

Progress in International Reading Literacy Study

International Data Explorer Help Guide

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PIRLS International Data Explorer Help Guide

I. Background on the Progress in International Reading Literacy Study (PIRLS) and the PIRLS International Data Explorer (IDE)

The Progress in International Reading Literacy Study (PIRLS) International Data Explorer (IDE) is a web-based application for accessing PIRLS data, supported by the U.S. National Center for Education Statistics (NCES). PIRLS is an international comparative study of the reading literacy of young students. PIRLS surveys the reading achievement and reading behaviors and attitudes of fourth-grade students in the United States and students in the equivalent of fourth grade in other participating countries.

PIRLS was first administered in 2001 and included 35 jurisdictions, and was administered again in 2006 to students in 45 jurisdictions (including countries and subnational education systems, such as Canadian provinces and Hong Kong, a Special Administrative Region of the People's Republic of China). [PIRLS 2006 results are now available](#). The next PIRLS administration is scheduled for 2011. PIRLS is coordinated by the International Association for the Evaluation of Educational Achievement (IEA).

Which aspect of reading literacy can I explore?

PIRLS Reading Literacy (overall): Students are asked to construct meaning from a variety of fictional and nonfictional texts for varying purposes.

PIRLS Reading for Literary Purposes: Fictional texts are used to measure the ability of students to read for literary experience.

PIRLS Reading for Informational Purposes: Nonfictional texts are used to measure the ability of students to acquire and use information.

PIRLS Retrieving and Straightforward Inferencing Processes: Items ask students to draw conclusions or connections that are primarily based on information contained in the text.

PIRLS Interpreting, Integrating, and Evaluating Processes: Items ask students to interpret and integrate text information that may draw on their background knowledge and experiences more than they do for straightforward inferences.

SOURCE: Mullis, I.V.S., Kennedy, A.M., Martin, M.O., and Sainsbury, M. (2006). [PIRLS 2006 Assessment Framework and Specifications \(2nd ed.\)](#). Chestnut Hill, MA: TIMSS & PIRLS International Study Center, Lynch School of Education, Boston College.

II. General Overview

There are four general steps for exploring PIRLS data using the PIRLS IDE (see exhibits 1 and 2). Each step is described in more detail starting on page 6.

Exhibit 1. General overview for using the IDE

<p>1. Select Criteria: Choose your measure(s) and jurisdiction(s).</p>	<p>2. Select Variables: Select at least one variable from the selection of categories and subcategories.</p>	<p>3. Edit Reports: Preview how your data will look and edit your report format options and statistics options as desired.</p>	<p>4. Build Reports: Retrieve the data, make charts and graphs, save, and print reports.</p>
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Exhibit 2. Introduction to the IDE environment



III. Computer Requirements for IDE

- Screen resolution should be 1024 x 768 pixels.
- Browsers: Internet Explorer (IE) version 6 or higher (IE7 is recommended). For rendering and scrolling pages with large tables, Firefox 2.0 is faster than IE7 (Firefox 3.0 or higher is recommended).
- Enable JavaScript and pop-ups in your browser.
- IDE requires Flash version 9.0.115 or higher (download Adobe Flash Player at <http://get.adobe.com/flashplayer/>.)
- Exports of files to Microsoft Office require Office 2003 or later.
- Exports of files to PDF can be read with Adobe Acrobat Reader.
- Screen reader software should be Jaws 8.0 or higher.

If you encounter an error, please send us the details through Contact Us (located in the upper right portion of the screen on each page of the IDE website). When writing, include your browser version and operating system version, and as many other details as possible. Be sure to provide an e-mail address so that we can contact you.

IV. Steps to Explore Data

To create your own custom tables, charts, and graphs, follow these steps when using the PIRLS IDE.

1. Select Criteria
2. Select Variables
3. Edit Reports
4. Build Reports

1. Select Criteria

A. Overview

Your data query in the IDE begins on the **Select Criteria** screen (see exhibit 3).

Choose one or more **Measures** and **Jurisdictions** for the data you wish to view or compare.

Use the **Reset** button located in the upper right portion of the screen (just below the **Help** button) to erase your choices and begin again.

Exhibit 3. Selecting criteria

PIRLS IDE 1. Select Criteria 2. Select Variables 3. Edit Reports 4. Build Reports

STEP 1: Select criteria from each drop-down menu to begin. Additional options related to your selections will appear. Then select measures, jurisdictions, and years based on available data. **Help**

Subject: Reading **Grade:** Grade 4 **Reset**

Measure	All Years	2006
<input checked="" type="checkbox"/> PIRLS Reading Scale: Combined Reading	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> PIRLS Reading Scale: Informational purpose	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> PIRLS Reading Scale: Interpret ideas and information	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> PIRLS Reading Scale: Literary purpose	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> PIRLS Reading Scale: Make straightforward inferences	<input type="checkbox"/>	<input type="checkbox"/>

Group	Jurisdiction	All Years	2006
<input type="checkbox"/> International	<input type="checkbox"/> International Average	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/> Average for Selected Countries	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Country	<input type="checkbox"/> Austria	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> Belgium (Flemish)	<input type="checkbox"/>	<input type="checkbox"/>

B. Choose Measure

Under **Measure**, you can choose the composite (combined reading scale) and/or any of the reading subscales. Note that the combined reading scale is the default.

C. Choose Jurisdiction

With your measure selected, next choose at least one **Jurisdiction**.

Jurisdictions are found under the following **Groups**: **Country** and **Benchmarking jurisdictions**. There is also a **Group** category called **International**, with options to display the **International Average** and the **Average for Selected Countries**. Please note that selecting **International Average** or **Average for Selected Countries** increases the frequency of receiving an error message in the **Build Reports** step due to the high volume of information contained in these groups.

The general procedures for selecting one or more jurisdiction are as follows:

1. When the blue arrow to the left of the group name is pointed down, the jurisdictions in that group are open (i.e., shown below) and can be selected. If you click the checkbox next to the group name (e.g., “Country”), you will select all the jurisdictions within that group. If desired, uncheck the group name to de-select all.
2. Click the checkboxes next to specific jurisdictions that you are interested in, or uncheck those jurisdictions that you wish to de-select.
3. If you want to close a group (for example, close the list of countries in order to readily see the benchmarking jurisdictions), click the blue arrow next to the group name. For the closed group, the blue arrow points to the right instead of pointing down and showing the group components (see exhibit 4).

Exhibit 4. Choosing jurisdictions

Group	Jurisdiction	All Years	2006
<input type="checkbox"/> International	<input type="checkbox"/> International Average	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/> Average for Selected Countries		
<input checked="" type="checkbox"/> Country			
<input checked="" type="checkbox"/> Benchmarking jurisdictions	<input type="checkbox"/> Canada, Alberta		
	<input type="checkbox"/> Canada, British Columbia		
	<input type="checkbox"/> Canada, Nova Scotia		
	<input type="checkbox"/> Canada, Ontario		
	<input type="checkbox"/> Canada, Quebec		
	<input type="checkbox"/> Iceland (5th grade)		
	<input type="checkbox"/> Norway (5th grade)		

Be advised that closing the group will not de-select your choices.

To continue in the IDE, click the **Select Variables** button at the bottom of the page or the tab at the top of the page to go to the next screen.

2. Select Variables

A. Overview

Step 2, **Select Variables**, can only be accessed after choosing criteria at step 1, **Select Criteria**.

To continue your data query and edit a report, *you must choose at least one variable on this screen*. You can browse for variables using the **Category** and **Sub Category** lists, or by using the **Search** function (see exhibit 5). You can return to this screen to change variable selections at any time.

Exhibit 5. Selecting variables overview

B. Search Using Category and Subcategory Lists

Choose at least one variable on this screen for your report. One way to do this is to search for variables using the **Category** and **Sub Category** lists. If you don't wish to choose from any of the specified categories and subcategories, then select **All students**.

The variables shown are tied to the criteria you selected at step 1 (**Measure** and **Jurisdiction**), which are indicated at the top of the screen. To change any of these criteria, return to step 1, **Select Criteria**.

To browse for variables, get details about them, select them, and view them:

1. Click the blue arrows to open and close categories and subcategories of variables (see exhibit 6).

2. Click **details** or **hide details** to show or hide the full title of a given variable, the PIRLS ID, and the values (i.e., variable labels). Note that some variables have the same or similar short titles, but comparing details will show you how the variables differ. See the example in exhibit 6 below, which shows the gender variable that is reported by the school (ITSEX) and the gender question that is asked in the student background questionnaire (ASBGSEX).
3. Click the checkbox next to a variable to select it for your analysis/report. You will see the count increase next to **View Selected**.
4. Click the **View Selected** tab to see the variables you have chosen. To return to the full list of variables by category, click the **View All** tab.

Exhibit 6. Select variables using category and subcategory lists

PIRLS IDE 1. Select Criteria ▶ 2. Select Variables ▶ 3. Edit Reports ▶ 4. Build Reports ▶

STEP 2: Select at least one variable from the category list below. View the list of all available variables, view by selected variables only, or search variables by keywords. Years selected will override previous selections. [Help](#)

Subject, Grade: Reading, Grade 4
Jurisdictions: International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States
Measures: PIRLS Reading Scale: Combined Reading, PIRLS Reading Scale: Informational purpose, PIRLS Reading Scale: Literary purpose
Variables: All students, Sex of students, Index students' reading attitudes (SATR)
Year: 2006 [Reset](#)

[View All \(334\)](#) [View Selected \(3\)](#) Search: [Go](#)

Category	Sub Category	Variable	All Years	2006
▼ Total	▼ Total	<input checked="" type="checkbox"/> All students details	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
▼ Student and Family Characteristics	▼ Sex	<input checked="" type="checkbox"/> Sex of students hide details Full Title: Student's sex ID: ITSEX Values: Female, Male		<input checked="" type="checkbox"/>
		<input type="checkbox"/> Gen/sex of student hide details Full Title: Are you a female or a male? ID: ASBGSEX Values: Female, Male		<input checked="" type="checkbox"/>
	▶ Age			
	▶ Race/Ethnicity			
	▶ Language			
	▼ Home Resources	<input type="checkbox"/> Index home educational resources (HER) details		<input checked="" type="checkbox"/>
		<input checked="" type="checkbox"/> Gen/how many books at home hide details Full Title: About how many books are there in your home? ID: ASBGBOOK Values: 0-10 books, 11-25 books, 26-100 books, 101-200 books, More than 200 books		<input checked="" type="checkbox"/>

When you have selected the variable(s) you want to include, continue by clicking the **Edit Reports** button at the bottom of the page or the tab at the top of the page to go to the next screen.

C. Search Function

The second way to search for variables is to use the **Search** function on the **Select Variables** screen.

Type a term in the **Search** box and click **Go** (or hit 'Enter' on your keyboard) to find variables by keywords in the question and/or details for the variable (see exhibit 7). If you use multiple

keywords, “and” is assumed. Also narrow your search using “or,” “not,” “and not,” or “near.” The search function operates on an exact phrase if it is contained in quotes. The variable(s) that include the search term(s) in the question or its details will be listed.

See section B, Select Variables: Search Using Category and Subcategory Lists, for information on how to get details about variables, selecting variables, and viewing variables.

Exhibit 7. Select variables using the search function

View All (334)		View Selected (3)		Search: (2) attitudes or self concept		Go
Category	Sub Category	Variable	All Years	2006		
▼ Student Perception of Reading	▼ Interest in Reading	<input type="checkbox"/> Index students' reading attitudes (SATR) details	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
	▼ Self-perception of Reading	<input type="checkbox"/> Index students' reading self concept (SRSC) details				

When you have selected the variable(s) you want to include, continue by clicking the **Edit Reports** button at the bottom of the page or the tab at the top of the page to go to the next screen.

3. Edit Reports

A. Overview

You can access step 3, **Edit Reports**, after choosing criteria at step 1, **Select Criteria**, and choosing variables at step 2, **Select Variables**.

At this step, you can

- preview and edit the layout of your reports;
- copy reports or create new reports based on the variables selected;
- change formatting options, such as number of decimal places to display, for all reports (these may also be changed in individual reports, but format options can overwrite previous edits);
- change statistics options, such as average scale scores and achievement levels, for all reports (these may also be changed in individual reports, but statistics options can overwrite previous edits);
- select reports to be built into tables and charts at step 4, **Build Reports**; and
- delete reports.

Using your chosen criteria, the IDE will return a separate data report for each variable you have chosen. If you have selected two or three variables (not counting **All Students**), you will also see a cross-tabulated report that crosses these two or three variables. If your selected criteria include

more than one measure (e.g., combined reading scale and one or more reading subscales), a separate set of data reports will be generated for each measure (see exhibit 8).

Exhibit 8. Edit reports overview

PIRLS IDE 1. Select Criteria 2. Select Variables 3. Edit Reports 4. Build Reports

STEP 3: Preview and edit existing reports using the action links next to each report name. Create new reports, set format and statistic options. (New and copied reports will appear at the bottom of the report list.) Help

Subject, Grade: Reading, Grade 4
Jurisdictions: International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States
Measures: PIRLS Reading Scale: Combined Reading, PIRLS Reading Scale: Informational purpose, PIRLS Reading Scale: Literary purpose
Variables: All students, Sex of students, Index students' reading attitudes (SATR)
Year: 2006 Reset

Create New Report		Format Options		Statistics Options			
Report	All	Action	Measure	Variable	Year	Jurisdiction	Statistic
Report 1	<input checked="" type="checkbox"/>	Preview Edit Delete Copy	PIRLS Reading Scale: Combined Reading	All students	2006	International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States	Average scale scores
Report 2	<input checked="" type="checkbox"/>	Preview Edit Delete Copy	PIRLS Reading Scale: Combined Reading	Sex of students	2006	International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States	Average scale scores
Report 3	<input checked="" type="checkbox"/>	Preview Edit Delete Copy	PIRLS Reading Scale: Combined Reading	Index students' reading attitudes (SATR)	2006	International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States	Average scale scores
Cross-Tabulated Report 1	<input checked="" type="checkbox"/>	Preview Edit Delete Copy	PIRLS Reading Scale: Combined Reading	Sex of students, Index students' reading attitudes (SATR)	2006	International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States	Average scale scores
Report 4	<input checked="" type="checkbox"/>	Preview Edit Delete Copy	PIRLS Reading Scale: Informational purpose	All students	2006	International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States	Average scale scores
Report 5	<input checked="" type="checkbox"/>	Preview Edit Delete Copy	PIRLS Reading Scale: Informational purpose	Sex of students	2006	International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States	Average scale scores
Report 6	<input checked="" type="checkbox"/>	Preview Edit Delete Copy	PIRLS Reading Scale: Informational purpose	Index students' reading attitudes (SATR)	2006	International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States	Average scale scores
Cross-Tabulated Report 2	<input checked="" type="checkbox"/>	Preview Edit Delete Copy	PIRLS Reading Scale: Informational purpose	Sex of students, Index students' reading attitudes (SATR)	2006	International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States	Average scale scores

B. Preview Report

Select **Preview** to see how your report will be laid out. The preview will not provide actual data, but will show how the data will be arranged in rows and columns (see exhibit 9).

Exhibit 9. Using preview report

				Sex of students			
				Female		Male	
Index students' reading attitudes (SATR)	Years	Jurisdictions	Average scale scores	Standard Errors	Average scale scores	Standard Errors	
High	2006	International Average					
		England					
		France					
		Germany					
		Italy					
		Russian Federation					
		Scotland					
		United States					
Medium	2006	International Average					

C. Edit Report

You can edit your report by choosing **Edit** under **Action** on the **Edit Reports** main screen. (You can select **Preview** at any time to see how your changes will affect the report's final layout.) Another way to edit a report is to select the **Edit** tab when you are previewing a report. The following can be done using this function (see exhibit 10):

1. Name your report. You have the option to give each report a distinctive name, up to a limit of 50 characters using only letters, numbers, spaces, underscores, and hyphens. (Otherwise, the default is Report 1, Report 2, etc., and Cross-Tabulated Report 1, Cross-Tabulated Report 2, etc.)
2. Select a measure. You can choose a measure if more than one was selected at step 1.
3. Select jurisdictions, variables, years (if applicable), and statistics to include (out of the selections previously made at steps 1 and 2). You can also create new variables out of the ones already chosen (For further information, see section D, Edit Reports: Create New Variables.) You can select up to two statistics options from the following: average scale scores; percentages; achievement levels—discrete; achievement levels—cumulative; percentiles; and standard deviations. (For further information, see section G, Edit Reports: Statistics Options.)

Exhibit 10. Editing reports

The screenshot shows the 'Edit Report' window with the following configuration:

- Name:** Cross-Tabulated Report
- Measure:** PIRLS Reading Scale: Combined Reading

Step 2: Select available options from each of the columns below, then preview results.

Jurisdiction	Variable Create new...	Year	Statistic
<input type="checkbox"/> Select All	<input type="checkbox"/> All students	<input type="checkbox"/> Select All	<input type="checkbox"/> Average scale scores
<input checked="" type="checkbox"/> International Average	<input checked="" type="checkbox"/> Sex of students	<input checked="" type="checkbox"/> 2006	<input checked="" type="checkbox"/> Percentages
<input checked="" type="checkbox"/> England	<input checked="" type="checkbox"/> Index students' reading attitudes (SATR)		<input checked="" type="checkbox"/> Achievement levels - discrete
<input checked="" type="checkbox"/> France	<input type="checkbox"/> Index students' reading self concept (SRSC)		<input type="checkbox"/> Achievement levels - cumulative
<input checked="" type="checkbox"/> Germany			<input type="checkbox"/> Percentiles
<input checked="" type="checkbox"/> Italy			<input type="checkbox"/> Standard deviations
<input checked="" type="checkbox"/> Russian Federation			
<input checked="" type="checkbox"/> Scotland			

Step 3: Drag and drop header elements between Row and Column to custom design the report.

TABLE LAYOUT	
Row	Column
Years	Sex of students
Jurisdictions	
Index students' reading attitudes (SATR)	

- Change the table layout by dragging elements to determine which items will appear in rows and which will appear in columns. Some of the arrangements will not be permissible, but a pop-up alert will explain this.

Be advised that to save changes, make sure to select **Done** in the lower right portion of the screen before closing the **Edit Report** window.

D. Create New Variables

This tab can be reached only from within the **Edit Report** window or **Create New Report** window. To create a new variable, you can combine values that make up an existing variable. The steps are as follows:

- Click **Create new...** under the **Variable** heading in the **Edit Report** window or **Create New Report** window.
- Select the variable for which you wish to combine values.

3. Select the values you want to combine by checking the boxes to the left of the values (see exhibit 11).
4. Create a name for the new value, and press **Create**. See how the collapsed values appear in gray.
5. Wait for the screen to refresh, and press **Done**.

Exhibit 11. Creating new variables

The screenshot shows a 'Create Variables' dialog box with three main sections:

- 1. Select a Variable group:** A dropdown menu is set to 'Index students' reading attitudes (SATR) with a 'Help' button to the right.
- 2. Select values to create new Variable:** Three checkboxes are listed: 'High' (unchecked), 'Medium' (checked), and 'Low' (checked).
- 3. Create a name for the new Value:** A text input field contains 'medium_low', with a 'Name:' label above it and a 'Create' button to the right.

At the bottom of the dialog are three buttons: 'Reset', 'Cancel', and 'Done'.

6. The new variable will appear in the **Variable** list in the **Edit Report** window or **Create New Report** window, with the new variable name designated as "(Collapsed)". You will need to check the box next to the new (collapsed) variable for it to appear in the report. You can click **Preview** to see how the table will be laid out before retrieving data.

A new variable that you create is applicable to that specific report; it does not apply to the other reports appearing in the **Edit Reports** screen. For example, if you selected multiple measures of reading literacy for analysis, then you would need to create the new variable for each measure, or create a copy of the report and edit it accordingly. To do the latter, click on **Copy** report in the **Edit Reports** screen (copied reports appear at the end of the list of reports) and then **Edit** the new copy (using the above example, you can change the measure and give the report a new name).

You can repeat the process and combine different values of a variable to create additional new variables. Using the **Create New Report** function, you can create a new report for each new variable that you create. (For further information, see section E, Edit Reports: Create New Report.)

If you selected two or three variables to create new variables from, you can repeat the process for each of these variables. Using the **Create New Report** or **Edit Report** function, these collapsed variables will be listed and available for cross-tabulation (see exhibit 12). You can click Preview to see how the table will be laid out before retrieving data.

Exhibit 12. Edit reports with collapsed variables

The screenshot shows the 'Edit Report' dialog box with the following configuration:

- Name:** Cross-Tabulated Report
- Measure:** PIRLS Reading Scale: Combined Reading

Step 2: Select available options from each of the columns below, then preview results.

Jurisdiction	Variable	Year	Statistic
<input type="checkbox"/> Select All	<input type="checkbox"/> All students	<input type="checkbox"/> Select All	<input type="checkbox"/> Average scale scores
<input checked="" type="checkbox"/> International Average	<input type="checkbox"/> Sex of students	<input checked="" type="checkbox"/> 2006	<input checked="" type="checkbox"/> Percentages
<input checked="" type="checkbox"/> England	<input type="checkbox"/> Index students' reading attitudes (SATR)		<input checked="" type="checkbox"/> Achievement levels - discrete
<input checked="" type="checkbox"/> France	<input type="checkbox"/> Index students' reading self concept (SRSC)		<input type="checkbox"/> Achievement levels - cumulative
<input checked="" type="checkbox"/> Germany	<input checked="" type="checkbox"/> Index students' reading attitudes (SATR) (Collapsed)		<input type="checkbox"/> Percentiles
<input checked="" type="checkbox"/> Italy	<input checked="" type="checkbox"/> Index students' reading self concept (SRSC) (Collapsed)		<input type="checkbox"/> Standard deviations
<input checked="" type="checkbox"/> Russian Federation			
<input checked="" type="checkbox"/> Scotland			

Step 3: Drag and drop header elements between Row and Column to custom design the report.

TABLE LAYOUT	
Row	Column
Years	Index students' reading attitudes (SATR) (Collapsed)
Jurisdictions	Index students' reading self concept (SRSC) (Collapsed)

E. Create New Report

From the main Edit Reports screen, clicking on **Create New Report** brings up the same options as Edit, but with no checkboxes marked and without any new variables you may have created. Thus, **Create New Report** provides a "clean slate" for your selections from the first two steps, **Select Criteria** and **Select Variables** (see exhibit 13). Each new report you create will appear at the end of the list of reports. If you do not give the report a specific name, it will be called "New Report."

Exhibit 13. Creating new reports

New Report

Edit **Preview** **Cancel** **Done**

1. Create a name and select a measure for the new report. **Help**

Name: Measure:

2. Select available options from each of the columns below, then preview results.

Jurisdiction	Variable Create new...	Year	Statistic
<input type="checkbox"/> Select All <input type="checkbox"/> International Average <input type="checkbox"/> England <input type="checkbox"/> France <input type="checkbox"/> Germany <input type="checkbox"/> Italy <input type="checkbox"/> Russian Federation <input type="checkbox"/> Scotland	<input type="checkbox"/> All students <input type="checkbox"/> Sex of students <input type="checkbox"/> Index students' reading attitudes (SATR) <input type="checkbox"/> Index students' reading self concept (SRSC)	<input type="checkbox"/> Select All <input type="checkbox"/> 2006	<input type="checkbox"/> Average scale scores <input type="checkbox"/> Percentages <input type="checkbox"/> Achievement levels - discrete <input type="checkbox"/> Achievement levels - cumulative <input type="checkbox"/> Percentiles <input type="checkbox"/> Standard deviations

3. Drag and drop header elements between Row and Column to custom design the report.

TABLE LAYOUT	
Row	Column
<input type="text" value="Jurisdictions"/> <input type="text" value="Years"/>	

F. Format Options

From the main **Edit Reports** screen, clicking on **Format Options** will allow you to make formatting changes applicable to all the reports listed. The following formatting options are available using this function (see exhibit 14):

1. **Variable Labels (Long)** displays a more detailed description of the variables selected in a query than the default short label. For variables from questionnaires, the full text of the question is displayed. Be advised that the length of the extra detail may sometimes interfere with table formatting.
2. **Show data for values categorized as Missing** will include the percentage of students in the total sample or in a reporting group for whom membership in a particular response category is unknown because no response was given by the student, their teacher, or their school. The percentage of “missing” will be shown in the right-most table column. Missing data are available only for queries that involve percentages as the statistic type. Unless you check this option, the default is for missing responses not to be included in the percentage distribution shown.
3. **Decimal Places** allows you to specify a greater level of precision for a particular statistic (one or two decimal places) as opposed to the default, which is whole numbers. Note that

only integer-level precision is allowed for percentages; that is, the number of decimal places is fixed at None for percentages. Also, standard errors will be shown to one more decimal place than what is shown for a particular statistic. For example, if you request that the achievement scores be displayed to one decimal place, the corresponding standard errors will be displayed to two decimal places. If you export to Excel, you will be able to increase the number of decimal places in most cases.

4. **Include** gives you the options to show or not show standard errors and parentheses/brackets surrounding the standard errors. Unless you indicate otherwise, the default is to show standard errors with parentheses surrounding the standard errors. You can preview the effects of your selection in the Sample Display area (see blue-shaded box).

Exhibit 14. Format options

Be advised that choices in the **Format Options** window will apply to all reports and cannot be changed for individual reports. Use the **Reset** button located in the upper right portion of the screen (just below the **Help** button) to restore the **Format Options** to the default settings (though a word of caution, as this will also delete any new reports that you created).

G. Statistics Options

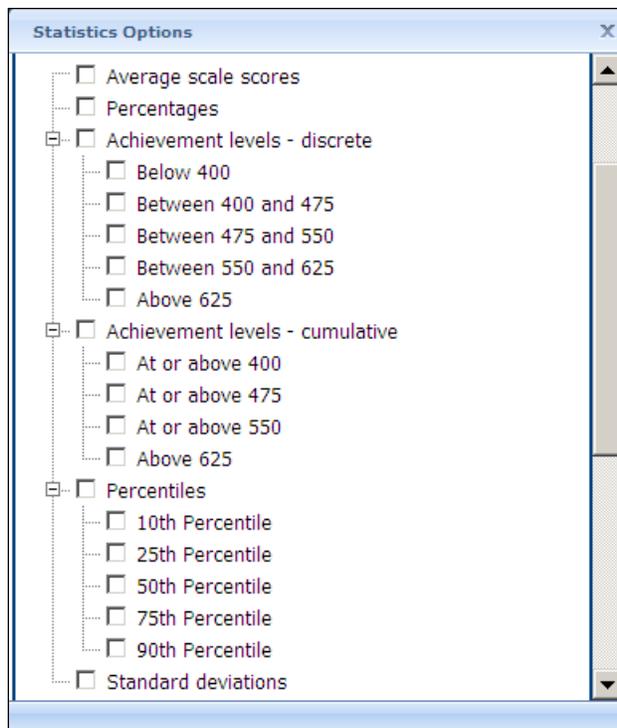
Available only from the main **Edit Reports** screen, clicking on **Statistics Options** allows you to designate up to two statistics. The selections made are applicable to all the reports listed,

although you can also change the statistics for an individual report when you edit that report. (For further information, see section C, Edit Reports: Edit Report.)

The following statistics options are available (see exhibit 15):

1. **Average scale scores.** For the PIRLS assessment, student performance is reported on scales that range from 0 to 1,000. PIRLS reports the average scale score for a variety of demographic samples of the student population (e.g., the average scale score in reading for literary purposes for female students). By default, the standard errors of the scale scores are shown in parentheses.
2. **Percentages.** This statistic shows the percentage of students as a row percentage. For example, if the table cell for Black female students in the United States is 9 percent, then Black females composed 9 percent of U.S. fourth-graders. By default, percentage distributions do not include those with missing data. For information on how to show data for values categorized as missing, see section F, Edit Reports: Format Options.

Exhibit 15. Statistics options



3. **Achievement levels – discrete.** Discrete achievement levels are reported as the percentage of students performing at *each* international benchmark, counted separately from the other benchmarks:
 - *Below low – below 400*
 - *At low – between 400 and 475*
 - *At intermediate – between 475 and 550*
 - *At high – between 550 and 625*
 - *At advanced – above 625*
4. **Achievement levels – cumulative.** Cumulative achievement levels are reported as the percentage of students performing *at or above* each international benchmark:
 - *At or above low – at or above 400*
 - *At or above intermediate – at or above 475*
 - *At or above high – at or above 550*
 - *At advanced – at or above 625*
5. **Percentiles.** This statistic shows the threshold (or cutpoint) score for the following:
 - *10th percentile – the bottom 10 percent of students*
 - *25th percentile – the bottom quarter of students*
 - *50th percentile – the median (half the students scored below the cutpoint and half scored above it)*
 - *75th percentile – the top quarter of students*
 - *90th percentile – the top 10 percent of students*
6. **Standard deviations.** The standard deviation is a measure of how widely or narrowly dispersed scores are for a particular data set. Under general normality assumptions, 95 percent of the scores are within two standard deviations of the mean. For example, if the average score of a data set is 500 and the standard deviation is 100, it means that 95 percent of the scores in this data set fall between 300 and 700. The standard deviation is the square root of the variance.

The selections you make in **Statistics Options** will be applied automatically to all reports, although you can change the statistics for an individual report when you edit that report. Be advised that if you use **Statistics Options** after editing the statistics in one or more of your individual reports, the statistics options selected will overwrite your previously edited selections. If you wish to use the same criteria and variables in a report with a different selection of statistics, consider using the **Create New Report** function to generate a new report with different statistics. (For further information, see section E, Edit Reports: Create New Report.) You can also make a copy of an individual report.

You can use the **Reset** button located in the upper right portion of the screen (just below the **Help** button) to restore the **Statistics Options** to the default setting, which is average scale scores for all reports (as this will also delete any new reports that you created).

Not all statistics are available for all reports. Availability depends on other selections you have made to define the content and format of your report:

- Percentages will not display if jurisdictions or years appear in columns.
- Achievement level results cannot be displayed in both columns and rows.
- Achievement level results are available only for the composite, or overall, scale.
- If achievement levels are selected as a variable, only percentages will be displayed.

Please note that statistics produced by the IDE may not match the statistics shown in reports published by IEA due to differences in certain statistical standards. In particular, organizations differ in the minimum sample sizes required for publishing student scores.

H. Select Reports to Build

As you edit your reports, you can give them distinct names (up to 50 characters) to differentiate them, as well as make changes to the jurisdictions and variables previously selected, the statistics, and the layout of the rows and columns. (For further information, see section C, Edit Reports: Edit Report.) You may also have made copies of reports with these changes. In order to proceed to step 4, **Build Reports**, each report for which you want to retrieve data should be previewed/inspected using the Preview function. To decrease processing time as you move to step 4, you can uncheck any reports for which you do not wish to retrieve data. By default, all reports are checked. To uncheck one or more reports, you can either uncheck the reports individually or click on the **All** box. Doing the latter will uncheck all of the reports and allow you to check only those that you wish to retrieve data for. In the example that follows (see exhibit 16), data will be retrieved only for the combined reading measure and only for the cross-tabulated report (see “Cross-Tabulated Report 1”). For this report, the statistics have been edited to show both average scale scores and percentages.

Exhibit 16. Selecting reports to build

PIRLS IDE 1. Select Criteria ▶ 2. Select Variables ▶ 3. Edit Reports ▶ 4. Build Reports ▶

STEP 3: Preview and edit existing reports using the action links next to each report name. Create new reports, set format and statistic options. (New and copied reports will appear at the bottom of the report list.) [Help](#)

Subject, Grade: Reading, Grade 4
Jurisdictions: International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States
Measures: PIRLS Reading Scale: Combined Reading, PIRLS Reading Scale: Informational purpose, PIRLS Reading Scale: Literary purpose
Variables: All students, Sex of students, Index of student safety in schools (SSS)
Year: 2006 [Reset](#)

Create New Report		Format Options		Statistics Options		
Report	All <input type="checkbox"/>	Action	Measure	Variable	Year Jurisdiction	Statistic
Report 1	<input type="checkbox"/>	Preview Edit Delete Copy	PIRLS Reading Scale: Combined Reading	All students	2006 International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States	Average scale scor
Report 2	<input type="checkbox"/>	Preview Edit Delete Copy	PIRLS Reading Scale: Combined Reading	Sex of students	2006 International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States	Average scale scor
Report 3	<input type="checkbox"/>	Preview Edit Delete Copy	PIRLS Reading Scale: Combined Reading	Index of student safety in schools (SSS)	2006 International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States	Average scale scor
Cross- Tabulated Report 1	<input checked="" type="checkbox"/>	Preview Edit Delete Copy	PIRLS Reading Scale: Combined Reading	Sex of students, Index of student safety in schools (SSS)	2006 International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States	Average scale scores, Percentage
Report 4	<input type="checkbox"/>	Preview Edit Delete Copy	PIRLS Reading Scale: Informational purpose	All students	2006 International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States	Average scale scor
Report 5	<input type="checkbox"/>	Preview Edit Delete Copy	PIRLS Reading Scale: Informational purpose	Sex of students	2006 International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States	Average scale scor
Report 6	<input type="checkbox"/>	Preview Edit Delete Copy	PIRLS Reading Scale: Informational purpose	Index of student safety in schools (SSS)	2006 International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States	Average scale scor
Cross- Tabulated Report 2	<input type="checkbox"/>	Preview Edit Delete Copy	PIRLS Reading Scale: Informational purpose	Sex of students, Index of student safety in schools (SSS)	2006 International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States	Average scale scor

If you wish to delete a report from the list of reports, click **Delete** in the **Action** column. Use the **Reset** button located in the upper right portion of the screen (just below the **Help** button) to restore the deleted reports (though a word of caution, as this will also delete any new reports that you created and restore the Format Options and Statistics Options to the default settings).

To continue to the last step in the IDE, click the **Build Reports** button at the bottom of the page or the tab at the top of the page to go to the next screen.

4. Build Reports

A. Overview

You can access step 4, **Build Reports**, after choosing criteria at step 1, **Select Criteria**, in which case the default report built will provide data for just average scale scores and for the **All Students variable**. In most cases, you will proceed to step 4, **Build Reports**, not only after completing step 1, but also after choosing different or additional variables at step 2, **Select Variables**, and editing the reports at step 3, **Edit Reports**.

In **Build Reports**, you can do the following:

1. Generate a data table for each report selected in step 3, **Edit Reports** (see exhibit 17). By default, all reports are checked, though you can uncheck any reports for which you do not wish to retrieve data. (For further information, see section 3-H, Edit Reports: Select Reports to Build.)
2. Export and save data tables into various formats using the Export Reports button. The output formats include HTML (print-friendly), Microsoft Word, Microsoft Excel, and Adobe PDF.
3. Select the **Chart** tab to create and customize charts of the data for each report and save them for export in the above formats.
4. Select the **Significance Test** tab to run a significance test on your results, customize it and export it.

Exhibit 17. Building reports overview

PIRLS IDE 1. Select Criteria ▶ 2. Select Variables ▶ 3. Edit Reports ▶ 4. Build Reports ▶

STEP 4: View each report table by selecting the report name from the drop-down menu. Create report types to edit and preview, each tab created represents one report type to export. Double-click report tabs to rename. [Help](#)

Subject, Grade: Reading, Grade 4
Jurisdictions: International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States
Measures: PIRLS Reading Scale: Combined Reading, PIRLS Reading Scale: Informational purpose, PIRLS Reading Scale: Literary purpose
Variables: All students, Sex of students, Index of student safety in schools (SSS)
Year: 2006

Select Report: Cross-Tabulated Report 1 [Export Reports](#)

Table | Chart | Significance Test

49% [Cancel](#)

PROCESSING DATA

Some queries may take up to two minutes to process.

Please do not hit the "Back" button while processing.

B. View Reports as Data Tables

Once the IDE processes the data for the reports you selected to be built, you will be able to see the data table for the first report (see exhibit 18). Go to **Select Report** to choose the table of interest from the drop-down menu. To change the formatting or statistics options of a table or to generate a table from a report not included in your selection, return to step 3, Edit Reports.

Exhibit 18. Viewing reports as data tables

PIRLS IDE 1. Select Criteria ▶ 2. Select Variables ▶ 3. Edit Reports ▶ 4. Build Reports ▶

STEP 4: View each report table by selecting the report name from the drop-down menu. Create report types to edit and preview, each tab created represents one report type to export. Double-click report tabs to rename. Help

Subject, Grade: Reading, Grade 4
Jurisdictions: International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States
Measures: PIRLS Reading Scale: Combined Reading, PIRLS Reading Scale: Informational purpose, PIRLS Reading Scale: Literary purpose
Variables: All students, Sex of students, Index of student safety in schools (SSS)
Year: 2006

Select Report: Cross-Tabulated Report 1 Export Reports

Table | Chart | Significance Test

Average scale scores and percentages for reading, grade 4, by year, jurisdiction, Sex of students [ITSEX], and Index of student safety in schools (SSS) [ASDGSSS]:

Year	Jurisdiction	Sex of students	High				Medium				Low	
			Average score	Standard error	Percentage	Standard error	Average score	Standard error	Percentage	Standard error	Average score	Standard error
2006	International Average	Female	519	(0.7)	51	(0.3)	502	(0.7)	47	(0.3)	502	(2.5)
		Male	503	(0.8)	43	(0.3)	487	(0.7)	52	(0.3)	488	(1.7)
	England	Female	574	(4.4)	39	(1.8)	536	(3.8)	57	(1.8)	512	(11.2)
		Male	553	(4.5)	34	(1.8)	522	(3.3)	59	(1.6)	502	(6.7)
	France	Female	540	(2.9)	44	(2.1)	519	(3.0)	52	(1.9)	511	(9.6)
		Male	528	(3.1)	36	(1.8)	512	(3.0)	57	(1.5)	495	(6.2)
	Germany	Female	567	(2.8)	57	(1.4)	539	(3.2)	41	(1.3)	533	(8.9)
		Male	565	(3.1)	45	(1.4)	541	(2.8)	50	(1.3)	506	(7.5)

C. Charts

Go to **Select Report** to choose the report of interest from the drop-down menu, and then click the **Chart** link (see exhibit 19).

Exhibit 19. Viewing reports as charts

PIRLS IDE 1. Select Criteria ▶ 2. Select Variables ▶ 3. Edit Reports ▶ 4. Build Reports ▶

STEP 4: View each report table by selecting the report name from the drop-down menu. Create report types to edit and preview, each tab created represents one report type to export. Double-click report tabs to rename. Help

Subject, Grade: Reading, Grade 4
Jurisdictions: International Average, England, France, Germany, Italy, Russian Federation, Scotland, United States
Measures: PIRLS Reading Scale: Combined Reading, PIRLS Reading Scale: Informational purpose, PIRLS Reading Scale: Literary purpose
Variables: All students, Sex of students, Index of student safety in schools (SSS)
Year: 2006

Select Report: Cross-Tabulated Report 1 Export Reports

Table | Chart | Significance Test

You will be able to create many types of charts, and customize them. Exhibit 20 provides a summary of the custom features and they are further explained in Section E, Create Charts – Chart Options.

Exhibit 20. Chart Options

Actions	Description
Chart Options	Select display type (bars, columns, or lines) with your cursor. For data on achievement levels, you also have the option of selecting a discrete or cumulative chart. Customize the chart and preview it.
Preview	Change the jurisdiction and other variables as applicable. Also change the pattern and color in your chart.
Color	Change the color of the chart by clicking on one of each type bar so that a small square appears. Click on the small square, and a custom color grid will appear; click on the color of choice.
Pattern	Click the bars to change the pattern.
Grayscale	Available for the discrete or cumulative (achievement levels) chart; it will format the chart or map to print in black and white.
Click here to edit this chart	Edits will overwrite your previous version once you press Done . If you wish to produce a different chart based on the same report, begin by clicking Chart again.
Export Reports	After pressing Done for the last report, press the Export Reports button.

If you complete one chart and wish to try a different type of chart, you will need to **Preview** the chart and press **Done** in order to save the chart to export.

D. Create Charts – Data Options

When you click **Chart**, your screen will present **Data Options** pertaining to **Statistic**, **Year**, and **Jurisdiction**. All are selected by default, except that you can have only one statistic (see exhibit 21). Uncheck any of the criteria that you do not wish to chart, as long as you have one selected in each category.

Exhibit 21. Data options for charts

Select Report: Cross-Tabulated Report 1 Export Reports

Table **Chart 1** X

Chart Significance Test

Data Options

Select a single statistic and any combination of jurisdictions and years. Continue to Chart Options.

Statistic	Year	Jurisdiction
<input type="radio"/> Average scale scores <input checked="" type="radio"/> Percentages <input type="radio"/> Achievement levels - cumulative <input type="radio"/> Achievement levels - discrete <input type="radio"/> Percentiles	<input checked="" type="checkbox"/> Year <input checked="" type="checkbox"/> 2006	<input checked="" type="checkbox"/> International <input checked="" type="checkbox"/> International Average <input checked="" type="checkbox"/> Country <input checked="" type="checkbox"/> Austria <input checked="" type="checkbox"/> Belgium (Flemish) <input checked="" type="checkbox"/> Belgium (French) <input checked="" type="checkbox"/> Bulgaria <input checked="" type="checkbox"/> Chinese Taipei <input checked="" type="checkbox"/> Denmark

* The item response rate is below 85 percent. Missing data have not been explicitly accounted for.

Chart Options

E. Create Charts – Chart Options

Once finished with the Data Options, click the **Chart Options** button in the lower right corner.

In the Chart Options screen, select **Bar Chart**, **Column Chart**, or **Line Chart**. For data on achievement levels, you also have the option of selecting a **Discrete** or **Cumulative Chart**.

After selecting a chart type, change any data dimensions from the drop-down menus for **Bar**, **Column**, or **Line Values** and **Values Grouped by**. Any new variables that you created at step 3, **Edit Reports**, will be available for selection, but only if you selected the variables (i.e., check mark next to them) and pressed **Done** when you edited the report.

Enter a **Chart Name** limited to 25 characters, using only letters, numbers, spaces, underscores, and hyphens (otherwise, the default is “Chart 1”) (see exhibit 22).

Preview your chart by clicking the **Preview** button in the lower right corner, or go back to the data options and make different selections by clicking the **Data Options** button in the lower left corner.

Exhibit 22. Chart options

Select Report: Cross-Tabulated Report 1 Export Reports

Table **Chart 1** X

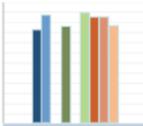
Chart Significance Test

Chart Options

Choose an available chart type based on selected data. Choose data dimensions from the drop-down menus and name the chart, then preview the chart. To select different data return to Data Options.



Bar Chart



Column Chart



Line Chart



Discrete Chart

Bar Values: Jurisdiction

Values Grouped by: Achievement levels - discrete

Chart Name: Achievement levels-G8

Data Options
Preview

While previewing your chart, you can do the following (see exhibit 23 as an example of a **Discrete Chart** and exhibit 24 as an example of a **Bar Chart**):

1. Use the drop-down menus to change the jurisdiction and other variables as applicable. Notice that when you change your selection, the change occurs slowly enough that you get a sense of the size and direction of the change—especially if you didn't previously specify in the data dimensions how you want your values grouped by.
2. For the **Discrete Chart**, you can select where you want the divider by clicking one of the achievement level buttons above the bars. This makes it much easier to compare the percentages at a given level(s). In the example shown in exhibit 23, the percentages of students at the high and advanced levels are shown to the right of the divider.
3. Place your cursor over the bars of the chart to see the data points and value label(s).
4. Choose between using colors or patterns for the bars by clicking the alternating **Pattern** or **Color** button located just below the **Chart** tab in the upper left portion of the screen. For the **Discrete Chart** and **Cumulative Chart**, choose between **Color** or **Grayscale**.

Exhibit 23. Preview of discrete chart

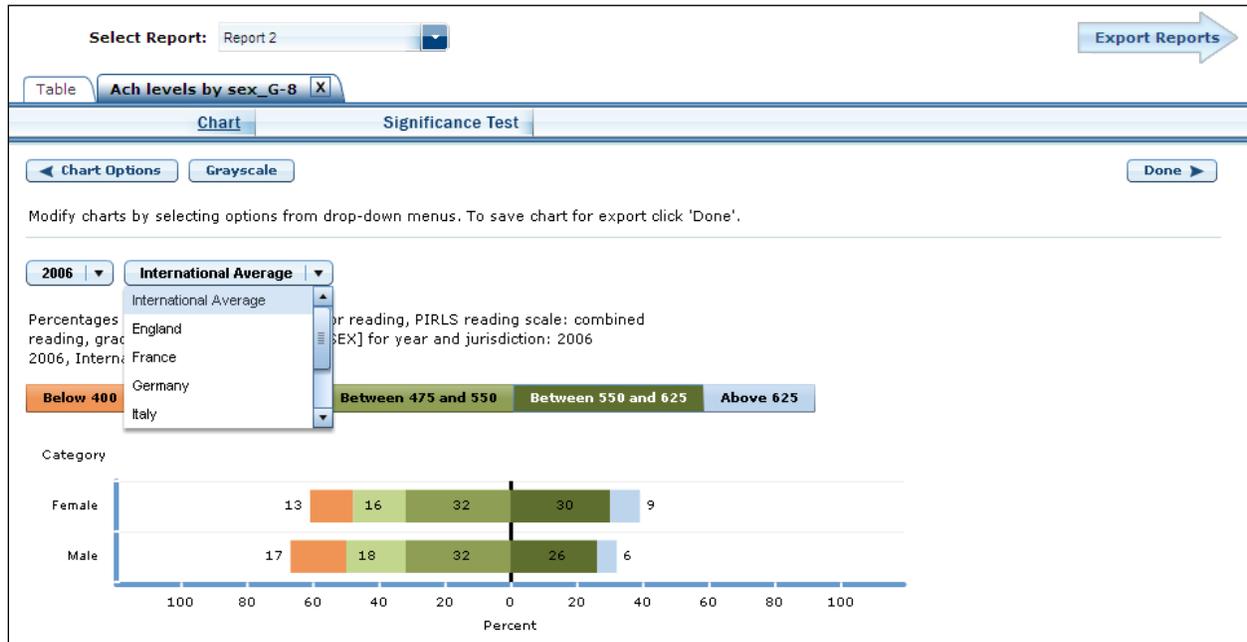
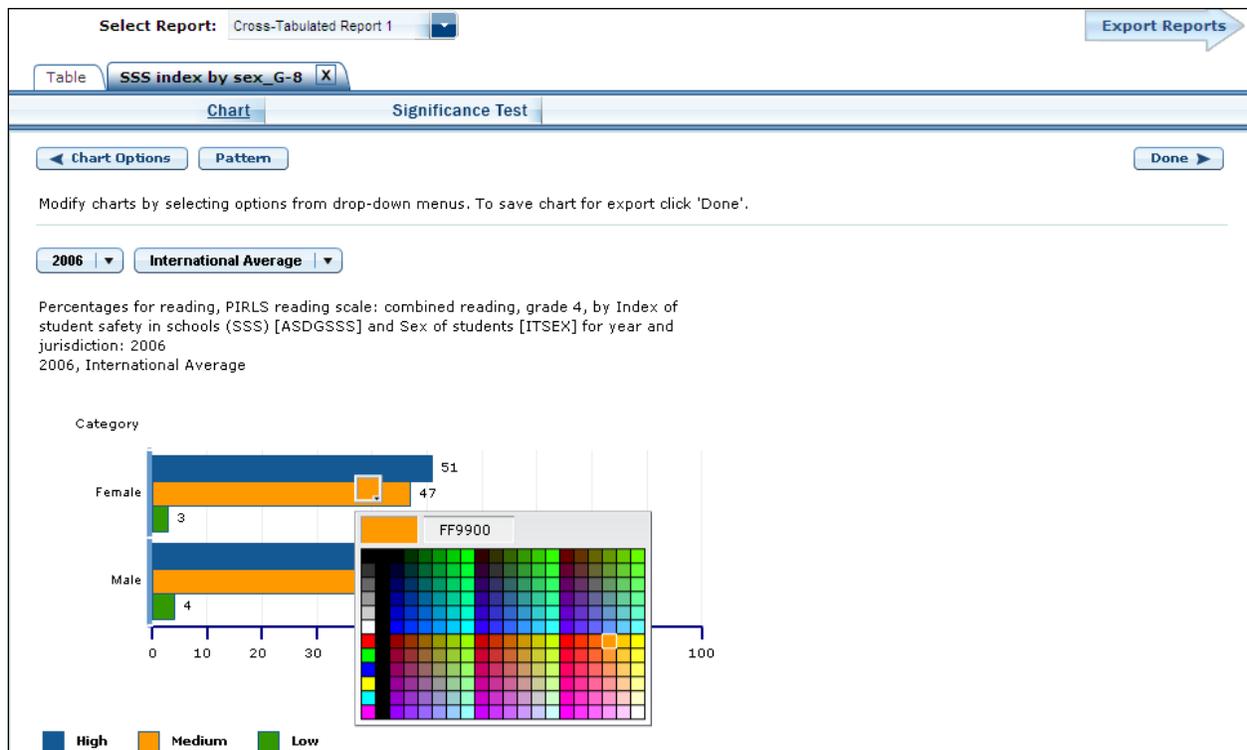


Exhibit 24. Preview of bar chart



5. Change the color of the bars with a single click on each level in the bars. That click brings a thumbnail of a color chart. Click on the thumbnail to reveal a color grid, and then select the color you desire.
6. Change the pattern of the bars with a single click on each level in the bars. Continuous clicking brings up many patterns to choose from.

Click the **Done** button located on the right side of the screen, or click back to **Chart Options** and/or **Data Options** to change your selection criteria. You must click **Done** if you wish to later save and/or print your chart via the Export Wizard.

Done takes you to the exportable version of the chart, but you can subsequently “**Click here to edit this chart**” (located in the upper left corner, below the **Chart** link) to make more changes. Alternatively, the entire chart area, if clicked, will take you to the edit screen.

To make an additional chart from the same report/table, click the Chart link to begin a new chart. It is recommended that you provide a new chart name (the default is Chart 1, Chart 2, etc.). If you don't start the chart process again by clicking the Chart link, the new chart will overwrite the previous one.

If you wish to make charts using other reports or additional ones, select other report in the **Select Report** drop-down list. If other reports were not checked in Step 3, **Edit Reports**, go back to Step 3, **Edit Reports**, and check the ones you want. When you then advance to step 4, **Build Reports**, the reports will appear in the **Select Report** drop-down list. If you need to create new reports, go back to step 1, **Select Criteria**, and/or step 2, **Select Variables**. Remember to export any completed charts you want to save by clicking **Done** and using the **Export Reports** function before leaving the **Build Reports** screen. (For further information, see section G, Build Reports: Export Reports.)

F. Significance Tests

Tests for statistical significance indicate whether observed differences between assessment results are likely to have occurred because of sampling error or chance. "Significance" here does not imply any judgment about absolute magnitude or educational relevance. It refers only to the statistical nature of the difference and whether that difference likely reflects a true difference in the population.

With your report of interest selected, click the **Significance Test** link, which is located towards the middle of the screen, to the right of the **Chart** link. You first need to decide which variable you want to test and the criterion by which you want to test that variable (i.e. within or between variable values). You will compare or “look across” the criterion's range of values, so it must have more than one value. You can look across jurisdictions for a variable, that is, compare between two or more jurisdictions, or you can look across the values within a variable for a single jurisdiction. For example, with the variables shown in exhibit 25 you can choose to compare female scores between countries, or you could choose to compare male and female

scores within a country. Once the primary criterion is chosen, all other criteria must be restricted to a single value.

The general steps for running significance tests are as follows (see exhibit 25):

1. In the **Significance Test** window select either **Between Jurisdictions** or **Within Variables**. Select **Jurisdiction(s)**, **Variable(s)**, and **Statistic(s)**. For **Between Jurisdictions**, you must select at least two jurisdictions. For **Within Variables**, you select one or more jurisdictions.
2. Enter a **Name** limited to 25 characters, using only letters, numbers, spaces, underscores, and hyphens (otherwise, the default is “Sig Test 1”).
3. Located under the test **Name**, you can check **Show Score Details** to display the estimates and standard errors for the table cells.
4. Click the **Preview** tab located in the upper left corner, or the **Preview** button located in the bottom left corner.
5. Click the **Edit** tab in the upper left corner of the screen if you wish to go back and make changes to the selections you made for running the significance tests.
6. Click the **Done** button in the upper or lower right corner of the screen to run the significance tests.

Exhibit 25. Significance tests options

Significance Test

Edit **Preview** **Cancel** **Done**

1. Select one category to compare significance from the choices available below. **Help**

Between Jurisdictions **Within Variables** **Across Years**

2. Create a name for this significance test. **Name:** SSS index by

3. Check to show score details. Show score details

4. Select available options from each of the columns below, then preview results.

Jurisdiction	Variable	Year	Statistic
<input type="checkbox"/> All Jurisdictions	<input checked="" type="checkbox"/> Sex of students	<input checked="" type="checkbox"/> 2006	<input checked="" type="checkbox"/> Percentages
<input type="checkbox"/> International Average	<input checked="" type="checkbox"/> Female		
<input type="checkbox"/> England	<input checked="" type="checkbox"/> Male		
<input checked="" type="checkbox"/> France	<input checked="" type="checkbox"/> Index of student safety in		
<input checked="" type="checkbox"/> Germany	<input checked="" type="checkbox"/> High		
<input type="checkbox"/> Italy	<input checked="" type="checkbox"/> Medium		

Preview **Cancel** **Done**

In the significance test matrix, you will see the differences and *p*-values. As shown in the legend of the matrix, it is indicated whether one estimate is significantly lower or higher than another estimate, or if there is no significant difference between them (see exhibit 26). Most comparisons are independent with an alpha level of 0.05, except for within-variable tests for gender where a dependent methodology is used. Please note that multiple comparisons are not available in the IDE.

Exhibit 26. Significance test output

		France (44)	Germany (57)
France (44)			< Diff = -13 P-value = 0.0000
Germany (57)		> Diff = 13 P-value = 0.0000	

LEGEND:

<	Significantly lower.
>	Significantly higher.
x	No significant difference.

NOTE: Most comparisons are independent with an alpha level of 0.05, except for within variable tests for gender where a dependent methodology is used.

Percentages for reading, grade 4, by year and jurisdiction: 2006

Year	Jurisdiction	Sex of student	High Percentage	High Standard error	Medium Percentage	Medium Standard error	Low Percentage	Low Standard error
2006	France	Female	44	(2.1)	52	(1.9)	4	
	Germany	Female	57	(1.4)	41	(1.3)	2	

NOTE: Detail may not sum to totals because of rounding. Some apparent differences between estimates may not be statistically significant.
SOURCE: International Association for the Evaluation of Educational Achievement, Progress in International Reading Literacy Study (PIRLS), 2006.

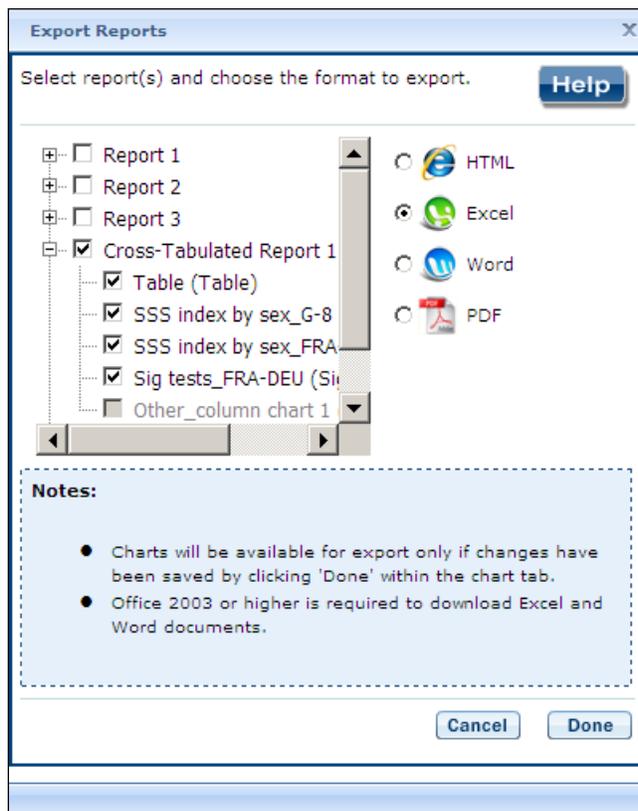
G. Export Reports

Click on the **Export Reports** button/arrow located on the right side of the screen to save or print your tables, charts, and significance tests. The report names that appear in the **Export Reports** window are those that were checked off at step 3, **Edit Reports**.

Check the files you want to export, and select one of the file formats: **HTML** (print-friendly), **Excel**, **Word**, and **PDF** (see exhibit 27). All reports that you select at the same time will be exported in one file. In the Excel format, you will be able to increase the decimal places visible (wherever more precision is available in the database). Because there are many different operating systems in use, you may get an error message with Excel or one of the other formats. Usually, this will not affect your ability to export, so please wait for software "errors" to resolve themselves.

Charts for each report will only be available on this menu if you saved them by clicking **Done** on the last screen when you created them. If a chart that you wish to save or print is grayed out (not available for selection), cancel the **Export Reports** tool, go back to your chart, and be sure to click **Done** on the last screen. After that, it will be available for export.

Exhibit 27. Export report options



If you edited report tables or completed charts that you wish to save or print, remember to do this via the **Export Reports** function before leaving the **Build Reports** screen. Returning to prior screens to edit the report table formats or change variables or criteria will overwrite the report tables and charts.

V. PIRLS IDE Definitions

This section describes the kinds of criteria and variables that are used to form data queries, as well as the kinds of data available and statistical methods to assess them.

These topics include the following:

- Criteria
 - Measures
 - Jurisdictions
- Variables
- Statistics Options
 - Average scale scores
 - Percentages
 - Achievement levels (discrete and cumulative)
 - Percentiles
 - Standard deviations
- Cross-tabulations
- Statistical Notations and Other Notes

1. Criteria

Each data query must include at least one selection from two criteria choices: measure(s) and jurisdiction(s). Shown below is an outline of these selection criteria followed by a brief description.

1. Measure:
 - PIRLS Reading Scale: Combined reading
 - PIRLS Reading Scale: Literary purpose
 - PIRLS Reading Scale: Informational purpose
 - PIRLS Reading Scale: Make straightforward inferences
 - PIRLS Reading Scale: Interpret ideas and information
2. Jurisdiction:
 - International Average
 - Average for Selected Countries
 - Country
 - Benchmarking jurisdiction

Measures

PIRLS focuses on overall reading literacy, but within this broad category four subscales are available, two focusing on the purposes of reading: literary purposes, and informational purposes; and two focusing on the processes used for reading: straightforward inferencing, and interpreting ideas and information. Subscales are constituent parts of the composite subject scale for an assessment. Subscales are specified by the assessment framework. The weighted average of these is the basis for the reading composite scale, as described in the PIRLS framework.

Subscales are based on fewer observations than the combined scale and as a result may have larger standard errors.

Jurisdictions

In 2006, 38 countries participated in PIRLS, including 2 separate samples of students in Belgium, and separate samples for Chinese Taipei and Hong Kong. Seven benchmarking jurisdictions also participated, which included 5 Canadian provinces, and 5th grade students in Norway and Iceland. All listed jurisdictions can be selected for any analyses. However, the IDE contains a few U.S.-specific background variables (e.g., race/ethnicity) that, when selected, will not yield information for any other jurisdictions.

2. Variables

In the PIRLS IDE, questions from three types of questionnaires (student, teacher, and school) as well as variables that are derived from background information are organized into categories that have shared characteristics and can be selected as a group when examining and generating tables.

Content category and subcategory titles may overlap, but specific variables appear only once in a subcategory. Use Search in the Select Variables step to locate variables.

3. Statistics Options

The IDE reports PIRLS data with several Statistics Options:

- Average scale scores
- Percentages
- Achievement levels – discrete
- Achievement levels – cumulative
- Percentiles
- Standard deviations

Average scale scores

For the PIRLS assessment, student performance is reported on scales that range from 0 to 1,000, with the PIRLS scale average fixed at 500 and a standard deviation of 100.

Scale scores can show the standard error (in parentheses) and are often accompanied by data showing percentages and standard deviations.

PIRLS scales are produced using Item Response Theory (IRT) to estimate average scores for reading literacy for each jurisdiction. IRT identifies patterns of response and uses statistical models to predict the probability of answering an item correctly as a function of the students' proficiency in answering other questions. That is, student responses to the assessment questions are analyzed to determine the percentage of students responding correctly to each multiple-choice question and the percentage of students achieving each of the score categories for constructed-response questions.

Percentages

Percentages show the percentage of students as a row percentage. For example, if the table cell for Black female students in the United States is 9 percent, then Black females composed 9 percent of U.S. fourth-graders. By default, percentage distributions do not include those with missing data, though there is an option to include the missing.

Achievement levels (discrete and cumulative)

In addition to average scale scores, achievement results for PIRLS are also reported using achievement levels. The achievement levels are international benchmarks based on collective judgments about what students should know and be able to do relative to the body of content reflected in each subject-area assessment. The overall reading literacy scale is divided into benchmarks (*below low, at low, at intermediate, at high, and at advanced*). Descriptions were developed to characterize typical student performance at each benchmark.

International benchmarks for the reading levels are as follows:

- below low, below 400
- at low, 400-474
- at intermediate, 475-549
- at high, 550-624
- at advanced, 625 and above

Descriptions of competencies at the 2006 PIRLS international benchmarks appear in the following table:

Description of PIRLS international benchmarks: 2006

Benchmark	Cutpoint	Reading skills and strategies
Low	400	<ul style="list-style-type: none"> • Retrieve explicitly stated details from literary and informational texts
Intermediate	475	<ul style="list-style-type: none"> • Identify central events, plot sequences, and relevant story details • Make straightforward inferences from the text • Begin to make connections across parts of the text
High	550	<ul style="list-style-type: none"> • Recognize some textual features, such as figurative language and abstract messages • Make inferences on the basis of abstract or embedded information • Integrate information to recognize main ideas and provide explanations
Advanced	625	<ul style="list-style-type: none"> • Interpret figurative language • Distinguish and interpret complex information from different parts of text • Integrate ideas across text to provide interpretations about characters' feelings and behaviors

NOTE: Information about the procedures used to set the international benchmarks is available in the [PIRLS 2006 Technical Report](#) (Martin, Mullis, and Kennedy 2007).

SOURCE: International Association for the Evaluation of Educational Achievement, Progress in International Reading Literacy Study (PIRLS), 2006.

Achievement-level data are presented in a discrete or cumulative format. Discrete format means that the percentage of students performing within each international benchmark is counted separately from the other benchmarks. These categories are the percentages of students scoring *below low, at low, at intermediate, at high, and at advanced*. Cumulative format shows the percentage of students performing *at or above* each international benchmark. These categories are the percentages of students scoring *at or above low, at or above intermediate, at or above high, and at advanced*. Scoring below *low* indicates that a student's abilities could not be accurately described based on their responses.

Percentiles

This statistic shows the threshold (or cutpoint) score for the following:

- 10th percentile – the bottom 10 percent of students
- 25th percentile – the bottom quarter of students
- 50th percentile – the median (half the students scored below the cutpoint and half scored above it)
- 75th percentile – the top quarter of students
- 90th percentile – the top 10 percent of students

Standard deviations

The standard deviation is a measure of how widely or narrowly dispersed scores are for a particular data set. Under general normality assumptions, 95 percent of the scores are within two standard deviations of the mean. For example, if the average score of a data set is 500 and the

standard deviation is 100, it means that 95 percent of the scores in this data set fall between 300 and 700. The standard deviation is the square root of the variance.

In the IDE, you may obtain Standard Deviations as one of your two choices for Statistics Options in Edit Reports.

4. Cross-tabulations

Cross-tabulation is a method of combining separate variables into a single table. Normally each variable has its own table. If you have selected two or three variables (not counting All Students), when you go to the Edit Reports step, you will automatically get one table for each variable (including one for All Students); at the end of that list, you will get one cross-tabulation for the two or three variables selected.

If you have chosen four or more variables (not counting All Students), you will get tables for each variable, but you won't get the cross-tabulation.

Be advised that if you go back to add another variable without subtracting one to keep the total under four, you will lose any edits you might have made to the cross-tabulation.

5. Statistical Notations and Other Notes

Statistical notations and other notes are found at the end of a data table, as applicable to that table:

— Not available.

† Not applicable. (For instance, the statistic does not meet reporting standards, so the standard error for that statistic cannot be reported.)

The statistic rounds to zero.

‡ Reporting standards not met. (For instance, the sample size is insufficient to permit a reliable estimate.)

NOTE: A general note pertains to any special characteristics of the data in the table.

SOURCE: Source information is listed for all PIRLS data and should be cited when data are used in a publication or presentation.

6. Glossary

Below is a list of technical and PIRLS-specific assessment terms used in the IDE.

A. Student and Family Characteristics

Language of testing – This question asks students what language they spoke before they started school. Language options vary by country, but in the United States in 2006 the options were as follows: English, Spanish, Vietnamese, Chinese, a Filipino language, and Other. For additional details about country-specific adaptations, see the PIRLS 2006 User Guide Supplement 2.

Home resources – Within the home resource category, six items are consistent across countries, and up to four country-specific items could be included. In 2006, students in all

countries were asked if they had a computer (not including Nintendo®, Gameboy®, or other TV/video game stations); study desk/table for personal use; books of their very own (not including school books); daily newspaper; their own room; and their own mobile (cellular) phone. In addition, the United States used three country-specific variables: video or digital camera; more than one car, truck or van; and more than one bathroom. For additional details about country-specific adaptations, see the PIRLS 2006 User Guide Supplement 2.

ISCED – The International Standard Classification of Education (ISCED) is an internationally comparable method for describing levels of education across countries, created by the United Nations Educational, Scientific and Cultural Organization (UNESCO). ISCED levels are defined as follows:

Level 0 – The initial stage of organized instruction, designed primarily to introduce very young children to a school-type environment. ISCED level 0 programs can either be center or school based. Preschool and kindergarten programs in the United States fall into the level 0 category.

Level 1 – Consists of primary education, which usually lasts 4 to 6 years. ISCED level 1 typically begins between ages 5 and 7, and is the stage where students begin to study basic subjects, such as reading, writing, and mathematics. In the United States, elementary school (grades 1 through 6) is classified as level 1.

Level 2 – Also known as lower secondary education, students continue to learn the basic subjects taught in level 1, but this level is typically more subject specific than level 1 and may be taught by specialized teachers. ISCED level 2 usually lasts between 2 and 6 years, and begins around the age of 11. Middle school and junior high (grades 7 through 9) in the United States are classified as level 2. These programs are primarily designed to prepare students for ISCED level 3.

Level 3 – Also known as upper secondary education, student coursework is generally subject specific and often taught by specialized teachers. Students often enter upper secondary education at the age of 15 or 16 and attend anywhere from 2 to 5 years. ISCED level 3 can prepare students for university, further schooling, or the labor force. Senior high school (grades 10 through 12) is considered level 3 in the United States. These programs are primarily designed to prepare students for ISCED levels 5A and 5B.

Level 4 – Consists of primarily vocational education and courses are taken after the completion of secondary school, though the content is not more advanced than the content of secondary school courses. ISCED level 4 programs in the United States are often in the form of 1-year certificate programs. These programs can prepare students for ISCED levels 5A and 5B.

Level 5 – Divided into levels 5A and 5B, this level refers to tertiary education and usually lasts 3 to 6 years. ISCED level 5A refers to academic higher education below the doctoral level. Level 5A programs are intended to provide sufficient qualifications to gain entry into advanced research programs and professions with high skill requirements. In the United States, bachelor's, master's, and first professional degree programs are classified as ISCED level 5A. ISCED level 5B refers to vocational higher education. Level 5B programs provide a higher level of

career and technical education and are designed to prepare students for the labor market. In the United States, associate's degree programs are classified at this level.

Level 6 – Refers to the doctoral level of academic higher education. Level 6 programs usually require the completion of a research thesis or dissertation.

B. Student Reading Activities

Activities outside of school – Within the category of reading activities students engage in outside of school, eight items were used by all countries, and one country-specific item could be used. Items used internationally asked students if they read comic books; stories or novels; books that explain things; magazines; newspapers; directions or instructions; brochures and catalogues; and subtitles on a television screen. In 2006, the United States did not include a country-specific item. For additional details about country-specific adaptations, see the PIRLS 2006 User Guide Supplement 2.

Students' reports on students reading aloud in class – This index variable is based on students' responses to two questions: reading aloud to the whole class and reading aloud in small groups [ASBGTHC2 and ASBGTHC3]. The average is calculated based on a 4-point scale corresponding to four response options for each question: *Never or almost never* = 4; *Once or twice a month* = 3; *Once or twice a week* = 2; and *Every day or almost every day* = 1. Students were categorized for the index variable as follows: *Every day or almost every day* = average of 1 to less than 1.75; *Once or twice a week* = average of 1.75 through 2.5; *Once or twice a month* = average of greater than 2.5 through 3.25; *Every day or almost every day* = average of greater than 3.25 through 4.

Students' reports about independent reading – This index variable is based on students' responses to two questions: reading silently and selecting their own books [ASBGTHC4 and ASBGTHC5]. The average is calculated based on a 4-point scale corresponding to four response options for each question: *Never or almost never* = 4; *Once or twice a month* = 3; *Once or twice a week* = 2; and *Every day or almost every day* = 1. Students were categorized for the index variable as follows: *Every day or almost every day* = average of 1 to less than 1.75; *Once or twice a week* = average of 1.75 through 2.5; *Once or twice a month* = average of greater than 2.5 through 3.25; *Every day or almost every day* = average of greater than 3.25 through 4.

C. Students' Interests and Self Perception

Index of students' attitudes toward reading (SATR) – This index is composed of five statements about reading enjoyment. Students were asked to respond to the following statements: I read only if I have to; I like talking about books with other people; I would be happy if someone gave me a book as a present; I think reading is boring; and I enjoy reading [ASBGRST1-6]. Student responses were averaged on a 4-point scale as follows: *Agree a lot* = 1; *Agree a little* = 2; *Disagree a little* = 3; and *Disagree a lot* = 4. After reverse-scoring relevant items, responses to each statement were averaged such that *High* = average of 1 to less than 2; *Medium* = average of 2 through 3; and *Low* = average of greater than 3 through 4.

Index of students' reading self-concept (SRSC) – This index is composed of four statements about students' reading self-concept. Students were asked to respond to the following statements: Reading is very easy for me; I do not read as well as other students in my class; When I am reading by myself, I understand almost everything I read; and I read slower than other students in my class [ASBGRD1-4]. Student responses were averaged on a 4-point scale as follows: *Agree a lot* = 1; *Agree a little* = 2; *Disagree a little* = 3; and *Disagree a lot* = 4. After reverse-scoring relevant items, responses to each statement were averaged such that *High* = average of 1 to less than 2; *Medium* = average of 2 through 3; and *Low* = average of greater than 3 through 4.

D. Student Perception of School

Index of student safety in school (SSS) – This index is based on students' level of agreement with the statement "I feel safe when I am at school" and student reports of incidents of bullying, stealing, and injury to the student or someone in the student's class in the past month. Specifically, students were asked to respond to the follow statements: Something was stolen from me; Something was stolen from someone in my class; I was bullied by another student; Someone in my class was bullied by another student; I was injured by another student; and Someone in my class was injured by another student [ASBGOBUL, ASBGOHRT, ASBGOSTL, ASBGSBUL, ASBGSHRT, ASBGSSTL]. Students at the *High* level of the index agreed (a little or a lot) that they felt safe at school, reported one or fewer incidents happening to them, and one or fewer incidents happening to a classmate in the last month. Students at the *Low* level of the index disagreed (a little or a lot) about feeling safe at school, had two or more incidents happen to them, and two or more incidents happen to a classmate during the past month. All other students were at the *Medium* level.

E. Student Characteristics (Teacher)

Fourth-grade – The target population for PIRLS 2006 was students enrolled in the fourth grade of formal schooling, counting from the first year of primary school as defined by UNESCO's International Standard Classification of Education (ISCED) system. Accordingly, the fourth year of formal schooling should be the fourth grade in most countries. However, to avoid testing very young children, PIRLS has a policy that the average age of children in the grade tested should not be below 9.5 years old, so some countries participate with students in the fifth grade.

F. Homework Assignment (Teacher)

Index of reading for homework (RFH) – This index was created by combining teachers' responses to individual questions about reading homework. Teachers were asked how often they assigned reading as part of homework (for any subject), and how much time they expected students to spend on the homework each time it was assigned [ATBGHWR1 and ATBGHWR2]. Students were placed in one of three categories of the index (*High*, *Medium*, or *Low*) according to their teachers' responses. Cutoff points were established such that the *High* level of the index corresponds to relatively high amounts of reading for homework. Students assigned to the *High* level were expected to spend more than 30 minutes on reading for homework at least 1-2 times per week. Students

assigned to the *Low* level were given reading for homework less than once a week and were expected to spend no more than 30 minutes on it if/when assigned. The remaining students were assigned to the *Medium* level.

G. Teacher Characteristics

Index of teacher career satisfaction (TCS) – This index combined teachers’ responses to five items about their satisfaction with being a teacher. Teachers were asked to respond to the follow statements: I am content with my profession as a teacher; I am satisfied with being a teacher at this school; I would describe the teachers at this school as a satisfied group; I had more enthusiasm when I began teaching than I have now; and I do important work as a teacher [ATBGSAT1-5]. Teacher responses were averaged on a 4-point scale as follows: *Agree a lot* = 1, *Agree a little* = 2, *Disagree a little* = 3, and *Disagree a lot* = 4. After reverse-scoring relevant items, students whose teacher’s average was 3 or greater (i.e., they agreed either a little or a lot with all five statements) were assigned to the *Low* level of the index, students with a teacher averaging 2 or more but less than 3 were at the *Medium* level, and students with a teacher averaging less than 2 were assigned to the *High* level of the index.

H. School Characteristics

Percentages of students with early literacy skills – This variable is a composite of principals’ responses to five questions about the percentage of students entering school with the ability to recognize most of the letters of the alphabet; read some words; read sentences; write letters of the alphabet; and write some words [ACBG1GR1- 5]. A 4-point scale was used to compute the average for each principal’s responses: *More than 75%* = 4; *51-75%* = 3; *25-50%* = 2; *Less than 25%* = 1. Students were assigned to groups based on average school principal responses as follows: average greater than 3.25 was assigned to the *More than 75%* group; average greater than 2.5 through 3.25 was assigned to the *51-75%* group; average 1.75 through 2.5 was assigned to the *25-50%* group; and average from 1 to less than 1.75 was assigned to the *Less than 25%* group.

I. School Resources

Index of availability of school resources (ASR) – This index is based on principals’ responses to 14 items about shortages of or inadequacies in accommodation, staff, equipment, and instructional materials [SCQ18a-n and ACBGSII-14]. Specifically, principals were asked to indicate if their school’s capacity to provide instruction was affected by shortages or inadequacies in qualified teaching staff; teachers with a specialization in reading; second language teachers; instructional materials (e.g., textbooks); supplies (e.g., papers, pencils); school buildings and grounds; heating/cooling and lighting systems; instructional space (e.g., classrooms); special equipment for physically disabled students; computers for instructional purposes; computer software for instructional purposes; computer support staff; library books; and audio-visual resources. Principals’ average responses were computed on a 4-point scale: *Not at all* = 1, *A little* = 2, *Some* = 3, and *A lot* = 4. Students were assigned to the *High* level of the index if their school’s principal had an average response of less than 2. Students were assigned to the *Medium* level if their principal’s average was 2 through 3, and to the *Low* level if the average was greater than 3.

J. Home Involvement (School)

Index of home-school involvement (HSI) – This index is based on principals’ responses to seven questions, including four questions about frequency of communication from the school to the home—teacher-parent conferences; letters, calendars, newsletters, etc., sent home; written reports of child’s performance; and events at school to which parents are invited [ACBGPRO1-4]—and three questions about the percentage of students with parents who participate in the life of the school—volunteer regularly to help in the classroom or school; attend teacher-parent conferences; and attend cultural, sporting, or social events at the school [ACBGPAR1-3]. Students were assigned to the *High* level of the index if they attended a school that, at least four times a year, held teacher-parent conferences and school events that were attended by more than half the parents; sent home written report cards of the child’s performance at least four times a year; and sent home letters, calendars, newsletters, etc., with news about the school at least seven times a year. Students were assigned to the *Low* level of the index if their school never held a teacher-parent conference, or if it did, no more than 25 percent of parents attended; held school events no more than once a year that were attended by no more than 25 percent of parents; sent home letters or newsletters no more than three times a year; and written reports of the child’s performance were sent home no more than once a year. Students in schools with other combinations were assigned to the *Medium* level.

K. School Climate

Index of principal’s perception of school climate (PPSC) – This index summarizes principals’ perception of the overall atmosphere in their school using six items. Principals were asked to characterize each of the following within their school: Teachers’ job satisfaction; Teachers’ expectations for student achievement; Parental support for student achievement; Students’ regard for school property; Students’ desire to do well in school; and Students’ regard for each other’s welfare [ACBGCHA1-6]. An average was computed for each principal on a 5-point scale: *Very high* = 1, *High* = 2, *Medium* = 3, *Low* = 4, and *Very low* = 5. Students whose school principal had an average response greater than 3.67 were assigned to the *Low* level of the index, those where the average was below 2.33 to the *High* level, and the remainder to the *Medium* level.