via a randomized controlled trial with one treatment and one control group in Basic 1 (B1) and Basic 2 (B2), separately. Treated schools were to receive T2E+ during the 2021-22 academic school year. Controlled schools were placed on a waiting list while the evaluation was ongoing, but would receive some T2E+ support at a later time.

SAMPLING PROCEDURE

Data was collected from 100 treatment and 99 control schools. The schools were selected at random from a pool of 3,127 eligible schools currently participating in T2E+. Those that had participated in the pilot of T2E+ were excluded from the evaluation sample. **Boys and girls are equally represented in the sample.** Teachers were also surveyed to understand the learners’ instructional environment.

INSTRUMENTS

Learners’ data were collected through an Early Grade Reading Assessment (EGRA) in English and in eleven (11) Ghanaian languages approved by GES (Asante Twi, Akuapem Twi, Fante, Ewe, Ga, Dangme, Dagaare, Dagbani, Gonja, Kasem, and Nzema). Data were also collected through the Expressive Language Model (ELM) for English.

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### Reading Assessment

- **Letter Sound Knowledge**: identifying sounds and names of letters quickly and accurately
- **Non-word Reading**: reading unfamiliar or pseudo words quickly and accurately
- **Oral Reading Fluency**: reading a short passage quickly and accurately

### Expressive Language Skills Assessment

- **Receptive Vocabulary**: listening to simple words read aloud and choosing a corresponding image for each word
- **Expressive Vocabulary**: describing an image shown with a proper English word
- **Story Retelling**: listening to stories read aloud and repeating them in one's own words
- **Inference Making**: listening to stories read aloud and understanding their meanings

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Figure 2: Sampling procedure for T2E+ with achieved sample data
**FINDINGS**

**BACKGROUND CHARACTERISTICS**

The treatment and control groups possessed *similar characteristics in all key background variables* measured in our analysis including age, gender, family’s socio-economic status, and home literacy environments amongst others.

<table>
<thead>
<tr>
<th>Description</th>
<th>Basic 1</th>
<th>Basic 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years</td>
<td>Treatment</td>
<td>Control</td>
</tr>
<tr>
<td></td>
<td>8.0</td>
<td>8.2</td>
</tr>
<tr>
<td>Number of days absent at school in the past week</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Number of reading resources at home</td>
<td>1.8</td>
<td>1.8</td>
</tr>
<tr>
<td>Percent of girls</td>
<td>49.4</td>
<td>50.1</td>
</tr>
<tr>
<td>Percent of children whose home and school language match</td>
<td>66.6</td>
<td>64.4</td>
</tr>
<tr>
<td>Percent of children reporting parents read to them</td>
<td>26.1</td>
<td>26.5</td>
</tr>
<tr>
<td>Percent of children reporting teachers use English outside class</td>
<td>77.1</td>
<td>81.7</td>
</tr>
</tbody>
</table>

Table 1: Overview of participant demographic averages in Basic 1 and Basic 2. A checkmark denotes that the averages are similar between treatment and control in each grade level.

**LANGUAGE MAPPING**

Ghana is a multilingual nation. Among all, there are 11 Ghanaian languages approved by the Ghana Education Service for official medium of instruction in schools. Some children in our sample also speak these languages at home, while others do not. Across both B1 and B2, 63-65% of students spoke the same language at school and at home; teachers had a language-classroom match rate at 73-75%.

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**LANGUAGE & READING PERFORMANCE**

The children’s oral language and reading scores on EGRA and ELM were *similar between the treatment and control groups in both B1 and B2*. In B1, children in the treatment and control groups generally performed similarly on all EGRA and ELM subtests except that the former group scored slightly higher in English letter sound. Children in B2 performed better than those in B1 on all three assessments. Overall, in B2, children in the treatment and control groups performed similarly on all EGRA and ELM subtests except that the former group scored slightly higher in local language letter sound identification, local language non-word reading, and English letter sound identification. In all other areas, the numeric differences between the two groups were marginal and statistically insignificant, meaning these differences could be due to chance rather than systematic. The average EGRA scores were well below Ghana’s national benchmarks in all subtests, languages, and all groups.
Figure 3: Comparison and overview of EGRA and ELM mean scores between treatment and control groups in B1 and B2. Differences in score categories marked with an asterisk (*) are considered statistically significant between treatment and control groups. For reference, national benchmarks for each EGRA score category (letter sound, invented word, fluency) in English are 30, 20, and 45, respectively, in the local language those benchmarks are 40, 25, and 40, respectively. The highest score that children can receive on expressive and receptive vocabulary ELM assessments is 100; the highest score possible for story retell and meaning ELM assessments is 3.

**KEY TAKEAWAYS**

In both B1 and B2, the treatment and the control groups we created for the T2E+ impact evaluation are comparable in nearly all key background characteristics, as well as the language and reading outcomes of interest. This similarity between the treatment and control groups in each grade is essential to adequately attribute differences in children’s language and reading outcomes to T2E+ at endline. The findings show that the average language and reading scores of children in public primary schools in Ghana were far below the grade-appropriate MoE-approved EGRA benchmarks or the highest obtainable ELM scores. The performance was particularly weak in higher-level skills such as reading fluency and inference making.

**NEXT STEPS**

Endline evaluation data will be collected in October 2022 to better evaluate the effectiveness of the T2E+ program. In order to preserve the similarities between the treatment and control groups, we will:

1. Use various media to remind directors of schools about endline school visits.
2. Conduct community entry visits prior to the collection of endline data in order to gain buy-in from national, regional, and district education directorates and allied agencies, teachers, parents, and community leaders. A team of research coordinators will be assigned to each of the three regional clusters including Coastal, Middle Belt, and Savannah regions.

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