

CALL FOR PROPOSALS

Call no. IEA 17/02-2026

IEA Research for Education Series:

Understanding Learning Growth through TIMSS Longitudinal Data

1. Introduction

The International Association for the Evaluation of Educational Achievement (IEA) invites proposals for a new volume in its *Research for Education* series. This volume will focus on secondary analysis from the TIMSS 2023 Longitudinal Study (TIMSS-L), examining student learning growth in mathematics and science over one year of schooling.

The deliverable for this project will be an 80- to 150-page book, to be published by Springer as part of the series (see <https://link.springer.com/bookseries/14293>), which is open access. The book should include tables, graphs, cited references, and any relevant appendices.

2. Study Background and Objectives

The TIMSS 2023 Longitudinal Study represents an innovative extension of the traditional TIMSS cross-sectional design. By reassessing the same sample of students one year after their initial participation in TIMSS 2023, TIMSS-L creates a unique opportunity to examine individual learning gains in mathematics and science. This repeated measures design allows researchers to move beyond group-level comparisons to investigate learning growth at the individual student level.

While cross-sectional studies like TIMSS have provided invaluable insights into achievement levels across countries and over time, they cannot directly address questions about learning progressions or the factors associated with differential growth. The longitudinal dimension of

TIMSS-L enables researchers to examine:

- How much students learn in one year of schooling across different education systems;
- Which home, classroom, and school factors are associated with greater learning gains;
- How achievement gaps evolve over time; and
- Whether relationships between contextual factors and achievement differ when examining growth versus cross-sectional status.

Through this call, the IEA invites researchers to contribute a volume that leverages the unique analytical opportunities afforded by the TIMSS-L repeated measures design to advance understanding of student learning growth in mathematics and science.

3. Possible Substantive Topics

The IEA welcomes proposals that address broad research questions that use the longitudinal nature of TIMSS-L data. Proposals may address questions such as:

- What factors are associated with differential learning growth in mathematics and science across diverse education systems?
- How do achievement gaps change over one year of schooling, and what contextual factors are associated with gaps widening or narrowing?
- Do relationships between student, teacher, and school characteristics differ when predicting learning gains versus achievement levels?
- How do instructional practices relate to student learning growth in different national contexts?

Proposals may adapt or expand on these questions or investigate other novel research areas. Research should draw primarily on TIMSS-L datasets, but the use of additional relevant data sources is encouraged where appropriate.

Competitive proposals will:

- Articulate a theoretical framework that situates growth within educational contexts.
- Engage critically with the TIMSS assessment framework and the opportunities afforded by the longitudinal design.
- Describe how home, classroom, and school contexts are conceptualized and operationalized in the analysis.
- Define clear, policy-relevant research questions and hypotheses.
- Propose robust analytical methods appropriate for longitudinal data and discuss the relevance and implications of anticipated findings.

Potential areas of focus might include (but are not limited to):

- Learning growth across different student populations (e.g., by gender, socioeconomic status).
- The association between instructional quality, curriculum coverage, and learning gains.
- Cross-national and/or cross-grade variation in learning growth and its relationship to educational policies and practices.
- The role of student motivation, attitudes, and self-concepts in learning growth.
- School-level factors associated with promoting equitable learning gains.
- Methodological innovations in analyzing repeated-measures achievement data from international assessments.

4. Data

TIMSS-L collects extensive information on students' mathematics and science achievement at two time points, approximately one year apart, along with contextual data from students, teachers, school principals, and curriculum experts. The repeated measures design, with two assessments of the same students, offers rich opportunities for growth modeling, difference-in-differences analyses, and examination of change over time.

The context questionnaires at both time points include information on:

- Student characteristics, home resources, attitudes, and out-of-school experiences;
- Teacher qualifications, instructional practices, curriculum coverage, and professional development;
- School characteristics, resources, climate, and policies; and
- Curriculum frameworks and implementation.

Proposals should specify:

- Which TIMSS-L datasets, questionnaire items, indices, or constructs will be used;
- Whether analysis will focus on mathematics, science, or both subjects;
- Any additional data sources (e.g., national datasets, international indicators); and
- Whether new data collection (e.g., system-level data) is needed.

5. Methods

Proposals should outline the analytical methods to be employed, including a justification for their suitability to the research questions. The longitudinal design of TIMSS-L opens up opportunities for sophisticated analytical approaches that leverage the repeated measures structure.

Appropriate methods may include (but are not limited to):

- Latent change score models to examine learning gains;
- Residualized models to estimate the association with contextual factors.
- Multilevel modeling accounting for students nested within classrooms and schools;
- Longitudinal measurement invariance testing to ensure comparability of constructs over time; and
- Fixed-effects to control for time-invariant student characteristics.

While the longitudinal nature of the data lends itself to quantitative methods, justified qualitative or mixed-methods approaches that complement the quantitative analyses are welcome. All methods should account for the complex sampling and assessment design of TIMSS-L, including the use of sampling weights, plausible values, and appropriate estimation of standard errors.

Authors are encouraged to describe how they will ensure the validity and reliability of findings, address potential limitations such as attrition or measurement error, and detail any planned integration of additional data sources.

6. General Guidelines for Proposal Submission

Proposals must be submitted in English and should not exceed 10 pages. Each proposal must:

- Include a review of relevant literature and clearly identify the proposed contribution to the existing research base.
- Explicitly describe both research relevance and policy relevance.
- Provide a detailed analytical framework, including proposed quantitative and/or qualitative methods.
- Detail the intended timeline for analysis, writing, and revisions.
- Include a detailed budget proposal, specifying the expected number of workdays and total costs (in euros or US dollars). The maximum budget is 40,000 euros.
- Provide short biographical notes (maximum 500 words each) for all team members, highlighting experience relevant to the proposed project.

Proposals will be evaluated on their methodological rigor, policy relevance, and feasibility within the proposed budget.

The project is expected to commence on 1 May 2026, with a final manuscript due to IEA for production by 1 September 2027. A complete draft must be submitted by 1 May 2027 to allow time for peer review, revision, and language editing.

Please submit proposals by email to secretariat@iea.nl

Subject line: Research for Education Volume—TIMSS Longitudinal Study

The deadline for proposals is 1:00 p.m. (CEST), 31 March 2026.