Extending the Reach of TIMSS and PIRLS: IEA’s Rosetta Stone and LaNA

Project Update

Matthias von Davier & Lale Khorramdel

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- Summary
The TIMSS and PIRLS scales and benchmarks are established global indicators of student achievement around the world.

We discuss two efforts to build on TIMSS and PIRLS:

- **Rosetta Stone**: comparing TIMSS and PIRLS to two regional assessments – ERCE and PASEC; Sponsored by UNESCO.
  - Concordance tables for score comparisons between different assessments
  - Projected TIMSS and PIRLS achievement using only ERCE or PASEC results

- **LaNA**: a new, less difficult Literacy and Numeracy assessment for countries where TIMSS and PIRLS are too difficult
  - LaNA is rooted in the TIMSS and PIRLS frameworks, allows direct linking
Goal

• Provide assessments that enable international comparisons for countries in which TIMSS and PIRLS are too difficult for students

• Help countries building capacity and facilitate better understanding of regional vis-a-vis international large-scale assessments
  – Example: How do international and regional assessment benchmarks relate?

• Provide countries with data that help to target the UN’s SDG 4 which aims to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.”
Rosetta Stone: Project Status

- Successfully established concordance tables based on data from the following countries where the same students took both ERCE or PASEC and Rosetta Stone linking booklets
  - ERCE: Guatemala and Colombia (grade 6)
  - PASEC: Burundi, Guinea and Senegal (grade 6)

- The concordance tables and reports together with an executive summary have been published in a **Global Launch on June 27, 2022** together with the UNESCO institute for statistics (UIS) and IEA
Rosetta Stone: Comparing PASEC with TIMSS & PIRLS

• Le Programme d’analyse des systèmes éducatifs de la CONFEMEN (PASEC) includes participants from (mainly) francophone countries in Africa.

• The Rosetta report is based on joint work with participating PASEC countries is available through the IEA, the UNESCO Institute for Statistics and the TIMSS and PIRLS International study center.
Rosetta Stone: Comparing ERCE with TIMSS & PIRLS

- **(ERCE)** is UNESCO’s Regional Comparative and Explanatory Study assesses primary students from Latin America in reading, mathematics and science.

- The Rosetta report is based on joint work with participating ERCE countries is available through the IEA, the UNESCO Institute for Statistics and the TIMSS and PIRLS International study center.
Example: Concordance Table for ERCE Math

The concordance table provides a **range** of likely TIMSS scores for each ERCE score level to account for the statistical variability of achievement estimates in both TIMSS and ERCE.

This allows projections of how a country **approximately** would perform on TIMSS if only ERCE data is available.
We hope to continue collaborations with UNESCO and regional partners, including additional countries or other assessments. The ERCE and PASEC Rosetta Stone studies showed that successful data collections and very useful concordance tables can be achieved. The methodology we developed for the studies was presented and well received at an international meeting of the psychometric society. The studies showed that the TIMSS and PIRLS scales can be extended to a wider range of countries through collaborations and new developments.
LaNA: Project Status

• Final LaNA instrument is a redesign based on the results of several waves of piloting in four countries
• The Pilot showed that LaNA constitutes a set of reliable scales with appropriate between school and between country variance
• The finalized LaNA design based on the pilot results is ready for full scale implementation
• The final LaNA instrument together with the linking booklets will be administered to 5-10 seed countries
Implementation of LaNA

- Instruments, administration manuals and scoring guides have been prepared and shared with IEA
- A preliminary timeline for the LaNA data collection, analysis and reporting has been established
- IEA is currently recruiting countries, and we are happy to invite more
- LaNA and linking booklets are given in an equivalent groups design
- Data from the first LaNA main study countries will be used to
  - Establish the LaNA scale and scale metric, and link to TIMSS/PIRLS
  - Explore Creation of a new “Basic” International Benchmark
LaNA – Timeline

FROM JUNE 2022

- Project inception meetings

JULY 2022 TO FEBRUARY 2023

- Within-country project preparation (setting up project team, preparing for the Field Test)

MARCH OR APRIL 2023

- Training for Practice Administration (sampling, test administration, data entry, scoring)

APRIL TO MAY 2023

- Practice administration (1 day)

MAY TO SEPTEMBER 2023

- Sampling activities and instrument finalization

OCTOBER TO NOVEMBER 2023

- Main data collection

UNTIL OCTOBER 2024

- Processing, scaling, reporting
Summary

• Reliable, valid, and internationally comparable indicators of student proficiencies in literacy and numeracy for measuring progress toward the UN’s SDG 4

• This first main LaNA Study (after piloting and redesign) aims at a scale linkage to TIMSS (Math) and PIRLS

• LaNA and Rosetta Stone studies complement and complete each other: One establishes an expanded score range, the other shows relationships to existing regional assessments.

• A targeted outcome is establishing a new ‘basic’ benchmark that extends the reach of the achievement range measured on the TIMSS and PIRLS scales.
Thank You!

Matthias von Davier & Lale Khorramdel