



Chapter 5

Translation and Translation Verification of the PIRLS Reading Assessment and Questionnaires

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5.1 Overview

The PIRLS 2006 reading assessment, background questionnaires, and procedural manuals were developed in English, the working language of the International Association for the Evaluation of Education Achievement (IEA). Using this English international version, participants translated the materials into their target language(s) and adapted them to be appropriate for their cultural context. Throughout this translation and adaptation process, the overarching purpose was to create a set of instruments that was comparable to the originals in terms of reading difficulty and accessibility, while still allowing each country to adapt the materials to their national needs. Guidelines for translating the materials were described in the *Survey Operations Procedures Unit 2: Preparing Materials for the PIRLS Assessment* (TIMSS & PIRLS International Study Center, 2005), developed by the TIMSS & PIRLS International Study Center.

Since high-quality translations were essential to the success of PIRLS 2006, these translated texts were subjected to a stringent international translation verification process. This process was intended to make certain that the translated materials were equivalent to the international version through direct comparisons of the two. Each participating country was asked to submit materials for verification prior to both the field test and main data collection.

5.2 Identifying the Target Language

For most participating countries, identifying the language that would be used for testing, or the target language, was simple since they have one dominant language that is used in public and private arenas. However, schools in some countries provided instruction in more than one language.¹ Thus, such a country would have prepared test instruments in more than one language. In other cases, while there may be one language of instruction, there are other languages that are prominent in other parts of society. For example, most students in Singapore are taught in English, but the language used at home is primarily Chinese and also may be Tamil or Malay. Therefore, while Singapore prepared the reading assessment in English, the *Learning to Read Survey* was provided in all four languages so that parents could respond in whichever language they were most comfortable.

In total, the PIRLS 2006 data collection materials were translated into 44 languages, with English used the most often (8 participants), followed by French and Arabic (4 participants in each). Of the 45 participants, 15 administered the reading assessment in more than one language (ranging from 2 up to 11). Exhibit 4.1 shows the languages used by each participant for the various instruments.

5.3 PIRLS Instruments to Be Translated

For PIRLS 2006, the following materials required translation:

- Reading assessment passages, items, and directions;
- Questionnaires for students, teachers, school, and home;
- Manuals for preparing for the assessment within schools, and administering the assessment; and
- Scoring guides for constructed-response items, where necessary.

Of these, the components of the reading assessment and the questionnaires were verified. Participants who tested in English also were required to go through the verification steps. Although they had not translated the instruments, the materials were reviewed for national adaptations and comparable layout.

5.3.1 Reading Assessment

The PIRLS 2006 reading assessment is comprised of 13 booklets, one of which is distributed to each student. A booklet contains two “blocks,” each of which

1 Further discussion of languages of instruction in the PIRLS 2006 countries is available in the *PIRLS 2006 Encyclopedia: A Guide to Reading Education in the Forty PIRLS 2006 Countries*. (Kennedy, Mullis, Martin, & Trong, 2007).

contains a story or article followed by a series of questions pertaining to the text passage. There are 10 blocks in total (5 for each reading purpose),² which are systematically rotated throughout the booklets. Most blocks appear in three different booklets, with the exception of the PIRLS 2006 Reader. This is a full-color, magazine-style booklet that contains two passages that only appear in the Reader. The questions that are associated with these passages are located in an accompanying booklet, called Booklet R.

Each test block was translated once and then used to create the various booklets. The same was true for the directions that were included in the beginning of each booklet. These also were translated a single time and then distributed throughout the booklets. The National Research Coordinator (NRC) for each country was provided with the electronic files necessary to facilitate the translation of the blocks and the subsequent creation of the booklets.

5.3.2 Questionnaires

In addition to the PIRLS reading assessment, four questionnaires were translated and administered to gather information about the home and school contexts for learning to read.³ Separate questionnaires were developed for the participating students, their parents/caregivers, their teachers, and principals of their schools. As with the reading assessment, NRCs were provided with the electronic files necessary to create a translated version of each of these questionnaires.

5.4 Translators and Reviewers

All study participants were strongly encouraged to hire an experienced translator who would be well suited to the task of working with the PIRLS materials.

Qualifications for translators included:

- An excellent knowledge of English;
- The target language as a native language;
- Some experience translating literary texts;
- Experience in the country cultural context; and if possible,
- Experience with students in the target population, and
- Familiarity with test development.

2 PIRLS assesses students' reading literacy for two purposes—reading for literary experience and reading to acquire and use information. For more information about the PIRLS test, please refer to Chapter 2.

3 For more information on the PIRLS questionnaires, please refer to Chapter 3.

Exhibit 5.1 PIRLS 2006 Main Survey Languages

Country	Language	Instruments				
		Student Test	Student Questionnaire	Parent Questionnaire	Teacher Questionnaire	School Questionnaire
Austria	German	•	•	•	•	•
Belgium (Flemish)	Flemish	•	•	•	•	•
Belgium (French)	French	•	•	•	•	•
Bulgaria	Bulgarian	•	•	•	•	•
Canada, Alberta ¹	English	•	•	•	•	•
	French	•	•	•	•	•
Canada, British Columbia	English	•	•	•	•	•
	French	•	•	•	•	•
Canada, Nova Scotia	English	•	•	•	•	•
	French	•	•	•	•	•
Canada, Ontario	English	•	•	•	•	•
	French	•	•	•	•	•
Canada, Québec	English	•	•	•	•	•
	French	•	•	•	•	•
Chinese Taipei	Chinese Mandarin	•	•	•	•	•
Denmark	Danish	•	•	•	•	•
England	English	•	•	•	•	•
France	French	•	•	•	•	•
Georgia	Georgian	•	•	•	•	•
Germany	German	•	•	•	•	•
Hong Kong, SAR	Modern Standard Chinese	•	•	•	•	•
Hungary	Hungarian	•	•	•	•	•
Iceland	Icelandic	•	•	•	•	•
Indonesia	Indonesian	•	•	•	•	•
Iran	Farsi	•	•	•	•	•
Israel	Hebrew	•	•	•	•	•
	Arabic	•	•	•	•	•
Italy	Italian	•	•	•	•	•
Kuwait	Arabic	•	•	•	•	•
Latvia	Latvian	•	•	•	•	•
	Russian	•	•	•	•	•
Lithuania	Lithuanian	•	•	•	•	•
Luxembourg	German	•	•	•	•	•
	French			•		
	Portuguese			•		
Macedonia	Macedonian	•	•	•	•	•
	Albanian	•	•	•	•	•
Moldova	Romanian	•	•	•	•	•
	Russian	•	•	•	•	•
Morocco	Arabic	•	•	•	•	•
Netherlands	Dutch	•	•	•	•	•
New Zealand	English	•	•	•	•	•
	Maori	•	•	•	•	•
Norway	Bokmål	•	•	•	•	•
	Nynorsk	•	•	•	•	•
Qatar	Arabic	•	•	•	•	•
Poland	Polish	•	•	•	•	•

Exhibit 5.1 PIRLS 2006 Main Survey Languages (continued)

Country	Language	Instruments				
		Student Test	Student Questionnaire	Parent Questionnaire	Teacher Questionnaire	School Questionnaire
Romania	Romanian	•	•	•	•	•
	Hungarian	•				
Russian Federation	Russian	•	•	•	•	•
Scotland	English	•	•	•	•	•
Singapore	English	•	•	•	•	•
	Chinese			•		
	Malay (Bahasa Melayu)			•		
	Tamil			•		
Slovak Republic	Slovak	•	•	•	•	•
	Hungarian	•	•	•		
Slovenia	Slovenian	•	•	•	•	•
South Africa ²	Afrikaans	•	•	•	•	•
	English	•	•	•	•	•
	isiZulu	•	•	•		
	isiXhosa	•	•	•		
	Sepedi	•	•	•		
	Sesotho	•	•	•		
	Setswana	•	•	•		
	isiNdebele*	•	•	•		
	Siswati*	•	•	•		
	Tshivenda*	•	•	•		
Xitsonga*	•	•	•			
Spain	Spanish (Castilian)	•	•	•	•	•
	Catalonian	•	•	•	•	•
	Galician	•	•	•	•	•
	Basque	•	•	•	•	•
	Valencian	•	•	•	•	•
Sweden	Swedish	•	•	•	•	•
Trinidad & Tobago	English	•	•	•	•	•
United States	English	•	•		•	•

1 Please note that the participating Canadian provinces administered the assessment separately, but all used the same set of translated materials.

2 Please note that the South African languages with asterisks (*) were not internationally verified.

A reviewer was responsible for reviewing the translation, paying particular attention to the readability of the texts for the target population. Participants were asked to hire a reviewer with the following qualifications:

- An excellent knowledge of English;
- The target language as a native language;
- Experience in the country and cultural context; and
- Experience with students (in target grade if possible).

5.5 Translation and Adaptation Guidelines

To ensure that appropriate translations and adaptations were made when the PIRLS instruments were produced, the TIMSS & PIRLS International Study Center provided basic guidelines for these processes in the *Survey Operations Procedures Unit 2*, which was distributed to all NRCs. These guidelines are summarized in the list below.

- Translated passages should have the same register (language level and degree of formality) as the source text.
- Translated passages should have correct grammar and usage: subject/verb agreement, prepositions, verb tenses, etc.
- Translated passages should neither clarify nor omit text from the source text, nor should information be added that is not given in the source text.
- Translated passages should contain equivalent qualifiers and modifiers, in the order appropriate for the target language.
- Idiomatic expressions should be translated appropriately, not necessarily word for word.
- Spelling, punctuation, and capitalization in the target text should be appropriate for the target language and the country/cultural context.

For countries administering the PIRLS instruments in English, these guidelines are applicable to any changes made to the text to adapt the American English of the international version to the variant of English that is appropriate for their context.

5.5.1 Adaptations in Passages and Items

The equivalence of materials across countries is a key aspect of the PIRLS assessment. However, it also is important to consider the cultural spectrum of the participating systems, and allow for adaptations that are appropriate for their situations. NRCs were encouraged to keep these to a minimum and to only make changes that were vital to students' understanding of the text. These alterations included changes in vocabulary, expressions, and names of people and places.

Words or phrases within a text could be altered if a participant believed that the term's unfamiliarity would inhibit students' abilities to read the passage. When making these changes, it was important to make sure that the meaning

and difficulty level of the text remained unchanged. For instance, an “apartment” in American English would be changed to a “flat” in British English. Such changes also were necessary in order to follow national conventions, such as measurement units or date formats in the various countries. For example, “feet” could be changed to “meters” or quotation marks replaced with dashes. For the unit conversions, the TIMSS & PIRLS International Study Center provided participants with a list of all instances of measurement units used in the reading assessment and their appropriate conversions (in most cases, to the whole numbers). This was done to standardize those adaptations made across participating countries.

The PIRLS reading assessment is comprised of a collection of authentic passages that have been contributed by participating systems. If the passage contained a nonfictional name or place that was central to the meaning of the passage, this could not be changed. Otherwise, participants were permitted to adapt the names to those that would be more familiar to their students.

5.5.2 Adaptations in Questionnaires

The questionnaires involved a required set of adaptations for each participant. Some of the items in the questionnaires contained words or phrases that needed to be translated according to country-specific contexts and usage. Thus, the international version of the questionnaires contained words and phrases placed in carets (< >), indicating that the text within the carets should be adapted. For example, <tutor> in the international version of the questionnaires was replaced by <support teacher> in the Norwegian version. Items that asked parents and teachers about levels of education completed utilized the ISCED-1997⁴ system. The international versions of the questionnaires provided the generic ISCED levels in carets, to be replaced with the educational terms appropriate for each country. For example, <ISCED 3> was replaced with the term “high school” in the United States version of the questionnaires. NRCs were provided with the *Operational Manual for ISCED-1997* (UNESCO, 1999) to assist them in determining the equivalent educational level for each item.

The TIMSS & PIRLS International Study Center provided participants with a detailed description of the intention of each required adaptation in order to clarify the terms used and help translators choose the appropriate corresponding term. In regards to the ISCED levels, the TIMSS & PIRLS International Study Center also provided participants with a cross-referencing list to ensure that the same educational level adaptations were made across different items and questionnaires.

4 ISCED (International Standard Classification of Education) was developed by UNESCO for cross-national comparisons. *The Operational Manual for ISCED-1997* describes the levels of education in that system.

In addition to these required adaptations, participants were allowed to add items to the questionnaires if there were pertinent issues related to reading in their country not addressed by the international items. Participants were encouraged to add items only to the end of the questionnaire to avoid influencing the responses to the international items in any way. The country-specific items were required to appear in the same form as the rest of the questionnaire and required approval from the TIMSS & PIRLS International Study Center.

5.6 Documenting National Adaptations

All deviations from the international version of the reading assessment or questionnaires were documented on the National Adaptation Forms. For each instrument, a form was completed that listed any changes made and, in the rare cases of not administered questions, the rationale behind these decisions. These forms were updated after each stage of the verification process.

5.7 Translating the PIRLS Materials

Each translator and reviewer was given the international version of the set of PIRLS 2006 materials that were being translated. Each also was given information to familiarize them with PIRLS and the translation procedures and the National Adaptation Forms that would be used to document all adaptations.

The translator used these materials to translate each of the instruments, following the adaptation guidelines that were described earlier in this chapter. If more than one translator was employed for a target language, then whichever translator worked with a passage also translated the corresponding questions. During translation, translators were instructed to document any changes made to the original text in an electronic version of the National Adaptation Forms.

This translated set of materials then was given to the reviewer, whose purpose was to make sure that the translations were at an appropriate level for the target population. The reviewer's suggestions were then incorporated into the materials by the translator, and the forms were updated accordingly.

Countries that also participated in PIRLS 2001 used an unchanged version of the blocks that carried over from the previous cycle in order to accurately measure trend. In some cases, improvements were made to the translations from 2001. In these cases, changes were carefully documented and were referenced during data analysis. If the text changes seemed to have dramatically altered

the performance of any item, then this item was not included in trend analyses for this participant.

5.8 Verification of Translation and Layout of PIRLS Instruments

Once the instruments had been translated and reviewed, the text of the directions, assessment blocks, and questionnaires were submitted for international translation and layout verification. This process was managed by the IEA Secretariat in Amsterdam, who enlisted the assistance of two independent translation companies to verify translations for each of the countries: Bowne Global Solutions (Luton, England) and Capstan Linguistic Quality Control (Brussels, Belgium). Of the 45 participants in PIRLS 2006, all except 2 submitted materials for verification for the field test. All participants submitted instruments for verification before the main data collection.

5.8.1 International Translation Verifiers

The international translation verifiers for PIRLS 2006 were required to have the target language as their first language, have formal credentials as translators working in English, be educated at the university level, and, if possible, live and work in the country where the verification was being carried out (or in close contact with this country). Verifiers received general information about the study and the design of the instruments together with a description of the translation procedures used by the national centers. They also received detailed instructions for reviewing the instruments and registering deviations from the international version.

5.8.2 International Translation Verification

The main task of the translation verifiers was to evaluate the accuracy of the translation and adequacy of the national adaptations (reported in the National Adaptation Forms). Their instructions emphasized the importance of maintaining the meaning and difficulty level in test passages and related questions, as well as questions included in each of the four questionnaires. Verifiers also were asked to pay attention to correspondence between the reading passages and test questions. Specifically, verifiers had to ensure the following:

- The translation has not affected the meaning or difficulty of the text.
- The test questions have not been made easier or more difficult when translated/adapted.

- No information has been omitted or added in the translated text.
- No question related to the passage was omitted.
- The questionnaires contain all and correct questions.
- The order of questions and response options to questions are the same as in the international version.

The verifiers documented any errors or suggested changes using the “Track Changes” function in Microsoft® Word. Additionally, for the 28 participating countries who also were a part of PIRLS 2001, a comparison was made between those blocks that were being used to measure trends in 2001 to the blocks used in PIRLS 2006. To help NRCs understand the comparability of the translated text with the international version, verifiers were asked to assign a “severity code” to any deviations. The severity codes ranged from 1 (major change or error) to 4 (acceptable change) as follows:

- **Major Change or Error:** Examples include incorrect order of choices in a multiple-choice question, omission of a graphic, omission of a question, incorrect translation resulting in the answer being indicated by the question, an incorrect translation which changes the meaning or difficulty of the passage or question, and the questions being in the incorrect order.
- **Minor Change or Error:** Examples include spelling errors that do not affect comprehension, misalignment of margins or tabs, inappropriate changes in font or font sizes, and discrepancies in the headers and footers of the document.
- **Suggestion for Alternative:** The translation may be adequate, but the verifier suggests a different wording.
- **Acceptable Change:** The change was acceptable and appropriate but was not documented. An example would be the Southern Hemisphere changing a reference to winter from January to July.

The instruments were returned to the NRC of each participating system with the verifier’s suggestions. The NRC was responsible for reviewing translation verifier’s suggestions and revising the instruments.

5.8.3 International Layout Verification

Verified texts were then used to generate the booklets and questionnaires in their final form, utilizing the appropriate layout and graphics. Completed instruments were then submitted, along with updated National Adaptation Forms, to the TIMSS & PIRLS International Study Center for international layout verification.

During international layout verification, each booklet was reviewed in its print-ready form. The TIMSS & PIRLS International Study Center compared each of the translated booklets to the international version, documenting any discrepancies between the two. During this verification, it was recognized that the materials may not be exactly identical, due to the changes in text length that often occurred during translation. However, the international versions were created with this in mind, and extra space was provided in the margins of the pages to facilitate the use of a longer text without extensive changes to the layout of the instrument. For countries that also participated in PIRLS 2001, the booklets from the previous cycle were compared to the newly submitted instruments to make sure that they were identical. The verifier's comments and suggested changes were returned to the NRC, along with permission to print and administer the materials once they had been revised.

5.8.4 Quality Control Monitor Review

Quality Control Monitors (QCMs) from each participating country were hired by the IEA to document the quality of the PIRLS 2006 assessment administration, including that of the assessment materials.⁵ An important part of the QCMs' responsibilities included review of the booklets and questionnaires used during test administration. The QCMs compared the final version of the booklets with the international translation verifier's comments to ensure that their suggestions had been incorporated appropriately into the materials. The QCMs' report with this information was then delivered to the TIMSS & PIRLS International Study Center.

5 For more information on the PIRLS Quality Control program, please see Chapter 7.

References

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