

TIMSS Longitudinal Study

Measuring Student Progress over Time

Project Update



Matthias von Davier & Lale Khorramdel

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Goal of the TIMSS Longitudinal Study



- The TIMSS Longitudinal Study provides a measure of average learning gains over the course of a school year that can be used to contextualize achievement differences across countries and gaps within countries
- The study builds on the existing infrastructure of TIMSS 2023 and is intended to produce results meeting the same high quality standards as any IEA study
- Learning gains will be measured on the well-known TIMSS achievement scales for mathematics and science



Sample



- The TIMSS 2023 4th and 8th grade students constitute the baseline and will be assessed again one year later in 5th and 9th grade, respectively
- Countries can participate in the longitudinal design for one or both grade options
- The feasibility of following the same students as they transition to another school or class must be assured



Setting



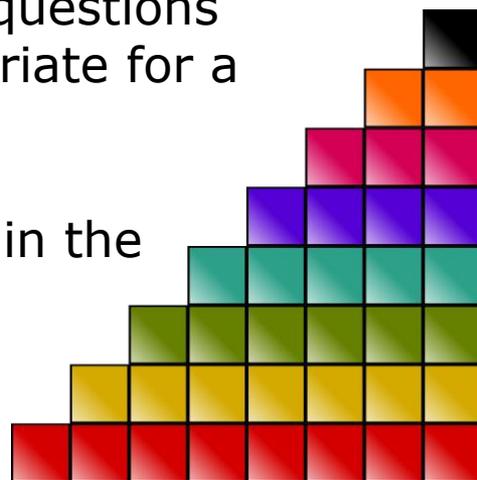
- Similar to TIMSS 2023, the fully digital TIMSS assessment will be used in 2024
- The group adaptive design introduced in TIMSS 2023 provides the flexibility to cater to the ability level of the subsequent grade levels tested in 2024
- The same item pool as in TIMSS 2023 will be used but a higher proportion of more difficult items will be allocated for the second measurement in 2024





Context of Student Achievement over Time

- The same international context questionnaires as in T23 will be used in the second measurement occasion in 2024
- Necessary adaptations will be made to ensure the questions asked in context instruments apply and are appropriate for a repeated presentation in 2024
- Similarly, required changes to the national options in the context questionnaires will be applied.





Benefits of Participation

- The TIMSS Longitudinal Study will provide education systems with high-quality, internationally comparative longitudinal data that can answer important questions about student growth
- Participating countries will
 - receive an additional dataset with achievement scores based on the joint analysis of the two time points
 - an international report on achievement differences between the two measurement points



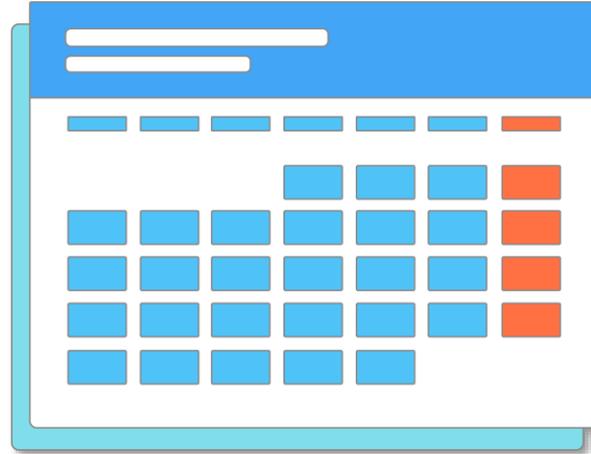
Benefits of Participation

- With the longitudinal data, countries will be able to:
 - Make information about achievement growth visible and available to education stakeholders
 - Compare educational quality in a global context using an alternative outcome measure
 - Contextualize achievement gaps and gain insights into how to address them
 - Use longitudinal evidence related to home, classroom, and school features associated with learning
 - gains to inform educational policy decisions
 - Build capacities to conduct longitudinal studies



Project Status

- Participating Countries:
 - Grade 4: four countries
 - Grade 8: three countries
- Additional countries are interested and in contact with IEA
- Preparatory work starts in October 2022

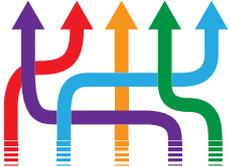


Project Timeline

Task	Date
Preparatory work – review of student context questionnaire, support country preparations	October 2022 – February 2023
TIMSS 2023 data collection, recruit TIMSS 2023 sample for longitudinal study (SH)	March–June 2023
Review of assessment material, software and sampling preparations for repeated measure	March 2023–June 2024
TIMSS 2023 data collection, recruit TIMSS 2023 sample for longitudinal study (SH)	September–December 2023
Continued (SH) sampling preparations for repeated measure (IEA, RTI, Countries)	September–December 2024
Reassess TIMSS 2023 students one year later (NH)	March –June 2024
Reassess TIMSS 2023 students one year later (SH)	September–December 2024
Analysis, Country Review, and Reporting	January 2025 – November 2025



Summary



- The TIMSS 2023/2024 longitudinal study is an important additional study, but is an optional component of TIMSS 2023
 - allows countries to talk about grade-to-grade growth measures
 - supports validity arguments about contexts of learning
- Measuring student growth in several countries will be a of great interest to educators, policy makers, and education research in participating countries
- Beyond that, we expect that the report and data products will be of interest well beyond the immediate group of participants

Thank You!



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