

# National Roles and Tasks for IEA TIMSS 2027

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The following document outlines the key roles and tasks at the national level for conducting IEA's TIMSS 2027. The most important role is that of the National Research Coordinator (NRC), who serves as a country's main contact person for all aspects of the study. The NRC is an active ambassador for IEA studies and contributes to the national and international discourse around large-scale student assessments. The NRC's main responsibility is the implementation of the study in the country, including the coordination of all tasks (see tasks listed below). The NRC is required to have a proficient command of English (IEA's working language).

More specifically, the NRC is responsible for:

- organizing the National Study Center (NSC) to plan and execute the tasks required for TIMSS 2027;
- bringing national interests and priorities to discussions about the content and reporting plans for TIMSS 2027;
- employing and/or supervising staff at the NSC or sub-contracted organizations, including assigning/distributing required roles (listed below) for completing all survey operations and procedures tasks and implementing quality assurance measures to ensure accurate and reliable data;
- ensuring availability of required hardware and software and other necessary equipment and materials;
- communicating with the TIMSS & PIRLS International Study Center, IEA Amsterdam, IEA Hamburg, and RTI International;
- participating in the international NRC meetings (conducted in English);
- contributing to the TIMSS 2027 Encyclopedia by providing a country chapter;
- contributing to the TIMSS 2027 International Report by participating in the review process and ensuring the country's data are accurate;
- preparing and disseminating a national report for TIMSS in synchronization with the release of the TIMSS 2027 International Report; and
- communicating with national press, policymakers, and researchers about key findings and implications of TIMSS 2027 results.

In addition to the NRC, further staff are required in each country to successfully conduct the study.

## Required Roles and Expertise

- **Content and Curriculum Experts**  
The content and curriculum experts are responsible for reviewing the updated TIMSS 2027 mathematics and science assessment frameworks from the national

perspective, as well as participating in assessment development, reviewing items/scoring guides, and training for reliable scoring of constructed response items. It is desirable that the context questionnaire framework and the questionnaires be reviewed by individuals familiar with educational policies and practices in the country.

- **Sampling Coordinator**

The sampling coordinator works with the TIMSS Sampling Team (IEA and RTI) to adapt the international sampling design to national conditions. They are responsible for conveying specific national analysis priorities (e.g., analysis of population subgroups) that may affect the sampling design to the TIMSS Sampling Team.

- **Data Manager**

The data manager is responsible for all data related issues, organizing and implementing within-school sampling procedures, overseeing data entry/data submission, and verifying the quality of all data products in close collaboration with the IEA data management team. They also are responsible for or assist with preparing the software to be distributed for the electronically administered assessments.

- **Office Staff**

Further office staff may be needed for general office administration, which may include tasks such as contacting schools, making travel arrangements, etc.

The above-mentioned roles can be performed by one or several individuals depending on the resources available to the national center.

Additionally, each NSC will need to coordinate the following roles:

- **Translators/Translation Reviewers**

Translators and translation reviewers are responsible for adapting and/or translating the assessment instruments (achievement test and context questionnaires) into the national language(s) and for reviewing the translations internally. The NSC may also involve the translators and translation reviewers in the finalization of instruments following international translation verification. Translation, documentation, and both internal and external verifications are conducted using the RM Assessment Master (for the achievement test) and IEA *StudyExpert* (for the context questionnaires).

- **School Coordinators**

Each school participating in TIMSS nominates a school coordinator who provides information about classes, teachers, and students in the school and organizes and supervises the assessment administration. School coordinators organize checking and preparing devices to be used, launching the software on the compatible devices, and uploading the data to the study server, unless external computers/tablets are used, or the process is otherwise organized by the NSC.

The TIMSS & PIRLS International Study Center provides an international version of the *School Coordinator Manual*, which the NRC translates and/or adapts to create a national version for use in the participating schools. It is the NRC's responsibility to train school coordinators to effectively perform their tasks.

- **Test Administrators**

Participating schools are also required to have individuals that administer the assessment in the selected classes. Test administrators can be recruited by the NSC directly or can also be members of staff in schools (but it is suggested to not be a teacher of the target grade). In some situations, the school coordinator may also perform this task. The TIMSS & PIRLS International Study Center provides an international version of the *Test Administrator Manual*, which should be adapted and /or translated for use in the participating schools. Test administrator assistants can also be appointed to support during the test administration.

- **IT Support**

IT support is needed to ensure that each participating student is provided with a TIMSS-compatible device (school computers tested for TIMSS compatibility or external computers tested and prepared). IT support personnel should also be made available to provide assistance to school coordinators and test administrators who experience any issues while preparing for and during the test administration (e.g., in the form of a help desk).

- **National Quality Control Monitor**

The national quality control monitor observes and reports on actual testing sessions in 10 percent of selected schools. The ISC provides international templates of the *National Quality Control Manual* and the Classroom Observation Record, which can be adapted and /or translated for implementing the national quality assurance program.

- **Scorers**

The scorers apply TIMSS scoring guides to determine whether student answers to the constructed-response items are correct. An online scoring system will be used for scoring TIMSS.

- **Statistician**

A statistician will review the national data during the data processing stages of the study and will support the NRC with conducting analyses for the national report. This role could potentially be filled by the NRC, data manager, or some other staff member with the required qualifications.

- **Data Entry and/or Scanning Staff (if applicable)**

If any paper-based Home Questionnaires (Grade 4 only) are used, it will be necessary to have individuals enter the data into data files and/or scan the instruments and compile the data into data files.

## **National Study Tasks**

There are **two** rounds of instrument development, achievement test and context questionnaire administration, and analysis activities for the TIMSS assessment. First, instruments are developed and field-tested using the planned procedures for the data collection. After the field test is conducted, responses are scored, and the results analyzed, the final instruments are selected for the data collection. After the data collection is conducted, the responses are again scored, the data is analyzed and reviewed, and the results are reported.

### **Stage 1: Preparing school sample (school sample usually is selected at the same time for the field test and for the main data collection), contacting schools, and sampling classes for the field test and then for the main data collection**

- Specifying the school sampling design with the help of study sampling experts
- Providing the school sampling frame including all sampling-related information
- Contacting the sampled schools to obtain cooperation
- Identifying and training school coordinators for each sampled school
- Requesting information about classes and their teachers from the sampled schools
- Sampling one or more classes per school (using IEA's proprietary software)
- Listing the students and their teachers in the sampled classes
- Printing tracking forms and/or labels
- Assigning instruments to students, teachers, and school principals

### **Stage 2: Preparing the field test instruments and then the data collection instruments**

- Contributing to assessment item writing (e.g., during NRC meetings) and to reviewing assessment items and context questionnaires
- Translating, reviewing, and producing national instruments, including applying national adaptations and documenting them
- Submitting the translated national instruments (achievement items and context questionnaires) to IEA Amsterdam for international translation verification
- Submitting the national instruments to the TIMSS & PIRLS International Study Center for adaptations verification and national instrument localization
- Testing and finalizing/approving the assessment player(s) and online system version of context questionnaires
- Printing any paper-based national context questionnaires (G4 Home Questionnaire, if applicable)

### **Stage 3: Administering the field test and then the data collection**

At the National Study Center:

- Preparing and sending field test materials and later data collection materials to the participating schools
- Nominating an international quality control monitor for the data collection, if required by IEA

- Carrying out the National Quality Assurance Program for the field test and then again for the data collection
- Responding to the Survey Activities Questionnaire after the data collection
- Responding to the Curriculum Questionnaire

At the participating schools:

- Preparing devices for the field test and then again for the data collection. This includes testing the compatibility of the devices to be used and launching the assessment administration software on the compatible devices. This step is either done at the schools, at the NSC, or at an external outsourced company. The TIMSS & PIRLS International Study Center provides an international version of the “Preparing Computers” instructions, which are then translated and/or adapted in order to create a national version of the instructions
- Administering the field test and then the data collection
- Calculating student response rates and holding make-up sessions
- Uploading the assessment data and returning the field test/data collection materials to the NSC

#### **Stage 4: Scoring student responses to the constructed-response items (for the field test and then again for the data collection)**

- Managing the online scoring system
- Training scorers
- Scoring the constructed-response items, including documenting the cross-country scoring reliability and the trend scoring reliability (trend countries only)

#### **Stage 5: Creating the data files and reviewing the data (for the field test and data collection)**

- Entering test administration information (using IEA’s proprietary software)
- Entering the data from the Home Questionnaire (Grade 4 only) using IEA’s proprietary software, if needed
- Tracking data submission from respondents using digital system(s)
- Verifying the data
- Submitting the required field test materials and then the data collection materials to the TIMSS & PIRLS International Study Center, IEA Hamburg, and RTI International
- Reviewing the country’s field test data provided in the item and questionnaire almanacs for accuracy, reviewing the data collection data provided in the item and questionnaire almanacs for accuracy
- Reviewing the TIMSS 2027 International Report

#### **Stage 6: Preparing national reports**

- Conducting national analysis of the data
- Writing the national report
- Disseminating the national report (in synchronization with the release of the TIMSS 2027 International Report)