IEA’s Rosetta Stone: Project and Implementation

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Objectives

- To provide data on proportions of students of regional assessments achieving TIMSS and PIRLS Minimum Proficiency Levels (MPLs) serving as a measure for SDG 4.1.1b
- ...by establishing a concordance between regional assessment results at the end of primary education and the TIMSS intermediate and PIRLS international low benchmarks
  - This concordance enables one to project, with a certain confidence, regional assessment results onto the TIMSS mathematics and PIRLS reading scales
- Objectives were achieved through close collaboration between UIS, IEA, the TIMSS & PIRLS ISC at Boston College, the coordination centers for regional studies (LLECE & CONFEMEN), and participating countries → thanks to all the teams involved!
- Special thanks to Khalil Diarra & Massar Diop (Senegal), Thierry Rocher (IEA Chair), and to Sebastian Meyer and Juliane Kobelt from the IEA Hamburg team
Implementation

• To create the concordance table, Rosetta Stone needs to be implemented in a subset of countries per regional assessment.
• As a first step, Rosetta Stone has been implemented in two Latin American countries (ERCE) and three African countries (PASEC).
• It would be possible and desirable to administer Rosetta Stone in other regional studies as well (e.g., SACMEQ, SEA-PLM, PILNA).
Instrument Development and Test Design

- Eight Rosetta Stone booklets with easier TIMSS 2015/2019 and PIRLS 2016 items were administered at the same time as PASEC and ERCE to students at grade 6.
- That is, the same students took their regional assessment followed by TIMSS and PIRLS booklets in a separate session.
- The combined data was used to construct concordance tables.
Administration

- ERCE 2019: Administration of the Rosetta Stone material took place in combination with the ERCE 2019 Main Survey implementation.
- PASEC 2019: Project was administered in 2020, where PASEC was re-administered in combination with the Rosetta booklets for about half of the regular sample size.

<table>
<thead>
<tr>
<th>ERCE Countries</th>
<th>N (Students)</th>
<th>N (for analysis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colombia</td>
<td>4,467</td>
<td>2,619 – 3,108</td>
</tr>
<tr>
<td>Guatemala</td>
<td>4,894</td>
<td>3,902 – 4,716</td>
</tr>
<tr>
<td>Total</td>
<td>9,361</td>
<td>6,521 – 7,824</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PASEC Countries</th>
<th>N (Students)</th>
<th>N (for analysis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burundi</td>
<td>2,304</td>
<td>2,271</td>
</tr>
<tr>
<td>Guinea</td>
<td>2,252</td>
<td>2,207</td>
</tr>
<tr>
<td>Senegal</td>
<td>2,072</td>
<td>2,059</td>
</tr>
<tr>
<td>Total</td>
<td>6,628</td>
<td>6,573</td>
</tr>
</tbody>
</table>

Depending on the type of analyses.
Challenges

ERCE
- Drop out of Chile for the main data collection
- Delays with the ERCE Main Survey and consequently with the Rosetta implementation due to the pandemic and other reasons

PASEC
- Covid pandemic delayed test administration in Guinea and for part of the sample in Senegal by half a year
- Harmonization needed between the different survey operation procedures and data entry systems of the assessments

→ All challenges overcome by excellent collaboration between contributing teams on local, regional, and international level
Thank you for your attention!

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