

CHAPTER 8

Layout Verification for TIMSS 2015

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Layout verification is the final external review and ratification of each participating country's national assessment instruments and their corresponding National Adaptations Forms. To ensure that the instruments are of the highest quality and are comparable across all of the participating countries and benchmarking entities, countries follow standard internationally agreed-upon procedures in preparing national versions of the assessment instruments (see [Chapter 6 on Survey Operations Procedures](#)). Assessment translation guidelines allow for national adaptations to instruments as long as international comparability is maintained. Countries are required to document any national adaptations applied to the international assessment instruments within the TIMSS 2015 National Adaptations Forms. This documentation is verified nationally and internationally throughout all stages of preparing each country's national instruments.

Prior to both the field test and main data collection, all national instruments undergo independent [translation verification](#) coordinated by the IEA Secretariat, and after the contents of the achievement booklets and context questionnaires have completed translation verification, the national instruments are sent to the TIMSS & PIRLS International Study Center for layout verification. During the layout verification process, the TIMSS & PIRLS International Study Center checks to ensure that all national assessment instruments conform to the international format and that any national adaptations made to the TIMSS 2015 international instruments do not unduly influence their international comparability. In particular, layout verification focuses on the following:

- Reviewing the national assessment instruments for acceptable layout structure including pagination, page breaks, item sequence, response options, text formats, and graphics
- Reviewing the national adaptations applied to both the international achievement booklets and context questionnaires with respect to how they may influence the international comparability of the data

Scope of Layout Verification for TIMSS 2015

Participating countries and benchmarking entities prepare national versions of the instruments for the field test and then again for the main data collection. This includes translating and/or adapting the newly developed items and questionnaires in preparation for the field test. Then, changes resulting from the field test are applied to the achievement items selected for the main data collection and similar modifications are applied to the context questionnaires. Accordingly, in preparation for TIMSS 2015 assessment administration, layout verification was conducted twice for each participating country—once for the field test and again for the main data collection.

To complete layout verification, each country submits the following documentation for each language in which they are administering the assessment(s):

- A set of all achievement booklets assembled in complete, ready-to-print booklet form
- Context questionnaires for school principals, teachers, parents/guardians¹, and students in complete, ready-to-print booklet form
- National Adaptations Forms for both the achievement booklets and context questionnaires, including documentation of national adaptations and the feedback received from translation verification

For the TIMSS 2015 main data collection, layout verification was completed for 57 countries and seven benchmarking participants. This included 48 countries and 7 benchmarking participants for the fourth grade assessment, 7 countries and 1 benchmarking participant for the TIMSS Numeracy assessment, and 40 countries and 7 benchmarking participants for the eighth grade assessment. With 22 countries administering the assessment(s) in multiple languages, the TIMSS & PIRLS International Study Center reviewed a total of 140 sets of national TIMSS 2015 assessment instruments (each set including achievement booklets and context questionnaires). A list of assessment instruments and languages they were administered in each of the participating countries can be found in Exhibits 7.1-7.3 of the [Translation and Translation Verification](#) chapter of this volume.

Layout Verification of Achievement Booklets

The primary goal of layout verification is to ensure that students in different countries experience the assessment instruments in the same way. Thus, the national achievement booklets were checked against the international versions to identify any deviations from the international format.

Due to differences in languages, the national assessment instruments varied slightly in length and format. The international versions, however, were designed with this in mind, and extra space was provided in the margins of the pages to facilitate the use of longer text and different paper sizes (letter versus A4) without necessitating extensive changes to the layout of each page.

1 The Early Learning Survey, which is completed by parents/guardians, is administered only at the fourth grade.

National Research Coordinators (NRCs) were directed to document all national adaptations (apart from direct translations) made to the achievement booklets within the achievement booklet National Adaptations Forms. During layout verification, the verifiers also checked the achievement items for international comparability while taking into consideration the national adaptations documented by the NRCs. Any layout deviations or errors, as well as any concerns of international incomparability of assessment items, were documented by the verifiers in the National Adaptations Forms.

Per the [TIMSS assessment design](#), the TIMSS 2015 achievement instruments include blocks of items from TIMSS 2011 and TIMSS 2007. These “trend blocks” provide the foundation for the measurement of change in student achievement over time and therefore must be administered in the same way across subsequent TIMSS cycles. As such, for countries that previously participated in TIMSS 2011 and/or TIMSS 2007, the TIMSS 2015 trend blocks were reviewed during the layout verification against those from the last cycle in which the country participated. Any deviations from the previous cycle were documented by the verifiers within the National Adaptations Forms.

Following layout verification, the National Adaptations Forms containing the verifiers’ comments were sent back to the National Research Coordinators for consideration. The National Research Coordinators were asked to confirm that each of the suggested changes was implemented or provide an explanation for not implementing the suggested change.

Layout Verification of Context Questionnaires

As with the achievement booklets, the context questionnaires were also checked against the international versions to identify any potential layout issues as well as to ensure the international comparability of the questionnaire data.

In an effort to make the questionnaires general enough for international analyses but appropriate for each intended audience, participating countries were required to adapt certain phrases and designations in the text of the questionnaires. The text that requires country-specific adaptations is enclosed in brackets (e.g., <fourth grade>) in the international instruments. To assist the NRCs in finding comparable and appropriate substitutions for the bracketed text, the TIMSS & PIRLS International Study Center supplied documentation in one of the [Survey Operations](#) Units, providing explanations of the intended meaning of each bracketed text, and where applicable, offered examples to guide the National Research Coordinators in selecting appropriate replacements.

National Research Coordinators were directed to document all national adaptations made to the context questionnaires within the National Adaptations Forms. During the layout verification, the verifiers checked the instruments for international comparability, taking into consideration the national adaptations documented by the National Research Coordinators. Any internationally incomparable adaptations or errors were documented by the verifiers in the National Adaptations Forms along with recommendations for recoding or rewording.

Additionally, the verifiers ensured that all bracketed text, requiring country-specific adaptations, was properly documented with English back translations. The documentation for these universally adapted questionnaire items is intended for later use in the National Adaptations Database. The database is a compilation of each country's intended adaptations, to be used during [data processing](#) by the IEA Data Processing and Research Center, and the information included in the database is reported as a supplement to the user guide for the [TIMSS 2015 International Database](#).

Similar to the layout verification process for the achievement items, layout verifiers provided the NRCs with feedback through the National Adaptations Forms, and the NRCs were asked to respond to the feedback by either confirming the implementation of the suggested modifications or providing an explanation as to why the changes were not applied.