International Computer and Information Literacy Study

ICILS 2013 User Guide for the International Database

Edited by
Michael Jung and Ralph Carstens

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The International Association for the Evaluation of Educational Achievement, known as IEA, is an independent, international consortium of national research institutions and governmental research agencies, with headquarters in Amsterdam. Its primary purpose is to conduct large-scale comparative studies of educational achievement with the aim of gaining more in-depth understanding of the effects of policies and practices within and across systems of education.

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CHAPTER 1:

Introduction and overview of ICILS 2013

Michael Jung and Ralph Carstens

1.1 Main objectives and scope

The International Computer and Information Literacy Study (ICILS) 2013, conducted by the International Association for the Evaluation of Educational Achievement (IEA), studied how students in different countries develop the knowledge, understanding, attitudes, dispositions, and skills that comprise computer and information literacy (CIL). Students need this form of literacy in order to participate effectively in this digital age.

ICILS 2013 was based on the premise, acknowledged by many countries, that preparing students to use digital technology in all its forms secures future economic and social benefits. The aim of ICILS 2013 was to report on student preparation and achievement by way of an authentic computer-based assessment, the first of its kind in international comparative research. These concepts were put forward in the ICILS 2013 framework (Fraillon, Schulz, & Ainley, 2013).

The ICILS 2013 international report (Fraillon, Ainley, Schulz, Friedman, & Gebhardt, 2014) sets out the core findings of the study. The report documents variations across the participating countries in a wide range of different CIL-related outcomes, actions, and dispositions. It also describes the extent to which these outcomes were associated with various characteristics of the participating countries as well as with student characteristics and school contexts.

ICILS 2013 considered four research questions:

- What variations exist among countries and within countries in student and information literacy?
- What aspects of schools and education systems are related to student achievement in computer and information literacy with respect to:
  - The general approach to computer and information literacy education;
  - School and teaching practices regarding the use of technologies in computer and information literacy;
  - Teacher attitudes to, and proficiency in, using computers;
  - Access to information and communication technologies (ICT) in schools; and
  - Teacher professional development and within-school delivery of computer and information literacy programs?

- What characteristics of students' levels of access to, familiarity with, and self-reported proficiency in using computers are related to student achievement in computer and information literacy?
  - How do these characteristics differ among and within countries?
  - To what extent do the strengths of the relations between these characteristics and measured computer and information literacy differ among countries?
- What aspects of students' personal and social backgrounds (such as gender, socioeconomic background, and language background) are related to computer and information literacy?

ICILS 2013 researchers gathered data from about 60,000 Grade 8 (or equivalent) students in more than 3,300 schools from 21 countries or education systems within countries.[1] These student data were augmented by data from almost 35,000 teachers in those schools and by contextual data collected from school ICT-coordinators, principals, and the ICILS 2013 national research centers.

The countries or education systems that participated in ICILS 2013 were:

- Australia
- City of Buenos Aires, Argentina
- Chile
- Croatia
- Czech Republic
- Denmark
- Germany
- Hong Kong SAR
- Korea, Republic of
- Lithuania
- Netherlands
- Norway
- Newfoundland and Labrador, Canada
- Ontario, Canada
- Poland
- Russian Federation
- Slovak Republic
- Slovenia
- Switzerland
- Thailand
- Turkey.

1 In this guide, we use the terms country and education system interchangeably. Some of the entities that participated were countries and others were education systems that did not cover the whole of a country (e.g., the Canadian provinces of Ontario and Newfoundland and Labrador and the city of Buenos Aries in Argentina).

1.2 The design in brief

The ICILS 2013 international database (IDB) offers researchers and analysts a rich and innovative environment for examining student achievement in computer and information literacy in an international context. The database includes:

- Extensive data on CIL that enable indepth study of the quality of education in terms of preparedness and learning outcomes;
- Data for 21 countries from around the world that provide an international perspective from which to examine educational practices and student outcomes in CIL education;
- Student achievement in CIL, linked to questionnaire information from students, school principals, and ICT-coordinators and providing policy-relevant contextual information on the antecedents of achievement;
- Scales on students' behavioral and emotional engagement with regard to ICT; and
- Teacher questionnaire data that provide additional contextual information about the organization and culture of the sampled schools as well as information on general aspects of teaching pertaining to CIL.

The ICILS 2013 student target population comprised students in the grade that represents eight years of schooling, counting from ISCED Level 1,[2] provided that the average age of students in this grade was 13.5 years or above (usually Grade 8)[3] at the time of the assessment.

The target population for the ICILS 2013 teacher survey was defined as all teachers teaching regular school subjects to the students of the target grade during the testing period and since the beginning of the school year. ICILS 2013 also administered separate questionnaires to principals and nominated ICT-coordinators in each school.

Representative samples drawn by means of a systematic random sampling approach that involved multiple sampling stages, clustering, and stratification were selected for both target populations. In most participating countries, about 150 schools, 20 students, and 15 teachers per school were sampled. Minimum exclusion and target response rates were determined in order to secure high-quality data.

A demonstration video of one of the student test modules from the ICILS 2013 assessment, the After-School Exercise test module, can be found on the IEA website: http://www.iea.nl/index.php?id=475.[4] This module required students to set up an online collaborative workspace for sharing information and then to select and adapt information to create an advertising poster for an after-school exercise program.

1.3 Analyzing the data

The ICILS 2013 design and operations resembled procedures used in past and current educational surveys and student achievement studies, such as, for example, the IEA Trends in International Mathematics and Science Study (TIMSS), the IEA Progress in International Reading Literacy Study (PIRLS), and the IEA International Civic and Citizenship Education Study (ICCS). However, the actual data collection for ICILS 2013, via a computer-based assessment, represented a new direction in international

2 ISCED = International Standard Classification of Education.

3 Norway chose to assess Grade 9 students.

4 Retrieved January 3, 2015. The URL may be nonpermanent.

comparative research. The themes of the study imposed a number of additional requirements on data collection and analysis. ICILS 2013 was thus an ambitious and demanding study, involving complex procedures for drawing samples, collecting data, and analyzing and interpreting findings. Researchers using the database need to understand the characteristics of the study in order to work effectively with the information it contains.

1.3.1 Resources and requirements

This user guide describes the organization, content, and use of the international database from a practical perspective. It is imperative that it is used in conjunction with the ICILS 2013 technical report (Fraillon, Schulz, Friedman, Ainley, & Gebhardt, 2015), which provides a comprehensive account of the conceptual, methodological, and analytical implementation of the study. The international report (Fraillon et al., 2014) is another key resource. Using all three publications in combination will allow analysts to understand and confidently replicate the procedures used, as well as to correctly undertake new analyses in areas of special interest.

At a minimum, an analyst carrying out statistical analysis will need to have a good understanding of the conceptual foundations of ICILS 2013, the themes addressed, the populations targeted, the samples selected, the instruments used, and the production of the international database. All of this information is covered and explained in detail in the ICILS 2013 technical report and sketched in practical terms in this user guide. Researchers using the database also need to make themselves familiar with the database structure and its included variables (Chapter 2 in this guide). While it is not critically necessary to be fully knowledgeable about the methods used to construct, validate, and compute the derived scales, analysts must be aware of possible limitations (see Chapters 11 and 12 in the ICILS 2013 technical report).

Other important aspects to keep in mind when working with ICILS 2013 data are these:

- ICILS 2013 is an observational, nonexperimental study that collected cross-sectional data. For this reason, causal inferences and language of the type "condition A caused effect B," "factor A influenced outcome B," and "variable A impacted on variable B" cannot and should not be established with ICILS 2013 data alone. The report containing the international results of the study (Fraillon et al., 2014) refrains from making such inferences or using causal language.
- The ICILS 2013 instruments included a variety of questions relating to factual information as well as to attitudes, beliefs, and perceptions. All this information was self-reported by the principals, teachers, ICT-coordinators, and students. Furthermore, because population features were not observed but estimated using sample data, wording such as "the estimated proportion of students with X is …" is preferable to writing "X percent of students are …".
- ICILS 2013 was carried out in countries with diverse education systems, sometimes further divided within a country by jurisdiction and cultural contexts. Thus, the perception of questions or the terminology used in them might not be fully equivalent across these or other boundaries. This effect became evident in the analysis of crosscultural measurement invariance (see Chapter 10 in the ICILS 2013 technical report).
- Nearly all variables in ICILS 2013 are categorical in nature (nominal or ordered). Analysts may therefore need to consider using categorical, nonparametric analysis methods for these types of variable.

Techniques for continuous variables (provided that the required assumptions hold) should only be used on counts and on the derived scales obtained through data reduction or scaling methods such as factor analysis, structural equation modelling, or item response theory. Analysts also need to have a working knowledge of SPSS (or the software of choice) and knowledge of basic inferential statistics, such as estimating means, correlations, and linear regression parameters. Appropriate theoretical knowledge will be needed to conduct advanced analyses such as logistic regressions.

1.3.2 Estimation requirements

Researchers familiar with population estimation in large-scale education-survey databases such as TIMSS, PIRLS, and other IEA studies will have little difficulty analyzing ICILS 2013 data once they have familiarized themselves with the study's conceptual foundation and its methodological, operational, and analytical details. If, as a user of the ICILS 2013 international database, you are not accustomed to working with complex survey sample data, this guide should provide you with sufficient technical information to enable you to conduct correct basic analysis.

The three main design features of ICILS 2013 that you will need to take into account during any secondary analysis of the study's data are the following:

1. The unequal selection probabilities of the sampling units that necessitate the use of sampling weights during computation of estimates;
2. The complex multistage cluster sample design that was implemented to ensure a balance between the research goals and cost-efficient operations; and
3. The rotated design of the CIL assessment test, wherein students completed only samples of the test items rather than the full set of test items.

Chapter 3 of this guide includes a brief account of the weights and variance estimation techniques intended for ICILS 2013, whereas Chapters 6, 7, and 13 of the ICILS 2013 technical report (Fraillon et al., 2015) provide a more detailed description of the sample design and of the estimation and replication weights found in the international database.

ICILS 2013 used item response theory (IRT) scaling to summarize student results from the CIL assessment. This scaling approach uses multiple imputation—"plausible values"—methodology to obtain CIL proficiency scores for all students. Because each imputed score is a prediction based on limited information, it is subject to estimation error. To allow analysts to account for this error when analyzing the achievement data, the international database provides five separate imputed scores for the CIL scale. Any analysis involving CIL scores needs to be replicated five times, using a different plausible value each time, with the results then combined into a single result that includes information on standard errors that incorporate both sampling and imputation error. More details on plausible values can be found in Chapters 11 and 13 of the ICILS 2013 technical report.

As previously mentioned, this user guide is principally tailored to SPSS (IBM Corp., 2013), one of the most widely used statistical packages in the social sciences and educational research. Unfortunately, the base SPSS to date (i.e., Version 22) does not support complex survey designs such as those used in ICILS 2013 and cannot be used "out of the box" for methodologically correct estimation of sampling errors and of test statistics. The base SPSS assumes that data come from a single-stage, simple random

sample, which is not the case in ICILS 2013 (in common with most other large-scale surveys).

A "complex samples" module for SPSS is available. However, it supports only one of many variance estimation approaches, namely Taylor expansion, and does not handle jackknife replication for estimating sampling errors, which was the technique used for ICILS 2013. This gap has been filled by IEA's International Database (IDB) Analyzer (IEA, 2014), available free of charge to analysts and researchers using the ICILS 2013 database. The Analyzer employs SPSS as an engine to compute population estimates and design-based standard errors using replication. IEA developed the Analyzer in the context of its large-scale student assessments TIMSS and PIRLS, and adapted it for use with data from ICILS 2013 and other studies. The Analyzer allows users to compute estimates of percentages, means, percentiles, correlations, and linear regression parameters, including their respective standard errors. Chapter 4 of this current guide provides indepth information about the IDB Analyzer as well as examples illustrating its use.

If you are an occasional user of the database, you may not want to use one of the commercial statistical software packages with their associated costs. You can, however, access alternative packages suitable for analyzing complex sample data. Available in addition to the IDB Analyzer are a growing number of software packages able to handle the jackknifing replication method implemented in ICILS 2013.

Because customized SAS macros for ICILS 2013 will not be released, we encourage analysts to adapt and use the existing SAS macros developed for TIMSS 2011 and released and documented as part of the TIMSS 2011 user guide (Foy, Arora, & Stanco, 2011). The WesVar (Westat Inc., 2008) software for complex sample analysis is available free of charge from Westat's webpage at http://www.westat.com/Westat/expertise/information_systems/WesVar/wesvar_downloads.cfm. The software is accompanied by a manual and technical appendices.

Commercial packages that include support for the weights and the replication method used in ICILS 2013 are SAS 9.4 and later editions (SAS Institute, 2014), SUDAAN 11 and later editions (Research Triangle Institute, 2013), and Stata 13 and later editions (StataCorp LP, 2014). While these support the complex samples in ICILS 2013, they do not generally support these in orchestration with the multiple imputations methodology that ICILS 2013 used for describing and representing students' CIL performance data. Third-party scripts and macros may exist to provide this support.

In terms of literature, Lehtonen and Pahkinen's (2004) comprehensive introduction to sampling and estimation in descriptive surveys includes content on design effect statistics. *Applied Survey Data Analysis* by Heeringa, West, and Berglund (2010) provides an intermediate-level statistical overview of analyzing complex sample survey data.

1.3.3 Levels and units of analysis

ICILS 2013 defined two target populations, each of which was sampled using a multistage stratified cluster design. Each school was regarded as a "cluster," with all students and teachers nested within these clusters. Schools can therefore be referred to as the primary sampling units (Level 2 in multilevel models), and teachers and students as the secondary sampling units (Level 1 in multilevel models).[5] ICILS 2013

5 As elaborated in Chapter 3 of this guide, the teacher data collected for ICILS 2013 were deemed insufficient to meet the preconditions for multilevel analysis.

defined populations to be as inclusive as possible, and designed samples that would yield unbiased estimates for both student and teacher populations. While schools can be considered as units of analysis in their own right, the school information in ICILS 2013 was of secondary interest. Samples were optimized to enrich and contribute to the information of central interest, that is, the student and the teacher data.

Most of the tables in the ICILS 2013 international report (Fraillon et al., 2014) use the student as the unit of analysis, either on their own or by combining them with school-level variables. In the latter case, school information becomes an attribute of the student, and the information from both files can be used to answer such research questions as: "What percentage of students are studying in schools with a particular (school) attribute?" In other words, the publication generally reports data and findings from the perspective of students. Note, however, that in this case the appropriate weight to use is the final student weight, TOTWGTS (see also Section 3.2.1).

Another possibility for analysts working with the data is to "aggregate" student-level information to the school level and to use this information in school-level or teacher-level analyses. Be aware, though, of the implicit shift of focus within this "aggregation" scenario to the school level: inferences and interpretations can no longer refer to the Level 1 units (in this case, the students). Ignoring this issue may result in an "ecological fallacy" (Robinson, 1950) if aggregated information is being analyzed. This fallacy assumes that each individual member of a group has the average characteristics of the group at large. ICILS 2013 derived and reported a few such variables. (Appendix 3 of this guide lists all of these derived variables.)

Snijders and Bosker (1999) summarize (in Chapter 3 of their book) the pros and cons of both "disaggregating" and "aggregating" information, while Section 3.2.1 of this current guide describes the weights that have to be used during merging of files. However, it is important to note that for certain research questions, neither of these two methods may fully account for the hierarchical nature of the data. The potential effects arising from the fact that students are nested within schools also need to be considered. In the worst-case scenario, the two methods may provide an incomplete or misleading representation of respective education systems and processes. If you are interested in answering research questions that refer to or try to explain the degree of variability of a characteristic located within schools and between schools, you might find using multilevel models (e.g., a two-level hierarchical linear model) advisable.

Although ICILS 2013 was designed with multilevel modelling in mind, we do not discuss such models in either theoretical or practical terms in this guide because more factors and considerations than can be addressed here determine their specification within the purview of specific research questions. However, because users of the ICILS 2013 database need to fully understand the theoretical and mathematical bases for multilevel analysis, we refer you to the existing literature on multilevel modeling. Section 3.2.1 of this guide describes the use of weights in such models. Chapter 13 in the technical report (Fraillon et al., 2015) includes a description of how hierarchical linear modelling has been approached for the international report (Fraillon et al., 2014).

If you are considering undertaking multilevel analysis of the ICILS 2013 data, you will need to take into account the structure of each participating education system. Although there are no major differences across the ICILS 2013 countries in how they defined a student for the purposes of the study, their determinations of what a school is (e.g.,

with respect to administrative units, multicampus schools, buildings, tracks, and shifts) did vary. The results of multilevel and variance decomposition analyses that investigate the across-school variability of a characteristic therefore need to be interpreted in terms of the structure of the education systems, the definitions underlying the school sample frame, and the specific schools that ICILS 2013 asked teachers and principals to refer to when completing their questionnaires.

Snijders and Bosker's (1999) introduction to multilevel analysis is readable and straightforward. If you are interested in the actual estimation of such models, we suggest you refer to the popular multilevel software packages that include Stata (StataCorp LP, 2014), HLM 6 (Raudenbusch, Bryk, & Congdon, 2004), Mplus (Muthén & Muthén, 2012), MLwiN (Rasbash, Steele, Browne, & Goldstein, 2014), and SAS (SAS Institute, 2014).

1.3.4 Limitations of the public-use database

When analyzing ICILS 2013 data, researchers need to keep the following constraints in mind:

- Participation rates in the student survey were below ICILS 2013 standards in the city of Buenos Aires (Argentina), Denmark, Hong Kong SAR, the Netherlands, and Switzerland, resulting in a separated presentation of the results in the ICILS 2013 international report (Fraillon et al., 2014). Student data from these countries hold a higher risk of bias and therefore should be interpreted with caution and not compared with data from other countries.
- Participation rates in the teacher survey were below ICILS 2013 standards in Denmark, Germany, Hong Kong SAR, the Netherlands, Norway (Grade 9), and Ontario (Canada), resulting in a separated presentation of the results in the ICILS 2013 international report. Teacher data from these countries hold a higher risk of bias and therefore should be interpreted with caution and not compared with data from other countries.
- The particularly low participation rates in the teacher survey in the city of Buenos Aires (Argentina) and in Switzerland led to the exclusion of their teacher data from the ICILS 2013 international database.
- Exclusion rates pertaining to the student population were above five percent in Hong Kong SAR, Newfoundland and Labrador (Canada), Norway (Grade 9), and the Russian Federation. The ICILS 2013 research team deemed this level of exclusion a significant reduction of target population coverage and researchers need to keep this feature in mind when interpreting results.
- Students in the Russian Federation were tested at the beginning of Grade 9 rather than at the end of Grade 8 (about seven months after the regular testing time). When answering the student background questionnaire, these students were asked to refer to their current school year. Because of this delayed survey administration, teachers filled in their questionnaires retrospectively and were asked to refer to the previous school year and the Grade 8 students they were teaching at the time.

Chapters 6 and 7 of the ICILS 2013 technical report (Fraillon et al., 2015) provide further details on participation and exclusion rates and the results of nonresponse analysis.

1.4 Contents of this guide

This user guide for the ICILS 2013 international database describes the content and format of the data in it. In addition to this introduction, the guide includes the following chapters.

- Chapter 2 describes the structure and content of the ICILS 2013 international database.
- Chapter 3 introduces the use of weighting and variance estimation variables for analyzing the ICILS 2013 data. It also provides guidelines on comparing estimates.
- Chapter 4 introduces the IEA International Database (IDB) Analyzer software (IEA, 2014) and presents examples of analyses of the ICILS 2013 data using this software in conjunction with SPSS.

Four appendices also accompany this user guide.

- Appendix 1 includes the international version of all international questionnaires administered in ICILS 2013. These serve as a reference guide to the questions asked and the variable names used to record the responses in the international database.
- Appendix 2 provides details on all national adaptations applied to the national versions of all ICILS 2013 international questionnaires. When using the database, please refer to this supplement and check for any special adaptations to the background and perceptions variables that could potentially affect the results of analyses.
- Appendix 3 describes how the derived questionnaire variables, which were used for producing tables in the ICILS 2013 international report (Fraillon et al., 2014), were computed.
- Appendix 4 provides for each country information about the explicit and implicit stratification that was used during the school sampling process.

CHAPTER 2:

The ICILS 2013 international database files

Michael Jung and Ralph Carstens

2.1 Overview

The ICILS 2013 international database (IDB) contains student, teacher, and school data collected in the 21 countries around the world that participated in the study. Table 2.1 lists all countries along with the codes used to identify them in the international database. The database also contains materials that provide additional information on its structure and content. This chapter describes the content of the database and is divided into five major sections covering the different file types and materials included in it.

Table 2.1: Countries participating in ICILS 2013

Countries	Operational Codes	
	Alphanumeric	*Numeric*
Australia	AUS	36
City of Buenos Aires, Argentina	ABA	32001
Chile	CHL	152
Croatia	HRV	191
Czech Republic	CZE	203
Denmark	DNK	208
Germany	DEU	276
Hong Kong SAR	HKG	344
Korea, Republic of	KOR	410
Lithuania	LTU	440
Netherlands	NLD	528
Norway	NOR	578
Newfoundland and Labrador, Canada	CNL	9137
Ontario, Canada	COT	9132
Poland	POL	616
Russian Federation	RUS	643
Slovak Republic	SVK	703
Slovenia	SVN	705
Switzerland	CHE	756
Thailand	THA	764
Turkey	TUR	792

2.2 Data files

The ICILS 2013 database comprises data from all instruments administered to the students, the teachers teaching in the target grade, the school principals, and the ICT-coordinators at the students' respective schools. The data files include the student responses to the computer and information literacy (CIL) achievement items and the responses to the student, teacher, school, and ICT-coordinator questionnaires. The files also contain the achievement scores estimated for participating students, as well as the background variables derived for reporting study findings in the ICILS 2013 international report (Fraillon et al., 2014).

This chapter furthermore describes the format of the ICILS 2013 data files. These are provided in SPSS format (.sav) and SAS export format (.sas7bdat) and can be downloaded from the IEA study data repository at http://rms.iea-dpc.org/. Data files are provided for each country that participated in ICILS 2013 and for which internationally comparable data are available.[6]

The three types of ICILS 2013 data files in the database correspond to the three data levels established in ICILS 2013: school level, student level, and teacher level. Files of the same type include the same uniformly defined set of variables across countries. Table 2.2 shows the protocols for establishing the file names given to the various types of data file. For example, BSGDEUI1.SAV is an SPSS file that contains Germany's ICILS 2013 student data. Each file type contains a separate data file for each participating country.

Table 2.2: ICILS 2013 data file names

File Name	Description
BSG•••I1	Student data file
BCG•••I1	School data file
BTG•••I1	Teacher data file

Note: ••• = three-character alphanumeric country code based on the ISO 3166 coding scheme (see Table 2.1).

The SPSS files include full dictionary/meta information, that is, variable name, format (type, width, and decimals), label, value labels, missing values, and appropriately set measurement levels (nominal, ordinal, or scale). The dictionary information can be accessed through the SPSS "View → Variables" menu, or in output form through the "File → Display Data File Information" menu. SAS files include appropriate display formats and variable labels but do not permanently store value labels in data files.

All information related to the structure of the ICILS 2013 data files as well as the source, format, descriptive labels, and response option codes for all variables are contained in codebook files. Each type of data file in the database is accompanied by a codebook file in text format. The naming convention for codebook files follows the convention for the data files as stated in Table 2.2 above, except that the file extension is ".txt".

2.2.1 Student data files (BSG)

Students who participated in ICILS 2013 were administered two of four test modules, each of which contained a series of tasks. Some of these tasks were multiple-choice items, some were constructed-response items, some were automatically scored

6 Please refer to Section 1.3.4 in Chapter 1 for information on the constraints on data comparability.

computer-skills tasks, and some were large tasks that were scored using analytic criteria. The student data files contain the actual responses to the multiple-choice questions and the scores assigned to the constructed-response items, the automatically scored skills items, and the large-task criteria.

Students who participated in ICILS 2013 were also administered a questionnaire that asked them to answer questions related to their home background and their value beliefs, attitudes, and behaviors relevant to CIL. The student data files therefore contain students' responses to these questions. They also contain students' CIL proficiency scores (plausible values). In addition, the student data files feature a number of identification variables, tracking variables, sampling and weighting variables, and derived variables that were used for the analyses described in the international report. We describe these variables later in this chapter. In the student data files, each student has a unique identification number (IDSTUD). The IDSTUD thus uniquely identifies, within a country, a student.

2.2.2 School data files (BCG)

The school data files contain responses from school principals and ICT-coordinators to the questions in the ICILS 2013 principal and ICT-coordinator questionnaires. Although analysis with schools as investigative units can be performed, it is preferable to analyze school-level variables as attributes of students or teachers. If you want to perform student- or teacher-level analyses with the ICILS 2013 school data, you will need to merge the school data files with the student or teacher data files and to use the country and school identification variables to do so. Section 4.2 of this database guide details the IEA IDB Analyzer's merging procedure.

2.2.3 Teacher data files (BTG)

The teachers sampled for participation in ICILS 2013 were asked to complete a questionnaire containing questions pertaining to their background and the organization and culture of the schools they were teaching at. Remaining questions focused on general aspects of teaching with respect to CIL. Each teacher in the teacher data files has his or her own identification number (IDTEACH). This number therefore uniquely identifies, within a country, a teacher.

It is important to note that in contrast to other IEA surveys, the teachers in the ICILS 2013 teacher data files constitute a representative sample of target-grade teachers in a country. However, student and teacher data must not (and cannot) be merged at the level of individuals because these two groups constitute separate, albeit related, target populations. Chapter 4 of this user guide describes how the IEA IDB Analyzer software can be used to conduct student-level analyses with teacher data.

2.3 Records included

The international database includes all records that satisfied the international sampling standards. Data from those respondents who either did not participate or did not pass adjudication because, for example, within-school participation was not sufficient were removed from the final database.

More specifically, the database contains records for the following:

- *All participating schools:* any school where the school principal responded to the principal questionnaire and/or the ICT-coordinator responded to the ICT-

coordinator questionnaire has a record in the school-level files. Participation in ICILS 2013 at school level is independent of participation at the student and/or teacher levels for the same school.

- *All participating students:* any student who responded to at least one item of the student test has a record in the student-level files, but only if at least 50 percent of the sampled students of that school took part in ICILS 2013.
- *All participating teachers:* any teacher who responded to the teacher questionnaire has a record in the teacher-level files, provided that at least 50 percent of the sampled teachers of that school participated in the study.

Consequently, the following records were excluded from the database:

- Schools where both the principal and the ICT-coordinator did not respond to the questionnaire;
- Students who could not or refused to participate or did not respond to a single item of the student test;
- Students who experienced a technical failure of the electronic assessment system during test administration and were consequently unable to complete the assessment;
- Students from those schools where less than 50 percent of the sampled students participated;
- Teachers who did not respond to the questionnaire;
- Teachers from those schools where less than 50 percent of the sampled teachers participated;
- Students and/or teachers who were afterwards reported as not in scope, not eligible, or excluded;
- Students or teachers who participated but were not part of the sample; and
- Any other records that were considered unreliable, of undocumented origin, or otherwise in violation of accepted sampling and adjudication standards.

Any additional data collected by countries to meet national requirements were also excluded from the international database.

For further information on the ICILS 2013 participation and sampling adjudication requirements, refer to Chapter 7 of the study's technical report (Fraillon et al., 2015).

2.4 Survey variables

The database contains the following information for each school that participated in the survey:

- The identification variables for the country and school;
- Additional administrative variables;
- The school principal's responses to the principal questionnaire;
- The ICT-coordinator's responses to the ICT-coordinator questionnaire;
- The school indices derived from the original questions in the principal and ICT-coordinator questionnaires;
- Weights and variance estimation variables pertaining to schools; and
- The database version and the date of its creation at the IEA DPC.

For each student who participated in the survey, the following information is available:

- The identification variables for the country, school, and student;
- Additional administrative variables;
- The student's responses to the student questionnaire;
- The student's responses to the student test;
- The student's achievement scores for CIL;
- The student indices derived from the original questions in the student questionnaire;
- The weights and variance estimation variables pertaining to students; and
- The database version and the date of its creation at the IEA DPC.

The information in the database for each teacher who participated in the survey is as follows:

- The identification variables for the country, school, and teacher;
- Additional administrative variables;
- The teacher's responses to the teacher questionnaire;
- The teacher indices derived from the original questions in the teacher questionnaire;
- The weights and variance estimation variables pertaining to teachers; and
- The database version and the date of its creation at the IEA DPC.

The next three sections of this chapter offer more detailed explanations of these variables.

2.4.1 Identification variables

All ICILS 2013 data files contain several identification variables that provide information to identify countries and entries of students, teachers, or schools. These variables are used to link variables of one case, clusters of cases (students and teachers pertaining to specific schools), and cases across the different types of data file. However, the variables do not allow identification of individual schools, students, or teachers in a country.

IDCNTRY

IDCNTRY is an up to six-digit numeric country identification code based on the ISO 3166 classification shown in Table 2.1. This variable should always be used as the first linking variable whenever files are linked within and across countries.

CNTRY

This variable indicates the three-digit alpha numeric ID code for the respective country given in Table 2.1.

IDSCHOOL

IDSCHOOL is a four-digit identification code that uniquely identifies the participating schools within each country. The school codes are not unique across countries, however. Schools across countries can only be uniquely identified with the combination of IDCNTRY and IDSCHOOL.

IDSTUD

IDSTUD is an eight-digit identification code that uniquely identifies each sampled student within a country. Students can be uniquely identified across countries using the combination of IDCNTRY and IDSTUD. The first four digits of IDSTUD are equal to the value of IDSCHOOL of the student's school.

IDTEACH
IDTEACH is a six-digit identification code that uniquely identifies the sampled teacher within a country. Teachers can be uniquely identified across countries using the combination of IDCNTRY and IDTEACH. The first four digits of IDTEACH are equal to the value of IDSCHOOL of the teacher's sampled school.

Table 2.3 shows the data files containing the various identification variables.

Table 2.3: Location of identification variables in the data files

Identification Variables	Data File Types		
	BCG	*BSG*	*BTG*
IDCNTRY	•	•	•
CNTRY	•	•	•
IDSCHOOL	•	•	•
IDSTUD		•	
IDTEACH			•

2.4.2 Administration variables

The international database includes several variables that provide additional information about survey administration, participation in the study, and other basic characteristics of respondents.

ITLANGP
This variable indicates the language used in the principal questionnaire. The two-digit alphanumeric language codes are based on the ISO 639-1 standard.

MODEA_PrQ
This variable indicates the principal's questionnaire mode. The variable is set to "1" if the questionnaire was completed online. It is set to "2" if it was completed on paper.

ITLANGC
This variable indicates the language used in the ICT-coordinator questionnaire. The two-digit alphanumeric language codes are based on the ISO 639-1 standard.

MODEA_CoQ
This variable indicates the ICT-coordinator's questionnaire mode. The variable is set to "1" if the questionnaire was completed online. It is set to "2" if it was completed on paper.

IDBOOK
IDBOOK identifies the specific instrument version that was administered to each student via the electronic ICILS 2013 assessment software. The instrument versions are given a numerical value that ranges from 1 through 12.

ITLANGS
This variable indicates the language(s) in which the CIL test was written in a country and which each student was actually required to use when working through the assessment. The two-digit alphanumeric language codes are based on the ISO 639-1 standard.

PARTT
This variable represents the student's participation in the achievement test. The international database contains only those students with PARTT = 1 ("participated") status (see Section 2.3).

PARTQ

This variable represents the student's participation in the questionnaire session. It is set to "1" for students participating in the questionnaire session. It is set to "2" for students who were absent from the questionnaire session. Code 4 indicates that parents did not give permission for their child to participate in the study. Code 6 is used for students who experienced a technical failure during the electronic administration of the student questionnaire.

ITLANGT

This variable represents the language used in the teacher questionnaire. The two-digit alphanumeric language codes are based on the ISO 639-1 standard.

MODEA_TcQ

This variable indicates the teacher's questionnaire mode. The variable is set to "1" if the teacher completed the questionnaire online and "2" if he or she completed it on paper.

Table 2.4 shows the data files containing the various administration variables.

Table 2.4: Location of administration variables in the data files

Administration Variables	Data File Types		
	BCG	*BSG*	*BTG*
ITLANGP	•		
MODEA_PrQ	•		
ITLANGC	•		
MODEA_CoQ	•		
IDBOOK		•	
ITLANGS		•	
PARTT		•	
PARTQ		•	
ITLANGT			•
MODEA_TcQ			•

2.4.3 Achievement item variables

The names of the achievement item variables pertaining to the international test are based on an alphanumeric code (e.g., CI2COM1). The code consists of up to eight characters and adheres to the following rules:

- The first character indicates the general study context. "C" stands for computer and information literacy.
- The second character indicates the assessment cycle when the item was first used in ICILS 2013. It is therefore "1" for all items.
- The third character represents the test module the item belongs to. "A" is used for items in the "After-School Exercise" module, "H" belongs to "Breathing," "B" represents items in the "Band Competition" test module, and "S" is used for items in the "School Trip" module.
- The fourth and fifth characters indicate the item number of the test module.
- The sixth character is used for multipart items. "Z" is used for items not split into multiple parts.
- The seventh digit represents the original item type. "M" represents multiple-choice items; "O" stands for open-ended items. "A" represents items that were automatically scored, and "C" stands for items that were manually scored. "L" is the indicator for items belonging to a large task.

As an example, C1A03ZM is the third item from the student test module After-School Exercise. It is a multiple-choice item and was first developed for use in ICILS 2013.

The values assigned to each of the item variables also depended on the item format. For multiple-choice items, numerical values from 1 through 4 correspond to response options A through D, respectively. The scoring, whether automatic or human, of constructed-response items and large-task criteria used a one-digit scheme, for example, 0 for an incorrect response, 1 for a partially correct response, and 2 for a correct response. The scoring system automatically allocated the "missing" code (Code 9) and checked whether the response showed any deviation from its initial state.

2.4.4 Achievement scores

The ICILS 2013 research team produced a student computer and information literacy (CIL) achievement scale. Chapter 11 of the ICILS 2013 technical report (Fraillon et al., 2015) provides detailed descriptions of the ICILS 2013 scaling and the CIL achievement scale, including its construction. The international database provides five separate estimates of each student's score on that scale. These are contained in the student file. The variability between the five estimated scores, known as "plausible values," encapsulates the uncertainty inherent in the scale estimation process.

The plausible values for the CIL scale are the best available measures of student achievement on that scale in the international database and should therefore be used as the outcome measure in any study of student achievement. Plausible values can be readily analyzed using the IEA IDB Analyzer described in detail later in this user guide.

The achievement score variable names are based on a six-character alphanumeric code where PV1CIL represents the first plausible value and PV5CIL represents the fifth plausible value.

2.4.5 Indices, ratios, and indicators derived from the questionnaire data

Several questions asking about various aspects of a single construct appear frequently in the ICILS 2013 questionnaires. In these cases, the ICILS 2013 research team combined responses to the individual items in order to create a derived variable that provided a more comprehensive picture of the construct of interest than the individual variables could on their own.

The international database contains scale indices derived from scaling of items, a process typically achieved by using item response modeling of dichotomous or Likert-type items. Questionnaire scales derived from weighted likelihood estimates (logits) present values on a continuum with an ICILS 2013 average of 50 and a standard deviation of 10 (for equally weighted national samples). The database also contains other indices that were derived by simple recoding or arithmetical transformation of original questionnaire variables.

Appendix 3 of this user guide provides a description of all derived variables included in the international database. For further information about the scaling procedure for questionnaire items, please refer to Chapter 12 of the ICILS 2013 technical report (Fraillon et al., 2015).

Variables derived from the principal questionnaire data

P_PRIV

This variable indicates whether the school is a public or private school. The codes for it are as follows:

- Code 0 Public school
- Code 1 Private school

P_SEX

This variable indicates the sex of the school's principal. The codes for this variable are:

- Code 0 Male
- Code 1 Female

P_ICTLRN

This variable indicates whether ICT was being used for teaching and learning activities in the school. The result of this variable indicates whether subsequent questions (specifically, 12 and 13) of the principal questionnaire needed to be answered. The codes for this variable are as follows:

- Code 0 No
- Code 1 Yes

P_NGRADE

This variable indicates the total number of different grades in the school.

P_NUMTCH

This variable indicates the total number of teachers in the school. It is calculated by adding the number of fulltime teachers in the school to the product of parttime teachers in the school multiplied by 0.5 (IP1G06A + 0.5*IP1G06B).

P_RATTCH

This variable indicates the ratio of school size and teachers. It is calculated by dividing the total number of teachers in the school by the total number of students in the school (P_NUMTCH/ P_NUMSTD).

P_NUMTAR

This variable indicates the number of students in the target grade. It is calculated by adding the total number of boys in the target grade to the total number of girls in the target grade (IP1G04A + IP1G04B).

P_NUMSTD

This variable indicates the number of students in the school. It is calculated by adding the total number of boys in the school to the total number of girls in the school (IP1G03A + IP1G03B).

P_EXPLRN

This variable represents a scale index for "ICT use expected of teachers—learning." The index was derived from variables IP1G12A, IP1G12B, IP1G12C, IP1G12H, IP1G12I, and IP1G12J.

P_PRIORH

This variable represents a scale index for "priorities for facilitating use of ICT—hardware." The index was derived from variables IP1G16A, IP1G16B, and IP1G16C.

P_PRIORS

This variable represents a scale index for "priorities for facilitating use of ICT—support." The index was derived from variables II1G16D, II1G16E, II1G16F, II1G16G, and II1G16H.

P_VWICT

This variable represents a scale index for "views on using ICT for educational outcomes." The index was derived from variables IP1G09B, IP1G09C, IP1G09D, IP1G09E, and IP1G09F.

Variables derived from the ICT-coordinator questionnaire data

C_EXP

This variable indicates the length of time (in years) that a school had been using/experiencing ICT on its premises. The codes for this variable are as follows:

- Code 0 Never, we do not use computers
- Code 1 Fewer than 5 years
- Code 2 At least 5 but fewer than 10 years
- Code 3 t10 years or more

C_ICTRES

This variable represents a scale index for "ICT resources at school." This index was derived from variables II1G04A, II1G04B, II1G05A, II1G05B, II1G05C, II1G05D, II1G05E, II1G05F, II1G05I, II1G06C, and II1G06D.

C_HINHW

This variable represents a scale index for "ICT use hindered in teaching and learning—lack of hardware." This index was derived from variables II1G13A, IIG13B, IIG13C, IIG13D, and IIG13E.

C_HINOTH

This variable represents a scale index for "ICT use hindered in teaching and learning—other obstacles." This index was derived from variables II1G13F, II1G13G, II1G13H, II1G13I, and II1G13J.

Variables derived from the principal and ICT-coordinator questionnaire data

C_RATCOM

This variable indicates the ratio of number of computers to school size. The variable is calculated by dividing the total number of students in the school by the approximate number of (school-provided) computers in the school (P_NUMSTD/II1G07A).

C_RATSTD

This variable indicates the ratio of number of (school-provided) computers available for student use to school size. The variable is calculated by dividing the total number of students in the school by the approximate number of (school-provided) computers available to students (P_NUMSTD/II1G07B).

C_RATWWW

This variable indicates the ratio of number of (school-provided) computers with connectivity to the world wide web to school size. The variable is calculated by dividing the total number of students in the school by the approximate number of (school-provided) computers in the school connected to the web (P_NUMSTD/II1G07C).

C_RATSMB

This variable indicates the ratio of the number of (school-provided) smart boards in the school to school size. The variable is calculated by dividing the total number of students in the school by the total number of (school-provided) smart boards or interactive whiteboards in the school (P_NUMSTD/II1G08).

Variables derived from the student questionnaire data

S_AGE

This derived variable indicates the student's age at the time of testing, as stated by the student in answer to questionnaire items IS1G01A and IS1G01B.

S_FISCED

This variable indicates the highest educational level/ISCED of the father/male guardian. It was derived (recoded) from questionnaire item IS1G11. The codes for it are as follows:

- Code 0 Did not complete <ISCED 2>
- Code 1 <ISCED 2>

- Code 2 <ISCED 3>
- Code 3 <ISCED 4 or 5b>
- Code 4 <ISCED 5a or 6>

S_FISCO

This variable indicates the occupation of the student's father/male guardian. The occupation codes are based on the ISCO-08 standard.

S_FISEI

This variable indicates the occupational status/ISEI[7] of the father/male guardian. This variable was derived from the father's/male guardian's parental occupation code (S_FISCO).

S_FWORK

This variable indicates the paid work status of the father. It was derived (recoded) from questionnaire item IS1G09, and the codes for it are as follows:

- Code 0 Yes
- Code 1 No

S_HISCED

This variable indicates the highest level of education/ISCED of the student's parents/guardians. S_HISCED is calculated as the maximum of S_FISCED and S_MISCED.

S_HISEI

This variable indicates the highest occupational status/ISEI of the student's parents/guardians. S_HISEI is calculated as the maximum of S_FISEI and S_MISEI.

S_HOMLIT

This variable indicates the home literacy index. It was derived (recoded) from questionnaire item IS1G12. The codes for it are as follows:

- Code 0 0–10 books
- Code 1 11–25 books
- Code 2 26–100 books
- Code 3 101–200 books
- Code 4 More than 200 books

S_IMMIG

This variable indicates the student's immigration background according to his or her parents'/guardians' country of birth. The variable was derived from questionnaire items IS1G04A, IS1G04B, IS1G04C, and the codes for it are as follows:

- Code 0 Student and/or at least one parent/guardian born in country of test
- Code 1 Student born in country of test but both parents/guardians or only one parent/guardian born abroad
- Code 2 Student and both parents/guardians or only one parent/guardian born abroad

S_ISCED

This variable indicates the education level/ISCED the student expected to attain. The variable was derived (recoded) from questionnaire item IS1G03, and the codes for it are as follows:

- Code 0 Do not expect to complete <ISCED 2>
- Code 1 <ISCED 2>
- Code 2 <ISCED 3>
- Code 3 <ISCED 4 or 5b>
- Code 4 <ISCED 5a or 6>

S_MISCED

This variable indicates the highest educational level/ISCED of the student's mother/female guardian. This variable was derived (recoded) from questionnaire item IS1G08. The codes for it are as follows:

- Code 0 Did not complete <ISCED 2>
- Code 1 <ISCED 2>
- Code 2 <ISCED 3>

7 ISEI = International Socioeconomic Index.

- Code 3 <ISCED 4 or 5b>
- Code 4 <ISCED 5a or 6>

S_MISCO

This variable indicates the occupation of the student's mother/female guardian. The occupation codes are based on the ISCO-08 standard.

S_MISEI

This variable indicates the occupational status/ISEI of the student's mother/female guardian. This variable was derived from the mother's/female guardian's occupation code (S_MISCO).

S_MWORK

This variable indicates the paid work status of the mother/female guardian. This variable was derived (recoded) from questionnaire item IS1G06. The codes for it are as follows:

- Code 0 No
- Code 1 Yes

S_SEX

This variable indicates the sex of the student as stated in the student questionnaire (IS1G02). The codes for this variable are:

- Code 0 Boy
- Code 1 Girl

S_TLANG

This variable indicates whether the test language was spoken in the student's home. This variable was derived from questionnaire item IS1G05. The codes for it are as follows:

- Code 0 Other language
- Code 1 Language of test

S_ADVEFF

This variable represents the index for "ICT self-efficacy advanced skills." The index was derived from variables IS1G25B, IS1G25D, IS1G25G, IS1G25H, IS1G25I, IS1G25J, and IS1G25K.

S_BASEFF

This variable represents a scale index for "ICT self-efficacy basic skills." The index was derived from variables IS1G25A, IS1G25C, IS1G25E, IS1G25F, IS1G25L, and IS1G25M.

S_TSKLRN

This variable represents a scale index for "learning ICT tasks at school." The index was derived from variables IS1G23A, IS1G23B, IS1G23C, IS1G23D, IS1G23E, IS1G23F, IS1G23G, and IS1G23H.

S_USEAPP

This variable represents a scale index for "use of specific ICT applications." The index was derived from variables IS1G18A, IS1G18B, IS1G18C, IS1G18D, IS1G18E, IS1G18F, and IS1G18G.

S_USELRN

This variable represents a scale index for "use of ICT during lessons at school." The index was derived from variables IS1G22A, IS1G22B, IS1G22C, IS1G22D, and IS1G22E.

S_USEREC

This variable represents a scale index for "use of ICT for recreation." The index was derived from variables IS1G20A, IS1G20B, IS1G20D, IS1G20E, and IS1G20F.

S_USESTD

This variable represents a scale index for "use of ICT for study purposes." The index was derived from variables IS1G21A, IS1G21B, IS1G21C, IS1G21D, IS1G21E, IS1G21F, IS1G21G, and IS1G21H.

S_USECOM

This variable represents a scale index for "use of ICT for social communication." The index was derived from variables IS1G19C, IS1G19D, IS1G19H, and IS1G19I.

S_INTRST

This variable represents a scale index for "interest and enjoyment in using ICT." The index was derived from variables IS1G26A, IS1G26C, IS1G26E, IS1G26F, IS1G26H, IS1G26J, and IS1G26K.

S_USEINF

This variable represents a scale index for "use of ICT for exchanging information." The index was derived from variables IS1G19E, IS1G19F, IS1G19G, and IS1G19J.

Variables derived from the teacher questionnaire data

T_EXPT

This variable indicates the teacher's ICT experience in terms of years of teaching. The codes for this variable are as follows:

- Code 0 Never
- Code 1 Less than two years
- Code 2 Two years or more

T_SEX

This variable indicates the sex of the teacher. The codes for this variable are as follows:

- Code 0 Male
- Code 1 Female

T_AGE

This derived variable indicates the teacher's approximate age at the time of testing, as stated by the teacher in response to questionnaire item IT1G02.

T_USEAPP

This variable represents a scale index for "use of specific ICT applications." The index was derived from variables IT1G09A, IT1G09B, IT1G09C, IT1G09D, IT1G09E, IT1G09F, IT1G09G, IT1G09H, IT1G09I, IT1G09J, IT1G09K, IT1G09L, IT1G09M, and IT1G09N.

T_USELRN

This variable represents a scale index for "use of ICT for learning at school." The index was derived from variables IT1G10A, IT1G10B, IT1G10C, IT1G10D, IT1G10E, IT1G10F, IT1G10G, IT1G10H, IT1G10I, IT1G10J, IT1G10K, IT1G10L, and IT1G10M.

T_USETCH

This variable represents a scale index for "use of ICT for teaching at school." The index was derived from variables IT1G11B, IT1G11C, IT1G11D, IT1G11E, IT1G11F, IT1G11G, IT1G11H, IT1G11I, IT1G11J, and IT1G11K.

T_EFF

This variable represents a scale index for "ICT self-efficacy." The index was derived from variables IT1G07A, IT1G07B, IT1G07C, IT1G07D, IT1G07E, IT1G07F, IT1G07G, IT1G07H, IT1G07I, IT1G07J, IT1G07K, IT1G07L, IT1G07M, and IT1G07N.

T_EMPH

This variable represents a scale index for "emphasis on teaching ICT skills." The index was derived from variables IT1G12A, IT1G12B, IT1G12C, IT1G12D, IT1G12E, IT1G12F, IT1G12G, IT1G12H, IT1G12I, IT1G12J, IT1G12K, and IT1G12L.

T_VWPOS

This variable represents a scale index for "positive views on using ICT in teaching and learning." The index was derived from variables IT1G13A, IT1G13C, IT1G13E, IT1G13G, IT1G13I, IT1G13J, IT1G13L, and IT1G13N.

T_VWNEG
This variable represents a scale index for "negative views on using ICT in teaching and learning." The index was derived from variables IT1G13B, IT1G13D, IT1G13F, IT1G13H, IT1G13K, IT1G13M, and IT1G13O.

T_RESRC
This variable represents a scale index for "computer resources at school." The index was derived from variables IT1G14B, IT1G14C, IT1G14D, IT1G14E, IT1G14G, and IT1G14H.

T_COLICT
This variable represents a scale index for "collaboration between teachers in using ICT." The index was derived from variables IT1G16A, IT1G16B, IT1G16C, IT1G16D, and IT1G16E.

2.4.6 Weighting and variance estimation variables

To allow for calculation of the population estimates and correct jackknife variance estimates, the data files provide sampling and weighting variables. Further details about weighting and variance estimation appear in Chapter 3 of this guide.

Each record in the international database contains one or more variables that reflect the record's selection probabilities (or base weights) and nonresponse adjustment(s). The last character of the variable name indicates the data type (student = S, teacher = T, school = C). The weights and weighting factors differ depending on the data type. The only value identical in all three types of datasets is the value for the school base weight (variable WGTFAC1). This is because the school sampling comprised universally the first sampling stage and is therefore independent of data type. Each data file contains an estimation or final weight variable. Each such variable starts with the letters "TOT" (i.e., the product of all other weight variables) and must be used for single-level analyses.

The weight variables included in the ICILS 2013 international database are the following:

TOTWGTC
This variable indicates the total school weight.

WGTFAC1
This variable indicates the school base weight.

WGTADJ1C
This variable indicates the school nonparticipation adjustment for school-level data analyses.

TOTWGTS
This variable indicates the total student weight.

WGTADJ1S
This variable indicates the school nonparticipation adjustment for the student survey.

WGTFAC3S
This variable indicates the student base weight.

WGTADJ3S
This variable indicates the student nonparticipation adjustment.

TOTWGTT
This variable indicates the total teacher weight.

WGTADJ1T
This variable indicates the school nonparticipation adjustment for the teacher survey.

WGTFAC2T
This variable indicates the teacher base weight.

WGTADJ2T
This variable indicates the teacher nonparticipation adjustment.

WGTFAC3T
This variable indicates the teacher multiplicity adjustment.

Table 2.5 shows the availability of these weight variables in the data files.

Table 2.5: Location of weighting variables in the ICILS 2013 international database

Weighting Variables	Data File Types		
	BCG	*BSG*	*BTG*
WGTFAC1	•	•	•
TOTWGTC	•		
WGTADJ1C	•		
TOTWGTS		•	
WGTADJ1S		•	
WGTFAC3S*		•	
WGTADJ3S		•	
TOTWGTT			•
WGTADJ1T			•
WGTFAC2T			•
WGTADJ2T			•
WGTFAC3T			•

Note: *In a few schools in the Netherlands and Switzerland, intact classrooms were sampled instead of single students. For these countries, a classroom's selection probability is reflected in the variable WGTFAC3S. For details regarding this matter, see Chapter 7 of the ICILS 2013 technical report (Fraillon et al., 2015).

Because all statements about any ICILS 2013 population are based on sample data, they can only be made with a specific degree of certainty. Standard errors reflect how accurate an estimate is, and they should always be reported in any analysis of ICILS 2013 data. Also, because ICILS 2013 used a stratified complex design to draw samples, calculating standard errors of estimates is not as straightforward as it would be with respect to simple random samples. In addition, standard software packages might not support these calculations.

A variance estimation method that considers the structure of the data is the jackknife repeated replication (JRR) method. The ICILS 2013 international database contains variables that support the implementation of this method (i.e., "jackknife zone," "jackknife replicate," "replicate weights"); we strongly encourage database users to use them. The IEA IDB Analyzer automatically recognizes the data structure of ICILS 2013 and reports correct standard errors for all estimates.

The international database includes the following variance estimation variables (or "jackknife variables").

JKZONEC
This variable indicates the jackknife zone to which a school is assigned for school-level data analysis.

JKREPC
This variable indicates the jackknife replicate to which a school is assigned for school-level data analysis.

CRWGT1 to CRWGT75
These variables indicate the jackknife replicate weights variables (1–75) for the school survey.

JKZONES
This variable indicates the jackknife zone to which the students in a school are assigned.

JKREPS
This variable indicates the jackknife replicate to which the students in a school are assigned.

SRWGT1 to SRWGT75
These variables indicate the jackknife replicate weights variables (1–75) for the student survey.

JKZONET
This variable indicates the jackknife zone to which the teachers in a school are assigned.

JKREPT
This variable indicates the jackknife replicate to which the teachers in a school are assigned.

TRWGT1 to TRWGT75
These variables indicate the jackknife replicate weights variables (1–75) for the teacher survey.

Table 2.6 shows the availability of the variance estimation variables in the data files.

Table 2.6: Location of variance estimation variables in the international database

Variance Estimation Variables	Data File Types		
	BCG	*BSG*	*BTG*
JKZONEC	•		
JKREPC	•		
CRWGT1 to CRWGT75	•		
JKZONES		•	
JKREPS		•	
SRWGT1 to SRWGT75		•	
JKZONET			•
JKREPT			•
TRWGT1 to TRWGT75			•

IDSTRATE & IDSTRATI
IDSTRATE and IDSTRATI are variables that reflect the stratification schemes used for school sample selection. IDSTRATE identifies the explicit strata and IDSTRATI the implicit strata from which the participating schools were sampled. The codes assigned to these two variables vary from country to country and are documented in Appendix 4 of this user guide. For more details on stratification, see Chapter 6 of the ICILS 2013 technical report (Fraillon et al., 2015).

2.4.7 Database creation variables

Information about the version number of the international database and the date of its creation at the IEA Data Processing and Research Center (DPC) in Hamburg, Germany is contained in the database creation variables. These variables are included in all data files.

VERSION

A system of database version numbers was used throughout the data-processing process. The version number of the ICILS 2013 final database is "3.2" or higher.

DPCDATE

The date specifies when the IEA DPC produced the data file.

2.5 Coding of missing data

A subset of the values for each variable type was reserved for specific codes related to different categories of missing data. We recommend that you read this section of Chapter 2 particularly carefully because the way in which these missing codes are used can have major consequences for analyses.

Omitted or invalid response codes (SPSS: 9, 99, 999, ...; SAS: .)

"Omitted" response codes were used for questions or items that a student, teacher, or school principal should have answered but did not. Thus, an omitted or invalid response code was assigned when an item was left blank, when a response was provided but was uninterpretable, or when the respondent chose more than one option to a multiple-choice question. The length of the omitted response code given to a variable in the SPSS data files depends on the number of characters needed to represent the variable. For example, the omitted code for a one-digit variable is "9" whereas the omitted code for three-digit variables would be "999."

Not administered response codes (SPSS: 8, 98, 998, …; SAS: .A)

Specific codes were assigned to items that were "not administered" to distinguish these from data that were missing due to nonresponse. In general, the not administered code was used when an item was not administered, either by design arising from the rotated test design (i.e., not every student was administered the same questions), or unintentionally when a question or item was misprinted or otherwise unavailable to a respondent. In addition, the not administered code was also used for the student achievement items for those questions that were not displayed to a student due to a technical failure of the system *during* the assessment. The not administered code was used in the following cases.

- *The achievement item was not assigned to the student:* All students participating in ICILS 2013 received only two of the four test modules. All variables corresponding to items that were not part of the module assigned to a student were coded as "not administered."
- *The student was absent from a test session:* If a student did not attend a particular testing session, for example because of sickness, all variables relevant to that session were coded as "not administered."
- *The achievement item was not displayed to the student due to a technical failure of the electronic assessment system:* If the assessment system failed during the assessment, all variables following the last item presented to a student when the failure occurred (i.e., assuming there was still time left to complete the corresponding test module) were coded as "not administered" (cf. Chapter 11 in the ICILS 2013 technical report, Fraillon et al., 2015).
- *A questionnaire was returned empty, was not returned, or was lost:* All variables referring to that questionnaire and any derived variables were coded as "not administered."
- *A country chose, for cultural reasons, not to administer (include) a certain question in its national questionnaire:* The variables corresponding to the removed question were coded as "not administered." Chapter 5 of the ICILS 2013 technical report (Fraillon et al., 2015) and Appendix 2 of this user guide detail the national adaptations.

- *The question or item was deleted or mistranslated:* A question or item identified during translation verification or item review as having a translation error, such that the nature of the question was altered, or as having poor psychometric properties was coded as "not administered" if it could not be recoded to match the international version as closely as possible.

Not reached response codes (SPSS: 7; SAS: .R)

An item was considered "not reached" in the achievement data files when the item itself and the item preceding it were not answered and when (i) no other items were completed in the remainder of the test module, and (ii) no technical failure of the electronic student assessment system occurred.[8]

Logically not applicable response codes (SPSS: 6, 96, 996, ...; SAS: .B)

"Not applicable" response codes were used for questionnaire items for which responses depended on a filter question. If the filter question was answered in a way that meant the following questions would not apply, any follow-up question was coded as not applicable.

The length of the invalid response codes in the SPSS data files depended on the number of characters needed to represent the variable. For example, the omitted code for a one-digit variable is "6" whereas the omitted code for two-digit variables would be "96" and for three-digit variables "996."

2.6 Confidentiality measures applied to the public-use international database and resulting limitations

To protect the confidentiality of the study respondents, ICILS 2013 applied certain disclosure- avoidance measures at the international level. These measures were consistent across all countries. The disclosure avoidance measures applied at the national level concerned only specific national datasets. These measures were implemented for all data versions and exports of the database that participating countries and public users can access.

2.6.1 International-level measures

The following set of international-level measures applied to all datasets.

- Variables used purely during field operations as well as variables used only for the purpose of data processing and quality control were removed. Particular variables dropped from the database were those collected during within-school sampling that could potentially identify individuals, such as students' and teachers' exact birth dates.
- Because the student (IDSTUD), teacher (IDTEACH), and school unique identifiers (IDSCHOOL) were scrambled, they did not match the identifiers used during data collection. However, the structural link between the school and teacher level (the variable IDSCHOOL in the student and teacher files and the first four digits of any IDSTUD/IDTEACH) was maintained for all countries. For each country, unique matching tables were created and made available to authorized individuals.

8 For more detailed information about the scaling procedure for ICILS 2013 test items, refer to Chapter 11 of the ICILS 2013 technical report (Fraillon et al., 2015).

2.6.2 Country-level measures

Some countries requested that all or parts of their stratification information be removed in order, for example, to avoid identification of geographical or organizational groups. The variables IDSTRATE and IDSTRATI were accordingly altered or set to the not administered missing value. Experience shows that researchers conducting secondary analysis may also prefer analysis by stratification, in which case they can request the stratification variables directly from the country. Appendix 4 of this guide explains the limits of using stratification information for analysis and lists the stratification variables and codes that are part of the international database. Appendix 4 also presents the original stratification schemes applied for each country.

CHAPTER 3:

Weights and variance estimation for ICILS 2013

Sabine Meinck and Diego Cortes

3.1 Overview

This chapter provides an introduction to the use of weight and variance estimation variables in the ICILS 2013 student, teacher, and school data analyses. Examples demonstrate the importance of using appropriate weight variables and variance estimation techniques in order to achieve correct parameter and standard error estimates as well as to draw correct conclusions when comparing groups. The chapter also includes a discussion of constraints for specific analysis types (e.g., when simultaneously using data from different sources).

3.2 Sampling weights

All data in the ICILS 2013 international database were derived from randomly drawn samples of schools, students, and teachers. In order to make correct inferences about the target population under study, database users and analysts must take into account the complex nature of the sampling design implemented in each ICILS 2013 education system. Chapter 6 of the ICILS 2013 technical report (Fraillon et al., 2015) provides details about the sampling design of ICILS 2013.

This complex design resulted in varying selection probabilities for sampled schools, students, and teachers. Another consideration arising out of this design is that the varying nonparticipation patterns of schools among strata and of students/teachers within participating schools can lead to biased estimates. In recognition of these two survey features, ICILS 2013 created sampling weights so as to enable correct estimates of population parameters. Chapter 7 of the ICILS 2013 technical report (Fraillon et al., 2015) elucidates the weighting and nonparticipation adjustments.

3.2.1 Selecting the appropriate weight variable

As indicated, researchers analyzing ICILS 2013 data must use sampling weights that consider the study's complex sample design in order to obtain accurate population estimates. The choice of correct sampling weights will depend on the type of data used, the level of analysis, and the number of countries involved. Section 2.4.6 of this guide lists and describes all weight variables in the international database. It also provides the variables' labels and source files.

3.2.1.1 Use of weights for single-level analysis

The following weights should be applied when analyzing data from a single level:

- TOTWGTS should be used for *student-level* analyses (BSG files);
- TOTWGTT should be used for *teacher-level* analyses (BTG files); and
- TOTWGTC should be used for *school-level* analyses (BCG files).

We recommend that you use the IEA IDB Analyzer for analyzing ICILS 2013 data because this software automatically selects, depending on the level of the requested analysis, the correct weight variable.

Please note that ICILS 2013 is conceptually a survey of students and teachers and was not designed as a survey of schools. Although it is possible to undertake analyses at the level of schools that generate unbiased results, the sampling precision of the estimates tends to be lower (with larger standard errors and confidence intervals) at this level than it is for analyses at the student or teacher level. Therefore, results concerning school-level data tend to be associated with a high degree of uncertainty. For example, if we use the ICILS 2013 school data file for Australia, we find that the estimated average school size (in terms of student number) of Australian schools offering Grade 8 education is 363.2 students, with a standard error of 27.2. Hence, it is possible to conclude (with a 95% probability) that the true average school size of these Australian schools lies somewhere between 308.6 and 417.4 students, which is clearly not a very precise estimate.

3.2.1.2 Use of weights when merging files from different levels

Researchers who analyze data simultaneously from different levels need to do so with caution because the process requires merging different types of data. The way different file types need to be combined will depend on the particular research question underlying each analysis. Furthermore, an appropriate choice of weights will depend on the level at which inferences should be made.

- The variable TOTWGTS should be used for analyzing student data with added school data. The IEA IDB Analyzer makes this type of disaggregated analysis, explained in Section 4.2, straightforward. The software merges school-level data with the student data and automatically selects the correct estimation weight variable. School information becomes an attribute of the student, and the user can analyze information based on both data files. An example would be an analysis of the percentage of students at a school with a female principal. Chapter 6 of the ICILS 2013 international report (Fraillon et al., 2014) contains many tables that are a product of this type of analysis.
- While analysis of combined teacher and school data can be performed in the same way, TOTWGTT should be used as a weighting factor. When performing this kind of analysis, the IEA IDB Analyzer again selects the correct estimation weight variable. For this type of analysis, an example of which would be the percentage of Grade 8 teachers working at a school with a female principal, school information becomes an attribute of the teachers.
- It is also possible to use weighted aggregates of student or teacher data at the school level during analyses. However, because the IEA IDB Analyzer does not include features to assist this kind of analysis, be aware that you will need to aggregate data by school (using other statistical software tools), merge the data to the school file, and then proceed with your school-level analysis. When aggregating within-school student data, you can disregard the weighting factors because all students share the same within-school weight. Aggregation of within-school teacher data requires the aggregate to be computed using WGTFAC3 (teacher multiplicity adjustment), as this is the only weighting factor that differs between teachers within a given school. Possible pitfalls of this analysis are mentioned in Section 1.3.3 of this guide.

As we have already pointed out, it is neither possible nor meaningful to directly combine individual student and teacher data files because they constitute two different target populations and are not directly linked to each other. This characteristic means that a teacher in a sampled school in the dataset may have never taught a particular student

in the same school and that surveyed students may have never been exposed to the participating teacher even though both belong to the same school.

Nevertheless, it is possible to aggregate teacher data at the school level and to operationalize this as an attribute of the students or to use aggregated student data for an analysis of teacher data. Table 6.13 of the ICILS 2013 international report (Fraillon et al., 2014) presents one example of such an analysis. For this, teacher responses to questions on professional development participation were aggregated at school level, and these data were then merged to the student data file. Analysis of the generated dataset allowed presentation of the percentages of students at schools where teachers were participating in professional development focused on using ICT in teaching and learning.

Finally, be aware that the proportion of missing values tends to increase when data from different datasets are used. Because missing data can bias the analysis results, it is important to review the possible reduction of the sample size due to missing data before conducting the analysis and when interpreting the results. As an example of bias caused by missing data, consider a case where all or most ICILS 2013 students from disadvantaged backgrounds did not respond to questions about their respective backgrounds. Any estimation of CIL average scores controlling for these variables would inevitably lead to biased results, because CIL is interrelated with social background (Fraillon et al., 2014). Multiple imputation methods offer a possible option for dealing with missing data issues.

Problems with missing data can become particularly problematic for countries with low within-school individual response rates. For example, a national dataset may include some schools that count as participants in the student survey but not in the teacher survey because less than 50 percent of the teachers returned their questionnaire. In such a case, the corresponding schools would be present in the student data file but absent from the teacher data file.

3.2.1.3 Use of weights for multilevel analysis

Working with data at different levels poses some methodological considerations (for details, see Snijders & Bosker, 1999). A common approach used for analyzing clustered data is hierarchical (or multilevel) linear modeling (HLM). Software packages such as HLM (Raudenbusch et al., 2004), Mplus (Muthén & Muthén, 2012), and MLwiN (Rasbash et al., 2014) provide tools for undertaking this type of analysis. If you are using multilevel modeling, it is important that you choose a correct set of weights at different levels of analysis. The use of weights in multilevel analysis is currently under debate in the research community; however, in line with recommendations from Rutkowski, Gonzalez, Joncas, and von Davier (2010), the ICILS 2013 research team applied and supports the following approach.

- At Level 1 (student level), a "within-school student weight" should be computed as the product of the student-level weighting factors (WGTFAC3S x WGTADJ3S).[9] In cases where teachers constitute Level 1, a "within-school teacher weight" should be computed as the product of the teacher-level weighting factors (WGTFAC2T x WGTADJ2T x WGTADJ3T). The resulting Level 1 weights reflect the selection probabilities, adjusted for nonresponse, of individuals within their primary sampling unit (here, schools).

9 In ICILS 2013, the student weights do not differ within a given school, which means this step can also be skipped, leaving the Level 1 data unweighted.

- At Level 2 (school level), a "school weight" should be used for analysis. During analysis of student data, this weight should be computed as the product of the variables WGTFAC1 and WGTADJ1S; during analysis of teacher data, this weight variable can be derived as the product of WGTFAC1 and WGTADJ1T. In both cases, the resulting Level 2 weights reflect the selection probabilities of the schools adjusted for nonresponse. It is not appropriate to use the variable TOTWGTC from the school files, as nonresponse adjustments made to school questionnaire data may differ from school-level nonresponse adjustments for the student and teacher surveys.

It is important to ensure that the software used for multilevel analysis normalizes the weights, which means that the sum of weights must be set so that it is equal to the sample size (students or teachers within schools, schools within a country). Not following this procedure can lead to the standard errors of parameter estimates being underestimated.

One important prerequisite for multilevel analysis is that of sufficiently large sample sizes at both levels to assure acceptable precision of the estimated model parameters. According to Meinck and Vandenplas (2012), the precision varies largely for different kinds of model parameters, namely fixed-model parameters versus variances. As a rule of thumb, sample sizes of, at the very least, 10 units at Level 1 and 30 units at Level 2 can be viewed as the minimum required numbers for multilevel analysis. These sample sizes are important not only for achieving precise parameter estimates but also for obtaining unbiased estimates of the parameters' standard errors.[10] Because the sampling precision differs considerably for different parameters of a multilevel model, analysts must take into account the respective standard errors of coefficients when interpreting the results.

For analysis pertaining to students at Level 1, the above-mentioned requirement was met in the majority of schools in most countries. This is illustrated in Table 3.1, which gives the minimum, maximum, standard deviation, and average number of participating students per school for all participating ICILS 2013 countries. However, we recommend that you thoroughly review the number of schools with smaller student samples before conducting such an analysis, and that you interpret the results with due caution if there are many schools with small student samples.

If multilevel analyses are done using the entire national sample, sample size should generally be sufficiently large for conducting this type of analysis. However, if the analysis is undertaken only for subgroups of schools, researchers should ensure that there are no fewer than 30 schools within each subgroup.

For the majority of participating countries, conducting multilevel analysis with teacher data is unlikely to result in precise Level 1 estimates. As illustrated in Table 3.2, the average number of responding teachers per school is close to 10; hence, a significant number of schools have smaller cluster sizes. In this instance, single-level analysis may be preferable in order to obtain more reliable results.

10 See Meinck and Vandenplas (2012) for details and an extensive literature review on the topic.

Table 3.1: Average cluster sizes for student survey

Country	Minimum	Maximum	Mean	Standard Deviation
Australia	6	21	17.1	2.2
Chile	6	23	18.3	2.4
Croatia	6	21	16.8	2.8
Czech Republic	4	24	18.0	2.7
Denmark	3	23	17.2	2.5
Germany	6	20	16.4	2.9
Hong Kong SAR	10	20	17.7	2.2
Korea, Republic of	11	20	19.3	1.1
Lithuania	2	23	17.0	4.1
Netherlands	9	30	18.2	3.5
Norway (Grade 9)	2	22	17.7	2.5
Poland	4	68	18.4	6.6
Russian Federation	3	23	17.6	3.7
Slovak Republic	7	27	17.9	3.1
Slovenia	2	24	17.2	3.5
Switzerland	4	77	32.9	20.5
Thailand	7	23	18.4	2.3
Turkey	7	20	18.0	2.3
Benchmarking Participants				
City of Buenos Aires, Argentina	9	20	15.8	2.8
Newfoundland and Labrador, Canada	2	23	13.2	5.7
Ontario, Canada	4	24	17.5	3.4

Table 3.2: Average cluster sizes for teacher survey

Country	Minimum	Maximum	Mean	Standard Deviation
Australia	1	19	11.9	3.1
Chile	3	19	10.3	3.8
Croatia	9	19	14.4	2.3
Czech Republic	5	19	12.5	3.2
Denmark	1	17	8.9	3.7
Germany	4	16	11.5	2.7
Hong Kong SAR	8	15	12.5	2.3
Korea, Republic of	7	19	14.6	2.4
Lithuania	7	19	13.3	2.4
Netherlands	1	15	11.3	2.7
Norway (Grade 9)	2	18	10.0	3.8
Poland	8	23	14.2	2.4
Russian Federation	4	19	13.2	3.0
Slovak Republic	5	19	12.8	3.2
Slovenia	5	19	13.0	3.2
Switzerland	1	18	10.8	3.1
Thailand	2	19	11.5	3.7
Turkey	4	18	12.6	3.5
Benchmarking Participants				
City of Buenos Aires, Argentina	8	18	12.1	2.2
Newfoundland and Labrador, Canada	1	5	3.9	1.4
Ontario, Canada	1	5	2.9	1.4

3.2.2 Importance of using weights for data analysis

Although the sampling design used for ICILS 2013 generally leads to self-weighted samples,[11] certain circumstances, briefly described below, explain a high variation between the estimation weights of sampled units.

- *The sampling design was optimized for the student population:* This means the base weights for schools depend on their size (i.e., number of Grade 8 students), with larger schools having higher selection probabilities than small schools. If weights are ignored during school-level analysis, large schools will be overrepresented. The following example illustrates this. In an estimate of the average number of fulltime teachers per school in Germany (variable IP1G06A in file BCGDEUC1), the unweighted (hence incorrect) estimate is 34.6, while the (correctly) weighted estimate is considerably smaller (25.9). This outcome is due to the sampling design, which leads to a sample that contains more large schools than are actually present in the population, and of course large schools employ more teachers than small schools.
- *The correlation between the numbers of Grade 8 students in schools (used as the measure of size for determining school selection probabilities) and Grade 8 teachers is only moderate.* The teacher selection probabilities accordingly vary by design.
- *Explicit stratification and disproportional sample allocation was commonly used.* This practice would lead to further variation in school selection probabilities.
- *Nonresponse patterns vary in accordance with nonresponse adjustment cells (i.e., strata or schools).* For instance, individual student weights in schools with a response rate of just over 50 percent[12] would be almost twice as large as those from schools where all sampled students participated.

Circumstances such as these make using weights in all ICILS 2013 data analysis essential if biased results are to be avoided. Our next example illustrates this importance. Imagine you are interested in ascertaining the CIL average in Chile (variables PV1CIL–PV5CIL in the BSG file) and are using (e.g., in SPSS) unweighted data. You would first calculate the mean of each plausible value and then take the average of the five values. As shown in Figure 3.1, the average score would turn out to be 495.26. However, if you used weighted data with the IEA IDB Analyzer, as illustrated in Figure 3.2, you would find that the correct average of the CIL score in Chile is actually 486.58.

In this example, the large difference between the unweighted and weighted results can be explained by the specific sampling design for Chile. The proportion of students from nonsubsidized private schools in the sample is considerably higher than their proportion in the population. The sample was chosen intentionally that way so that Chilean researchers could not only obtain more precise estimates on this group of students but also detect statistically significant differences between students from public or publicly subsidized private schools and those from private nonsubsidized schools. In order to balance out the disproportionate sample allocation, the weights assigned to students from private schools were smaller than the weights assigned to students from the other school types. Because, on average, students attending private

11 All sampling units have similar estimation weights. This is achieved by assigning low selection probabilities to small schools but high selection probabilities to students within small schools and, vice versa, high selection probabilities to large schools but low selection probabilities to students within large schools. The product of the two base weights is then similar for all students. See Meinck (2015) for further reading on this matter.

12 Note that ICILS 2013 considered schools with response rates below 50 percent as refusals and gave them a weight of zero.

Figure 3.1: Example of unweighted analysis in SPSS

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Computer and Information Literacy- 1ST PV	3180	133,35	709,44	495,6796	87,88243
Computer and Information Literacy- 2ND PV	3180	115,12	706,08	495,3302	88,53991
Computer and Information Literacy- 3RD PV	3180	101,33	709,34	495,4560	87,86492
Computer and Information Literacy- 4TH PV	3180	105,36	736,18	494,9780	87,79496
Computer and Information Literacy- 5TH PV	3180	123,12	744,95	494,8878	87,78396
Valid N (listwise)	3180				

Figure 3.2: Example of weighted analysis using the IEA IDB Analyzer

Average for PVCIL by IDCNTRY

Country ID - Numeric Code	N of Cases	Sum of TOTWGTS	Sum of TOTWGTS (s.e.)	Percent	Percent (s.e.)	PVCIL (Mean)	PVCIL (s.e.)	Std.Dev	Std.Dev. (s.e.)
Chile	3180	222720	5077,12	100,00	,00	486,58	3,14	85,86	2,48

schools perform better than their peers from other school types, omitting weights would lead to an overestimation of the students' performance in Chile. The sampling weights compensate for the disproportional school sample allocation.

3.3 Variance estimation

Because all statements about any ICILS 2013 population are based upon sample data, they can only be made with a limited degree of certainty. Standard errors reflect the accuracy of the estimates and should always be reported when analyzing ICILS 2013 data. Also, because the samples were drawn using a stratified complex design, the estimation of standard errors of parameter estimates is not as straightforward as in the case of simple random samples, and standard software packages do not always support this design feature.

A variance estimation method that considers the structure of the data is jackknife repeated replication (JRR). The ICILS 2013 international database contains variables that support the implementation of this method. They include the "jackknife zone," the "jackknife replicate," and "replicate weights." For details on the JRR technique used in ICILS 2013, please refer to Chapter 13 of the ICILS 2013 technical report (Fraillon et al., 2015).

The IEA IDB Analyzer recognizes the data structure of ICILS 2013 automatically and reports correct standard errors for all estimates.

3.3.1 Selecting the appropriate variance estimation variables

Section 2.4.6 of this guide introduces all variables related to variance estimation that are part of the international database and gives their references to the different source files. Note that even for the same school, the variables at different levels of analysis can differ from one another and so are not interchangeable. As is the case with weights, you need to be sure you are choosing the correct jackknife variables when working with aggregated datasets. The level of analysis (student, teacher, or school) determines which variable to use.

When the analysis is performed with the IEA IDB Analyzer, the correct variables are selected automatically. However, you may want to use specialized software for those types of analysis that go beyond the range of the Analyzer's capabilities. In this case, you will need to specify the jackknife variables according to the requirements of the software. Usually, "zone" variables have to be specified as "stratum" or "strata" variables, while the "replicate" variables are commonly referred to as "cluster" variables. Frequently, software accepts direct use of the replicate weights. In such cases, the JKZONE and JKREP variables can be ignored. We strongly urge data users to use the replicate weights provided for all single-level analysis of ICILS 2013 data.

3.3.2 Estimating sampling variance with jackknife repeated replication

When population parameter μ is estimated, then μ_s is its estimate, assuming all weighted sampled measurements have been used (i.e., applying TOTWGTS for the student population or TOTWGTT for the teacher population). Because all samples in ICILS 2013 are probabilistic, μ_s itself is a random variable, and μ is therefore estimated with a certain degree of precision. To account for this, we use JRR methodology to estimate the sampling variance of μ:

$$SV_\mu = \sum_{i=1}^{75} [\mu_i - \mu_s]^2$$

where 75 refers to the number of jackknife zones, and μ_i is the estimate of μ using the i^{th} set of jackknife replicate weights. The standard error of μ is given by:

$$SE_\mu = \sqrt{SV_\mu}.$$

A particular parameter of interest in ICILS 2013 is the CIL scale. For this particular case, we have to account for the variability introduced by all plausible values reflecting the construct. The JRR formula to estimate the variance of the construct is given by:

$$SV_\mu = \frac{1}{P}\left(\sum_{j=1}^{P}\left[\sum_{i=1}^{75}(\mu_{ij} - \mu_j)^2\right]\right) + \left(\frac{P+1}{P} * \frac{\sum_{j=1}^{P}(\mu_j - \mu)^2}{P-1}\right)$$

where P is the number of plausible values (i.e., five in the case of CIL), μ_{ij} is the estimate of μ using the j^{th} plausible value with the i^{th} set of jackknife replicate weights, and μ_j is the estimate of μ using the j^{th} plausible value with full-sample weights (i.e., TOTWGTS).

Finally, note that in this case, SE_μ is the sum of two independent sources of variation. The first term reflects variation on μ due to sampling, while the second reflects variation due to measurement.

Once more, please note that the IEA IDB Analyzer automatically applies the above formulas for computing standard error estimates.

3.3.3 Comparing groups and statistical significance testing

Analyzing data by subgroups is common practice in research. However, if your aim is to review statistical differences among subgroups, you will need to proceed cautiously. This is because the sampling design has a direct impact on the standard error of any estimate, as we pointed out above. Even in the case of larger effect sizes, you will be unlikely to find statistically significant differences among subgroups if the number of sampled students or teachers within grouping cells is small or if all members of a subgroup belong to only a very small number of schools. Furthermore, the standard error estimate itself is not accurate in these cases. As a rule of thumb, an analysis group should have no fewer than 50 individuals (students or teachers) coming from at least 25 different schools.[13] Whenever you are developing research questions and designs, we recommend that you evaluate if the survey and sampling design supports the respective research goals.

In this section of this chapter, we consider comparisons of means, percentages, and percentiles. Because comparison of other estimators such as correlation or regression coefficients or standard deviations is not as straightforward, we decided not to cover it in this guide.

Testing for significant differences between group estimates involves the following steps:

1. Estimating the difference between two groups by simply subtracting the two group estimates from each other;
2. Estimating the standard error of the difference and then dividing the difference by its standard error (the result of this division is called the "*t*-value"); and
3. Comparing the *t*-value to the *t*-distribution.

Absolute *t*-values larger than 1.96 point to significant differences on the 95-percent certainty level ($p < 0.05$). In other words, if the absolute *t*-value is larger than 1.96, we can, with a probability of 95 percent, predict that the difference is not only present in the sample but also in the population. Note, however, that *t*-values are no proof of the absence of a difference between two compared subgroups (a mistake commonly made in statistical analysis); instead, the probability of whether or not there is a difference is less than 95 percent.

The second step above (computing the standard error of the difference) deserves special attention. The method used to compute this standard error will depend on the composition of the groups to be compared. We can distinguish between three cases, descriptions of which follow.

3.3.3.1 Differences between independent samples

Independent samples consist of sample subgroups that were not part of the same sampling frame. This axiom holds for comparisons across countries or among different explicit strata.

The standard error of the difference SE_{dif_ab} for two groups a and b can be computed for such groups as:

$$SE_{dif\_ab} = \sqrt{SE_a^2 + SE_b^2}.$$

13 The JRR method measures sampling variance by comparing the variation between paired schools. It is therefore important to have enough schools contributing to the computations.

Because the IEA IDB Analyzer does not provide a tool for this simple arithmetic operation, we need to perform it manually and then compute the *t*-value with

$$t = \frac{(a-b)}{SE_{dif\_ab}}.$$

3.3.3.2 Differences between dependent samples

Dependent samples consist of sample subgroups that were part of the same sampling frame. One example is gender groups. Assume that female and male students are sampled as part of the same explicit strata. For example, they attend the same school type (a feature that is relevant if used for explicit stratification), or they share the same teacher and school environment because they attend the same school. The sampling covariance between these subgroups will need to be considered during estimation of the standard errors.

Using jackknife replication to estimate the standard error of the difference involves the following formula:

$$SE_{dif\_ab} = \sqrt{\sum_{i=1}^{75} ((a^i - b^i) - (a-b))^2}.$$

Here, a and b represent the weighted averages (or percentages) in each of the two subgroups for the fully weighted sample, and a^i and b^i are the weighted averages for the replicate samples.

Where, with respect to ICILS 2013, there are differences in CIL scores, the measurement error also needs to be taken into account using the following formula:

$$SE_{dif\_ab} = \sqrt{\left[\frac{\sum_{p=1}^{P}\left(\sum_{i=1}^{75}((a_p^i - b_p^i) - (a_p - b_p))^2\right)}{P}\right] + \left[\left(1+\frac{1}{P}\right)\frac{\sum_{p=1}^{P}((a_p - b_p) - (\bar{a}_p - \bar{b}_p))^2}{P-1}\right]}.$$

Here, a_p and b_p represent the weighted subgroup averages in groups a and b for each of the P plausible values ($P = 5$), a_p^i and b_p^i are the subgroup averages within replicate samples for each of the P plausible values, and $\bar{a}_p$ and $\bar{b}_p$ are the means of the two weighted subgroup averages across the P plausible values.

Obviously, manually computing the standard error estimates of these differences would be tedious. A simpler solution is to model group differences with a regression, an approach which also builds in the covariance term. The IEA IDB Analyzer makes it easy to implement this approach for both variable types; *t*-values of group differences are part of the output. The text headed "contrast-coded regression" in Section 4.3.1.3 of this guide gives a detailed explanation of the implementation of this method.

When estimating standard errors of dependent samples by using the method for independent samples, we can risk overestimating the standard error, thereby detecting fewer significant differences than are actually present.

3.3.3.3 Differences between group and combined-group estimates

Researchers sometimes want to compare a group estimate with a combined estimate where the group of interest also contributes to the combined estimate (of independent groups). A typical example is that of comparing national average scores with the "country average" (an estimate based on data from all participating countries). In this case, the samples to be compared are not independent because the national mean

contributes to the estimation of the international mean. The (adjusted) standard error estimate of this difference SE_{dif_ic} can be computed as

$$SE_{dif\_ic} = \frac{\sqrt{((N-1)^2 - 1)SE_c^2 + \sum_{k=1}^{N} SE_k^2}}{N},$$

where SE_c is the standard error for country c and SE_k is the standard error for the k^{th} of the N participating countries (or groups contributing to the combined estimate).

Again, because the IEA IDB Analyzer does not offer this operation, it needs to be performed manually.

3.3.4 Importance of using the correct variance estimation method

If we fail to take the data structure into account when performing our analyses, we are likely to produce incorrect standard error estimates. Standard errors will be considerably underestimated in most cases, and group differences will become significant even though they are not. The following example illustrates the importance of using the JRR technique when analyzing ICILS 2013 data.

Figure 3.5 of the ICILS 2013 international report (Fraillon et al., 2014) displays multiple comparisons of average country CIL scores. As shown in the figure, the CIL scores of the Slovak Republic (SVK) and Croatia (HRV) are not significantly different, although the difference in average scores is five points. Verifying whether the difference is statistically significant requires computation of the standard error. Because the samples to be compared are independent, the following formula applies:

$$SE_{dif} = \sqrt{SE^2_{SVK} + SE^2_{HRV}}.$$

After inserting the standard errors of the CIL scores of both countries ($SE_{SVK} = 4.6$; $SE_{HRV} = 2.2$) into the formula, we get 5.1 as the standard error of the difference. We then need to divide the difference by its standard error to compute the t-value ($t = 0.98$). Accordingly, the CIL average score difference between the Slovak and Croatian students might just be due to chance.

However, when estimating the standard errors of the same CIL scores on the assumption of simple random sampling (by, e.g., using SPSS), we find that the standard errors are largely underestimated. When we apply the total weights in the analysis, we find that the standard error estimations are 5 to 10 times smaller than the correct estimates (0.4 for both countries). The country difference then becomes significant if we use these incorrect standard errors for significance testing (the t-value would be 8.8). Not applying the weights but still treating samples as simple random samples would still lead to underestimation of the standard errors (1.7 for the Slovak Republic and 1.5 for Croatia), and the difference would still appear significant (t-value of 2.2).

The effect of underestimating standard errors generally holds for all variables or types of analysis.

CHAPTER 4:

Analyzing ICILS 2013 data using the IEA IDB Analyzer

Plamen Mirazchiyski

4.1 Overview

This chapter describes how the IEA International Database (IDB) Analyzer software (IEA, 2015)[14] can be used to analyze the ICILS 2013 international data files. Example analyses illustrate the capabilities of the Analyzer to compute a variety of statistics, including percentages of students in specified subgroups, average computer and information literacy (CIL) in those subgroups, correlations, regression coefficients, and percentages of students reaching certain proficiency levels. The examples use student, teacher, and school data to replicate some of the results included in the ICILS 2013 international report (Fraillon et al., 2014). They also reference other useful analyses for investigating policy-relevant research questions.

The examples given here use the SPSS data files from the international database. Developed by the IEA Data Processing and Research Center (IEA DPC) in Hamburg, Germany, the IEA IDB Analyzer is software that uses the Statistical Package for the Social Sciences (IBM Corp., 2013) as an engine for performing computations involving IEA data. The Analyzer creates syntax files reflecting the settings users define by means of a graphical user interface. The syntax files produced can be used for combining SPSS data files from IEA's large-scale assessments and for conducting analyses using SPSS without actually writing programming code. When computing statistics and the corresponding standard errors, the SPSS syntax generated by the IEA IDB Analyzer takes into account information from the sampling design. In addition, the SPSS syntax generated uses the plausible values for calculating estimates of achievement (CIL in the case of ICILS 2013) and their corresponding standard errors, thus combining both sampling and imputation variance. (Chapter 3 of this guide provides a more indepth description of and rationale for requirements pertaining to complex sample analysis.)

The IEA IDB Analyzer consists of two main modules—the merge module and the analysis module. The merge module creates analysis datasets by combining data files of different types and/or from different countries or education systems[15] for a single study cycle and for selecting subsets of variables for analysis. The analysis module provides procedures for computing various statistics and their standard errors for variables of interest. These procedures can be applied per country as well as for specific subgroups within a country. Both modules can be accessed via the **Start** menu in Windows:

Start → All Programs → IEA → IDB AnalyzerV3 → IEA IDB Analyzer

The two modules can be started from the main window (see Figure 4.1), which also has the button **Help**. Clicking on it will open the application help file. It contains examples employing PIRLS 2011 data. However, the analysis steps are the same regardless of the

14 The IDB Analyzer can be downloaded from the IEA webpage at http://www.iea.nl/data.html (retrieved January 26, 2015; the URL may be nonpermanent).

15 Please note again that we use the terms country and education system interchangeably in this guide.

study. The help file also contains information on other topics and technical details not covered in this chapter.

4.2 Merging files with the IEA IDB Analyzer

The ICILS 2013 data files are released separately for each country and by file type. In addition to allowing us to combine data from the same file type from more than one country for cross-country analyses, the merge module lets us combine data from different levels, such as student and school data, into a single SPSS dataset.

The sampling design of ICILS 2013 allows data from different groups of respondents in the study to be merged as follows:

- School files can be merged with themselves (i.e., school files from different countries) and with every other (student or teacher) file type.
- Teacher files can be merged only with themselves (i.e., teacher files from different countries) and with school files. Merging teacher files with student files is not possible. The reason why is associated with the study's sample design wherein the ICILS 2013 teacher sample was drawn by taking all teachers from the students' target grade into account; see Chapter 6 of the ICILS 2013 technical report (Fraillon et al., 2015). Because these teachers are usually not just the teachers who teach the sampled students, we cannot link the teacher data to student data at the level of individuals. Instead, we can only do the linking at the level of the school.
- Student files can be merged only with themselves (i.e., student files from different countries) and with school files, but not with teacher files for the reasons explained in the previous point.

Merging files from different levels has implications for analysis of the data: when data files from different levels are merged, the weights (see Section 2.4.6 and Chapter 3 for an overview of the study weights) retained in the merged file will depend on the particular levels that were merged. This situation also has implications for interpretation of the results. As an example, when school and teacher files are merged, the teacher becomes the reference (unit of analysis), and the computed statistics are interpreted as applying to "teachers who teach in schools with characteristic X." Table 4.1 provides a summary of these points.

Table 4.1: Possible merges of data files from different levels, retained weights, and interpretation of results

File Type	Weight in Merged File	Interpretation
Student	TOTWGTS	Student characteristics
Teacher	TOTWGTT	Teacher characteristics
School	TOTWGTC	School characteristics
Student and school	TOTWGTS	Student characteristics; school characteristics as properties of students
Teacher and school	TOTWGTT	Teacher characteristics; school characteristics as properties of teachers

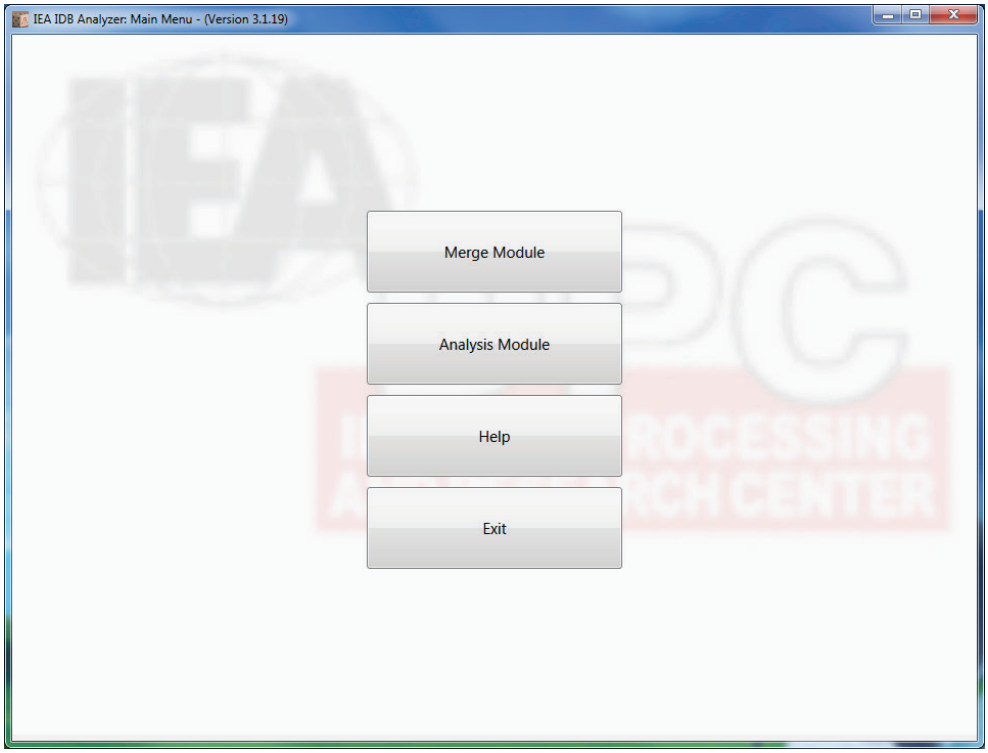
Please note that merging data from different levels may result in larger amounts of missing data if more than one variable is involved in the analysis. For example, suppose teacher files and school files are merged. If the analysis variables from both teachers and school principals (or school ICT-coordinators) are used, the number of missing responses are likely to increase because the missing data from teachers and from school principals have been combined.

4.2.1 Merging data from different countries

Merging files from different countries on a single level (e.g., student data only) is simple. The same steps used for merging solely school or teacher file types apply. The following example shows you how to create an SPSS data file from student data from all of the ICILS 2013 countries.

1. Begin by opening the merge module of the IEA IDB Analyzer (Start → All Programs → IEA → IDB AnalyzerV3 → Merge Module). You will see the main window of the application as shown in Figure 4.1.

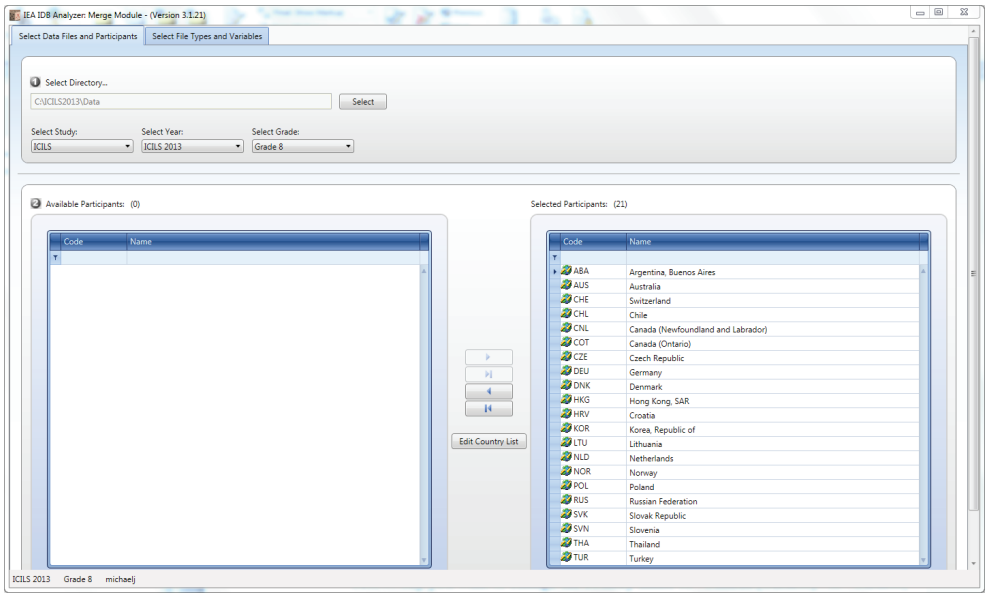
Figure 4.1: Main window of the IEA IDB Analyzer



2. Click on the **Merge Module** button to open the IEA IDB Analyzer merge module. When it has launched, click on the **Select** button in the upper left-hand part of the window. Browse to the folder where all SPSS data files are located. For example, as shown in Figure 4.2, all SPSS data files can be found in the "C:\ICILS2013\Data" folder. The program will automatically recognize and complete the **Select Study**, **Select Year**, and **Select Grade** fields and list all countries available in this folder as possible candidates for merging. If the folder contains data from more than one IEA study, study cycle, or grade, the Analyzer will prompt you to select files from the desired study and grade for analysis.

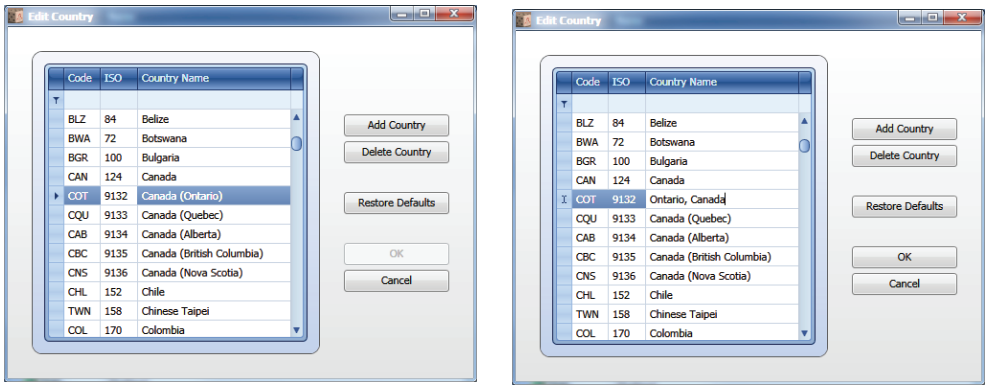
3. Select the countries of interest from the **Available Participants** list. To select multiple countries, hold down the CTRL key of the keyboard when selecting the countries and then press the single-arrow button ▶ to move them into the **Selected Participants** list on the right. In the current example, you can select all countries participating in the ICILS 2013 assessment for merging simply by pressing the double-arrow button ▶▶. Figure 4.2 shows the IEA IDB Analyzer screen after all countries for merging have been selected.

Figure 4.2: IEA IDB Analyzer merge module: Selecting countries



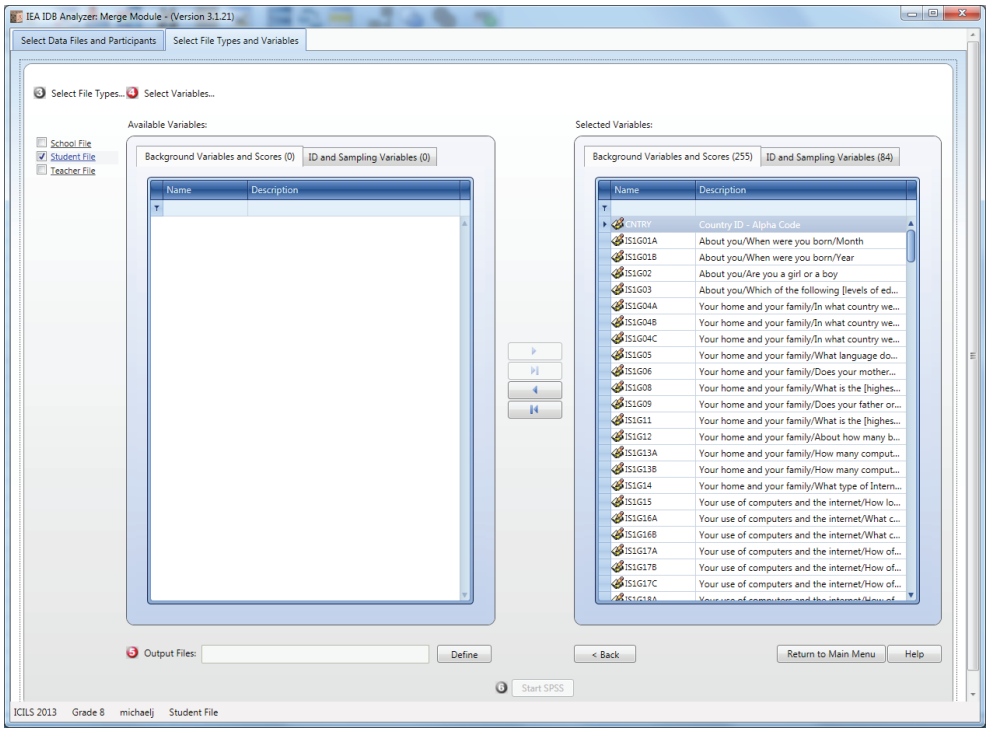
4. If you need to change how the countries' names appear in the outputs from the IDB Analyzer when you analyze data, you can do so by clicking on the **Edit Country List** button located in the middle of the window, as shown in the example provided in Figure 4.2 above. Assume you now want to change the country name of "Canada (Ontario)" to "Ontario, Canada" in the analysis outputs. Scroll down with the mouse until you find the entry for "Canada (Ontario)." You will see three columns in the table: **Code** (numeric codes of the countries), **ISO** (the three-letter character codes for the countries), and **Country Name**. The values in the first two columns cannot be changed. Click in the cell containing "Canada (Ontario)" in the **Country Name** column and change it to "Ontario, Canada." Click **OK** to confirm the change. Figure 4.3 shows the country list before and after the "Canada (Ontario)" change. From now on, the results for Ontario will appear with "Ontario, Canada" as the label. If you need to restore the default values, press the **Restore Defaults** button. Click **OK** to close the **Edit County List** window.
5. Press the **Next>** button to proceed to the next screen. This next window of the merge module (see Figure 4.4) allows you to select the file types and the variables to be included in the merged data file.
6. Select the file types for merging by checking the appropriate checkboxes to the left of the window. In the current example, only the **Student File** is selected (see Figure 4.4).
7. Select the desired variables from the list of **Available Variables** in the left-hand panel. You can select and move separate variables from the **Available Variables** to the

Figure 4.3: Country list in the IDB Analyzer merge module (before and after changing country name)



Selected Variables list by holding down the CTRL key on the keyboard, selecting the countries one by one with the left mouse button, and then clicking the arrow button ▶. If you want to select all variables and move them into the **Selected Variables** list, use the double-arrow key ▶▶. In our example, we will select all student variables for merging. Note that the IEA IDB Analyzer automatically selects all achievement score variables as well as all identification and sampling variables.

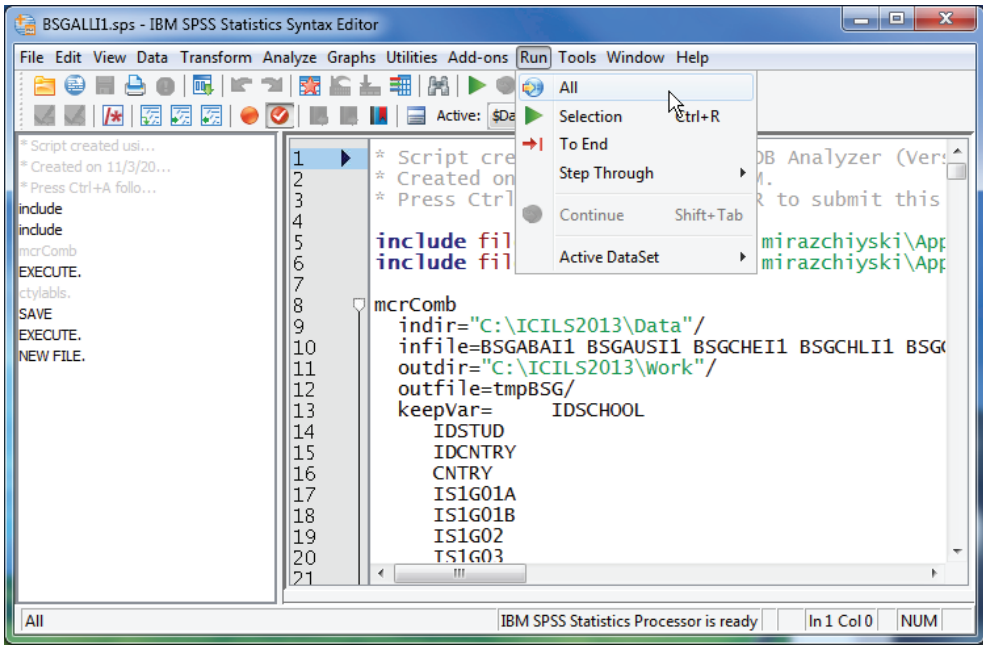
Figure 4.4: IEA IDB Analyzer merge module: Selecting file types and variables



8. Specify the desired name of the merged data file and the folder where it will be stored in the **Output Files** field. The IEA IDB Analyzer will create an SPSS syntax file (*.SPS) containing the code necessary for the merge with the provided file name. The syntax file will be saved in the specified folder and will be opened in the SPSS **Syntax Editor**. After the execution in SPSS, .SAV and .XLSX (with the provided file name) files containing the output will also be created. In the example shown in Figure 4.5, the syntax file BSGALLI1.SPS (and the resulting merged data file BSGALLI1.SAV) is stored in the "C:\ICILS2013\Work" folder. The merged data file will contain student data from all participating countries, and the variables will appear in the **Selected Variables** panel to the right in Figure 4.5.

   NOTE: The IEA IDB Analyzer accepts only alphanumeric characters (A–Z; a–z; 0–9) and underscore ("_") in the file names. If any other characters (!@#$%^&*()+=.,|/?\~`and space) appear in the file name, the application will not accept the specified file name and will display a warning message.

Figure 4.5: SPSS Syntax Editor with merge syntax produced by the IEA IDB Analyzer merge module



9. Click on the **Start SPSS** button, at which point the IEA IDB Analyzer will create the syntax file with the specified name, store it in the specified folder, and open it in an SPSS **Syntax Editor** window (Figure 4.5), ready for execution. In order to execute the syntax file, you must open the **Run** menu of SPSS and click the **All** option. The Analyzer will give a warning if it is about to overwrite an existing file with the same name in the specified folder.

After execution of the syntax, the Analyzer will save the data file in the "C:\ICILS2013\Work" folder under the name BSGALLI1.SAV. Be sure to check the resulting SPSS Output on screen for possible warnings. If warnings appear, check them carefully because they might indicate that the merge process was not performed properly and that the resulting merged data file may not be as expected.

4.2.1.1 Questionnaire variables

This subsection of Chapter 4 describes the variables collected from students, principals, ICT-coordinators, and teachers via the ICILS 2013 questionnaires. The four questionnaires and their respective variable names can be found in Appendix 1 of this document. ICILS 2013 used a consistent and systematic naming convention to assign the variable names used in the database.

- The first character of each name indicates the reference level. The letter "I" is used for variables administered on the international level. The letter "N" indicates nationally administered variables. However, the international database includes only those variables administered on the international level.
- The second character indicates the type of respondent. The letter "C" is used to identify data from school principals, while the letter "I" is used for ICT-coordinator data. The letter "T" is used for teacher data. The letter "S" is used for student data.
- The third character indicates the study cycle. Number "1" identifies ICILS 2013 as the first cycle of an IEA study exclusively focusing on CIL.
- The fourth character is used to indicate the context of the variable. The letter "G" is used for general contexts.
- The fifth and sixth characters indicate the question number.
- The seventh and eighth characters represent optional digits for multipart items, and optional digits for multipart subitems, respectively.

The values assigned to each of the questionnaire variables depend on the questionnaire item format and the number of options available. For categorical questions, sequential numerical values are used that correspond to the response options available. The numbers correspond to the sequence of appearance of the response options. For example, the first response option is represented with a 1, the second response option with a 2, and so on. Open-ended questions, such as "number of students in a school," are coded with the actual number given as a response.

The raw information collected by the questionnaires underwent extensive processing, inspection, cleaning, and editing. Out-of-range values, questions determining the flow of the questionnaire, and inconsistent or implausible combinations of responses were inspected and cleaned where necessary. To address residual inconsistencies, ICILS 2013 imposed certain automatic edits, for example, the removal of implausible responses, for all countries. For further information on data collection, capturing, processing, editing, weighting, and adjudication of the international database, please consult Chapters 7 and 10 of the ICILS 2013 technical report (Fraillon et al., 2015).

With respect to the international database, the data-cleaning process at the IEA DPC ensured that information coded in each variable would be internationally comparable. National adaptations were reflected appropriately in all concerned variables, and questions that were not internationally comparable were removed from the database. For more information on national adaptations and their eventual handling, consult Appendix 2 of this guide.

4.2.2 Merging school and student data files

The ICILS 2013 school samples were primarily designed to yield optimal student-level samples and estimates. Therefore, analyzing the school variables as attributes of students rather than as elements in their own right is the preferred practice. However, because

the school samples are "bona fide" representative probability samples of schools within each participating country, we can analyze them in their own right, thereby providing estimates for the populations of schools in each country.

To merge student and school files, you will first need to perform Steps 1 to 4 as described in Section 4.2.1, after which you simply select both file types in the second window of the IEA IDB Analyzer merge module. Next, select the variables of interest separately for both file types by following these steps.

1. Click on the **School Questionnaire File**-type checkbox so that it appears checked and highlighted. The ID and sampling variables will be selected automatically and listed in the right-hand panel.
2. Select the variables of interest and press the right arrow button ▸ to move these variables into the right-hand panel.
3. Next, check the **Student File**-type checkbox. Select the variables of interest from the **Background Variables and Scores** panel in the same manner described in Steps 1 and 2.
4. Click on the **Define** button and specify the desired name of the merged data file and the folder. The full path to the file will be displayed in the **Output Files** field. The IEA IDB Analyzer will create an SPSS syntax file (*.SPS) of the same name and in the same folder along with the code necessary to perform the merge.
5. Click on the **Start SPSS** button to create the SPSS syntax file that will produce the specified merged data file. You can then run the file by opening the SPSS **Run** menu and selecting the **All** option.

All ID and appropriate sampling variables will be selected automatically. Note that merging student and school data, that is, disaggregating school-level information to the respective student records in that school, will lead to inclusion of only the total student weight (TOTWGTS)—*not* the total school weight (TOTWGTC)—in the merged file; see Chapter 3 for details.

Researchers who use school variables yet weight by the total student weight when conducting an analysis will be unable to make inferences for the schools as the unit of analysis. The interpretation of results will be about students who study in schools with certain characteristics. For example, if we use merged student and school data and use the type of school (public/private) as the grouping variable, the total student weight will be selected as the weighting variable. We can then interpret the results as percentages of students who study in schools where the school principal is male or female, as evident in this statement: "In Chile, 50.97 percent of the students study in public schools, and 49.03 percent in private schools."

4.2.3 Merging school and teacher data files

Merging these data files follows the same procedure described in the previous section. All ID and relevant sampling variables will be selected automatically. Note that the school data will be disaggregated to the teacher level when the respective school-level variables are added to each teacher record. Only the total teacher weight (TOTWGTT) variable and thus not the total school weight (TOTWGTC) variable will be included in the merged file. Researchers who intentionally use school variables yet weight by the total teacher weight when conducting an analysis will not be able to make inferences for

the schools as the unit of analysis. The interpretation of results will be about teachers who teach in schools with certain characteristics.

4.2.4 Merging data files for the sample analyses

To carry out and replicate the analysis examples described in this chapter, we need to create the following merged data files so that they include all available background variables and scores. We can do this by following the instructions in the previous sections of this chapter.

File name	Instructions
BSGALLI1.SAV	Merge the student (BSG) data files for all countries
BTGALLI1.SAV	Merge the teacher (BTG) data files for all countries
BSG_BCGALLI1.SAV	Merge the student (BSG) and school (BCG) data files for all countries

4.3 Performing analyses with the IEA IDB Analyzer

The analysis module of the IEA IDB Analyzer allows us to analyze any files created via the merge module. The analysis module can perform the following statistical procedures:

- *Percentages and means:* Computes percentages, means, and standard deviations for selected variables by subgroups defined by grouping variable(s).
- *Percentages only:* Computes percentages by subgroups defined by grouping variable(s).
- *Regression:* Computes linear, dummy, and effect coded regression coefficients for selected variables in order to predict a dependent variable by subgroups defined by grouping variable(s).
- *Benchmarks:* Computes percentages of students meeting a set of user-specified achievement proficiency levels by subgroups defined by grouping variable(s).
- *Correlations:* Computes means, standard deviations, and correlation coefficients for selected variables by subgroups defined by grouping variable(s).
- *Percentiles:* Computes the score points that separate a given proportion of the distribution of scores, by subgroups defined by grouping variable(s).

All statistical procedures offered within the analysis module of the IEA IDB Analyzer use appropriate sampling weights. Standard errors are computed using the paired jackknife repeated replication approach implemented for ICILS 2013 (JK2). Percentages and means, regressions, and correlations may be specified with or without achievement scores (plausible values).

To conduct analyses using achievement scores, you will first need to select the **Use PVs** option from the **Plausible Values Option** drop-down menu at the top of the screen. The analyses will be performed using all five plausible values, and the calculated standard errors will include both sampling and imputation error components.

The IEA IDB Analyzer requires selection of several types of variable, each of which serves a particular purpose.

- *Grouping variables:* The variables in this list define subgroups. The list must include at least one grouping variable. By default, the Analyzer includes IDCNTRY as a mandatory grouping variable. Additional variables may be selected from the available

list. If you check the **Exclude Missing from Analysis** option, the only cases used in the analysis will be those that have nonmissing values in the grouping variables.

- *Analysis variables:* The variables in this list are the ones to use when computing percentages and means for specified groups, as well as for correlation analysis and percentiles (with or without achievement scores). More than one analysis variable can be selected. To compute means, percentiles, or correlations for achievement scores, select the **Use PVs** option from the **Plausible Values Option** drop-down menu at the top of the screen and select the achievement scores of interest.
- *Plausible values (if Use PVs selected):* This section identifies the set of plausible values you will need to use when computing benchmarks of achievement or the independent or dependent variable in a regression analysis involving achievement scores.
- *Independent variable:* The independent variable is the variable to use when a regression analysis is specified. To use achievement scores as an independent variable, select the **Use PVs** option from the **Plausible Values Option** drop-down menu at the top of the screen and specify the achievement scores of interest in the **Plausible Values** section in the **Independent Variables** panel.
- *Dependent variable:* This variable is the one to use when a regression analysis is specified. Remember that only one dependent variable can be listed. To use achievement scores as the dependent variable, select the **Use PVs** option from the **Plausible Values Option** drop-down menu at the top of the screen and add the achievement scores of interest in the **Dependent Variable** field in the **Dependent Variable** section after clicking on the button **Plausible Values** located above it.
- *Benchmarks:* These values provide the cut points of the achievement distribution for computing the percentages of students meeting the specified proficiency levels. Although it is best to specify one proficiency level as a cut point at a time, more levels can be specified with a space between them. There are three options for this type of analysis: **Discrete** (computes percentages of students at or above a specific benchmark), **Cumulative** (same as discrete, but adding up the percentages from each of the previous benchmarks), and **Discrete with Analysis Variable(s)** (same as discrete, but also computing the mean for a continuous contextual variable for the group of students reaching each of the benchmarks).
- *Percentiles:* These are the values at a particular point of the distribution of scores by subgroups defined by the grouping variable(s). Although it is best to specify a single percentile point at a time, more can be specified with a space between them.
- *Weight variable:* This is the sampling weight used in the analysis. The IEA IDB Analyzer automatically selects the appropriate weight variable for analysis based on the file types included in the merged data file (see Section 4.2). This weight is the base weight. Although the Analyzer does not show them, the 75 JK2 replicate weights are also used in the analysis in order to allow correct estimation of the standard errors.

4.3.1 Performing analyses with student-level variables

As indicated elsewhere in this guide, many analyses of ICILS 2013 data can use only student-level data. These analyses constitute the majority of those reported in the ICILS 2013 international report (Fraillon et al., 2014). The following subsections of this chapter present examples of actual analyses used to produce tables in that report,

as well as examples of percentages only, percentages and means, regression analyses, and computing percentages of students reaching proficiency levels. Also included is information on conducting correlation analysis.

The analyses in this section assume that the data files have been prepared and merged as stipulated in Section 4.2.4.

4.3.1.1 Student-level analysis without achievement scores

In our first example, we replicate an analysis of students' reported age at the time of testing. The results, presented in Table 3.4 of the ICILS 2013 international report, are reproduced here in Figure 4.6. This example focuses on the results presented in the third data column—students' average age at the time of testing. Because we want to report the average ages (with their appropriate standard errors), we need to compute means without achievement scores. We can also use the same settings to reproduce the student–computer ratios (last column of the table). An example using CIL achievement scores is presented later in this chapter.

Figure 4.6: Example of student-level analysis without achievement scores results taken from the ICILS 2013 international report (Fraillon et al., 2014, p. 96)

Table 3.4: Country averages for CIL, years of schooling, average age, ICT Index, student–computer ratios and percentile graph

Country	Years of Schooling	Average Age	Computer and Information Literacy Score (100 200 300 400 500 600 700; Below 1, L1, L2, L3, L4)	Average CIL Score	ICT Development Index Score (and Country Rank)	Student–Computer Ratios
Czech Republic	8	14.3		553 (2.1) ▲	6.40 (34)	10 (0.3)
Australia	8	14.0		542 (2.3) ▲	7.90 (11)	3 (0.3)
Poland	8	14.8		537 (2.4) ▲	6.31 (37)	10 (0.5)
Norway (Grade 9)[1]	9	14.8		537 (2.4) ▲	8.13 (6)	2 (0.1)
Korea, Republic of	8	14.2		536 (2.7) ▲	8.57 (1)	20 (2.3)
Germany[1]	8	14.5		523 (2.4) ▲	7.46 (19)	11 (0.8)
Slovak Republic	8	14.3		517 (4.6) ▲	6.05 (43)	9 (0.5)
Russian Federation[2]	8	15.2		516 (2.8) ▲	6.19 (40)	17 (1.0)
Croatia	8	14.6		512 (2.9) ▲	6.31 (38)	26 (0.8)
Slovenia	8	13.8		511 (2.2) ▲	6.76 (28)	15 (0.5)
Lithuania	8	14.7		494 (3.6)	5.88 (44)	13 (0.7)
Chile	8	14.2		487 (3.1) ▼	5.46 (51)	22 (4.7)
Thailand[2]	8	13.9		373 (4.7) ▼	3.54 (95)	14 (0.9)
Turkey	8	14.1		361 (5.0) ▼	4.64 (69)	80 (16.0)
Countries not meeting sample requirements						
Denmark	8	15.1		542 (3.5)	8.35 (4)	4 (0.4)
Hong Kong SAR	8	14.1		509 (7.4)	7.92 (10)	8 (0.8)
Netherlands	8	14.3		535 (4.7)	8.00 (7)	5 (0.8)
Switzerland	8	14.7		526 (4.6)	7.78 (13)	7 (0.6)
Benchmarking participants						
Newfoundland and Labrador, Canada	8	13.8		528 (2.8)	7.38 (20)[3]	6 (0.0)
Ontario, Canada	8	13.8		547 (3.2)	7.38 (20)[3]	6 (0.3)
Benchmarking participant not meeting sample requirements						
City of Buenos Aires, Argentina	8	14.2		450 (8.6)	5.36 (53)[4]	33 (9.4)

Percentiles of performance: 5th 25th 75th 95th
Mean and Confidence Interval (±2SE)

▲ Achievement significantly higher than ICILS 2013 average ▼ Achievement significantly lower than ICILS 2013 average

Notes to table on opposite page.

In order to replicate the results in the third column of this table, we need to begin by reviewing the student file codebook, which leads to us identifying the student background variable S_AGE as the numeric variable reporting the age of students at the time of testing. Next, we need to create the merged data file for the analysis so that we can use the analysis module of the IEA IDB Analyzer to perform our analysis, which involves the following steps:

1. Open the analysis module of the IEA IDB Analyzer.
2. Select the merged data file BSGALLI1.SAV as the **Analysis File** (see Section 4.2.4).
3. Select **ICILS** (**Using Student Weights**) as the **Analysis Type**.
4. Select **Percentages and Means** as the **Statistic Type**. Note that the analysis does not involve achievement scores, so leave the **Plausible Values Option** as **None Used**.
5. Change the **Number of Decimals** to 1.
6. Find the checkbox next to that option, that is, **Show Graphs**. Once that box is checked, the SPSS output of the analysis generates some basic bar-charts depicting the distribution of the analysis variable(s).
7. Note that the variable IDCNTRY is added automatically to the list of **Grouping Variables**. No additional grouping variables are needed for this analysis. Note also the change option in the grouping variables field. This option, titled **Exclude Missing from Analysis**, is checked by default to exclude cases that have missing values in the grouping variables. In the current example, this option has no effect because the country ID is always fully observed and present in the database.
8. Specify the analysis variables. To activate this section, click somewhere around the **Analysis Variables** radio button to activate it. In this example, you will need to select S_AGE from the list of available variables and move it to the **Analysis Variables** list by clicking the right arrow button ▶.
9. Remember that the software automatically selects the **Weight Variable**. Because this example analysis uses student data, TOTWGTS is selected by default. The 75 replicate weights will also be involved in the analysis for computing the correct estimates of the standard errors, although, as noted above, the IEA IDB Analyzer interface does not indicate or list them individually.
10. Specify the name and folder of the output files in the **Output Files** field. The IEA IDB Analyzer will use this name and folder to create three output files: an SPSS syntax (.SPS) file that contains the code for performing the analysis and, after running the syntax file, an MS Excel (.XLSX) file and an SPSS data (.SAV) file, both containing the results.
11. Press the **Start SPSS** button to create the SPSS syntax file. The file will open in an SPSS syntax window. To execute the syntax file, open the **Run** menu of the SPSS **Syntax Editor** and select the **All** option. If necessary, the IEA IDB Analyzer will prompt you to confirm overwriting existing files.

Figure 4.7 shows the IEA IDB Analyzer analysis module window once all the information relevant to this example has been produced, while Figure 4.8 displays the results (SPSS output).

The output depicted in Figure 4.8 contains weighted and unweighted counts and estimates for the analysis variables. The output also contains graphs (not displayed in the figure). Graphs are not included in SPSS and MS Excel output files, which are stored automatically in the working directory. The bottom of the output in Figure 4.8 shows the international average statistic for all countries included in the analysis. This "international average" is the average of the education systems involved in the analysis and thus not all countries participating in ICILS 2013. Because of this, the numbers may differ from the international average presented in the ICILS 2013 international report. Note also that the outputs from the IDB Analyzer are raw and do not correspond to the reporting standards described in Chapter 13 of the ICILS 2013 technical report.

Figure 4.7: IEA IDB Analyzer setup for example student-level analysis without achievement scores

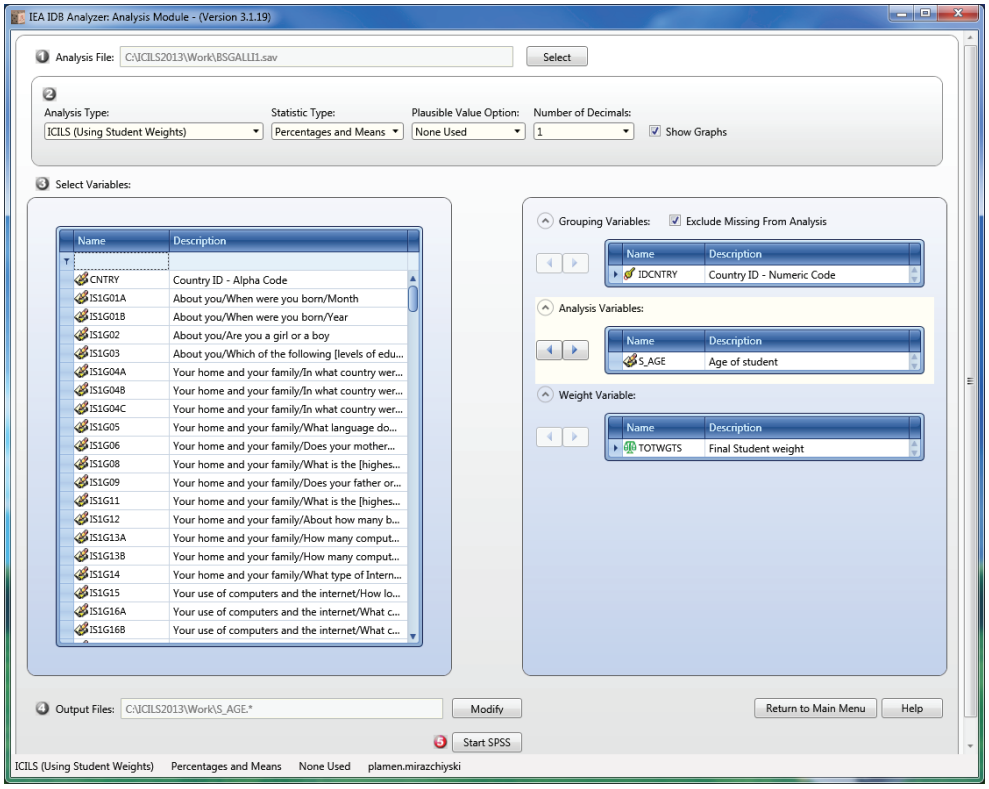


Figure 4.8: Partial SPSS output for example student-level analysis without achievement scores

Average for S_AGE by (IDCNTRY) PAGE 1

Country ID - Numeric Code	N of Cases	Sum of TOTWGTS	Sum of TOTWGTS (s.e.)	Percent	Percent (s.e.)	S_AGE (Mean)	S_AGE (s.e.)	Std.Dev.	Std.Dev. (s.e.)	Percent Missing
Australia	5326	264948	3719.79	4.4	.1	14.0	.0	.5	.0	.0
Chile	3180	222720	5077.12	3.7	.1	14.2	.0	.6	.0	.0
Croatia	2850	44193	838.48	.7	.0	14.6	.0	.4	.0	.0
Czech Republic	3063	83119	1950.28	1.4	.0	14.3	.0	.5	.0	.1
Denmark	1767	58249	1723.63	1.0	.0	15.1	.0	.5	.0	.0
Germany	2223	840817	24249.18	13.8	.4	14.5	.0	.6	.0	.1
Hong Kong, SAR	2010	57340	1205.12	.9	.0	14.1	.0	.7	.0	3.8
Korea, Republic of	2769	538566	7077.07	8.9	.1	14.2	.0	.3	.0	4.2
Lithuania	2756	30842	883.57	.5	.0	14.7	.0	.4	.0	.0
Netherlands	2148	179662	4932.31	3.0	.1	14.3	.0	.5	.0	1.9
Norway	2435	56856	880.18	.9	.0	14.8	.0	.3	.0	.1
Poland	2849	362210	6640.49	6.0	.1	14.8	.0	.4	.0	1.0
Russian Federation	3626	1124977	17391.49	18.5	.3	15.2	.0	.5	.0	.0
Slovak Republic	2994	49186	1057.16	.8	.0	14.3	.0	.5	.0	.0
Slovenia	3737	16845	270.39	.3	.0	13.8	.0	.4	.0	.1
Switzerland	3223	85778	3055.16	1.4	.0	14.7	.0	.6	.0	.1
Thailand	3611	686895	20069.28	11.3	.3	13.9	.0	.6	.1	1.0
Turkey	2527	1189811	8970.97	19.6	.2	14.1	.0	.6	.0	.5
Canada (Ontario)	3377	139615	2977.81	2.3	.0	13.8	.0	.3	.0	.0
Argentina, Buenos Aires	1059	40224	1609.40	.7	.0	14.2	.1	.8	.1	2.4
x.International Average	.	.	.	5.0	.0	14.4	.0	.5	.0	.

The table in our example in Figure 4.8 reports each country's average for the S_AGE variable for all sampled students for whom valid data exists. The first column of the table identifies the countries. The second column reports the (unweighted) number of valid cases. The third column reports the weighted number of students (sum of weights) followed by the percent, mean, and standard deviation estimates, each of which is accompanied by its jackknife standard error. Please note that the percentage is not a country estimate but the share of cases across all countries in the analysis and so differs from the mean and the standard deviation of the **Analysis Variable**, which are country estimates. The last column reports the percentage of missing values.

From the first line in Figure 4.8, we can see that Australia has valid data for 5,326 students and that these sampled students represent a population of 264,948 students. Australian students were, on average, 14.0 years old, with the standard error less than 0.01, at the time they took the ICILS 2013 assessment. The percentage of Australian students who did not report their age at the time of testing was less than 0.01.

4.3.1.2 Student-level analysis with achievement scores

As a second example, we offer another set of results presented in the ICILS 2013 international report. Here, our interest lies in investigating the relationship between students' gender and CIL, the latter being represented by a set of five plausible values. These results, presented in Table 4.1 of the international report, are reproduced below as Figure 4.9. The achievement scores of the male and female students of interest are in the second and third columns. Because the results in this table are based on achievement scores using plausible values, we need to indicate that we want our analysis to use achievement scores when we specify the analysis type.

After reviewing the codebooks, we observe that the variable S_SEX contains categorical information on the gender of the student and that this variable can be found in the student background data files. Activating the **Percentages and Means** statistic type and **With Achievement Scores** options results in computation of percentages and mean achievement scores based on plausible values and their respective standard errors.

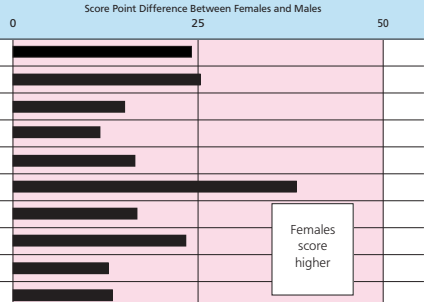
Having opened the analysis module and selected the BSGALLI1.SAV data file, our next steps with regard to using the IEA IDB Analyzer are as follows:

1. Open the analysis module of the IEA IDB Analyzer.
2. Select the merged data file BSGALLI1.SAV as the **Analysis File**.
3. Select **ICILS** (**Using Student Weights**) as the **Analysis Type**.
4. Select **Percentages and Means** as the **Statistic Type**.
5. Note that, by default, the program will exclude records with missing grouping variables from the analysis because the **Exclude Missing from Analysis** option is checked.
6. Set the **Number of Decimals** to 1.
7. Add the variable S_SEX as a second **Grouping Variable**, together with the IDCNTRY (default).
8. Choose **Use PVs** from the **Plausible Values Option** drop-down menu.
9. Specify the achievement scores to be used for the analysis. To activate this section, click somewhere in the field under **Plausible Values**. Select variable PVCIL01-05 from the list of available variables (this set of plausible values should be the only

Figure 4.9: Example of student-level analysis with achievement scores results taken from the ICILS 2013 international report (Fraillon et al., 2014, p. 103)

Table 4.1: Gender differences in CIL

Country	Mean Scale Score Males	Mean Scale Score Females	Difference (Females - Males)	Score Point Difference Between Females and Males (0 / 25 / 50)
Australia	529 (3.3)	554 (2.8)	24 (4.0)	
Chile	474 (3.9)	499 (3.9)	25 (4.8)	
Croatia	505 (3.6)	520 (3.1)	15 (3.5)	
Czech Republic	548 (2.8)	559 (2.0)	12 (2.7)	
Germany†	516 (3.2)	532 (2.9)	16 (3.8)	
Korea, Republic of	517 (3.7)	556 (3.1)	38 (4.1)	
Lithuania	486 (3.8)	503 (4.2)	17 (3.4)	
Norway (Grade 9)[1]	525 (3.1)	548 (2.8)	23 (3.5)	
Poland	531 (3.1)	544 (2.9)	13 (3.7)	
Russian Federation[2]	510 (3.4)	523 (2.8)	13 (2.4)	
Slovak Republic	511 (5.1)	524 (4.8)	13 (4.1)	
Slovenia	497 (2.8)	526 (2.8)	29 (3.6)	
Thailand[2]	369 (5.3)	378 (5.7)	9 (5.6)	
Turkey	360 (5.4)	362 (5.2)	2 (3.8)	
ICILS 2013 average	491 (1.0)	509 (1.0)	18 (1.0)	
Countries not meeting sample requirements				
Denmark	534 (4.1)	549 (4.7)	15 (5.4)	
Hong Kong SAR	498 (9.2)	523 (7.5)	25 (8.3)	
Netherlands	525 (5.4)	546 (5.1)	20 (4.9)	
Switzerland	522 (4.6)	529 (5.5)	6 (4.3)	
Benchmarking participants				
Newfoundland and Labrador, Canada	509 (3.7)	544 (4.1)	35 (6.0)	
Ontario, Canada	535 (3.4)	560 (4.0)	25 (3.8)	
Benchmarking participant not meeting sample requirements				
City of Buenos Aires, Argentina	448 (9.7)	453 (8.9)	5 (6.9)	



Notes:
() Standard errors appear in parentheses. Because some results are rounded to the nearest whole number, some totals may appear inconsistent.
† Met guidelines for sampling participation rates only after replacement schools were included.
[1] National Desired Population does not correspond to International Desired Population.
[2] Country surveyed the same cohort of students but at the beginning of the next school year.

set available) and move it to the analysis variables field by clicking the right arrow button ▸ in this section.

NOTE: Although represented as just one line (PVCIL01-05), the IEA IDB Analyzer will select all five plausible values and include them in the analysis.

10. Remember that the software automatically selects the appropriate **Weight Variable**. Because this example analysis uses student data, the software selects TOTWGTS by default. Although the 75 replicate weights are also needed in the analysis so that the correct estimates of the standard errors can be computed, the IEA IDB Analyzer interface does not indicate them.
11. Specify the name and folder of the output files in the **Output Files** field.
12. Click the **Start SPSS** button to create the SPSS syntax file. The file will open in an SPSS **Syntax Editor** window. As before, the syntax file needs to be executed by opening the **Run** menu of SPSS and selecting the **All** menu option. If necessary, the IEA IDB Analyzer will prompt you to confirm overwriting existing files.

Figure 4.10 displays the analysis module with the correct settings for this example analysis. Figure 4.11 shows a partial output for this setup.

Each country's results in Figure 4.11 (i.e., the values of the S_SEX variable) are presented in two rows, one for each gender. The first column of the output identifies the countries; the second column describes the category of S_SEX being reported. The third column reports the number of valid cases; the fourth the sum of weights of the

Figure 4.10: IEA IDB Analyzer setup for example student-level analysis with achievement scores

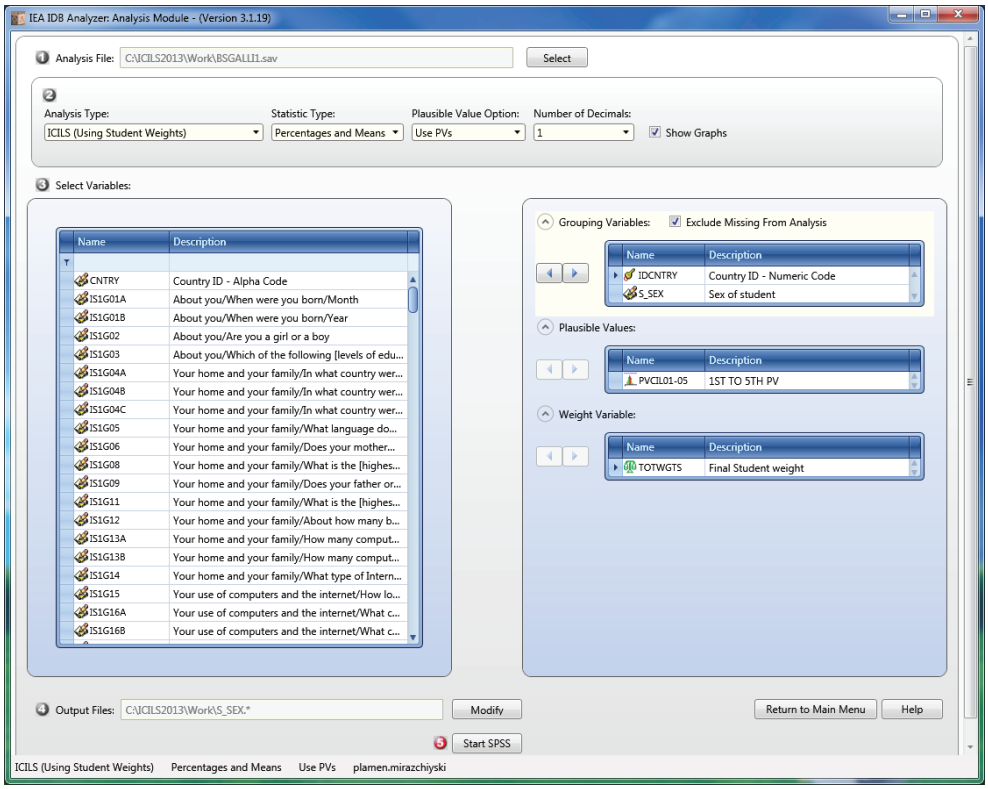


Figure 4.11: Partial SPSS output for example student-level analysis with achievement scores

Average for PVCIL by IDCNTRY S_SEX PAGE 1

Country ID - Numeric Code	Sex of student	N of Cases	Sum of TOTWGTS	Sum of TOTWGTS (s.e.)	Percent	Percent (s.e.)	PVCIL (Mean)	PVCIL (s.e.)	Std.Dev	Std.Dev. (s.e.)
Australia	Boy	2641	130425	4430.04	49.2	1.5	529.4	3.3	79.9	2.2
	Girl	2685	134523	4373.42	50.8	1.5	553.5	2.8	73.2	1.8
Chile	Boy	1628	110376	4067.48	49.6	1.6	473.9	3.9	89.0	3.1
	Girl	1552	112343	4508.06	50.4	1.6	499.1	3.9	80.7	2.9
Croatia	Boy	1450	22540	559.31	51.0	.7	505.1	3.6	82.8	2.2
	Girl	1400	21653	495.22	49.0	.7	520.1	3.1	79.5	2.4
Czech Republic	Boy	1510	41271	1259.84	49.6	.9	547.6	2.8	63.3	2.0
	Girl	1556	41922	1231.04	50.4	.9	559.2	2.0	60.3	1.7
Denmark	Boy	905	29769	1072.47	51.1	1.2	534.4	4.1	70.1	2.4
	Girl	862	28481	1113.06	48.9	1.2	549.0	4.7	67.1	3.4
Germany	Boy	1127	436527	15575.51	51.9	1.1	515.6	3.2	78.7	2.3
	Girl	1098	405235	14966.63	48.1	1.1	532.0	2.9	75.4	2.9
Hong Kong, SAR	Boy	1105	31084	983.02	52.2	1.4	497.5	9.2	97.1	6.4
	Girl	983	28507	1077.45	47.8	1.4	522.6	7.5	91.3	3.5
Korea, Republic of	Boy	1480	287210	11012.06	51.1	1.9	517.3	3.7	92.1	2.4
	Girl	1408	275024	10976.34	48.9	1.9	555.5	3.1	80.5	2.0
. . .										
x.International Average	Boy	.	.	.	50.7	.3	497.0	1.1	82.2	.7
	Girl	.	.	.	49.3	.3	514.2	1.0	79.0	.7

sampled students. The next two columns report the estimated percentage of students and its standard error in each category, followed by the estimated mean CIL and its standard error. The standard deviation of the achievement scores and its standard error are reported in the last two columns.

From the first two lines in Figure 4.11, we see that in Australia 49.2 percent of the target population students are estimated to be girls, and 50.8 percent are estimated to be boys. We can also see that the mean CIL is 553.5 (with a standard error of 2.8) for girls and 529.4 (with a standard error of 3.3) for boys.

While we can compute the mean score difference between female and male students from these group estimates, we cannot determine if these differences are statistically significant. We can, however, test the difference by using dummy-coded regression. The next section provides an example of this. The categorical variable in the example has more than two of the categories that the gender variable used above, but the analysis steps are the same.

4.3.1.3 Student-level regression analysis

The IEA IDB Analyzer can calculate multiple linear regressions between dependent (to be predicted) variables and a set of independent (predictor) variables. In this subsection, we outline a regression analysis with achievement scores using student-level variables selected in the example merged data file BSGALLI1.SAV.

The IEA IDB Analyzer can also be used to compute regression analysis without achievement scores. However, an example is not necessary here, as the steps are similar to those described for the regression analysis with achievement scores. The only difference between the two analyses is that, when conducting the "without achievement scores" analysis, we need to select **None Used** instead of **Use PVs** from the **Plausible Value Option** drop-down menu.

Linear regression with continuous independent variables

In this example, the aim is to fit a linear regression model using the student CIL scores as an outcome variable and the "student interest and enjoyment in using ICT" (S_INSTR) scale as well as the "student use of ICT for study purposes" (S_USESTD) scale as independent variables. The two independent variables are continuous scales derived from student background data. Each scale has a mean of 50 points and a standard deviation of 10. For more information on the methods used to derive these variables, see Chapter 12 of the ICILS 2013 technical report and Appendix 3 of this user guide.

The example analysis does not have a corresponding table in the ICILS 2013 international report that we can reproduce here. The steps you need to take when conducting such an analysis are presented below, and Figure 4.12 shows what the window of the IEA IDB Analyzer will look like.

1. Open the analysis module of the IEA IDB Analyzer.
2. Specify the data file BSGALLI1.SAV as the **Analysis File**.
3. Select **ICILS** (**Using Student Weights**) as the **Analysis Type**.
4. Select **Regression** as the **Statistic Type**.
5. Select **Use PVs** from the **Plausible Value Option** drop-down menu.
6. Leave the **Create Contrast** option as **No** (default), the **Missing Value Option** as **Listwise** (default), and the **Number of Decimals** as 2 (default).

NOTE: The IEA IDB Analyzer can use either listwise or pairwise deletion of records with missing data in multivariate analyses. When **Listwise** deletion is used, the entire record of any respondent who has a missing value for any of the variables in the model will be removed from the analysis and only complete cases will be used. If **Pairwise** deletion is used, the cases with incomplete data will be removed only for those pairs formed by the dependent and each independent variable in which a case has missing values.

7. Note that the software selects the IDCNTRY (country ID) by default in **Grouping Variables**. No other grouping variable is needed for this analysis.
8. Click on the **Non-Plausible Values** field in the **Independent Variables** section to activate it. Locate the variables S_INSTR (interest and enjoyment in using ICT scale) and S_USESTD (use of ICT for study purposes scale) variables in the list of available variables in the left-hand side of the window and add them as non-plausible-values independent variables on the right using the right arrow button ▶.
9. Click on the **Dependent Variable** section to activate it and then select the **Plausible Values** radio button. From the list of variables on the left side, select PVCIV01-05 and use the right arrow button ▶ to move it to the corresponding field.
   NOTE: Although the plausible values are represented as just one line (PVCIL01-05), the IEA IDB Analyzer will select all five and include them in the analysis.
10. Remember that the software automatically selects the **Weight Variable**. Because this example analysis uses student data, the software selects TOTWGTS by default. Although the 75 replicate weights are also needed in the analysis so that the correct estimates of the standard errors can be computed, the IEA IDB Analyzer interface does not indicate them.
11. Specify the name and folder of the output files in the **Output Files** field.
12. Click the **Start SPSS** button to create the SPSS syntax file. The file will open in an SPSS **Syntax Editor** window. To execute the syntax file, open the **Run** menu of SPSS and select the **All** option. If necessary, the IEA IDB Analyzer will prompt you to confirm overwriting existing files.

In our current example analysis, and unlike the other example analyses shown so far, the IDB Analyzer syntax will create more than one Excel output file and more than one SPSS output file on the hard drive, namely, ANOVA statistics, regression coefficients estimates statistics, descriptive statistics, and regression model statistics.

Figure 4.13 shows a partial SPSS output that includes the regression coefficients. Here, we can see that the constant of the model in Australia equals 448.81 score points and that the regression coefficients for the two scales, S_INTRST and S_USESTD, equal 0.71 and 1.08 score points, with corresponding standard errors of 0.16 and 0.17 score points respectively. This information tell us that in Australia a one-point increase in S_INTRST (when S_USESTD is held constant) relates to a 0.71-point increase in the predicted value of the CIL scores. However, a one-point increase in S_USESTD (with S_INTRST held constant) relates to a 1.08-point increase in the predicted value of CIL. These coefficients are statistically significant ($p < 0.05$) because the absolute *t*-test values for the estimates are larger than 1.96.

Note that the variables in the model have different metrics. The CIL scores have an average of 500 and the standard deviations equal 100, while the two predictor variables each has a mean of 50 and a standard deviation of 10. Because of this, it may be appropriate to report and draw conclusions on the coefficients derived from the standardized variables first (see the last three columns of Figure 4.13).

Figure 4.12: IEA IDB Analyzer setup for example student-level linear regression analysis with achievement scores

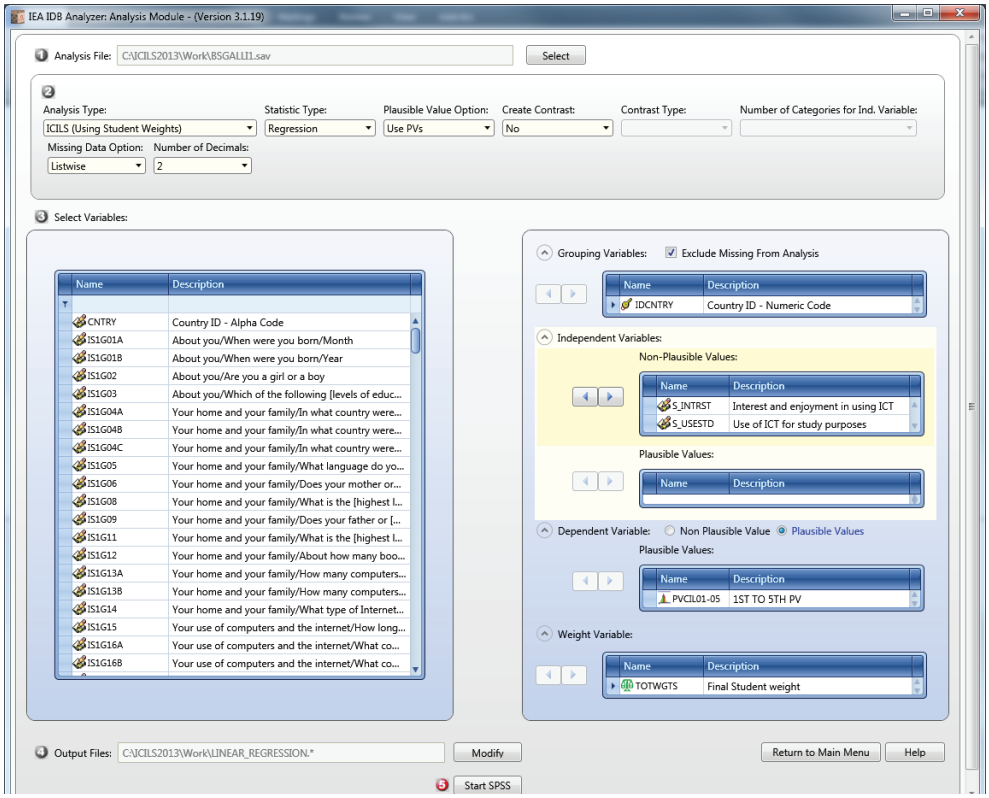


Figure 4.13: Partial SPSS output for example student-level regression analysis with achievement scores

Regression Coefficients PAGE 1

IDCNTRY	Variable	Regression Coefficient	Regression Coefficient (s.e.)	Regression Coefficient (t-value)	Stndrdzd. Coefficient	Stndrdzd. Coefficient (s.e.)	Stndrdzd. Coefficient (t-value)
Argentina, Buenos Aires	(CONSTANT)	475.85	32.08	14.83	.	.	.
	S_INTRST	-.43	.56	-.77	-.05	.06	-.78
	S_USESTD	.10	.51	.20	.01	.06	.20
Australia	(CONSTANT)	448.81	11.95	37.56	.	.	.
	S_INTRST	.71	.16	4.46	.09	.02	4.52
	S_USESTD	1.08	.17	6.48	.13	.02	6.47
Canada (Ontario)	(CONSTANT)	505.40	15.75	32.10	.	.	.
	S_INTRST	.60	.17	3.57	.09	.02	3.65
	S_USESTD	.24	.25	.97	.03	.03	.96
Chile	(CONSTANT)	457.43	19.87	23.02	.	.	.
	S_INTRST	.44	.23	1.87	.05	.03	1.90
	S_USESTD	.14	.32	.42	.01	.03	.42
Croatia	(CONSTANT)	462.56	12.24	37.78	.	.	.
	S_INTRST	.34	.19	1.75	.04	.02	1.75
	S_USESTD	.70	.22	3.21	.08	.02	3.28
Czech Republic	(CONSTANT)	586.39	9.85	59.54	.	.	.
	S_INTRST	-.04	.17	-.24	-.01	.03	-.24
	S_USESTD	-.63	.17	-3.74	-.10	.03	-3.77
. . .							
Int. Avg.	(CONSTANT)	469.93	4.27	109.97	.	.	.
	S_INTRST	.51	.06	8.91	.06	.01	8.85
	S_USESTD	.23	.06	3.70	.03	.01	3.73

Contrast-coded regression

The IDB Analyzer computes contrast-coded regression using two different types of contrast coding: effect and dummy. The example provided here demonstrates computation of dummy-coded regression. The analysis steps for the effect-coded regression are the same as those for dummy-coded regression except for one difference, which is the need to select **Effect Coding** from the **Contrast Type** drop-down menu.

Dummy-coded regression can estimate differences between two groups. It can also test if the differences between subgroups in a single sample (i.e., dependent samples such as students who have different expectations for their further education or students with and without immigrant status) are significant. For this purpose, new variables have to be created from the categorical independent variable corresponding to the questionnaire items that the respondents answered. The number of dummy variables created has to be one less than the number of categories of the corresponding independent variable because one of these categories will be the reference category.

For example, if the categorical independent variable has three categories and we decide that the first category is the reference one, then two dummy variables will need to be created. All values for the first such variable will be recoded as 0, except for the second category, which will be coded as 1. In the second dummy variable, all values will be coded as 0, except for the third category, which will be coded as 1. The estimate for the constant will now equal the average for the respondents who chose the first (reference) category (the dummy variable for this category will not be included in the regression analysis). The regression coefficients for the two dummy variables (dummies for the respondents who chose the second and the third categories) are thus the differences with the constant.

The IEA IDB Analyzer can compute dummy-coded regression coefficients by creating the dummy variables automatically. The first category of the independent variable always serves as the reference category. The IEA IDB Analyzer can furthermore compute regression with effect coding. Although this coding scheme and its outcomes differ from those for the dummy coding (the difference for each effect-coded variable is compared to the grand mean of the dependent variable), the analysis steps and the settings in the user interface are the same, which is why we provide only a dummy-coding example here. More information about the effect of the coding option can be found on the Analyzer's help file, accessible from the start screen or the **Help** button in the lower-left-hand corner of the analysis module.

Our example uses achievement scores. The steps that need to be taken during an analysis without achievement scores follows the same logic as the analysis with achievement scores, the only difference being that the **None** option under the **Plausible Values Option** needs to be chosen. As with our previous example, the current example does not reproduce results from the ICILS 2013 international report. Assume (for the purpose of this example) that your aim is to test if CIL differs according to how long the ICILS 2013 students had been using computers (Question 15 from the student questionnaire). The response categories for this question are (1) "less than one year," (2) "at least one year but less than three years," (3) "at least three years but less than five years," (4) "at least five years but less than seven years," and (5) "seven years or more." More specifically, the analysis will use dummy-coded regression to test the differences in CIL between those students who said they had been using computers for less than a year and the averages for the students who chose each of the other four categories.

To perform the analysis, you will need to follow these steps:

1. Open the analysis module of the IEA IDB Analyzer.
2. Select the merged data file BSGALLI1.SAV as the **Analysis File**.
3. Select **ICILS (Using Student Weights)** as the **Analysis Type**.
4. Select **Regression** as the **Statistic Type**. Choose **Use PVs** from the **Plausible Value Option** drop-down menu, and then choose **Yes** from the **Create Contrast** drop-down menu. Go to the **Contrast Type** drop-down menu and choose D**ummy Coding**.
5. Note that the independent categorical variable for the contrast (IS1G15) has five categories, so set the **Number of Categories for Ind. Variable** to 5 (the IDB Analyzer can compute dummy-coded regression with independent variables that have up to nine distinct categories). Set the **Number of Decimals** to 1.
6. Leave the **Missing Data Option** as **Listwise** (default).

   NOTE: The IEA IDB Analyzer can use either listwise or pairwise deletion of records with missing data in multivariate analyses. When **Listwise** deletion is used, the entire record of any respondent who has a missing value for any of the variables in the model will be removed from the analysis and only complete cases will be used. If **Pairwise** deletion is used, the cases with incomplete data will be removed only for those pairs formed by the dependent and each independent variable in which a case has missing values.
7. Add the variable IS1G15 as an **Independent Variable**.
8. Specify the achievement scores to be used for the analysis. To activate this section, click somewhere in the field under **Plausible Values**. Select variable PVCIL01–05 from the list of available variables and move it to the analysis variables field by clicking the right arrow button ▸ in this section.

   NOTE: Although the plausible values are represented as just one line (PVCIL01-05), the IEA IDB Analyzer will select all five and include them in the analysis.
9. Remember that the software automatically defines the **Weight Variable**. Because this example analysis uses student data, the software selects TOTWGTS by default. Although the 75 replicate weights are also needed in the analysis so that the correct estimates of the standard errors can be computed, the IEA IDB Analyzer interface does not indicate them.
10. Specify the name and folder of the output files in the **Output Files** field.
11. Click the **Start SPSS** button to create the SPSS syntax file. The file will open in an SPSS **Syntax Editor** window. The syntax file will be executed when you open the **Run** menu of SPSS and select the **All** menu option. If necessary, the IEA IDB Analyzer will prompt you to confirm overwriting existing files.

Figure 4.14 displays the analysis module with the proper settings for this example. When the syntax is executed, SPSS will do all the necessary recodings to produce the dummy variables based on the original categories. The first category will be the reference one. A partial output containing the regression coefficients for this setup is shown in Figure 4.15.

The SPSS output represented in Figure 4.15 includes the weighted and unweighted descriptive statistics for the variables included in the analysis, the ANOVA statistics of the model, and the explained variance (not presented in the figure). The regression coefficients for the dummy coded variables appear at the end of the output. The MS Excel and SPSS output data files stored automatically in the working directory include

Figure 4.14: IEA IDB Analyzer setup for example student-level dummy-coded regression analysis with achievement scores

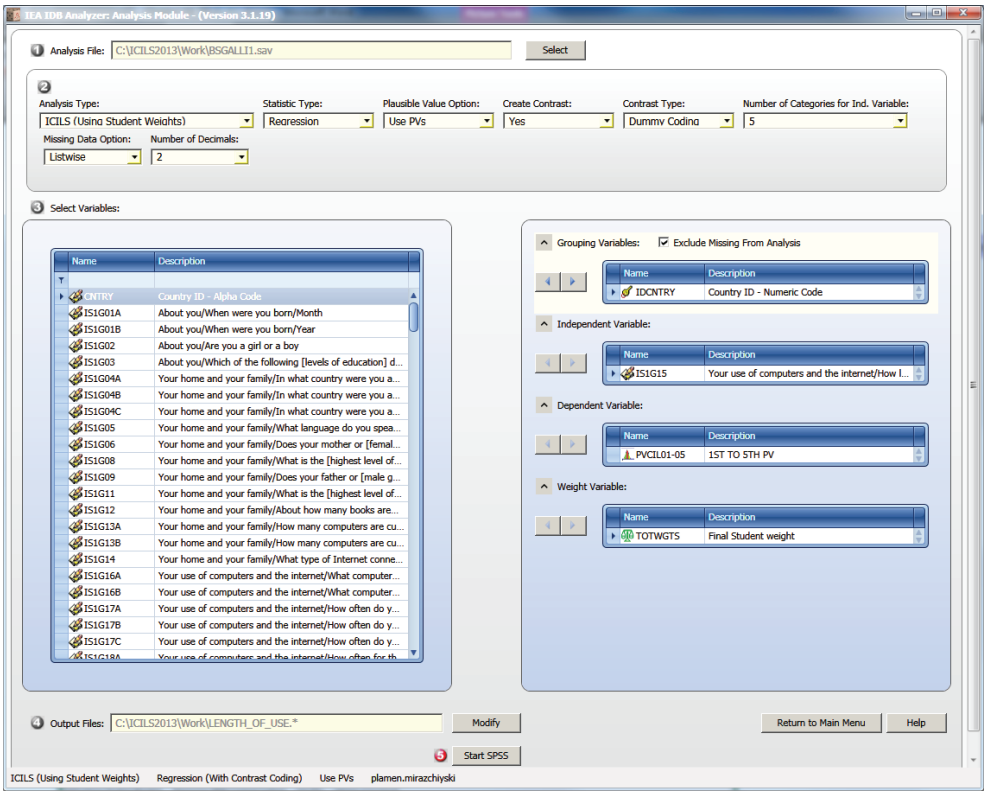


Figure 4.15: Partial SPSS output for example student-level dummy-coded regression analysis with achievement scores

Regression Coefficients PAGE 1

IDCNTRY	Variable	Regression Coefficient	Regression Coefficient (s.e.)	Regression Coefficient (t-value)	Stndrdzd. Coefficient	Stndrdzd. Coefficient (s.e.)	Stndrdzd. Coefficient (t-value)
Argentina, Buenos Aires	(CONSTANT)	369.3	20.4	18.1	.	.	.
	DVAR2	32.8	18.0	1.8	.1	.1	1.9
	DVAR3	72.1	18.1	4.0	.3	.1	4.3
	DVAR4	98.5	20.7	4.8	.5	.1	5.3
	DVAR5	106.7	20.3	5.3	.6	.1	6.2
Australia	(CONSTANT)	412.6	12.6	32.6	.	.	.
	DVAR2	77.4	12.7	6.1	.2	.0	5.9
	DVAR3	115.8	12.7	9.1	.5	.1	9.1
	DVAR4	132.9	12.7	10.4	.8	.1	11.0
	DVAR5	140.5	12.5	11.3	.9	.1	11.7
Canada (Ontario)	(CONSTANT)	476.0	16.7	28.6	.	.	.
	DVAR2	27.6	17.6	1.6	.1	.0	1.5
	DVAR3	57.9	17.0	3.4	.3	.1	3.5
	DVAR4	73.5	16.8	4.4	.4	.1	4.5
	DVAR5	78.0	17.2	4.5	.5	.1	4.6
Chile	(CONSTANT)	415.6	7.2	57.6	.	.	.
	DVAR2	48.6	8.1	6.0	.2	.0	5.8
	DVAR3	74.1	7.9	9.4	.4	.0	9.9
	DVAR4	88.1	7.9	11.2	.5	.0	12.7
	DVAR5	89.5	8.4	10.7	.5	.0	10.9
Croatia	(CONSTANT)	401.6	14.7	27.2	.	.	.
	DVAR2	64.2	17.9	3.6	.2	.0	3.6
	DVAR3	88.4	14.9	5.9	.4	.1	6.1
	DVAR4	115.6	15.0	7.7	.7	.1	7.9
	DVAR5	126.0	14.5	8.7	.8	.1	9.0
. . .							
Int. Avg.	(CONSTANT)	418.5	3.7	112.3	.	.	.
	DVAR2	51.9	4.1	12.6	.2	.0	13.1
	DVAR3	80.0	3.8	21.1	.4	.0	21.1
	DVAR4	97.9	3.8	26.1	.6	.0	25.6
	DVAR5	100.5	3.8	26.6	.6	.0	26.2

one for each type of output (.XLS and .SAV). Here, we focus only on the last section of the SPSS output (i.e., showing the regression coefficients) represented in Figure 4.15.

In this example, each country's results are presented in blocks of five rows because the categorical independent variable IS1G15 has five distinct categories, estimates for four of which are included in the output, as is an estimate for the constant of the model. The first row for each country displays the constant of the model, which equals the average CIL score for the first category of the independent variable (1 = "less than one year"). The second through to the fifth rows represent the regression coefficients for the second through the fifth categories of the independent variable. These coefficients represent the differences in CIL scores between the constant (average for students choosing the first category) and the averages for each of the other categories. The countries are identified in the first column of the output, while the second column shows the independent variable constant and the dummy code for the second category. The third, fourth, and fifth columns report the unstandardized estimates of the regression coefficients, their standard errors, and the *t*-test values. The last three columns show the standardized coefficients.

From the results, we see that in Australia the average CIL score for students who reported using computers for less than a year is 412.6 points. The difference in score points between this result and the average CIL score of students who said they had been using computers between one and three years is 77.4. The difference in average achievement between students who had been using computers for less than a year and the students who had been using them between three and five years is 115.8 points. The difference with those students who had been using computers between five and seven years is 132.9 points, and the difference with students whose use encompassed more than seven years is 140.5 points. The standard errors of these differences for the first category are 12.7, 12.7, 12.7, and 12.5 score points, and the *t*-test values of these differences are 6.1, 9.1, 10.4, and 11.3. Given the large samples in ICILS 2013, these results are statistically significant ($p < 0.05$). The positive differences with the constant of the model mean that the longer a student had been using computers, the higher his or her CIL score was likely to be.

4.3.1.4 Calculating the percentages of students reaching proficiency levels

This section highlights the IEA IDB Analyzer's ability to perform benchmark analyses. These analyses compute the percentages of students reaching specified proficiency levels on an achievement scale and within specified subgroups, along with appropriate standard errors. As an example, assume that you want to compute, again using the merged BSGALLI1.SAV data file that featured in the previous examples, the percentages of students reaching each of the four ICILS 2013 international proficiency levels of CIL achievement as well as the proportion of students not reaching Level 1.[16] The results of this analysis as actually conducted for ICILS 2013 can be found in Table 3.6 of the ICILS 2013 international report. That table is reproduced here as Figure 4.16. Figure 4.17 shows the settings for the analysis.

The steps needed to complete the analysis are as follows.

1. Open the analysis module of the IEA IDB Analyzer.
2. Specify the data file BSGALLI1.SAV as the **Analysis File**.

16 The levels boundaries are as follows: Below Level 1, up to 407 scale score points; Level 1, 407 to below 492 points; Level 2, 492 to below 576 points; Level 3, 576 to below 661 points; and Level 4, 661 points or above.

Figure 4.16: Example of proficiency levels analysis results taken from the ICILS 2013 international report (Fraillon et al., 2014, p. 98)

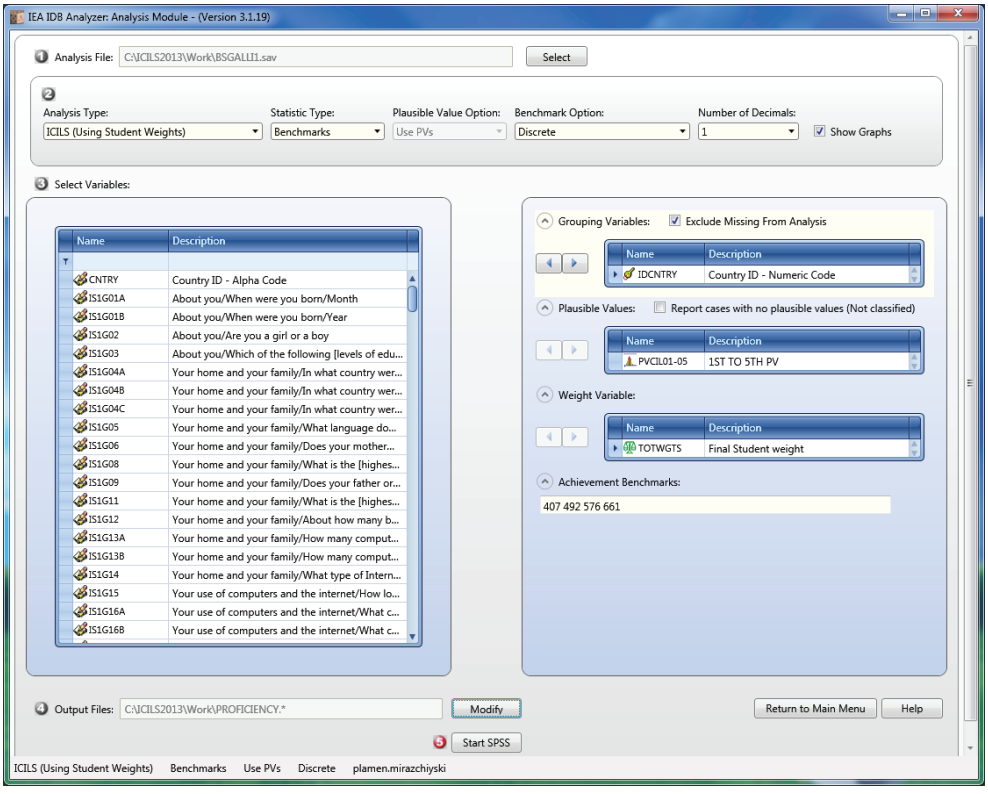
Table 3.6: Percent of students at each proficiency level across countries

Country	Below Level 1 (fewer than 407 score points)	Level 1 (from 407 to 492 score points)	Level 2 (from 492 to 576 score points)	Level 3 (from 576 to 661 score points)	Level 4 (661 score points and more)	Distribution of Students across Levels
Korea, Republic of	9 (0.7)	19 (1.1)	36 (1.6)	30 (1.3)	5 (0.5)	
Australia	5 (0.6)	18 (1.0)	42 (1.1)	30 (1.2)	4 (0.5)	
Poland	6 (0.7)	20 (1.1)	42 (1.3)	29 (1.6)	4 (0.5)	
Czech Republic	2 (0.4)	13 (0.9)	48 (1.2)	34 (1.3)	3 (0.4)	
Norway (Grade 9)[1]	5 (0.7)	19 (1.3)	46 (1.2)	27 (1.3)	3 (0.5)	
Slovak Republic	12 (1.6)	21 (1.0)	40 (1.4)	25 (1.3)	2 (0.4)	
Russian Federation[2]	9 (1.1)	27 (1.6)	41 (1.4)	21 (1.2)	2 (0.3)	
Croatia	11 (1.2)	25 (1.2)	42 (1.5)	21 (1.3)	1 (0.3)	
Germany[†]	7 (0.8)	22 (1.4)	45 (1.5)	24 (1.2)	1 (0.3)	
Lithuania	15 (1.3)	30 (1.5)	39 (1.4)	15 (1.0)	1 (0.3)	
Chile	18 (1.4)	30 (1.7)	40 (1.5)	13 (1.1)	0 (0.2)	
Slovenia	8 (0.7)	28 (1.4)	47 (1.3)	16 (1.1)	0 (0.3)	
Thailand[2]	64 (2.1)	23 (1.4)	11 (1.2)	2 (0.4)	0 (0.1)	
Turkey	67 (1.8)	24 (1.2)	8 (0.9)	1 (0.3)	0 (0.1)	
ICILS 2013 average	17 (0.3)	23 (0.3)	38 (0.4)	21 (0.3)	2 (0.1)	
Countries not meeting sample requirements						
Denmark	4 (0.8)	17 (1.4)	46 (1.7)	30 (1.6)	2 (0.6)	
Hong Kong SAR	15 (2.5)	23 (1.5)	37 (2.0)	23 (1.9)	3 (0.6)	
Netherlands	8 (1.2)	19 (1.6)	41 (2.0)	29 (2.0)	4 (0.7)	
Switzerland	6 (1.4)	24 (1.6)	45 (2.0)	23 (2.0)	2 (0.5)	
Benchmarking participants						
Newfoundland and Labrador, Canada	7 (1.1)	24 (2.1)	40 (2.7)	25 (2.7)	4 (1.3)	
Ontario, Canada	4 (0.7)	18 (1.1)	42 (1.3)	32 (1.4)	5 (0.8)	
Benchmarking participant not meeting sample requirements						
City of Buenos Aires, Argentina	31 (3.6)	34 (2.5)	27 (2.5)	7 (1.6)	0 (0.3)	

Notes:
() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.
† Met guidelines for sampling participation rates only after replacement schools were included.
[1] National Desired Population does not correspond to International Desired Population.
[2] Country surveyed the same cohort of students but at the beginning of the next school year.

Below Level 1 Level 1 Level 2 Level 3 Level 4

Figure 4.17: IEA IDB Analyzer setup for example benchmark analysis



3. Select **ICILS** (**Using Student Weights**) as the **Analysis Type**.
4. Select **Benchmarks** as the **Statistic Type**. Leave the **Benchmark Option** as **Discrete** (default) and change the **Number of Decimals** to 1.
5. Note that the software automatically adds the variable IDCNTRY to the **Grouping Variables** field. Note also that no additional grouping variables are needed for this analysis.
6. Click somewhere in the **Plausible Values** field to activate it. Select the variable PVCIL01-05 from the list on the left and move it to the **Plausible Values** field by clicking the right arrow button ▶.

   NOTE: Although the plausible values are represented as just one line (PVCIL01–05), the IEA IDB Analyzer will select all five and include them in the analysis.
7. Click in the **Achievement Benchmarks** text box and specify the ICILS 2013 international proficiency levels, which are 407, 492, 576, and 661. Enter these four values in the input field. Make sure you separate each with a blank space, that is, "407 492 576 661" (commas or other symbols will not be accepted). These four thresholds create the five groups (i.e., Below Level 1 and Levels 1 to 4) described above.
8. Note that the software automatically defines the **Weight Variable**. Because this example analysis uses student data, TOTWGTS is selected by default. Although the 75 replicate weights are also needed in the analysis so that the correct estimates of the standard errors can be computed, the IEA IDB Analyzer interface does not indicate them.
9. Specify the name and folder for the output files in the **Output Files** field.
10. Click the **Start SPSS** button to create the SPSS syntax file. The file will open in an SPSS **Syntax Editor** window, and the syntax file will be executed when you open the **Run** menu of SPSS and select the **All** menu option. If necessary, the IEA IDB Analyzer will prompt you to confirm overwriting existing files.

The full SPSS output of this analysis, which is opened during the execution of the syntax, actually contains weighted and unweighted descriptive statistics for all variables included in the analysis as well as graphs and the final report which contains the statistics of interest as displayed on Figure 4.18. The MS Excel and SPSS data files are stored automatically in the working directory containing only the final report.

Figure 4.18 presents partial results from this analysis as reported in the ICILS 2013 international report. It shows that, in Australia, 5.3 percent of the target-grade students were performing below Level 1 on the CIL achievement scale (i.e., below 407 score points and with a standard error of 0.6%). Just under 18 percent (17.9%) of the Australian students had reached Level 1 (407 to below 492 score points, with a standard error of 1.0%); 42.3 percent had reached Level 2 (492 to below 576 score points and a standard error of 1.1%); 30.4 percent had achieved Level 3 (576 to below 661 score points, with a standard error of 1.2%); and 4.1 percent of the students showed Level 4 proficiency (at or above 661 score points, with a standard error of 0.5%).

Figure 4.18: Partial SPSS output for example benchmark analysis

Percent within benchmarks (407 492 576 661) of PVCIL PAGE 1

Country ID - Numeric Code	Performance Group	N of Cases	Sum of TOTWGTS	Sum of TOTWGTS (s.e.)	Percent	Percent (s.e.)
Australia	1.Below 407	311	14049	1378.1	5.3	.6
	2.From 407 to Below 492	954	47465	2422.2	17.9	1.0
	3.From 492 to Below 576	2260	112009	3089.0	42.3	1.1
	4.From 576 to Below 661	1599	80562	3015.5	30.4	1.2
	5.At or Above 661	202	10862	1150.1	4.1	.5
Chile	1.Below 407	517	39033	2944.3	17.5	1.4
	2.From 407 to Below 492	847	65685	2844.3	29.5	1.7
	3.From 492 to Below 576	1264	88266	3210.9	39.6	1.5
	4.From 576 to Below 661	526	28664	2382.5	12.9	1.1
	5.At or Above 661	26	1072	311.4	.5	.2
Croatia	1.Below 407	294	4987	415.7	11.3	1.2
	2.From 407 to Below 492	678	10877	494.3	24.6	1.2
	3.From 492 to Below 576	1211	18484	623.2	41.8	1.5
	4.From 576 to Below 661	622	9193	471.2	20.8	1.3
	5.At or Above 661	46	653	110.7	1.5	.3
Czech Republic	1.Below 407	47	1534	327.2	1.8	.4
	2.From 407 to Below 492	360	10991	820.7	13.2	.9
	3.From 492 to Below 576	1363	39575	1243.1	47.6	1.2
	4.From 576 to Below 661	1178	28684	1151.9	34.5	1.3
	5.At or Above 661	119	2409	249.0	2.9	.4
. .						
x.International Average	1.Below 407	.	.	.	15.3	.3
	2.From 407 to Below 492	.	.	.	22.6	.3
	3.From 492 to Below 576	.	.	.	38.2	.3
	4.From 576 to Below 661	.	.	.	21.7	.3
	5.At or Above 661	.	.	.	2.2	.1

4.3.1.5 Computing correlations with background variables and achievement scores

The IEA IDB Analyzer is also able to compute correlations between background variables, between background variables and achievement scores, and between two sets of achievement scores. The latter, however, is not possible with ICILS 2013 data because they contain just one set of PVs, that is, one construct or domain. The example we provide below shows computation of a correlation analysis with achievement scores and background data. Correlation analysis between two background variables follows the same steps. The only difference is that this latter correlation requires the **Plausible Value Option** to be set to **None Used** and the addition of two variables instead of one to the **Analysis Variables** field.

The example replicates the correlation between CIL achievement scores and "advanced ICT self-efficacy" (variable name S_ADVEF, third column), and its results appear in part of Table 5.20 in the ICILS 2013 international report. Figure 4.19 below reproduces that part of the table. The steps involved in conducting correlation analysis with the IEA IDB Analyzer also appear below, while Figure 4.20 shows how the window of the application should look once all settings are completed.

1. Open the analysis module of the IEA IDB Analyzer.
2. Specify the data file BSGALLI1.SAV as the **Analysis File**.
3. Select **ICILS** (**Using Student Weights**) as the **Analysis Type**.
4. Select **Correlations** as the **Statistic Type**.
5. Note that the software selects IDCNTRY (country ID) by default. No other variable needs to be selected for this analysis.

Figure 4.19: Example of correlations analysis results taken from the ICILS 2013 international report (Fraillon et al., 2014, p. 165)

Table 5.20: National values of correlation coefficients for CIL with basic ICT self-efficacy, advanced ICT self-efficacy, and interest/enjoyment in computing

Country	Basic ICT Self-Efficacy*		Advanced ICT Self-Efficacy*		Interest - Enjoyment in ICT*	
Australia	**0.36**	(0.02)	0.04	(0.02)	**0.11**	(0.02)
Chile	**0.36**	(0.02)	0.00	(0.02)	**0.06**	(0.03)
Croatia	**0.34**	(0.02)	**0.12**	(0.02)	**0.05**	(0.02)
Czech Republic	**0.22**	(0.02)	0.01	(0.02)	-0.02	(0.03)
Germany†	**0.20**	(0.02)	-0.03	(0.02)	0.00	(0.03)
Korea, Republic of	**0.42**	(0.02)	**0.13**	(0.02)	**0.11**	(0.02)
Lithuania	**0.38**	(0.02)	**0.07**	(0.02)	**0.08**	(0.03)
Norway (Grade 9)[1]	**0.24**	(0.02)	**-0.07**	(0.03)	**0.06**	(0.03)
Poland	**0.33**	(0.02)	**0.05**	(0.02)	**0.05**	(0.02)
Russian Federation[2]	**0.28**	(0.02)	0.01	(0.02)	**-0.07**	(0.02)
Slovak Republic	**0.37**	(0.02)	**0.06**	(0.03)	**0.11**	(0.03)
Slovenia	**0.28**	(0.02)	-0.03	(0.03)	0.05	(0.03)
Thailand[2]	**0.29**	(0.02)	0.00	(0.03)	**0.23**	(0.03)
Turkey	**0.37**	(0.03)	**0.21**	(0.03)	**0.25**	(0.03)
ICILS 2013 average	**0.32**	(0.01)	**0.04**	(0.01)	**0.08**	(0.01)
Countries not meeting sample requirements						
Denmark	**0.20**	(0.03)	**-0.12**	(0.02)	-0.01	(0.03)
Hong Kong SAR	**0.40**	(0.03)	**0.09**	(0.03)	**0.12**	(0.05)
Netherlands	**0.28**	(0.03)	**-0.08**	(0.03)	0.01	(0.03)
Switzerland	**0.20**	(0.03)	-0.02	(0.04)	0.05	(0.04)
Benchmarking participants						
Newfoundland and Labrador, Canada	**0.25**	(0.04)	-0.08	(0.04)	**0.07**	(0.02)
Ontario, Canada	**0.31**	(0.03)	**-0.10**	(0.03)	0.09	(0.06)
Benchmarking participant not meeting sample requirements						
City of Buenos Aires, Argentina	**0.26**	(0.04)	0.07	(0.04)	-0.03	(0.04)

Notes:
* Statistically significant ($p < 0.05$) coefficients in **bold**.
() Standard errors appear in parentheses. Because some results are rounded to the nearest whole number, some totals may appear inconsistent.
† Met guidelines for sampling participation rates only after replacement schools were included.
[1] National Desired Population does not correspond to International Desired Population.
[2] Country surveyed the same cohort of students but at the beginning of the next school year.

6. Change the P**lausible Values Option** to **Use PVs.** Leave the **Missing Data Option** to **Listwise**. Set the **Number of Decimals** to 2.

   NOTE: The IEA IDB Analyzer can use either listwise or pairwise deletion of records with missing data in multivariate analyses. When **Listwise** deletion is used, the entire record of any respondent who has a missing value for any of the variables in the model will be removed from the analysis and only complete cases will be used. If **Pairwise** deletion is used, the cases with incomplete data will be removed only for those pairs formed by the dependent and each independent variable in which a case has missing values.

7. Click somewhere within the **Analysis Variables** field to activate it and then locate and move the variable S_ADVEF into the field using the right arrow button ▶.

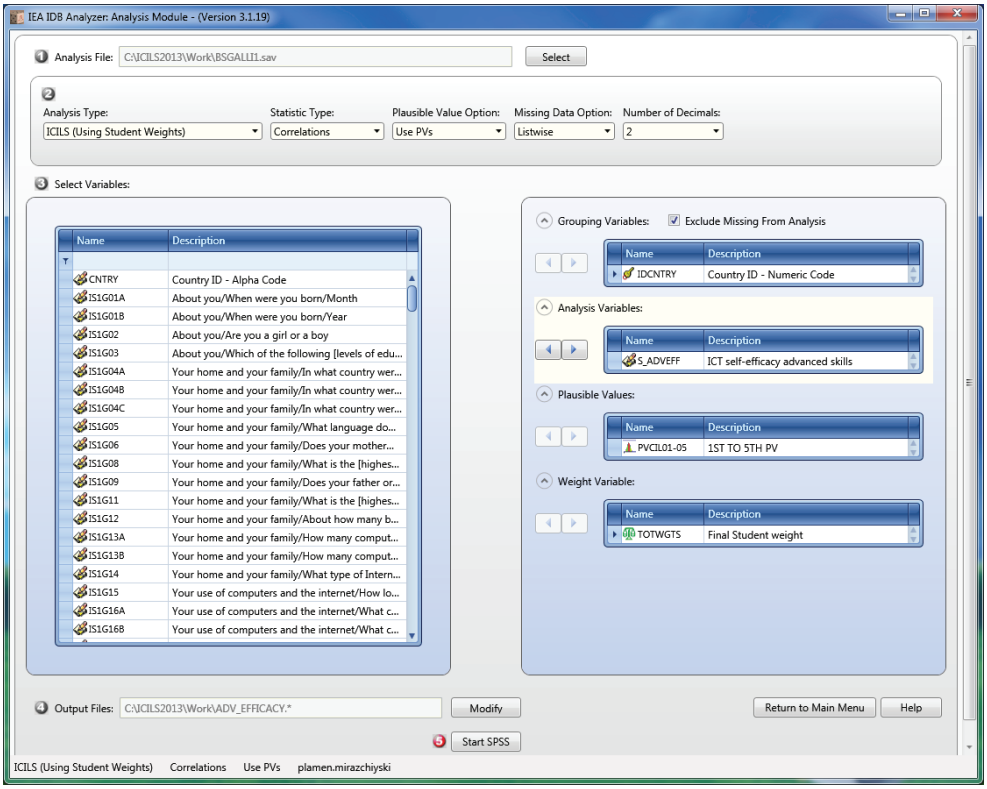
8. Click on the **Plausible Values** field to activate it. Select PVCIL01–05 from the list of variables and use the right arrow button ▶ to move it to the corresponding field.

NOTE: Although the plausible values are represented as just one line (PVCIL01–05), the IEA IDB Analyzer will select all five and include them in the analysis.

9. Remember that the software automatically selects the **Weight Variable**. Because this example analysis uses student data, the software selects TOTWGTS by default. The 75 replicate weights are also needed in the analysis so that the correct estimates of the standard errors can be computed. The IEA IDB Analyzer interface does not, however, indicate them.
10. Specify the name and folder of the output files in the **Output Files** field.
11. Click the **Start SPSS** button to create the SPSS syntax file. The file will open in an SPSS **Syntax Editor** window. Execute the syntax file by opening the **Run** menu of SPSS and selecting the **All** option. If necessary, the IEA IDB Analyzer will prompt you to confirm overwriting existing files.

After you have executed the syntax file, the SPSS output will appear on the screen and an SPSS data file and an MS Excel file will be automatically created and stored in the working directory. Should you conduct a correlation analysis, two files will be generated for each file type: one for the descriptive statistics of each variable included in the analysis and one for the correlations. The SPSS output on the screen will contain weighted and unweighted descriptive statistics for each variable included in the analysis for each education system, and the final report will be evident at the end of the output window.

Figure 4.20: IEA IDB Analyzer setup for example correlation analysis



The SPSS output in Figure 4.21 shows part of the final report from the correlation analysis conducted with the IEA IDB Analyzer. Here we can see two rows (one for each variable) for each country. The first column contains the names of the education systems; the second shows the variables included in the analysis. The third and fourth columns show the correlation coefficients for each variable with itself and with the other variable in the analysis. The SPSS output also shows us that the correlation between students' advanced ICT self-efficacy and CIL scores in Australia is fairly weak, that is, close to zero: 0.04 with a standard error of 0.02.

Figure 4.21: Partial SPSS output for example correlation analysis

Correlation Coefficients PAGE 1

IDCNTRY	variable	Correlation with S_ADVEFF	Correlation with S_ADVEFF (s.e.)	Correlation with PV_CIL	Correlation with PV_CIL (s.e.)
Argentina, Buenos Aires	S_ADVEFF	1.00	.00	-.08	.04
	PV_CIL	-.08	.04	1.00	.00
Australia	S_ADVEFF	1.00	.00	.04	.02
	PV_CIL	.04	.02	1.00	.00
Canada (Ontario)	S_ADVEFF	1.00	.00	.07	.03
	PV_CIL	.07	.03	1.00	.00
Chile	S_ADVEFF	1.00	.00	.00	.02
	PV_CIL	.00	.02	1.00	.00
Croatia	S_ADVEFF	1.00	.00	.12	.02
	PV_CIL	.12	.02	1.00	.00
Czech Republic	S_ADVEFF	1.00	.00	.01	.02
	PV_CIL	.01	.02	1.00	.00
Denmark	S_ADVEFF	1.00	.00	-.12	.02
	PV_CIL	-.12	.02	1.00	.00
Germany	S_ADVEFF	1.00	.00	-.03	.02
	PV_CIL	-.03	.02	1.00	.00
Hong Kong, SAR	S_ADVEFF	1.00	.00	.09	.03
	PV_CIL	.09	.03	1.00	.00
. . .					
Int. Avg.	S_ADVEFF	1.00	.00	.02	.01
	PV_CIL	.02	.01	1.00	.00

4.3.1.6 Calculating percentiles of student achievement

This type of analysis computes the percentiles within the distribution of student achievement scores within specified subgroups of students. It also computes the appropriate standard errors for those percentiles. To calculate percentiles of achievement scores, we need to select **Percentiles** as the **Statistic Type**.

As an example, assume we want to compute the percentiles of students' CIL achievement scores and their standard errors within each country, using the weighting variable TOTWGTS, as in Table C.1 of Appendix C of the ICILS 2013 international report and reproduced in this user guide as Figure 4.22. The data will be read from the data file BSGALLI1.SAV, and the standard errors will be computed based on replicate weights.

This kind of analysis can also be performed without CIL achievement scores, by using a background **Analysis Variable**.

Figure 4.22: Example of percentiles analysis results taken from the ICILS 2013 international report (Fraillon et al., 2014, p. 273)

Table C.1: Percentiles of computer and information literacy

Country	5th Percentile	25th Percentile	75th Percentile	95th Percentile
Australia	404 (6.0)	497 (2.9)	595 (2.7)	656 (3.2)
Chile	330 (7.9)	435 (5.5)	548 (2.7)	608 (5.1)
Croatia	364 (7.6)	463 (4.6)	570 (2.8)	631 (2.6)
Czech Republic	445 (6.8)	516 (2.6)	595 (1.5)	648 (2.3)
Germany†	380 (10.6)	481 (4.6)	577 (2.2)	631 (3.9)
Korea, Republic of	375 (5.8)	481 (5.0)	600 (4.0)	664 (3.2)
Lithuania	346 (11.5)	442 (4.8)	553 (3.5)	619 (3.9)
Norway (Grade 9)[1]	409 (8.3)	494 (3.7)	585 (2.5)	645 (5.3)
Poland	399 (7.2)	491 (3.3)	591 (3.2)	651 (4.7)
Russian Federation[2]	381 (6.5)	465 (4.0)	572 (3.7)	635 (3.4)
Slovak Republic	343 (11.7)	468 (7.6)	580 (3.2)	640 (4.6)
Slovenia	385 (6.0)	470 (3.2)	559 (2.2)	612 (3.6)
Thailand[2]	219 (9.6)	307 (5.4)	439 (6.1)	535 (7.6)
Turkey	191 (10.0)	296 (6.4)	430 (5.7)	519 (7.3)
Countries not meeting sample requirements				
Denmark	418 (14.4)	501 (4.6)	590 (3.4)	643 (6.5)
Hong Kong SAR	334 (13.9)	451 (12.1)	578 (5.2)	644 (5.6)
Netherlands	381 (11.1)	488 (7.3)	592 (5.3)	653 (5.1)
Switzerland	399 (12.3)	481 (7.1)	576 (6.2)	636 (7.6)
Benchmarking participants				
Newfoundland and Labrador, Canada	390 (7.8)	477 (5.6)	584 (4.9)	652 (7.4)
Ontario, Canada	421 (6.9)	501 (4.6)	598 (3.3)	659 (5.8)
Benchmarking participant not meeting sample requirements				
City of Buenos Aires, Argentina	282 (17.0)	390 (11.4)	518 (8.9)	594 (8.1)

Notes:
() Standard errors appear in parentheses. Because some results are rounded to the nearest whole number, some totals may appear inconsistent.
† Met guidelines for sampling participation rates only after replacement schools were included.
[1] National Desired Population does not correspond to International Desired Population.
[2] Country surveyed the same cohort of students but at the beginning of the next school year.

The steps that need to be taken when using the IEA IDB Analyzer to conduct the analysis are as follows.

1. Open the analysis module of the IEA IDB Analyzer.
2. Specify the data file BSGALLI1.SAV as the **Analysis File**.
3. Select **Percentiles** as the **Statistic Type**. IDCNTRY (country ID) will be selected by default. No other **Grouping Variables** need to be selected for this analysis.
4. Select **Use PVs** from the **Plausible Values Option**. Set the **Number of Decimals** to 1.
5. Click somewhere in the **Plausible Values** field to activate it. Select the five plausible values of CIL PVCIL01–05 as achievement scores from the variable on the left (the only one available in ICILS 2013). Use the right arrow button ▶ to move the variable to the corresponding field.

   NOTE: Although the plausible values are represented as just one line (PVCIL01–05), the IEA IDB Analyzer will select all five and include them in the analysis.
6. Remember that the software automatically selects the **Weight Variable**. Because this example analysis uses student data, the software selects TOTWGTS by default. The

75 replicate weights are also needed in the analysis so that the correct estimates of the standard errors can be computed. The IEA IDB Analyzer interface does not, however, indicate them.

7. Click in the **Percentiles** text box and specify the percentile points in the distribution. For this example, you will need to use the 5th, 25th, 75th, and 95th percentiles. Type these in in increasing order separated by spaces, that is, as "5 25 75 95". No other type of separator, such as a comma, will be accepted.
8. Click on the **Define** button and specify the name and folder where the **Output Files** should be saved.
9. Click the **Start SPSS** button to create the SPSS syntax file. The file will open in an SPSS **Syntax Editor** window. The syntax file will be executed when you open the **Run** menu of SPSS and select the **All** menu option. If necessary, the IEA IDB Analyzer will prompt you to confirm overwriting existing files.

Figure 4.23 shows the IDB Analyzer setup screen for this analysis. Figure 4.24 shows the SPSS output after running the analysis syntax. The first few lines of the results in Figure 4.24 show us that in Australia the score for the 5th percentile of the score distribution is 403.7 points, for the 25th it is 496.5, for the 75th it is 594.7, and for the 95th it is 655.6. The corresponding standard errors of these percentiles are 6.0, 2.9, 2.7, and 3.2, respectively.

Figure 4.23: IEA IDB Analyzer analysis-module screen setup for computing percentiles with plausible values

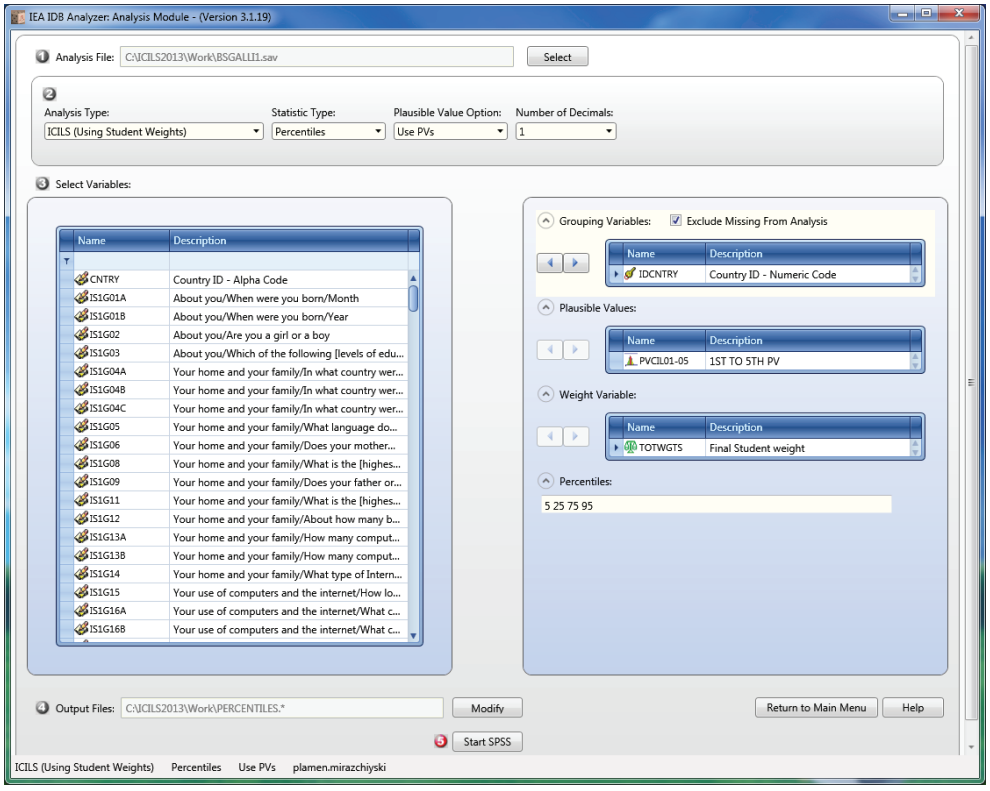


Figure 4.24: Partial SPSS output for example percentiles with plausible values

Percentiles for PVCIL by IDCNTRY PAGE 1

Country ID - Numeric Code	N of Cases	Sum of TOTWGTS	p5	p5_se	p25	p25_se	p75	p75_se	p95	p95_se
Australia	5326	264948	403.7	6.0	496.5	2.9	594.7	2.7	655.6	3.2
Chile	3180	222720	330.2	7.9	435.5	5.5	547.9	2.7	607.8	5.1
Croatia	2850	44193	364.3	7.5	462.7	4.6	570.3	2.8	631.1	2.7
Czech Republic	3066	83193	444.8	6.8	516.3	2.6	595.3	1.5	647.8	2.3
Denmark	1767	58249	418.4	14.4	501.1	4.6	589.7	3.4	643.2	6.6
Germany	2225	841762	379.6	10.6	480.6	4.6	576.9	2.2	631.5	3.9
Hong Kong, SAR	2089	59611	334.0	13.8	450.7	12.1	577.5	5.2	644.4	5.6
Korea, Republic of	2888	562234	374.7	5.8	480.9	5.0	599.6	4.0	663.7	3.2
Lithuania	2756	30842	346.3	11.4	441.9	4.8	553.1	3.5	619.2	3.9
Netherlands	2197	183212	381.4	11.1	487.8	7.3	592.0	5.3	653.0	5.1
Norway	2436	56894	409.3	8.3	494.5	3.7	584.9	2.5	644.8	5.3
Poland	2870	365863	398.9	7.2	491.2	3.3	591.0	3.2	651.2	4.7
Russian Federation	3626	1124977	381.5	6.5	465.2	4.0	571.6	3.7	634.9	3.4
Slovak Republic	2994	49186	343.3	11.8	467.5	7.6	580.5	3.2	640.3	4.6
Slovenia	3740	16870	385.4	5.9	469.7	3.2	559.0	2.3	612.4	3.5
Switzerland	3225	85888	399.4	12.3	480.7	7.1	576.0	6.2	636.4	7.6
Thailand	3646	694162	218.9	9.6	306.9	5.4	439.2	6.1	535.2	7.6
Turkey	2540	1196184	191.4	10.0	296.3	6.4	430.3	5.7	518.7	7.3
Canada (Ontario)	3377	139615	421.3	7.0	500.8	4.6	597.9	3.3	658.6	5.8
Argentina, Buenos Aires	1076	41200	281.9	17.1	390.1	11.4	517.8	8.9	593.6	8.2
x.International Average	.	.	360.4	2.2	455.8	1.4	562.3	1.0	626.2	1.2

4.3.2 Performing analyses with teacher-level (only) data

As noted several times throughout this guide, student and teacher data cannot be linked at the level of individuals (teacher x of student y) because of the intentional sampling design of ICILS 2013. The analysis example that we provide in this section draws on teacher background data and its aim is to determine the extent to which, on average, teachers under 40 years of age collaborate with one another with respect to ICT use and the extent to which, on average, teachers over 40 years of age engage in this form of collaboration. The analysis can, of course, be conducted only at the level of teachers.

The results of such an analysis appear in Table 6.9 (third and fourth columns) from the ICILS 2013 international report and are reproduced here in Figure 4.25. Note that this example simply computes the means of teachers under 40 and teachers over 40 years of age. It does not test the significance in the mean differences (fifth column). Dummy-coded regression is needed to conduct the analysis (see Section 4.3.1.3), but the data first have to be recoded.

As with the previous examples, the analysis requires us to identify within the appropriate files the variables relevant to the analysis. We then need to review the documentation for any specific national adaptations to the questions of interest (see Appendix 2 of this guide). Given that we are interested in teacher-level data, we need to look in the teacher data files for the variable that contains the information on teacher age. Variable IT1G02 contains the age ranges for teachers: under 25 years of age; 25 to 29 years; 30 to 39 years; 40 to 49 years; 50 to 59 years; and 60 years of age and over. Because these age-range categories are more detailed than required in this example, we need to collapse them into two (i.e., under 40 and 40 or over). The SPSS syntax (see Figure 4.26) then loads the data file BTGALLI1.SAV into SPSS (see Section 4.2.4 for details) and completes all necessary recoding, thus creating a new variable. It then assigns labels to the new categories and saves the file.

Figure 4.25: Teacher-level example analysis results taken from the ICILS 2013 international report (Fraillon et al., 2014, p. 182)

Table 6.9: National averages for teachers collaborating when using ICT overall and by age group

Country	Collaboration Among Teachers When Using ICT by Age Group				Score Distribution by Age Group
	All teachers	Under 40	40 and over	Differences (40 and over – under 40)*	30 40 50 60 70
Australia	49 (0.5) ▽	50 (0.3)	49 (0.7)	-1 (0.7)	
Chile	47 (0.5) ▼	46 (0.6)	48 (0.6)	**2** (0.7)	
Croatia	45 (0.2) ▼	43 (0.4)	46 (0.3)	**2** (0.6)	
Czech Republic	49 (0.4)	47 (0.5)	51 (0.5)	**3** (0.5)	
Korea, Republic of	47 (0.3) ▽	47 (0.4)	48 (0.3)	1 (0.4)	
Lithuania	51 (0.3) △	50 (0.5)	52 (0.3)	**2** (0.5)	
Poland	48 (0.3) ▽	47 (0.5)	49 (0.4)	**2** (0.7)	
Russian Federation[1]	55 (0.3) ▲	54 (0.4)	55 (0.4)	**1** (0.5)	
Slovak Republic	52 (0.3) △	52 (0.4)	53 (0.3)	**1** (0.4)	
Slovenia	46 (0.3) ▼	45 (0.5)	46 (0.3)	**2** (0.4)	
Thailand	58 (0.9) ▲	59 (1.2)	57 (0.8)	-2 (1.1)	
Turkey	53 (0.6) ▲	53 (0.7)	55 (0.9)	**2** (1.0)	
ICILS 2013 average	50 (0.1)	49 (0.2)	51 (0.1)	**1** (0.2)	
Countries not meeting sample requirements					
Denmark	45 (0.4)	45 (0.7)	46 (0.4)	1 (0.6)	
Germany	41 (0.5)	40 (0.5)	41 (0.6)	1 (0.7)	
Hong Kong SAR	47 (0.3)	47 (0.4)	47 (0.4)	-1 (0.6)	
Netherlands	44 (0.4)	44 (0.4)	44 (0.5)	-1 (0.6)	
Norway (Grade 9)	45 (0.3)	44 (0.5)	45 (0.4)	**1** (0.5)	
Benchmarking participant					
Newfoundland and Labrador, Canada	47 (0.4)	47 (0.7)	47 (0.5)	0 (0.9)	
Benchmarking participant not meeting sample requirements					
Ontario, Canada	49 (0.8)	49 (1.0)	48 (1.5)	-1 (1.9)	

Notes:
* Statistically significant (p <0.05) coefficients in **bold.**
() Standard errors appear in parentheses. Because some results are rounded to the nearest whole number, some totals may appear inconsistent.
[1] Country surveyed teachers retrospectively to the previous school year when they were teaching the target grade.

▲ More than three score points above ICILS 2013 average
△ Significantly above ICILS 2013 average
▽ Significantly below ICILS 2013 average
▼ More than three score points below ICILS 2013 average

Under 40 average score +/– confidence interval
Over 40 average score +/– confidence interval

On average, teachers with a score in the range indicated by this color have more than a 50% probability of responding to the statements about collaboration between teachers in using ICT with:

Disagreement to positive, agreement to negative items
Agreement to positive, disagreement to negative items

Figure 4.26: Example SPSS program to recode variable IT1G02 for teacher-level analysis

```
GET FILE = "C:\ICILS2013\Work\BTGALLI1.sav".

RECODE IT1G02 (LOWEST THRU 3 = 0) (4 THRU 6 = 1)
(ELSE = COPY) INTO IT1GO2col.

VARIABLE LABELS IT1GO2col "Collapsed ITGO2: About You/How old are you".

VALUE LABELS IT1GO2col
"0" "Under 40"
"1" "40 and over"
"8" "Not administered/missing by design"
"9" "Presented but not answered/invalid".

MISSING VALUES IT1GO2col (8, 9).
FORMATS IT1GO2col (F1.0).

EXECUTE.

SAVE OUTFILE = "C:\ICILS2013\Work\BTGALLI1.sav".
```

Our next task, once these operations have been completed, is to reload the file into the IEA IDB Analyzer in order for the software to recognize the newly created variables. The file can now be used in the analysis. The Analyzer analysis module will automatically select the variable that identifies the country (IDCNTRY) as well as the variables containing the sampling information that will be used to compute the error estimates.

From here, we can use the IDB Analyzer's analysis module to perform our teacher-level analysis. This process requires us to work through these steps. (Figure 4.27 shows the completed analysis window.)

1. Open the analysis module of the IEA IDB Analyzer.
2. Specify the data file BTGALLI1.SAV as the **Analysis File**.
3. Select **Percentages and Means** as the **Analysis Type**.
4. Leave the **Plausible Values Option** as **None Used** because the analysis does not employ CIL achievement scores.
5. Set the **Number of Decimals** to 1.
6. Add the variable IT1G02col (collapsed teacher age ranges) as a second **Grouping Variable**.
7. Locate and add the variable for the scale T_COLICT ("collaboration between teachers in using ICT") as an **Analysis Variable**. (The ICILS 2013 technical report and Appendix 3 of this user guide provide more details on the scales and their construction.)
8. Remain mindful that the software automatically selects the **Weight Variable** and that because this example analysis uses only teacher data, the software also selects TOTWGTT by default. Although the 75 replicate weights are also needed in the analysis so that the correct estimates of the standard errors can be computed, the IEA IDB Analyzer interface does not indicate them.
9. Specify the name and folder of the output files in the **Output Files** field.
10. Click the **Start SPSS** button to create the SPSS syntax file. The file will open in an SPSS **Syntax Editor** window, and the syntax file will be executed once we open the **Run** menu of SPSS and select the **All** menu option. If necessary, the IEA IDB Analyzer will prompt us to confirm overwriting existing files.

Figure 4.28 sets out the results of this analysis. Each country's results are presented in two rows, one for each value of the variable IT1G02col (under 40; 40 and over). The remainder of the presentation is the same as in the previous examples. Figure 4.28 shows that, for Australia, the average of the scale "collaboration between teachers in using ICT" (T_COLICT) is 49.5 for teachers under 40 years of age and 48.6 for teachers 40 years of age or older. The standard errors are 0.3 and 0.7, respectively.

4.3.3 Performing analyses with student-level data augmented with school-level data

When analyses are performed with merged student- and school-level data, the statements we make about these analyses must be in terms of the students in schools that have a certain characteristic. For example, the statement could be about the percentages of students attending schools with a given characteristic rather than about the number or percentages of schools with a given characteristic. In other words, the unit of analysis shifts from "schools in countries" to "students in country."

Figure 4.27: IEA IDB Analyzer setup for example teacher-level analysis

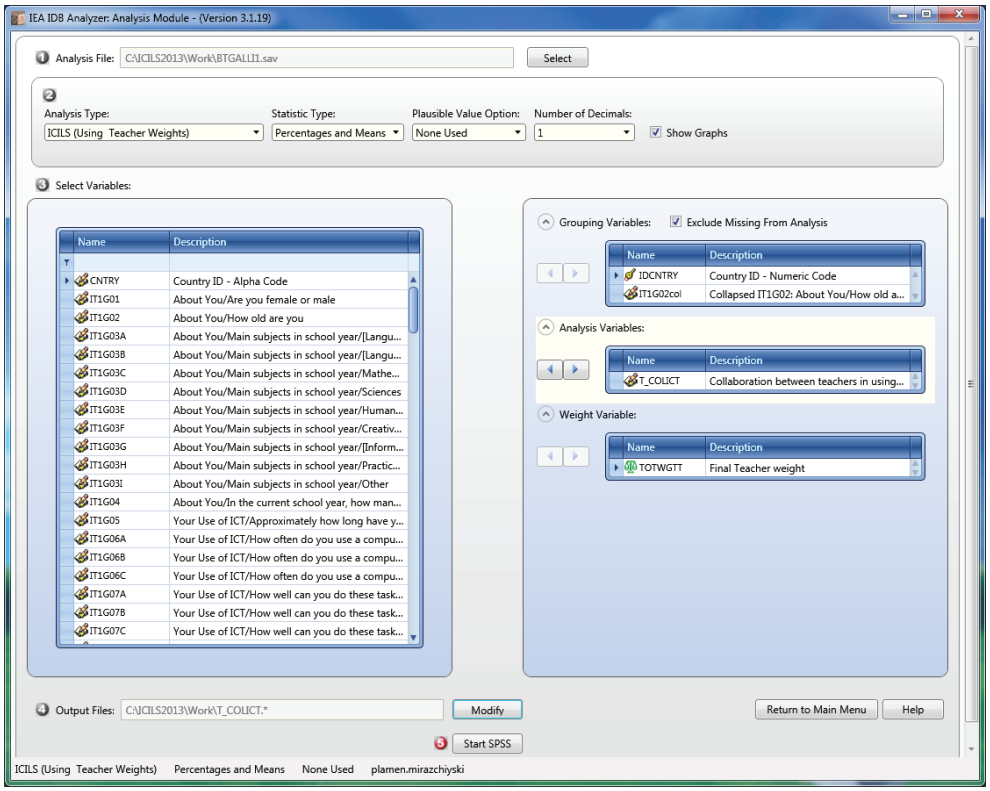


Figure 4.28: Partial SPSS output for example teacher-level analysis

Country ID - Numeric Code	Collapsed IT1G02: About You/How old are you	N of Cases	Sum of TOTWGTT	Sum of TOTWGTT (s.e.)	Percent	Percent (s.e.)	T_COLICT (Mean)	T_COLICT (s.e.)	Std.Dev.	Std.Dev. (s.e.)	Percent Missing
Australia	Under 40	1559	24225	825.87	41.9	1.6	49.5	.3	9.4	.3	.8
	40 and over	1900	33605	1840.33	58.1	1.6	48.6	.7	10.0	.3	1.1
Chile	Under 40	835	20408	1499.40	48.9	2.7	45.9	.6	11.8	.6	1.4
	40 and over	941	21313	1184.59	51.1	2.7	47.9	.6	11.0	.4	1.5
Croatia	Under 40	1142	5325	201.36	45.9	1.5	43.4	.4	8.6	.2	.7
	40 and over	1396	6264	236.96	54.1	1.5	45.6	.3	9.3	.3	2.1
Czech Republic	Under 40	814	11374	487.06	38.5	1.4	47.2	.5	9.9	.3	.2
	40 and over	1301	18146	569.46	61.5	1.4	50.6	.5	10.8	.3	.8
Denmark	Under 40	301	5037	279.56	39.3	2.1	45.1	.7	9.4	.6	1.4
	40 and over	424	7774	541.22	60.7	2.1	45.6	.4	8.7	.3	.0
Germany	Under 40	446	75344	5424.00	31.3	1.6	40.1	.5	10.1	.4	1.0
	40 and over	927	165619	8513.03	68.7	1.6	41.1	.6	10.2	.3	1.0
Hong Kong, SAR	Under 40	744	5938	291.64	54.3	2.6	47.3	.4	8.1	.3	1.0
	40 and over	577	5006	360.18	45.7	2.6	46.7	.4	7.5	.3	.4
Korea, Republic of	Under 40	855	16759	1276.00	39.6	1.2	47.0	.4	7.7	.4	.2
	40 and over	1325	25611	1973.47	60.4	1.2	47.5	.3	8.0	.3	.5
Lithuania	Under 40	530	3508	172.49	25.6	1.2	49.5	.5	8.1	.4	3.3
	40 and over	1591	10215	316.32	74.4	1.2	51.5	.3	8.1	.2	3.2
. . .											
x.International Average	Under 40	.	.	.	43.9	.4	47.8	.1	9.0	.1	.
	40 and over	.	.	.	56.1	.4	48.7	.1	9.1	.1	.

Our last example focuses on the percentage of students attending schools where tutorial software was available, as seen in the second column of Table 6.2 from the ICILS 2013 international report. The percentages and their standard errors in all other columns in the table (presented below as Figure 4.29) are reproduced the same way.

Figure 4.29: Example of school-level analysis results taken from the ICILS 2013 international report (Fraillon et al., 2014, p. 171)

Table 6.2: National percentages of students at schools with available software resources for teaching and/or learning

Country	Tutorial Software or [Practice Programs]	Digital Learning Games	Wordprocessing, Databases, Spreadsheets (e.g., [Microsoft© Office Suite])	Multimedia Production Tools (e.g., Media Capture and Editing, Web Production)	Data-Logging and Monitoring Tools	Simulations and Modeling Software	Presentation Software (e.g. [Microsoft PowerPoint ®], [Keynote ®])	Communication Software (e.g., Email, Chat, Blogs, Other Social Media)	Graphing or Drawing Software
Australia	92 (2.2)	95 (1.7) ▲	100 (0.0) △	99 (0.3) ▲	85 (2.4) ▲	85 (2.8) ▲	100 (0.0) △	98 (1.0) △	99 (0.6) ▲
Chile	90 (2.3)	77 (3.6)	98 (1.1)	60 (4.2) ▼	59 (4.4)	24 (3.7) ▼	97 (1.4)	86 (3.0)	49 (4.6) ▼
Croatia	85 (3.1)	80 (2.9)	100 (0.0) △	74 (3.3)	56 (3.7)	16 (2.7) ▼	99 (0.6)	100 (0.0) △	70 (4.2) ▼
Czech Republic	98 (1.5) △	72 (3.0)	100 (0.0) △	75 (3.6)	15 (3.1) ▼	15 (2.6) ▼	100 (0.0) △	94 (2.3)	96 (1.6) △
Germany†	87 (3.2)	62 (4.2) ▼	100 (0.0) △	71 (3.7) ▽	57 (4.7)	41 (4.3)	100 (0.0) △	62 (5.0) ▼	96 (1.3) △
Korea, Republic of	88 (2.5)	78 (3.5)	98 (1.1)	87 (3.0) △	56 (4.4)	38 (4.0)	99 (0.9)	94 (1.9)	89 (2.6)
Lithuania	97 (1.2) △	93 (1.7) ▲	99 (0.5)	85 (3.2)	86 (3.3) ▲	54 (4.4) ▲	100 (0.5)	95 (2.1)	98 (0.9) ▲
Norway (Grade 9)[1]	95 (1.8) △	93 (2.6) ▲	100 (0.0) △	89 (3.0) △	34 (3.4) ▼	56 (4.4) ▲	100 (0.0) △	91 (2.6)	97 (1.7) △
Poland	89 (2.9)	83 (3.3) △	99 (0.5)	92 (2.0) ▲	42 (4.4) ▼	53 (3.9) ▲	99 (0.7)	98 (1.5) △	91 (2.4)
Russian Federation[2]	93 (1.7) △	72 (3.2)	100 (0.0) △	78 (2.6)	65 (3.3) ▲	48 (3.2) △	100 (0.0) △	93 (1.4)	96 (1.7) △
Slovak Republic	96 (1.7) △	89 (2.6) ▲	100 (0.0) △	75 (3.6)	58 (4.3)	33 (4.6)	100 (0.0) △	98 (1.0) △	98 (1.2) ▲
Slovenia	97 (1.7) △	93 (2.1) ▲	100 (0.0) △	98 (1.1) ▲	45 (3.7) ▽	50 (3.9) △	100 (0.0) △	99 (0.6) △	97 (1.6) △
Thailand[2]	74 (3.8) ▼	51 (4.5) ▼	95 (1.8)	88 (2.9) △	58 (4.7)	46 (5.0)	98 (1.5)	99 (0.9) △	98 (1.0) ▲
Turkey	49 (4.9) ▼	28 (3.8) ▼	88 (2.9) ▼	46 (4.4) ▼	40 (4.6) ▼	9 (2.4) ▼	98 (1.4)	73 (3.9) ▼	48 (4.4) ▼
ICILS 2013 average	88 (0.7)	76 (0.8)	98 (0.3)	80 (0.8)	54 (1.1)	41 (1.0)	99 (0.2)	91 (0.6)	87 (0.7)
Countries not meeting sample requirements									
Denmark	95 (2.1)	94 (3.1)	100 (0.0)	96 (2.1)	60 (5.8)	48 (5.2)	100 (0.0)	98 (1.5)	87 (3.5)
Hong Kong SAR	91 (3.5)	65 (4.9)	100 (0.0)	100 (0.0)	83 (4.1)	63 (5.3)	100 (0.0)	94 (2.8)	98 (1.4)
Netherlands	100 (0.0)	85 (5.0)	100 (0.0)	78 (5.9)	90 (3.7)	79 (5.2)	100 (0.0)	97 (2.1)	86 (4.7)
Switzerland	98 (1.5)	68 (6.7)	100 (0.0)	89 (3.2)	52 (6.8)	30 (6.8)	100 (0.0)	74 (6.9)	99 (0.4)
Benchmarking participants									
Newfoundland and Labrador, Canada	80 (0.2)	97 (0.1)	100 (0.0)	93 (0.1)	63 (0.3)	64 (0.3)	100 (0.0)	86 (0.2)	93 (0.1)
Ontario, Canada	88 (3.5)	96 (1.8)	99 (1.2)	89 (3.1)	73 (4.6)	67 (5.3)	99 (0.8)	97 (1.7)	94 (2.8)
Benchmarking participant not meeting sample requirements									
City of Buenos Aires, Argentina	83 (6.2)	60 (7.6)	100 (0.0)	81 (7.9)	45 (8.9)	39 (9.7)	91 (5.1)	94 (5.9)	81 (7.1)

Notes:
() Standard errors appear in parentheses. Because some results are rounded to the nearest whole number, some totals may appear inconsistent.
† Met guidelines for sampling participation rates only after replacement schools were included.
[1] National Desired Population does not correspond to International Desired Population.
[2] Country surveyed the same cohort of students but at the beginning of the next school year.

▲ More than 10 percentage points above ICILS 2013 average
△ Significantly above ICILS 2013 average
▽ Significantly below ICILS 2013 average
▼ More than 10 percentage points below ICILS 2013 average

The data file used in our example is BSG_BCGALLI1.SAV, which contains student- and school-level data merged as described earlier (see Section 4.2.4). Merging the school- and student-level data means that only the total student weight (TOTWGTS) and its replicate weights are included in the merged file. The school ones are excluded because they are no longer meaningful or interpretable.

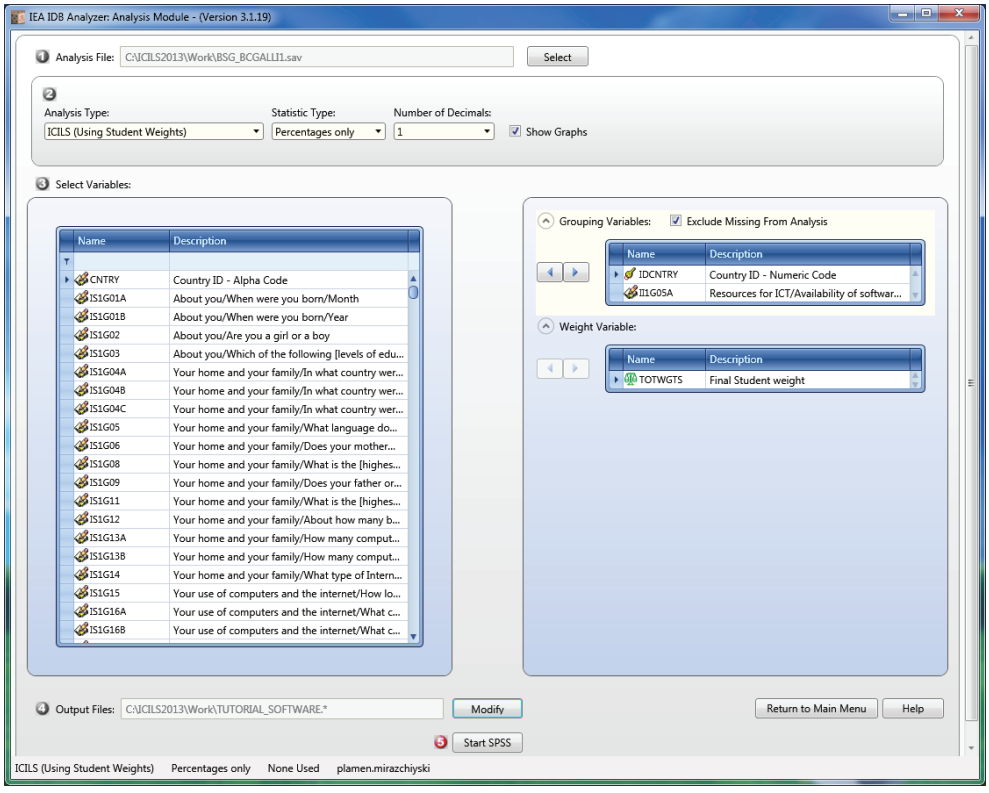
To conduct this student- and school-level analysis, we need to specify **Percentages Only** as the **Statistic Type**. We then need to identify the variable of interest and review the documentation on specific national adaptations to the questions of interest (see Appendix 2 of this guide). Variable II1G05A in the school file contains information on the availability of tutorial software. The two codes for this variable are (1) "available" and (2) "not available."

The analysis requires us to use the analysis module of the IEA IDB Analyzer (with the analysis settings as shown in Figure 4.30) according to the following steps:

1. Open the analysis module of the IEA IDB Analyzer.
2. Specify the data file BSG_BCGALLI1.SAV as the **Analysis File**.
3. Select **Percentages Only** as the **Statistic Type**.

4. Set the **Number of Decimals** to 1.
5. Remember that the variable identifying the country (IDCNTRY) is selected automatically as a **Grouping Variable**. We then add the variable II1G05A as a second **Grouping Variable**.
6. Note that the software automatically defines the **Weight Variable**. Because this example analysis uses both student data and school data disaggregated to student level, the software selects TOTWGTS by default. We also need to remember that the 75 replicate weights are needed in the analysis so that the correct estimates of the standard errors can be computed, but the IEA IDB Analyzer interface does not indicate them.
7. Specify the output file name and folder in the **Output Files** field.
8. Click the **Start SPSS** button to create the SPSS syntax file. The file will open in an SPSS **Syntax Editor** window, and the syntax file will be executed after we open the **Run** menu of SPSS **Syntax Editor** and select the **All** option. If necessary, the IEA IDB Analyzer will prompt us to confirm overwriting existing files.

Figure 4.30: IEA IDB Analyzer setup for example analysis with student- and school-level data



The results of this analysis, presented in the partial output in Figure 4.31, appear in the same manner as in the previous examples, with countries identified in the first column, and the second column describing the categories of II1G05A ("available" and "not available"). The third and fourth columns show the number of sampled students in each category and the number of students in the populations they represent while the fifth column shows the standard error of this estimate. The sixth column represents, the percentages of students in each of the two categories of the variable II1G05A reported

by the school ICT-coordinator. The associated standard errors appear in the last column of the output.

Figure 4.31: Partial SPSS output for example analysis with student- and school-level data

Percentages by (IDCNTRY II1G05A) PAGE 1

Country ID - Numeric Code	Resources for ICT/Availability of software resources/Tutorial software or [practice programs]	N of Cases	Sum of TOTWGTS	Sum of TOTWGTS (s.e.)	Percent	Percent (s.e.)
Australia	Available	4671	236156	5751.65	91.6	2.2
	Not available	436	21660	5758.51	8.4	2.2
Chile	Available	2767	198089	7847.42	90.2	2.3
	Not available	364	21615	5094.39	9.8	2.3
Croatia	Available	2430	37433	1543.59	85.3	3.1
	Not available	402	6450	1358.77	14.7	3.1
Czech Republic	Available	3014	81170	1746.68	97.6	1.5
	Not available	52	2023	1261.12	2.4	1.5
Denmark	Available	1263	41971	3021.50	94.8	2.1
	Not available	66	2309	921.19	5.2	2.1
Germany	Available	1613	620748	36982.97	86.7	3.2
	Not available	270	94892	22381.82	13.3	3.2
Hong Kong, SAR	Available	1623	45166	3021.31	91.2	3.5
	Not available	137	4379	1772.42	8.8	3.5
Korea, Republic of	Available	2569	496880	15530.76	88.4	2.5
	Not available	319	65354	14298.66	11.6	2.5
. . .						
x.International Average	Available	.	.	.	89.3	.6
	Not available	.	.	.	10.7	.6

As evident from Figure 4.31, 91.6 percent of target-grade students in Australia at the time of ICILS 2013 were attending schools which reported that tutorial software was available. The standard error of this estimate is 2.2 percent.

Appendices

APPENDIX 1:

International version of the ICILS 2013 questionnaires

Overview

The ICILS 2013 international database includes data for all questionnaires administered as part of the ICILS 2013 assessment. This supplement contains the international version of the ICILS 2013 questionnaires in the following five sections:

Section 1: Student questionnaire

Section 2: Principal questionnaire

Section 3: ICT-coordinator questionnaire

Section 4: Teacher questionnaire

Section 5: National context questionnaire.

Each section contains the international version of the questionnaire with variable names labeled next to the corresponding question. The ICILS 2013 questionnaires were designed to provide an opportunity for individual countries to modify some questions or response options. This feature allowed countries to include the appropriate wording or options most consistent with their own national systems, languages, and cultures. In the international version of the questionnaires, such questions contain instructions to the national research coordinators (NRCs) to substitute the appropriate wording for their country and/or to modify or delete any inappropriate questions or options. These instructions were indicated in the questionnaires by text inserted within square brackets ([country-specific]). NRCs were asked to substitute, if necessary, an appropriate national adaptation that would retain the same basic interpretation as the text within brackets. Appendix 2 of this user guide documents these national adaptations.

Section 1: ICILS 2013 Student Questionnaire

International Computer and Information Literacy Study

Student Questionnaire for the Main Survey

October 2012

CONFIDENTIAL TO ICILS
DO NOT CITE OR QUOTE

DPC IEA DATA PROCESSING AND RESEARCH CENTER

Secretariat

The Australian Council for Educational Research

[INTRODUCTION FOR STUDENTS TO THE QUESTIONNAIRE]

In this questionnaire you will find questions about:

- You, your home and your family
- Where and how often you use computers
- What you use computers for
- Your views about the use of computers.

In this questionnaire a computer can refer to a:

- desktop computer,
- notebook or laptop computer,
- netbook computer,
- tablet device such as an [iPad].

Please read each question carefully and answer as accurately as you can. In this questionnaire, you will mostly answer by clicking on a button. You can change your responses at any time until you have clicked on “I’ve finished” at the end of the questionnaire.

There are also a few questions where you will need to write a short response.

In this questionnaire, there are no right or wrong answers. Your answers should be the ones that apply to you.

You may ask for help if you do not understand something or if you are not sure how to answer a question.

All your answers will be kept confidential.

ABOUT YOU

Q1 **When were you born?**

January–December (Month) IS1G01A

1993–2008 (Year) IS1G01B

Q2 **Are you a girl or a boy?** IS1G02

Girl ☐ Boy ☐

Q3 **Which of the following [levels of education] do you expect to complete?**

(Please mark only one choice) IS1G03

[ISCED Level 5A or 6] ☐

[ISCED Level 4 or 5B] ☐

[ISCED Level 3] ☐

[ISCED Level 2] ☐

I do not expect to complete [ISCED Level 2] ☐

YOUR HOME AND YOUR FAMILY

In this section you will be asked some questions about your family and your home.

Some of these questions will be about home and your mother and father or guardians who look after you—for example, step-parents or foster-parents.

If you share your time with more than one set of parents or guardians, please answer the following questions for those parents/guardians you spend the most time with.

Q4 In what country were you and your parents born?

*(Please mark only one choice in each **column**)*

	IS1G04A You	IS1G04B Mother or [female guardian]	IS1G04C Father or [male guardian]
[Country of test]	☐	☐	☐
[Other country/Group A]	☐	☐	☐
[Other country/Group B]	☐	☐	☐
[Another country]	☐	☐	☐

Q5 What language do you speak at home most of the time?

(Please mark only once choice)

	IS1G05
[Language of test]	☐
[Other language 1]	☐
[Other language 2]	☐
[Another language]	☐

Q6 **Does your mother or [female guardian] work in a paid job?** IS1G06

Yes ☐ (Note: Student will be directed to Q7a and Q7b)

No ☐ (Note: Student will be directed to Q7c and Q7d)

Q7a **What is your mother's or [female guardian's] main [job]?**
(for example high school teacher, kitchen-hand, sales manager)

(Please write in the [job] title)

_____

Q7b **What does your mother or [female guardian] do in her main [job]?**
(for example teaches high school students, helps the cook prepare meals in a restaurant, manages a sales team)

(Please use a sentence to describe the kind of work she does in that [job])

_____

_____

(Note: on completion of Q7a and Q7b, students will be directed to Q8)

Q7c **What was your mother's or [female guardian's] last main [job]?**
(for example high school teacher, kitchen-hand, sales manager)

Please tell us her last main [job]. If she has never had a paid [job], please write what she is currently doing.

(Please write in the [job] title)

_____

Q7d **What did your mother or [female guardian] do in her last main [job]?**
(for example taught high school students, helped the cook prepare meals in a restaurant, managed a sales team)

(Please use a sentence to describe the kind of work she did in that [job] or what she is currently doing if she has never had a paid [job])

_____

_____

(Note: on completion of Q7c and Q7d, students will be directed to Q8)

Q8 **What is the highest level of education completed by your mother or [female guardian]?**

If you are not sure which box to choose, please ask the [test administrator] for help.

(Please mark only one choice) IS1G08

[ISCED Level 5A or 6] ☐

[ISCED Level 4 or 5B] ☐

[ISCED Level 3] ☐

[ISCED Level 2] ☐

She did not complete [ISCED Level 2]. ☐

Q9 **Does your father or [male guardian] work in a paid job?** IS1G09

Yes ☐ (Note: Student will be directed to Q10a and Q10b)

No ☐ (Note: Student will be directed to Q10c and Q10d)

Q10a **What is your father's or [male guardian's] main [job]?**
(for example high school teacher, kitchen-hand, sales manager)

(Please write in the [job] title)

_____

Q10b **What does your father or [male guardian] do in his main [job]?**
(for example teaches high school students, helps the cook prepare meals in a restaurant, manages a sales team)

(Please use a sentence to describe the kind of work he does in that [job])

_____

_____

(Note: on completion of Q10a and Q10b, students will be directed to Q11)

Q10c **What was your father's or [male guardian's] last main [job]?**
(for example high school teacher, kitchen-hand, sales manager)

Please tell us his last main [job]. If he has never had a paid [job], please write what he is currently doing.

(Please write in the [job] title)

_____

Q10d **What did your father or [male guardian] do in his last main [job]?**
(for example taught high school students, helped the cook prepare meals in a restaurant, managed a sales team)

(Please use a sentence to describe the kind of work he did in that [job] or what he is currently doing if he has never had a paid [job])

_____

_____

(Note: on completion of Q10c and Q10d, students will be directed to Q11)

Q11 **What is the highest level of education completed by your father or [male guardian]?**

If you are not sure which box to choose, please ask the [test administrator] for help.

(Please mark only once choice) IS1G11

[ISCED Level 5A or 6] ☐

[ISCED Level 4 or 5B] ☐

[ISCED Level 3] ☐

[ISCED Level 2] ☐

He did not complete [ISCED Level 2]. ☐

Q12 About how many books are there in your home?

Do not count magazines, newspapers, comic books, or your schoolbooks.

(Please mark only one choice) IS1G12

- None or very few (0–10 books) ☐
- Enough to fill one shelf (11–25 books) ☐
- Enough to fill one bookcase (26–100 books) ☐
- Enough to fill two bookcases (101–200 books) ☐
- Enough to fill three or more bookcases (more than 200 books) ☐

Q13 How many computers are currently used in your home?

(Please select a number for each type of computer)

a) Desktop computer ▯ IS1G13A

b) Portable computer (notebook, netbook, iPad or other tablet device) ▯ IS1G13B

Q14 What type of Internet connection do you mainly use in your home?

(Please mark only once choice) IS1G14

- None ☐
- Dial-up ☐
- Broadband (for example [cable], [DSL], [satellite]) ☐
- Connection through mobile phone network ☐
- I know we have Internet but I don't know what type of connection it is. ☐

YOUR USE OF COMPUTERS AND INTERNET

Q15 How long have you been using computers?

(Please mark only one choice) IS1G15

- Less than one year ☐
- At least one year but less than three years ☐
- At least three years but less than five years ☐
- At least five years but less than seven years ☐
- Seven years or more ☐

Q16 What computer operating system do you mainly use at home and at school?

(Please mark one choice in each row)

		Windows (PC)	*Mac OS*	*Other*	*I don't know*	*I do not use a computer at this location*	
a)	At home	☐	☐	☐	☐	☐	IS1G16A
b)	At school	☐	☐	☐	☐	☐	IS1G16B

Q17 How <u>often</u> do you use a computer in these places?

(Please mark one choice in each row)

		Never	*Less than once a month*	*At least once a month but not every week*	*At least once a week but not every day*	*Every day*	
a)	At home	☐	☐	☐	☐	☐	IS1G17A
b)	At school	☐	☐	☐	☐	☐	IS1G17B
c)	At other places (for example local library, Internet café)	☐	☐	☐	☐	☐	IS1G17C

Q18 **How <u>often</u> do you use a computer outside of school for each of the following activities?**

(Please mark one choice in each row)

		Never	*Less than once a month*	*At least once a month but not every week*	*At least once a week but not every day*	*Every day*	
a)	Creating or editing documents (for example to write stories or assignments)	☐	☐	☐	☐	☐	IS1G18A
b)	Using a spreadsheet to do calculations, store data or plot graphs (for example using [Microsoft Excel ®])	☐	☐	☐	☐	☐	IS1G18B
c)	Creating a simple “slideshow” presentation (for example using [Microsoft PowerPoint ®])	☐	☐	☐	☐	☐	IS1G18C
d)	Creating a multimedia presentation (with sound, pictures, video)	☐	☐	☐	☐	☐	IS1G18D
e)	Using education software that is designed to help with your school study (for example mathematics or reading software)	☐	☐	☐	☐	☐	IS1G18E
f)	Writing computer programs, macros or scripts (for example using [Logo, Basic or HTML])	☐	☐	☐	☐	☐	IS1G18F
g)	Using drawing, painting or graphics software	☐	☐	☐	☐	☐	IS1G18G

Q19 **How <u>often</u> do you use the Internet outside of school for each of the following activities?**

(Please mark one choice in each row)

		Never	*Less than once a month*	*At least once a month but not every week*	*At least once a week but not every day*	*Every day*	
a)	Searching for information for study or school work	☐	☐	☐	☐	☐	IS1G19A
b)	Accessing wikis or online encyclopedia for study or school work	☐	☐	☐	☐	☐	IS1G19B
c)	Communicating with others using messaging or social networks (for example instant messaging or [status updates])	☐	☐	☐	☐	☐	IS1G19C
d)	Posting comments to online profiles or blogs	☐	☐	☐	☐	☐	IS1G19D
e)	Asking questions on forums or [question and answer] websites	☐	☐	☐	☐	☐	IS1G19E
f)	Answering other people's questions on forums or websites	☐	☐	☐	☐	☐	IS1G19F
g)	Writing posts for your own blog	☐	☐	☐	☐	☐	IS1G19G
h)	Uploading images or video to an [online profile] or [online community] (for example Facebook or YouTube)	☐	☐	☐	☐	☐	IS1G19H
i)	Using voice chat (for example Skype) to chat with friends or family online	☐	☐	☐	☐	☐	IS1G19I
j)	Building or editing a webpage	☐	☐	☐	☐	☐	IS1G19J

Q20 How <u>often</u> do you use a computer for each of the following out-of-school activities?

(Please mark one choice in each row)

		Never	*Less than once a month*	*At least once a month but not every week*	*At least once a week but not every day*	*Every day*	
a)	Accessing the Internet to find out about places to go or activities to do	☐	☐	☐	☐	☐	IS1G20A
b)	Reading reviews on the Internet of things you might want to buy	☐	☐	☐	☐	☐	IS1G20B
c)	Playing games	☐	☐	☐	☐	☐	IS1G20C
d)	Listening to music	☐	☐	☐	☐	☐	IS1G20D
e)	Watching downloaded or streamed video (for example movies, TV shows or clips)	☐	☐	☐	☐	☐	IS1G20E
f)	Using the Internet to get news about things I am interested in	☐	☐	☐	☐	☐	IS1G20F

Q21 How <u>often</u> do you use computers for the following school-related purposes?

(Please mark one choice in each row)

		Never	*Less than once a month*	*At least once a month but not every week*	*At least once a week*	
a)	Preparing reports or essays	☐	☐	☐	☐	IS1G21A
b)	Preparing presentations	☐	☐	☐	☐	IS1G21B
c)	Working with other students <u>from your own school</u>	☐	☐	☐	☐	IS1G21C
d)	Working with other students <u>from other schools</u>	☐	☐	☐	☐	IS1G21D
e)	Completing [worksheets] or exercises	☐	☐	☐	☐	IS1G21E
f)	Organizing your time and work	☐	☐	☐	☐	IS1G21F
g)	Writing about your learning	☐	☐	☐	☐	IS1G21G
h)	Completing tests	☐	☐	☐	☐	IS1G21H

Q22 **At school, how <u>often</u> do you use computers during lessons in the following subjects or subject areas?**

(Please mark one choice in each row)

		Never	*In some lessons*	*In most lessons*	*In every or almost every lesson*	*I don't study this subject / these subjects*	
a)	[Language arts: test language]	☐	☐	☐	☐	☐	IS1G22A
b)	[Language arts: foreign or other national languages]	☐	☐	☐	☐	☐	IS1G22B
c)	Mathematics	☐	☐	☐	☐	☐	IS1G22C
d)	Sciences (general science and/or physics, chemistry, biology, geology, earth sciences)	☐	☐	☐	☐	☐	IS1G22D
e)	Human sciences/humanities (history, geography, civics, law, economics etc.)	☐	☐	☐	☐	☐	IS1G22E
f)	Creative arts (visual arts, music, dance, drama etc.)	☐	☐	☐	☐	☐	IS1G22F
g)	[Information technology, computer studies or similar]	☐	☐	☐	☐	☐	IS1G22G
h)	Other (practical or vocational subjects, moral/ethics, physical education, home economics, personal and social development)	☐	☐	☐	☐	☐	IS1G22H

Q23 At school, have you learned how to do the following tasks?

(Please mark one choice in each row)

		Yes	*No*	
a)	Providing references to Internet sources	☐	☐	IS1G23A
b)	Accessing information with a computer	☐	☐	IS1G23B
c)	Presenting information for a given audience or purpose with a computer	☐	☐	IS1G23C
d)	Working out whether to trust information from the Internet	☐	☐	IS1G23D
e)	Deciding what information is relevant to include in school work	☐	☐	IS1G23E
f)	Organizing information obtained from Internet sources	☐	☐	IS1G23F
g)	Deciding where to look for information about an unfamiliar topic	☐	☐	IS1G23G
h)	Looking for different types of digital information on a topic	☐	☐	IS1G23H

Q24 Who <u>mainly</u> taught you the following things?

(Please mark one choice in each row)

		I mainly taught myself	*My teachers*	*My family*	*My friends*	*I have never learned this*	
a)	Communicating over the Internet	☐	☐	☐	☐	☐	IS1G24A
b)	Creating documents for school work	☐	☐	☐	☐	☐	IS1G24B
c)	Changing computer settings	☐	☐	☐	☐	☐	IS1G24C
d)	Finding information on the Internet	☐	☐	☐	☐	☐	IS1G24D
e)	Working in a computer network	☐	☐	☐	☐	☐	IS1G24E

YOUR THOUGHTS ABOUT USING COMPUTERS

Q25 How well can you do each of these tasks on a computer?

(Please mark one choice in each row)

		I know how to do this.	*I could work out how to do this.*	*I do not think I could do this.*	
a)	Search for and find a file on your computer	☐	☐	☐	IS1G25A
b)	Use software to find and get rid of viruses	☐	☐	☐	IS1G25B
c)	Edit digital photographs or other graphic images	☐	☐	☐	IS1G25C
d)	Create a database (for example using [Microsoft Access ®])	☐	☐	☐	IS1G25D
e)	Create or edit documents (for example assignments for school)	☐	☐	☐	IS1G25E
f)	Search for and find information you need on the Internet	☐	☐	☐	IS1G25F
g)	Build or edit a webpage	☐	☐	☐	IS1G25G
h)	Change the settings on your computer to improve the way it operates or to fix problems	☐	☐	☐	IS1G25H
i)	Use a spreadsheet to do calculations, store data or plot a graph	☐	☐	☐	IS1G25I
j)	Create a computer program or macro (for example in [Basic, Visual Basic])	☐	☐	☐	IS1G25J
k)	Set up a computer network	☐	☐	☐	IS1G25K
l)	Create a multi-media presentation (with sound, pictures, or video)	☐	☐	☐	IS1G25L
m)	Upload text, images or video to an online profile	☐	☐	☐	IS1G25M

Q26 *Thinking about your experience with computers:*
To what extent do you agree or disagree with the following statements?

(Please mark one choice in each row)

		Strongly agree	*Agree*	*Disagree*	*Strongly disagree*	
a)	It is very important to me to work with a computer.	☐	☐	☐	☐	IS1G26A
b)	Learning how to use a new computer program is very easy for me.	☐	☐	☐	☐	IS1G26B
c)	I think using a computer is fun.	☐	☐	☐	☐	IS1G26C
d)	I have always been good at working with computers.	☐	☐	☐	☐	IS1G26D
e)	It is more fun to do my work using a computer than without a computer.	☐	☐	☐	☐	IS1G26E
f)	I use a computer because I am very interested in the technology.	☐	☐	☐	☐	IS1G26F
g)	I know more about computers than most people of my age.	☐	☐	☐	☐	IS1G26G
h)	I like learning how to do new things using a computer.	☐	☐	☐	☐	IS1G26H
i)	I am able to give advice to others when they have problems with computers.	☐	☐	☐	☐	IS1G26I
j)	I often look for new ways to do things using a computer.	☐	☐	☐	☐	IS1G26J
k)	I enjoy using the Internet to find out information.	☐	☐	☐	☐	IS1G26K

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE

Section 2: ICILS 2013 Principal Questionnaire

International Computer and Information Literacy Study

Principal Questionnaire for the Main Survey

October 2012

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The Australian Council for Educational Research

[INTRODUCTION FOR PRINCIPALS TO THE QUESTIONNAIRE]

This questionnaire is concerned with Information and Communication Technology (ICT) in schools, its use in teaching and learning and students' development of Computer and Information Literacy (CIL).

In this questionnaire you will find questions about:

- You and your use of ICT
- Characteristics of your school
- The application of ICT in teaching and learning at your school
- Aspects of the management of ICT in your school.

Please answer as accurately as you can.

We have estimated that it will take less than 20 minutes of your time to complete the questionnaire.

Thank you for making that time available.

ABOUT YOU AND YOUR USE OF ICT

Q 1 Are you female or male?

Female ☐ Male ☐ IP1G01

Q 2 How often do you use ICT to:

(Please mark one choice in each row)

		Never	*Less than once a month*	*At least once a month but not every week*	*At least once a week but not every day*	*Every day*	
a)	Search for information on the Internet or an education system network	☐	☐	☐	☐	☐	IP1G02A
b)	Provide information about an educational issue through a website	☐	☐	☐	☐	☐	IP1G02B
c)	Look up records in a database (e.g. in a student information system)	☐	☐	☐	☐	☐	IP1G02C
d)	Maintain, organize and analyze data (e.g. with a spreadsheet or database)	☐	☐	☐	☐	☐	IP1G02D
e)	Prepare presentations	☐	☐	☐	☐	☐	IP1G02E
f)	Communicate with teachers in your school	☐	☐	☐	☐	☐	IP1G02F
g)	Communicate with education authorities	☐	☐	☐	☐	☐	IP1G02G
h)	Communicate with principals and senior staff in other schools	☐	☐	☐	☐	☐	IP1G02H
i)	Communicate with parents	☐	☐	☐	☐	☐	IP1G02I
j)	Work with a learning management system (e.g. [Moodle])	☐	☐	☐	☐	☐	IP1G02J

YOUR SCHOOL

Q 3 What is the total number of boys and girls in the entire school?

(Please record a whole number. Record 0 (zero), if none.)

IP1G03A

Total number of girls

IP1G03B

Total number of boys

Q 4 What is the total number of boys and girls in [target grade]?

(Please record a whole number. Record 0 (zero), if none.)

IP1G04A

Total number of girls

IP1G04B

Total number of boys

Q 5 (a) What is the lowest (youngest) grade that is taught at your school?

(Please mark only one choice) IP1G05A

- ☐ [National Adaptation 1]
- ☐ [National Adaptation 2]
- ☐ [National Adaptation 3]
- ☐ [National Adaptation 4]
- ☐ [National Adaptation 5]
- ☐ [National Adaptation 6]
- ☐ [National Adaptation 7]
- ☐ [National Adaptation 8]

(b) What is the highest (oldest) grade that is taught at your school?

(Please mark only one choice) IP1G05B

- ☐ [National Adaptation 9]
- ☐ [National Adaptation 10]
- ☐ [National Adaptation 11]
- ☐ [National Adaptation 12]
- ☐ [National Adaptation 13]
- ☐ [National Adaptation 14]

Q 6 What are the total numbers of full-time and part-time teachers in your school?

A full-time teacher is employed at least 90% of the time as a teacher for the full school year. All other teachers should be considered part-time.

(Please record a whole number for each. Record 0 (zero), if none.)

a) | | | | | Total number of full-time teachers — IP1G06A

b) | | | | | Total number of part-time teachers — IP1G06B

Q 7 Which of the following best describes where your school is located?

(*Please mark only one choice)* — IP1G07

- In a community with fewer than 3,000 people ☐
- In a town with at least 3,000 but less than 15,000 people. ☐
- In a town with at least 15,000 but less than 100,000 people ☐
- In a city with at least 100,000 but less than 1,000,000 people ☐
- In a city with 1,000,000 or more people ☐

Q 8 Is this school a public or a private school?

(Please mark only one choice) — IP1G08

A public school

(This is a school managed directly or indirectly by a public education authority, government agency, or governing board, appointed by government or elected by public franchise.) ☐

A private school

(This is a school managed directly or indirectly by a non-government organization; for example, a church, trade union, business, or other private institution.) ☐

ICT AND TEACHING IN YOUR SCHOOL

Q 9 In your opinion, how important is the use of ICT in this school for each of the following outcomes of education?

(Please mark one choice in each row)

		Very important	*Somewhat important*	*Not important*	
a)	Developing students' computer skills, such as word-processing, spreadsheet operations, and email	☐	☐	☐	IP1G09A
b)	Using ICT for facilitating students' responsibility for their own learning	☐	☐	☐	IP1G09B
c)	Using ICT to augment and improve students' learning	☐	☐	☐	IP1G09C
d)	Developing students' understanding and skills relating to safe and appropriate use of ICT	☐	☐	☐	IP1G09D
e)	Developing students' proficiency in accessing and using information with ICT	☐	☐	☐	IP1G09E
f)	Developing collaborative and organizational skills	☐	☐	☐	IP1G09F

Q 10 Is ICT used in any teaching and learning activities in your school? IP1G10

Yes ☐ Please continue with question 11

No ☐ Please go to question 14

Q 11 Does the school monitor whether teachers use ICT to achieve the following learning outcomes?

(Please select all that apply for each row)

		Yes, by reviewing lesson plans	*Yes, through teacher self-evaluation*	*Yes, through observing classrooms*	*Yes, by other means*	*No this is not monitored*
a)	Developing students' computer skills, such as word-processing, spreadsheet operations, and email	IP1G11AA	IP1G11AB	IP1G11AC	IP1G11AD	IP1G11AE
b)	Using ICT for facilitating students' responsibility for their own learning	IP1G11BA	IP1G11BB	IP1G11BC	IP1G11BD	IP1G11BE
c)	Using ICT to augment and improve students' learning	IP1G11CA	IP1G11CB	IP1G11CC	IP1G11CD	IP1G11CE
d)	Developing students' understanding and skills relating to safe and appropriate use of ICT	IP1G11DA	IP1G11DB	IP1G11DC	IP1G11DD	IP1G11DE
e)	Developing students' proficiency in accessing and using information with ICT	IP1G11EA	IP1G11EB	IP1G11EC	IP1G11ED	IP1G11EE
f)	Developing collaborative and organizational skills	IP1G11FA	IP1G11FB	IP1G11FC	IP1G11FD	IP1G11FE

Q 12 Are teachers in your school expected to acquire knowledge and skills in each of the following activities?

(Please mark one choice in each row)

		Expected and required	*Expected but not required*	*Not expected*	
a)	Integrating Web-based learning in their instructional practice	☐	☐	☐	IP1G12A
b)	Using ICT-based forms of student assessment	☐	☐	☐	IP1G12B
c)	Using ICT for monitoring student progress	☐	☐	☐	IP1G12C
d)	Communicating with other staff via ICT	☐	☐	☐	IP1G12D
e)	Collaborating with other teachers via ICT	☐	☐	☐	IP1G12E
f)	Communicating with parents via ICT	☐	☐	☐	IP1G12F
g)	Integrating ICT into teaching and learning	☐	☐	☐	IP1G12G
h)	Using subject-specific learning software (e.g. tutorials, simulation)	☐	☐	☐	IP1G12H
i)	Using e-portfolios for assessment	☐	☐	☐	IP1G12I
j)	Using ICT to develop authentic (real-life) assignments for students	☐	☐	☐	IP1G12J

MANAGEMENT OF ICT IN YOUR SCHOOL

Q 13 Who has the main responsibility for each of the following aspects of ICT management in your school?

(Please select all that apply for each row)

		[Ministry, department or local authority]	*School principal or deputy*	*Heads of department*	*ICT coordinator*	*Information specialist or librarian*	*Individual teachers*	*No one*
a)	Purchasing/supplying ICT equipment	IP1G13AA	IP1G13AB	IP1G13AC	IP1G13AD	IP1G13AE	IP1G13AF	IP1G13AG
b)	Selecting software to be used	IP1G13BA	IP1G13BB	IP1G13BC	IP1G13BD	IP1G13BE	IP1G13BF	IP1G13BG
c)	Maintaining ICT equipment	IP1G13CA	IP1G13CB	IP1G13CC	IP1G13CD	IP1G13CE	IP1G13CF	IP1G13CG
d)	Choosing whether ICT is used in teaching	IP1G13DA	IP1G13DB	IP1G13DC	IP1G13DD	IP1G13DE	IP1G13DF	IP1G13DG
e)	Implementing ICT-based approaches in teaching	IP1G13EA	IP1G13EB	IP1G13EC	IP1G13ED	IP1G13EE	IP1G13EF	IP1G13EG
f)	Implementing ICT-based approaches in administration	IP1G13FA	IP1G13FB	IP1G13FC	IP1G13FD	IP1G13FE	IP1G13FF	IP1G13FG
g)	Using ICT-based approaches to assessment	IP1G13GA	IP1G13GB	IP1G13GC	IP1G13GD	IP1G13GE	IP1G13GF	IP1G13GG
h)	Ensuring that students learn information search strategies	IP1G13HA	IP1G13HB	IP1G13HC	IP1G13HD	IP1G13HE	IP1G13HF	IP1G13HG
i)	Ensuring that students learn how to evaluate the quality of information	IP1G13IA	IP1G13IB	IP1G13IC	IP1G13ID	IP1G13IE	IP1G13IF	IP1G13IG

Q 14 Does your school or school system have procedures with regard to the following aspects of ICT use?

(Please mark one choice in each row)

		Yes	*No*	
a)	Setting up security measures to prevent unauthorized system access or entry	☐	☐	IP1G14A
b)	Restricting the number of hours students are allowed to sit at a computer	☐	☐	IP1G14B
c)	Student access to school computers outside class hours (but during school hours)	☐	☐	IP1G14C
d)	Student access to school computers outside school hours	☐	☐	IP1G14D
e)	Honoring of intellectual property rights (e.g. software copyrights)	☐	☐	IP1G14E
f)	Prohibiting access to inappropriate material (e.g. pornography, violence)	☐	☐	IP1G14F
g)	Playing games on school computers	☐	☐	IP1G14G
h)	Giving the local community (parents and/or others) access to school computers and/or the Internet	☐	☐	IP1G14H
i)	Providing students with their own laptop computers and/or other mobile learning devices for use at school and at home	☐	☐	IP1G14I

Q 15 How many teachers in this school participate in the following forms of professional development about ICT for teaching and learning?

(Please mark one choice in each row)

		None or almost none	*Some*	*Many*	*All or almost all*	
a)	Participating in courses on the use of ICT in teaching provided by the school	☐	☐	☐	☐	IP1G15A
b)	Working with another teacher who has attended a course and then trains other teachers	☐	☐	☐	☐	IP1G15B
c)	Discussing the use of ICT in education as a regular item during meetings of the teaching staff	☐	☐	☐	☐	IP1G15C
d)	Observing colleagues using ICT in their teaching	☐	☐	☐	☐	IP1G15D
e)	Discussing within groups of teachers about using ICT in their teaching	☐	☐	☐	☐	IP1G15E
f)	Participating in a [community of practice] concerned with ICT in teaching	☐	☐	☐	☐	IP1G15F
g)	Participating in courses conducted by an external agency or expert	☐	☐	☐	☐	IP1G15G
h)	Participating in professional learning programs delivered through ICT	☐	☐	☐	☐	IP1G15H

Q 16 At your school, what priority is given to the following ways of facilitating the use of ICT in teaching and learning?

(Please mark one choice in each row)

		High priority	*Medium priority*	*Low priority*	*Not a priority*	
a)	Increasing the numbers of computers per student in the school	☐	☐	☐	☐	IP1G16A
b)	Increasing the number of computers connected to the Internet	☐	☐	☐	☐	IP1G16B
c)	Increasing the bandwidth of Internet access for the computers connected to the Internet	☐	☐	☐	☐	IP1G16C
d)	Increasing the range of digital learning resources	☐	☐	☐	☐	IP1G16D
e)	Establishing or enhancing an online learning support platform	☐	☐	☐	☐	IP1G16E
f)	Providing for participation in professional development on pedagogical use of ICT	☐	☐	☐	☐	IP1G16F
g)	Increasing the availability of qualified technical personnel to support the use of ICT	☐	☐	☐	☐	IP1G16G
h)	Providing teachers with incentives to integrate ICT use in their teaching	☐	☐	☐	☐	IP1G16H
i)	Providing more time for teachers to prepare lessons in which ICT is used	☐	☐	☐	☐	IP1G16I
j)	Increasing the professional learning resources for teachers in the use of ICT	☐	☐	☐	☐	IP1G16J

THANK YOU FOR YOUR TIME AND EFFORT IN COMPLETING THIS QUESTIONNAIRE

Section 3: ICILS 2013 ICT-Coordinator Questionnaire

International Computer and Information Literacy Study

ICT-Coordinator Questionnaire for the Main Survey

October 2012

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Secretariat

The Australian Council for Educational Research

[INTRODUCTION FOR ICT-COORDINATORS TO THE QUESTIONNAIRE]

This questionnaire is concerned with Information and Communication Technology (ICT) in schools and in particular the resources and support available for its use.

In this questionnaire you will find questions about:

- Your position as ICT-coordinator
- Resources for ICT in your school
- Support for ICT use in your school.

Please answer as accurately as you can.

We have estimated that it will take less than 15 minutes of your time to complete the questionnaire.

Thank you for making that time available.

ABOUT YOUR POSITION

This questionnaire asks for information about ICT resources (including computers) in your school as well as pedagogical practices that use ICT. It is important that the person responding knows about the ICT facilities in your school and about practices regarding their use.

The questionnaire should be completed by the person with designated responsibility for ICT in the school. If there is no person with designated responsibility for ICT in the school the questionnaire should be completed by the principal or [deputy-principal].

If you do not have the information to answer particular questions, then please consult other persons in your school.

Q 1 Do you, at your school, hold the position of technology or computer coordinator?

(Please mark only one choice) II1G01

- ☐ Yes, I formally serve as coordinator.
- ☐ Yes, I informally serve as coordinator.
- ☐ I am not the ICT-coordinator, but I am answering as the school principal or his/her designate.

Q 2 Which of the following teaching duties do you have?

(Please mark one choice in each row)

	Yes	*No*	
I teach ICT courses to students	☐	☐	II1G02A
I teach other subjects (i.e., not ICT) to students	☐	☐	II1G02B
I do not have any teaching duties for students	☐	☐	II1G02C
I teach ICT courses to, or conduct workshops for, teachers and other school staff	☐	☐	II1G02D

Q 3 **How many years has your school been using computers for teaching and/or learning purposes for students in [target grade]?**

(Please mark only one choice) II1G03

- ☐ Never, we do not use computers
- ☐ Fewer than 5 years
- ☐ At least 5 but fewer than 10 years
- ☐ 10 years or more

RESOURCES FOR ICT

Q 4 For each of the following technology resources please indicate their availability for teaching and/or learning.

(Please mark one choice in each row)

		Available	*Not available*	
a)	Computer-based information resources (e.g. websites, wikis, encyclopaedia)	☐	☐	II1G04A
b)	Interactive digital learning resources (e.g. learning objects)	☐	☐	II1G04B
c)	Access to the world-wide-web	☐	☐	II1G04C
d)	Access to an education site or network maintained by an education system	☐	☐	II1G04D
e)	Mail accounts for teachers	☐	☐	II1G04E
f)	Mail accounts for students	☐	☐	II1G04F

Q 5 For each of the following software resources please indicate their availability for teaching and/or learning.

(Please mark one choice in each row)

		Available	*Not available*	
a)	Tutorial software or [practice programs]	☐	☐	II1G05A
b)	Digital learning games	☐	☐	II1G05B
c)	Word-processing, databases, spreadsheets (e.g. [Microsoft© office suite])	☐	☐	II1G05C
d)	Multimedia production tools (e.g. media capture and editing, web production)	☐	☐	II1G05D
e)	Data-logging and monitoring tools	☐	☐	II1G05E
f)	Simulations and modelling software	☐	☐	II1G05F
g)	Presentation software (e.g. [Microsoft PowerPoint ®], [Keynote ®])	☐	☐	II1G05G
h)	Communication software (e.g. email, chat, blogs, other social media)	☐	☐	II1G05H
i)	Graphing or drawing software	☐	☐	II1G05I

Q 6 For each of the following technology facilities please indicate their availability for teaching and/or learning at [target grade].

(Please mark one choice in each row)

		Available	*Not available*	
a)	Access to a local area network (LAN) in the school	☐	☐	II1G06A
b)	Tablet devices (e.g. [iPad] and similar)	☐	☐	II1G06B
c)	Space on a school network for students to store their work.	☐	☐	II1G06C
d)	A school intranet with applications and workspaces for students to use (e.g. [Moodle])	☐	☐	II1G06D
e)	Internet-based applications for collaborative work (e.g. [Google Docs®])	☐	☐	II1G06E
f)	A learning management system (e.g. [WebCT®])	☐	☐	II1G06F

Q 7 In your school, approximately how many (school-provided) computers are:

(Please record a <u>whole</u> number. Record 0 (zero), if none.)

For this question please:

- *Count terminals (if they have a keyboard and a screen) as computers*
- *Count laptops, netbooks and tablet devices as computers*
- *Exclude computers which are not in use*
- *Exclude computers which are only used as servers*

☐☐☐	In the school altogether?	II1G07A
☐☐☐	Available to students?	II1G07B
☐☐☐	Connected to the Internet/World Wide Web?	II1G07C

Q 8 In your school, about how many (school-provided) smart boards or interactive whiteboards are available?

(Please record a <u>whole</u> number. Record 0 (zero), if none.) II1G08

☐☐☐ Smart boards / Interactive white boards

Q 9 Where are school computers for teaching and learning in [target grade] located?

(Please mark one choice in each row)

		Yes	*No*	
a)	In most classrooms (80% or more)	☐	☐	II1G09A
b)	In computer laboratories	☐	☐	II1G09B
c)	As class sets of computers that can be moved between classrooms	☐	☐	II1G09C
d)	In the library	☐	☐	II1G09D
e)	In other places accessible to students (e.g. cafeteria, auditorium, study area)	☐	☐	II1G09E
f)	Student computers (school-provided or student-owned) brought by students to class	☐	☐	II1G09F

Q 10 What computer operating system is mainly used at your school?

(Please mark only one choice) II1G10

- ☐ Windows (PC)
- ☐ Mac OS
- ☐ Linux
- ☐ Other
- ☐ None

ICT SUPPORT

Q 11 At your school, who provides regular *technical* ICT support for teachers?

(Please mark one choice in each row)

		Yes	*No*	
a)	Yourself	☐	☐	II1G11A
b)	A network administrator in the school (other than yourself)	☐	☐	II1G11B
c)	Other ICT technical staff (not including yourself) at the school	☐	☐	II1G11C
d)	Other administrators and school staff	☐	☐	II1G11D
e)	Other teachers	☐	☐	II1G11E
f)	Staff from the education system to which the school belongs	☐	☐	II1G11F
g)	Personnel from external companies contracted to provide maintenance	☐	☐	II1G11G

Q 12 At your school, who provides regular *pedagogical* ICT support for teachers?

(Please mark one choice in each row)

		Yes	*No*	
a)	Yourself	☐	☐	II1G12A
b)	Other ICT technical staff (not including yourself) at the school	☐	☐	II1G12B
c)	Other administrators and school staff	☐	☐	II1G12C
d)	Librarians, library staff or information specialist	☐	☐	II1G12D
e)	Other teachers	☐	☐	II1G12E
f)	Staff from the education system to which the school belongs	☐	☐	II1G12F

Q 13 To what extent is the use of ICT in teaching and learning in this school hindered by each of the following obstacles?

(Please mark one choice in each row)

		A lot	*To some extent*	*Very little*	*Not at all*	
a)	Too few computers connected to the Internet	☐	☐	☐	☐	II1G13A
b)	Insufficient Internet bandwidth or speed	☐	☐	☐	☐	II1G13B
c)	Not enough computers for instruction	☐	☐	☐	☐	II1G13C
d)	Lack of sufficiently powerful computers	☐	☐	☐	☐	II1G13D
e)	Not enough computer software	☐	☐	☐	☐	II1G13E
f)	Lack of ICT skills among teachers	☐	☐	☐	☐	II1G13F
g)	Insufficient time for teachers to prepare lessons	☐	☐	☐	☐	II1G13G
h)	Lack of effective professional learning resources for teachers	☐	☐	☐	☐	II1G13H
i)	Lack of an effective online learning support platform	☐	☐	☐	☐	II1G13I
j)	Lack of incentives for teachers to integrate ICT use in their teaching	☐	☐	☐	☐	II1G13J
k)	Lack of qualified technical personnel to support the use of ICT	☐	☐	☐	☐	II1G13K

THANK YOU FOR YOUR TIME AND EFFORT IN COMPLETING THE QUESTIONNAIRE

Section 4: ICILS 2013 Teacher Questionnaire

International Computer and Information Literacy Study

Teacher Questionnaire for the Main Survey

October 2012

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[INTRODUCTION FOR TEACHERS TO THE QUESTIONNAIRE]

This questionnaire is concerned with Information and Communication Technology (ICT) in schools, its use in teaching and learning and students' development of Computer and Information Literacy (CIL).

In this questionnaire you will find questions about:

- Your background and familiarity with ICT
- Your use of ICT in teaching a reference [target grade] class
- The use of ICT in the school
- Learning to use ICT in teaching.

Some questions' focus is on a nominated "reference" class. This is the first [target grade] class that you teach for a regular subject (i.e. other than home room, assembly etc) on or after the Tuesday following the last weekend before you first accessed this questionnaire. You may, of course, teach the class at other times during the week as well.

If you did not teach a [target grade] class on that Tuesday please use the [target grade] class that you taught on the first day after that Tuesday.

Please answer as accurately as you can. You will mostly answer by clicking on a button. You can change your responses at any time until you have clicked on 'I've finished' at the end of the questionnaire.

We have estimated that it will take less than 30 minutes of your time to complete the questionnaire.

Thank you for making that time available.

About You

Q 1 Are you a female or male?

Female ☐ Male ☐ IT1G01

Q 2 How old are you?

(Please mark only one choice) IT1G02

- Less than 25 ☐
- 25–29 ☐
- 30–39 ☐
- 40–49 ☐
- 50–59 ☐
- 60 or over ☐

Q 3 What are the main subjects that you teach in this school in the current school year?

(Please indicate the subjects that you teach in this school (indicate only those that individually account for at least [four lessons] each week in this school). The exact name of one or more of your subjects may not appear in the list for each category. If it does not, please mark the category you think best fits the subject.)

- [Language arts: test language] ☐ IT1G03A
- [Language arts: foreign and other national languages] ☐ IT1G03B
- Mathematics ☐ IT1G03C
- Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) ☐ IT1G03D
- Human sciences/Humanities (history, geography, civic and citizenship education, law, economics etc.) ☐ IT1G03E
- Creative arts (visual arts, music, dance, drama etc.) ☐ IT1G03F
- [Information technology, computer studies or similar] ☐ IT1G03G
- Practical and vocational subjects (preparation for a specific occupation) ☐ IT1G03H
- Other (moral/ethics, physical education, home economics, personal and social development) ☐ IT1G03I

Q 4 **In the current school year, how many schools are you teaching in at [target grade]?**

(Please mark only one choice) IT1G04

- ☐ Only in this school
- ☐ In this and another school
- ☐ In this and in two other schools
- ☐ In this and in three or more other schools

YOUR USE OF ICT

Q 5 **Approximately how long have you been using computers for *teaching* purposes?**

(Please mark only one choice) IT1G05

- ☐ Never
- ☐ Less than two years
- ☐ Two years or more

Q 6 **How often do you use a computer in these settings?**

(Please mark one choice in each row)

		Never	*Less than once a month*	*At least once a month but not every week*	*At least once a week but not every day*	*Every day*	
a)	At school when teaching	☐	☐	☐	☐	☐	IT1G06A
b)	At school for other work-related purposes	☐	☐	☐	☐	☐	IT1G06B
c)	Outside school for any purpose	☐	☐	☐	☐	☐	IT1G06C

Q 7 How well can you do these tasks on a computer by yourself?

(Please mark one choice in each row)

		I know how to do this	*I could work out how to do this*	*I do not think I could do this*	
a)	Producing a letter using a word-processing program	☐	☐	☐	IT1G07A
b)	E-mailing a file as an attachment	☐	☐	☐	IT1G07B
c)	Storing your digital photos on a computer	☐	☐	☐	IT1G07C
d)	Filing digital documents in folders and sub-folders	☐	☐	☐	IT1G07D
e)	Monitoring students' progress	☐	☐	☐	IT1G07E
f)	Using a spreadsheet program (e.g. [Lotus 1 2 3 ®, Microsoft Excel ®]) for keeping records or analyzing data	☐	☐	☐	IT1G07F
g)	Contributing to a discussion forum/user group on the Internet (e.g. a wiki or blog)	☐	☐	☐	IT1G07G
h)	Producing presentations (e.g. [Microsoft PowerPoint®] or a similar program), with simple animation functions	☐	☐	☐	IT1G07H
i)	Using the Internet for online purchases and payments	☐	☐	☐	IT1G07I
j)	Preparing lessons that involve the use of ICT by students	☐	☐	☐	IT1G07J
k)	Finding useful teaching resources on the Internet	☐	☐	☐	IT1G07K
l)	Assessing student learning	☐	☐	☐	IT1G07L
m)	Collaborating with others using shared resources such as [Google Docs®]	☐	☐	☐	IT1G07M
n)	Installing software	☐	☐	☐	IT1G07N

YOUR USE OF ICT IN TEACHING

In this section of the questionnaire please focus your responses on your teaching practices in a "reference" class.

This is the first [target grade] class that you teach for a regular subject (i.e. other than home room, assembly etc) on or after Tuesday following the last weekend before you first accessed this questionnaire. You may, of course, teach the class at other times during the week as well. If you did not teach a [target grade] class on that Tuesday please use the [target grade] class that you taught on the first day after that Tuesday.

Q 8 Which of the following best describes the subject for this reference class?

(Please mark only one choice) IT1G08A

- [Language arts: test language] ☐
- [Language arts: foreign and other national languages] ☐
- Mathematics ☐
- Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) ☐
- Human sciences/Humanities (history, geography, civic and citizenship, law, economics etc.) ☐
- Creative arts (visual arts, music, dance, drama etc.) ☐
- [Information technology, computer studies or similar] ☐
- Practical and vocational subjects (preparation for a specific occupation) ☐
- Other (moral/ethics, physical education, home economics, personal and social development) ☐

(b) Do you ever use ICT in the teaching and learning activities of the reference class? IT1G08B

Yes ☐ Please continue with question 9

No ☐ Please go to question 13

Q 9 How often did you use the following tools in your teaching of the reference class this school year?

(Please mark one choice in each row)

		Never	*In some lessons*	*In most lessons*	*In every or almost every lesson*	
a)	Tutorial software or [practice programs]	☐	☐	☐	☐	IT1G09A
b)	Digital learning games	☐	☐	☐	☐	IT1G09B
c)	Word-processors or presentation software (e.g. [Microsoft Word ®], [Microsoft PowerPoint ®])	☐	☐	☐	☐	IT1G09C
d)	Spreadsheets (e.g. [Microsoft Excel®])	☐	☐	☐	☐	IT1G09D
e)	Multimedia production tools (e.g. media capture and editing, web production)	☐	☐	☐	☐	IT1G09E
f)	Concept mapping software (e.g. [Inspiration ®], [Webspiration ®])	☐	☐	☐	☐	IT1G09F
g)	Data logging and monitoring tools	☐	☐	☐	☐	IT1G09G
h)	Simulations and modelling software	☐	☐	☐	☐	IT1G09H
i)	Social media (e.g. Facebook, Twitter)	☐	☐	☐	☐	IT1G09I
j)	Communication software (e.g. email, blogs)	☐	☐	☐	☐	IT1G09J
k)	Computer-based information resources (e.g. websites, wikis, encyclopaedia)	☐	☐	☐	☐	IT1G09K
l)	Interactive digital learning resources (e.g. learning objects)	☐	☐	☐	☐	IT1G09L
m)	Graphing or drawing software	☐	☐	☐	☐	IT1G09M
n)	e-portfolios	☐	☐	☐	☐	IT1G09N

Q 10 How often does your reference class use ICT in the following activities?

(Please mark one choice in each row)

		Never	*Sometimes*	*Often*	
a)	Working on extended projects (i.e. over several weeks)	☐	☐	☐	IT1G10A
b)	Working on short assignments (i.e. within one week)	☐	☐	☐	IT1G10B
c)	Explaining and discussing ideas with other students	☐	☐	☐	IT1G10C
d)	Submitting completed work for assessment	☐	☐	☐	IT1G10D
e)	Working individually on learning materials at their own pace	☐	☐	☐	IT1G10E
f)	Undertaking open-ended investigations or field work	☐	☐	☐	ITIG10F
g)	Reflecting on their learning experiences (e.g. by using a learning log)	☐	☐	☐	ITIG10G
h)	Communicating with students in other schools on projects	☐	☐	☐	ITIG10H
i)	Seeking information from experts outside the school	☐	☐	☐	ITIG10I
j)	Planning a sequence of learning activities for themselves	☐	☐	☐	ITIG10J
k)	Processing and analyzing data	☐	☐	☐	ITIG10K
l)	Searching for information on a topic using outside resources	☐	☐	☐	ITIG10L
m)	Evaluating information resulting from a search	☐	☐	☐	ITIG10M

Q 11 How often do you use ICT in the following practices when teaching your reference class?

(Please mark one choice for each row)

		Never	*Sometimes*	*Often*	
a)	Presenting information through direct class instruction	☐	☐	☐	IT1G11A
b)	Providing remedial or enrichment support to individual students or small groups of students	☐	☐	☐	IT1G11B
c)	Enabling student-led whole-class discussions and presentations	☐	☐	☐	IT1G11C
d)	Assessing students' learning through tests	☐	☐	☐	IT1G11D
e)	Providing feedback to students	☐	☐	☐	IT1G11E
f)	Reinforcing learning of skills through repetition of examples	☐	☐	☐	IT1G11F
g)	Supporting collaboration among students	☐	☐	☐	IT1G11G
h)	Mediating communication between students and experts or external mentors	☐	☐	☐	IT1G11H
i)	Enabling students to collaborate with other students (within or outside school)	☐	☐	☐	IT1G11I
j)	Collaborating with parents or guardians in supporting students' learning	☐	☐	☐	IT1G11J
k)	Supporting inquiry learning	☐	☐	☐	IT1G11K

Q 12 In your teaching of the reference class in this school year how much emphasis have you given to developing the following ICT-based capabilities in your students?

(Please mark one choice in each row)

		Strong emphasis	*Some emphasis*	*Little emphasis*	*No emphasis*	
a)	Accessing information efficiently	☐	☐	☐	☐	IT1G12A
b)	Evaluating the relevance of digital information	☐	☐	☐	☐	IT1G12B
c)	Displaying information for a given audience/purpose	☐	☐	☐	☐	IT1G12C
d)	Evaluating the credibility of digital information	☐	☐	☐	☐	IT1G12D
e)	Validating the accuracy of digital information	☐	☐	☐	☐	IT1G12E
f)	Sharing digital information with others	☐	☐	☐	☐	IT1G12F
g)	Using computer software to construct digital work products (e.g. presentations, documents, images and diagrams)	☐	☐	☐	☐	IT1G12G
h)	Evaluating their approach to information searches	☐	☐	☐	☐	IT1G12H
i)	Providing digital feedback on the work of others (such as classmates)	☐	☐	☐	☐	IT1G12I
j)	Exploring a range of digital resources when searching for information	☐	☐	☐	☐	IT1G12J
k)	Providing references for digital information sources	☐	☐	☐	☐	IT1G12K
l)	Understanding the consequences of making information publically available online	☐	☐	☐	☐	IT1G12L

IN YOUR SCHOOL

Q 13 To what extent do you agree or disagree with the following statements about using ICT in teaching and learning at school?

(Please mark one choice in each row)

	Using ICT at school:	*Strongly agree*	*Agree*	*Disagree*	*Strongly disagree*	
a)	Enables students to access better sources of information	☐	☐	☐	☐	IT1G13A
b)	Results in poorer writing skills among students	☐	☐	☐	☐	IT1G13B
c)	Helps students to consolidate and process information more effectively	☐	☐	☐	☐	IT1G13C
d)	Only introduces organizational problems for schools	☐	☐	☐	☐	IT1G13D
e)	Helps students learn to collaborate with other students	☐	☐	☐	☐	IT1G13E
f)	Impedes concept formation better done with real objects than computer images	☐	☐	☐	☐	IT1G13F
g)	Enables students to communicate more effectively with others	☐	☐	☐	☐	IT1G13G
h)	Only encourages copying material from published Internet sources	☐	☐	☐	☐	IT1G13H
i)	Helps students develop greater interest in learning	☐	☐	☐	☐	IT1G13I
j)	Helps students work at a level appropriate to their learning needs	☐	☐	☐	☐	IT1G13J
k)	Limits the amount of personal communication among students	☐	☐	☐	☐	IT1G13K
l)	Helps students develop skills in planning and self-regulation of their work	☐	☐	☐	☐	IT1G13L
m)	Results in poorer calculation and estimation skills among students	☐	☐	☐	☐	IT1G13M
n)	Improves academic performance of students	☐	☐	☐	☐	IT1G13N
o)	Only distracts students from learning	☐	☐	☐	☐	IT1G13O

Q 14 To what extent do you agree or disagree with the following statements about the use of ICT in teaching at your school?

(Please mark one choice in each row)

		Strongly agree	*Agree*	*Disagree*	*Strongly disagree*	
a)	ICT is not considered a priority for use in teaching.	☐	☐	☐	☐	IT1G14A
b)	My school does not have sufficient ICT equipment (e.g. computers).	☐	☐	☐	☐	IT1G14B
c)	My school does not have access to digital learning resources.	☐	☐	☐	☐	IT1G14C
d)	My school has limited connectivity (e.g. slow or unstable speed) to the Internet.	☐	☐	☐	☐	IT1G14D
e)	The computer equipment in our school is out-of-date.	☐	☐	☐	☐	IT1G14E
f)	There is not sufficient time to prepare lessons that incorporate ICT.	☐	☐	☐	☐	IT1G14F
g)	There is not sufficient provision for me to develop expertise in ICT.	☐	☐	☐	☐	IT1G14G
h)	There is not sufficient technical support to maintain ICT resources.	☐	☐	☐	☐	IT1G14H

LEARNING TO USE ICT IN TEACHING

Q 15 Have you participated in any of the following professional development activities in the past two years?

(Please mark one choice in each row)

		Yes	*No*	
a)	Introductory course on general applications (e.g. basic word processing, spreadsheets, databases)	☐	☐	IT1G15A
b)	Advanced course on general applications (e.g. advanced word processing, spreadsheets, databases)	☐	☐	IT1G15B
c)	Introductory course on Internet use (e.g. compiling Internet searches, digital resources)	☐	☐	IT1G15C
d)	Advanced course on Internet use (e.g., creating websites, building web-based resources)	☐	☐	IT1G15D
e)	Course on integrating ICT into teaching and learning	☐	☐	IT1G15E
f)	Training on subject-specific software	☐	☐	IT1G15F
g)	Observing other teachers using ICT in teaching	☐	☐	IT1G15G
h)	Course on multimedia involving use of digital video / audio equipment	☐	☐	IT1G15H
i)	Course on subject-specific digital resources	☐	☐	IT1G15I
j)	An ICT-mediated discussion or forum on teaching and learning	☐	☐	IT1G15J
k)	Sharing and evaluating digital resources with others using a collaborative work space	☐	☐	IT1G15K

Q 16 To what extent do you agree or disagree with the following practices and principles in relation to the use of ICT in teaching and learning?

(Please mark one choice in each row)

		Strongly agree	*Agree*	*Disagree*	*Strongly disagree*	
a)	I work together with other teachers on improving the use of ICT in classroom teaching.	☐	☐	☐	☐	IT1G16A
b)	There is a common set of rules in the school about how ICT should be used in classrooms.	☐	☐	☐	☐	IT1G16B
c)	I systematically collaborate with colleagues to develop ICT based lessons based on the curriculum.	☐	☐	☐	☐	IT1G16C
d)	I observe how other teachers use ICT in teaching.	☐	☐	☐	☐	IT1G16D
e)	There is a common set of expectations in the school about what students will learn about ICT.	☐	☐	☐	☐	IT1G16E

THANK YOU FOR YOUR TIME AND EFFORT IN COMPLETING THE QUESTIONNAIRE

Section 5: ICILS 2013 National Context Questionnaire

International Computer and Information Literacy Study

National Context Survey

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DO NOT CITE OR QUOTE

DPC IEA DATA PROCESSING AND RESEARCH CENTER

Secretariat

The Australian Council for Educational Research

Introduction

This survey questionnaire is addressed to National Research Coordinators (NRCs), who are asked to supply information about their country's approach to developing computer information literacy among students. This will help provide important background information for the production of an encyclopaedia of computer information literacy and for interpretation of the data collected in other parts of the International Computer and Information Literacy Study (ICILS). Your responses are vital in helping to provide a context for, and a better understanding of, the study results.

Instructions

We ask that you complete this survey questionnaire, working with others in your country as necessary (e.g., ministries and departments of education, relevant non-government organizations, specialist organizations concerned with supporting the application of educational technologies, and teachers associations).

It is important that you answer each question carefully and concisely and provide additional information where requested so that an accurate picture of your country's approach to computer information literacy is presented, particularly in relation to the target population (typically Grade 8).

In order to help you to complete the survey as accurately and concisely as possible there are accompanying **Notes for Guidance**. It is recommended that you read these first before beginning to complete the survey and refer to them when answering the questions in the sections of the survey.

Section C contains questions about ICT and learning at the lower secondary level (ISCED 2). In some countries, lower secondary education is taught as the second phase of primary or basic education. In this case, the questions should be answered with respect to the grades pertaining to this second phase of primary/basic education. Please refer to the UNESCO ISCED-97 classification to identify the corresponding study program in your country or education system: http://www.uis.unesco.org/Library/Documents/isced97-en.pdf

Please complete this questionnaire at the latest by January 31, 2014. Once you finished the questionnaire, please inform the ICILS International Study Center at ACER by sending a brief confirmation email to icils@acer.edu.au.

Section A. Education System

Governance and organization

1. Which of the following statements best characterizes the school education system in your country?

(Please mark only one choice) IN1G01

a. Responsibility for school education rests primarily with national ministry or department of education ❑

b. Responsibility for school education rests primarily with state or provincial jurisdictions ❑

c. There is an even balance of responsibility for school education between national and state/provincial authorities ❑

d. Other – please describe below: ❑

Comments:

Please elaborate your answer to Question 1 by describing the responsibility at national and state/provincial level for the provision of school education in your country. IN1G01T

Structure of school education

2. For what ages is school education compulsory in your country?

*(Please write a number in **each** box)*

a. At what age does compulsory education begin? IN1G02A

b. How many years of compulsory education are there? IN1G02B

3. Please outline the main characteristics of the institutions in which the following phases/cycles of education are provided in your country

(a) Education at the primary level <ISCED 1> (from age 5 upwards to around 11 years old)

You may need to differentiate and explain different types of school that operate. It would also be helpful to indicate the ways in which education for students with special needs is provided (e.g. mainly in special schools, in special classes within comprehensive schools or through an integrated system).If ISCED 2 level of education is provided in a program/institution with ISCED level 1, please report the second phase of the educational level under this question.

IN1G03AT

(b) Education at the lower secondary level <ISCED 2> (from age 11 to around 14/15 years old)

You may need to differentiate and explain different strands, tracks or programmes that exist at institutional level. This could include strands, tracks or programmes concerning:

- *General education*
- *Pre-vocational/pre-technical education*
- *Vocational or technical education*

IN1G03BT

(c) Education at the upper secondary level <ISCED 3> (from age 14/15 to around 17/18 years old)

You may need to differentiate and explain different strands, tracks or programmes that exist at institutional level. This could include strands, tracks or programmes concerning:

- *General education*
- *Pre-vocational/pre-technical education*
- *Vocational or technical education*

IN1G03CT

(d) The institutions in which education of the target grade mainly takes place).

In this response please indicate whether the target grade is most often located in an institution that provides primary and lower secondary education, lower secondary education only, or lower secondary and upper secondary education. It would be helpful to indicate the lowest grade and the highest grade included in the institutions that most often include the target grade and whether those institutions are comprehensive or specialized.

IN1G03DT

4. What is the approximate percentage of government (public) and non-government (private) schools that provide education at the <ISCED 2> level in your country?

*(Please write a percentage in **each** box and ensure that the percentages add to 100.)*

a.	Public/government schools	%	IN1G04A
b.	Private schools	%	IN1G04B
c.	Other schools (please describe):	%	IN1G04C
	100	%	

Please use this space to elaborate your response. IN1G04CT

5. On the basis of the year with the most recent data, what is the percentage of target grade students in:

*(Please write a percentage in **each** box and ensure that the percentages add to 100.)*

a.	Public/government schools	%	IN1G05A
b.	Private schools	%	IN1G05B
c.	Other schools	%	IN1G05C
		100 %	

Please use this space to elaborate your response and indicate the year in which that most recent data were collected. IN1G05CT

6. How much autonomy do schools with students in the target grade have in relation to:

*(Please mark one choice on **each** row)*

		Complete autonomy	Some autonomy	No autonomy	
a.	School governance (e.g. school governing bodies/elected school boards)	❑	❑	❑	IN1G06A
b.	Acquisition/purchase of ICT equipment and software	❑	❑	❑	IN1G06B
c.	Provision of opportunities for staff to participate in in-service education in the use of ICT	❑	❑	❑	IN1G06C
d.	ICT curriculum planning and delivery	❑	❑	❑	IN1G06D
e.	Teacher recruitment	❑	❑	❑	IN1G06E
f.	Student assessment	❑	❑	❑	IN1G06F
g.	Technical support for ICT	❑	❑	❑	IN1G06G

Comments:

Please use this space to elaborate your response. IN1G06GT

Section B. Plans and Policies for Using ICT in Education

7. Are there plans or policies supporting the use of ICT in education?

(Please mark only one choice) IN1G07

- ❑ Yes, at the national and state/provincial level
- ❑ Yes, only at the national level
- ❑ Yes, only at the state/provincial level
- ❑ No, neither at the national or state/provincial level → **If <u>no</u>, you will be directed to question 14 after clicking the Next-button**

Comments:

Please use this space to elaborate your response. IN1G07T

8. What are the key documents that outline the plans and policies for supporting the use of ICT in school education in your country?

*(Please provide a URL for **each** document if possible.)* IN1G08T

9. Do the plans or policies for using ICT in education make reference to improving student learning with specific mention of:

*(Please mark one choice on **each** row)*

		Yes	No	
a)	Subject matter content (Mathematics, Science, etc.)	❑	❑	IN1G09A
b)	Preparing students for using ICT in their future work	❑	❑	IN1G09B
c)	Developing information literacy	❑	❑	IN1G09C
d)	ICT-based skills in critical thinking, collaboration and communication	❑	❑	IN1G09D
e)	Increasing access to online courses of study (e.g. for rural students)	❑	❑	IN1G09E

Comments:

Please use this space to elaborate your response. IN1G09T

10. Do the plans or policies for using ICT in education make reference to the following resources?

*(Please mark one choice on **each** row)*

		Yes	No	
a)	Provision of computer equipment and other ICT resources	❑	❑	IN1G10A
b)	Maintenance of computer equipment and other ICT resources	❑	❑	IN1G10B
c)	Renewal, updating and replacement of computer equipment and other ICT resources	❑	❑	IN1G10C
d)	Support for teachers for using computer equipment and other ICT resources in their work	❑	❑	IN1G10D
e)	Access to digital educational resources	❑	❑	IN1G10E
f)	Internet connectivity	❑	❑	IN1G10F
g)	Home access to school-based digital education resources	❑	❑	IN1G10G

Comments:

Please use this space to elaborate your response. IN1G10T

11. Do the plans or policies for using ICT in education make reference to the following methods of supporting student learning?

*(Please mark one choice on **each** row)*

		Yes	No	
a)	Pre-service teacher education in the use of ICT	❑	❑	IN1G11A
b)	In-service teacher education in the use of ICT	❑	❑	IN1G11B
c)	The use of learning management systems	❑	❑	IN1G11C
d)	Reporting to parents	❑	❑	IN1G11D
e)	Providing feedback to students	❑	❑	IN1G11E

Comments:

Please use this space to elaborate your response. IN1G11ET

12. Please identify the main priorities in the plans and policies for the use of ICT in education.

IN1G12T

13. Do the plans and/or policies for using ICT in education refer to providing 1:1 computing in schools?

(Please mark only one choice) IN1G13

- ❑ Yes, plans and/or policies for ICT in education refer to providing 1:1 computing in schools.
- ❑ No, plans and/or policies for ICT in education do not refer to providing 1:1 computing in schools.

Comments:

Please indicate the targets for computer provision in schools or indicate that there are no targets. IN1G13T

14. Is there formal support for the development of digital resources (e.g. digital curriculum resources or learning objects) through government agencies, incentives for other agencies, or encouragement to publishers to produce these resources?

(Please mark only one choice) IN1G14

- ❑ Yes, there is formal support for the development of digital resources.
- ❑ No, there is no formal support for the development of digital resources

Comments:

Please use this space to describe any support for the development of digital resources.

IN1G14T

15. To what extent is provision made and support provided for teaching information literacy using ICT in your country?

IN1G15T

16. Are any ICT-related subjects (such as ICT Study or Computer Studies) offered as a separate subject to students in your country?

*(Please mark one choice on **each** row)*

	Yes, as a compulsory subject	Yes, as a non-compulsory subject	No	If yes, please provide the name of the subject in English.
a) At the level of primary education (ISCED 1) IN1G16AA	❑	❑	❑	IN1G16AB
b) At the level of lower secondary education (ISCED 2) IN1G16BA	❑	❑	❑	IN1G16BB
c) At the level of upper secondary education (ISCED 3) IN1G16CA	❑	❑	❑	IN1G16CB

17. Are there any requirements regarding the assessment and monitoring of ICT and computing related skills of students in the target grade?

(Please mark only one choice) IN1G17

❑ Yes, using a compulsory assessment at the national and/or state/provincial level

❑ Yes, using a non-compulsory common assessment

❑ Yes, but assessment is controlled at the school level

❑ There is no formal requirement for assessing students in this area

Comments:

Please use this space to elaborate your response. IN1G17T

Section C. ICT and STUDENT LEARNING AT LOWER SECONDARY LEVEL (<ISCED 2>)

In responding to the questions in this section please use the response categories to indicate your general answer for <ISCED 2>. In addition please use the comment boxes to indicate:

- whether the national or state/provincial education authorities regard the issue as priority;
- whether there are any projects/programs that promote these practices (and, if possible briefly describe these projects or programs); and
- whether national and/or state or provincial education authorities collect data on the extent of the practice.

18. To what extent is the use of ICT for collaboration at school supported by national and/or state/provincial education authorities?

*(Please mark one choice on **each** row)*

	To a large extent	To some extent	Not at all	
a) Among teachers	❑	❑	❑	IN1G18A
b) Among students within the school	❑	❑	❑	IN1G18B
c) Among students in different schools	❑	❑	❑	IN1G18C
d) Among teachers and students in different schools	❑	❑	❑	IN1G18D
e) Among teachers and students within the school	❑	❑	❑	IN1G18E
f) With experts/authorities outside of schools	❑	❑	❑	IN1G18F
g) With learning partners outside the school	❑	❑	❑	IN1G18G
h) With students or teachers in other countries	❑	❑	❑	IN1G18H

Comments:

Please comment on whether collaboration is a priority and on any examples of programs of collaboration. IN1G18T

19. Have ministries or departments of education at either national or state/provincial level used, or supported the use of, ICT for provision of the following types of student assessment?

*(Please mark one choice on **each** row)*

	Yes	No	
a) Diagnostic assessments	❑	❑	IN1G19A
b) Formative assessments	❑	❑	IN1G19B
c) Summative assessments	❑	❑	IN1G19C
d) National or state/provincial monitoring programs	❑	❑	IN1G19D
e) Digital work products (e.g. e-portfolios)	❑	❑	IN1G19E

Comments:

*Please give examples for **each** assessment type for which you have selected Yes.*
IN1G19T

20. To what extent is the use of ICT in extended project work encouraged and supported in your country?

(Please mark only one choice) IN1G20

❑ To a large extent

❑ To some extent

❑ Not at all

Comments:

Please comment on the learning areas in which ICT supported extended project work is most strongly encouraged and how that encouragement is provided. IN1G20T

Section D. ICT and TEACHER DEVELOPMENT

Please indicate the extent to which ICT is used to support teacher development through training, collaboration and access to support delivered over the Internet.

In responding to the questions in this section please use the response categories to indicate your general answer. In addition please use the comment boxes to indicate:

- *whether national or state/provincial education authorities regard the issue as priority; and*
- *whether there are any initiatives, projects, or programs in which ICT is used to support teacher development (and, if possible briefly describe these initiatives, projects or programs).*

21. How do ministries or departments of education at either national or state/provincial level support and/or require the development of teacher capacity to use ICT with regard to the following areas?

*(Please mark as many choices as apply in **each** row)*

	Pre-service teacher education	Requirements for registration as a teacher	In-service teacher education or training
a) Technical capacity in using ICT	IN1G21AA	IN1G21AB	IN1G21AC
b) Using ICT in pedagogy	IN1G21BA	IN1G21BB	IN1G21BC
c) Collaboration and communication using ICT	IN1G21CA	IN1G21CB	IN1G21CC
d) Using ICT for student assessment	IN1G21DA	IN1G21DB	IN1G21DC

Comments:

Please describe the ways in which teacher development in these areas is provided or required. IN1G21T

22. To what extent do ministries or departments of education at national and/or state/provincial level support teacher access to, and participation in, ICT-based professional development for the following purposes?

*(Please mark one choice on **each** row)*

	To a large extent	To some extent	Not at all	
a) To improve ICT/technical skills	❑	❑	❑	IN1G22A
b) To improve content knowledge	❑	❑	❑	IN1G22B
c) To improve teaching skills	❑	❑	❑	IN1G22C
d) To develop digital resources	❑	❑	❑	IN1G22D
e) To integrate ICT in teaching and learning activities	❑	❑	❑	IN1G22E

Comments:

Please comment with examples of programs: IN1G22T

Section E. ICT-BASED LEARNING AND ADMINISTRATIVE MANAGEMENT SYSTEMS

Please indicate the extent to which ICT is used to support learning and administrative management systems.

In responding to the questions in this section please use the response categories to indicate your general answer. In addition please use the comment boxes to indicate:

- *whether the national or state/provincial education authorities regard the issue as priority; and*
- *whether there are any projects or programs that promote these practices (and, if possible briefly describe these projects or programs).*

23. Do ministries or departments of education at national and/or state/provincial level use ICT-based data systems for the following purposes?

*(Please mark one choice on **each** row)*

		Yes	No	
a)	Collecting, analyzing and reporting student achievement data at various levels of aggregation	❑	❑	IN1G23A
b)	Providing links to examples of student work and teaching resources that are related to achievement data	❑	❑	IN1G23B
c)	Providing tools for analysis of data about the school and its environment	❑	❑	IN1G23C

Comments:

Please give examples: IN1G23T

24. Do ministries or departments of education at either national or state/provincial level provide training for teachers in the use of ICT for the analysis of achievement data to support teaching and learning with regard to the following aspects?

*(Please mark one choice on **each** row)*

	Yes	No	
a) Interpreting data at school, class and/or student level	❑	❑	IN1G24A
b) Linking data to instructional decisions	❑	❑	IN1G24B
c) Use of data to monitor student progress over time.	❑	❑	IN1G24C

Comments:

Please give examples: IN1G24T

25. Please list the main sources of information that you used to answer this questionnaire.

Sources: IN1G25T

THANK YOU

for taking the time to complete this questionnaire survey.
Your response is very important to us.

APPENDIX 2:

National adaptations of international questionnaires

Overview

This appendix describes national adaptations made to the international version of the ICILS 2013 questionnaires. This information provides users with a guide to evaluate the availability of internationally comparable data for use in secondary analyses involving the ICILS 2013 questionnaire variables. The adaptations to questionnaires are presented in two sections: (i) general or common cultural adaptations and variables; and (ii) adaptations specific to individual systems.

General adaptations

General adaptations relate to text passages in the international English version of the instruments for which it was mandatory (or at least highly likely) to adapt them to the specific national settings and terminology. Mandatory cultural adaptations were indicated using angle brackets (< >) in the international English version, for instance, the term <Target grade>, which was used in the ICT-coordinator, principal, and teacher questionnaires, respectively. The tables in this section include descriptions or back-translations into English of those instances where the version of the question administered in a national version differed from the version of the question as it appeared in the international version of the questionnaires.

Adaptations of <Target grade>

Country	Adaptation
ABA	First year
AUS	Year 8
CAN	Grade 8 (Secondary II)
CHE	*French/German 8th year of school *Italian 8th grade
CHL	Grade 8
CZE	Grade 8 (corresponding grade of multiyear gymnasium)
DEU	8th grade
DNK	Grade 8
HKG	Secondary 2
HRV	Grade 8
KOR	Grade 8
LTU	Grade 8
NLD	Grade 8
NOR	Grade 9
POL	Second grade of gymnasium
RUS	Grade 8
SVK	8th grade (or in the 3rd grade of eight-year grammar school)
SVN	8th grade
THA	Grade 8
TUR	8th grade

Adaptations of <Job>

Country	Adaptation
ABA	Job
AUS	Job
CAN	Job
CHE	Job
CHL	Job
CZE	Job
DEU	Job
DNK	Job
HKG	Job
HRV	Job
KOR	Job
LTU	Job
NLD	Job
NOR	Job
POL	Job
RUS	Job
SVK	Job
SVN	Job
THA	Job
TUR	Job

Adaptations of <Female guardian>

Country	Adaptation
ABA	Guardian
AUS	Female guardian
CAN	Female guardian
CHE	*French Female guardian *German Psychological mother (e.g., stepmother, foster mother) *Italian Feminine legal parent
CHL	Female guardian
CZE	Female guardian
DEU	Female guardian (e.g., stepmother or foster mother)
DNK	Female guardian
HKG	Female guardian
HRV	Female guardian
KOR	Female guardian
LTU	Female guardian
NLD	Stepmother or foster mother
NOR	Female guardian
POL	Female guardian
RUS	Female guardian
SVK	Female guardian
SVN	Stepmother or female guardian
THA	Female guardian
TUR	Female guardian

Adaptations of <Male guardian>

Country	Adaptation
ABA	Guardian
AUS	Male guardian
CAN	Male guardian
CHE	*French Male guardian *German Psychological father (e.g., stepfather, foster father) *Italian Masculine legal parent
CHL	Male guardian
CZE	Male guardian
DEU	Male guardian (e.g., stepfather or foster father)
DNK	Male guardian
HKG	Male guardian
HRV	Male guardian
KOR	Male guardian
LTU	Male guardian
NLD	Stepfather or foster father
NOR	Male guardian
POL	Male guardian
RUS	Male guardian
SVK	Male guardian
SVN	Stepfather or male guardian
THA	Male guardian
TUR	Male guardian

Adaptations specific to individual systems

Questionnaire adaptations include questions that countries were required to adapt, questions that were not administered, and questions that countries modified to suit their national context. National adaptations are presented in the following four sections, which correspond to the ICILS 2013 questionnaire types.

Section 1: Student questionnaire

Section 2: Principal questionnaire

Section 3: ICT-coordinator questionnaire

Section 4: Teacher questionnaire

For each question that was adapted, a national entry is included if the version of the question administered in a country was different from the international version. For each question, the following is provided:

- Question number
- Question stem and response options
- Variable name(s)
- National adaptation, listed by country.

Each entry was assigned either Code D or Code X. The two codes represent the following meanings:

Code D:	National data for the country are included in the international database. This code is used for questions that are considered comparable to the international version.
Code X:	National data for the country are not included in the international database. This code is used for questions that were not administered, not applicable, or deleted for any of several reasons (e.g., not internationally comparable, removed per country request, removed due to other data problems).

List of country-specific adaptations to the student questionnaire sorted by question group, country, and location

Question group	Country	Location	Code	Adaptation: Language of test	Adaptation: English backtranslation
StQ-02	Argentina, Buenos Aires	StQ-02	D	Stem of the question changed: ¿Eres mujer o varón? Nationally defined categories: 1 = Mujer 2 = Varón	Stem of the question changed: Are you a woman or a man? Nationally defined categories: 1 = Woman 2 = Man
StQ-03	Argentina, Buenos Aires	StQ-03	D	Nationally defined categories: 1 = Estudios de educación superior en la universidad o estudios de postgrado (magíster o doctorado) 2 = Estudios de nivel terciario o formación profesional 3 = Enseñanza secundaria 4 = 2° año 5 = No espero completar 2° año de educación secundaria	Nationally defined categories: 1 = University studies, PhD 2 = Tertiary studies 3 = Secondary studies 4 = Second year of secondary school 5 = I do not expect to complete second year of secondary school
StQ-03	Australia	StQ-03	D	Nationally defined categories: 1 = A university degree (Bachelor, Graduate Diploma, Masters or doctorate) 2 = A TAFE training diploma (e.g. Diploma in Accounting) or a TAFE certificate (e.g. Hairdressing) 3 = Year 12 or a Year 12 equivalent 4 = Completion of Year 10 5 = More than Year 10	Nationally defined categories: 1 = A university degree (Bachelor, Graduate Diploma, Master's, or doctorate) 2 = A TAFE training diploma (e.g., Diploma in Accounting) or a TAFE certificate (e.g., Hairdressing) 3 = Year 12 or a Year 12 equivalent 4 = Completion of Year 10 5 = More than Year 10
StQ-03	Canada	StQ-03	D	Nationally defined categories: 1 = University degree 2 = College or cégep diploma 3 = Trades or vocational diploma 4 = High school diploma or equivalent 5 = Grade 9/Secondary 3 6 = I do not expect to complete Grade 9/Secondary 3 Nationally defined categories: 1 = Diplôme universitaire	National categories recoded for international comparability: 1 = University degree/General or vocational college diploma 2 = Trades or vocational diploma 3 = High school diploma or equivalent 4 = Grade 9/Secondary 3 5 = I do not expect to complete Grade 9/Secondary 3

				2 = Diplôme de collège ou de cégep 3 = Diplôme d'une école de métier ou de formation professionnelle 4 = Diplôme d'études secondaires ou l'équivalent 5 = 9e année/3e année du secondaire 6 = Je ne pense pas terminer la 9e année/3e année du secondaire	
StQ-03	Chile	StQ-03	D	Nationally defined categories: 1 = Estudios de educación superior en la universidad o estudios de postgrado (magíster o doctorado) 2 = Estudios en un instituto profesional o centro de formación técnica 3 = Enseñanza media 5 = No espero terminar enseñanza media	National categories recoded for international comparability: 1 = College education (four to five years) or postgraduate studies (Master's or PhD) 2 = Practical or technical tertiary programs 3 = Upper-secondary (general and prevocational programs) 4 = I do not expect to complete ISCED Level 3 5 = Category not administered or data not available
StQ-03	Croatia	StQ-03	D	Nationally defined categories: 1 = Diplomski ili poslijediplomski studij 2 = Viša škola ili preddiplomski studij 3 = Srednja škola 4 = Osnovna škola 5 = Ne očekujem da ću završiti osnovnu školu osnovna škola	Nationally defined categories: 1 = Master's degree or PhD 2 = Professional Bachelor's or vocational education 3 = Secondary school 4 = Primary school 5 = I do not expect to complete primary school
StQ-03	Czech Republic	StQ-03	D	Nationally defined categories: 1 = Vysoká škola 2 = Vyšší odborná škola nebo konzervatoř 3 = Nástavbové studium 4 = Střední odborná škola - maturita 5 = Střední odborná škola bez maturity - vyučení 6 = Gymnázium - maturita 7 = Základní škola 8 = Neplánuji dokončit ani základní školu	National categories recoded for international comparability: 1 = University 2 = Higher professional school or conservatory/Extension study 3 = Vocational or technical upper-secondary education with graduation/Vocational or technical upper-secondary education without graduation/General upper-secondary education with graduation 4 = Basic school 5 = I do not expect to complete basic school
StQ-03	Denmark	StQ-03	D	Nationally defined categories: 1 = Bachelor, kandidat- eller ph.d.-uddannelse (f.eks. lærer, læge, jurist) 2 = Erhvervsakademi- eller kortere videregående uddannelse (f.eks. laborant, datamatiker, bankrådgiver) 3 = Gymnasial uddannelse eller erhvervsuddannelse (f.eks. stx, EUD, hhx, htx, sosu, murer, vvs) 4 = Grundskolen (f.eks. folkeskolen) 5 = Jeg forventer ikke at gennemføre grundskolens afgangsprøve	Nationally defined categories: 1 = Bachelor's, Master's, or PhD degree (e.g., teacher, lawyer, or doctor) 2 = Vocational academy or short further education (e.g., laboratory technician, information technologist, bank adviser) 3 = Upper-secondary education or vocational education (e.g., stx, EUD, hhx, htx, sosu, bricklayer, plumber) 4 = Basic school (e.g., municipal school) 5 = I do not expect to complete basic school's final examination
StQ-03	Germany	StQ-03	D	Nationally defined categories: 1 = Promotion (Doktortitel) 2 = Universitätsabschluss/Fachhochschulabschluss	National categories recoded for international comparability: 1 = Doctoral degree/University diploma/Diploma at a university of applied science

				3 = Abitur/Hochschulreife/Fachhochschulreife 4 = Abschluss Abendgymnasium/Fachoberschule/ Berufsoberschule/Technische Oberschule 5 = Abschluss Berufsakademie/Verwaltungsfachhochschule/ Fachschule 6 = Berufsschule/Berufsfachschule/Berufsgrundbildungsjahr 7 = Realschulabschluss/Hauptschulabschluss nach Klasse 10 8 = Hauptschulabschluss nach Klasse 9 9 = Abschluss einer Sonderschule/Förderschule 10 = Ich erwarte nicht, einen Schulabschluss zu erhalten	2 = University entrance qualification (evening schools)/ Specialized vocational high school/Vocational secondary school/ Technical secondary school/Diploma at a vocational academy/ College of public administration/Trade and technical school 3 = University entrance qualification/University of applied science entrance qualification/Dual system/Specialized vocational school/ Basic vocational training year 4 = Lower-secondary school/Polytechnic secondary school after Grade 10/Lower-secondary school/Polytechnic secondary school after Grade 8/Elementary school/Finished special school/Special-needs school 5 = I do not expect to reach a degree
StQ-03	Hong Kong SAR	StQ-03	D	Nationally defined categories: 1 = 大学学位，硕士学位，博士学位 2 = 副学士，文凭，高级文凭 3 = 高中 4 = 初中 5 = 不期望能完成初中 Nationally defined categories: 1 = 大學學位，碩士學位，博士學位 2 = 副學士，文憑，高級文憑 3 = 高中 4 = 初中 5 = 不期望能完成初中 Nationally defined categories: 1 = Bachelor's Degree, Master's Degree, Doctoral Degree 2 = Associate Diploma, Diploma / Certificate, Higher Diploma 3 = Senior Secondary School 4 = Junior Secondary School 5 = I do not expect to complete Junior Secondary School	Nationally defined categories: 1 = Bachelor's degree, Master's degree, doctoral degree 2 = Associate diploma, Diploma/Certificate, Higher diploma 3 = Senior secondary school 4 = Junior secondary school 5 = I do not expect to complete junior secondary school
StQ-03	Korea, Republic of	StQ-03	D	Stem of the question changed: 여러분은 어느 단계까지 공부할 생각입니까? Nationally defined categories: 1 = 대학교 또는 대학원 2 = 전문대학 3 = 고등학교	Stem of the question changed: What step do you think you will study to? Nationally defined categories: 1 = University or graduate school 2 = College 3 = High school

				4 = 중학교 5 = 나는 중학교를 졸업하지 못할 것 같다	4 = Middle school 5 = I do not expect to complete middle school
StQ-03	Lithuania	StQ-03	D	Stem of the question changed: Kokį išsilavinimą Jūs planuojate įgyti? Question instruction changed: Pasirinkite tik vieną atsakymą, nurodantį aukščiausią planuojamą įgyti išsilavinimo lygį Nationally defined categories: 1 = Aukštasis universitetinis išsilavinimas arba daktaro laipsnis 2 = Povidurinis (profesinis) arba aukštasis neuniversitetinis (technikumo, kolegijos) išsilavinimas 3 = Vidurinis išsilavinimas 4 = Pagrindinis išsilavinimas 5 = Neplanuoju baigti pagrindinės mokyklos	Stem of the question changed: What education level do you expect to complete? Question instruction changed: Mark one; highest level of education you are planning to acquire Nationally defined categories: 1 = Higher education in university or doctoral degree 2 = Postsecondary (professional) education or nonuniversity higher education (college) 3 = Secondary education 4 = Basic school education 5 = I do not expect to complete basic school
StQ-03	Netherlands	StQ-03	D	Nationally defined categories: 1 = Universitaire opleiding 2 = HBO-opleiding (hoger beroepsonderwijs) 3 = HAVO, VWO of MBO (middelbaar beroepsonderwijs) 4 = Een VMBO-opleiding (lager beroepsonderwijs) of alleen de eerste drie jaar van HAVO of VWO afronden (en niet verder leren) 5 = Ik denk niet dat ik een VMBO-diploma zal halen of de eerste drie jaar van de HAVO of VWO zal afronden	Nationally defined categories: 1 = University 2 = Higher vocational education 3 = Senior general education, preuniversity education, vocational secondary education 4 = Prevocational secondary education or only the first three years of HAVO/VWO 5 = I do not expect to complete prevocational secondary education or only the first three years of HAVO/VWO
StQ-03	Norway	StQ-03	D	Utdanning Nationally defined categories: 1 = Høyskole eller universitet i 3 år eller mer 2 = Kort utdanning etter videregående skole på 1 til 2 år 3 = Videregående skole 4 = Ungdomsskolen 5 = Jeg regner ikke med å fullføre ungdomsskolen Utdanning Nationally defined categories: 1 = Høgskule eller universitet i 3 år eller meir 2 = Kort utdanning etter vidaregåande skule på 1 til 2 år 3 = Vidaregåande skule	Education Nationally defined categories: 1 = University college or university (3 years or more) 2 = Tertiary education after upper-secondary school (1 to 2 years) 3 = Upper-secondary education 4 = Lower-secondary school 5 = I do not expect to complete lower-secondary school

				4 = Ungdomsskulen 5 = Eg reknar ikkje med å fullføre ungdomsskulen	
StQ-03	Poland	StQ-03	D	Nationally defined categories: 1 = Doktorat 2 = Studia magisterskie 3 = Studia licencjackie/inżynierskie (niemagisterskie) 4 = Szkoła policealna/pomaturalna 5 = Technikum 6 = Liceum ogólnokształcące/liceum profilowane 7 = Szkoła zawodowa 8 = Gimnazjum 9 = Nie oczekuję, że ukończę gimnazjum	National categories recoded for international comparability: 1 = Doctoral studies/Master's studies/Bachelor's, Engineer's studies (non-Master's) 2 = Postsecondary schools 3 = Upper-secondary technical school/General upper-secondary school/Upper-secondary specialized school/Basic vocational school 4 = Middle school 5 = I do not expect to complete middle school
StQ-03	Russian Federation	StQ-03	D	Образование Nationally defined categories: 1 = Высшее профессиональное образование 2 = Среднее профессиональное образование 3 = Среднее (полное) общее образование или начальное профессиональное образование 4 = Основное общее образование 5 = Я не рассчитываю получить основное общее образование	Education Nationally defined categories: 1 = Higher professional education 2 = Vocational education 3 = Secondary (full) comprehensive/general education or initial vocational education 4 = Basic comprehensive/general education 5 = I do not expect to complete basic comprehensive/general education
StQ-03	Slovak Republic	StQ-03	D	Nationally defined categories: 1 = Egyetemi végzettség 2 = Felsőfokú szakvizsga vagy érettségi utáni felépítményi szakképesítés 3 = Érettségi vizsgával végződő középiskolai végzettség 4 = Középiskolai végzettség szakmunkás-bizonyítvánnyal 5 = Alapfokú végzettség (az alapiskola felső tagozata) 6 = Nem gondolom, hogy befejezem az alapfokú végzettséget (az alapiskola felső tagozatát) Nationally defined categories: 1 = Vysokoškolské vzdelanie 2 = Vyššie odborné alebo pomaturitné kvalifikačné vzdelanie 3 = Stredoškolské vzdelanie s maturitou 4 = Stredoškolské vzdelanie s výučným listom 5 = Základné vzdelanie (druhý stupeň základnej školy) 6 = Myslím si, že neukončím základné vzdelanie (druhý stupeň základnej školy)	National categories recoded for international comparability: 1 = University education 2 = Professional or higher education after graduation at the secondary school 3 = Secondary education with school-leaving examination/ Secondary education with professional certificate 4 = Elementary education (second stage of elementary school) 5 = I think that I will not complete elementary education (second stage of elementary school)

StQ-03	Slovenia	StQ-03	D	Nationally defined categories: 1 = Po srednji šoli bom končal visokošolski univerzitetni študij (tri- do petletni) ali več (npr. doktorat) 2 = Po srednji šoli se bom še poklicno izpopolnjeval ali pa bom končal študij na višji strokovni šoli (dve ali največ tri leta) 3 = Končal bom srednjo šolo 4 = Končal bom osnovno šolo 5 = Pričakujem, da ne bom dokončal/-a osnovne šole	Nationally defined categories: 1 = I will complete high university study (i.e., three to five years) or higher 2 = I will complete vocational specialization after high school or I will study at a higher vocational school (i.e., two years of study after high school) 3 = Secondary school education 4 = I will complete primary school education 5 = I do not expect to finish primary school
StQ-03	Switzerland	StQ-03	D	Nationally defined categories: 1 = Universités, Hautes écoles spécialisées, Hautes écoles pédagogiques 2 = Enseignement supérieur technique et professionnel (par ex. Diplôme fédéral, maîtrise) 3 = Diplôme de maturité académique (Lycée/Collège) 4 = Apprentissage, Diplôme d'une école de métier ou de formation professionnelle 5 = 3ème année du Cycle 3 (9ème année/3ème C.O/11CO) 6 = Je ne pense pas achever la 3ème année du Cycle 3 (9ème année/3ème CO/11CO) Abschlüsse Nationally defined categories: 1 = Universität, Fachhochschule, Pädagogische Hochschule 2 = Höhere Fach- und Berufsbildung (z.B. eidg. Fachausweis, Meisterdiplom) 3 = Maturität (inklusive Berufsmaturität) 4 = Fachmittelschule, Berufslehre oder Berufsschule 5 = Sekundarstufe I (Sekundarschule z.B. Werk-, Real-, Bezirks-, Orientierungs-, Oberschule oder Untergymnasium) 6 = Ich rechne nicht damit, die Sekundarschule abzuschliessen Livelli di istruzione Nationally defined categories: 1 = Università, scuole universitarie professionali, alte scuole pedagogiche 2 = Istruzione superiore tecnica professionale 3 = Scuole di maturità (incluse maturità professionali) 4 = Scuole medie professionali a tempo pieno, apprendistato	*French/German National categories recoded for international comparability: 1 = University, University of applied sciences, College of education 2 = Higher professional and vocational training (e.g., federal certificate, diploma for instruction) 3 = Maturity (including vocational maturity)/Middle school for vocational training, vocational training, vocational school 4 = Secondary Level I 5 = I don't expect to complete secondary school *German Certificates *Italian Graduations National categories recoded for international comparability: 1 = University, University of applied science, teacher training college 2 = Schools of maturity (including professional maturity) 3 = Matura (including professional baccalaureate)/School for general knowledge leading to a specific professional domain, apprenticeship 4 = Secondary school 5 = I don't expect to complete secondary school

				5 = Scuole medie 6 = Non prevedo di terminare la scuola media	
StQ-03	Thailand	StQ-03	D	Nationally defined categories: 1 = ปริญญาตรี หรือ สูงกว่า 2 = อนุปริญญา หรือ ปวส. 3 = มัธยมศึกษาตอนปลาย (ม.6) หรือ ปวช. 4 = มัธยมศึกษาตอนต้น (ม.3) 5 = มัธยมศึกษาตอนต้น (ม.3)	Nationally defined categories: 1 = Bachelor's degree or higher 2 = Diploma in postsecondary programs or practical/technical/occupational programs 3 = High school (Grade 12) or similar 4 = Middle school (Grade 9) 5 = I do not expect to complete middle school (Grade 9)
StQ-03	Turkey	StQ-03	D	Nationally defined categories: 1 = Üniversite veya Yüksek Lisans/Doktora 2 = Meslek Yüksek Okulu 3 = Gelen Lise/Meslek Lisesi 4 = Ortaokul 5 = Ortaokulu tamamlamayı beklemiyorum	Nationally defined categories: 1 = University or Master's/PhD 2 = Vocational school of higher education 3 = General/Vocational high school 4 = Secondary school 5 = I do not expect to complete secondary school
StQ-04A-C	Argentina, Buenos Aires	StQ-04A-C	D	Nationally defined categories: 1 = Argentina 2 = Paises limítrofes (Uruguay, Paraguay, Brasil, Bolivia, Chile) 3 = Otros países latinoamericanos 4 = Otro país	National categories recoded for international comparability: 0 = Bordering countries (Uruguay, Paraguay, Brazil, Bolivia, Chile)/Other Latin American countries/Another country 1 = Argentina
StQ-04A-C	Australia	StQ-04A-C	D	Nationally defined categories: 1 = Australia 4 = Another country	National categories recoded for international comparability: 0 = Another country 1 = Australia
StQ-04A-C	Canada	StQ-04A-C	D	Nationally defined categories: 1 = Canada 2 = Another country Nationally defined categories: 1 = Canada 2 = Un autre pays	National categories recoded for international comparability: 0 = Another country 1 = Canada
StQ-04A-C	Chile	StQ-04A-C	D	Nationally defined categories: 1 = Chile 2 = Otro país	National categories recoded for international comparability: 0 = Another country 1 = Chile
StQ-04A-C	Croatia	StQ-04A-C	D	Nationally defined categories: 1 = Republika Hrvatska 2 = Bosna i Hercegovina 3 = U jednoj od ostalih republika bivše Jugoslavije 4 = Neka druga zemlja	National categories recoded for international comparability: 0 = Bosnia and Herzegovina/In one of the rest of the former republics of Yugoslavia/Another country 1 = Republic of Croatia

StQ-04A-C	Czech Republic	StQ-04A-C	D	Nationally defined categories: 1 = Česká republika 2 = Slovensko 3 = Ukrajina 4 = Vietnam 5 = Ruská federace 6 = Jiná země	National categories recoded for international comparability: 0 = Slovak Republic/Ukraine/Vietnam/Russian Federation/Another country 1 = Czech Republic
StQ-04A-C	Denmark	StQ-04A-C	D	Nationally defined categories: 1 = Danmark 2 = Andet nordisk land (Island, Norge, Sverige, Færøerne) 3 = Andet europæisk land (Tyskland, Storbritannien, Polen, Rumænien, Litauen, Ukraine, Bosnien-Hercegovina, eks-Jugoslavien, osv.) 4 = Mellemøsten og Eurasien (Tyrkiet, Irak, Libanon, Iran, Afghanistan, Marokko, osv.) 5 = Afrika (Somalia, Uganda, Ghana, Etiopien osv.) 6 = Asien (Kina, Pakistan, Vietnam, Sri Lanka, Thailand, Filippinerne, Indien, osv.) 7 = Andet land	National categories recoded for international comparability: 0 = Other Nordic country (Iceland, Norway, Sweden, Faroe Islands)/Other European country (Germany, UK, Poland, Romania, Lithuania, Ukraine, Bosnia and Herzegovina, the former Yugoslavia, etc.)/Middle East or Eurasian country (Turkey, Iraq, Lebanon, Iran, Afghanistan, Morocco, etc.)/Africa (Somalia, Uganda, Ghana, Ethiopia, etc.)/Asia (China, Pakistan, Vietnam, Sri Lanka, Thailand, Philippines, India, etc.)/Other country 1 = Denmark
StQ-04A-C	Germany	StQ-04A-C	D	Nationally defined categories: 1 = Deutschland 2 = Ehemalige Sowjetunion (z.B. Russland, Ukraine, Weißrussland) 3 = Türkei 4 = Polen 5 = In einem anderen europäischen Land 6 = In einem anderen nicht-europäischen Land	National dimensions recoded for international comparability: 0 = Former Soviet Union (e.g., Russia, Ukraine, Belarus)/Turkey/Poland/In another European country/In another non-European country 1 = Germany
StQ-04A-C	Hong Kong, SAR	StQ-04A-C	D	Nationally defined categories: 1 = 香港 2 = 中国广东省 3 = 中国其他省份 4 = 中国以外地区 Nationally defined categories: 1 = 香港 2 = 中國廣東省 3 = 中國其他省份 4 = 中國以外地區	National categories recoded for international comparability: 0 = Guangdong Province/Other provinces of China/Outside China 1 = Hong Kong SAR

				Nationally defined categories: 1 = Hong Kong 2 = Guangdong Province 3 = Other provinces of China 4 = Outside China	
StQ-04A-C	Korea, Republic of	StQ-04A-C	D	Nationally defined categories: 1 = 대한민국 2 = 미국 3 = 베트남 4 = 일본 5 = 중국 6 = 필리핀 7 = 그외 다른 나라	National categories recoded for international comparability: 0 = USA/Vietnam/Japan/China/Philippines/Another country 1 = Korea, Republic of
StQ-04A-C	Lithuania	StQ-04A-C	D	Nationally defined categories: 1 = Lietuva 2 = Kita Europos sąjungos šalis 3 = Kita ne Europos sąjungos šalis Europoje 4 = Kita šalis	National categories recoded for international comparability: 0 = Other EU country/Other non-EU country in Europe/Other country 1 = Lithuania
StQ-04A-C	Netherlands	StQ-04A-C	D	Nationally defined categories: 1 = Nederland 2 = Aruba of voormalig Nederlandse Antillen (Bonaire, Curaçao, Saba, Sint Eustatius of Sint Maarten) 3 = Suriname 4 = Marokko 5 = Turkije 6 = Ander land	National categories recoded for international comparability: 0 = Aruba or former Dutch Antilles (Bonaire, Curacao, Saba, St. Eustatius and St. Maarten)/Suriname/Morocco/Turkey/Another country 1 = The Netherlands
StQ-04A-C	Norway	StQ-04A-C	D	Nationally defined categories: 1 = Norge 2 = Et annet land i Norden (Sverige, Danmark, Finland, Island) 3 = Et annet land i Europa 4 = Et land utenfor Europa Nationally defined categories: 1 = Noreg 2 = Eit anna land i Norden (Sverige, Danmark, Finland, Island) 3 = Eit anna land i Europa 4 = Eit land utanfor Europa	National categories recoded for international comparability: 0 = Another Nordic country (Sweden, Denmark, Finland, Iceland)/Another European country/A country outside Europe 1 = Norway
StQ-04A-C	Poland	StQ-04A-C	D	Nationally defined categories: 1 = Polska	National categories recoded for international comparability: 0 = Other country

				2 = Inny kraj	1 = Poland
StQ-04A-C	Russian Federation	StQ-04A-C	D	Nationally defined categories: 1 = Россия 2 = Другие страны СНГ 4 = Другая страна	National categories recoded for international comparability: 0 = Other members of Commonwealth of Independent States (CIS)/Another country 1 = Russia
StQ-04A-C	Slovak Republic	StQ-04A-C	D	Nationally defined categories: 1 = Szlovákia 2 = Csehország 3 = Magyarország 4 = Más ország Nationally defined categories: 1 = Slovenská republika 2 = Česká republika 3 = Mad'arská republika 4 = Iná krajina	National categories recoded for international comparability: 0 = Czech Republic/Hungary/Another country 1 = Slovak Republic
StQ-04A-C	Slovenia	StQ-04A-C	D	Nationally defined categories: 1 = V Sloveniji 2 = V Bosni in Hercegovini, Črni gori, Hrvaški, na Kosovem, v Makedoniji ali Srbiji 3 = V Avstriji, Italiji ali na Madžarskem 4 = V drugi državi	National categories recoded for international comparability: 0 = In Bosnia and Herzegovina, Kosovo, Montenegro, Croatia, Macedonia, or Serbia/In Austria, Italy, or Hungary/In other country 1 = In Slovenia
StQ-04A-C	Switzerland	StQ-04A-C	D	Nationally defined categories: 1 = Suisse 2 = Allemagne, Lichtenstein, Autriche 3 = France / Belgique 4 = Italie, Espagne, Portugal 5 = Bosnie-Herzégovine, Croatie, Macédoine, Monténégro, Serbie, Slovénie, Albanie, Kosovo 6 = Turquie 7 = Un autre pays Nationally defined categories: 1 = Schweiz 2 = Deutschland, Liechtenstein, Österreich 3 = Frankreich, Belgien 4 = Italien, Spanien, Portugal 5 = Bosnien-Herzegowina, Kroatien, Mazedonien, Montenegro, Serbien, Slowenien, Albanien, Kosovo	National categories recoded for international comparability: 0 = Germany, Lichtenstein, Austria/France, Belgium/Italy, Spain, Portugal/Bosnia-Herzegovina, Croatia, Macedonia, Montenegro, Serbia, Slovenia, Albania, Kosovo/Turkey/Another country 1 = Switzerland

				6 = Türkei 7 = Anderes Land Nationally defined categories: 1 = Svizzera 2 = Germania, Liechtenstein, Austria 3 = Francia, Belgio 4 = Italia, Spagna, Portogallo 5 = Bosnia-Erzegovina, Croazia, Macedonia, Montenegro, Serbia, Slovenia, Albania, Kosovo, 6 = Turchia 7 = Altra nazione	
StQ-04A-C	Thailand	StQ-04A-C	D	Nationally defined categories: 1 = ประเทศไทย 2 = ประเทศอื่นในแถบเอเชีย 3 = ประเทศในแถบยุโรป 4 = ประเทศอื่นๆ	National categories recoded for international comparability: 0 = Other country in Asia/Country in Europe/Another country 1 = Thailand
StQ-04A-C	Turkey	StQ-04A-C	D	Nationally defined categories: 1 = Türkiye 2 = Almanya 3 = Fransa 4 = Hollanda 5 = Diğer	National categories recoded for international comparability: 0 = Germany/France/Netherlands/Other 1 = Turkey
StQ-05	Argentina, Buenos Aires	StQ-05	D	Nationally defined categories: 1 = Castellano 2 = Otro idioma latino (italiano, francés, etc.) 3 = Otro idioma originario (guaraní, quechua, etc.) 4 = Otro idioma	National categories recoded for international comparability: 0 = Other Latin language (Italian, French, etc.)/Other native language (Guarani, Quechua, etc.)/Another language 1 = Spanish
StQ-05	Australia	StQ-05	D	Nationally defined categories: 1 = English 2 = An Australian Indigenous language 4 = Another language	National categories recoded for international comparability: 0 = An Australian Indigenous language/Another language 1 = English
StQ-05	Canada	StQ-05	D	Nationally defined categories: 1 = English 2 = French 3 = Another language Nationally defined categories: 1 = Français	National categories recoded for international comparability: 0 = French/Another language 1 = English National categories recoded for international comparability: 0 = English/Another language

				2 = Anglais 3 = Une autre langue	1 = French
StQ-05	Chile	StQ-05	D	Nationally defined categories: 1 = Castellano 2 = Otro idioma	National categories recoded for international comparability: 0 = Another language 1 = Castilian
StQ-05	Croatia	StQ-05	D	Nationally defined categories: 1 = Hrvatski jezik 2 = Srpski jezik 3 = Talijanski jezik 4 = Neki drugi jezik	National categories recoded for international comparability: 0 = Serbian language/Italian language/Another language 1 = Croatian language
StQ-05	Czech Republic	StQ-05	D	Nationally defined categories: 1 = Česky 2 = Slovensky 3 = Ukrajinsky 4 = Vietnamsky 5 = Rusky 6 = Jiným jazykem	National categories recoded for international comparability: 0 = Slovak/Ukrainian/Vietnamese/Russian/Another language 1 = Czech
StQ-05	Denmark	StQ-05	D	Nationally defined categories: 1 = Dansk 2 = Andet sprog	National categories recoded for international comparability: 0 = Other language 1 = Danish
StQ-05	Germany	StQ-05	D	Nationally defined categories: 1 = Deutsch 2 = Eine Sprache der ehemaligen Sowjetunion (z.B. Russisch, Ukrainisch, Weißrussisch) 3 = Türkisch 4 = Polnisch 5 = Eine andere europäische Sprache 6 = Eine andere nicht-europäische Sprache	National categories recoded for international comparability: 0 = A language from the former Soviet Union (e.g., Russian, Ukrainian, Belorussian)/Turkish/Polish/Another European language/Another non-European language 1 = German
StQ-05	Hong Kong SAR	StQ-05	D	Nationally defined categories: 1 = 普通话 2 = 广东话 3 = 英语 4 = 其他语言 Nationally defined categories: 1 = 廣東話 2 = 英語 3 = 普通話 4 = 其他語言	National categories recoded for international comparability: 0 = Cantonese/English/Other languages 1 = Putonghua National categories recoded for international comparability: 0 = English/Putonghua/Other languages 1 = Cantonese National categories recoded for international comparability: 0 = Cantonese/Putonghua/Other languages

				Nationally defined categories: 1 = English 2 = Cantonese 3 = Putonghua 4 = Other languages	1 = English
StQ-05	Korea, Republic of	StQ-05	D	Nationally defined categories: 1 = 한국어 2 = 영어 3 = 베트남어 4 = 일본어 5 = 중국어 6 = 타갈로그어(필리핀 공용어) 7 = 기타 언어	National categories recoded for international comparability: 0 = English/Vietnamese language/Japanese/Chinese/Tagalog (official language of the Philippines)/Another language 1 = Korean
StQ-05	Lithuania	StQ-05	D	Nationally defined categories: 1 = Lietuvių kalba 2 = Lenkų kalba 3 = Rusų kalba 4 = Kita kalba	National categories recoded for international comparability: 0 = Polish language/Russian language/Other language 1 = Lithuanian language
StQ-05	Netherlands	StQ-05	D	Nationally defined categories: 1 = Nederlands of een Nederlands dialect 2 = Fries 3 = Andere taal (bijvoorbeeld Turks, Marokkaans, Engels)	National categories recoded for international comparability: 0 = Frisian/Other (for example, Turkish, Moroccan, English) 1 = Dutch or Dutch dialect
StQ-05	Norway	StQ-05	D	Nationally defined categories: 1 = Norsk 2 = Dansk eller svensk 3 = Annet europeisk språk (f.eks. engelsk, fransk eller polsk) 4 = Annet ikke-europeisk språk (f.eks. urdu, vietnamesisk eller somalisk) Nationally defined categories: 1 = Norsk 2 = Dansk eller svensk 3 = Eit anna europeisk språk (ttil dømes engelsk, fransk eller polsk) 4 = Eit ikkje-europeisk språk (til dømes urdu, vietnamesisk eller somali)	National categories recoded for international comparability: 0 = Danish or Swedish/Another European language (e.g., English, French, or Polish)/Another non-European language (e.g., Urdu, Vietnamese, or Somalian) 1 = Norwegian

StQ-05	Poland	StQ-05	D	Nationally defined categories: 1 = Język polski 2 = Język niemiecki 3 = Język angielski 4 = Język śląski 5 = Język kaszubski 6 = Język białoruski 7 = Język ukraiński 8 = Inny język	National categories recoded for international comparability: 0 = German/English/Silesian/Kashubian/Belarusian/Ukrainian/ Other language 1 = Polish
StQ-05	Russian Federation	StQ-05	D	Nationally defined categories: 1 = Русский 4 = Другой язык	National categories recoded for international comparability: 0 = Another language 1 = Russian
StQ-05	Slovak Republic	StQ-05	D	Nationally defined categories: 1 = Magyar nyelven 2 = Szlovák nyelven 3 = Roma nyelven 4 = Más nyelven Nationally defined categories: 1 = Slovenský jazyk 2 = Mad'arský jazyk 3 = Rómsky jazyk 4 = Iný jazyk	National categories recoded for international comparability: 0 = Slovak language/Roma language/Another language 1 = Hungarian language National categories recoded for international comparability: 0 = Hungarian language/Roma language/Another language 1 = Slovak language
StQ-05	Slovenia	StQ-05	D	Nationally defined categories: 1 = Slovenski jezik 2 = Jezik narodnih manjšin (italijanski, madžarski) 3 = Romski jezik 4 = Jezik drugih republik v nekdanji Jugoslaviji (bošnjaški, hrvaški, srbski, makedonski, srbsko-hrvaški, albanski) 5 = Drug jezik	National categories recoded for international comparability: 0 = Language of national minorities (Italian, Hungarian)/Roma language/Languages of former Yugoslavian republics (Croatian, Bosnian, Serbian, Macedonian, Serbo-Croatian, Albanian ...)/ Another language 1 = Slovenian language
StQ-05	Switzerland	StQ-05	D	Nationally defined categories: 1 = Français 2 = Allemand 3 = Italien 4 = Romanche 5 = Anglais 6 = Une autre langue Nationally defined categories:	National categories recoded for international comparability: 0 = German/Italian/Rhaeto-Romanic/English/Another language 1 = French National categories recoded for international comparability: 0 = French/Italian/Rhaeto-Romanic/English/Another language 1 = German

				1 = Deutsch 2 = Französisch 3 = Italienisch 4 = Rätoromanisch 5 = Englisch 6 = Andere Nationally defined categories: 1 = Italiano 2 = Tedesco 3 = Francese 4 = Romancio 5 = Inglese 6 = Altra lingua	National categories recoded for international comparability: 0 = German/French/Rhaeto-Romanic/English/Another language 1 = Italian
StQ-05	Thailand	StQ-05	D	Nationally defined categories: 1 = ภาษาไทย 2 = ภาษาอังกฤษ 3 = ภาษาจีน 4 = ภาษาอื่นๆ	National categories recoded for international comparability: 0 = English/Chinese/Another language 1 = Thai
StQ-05	Turkey	StQ-05	D	Nationally defined categories: 1 = Türkçe 2 = Diğer	National categories recoded for international comparability: 0 = Other 1 = Turkish
StQ-06	Slovak Republic	StQ-06	D	Stem of the question changed: Pracuje tvoja mama alebo opatrovateľka za mzdu (má platenú prácu)?	Stem of the question changed: Does your mother or female caretaker work for a wage (does she have a paid job)?
StQ-06	Slovenia	StQ-06	D	Stem of the question changed: Ali je tvoja mama, mačeha ali skrbnica trenutno zaposlena?	Stem of the question changed: Is your mother or female guardian currently employed?
StQ-07A-D	Argentina, Buenos Aires	StQ-07A	D	Stem of the question changed: ¿Cuál es el trabajo principal de tu mamá o tutora? (por ejemplo, profesora de enseñanza media, cocinera, vendedora, etc.)	Stem of the question changed: What is your mother's or guardian's main job? (for example, teacher in a secondary school, cook, sales manager, etc.)
StQ-07A-D	Argentina, Buenos Aires	StQ-07B	D	Stem of the question changed: ¿Qué hace tu mamá o tutora en su trabajo principal? (por ejemplo, da clases a estudiantes de enseñanza media, ayuda a preparar las comidas en un restaurant o casa de familia, vende, etc.) Question instruction changed: Por favor describe en una frase la labor que ella desempeña en	Stem of the question changed: What does your mother or guardian do in her main job? (for example, she teaches secondary school students, helps to cook the meals in a restaurant or a family home, sells, etc.) Question instruction changed: Please describe in one sentence the work she does in that job

				ese trabajo	
StQ-07A-D	Argentina, Buenos Aires	StQ-07C	D	Stem of the question changed: ¿Cuál fue el último trabajo principal de tu mamá o tutora? (por ejemplo, profesora de enseñanza media, cocinera, vendedora, etc.)	Stem of the question changed: What was your mother's or guardian's last main job? (for example, teacher in a secondary school, cook, sales manager, etc.)
StQ-07A-D	Argentina, Buenos Aires	StQ-07D	D	Stem of the question changed: ¿Qué hacía tu mamá o tutora en su último trabajo principal? (por ejemplo, daba clases a estudiantes de enseñanza media, ayudaba a preparar las comidas en un restaurant o casa de familia, vendía, etc.)	Stem of the question changed: What did your mother or guardian do in her last main job? (for example, taught secondary school students, helped to cook the meals in a restaurant or family home, sold, etc.)
StQ-07A-D	Chile	StQ-07A	D	Question instruction changed: Por favor escribe el nombre de su ocupación	Question instruction changed: Please write in the name of her occupation
StQ-07A-D	Chile	StQ-07C	D	Question instruction changed: Por favor cuéntanos cuál fue su último trabajo remunerado más importante. Si ella nunca ha tenido un trabajo remunerado, cuéntanos qué hace ella actualmente.	Question instruction changed: Please tell us her last main job. If she has never had a paid job, please write what she is currently doing. Please write in the name of her occupation.
StQ-07A-D	Russian Federation	StQ-07A	D	Stem of the question changed: Кем работает твоя мама или женщина-опекун? Question instruction changed: Впиши, пожалуйста, свой вариант ответа	Stem of the question changed: What is your mother's or female guardian's job? Question instruction changed: Please write in your answer
StQ-07A-D	Russian Federation	StQ-07B	D	Stem of the question changed: Чем занимается твоя мама или женщина-опекун на своей работе?	Stem of the question changed: What does your mother or female guardian do in her job?
StQ-07A-D	Russian Federation	StQ-07C	D	Stem of the question changed: Кем работала твоя мама или женщина-опекун на своем последнем месте работы? Question instruction changed: Пожалуйста, укажи ее последнее место работы. Если она никогда не работала на оплачиваемой работе, пожалуйста, напиши, чем она сейчас занимается. Впиши, пожалуйста, свой вариант ответа.	Stem of the question changed: What was your mother's or female guardian's last job? Question instruction changed: Please tell us her last job. If she has never had a paid job, please write what she is currently doing. Please write in your answer.
StQ-07A-D	Russian Federation	StQ-07D	D	Stem of the question changed: Чем занималась твоя мама или женщина-опекун на своем последнем месте работы?	Stem of the question changed: What did your mother or female guardian do in her last job?
StQ-07A-D	Slovenia	StQ-07A	D	Stem of the question changed: Kateri poklic opravlja tvoja mama, mačeha ali skrbnica na	Stem of the question changed: What is the vocation of your mother, stepmother, or female

				delovnem mestu? (npr. profesorica v srednji šoli, kuhinjska pomočnica, vodja prodaje) Question instruction changed: Prosimo, zapiši vrsto poklica	guardian at her working place? (e.g., high school teacher, kitchen-hand, sales manager) Question instruction changed: Please write in the vocation
StQ-07A-D	Slovenia	StQ-07B,D	D	Delovnem mestu	Working place
StQ-07A-D	Slovenia	StQ-07C	D	Stem of the question changed: Kateri poklic je opravljala tvoja mama, mačeha ali skrbnica na svojem zadnjem delovnem mestu? (npr. profesorica v srednji šoli, kuhinjska pomočnica, vodja prodaje) Question instruction changed: Prosimo, da nam poveš o poklicu, ki ga je opravljala nazadnje. V primeru, da nikoli ni bila zaposlena, prosimo, da napišeš, kaj trenutno počne. Prosimo, zapiši vrsto poklica	Stem of the question changed: What was the vocation of your mother, stepmother, or female guardian at her last working place? (e.g., high school teacher, kitchen-hand, sales manager) Question instruction changed: Please write in the vocation she had at the last working place. If she has never had a paid job, please write what she is currently doing. Please write in the vocation
StQ-07A-D	Switzerland	StQ-07A,C	D	*German Arbeit / Beruf	*German Job/occupation
StQ-07A-D	Switzerland	StQ-07D	D	*German Question instruction changed: Bitte beschreibe mit einem Satz die Art der Arbeit, die sie dort machte, oder falls sie nie arbeitete, was sie derzeit macht	*German Question instruction changed: Please describe with a sentence the kind of work she does there or, if she never worked, what she does now
StQ-08	Argentina, Buenos Aires	StQ-08	D	Nationally defined categories: 1 = Terminó estudios de educación superior en la universidad o estudios de postgrado (magíster o doctorado) 2 = Terminó estudios terciarios o formación profesional 3 = Terminó nivel secundario 4 = Terminó 2° año de nivel secundario 5 = No terminó 2° año de nivel secundario 6 = Completó Nivel Primario 7 = No completó Nivel Primario	National categories recoded for international comparability: 1 = She completed university studies or a PhD 2 = She completed tertiary education or professional training 3 = She completed secondary education 4 = She completed second year of secondary school 5 = She didn't complete second year of secondary school/She completed primary education/She didn't complete primary education
StQ-08	Australia	StQ-08	D	Nationally defined categories: 1 = A university degree (Bachelor, Graduate Diploma, Masters or doctorate) 2 = A TAFE training diploma (e.g. Diploma in Accounting) or a TAFE certificate (e.g. Hairdressing) 3 = Year 12 or a Year 12 equivalent 4 = She completed Year 10	Nationally defined categories: 1 = A university degree (Bachelor, Graduate Diploma, Master's, or doctorate) 2 = A TAFE training diploma (e.g., Diploma in Accounting) or a TAFE certificate (e.g., Hairdressing) 3 = Year 12 or a Year 12 equivalent 4 = She completed Year 10

				5 = She did not complete Year 10	5 = She did not complete Year 10
StQ-08	Canada	StQ-08	D	Nationally defined categories: 1 = University - master's or Ph.D. degree or equivalent 2 = University - bachelor's degree 3 = College or cégep diploma 4 = Trades or vocational diploma 5 = High school diploma or equivalent 6 = Grade 9/Secondary 3 7 = Grade 6 8 = She did not complete Grade 6 Nationally defined categories: 1 = Diplôme universitaire - maîtrise ou doctorat ou équivalent 2 = Diplôme universitaire - baccalauréat 3 = Diplôme de collège ou de cégep 4 = Diplôme d'une école de métier ou de formation professionnelle 5 = Diplôme d'études secondaires ou l'équivalent 6 = 9e année/3e année du secondaire 7 = 6e année 8 = Elle n'a pas complété la 6e année	National categories recoded for international comparability: 1 = University—Master's or Ph.D. degree or equivalent/ University—bachelor's degree 2 = General or vocational college diploma/Trades or vocational diploma 3 = High school diploma or equivalent 4 = Grade 9/Secondary 3 5 = Grade 6/She did not complete Grade 6
StQ-08	Chile	StQ-08	D	Nationally defined categories: 1 = Terminó estudios de educación superior en la universidad o estudios de postgrado (magíster o doctorado) 2 = Terminó estudios en un instituto profesional o en un centro de formación técnica 3 = Terminó enseñanza media 4 = Terminó 8° básico 5 = No terminó 8° básico	Nationally defined categories: 1 = College education or postgraduate studies (Master's or PhD) 2 = Practical or technical tertiary programs 3 = Upper-secondary 4 = Last grade of lower-secondary 5 = She did not complete Grade 8
StQ-08	Croatia	StQ-08	D	Nationally defined categories: 1 = Diplomski ili poslijediplomski studij 2 = Viša škola ili preddiplomski studij 3 = Srednja škola 4 = Osnovna škola 5 = Nije završila osnovnu školu	Nationally defined categories: 1 = Master's degree or PhD 2 = Professional Bachelor's or vocational education 3 = Secondary school 4 = Primary school 5 = She did not complete primary school
StQ-08	Czech Republic	StQ-08	D	Opatrovnice Zadavatel dotazníku Nationally defined categories:	Guardian Questionnaire administrator National categories recoded for international comparability:

				1 = Vysoká škola 2 = Vyšší odborná škola nebo konzervatoř 3 = Nástavbové studium 4 = Střední odborná škola - maturita 5 = Střední odborná škola bez maturity - vyučení 6 = Maturita na gymnáziu 7 = Základní škola 8 = Nedokončila základní školu	1 = University 2 = Higher professional school or conservatory/Extension study 3 = Vocational or technical upper-secondary education with graduation/Vocational or technical upper-secondary education without graduation/General upper-secondary education with graduation 4 = Primary school 5 = She did not complete primary school
StQ-08	Denmark	StQ-08	D	Nationally defined categories: 1 = Bachelor, kandidat- eller ph.d.-uddannelse (f.eks. lærer, jurist, læge) 2 = Erhvervsakademi- eller kortere videregående uddannelse (f.eks. laborant, datamatiker, bankrådgiver) 3 = Gymnasial uddannelse eller erhvervsuddannelse (f.eks. stx, EUD, hhx, htx, sosu, murer, vvs) 4 = Grundskolen (f.eks. folkeskolen) 5 = Hun har ikke gennemført grundskolen	Nationally defined categories: 1 = Bachelor, Master's, or PhD degree (e.g., teacher, lawyer, or doctor) 2 = Vocational academy or short further education (e.g., laboratory technician, information technologist, bank adviser) 3 = Upper-secondary education or vocational education (e.g., stx, EUD, hhx, htx, sosu, bricklayer, plumber) 4 = Basic school (e.g., municipal school) 5 = She did not complete basic school's final examination
StQ-08	Germany	StQ-08	D	Nationally defined categories: 1 = Promotion (Doktortitel) 2 = Universitätsabschluss/Fachhochschulabschluss 3 = Abitur/Hochschulreife/Fachhochschulreife 4 = Abschluss Abendgymnasium/Fachoberschule/Berufsoberschule/Technische Oberschule 5 = Abschluss Berufsakademie/Verwaltungsfachhochschule/Fachschule 6 = Berufsschule/Berufsfachschule/Berufsgrundbildungsjahr 7 = Realschulabschluss/Polytechnische Oberschule nach Klasse 10 8 = Hauptschulabschluss/Polytechnische Oberschule nach Klasse 8/Volksschulabschluss 9 = Abschluss einer Sonderschule/Förderschule 10 = Sie ist ohne Abschluss von der Schule gegangen	National categories recoded for international comparability: 1 = Doctoral degree/University diploma/Diploma at a university of applied science 2 = University entrance qualification (evening schools)/Specialized vocational high school/Vocational secondary school/Technical secondary school/Diploma at a vocational academy/College of public administration/Trade and technical school 3 = University entrance qualification/University of applied science entrance qualification/Dual system/Specialized vocational schools/Basic vocational training year 4 = Lower-secondary school/Polytechnic secondary school after Grade 10/Lower-secondary school/Polytechnic secondary school after Grade 8/Elementary school/Finished special school/special-needs school 5 = She left school without a degree
StQ-08	Hong Kong SAR	StQ-08	D	Nationally defined categories: 1 = 大学学位，硕士学位，博士学位 2 = 副学士，文凭，高级文凭 3 = 高中 4 = 初中 5 = 小学 6 = 她没有完成小学课程	National categories recoded for international comparability: 1 = Bachelor's degree, Master's degree, doctoral degree 2 = Associate diploma, Diploma/Certificate, Higher diploma 3 = Senior secondary school 4 = Junior secondary school 5 = Primary school/She did not complete primary school

				Nationally defined categories: 1 = 大學學位，碩士學位，博士學位 2 = 副學士，文憑，高級文憑 3 = 高中 4 = 初中 5 = 小學 6 = 她沒有完成小學課程 Nationally defined categories: 1 = Bachelor's Degree, Master's Degree, Doctoral Degree 2 = Associate Diploma, Diploma / Certificate, Higher Diploma 3 = Senior Secondary School 4 = Junior Secondary School 5 = Primary school 6 = She did not complete Primary School	
StQ-08	Korea, Republic of	StQ-08	D	Nationally defined categories: 1 = 대학교 또는 대학원 2 = 전문대학 3 = 고등학교 4 = 중학교 5 = 중학교를 졸업하지 않음	Nationally defined categories: 1 = University or graduate school 2 = College 3 = High school 4 = Middle school 5 = She did not complete middle school
StQ-08	Lithuania	StQ-08	D	Nationally defined categories: 1 = Aukštasis universitetinis išsilavinimas arba daktaro laipsnis 2 = Povidurinis (profesinis) arba aukštasis neuniversitetinis (technikumo, kolegijos) išsilavinimas 3 = Vidurinis išsilavinimas 4 = Pagrindinis išsilavinimas 5 = Ji nebaigė pagrindinės mokyklos	Nationally defined categories: 1 = Higher education in university or doctoral degree 2 = Post-secondary (professional) education or nonuniversity higher education (college) 3 = Secondary education 4 = Basic school education 5 = She did not complete basic school
StQ-08	Netherlands	StQ-08	D	Nationally defined categories: 1 = Universitair 2 = Hoger beroepsonderwijs (bijvoorbeeld heao, hts, lerarenopleiding) 3 = HAVO of VWO of middelbaar beroepsonderwijs (MBO) 4 = Lager beroepsonderwijs (VMBO, LBO, VBO) of MAVO 5 = Zij heeft geen VMBO of eerste 3 jaar HAVO of VWO afgerond	Nationally defined categories: 1 = University 2 = Higher vocational education (examples) 3 = Senior general education, preuniversity education, vocational secondary education 4 = Prevocational secondary education 5 = She did not complete prevocational secondary education
StQ-08	Norway	StQ-08	D	Den høyeste utdanningen Læreren Nationally defined categories:	Highest education Teacher Nationally defined categories:

				1 = Høyskole eller universitet i 3 år eller mer 2 = Kort utdanning etter videregående skole på 1 til 2 år 3 = Videregående skole 4 = Ungdomsskolen 5 = Hun fullførte ikke ungdomsskolen Den høgste utdanninga Læraren Nationally defined categories: 1 = Høgskule eller universitet i 3 år eller meir 2 = Kort utdanning etter vidaregåande skule på 1 til 2 år 3 = Vidaregåande skule 4 = Ungdomsskulen 5 = Ho fullførte ikkje ungdomsskulen	1 = University college or university (3 years or more) 2 = Tertiary education after upper-secondary school (1 to 2 years) 3 = Upper-secondary education 4 = Lower-secondary school 5 = She did not complete lower-secondary school
StQ-08	Poland	StQ-08	D	Nationally defined categories: 1 = Doktorat 2 = Studia magisterskie 3 = Studia licencjackie/inżynierskie (niemagisterskie) 4 = Szkoła policealna/pomaturalna 5 = Technikum 6 = Liceum ogólnokształcące 7 = Szkoła zawodowa 8 = Ośmioklasowa szkoła podstawowa lub gimnazjum 9 = Nie ukończyła ośmioklasowej szkoły podstawowej lub gimnazjum	National categories recoded for international comparability: 1 = Doctoral studies/Master's studies/Bachelor's, Engineer's studies (non-Master's) 2 = Post-secondary schools 3 = Upper-secondary technical school/General upper-secondary school/Upper-secondary specialized school/Basic vocational school 4 = Primary school or middle school 5 = She did not complete primary school or middle school
StQ-08	Russian Federation	StQ-08	D	Stem of the question changed: Какое образование у твоей мамы или женщины-опекуна? К школьному координатору или администратору тестирования Nationally defined categories: 1 = Высшее профессиональное образование 2 = Среднее профессиональное образование 3 = Среднее (полное) общее образование или начальное профессиональное образование 4 = Основное общее образование 5 = Она не получила основного общего образования	Stem of the question changed: What education has your mother or female guardian? School coordinator or test administrator Nationally defined categories: 1 = Higher professional education 2 = Vocational education 3 = Secondary (full) comprehensive/general education or initial vocational education 4 = Basic comprehensive/general education 5 = She did not complete basic comprehensive/general education

StQ-08	Slovak Republic	StQ-08	D	Nationally defined categories: 1 = Egyetemi végzettség 2 = Felsőfokú szakvizsga vagy érettségi utáni felépítményi szakképesítés 3 = Érettségi vizsgával végződő középiskolai végzettség 4 = Középiskolai végzettség szakmunkás-bizonyítvánnyal 5 = Alapfokú végzettség (az alapiskola felső tagozata) 6 = Nem fejezte be az alapfokú végzettséget (az alapiskola felső tagozatát) Nationally defined categories: 1 = Vysokoškolské vzdelanie 2 = Vyššie odborné alebo pomaturitné kvalifikačné vzdelanie 3 = Ukončené stredoškolské vzdelanie s maturitou 4 = Ukončené stredoškolské vzdelanie s výučným listom 5 = Základné vzdelanie (druhý stupeň základnej školy) 6 = Neukončila základné vzdelanie (druhý stupeň základnej školy)	National categories recoded for international comparability: 1 = University education 2 = Professional or higher education after graduation at the secondary school 3 = Secondary education with school-leaving examination/ Secondary education with professional certificate 4 = Elementary education (second stage of elementary school) 5 = She did not complete elementary education (second stage of elementary school)
StQ-08	Slovenia	StQ-08	D	Nationally defined categories: 1 = Visokošolska univerzitetna izobrazba ali več 2 = Poklicno izpopolnjevanje po srednji šoli, višješolska izobrazba (npr.2 leti študija po srednji šoli) 3 = Srednješolska izobrazba 4 = Osnovnošolska izobrazba 5 = Ni končala osnovne šole	Nationally defined categories: 1 = University degree or higher 2 = Vocational specialization after high school or higher education (i.e., 2 years of study after high school) 3 = Secondary school education 4 = Primary school education 5 = She did not complete primary school
StQ-08	Switzerland	StQ-08	D	Nationally defined categories: 1 = Universités, Hautes écoles spécialisées, Hautes écoles pédagogiques 2 = Enseignement supérieur technique et professionnel (par ex. Diplôme fédéral, maîtrise) 3 = Diplôme de maturité académique (Lycée/Collège) 4 = Apprentissage, Diplôme d'une école de métier ou de formation professionnelle 5 = 3ème année du Cycle 3 (9ème année/3ème C.O/11CO) 6 = Elle n'a pas achevé la 3ème année du Cycle 3 (9ème année/ 3ème CO/11CO) Höchsten Billdungabschluss Nationally defined categories:	*French/German National categories recoded for international comparability: 1 = University, University of applied sciences, College of education 2 = Higher professional and vocational training (e.g., federal certificate, diploma for instruction) 3 = Maturity (including vocational maturity)/Middle school for vocational training, vocational training, vocational school 4 = Secondary Level I 5 = She does not have a secondary school certificate/degree *German Highest certificate/degree

				1 = Universität, Fachhochschule, Pädagogische Hochschule 2 = Höhere Fach- und Berufsbildung (z.B. eidg. Fachausweis, Meisterdiplom) 3 = Maturität (inklusive Berufsmaturität) 4 = Fachmittelschule, Berufslehre oder Berufsschule 5 = Sekundarstufe I (Sekundarschule z.B. Werk-, Real-, Bezirks-, Orientierungs-, Oberschule oder Untergymnasium) 6 = Sie hat keinen Sekundarschulabschluss Livello più alto d'istruzione Nationally defined categories: 1 = Università, scuole universitarie professionali, alte scuole pedagogiche 2 = Istruzione superiore tecnica professionale 3 = Scuole di maturità (incluse maturità professionali) 4 = Scuole medie professionali a tempo pieno, apprendistato 5 = Scuole medie 6 = Non ha terminato la scuola media	*Italian Highest level of graduation National categories recoded for international comparability: 1 = University, University of applied science, teacher training college 2 = Schools of maturity (including professional maturity) 3 = Matura (including professional baccalaureate)/School for general knowledge leading to a specific professional domain, apprenticeship 4 = Secondary school 5 = She did not complete secondary school
StQ-08	Thailand	StQ-08	D	Nationally defined categories: 1 = ปริญญาตรีหรือสูงกว่า 2 = อนุปริญญาหรือปวส. 3 = มัธยมศึกษาตอนปลาย (ม.6) หรือปวช. 4 = มัธยมศึกษาตอนต้น (ม.3) 5 = ไม่จบชั้นมัธยมศึกษาตอนต้น (ม.3)	Nationally defined categories: 1 = Bachelor's degree or higher 2 = Diploma in postsecondary programs or practical/technical/occupational programs 3 = High school (Grade 12) or similar 4 = Middle school (Grade 9) 5 = She did not complete middle school (Grade 9)
StQ-08	Turkey	StQ-08	D	Nationally defined categories: 1 = Üniversite veya Yüksek Lisans/Doktora 2 = Meslek Yüksek Okulu 3 = Gelen Lise/Meslek Lisesi 4 = Ortaokul 5 = Ortaokulu tamamlamadı	Nationally defined categories: 1 = University or Master's/PhD 2 = Vocational school of higher education 3 = General/Vocational high school 4 = Secondary school 5 = She did not complete secondary school
StQ-09	Slovak Republic	StQ-09	D	Stem of the question changed: Pracuje tvoj otec alebo opatrovateľ za mzdu (má platenú prácu)?	Stem of the question changed: Does your father or male caretaker work for a wage (does he have a paid job)?
StQ-09	Slovenia	StQ-09	D	Stem of the question changed: Ali je tvoja oče, očim ali skrbnik trenutno zaposlen?	Stem of the question changed: Is your father, stepfather, or male guardian currently employed?
StQ-10A-D	Argentina, Buenos Aires	StQ-10A	D	Stem of the question changed: ¿Cuál es el trabajo principal de tu papá o tutor? (por ejemplo, profesor de enseñanza media, cocinero, vendedor,	Stem of the question changed: What is your father's or guardian's main job? (for example, teacher in a secondary school, cook, sales

				etc.)	manager, etc.)
StQ-10A-D	Argentina, Buenos Aires	StQ-10B	D	Stem of the question changed: ¿Qué hace tu papá o tutor en su trabajo principal? (por ejemplo, da clases a estudiantes de enseñanza media, ayuda a preparar las comidas en un restaurante, vende, etc.) Question instruction changed: Por favor describe en una frase la labor que el desempeña en ese trabajo	Stem of the question changed: What does your father or guardian do in his main job? (for example, he teaches secondary school students, helps to cook the meals in a restaurant or a family home, sells, etc.) Question instruction changed: Please describe in one sentence the work he does in that job
StQ-10A-D	Argentina, Buenos Aires	StQ-10C	D	Stem of the question changed: ¿Cuál fue el último trabajo principal de tu papá o tutor? (por ejemplo, profesor de enseñanza media, cocinero, vendedor, etc.)	Stem of the question changed: What was your father's or guardian's last main job? (for example, teacher in a secondary school, cook, sales manager, etc.)
StQ-10A-D	Argentina, Buenos Aires	StQ-10D	D	Stem of the question changed: ¿Qué hacía tu papá o tutor en su último trabajo principal? (por ejemplo, daba clases a estudiantes de enseñanza media, ayudaba a preparar las comidas en un restaurante, vendía, etc.)	Stem of the question changed: What did your father or guardian do in his last main job? (for example, taught secondary school students, helped to cook the meals in a restaurant or family home, sold, etc.)
StQ-10A-D	Germany	StQ-10B	D	Arbeit	Work
StQ-10A-D	Russian Federation	StQ-10A	D	Stem of the question changed: Кем работает твой папа или мужчина-опекун? Question instruction changed: Впиши, пожалуйста, свой вариант ответа	Stem of the question changed: What is your father's or male guardian's job? Question instruction changed: Please write in your answer
StQ-10A-D	Russian Federation	StQ-10B	D	Stem of the question changed: Чем занимается твой папа или мужчина-опекун на своей работе?	Stem of the question changed: What does your father or male guardian do in his job?
StQ-10A-D	Russian Federation	StQ-10C	D	Stem of the question changed: Кем работал твой папа или мужчина-опекун на своем последнем месте работы? Question instruction changed: Пожалуйста, укажи его последнее место работы. Если он никогда не работал на оплачиваемой работе, пожалуйста, напиши, чем он сейчас занимается.	Stem of the question changed: What was your father's or male guardian's last job? Question instruction changed: Please tell us his last job. If he has never had a paid job, please write what he is currently doing. Please write in your answer.
StQ-10A-D	Russian Federation	StQ-10D	D	Stem of the question changed: Чем занимался твой папа или мужчина-опекун на своем последнем месте работы?	Stem of the question changed: What did your father or male guardian do in his last job?
StQ-10A-D	Slovenia	StQ-10A	D	Stem of the question changed:	Stem of the question changed:

				Kateri poklic opravlja tvoj oče, očim ali skrbnik na delovnem mestu? (Npr. profesor v srednji šoli, kuhinjski pomočnik, vodja prodaje) Question instruction changed: Prosimo, zapiši vrsto poklica	What is the vocation of your father, stepfather, or male guardian at his working place? (e.g., high school teacher, kitchen-hand, sales manager) Question instruction changed: Please write in the vocation
StQ-10A-D	Slovenia	StQ-10B,D	D	Delovnem mestu	Working place
StQ-10A-D	Slovenia	StQ-10C	D	Stem of the question changed: Kateri poklic je opravljal tvoj oče, očim ali skrbnik na zadnjem delovnem mestu? (npr. profesor v srednji šoli, kuhinjski pomočnik, vodja prodaje) Question instruction changed: (Prosimo, da nam poveš o poklicu, ki ga je opravljal nazadnje. V primeru, da nikoli ni bil zaposlen, prosimo, da napišeš, kaj trenutno počne.) (Prosimo, zapiši vrsto poklica.)	Stem of the question changed: What was the vocation of your father, stepfather, or male guardian at his last working place? (e.g., high school teacher, kitchen-hand, sales manager) Question instruction changed: Please write in the vocation he had at the last working place. If he has never had a paid job, please write what he is currently doing. Please write in the vocation.
StQ-10A-D	Switzerland	StQ-10A,C	D	*German Arbeit / Beruf	*German Job/occupation
StQ-10A-D	Switzerland	StQ-10D	D	*German Question instruction changed: Bitte beschreibe mit einem Satz die Art der Arbeit, die er dort machte, oder falls er nie arbeitete, was er derzeit macht	*German Question instruction changed: Please describe with a sentence the kind of work he does there or, if he never worked, what he does now
StQ-11	Argentina, Buenos Aires	StQ-11	D	Nationally defined categories: 1 = Terminó estudios de educación superior en la universidad o estudios de postgrado (magíster o doctorado) 2 = Terminó estudios terciarios o formación profesional 3 = Terminó nivel secundario 4 = Terminó 2° año de nivel secundario 5 = No terminó 2° año de nivel secundario 6 = Completó Nivel Primario 7 = No completó Nivel Primario	National categories recoded for international comparability: 1 = He completed university studies or a PhD 2 = He completed tertiary education or professional training 3 = He completed secondary education 4 = He completed second year of secondary school 5 = He didn't complete second year of secondary school/He completed primary education/He didn't complete primary education
StQ-11	Australia	StQ-11	D	Nationally defined categories: 1 = A university degree (Bachelor, Graduate Diploma, Masters or doctorate) 2 = A TAFE training diploma (e.g. Diploma in Accounting) or a TAFE certificate (e.g. Hairdressing) 3 = Year 12 or a Year 12 equivalent 4 = He completed Year 10 5 = He did not complete Year 10	Nationally defined categories: 1 = A university degree (Bachelor, Graduate Diploma, Master's, or doctorate) 2 = A TAFE training diploma (e.g., Diploma in Accounting) or a TAFE certificate (e.g., Hairdressing) 3 = Year 12 or a Year 12 equivalent 4 = He completed Year 10 5 = He did not complete Year 10

StQ-11	Canada	StQ-11	D	Nationally defined categories: 1 = University - master's or Ph.D. degree or equivalent 2 = University - bachelor's degree 3 = College or cégep diploma 4 = Trades or vocational diploma 5 = High school diploma or equivalent 6 = Grade 9/Secondary 3 7 = Grade 6 8 = She did not complete Grade 6 Nationally defined categories: 1 = Diplôme universitaire - maîtrise ou doctorat ou équivalent 2 = Diplôme universitaire - baccalauréat 3 = Diplôme de collège ou de cégep 4 = Diplôme d'une école de métier ou de formation professionnelle 5 = Diplôme d'études secondaires ou l'équivalent 6 = 9e année/3e année du secondaire 7 = 6e année 8 = Il n'a pas complété la 6e année	National categories recoded for international comparability: 1 = University—Master's or Ph.D. degree or equivalent/ University—bachelor's degree 2 = General or vocational college diploma/Trades or vocational diploma 3 = High school diploma or equivalent 4 = Grade 9/Secondary 3 5 = Grade 6/She did not complete Grade 6
StQ-11	Chile	StQ-11	D	Nationally defined categories: 1 = Terminó estudios de educación superior en la universidad o estudios de postgrado (magíster o doctorado) 2 = Terminó estudios en un instituto profesional o en un centro de formación técnica 3 = Terminó enseñanza media 4 = Terminó 8° básico 5 = No terminó 8° básico	Nationally defined categories: 1 = College education or postgraduate studies (Master's or PhD) 2 = Practical or technical tertiary programs 3 = Upper secondary 4 = Last grade of lower secondary 5 = He did not complete Grade 8
StQ-11	Croatia	StQ-11	D	Nationally defined categories: 1 = Diplomski ili poslijediplomski studij 2 = Viša škola ili preddiplomski studij 3 = Srednja škola 4 = Osnovna škola 5 = Nije završio osnovnu školu	Nationally defined categories: 1 = Master's degree or PhD 2 = Professional Bachelor's or vocational education 3 = Secondary school 4 = Primary school 5 = He did not complete primary school
StQ-11	Czech Republic	StQ-11	D	Opatrovník Zadavatel dotazníku Nationally defined categories: 1 = Vysoká škola 2 = Vyšší odborná škola nebo konzervatoř	Guardian Questionnaire administrator National categories recoded for international comparability: 1 = University 2 = Higher professional school or conservatory/Extension study

				3 = Nástavbové studium 4 = Střední odborná škola - maturita 5 = Střední odborná škola bez maturity - vyučení 6 = Maturita na gymnáziu 7 = Základní škola 8 = Nedokončil základní školu	3 = Vocational or technical upper-secondary education with graduation/Vocational or technical upper-secondary education without graduation/General upper-secondary education with graduation 4 = Primary school 5 = He did not complete primary school
StQ-11	Denmark	StQ-11	D	Nationally defined categories: 1 = Bachelor, kandidat- eller ph.d.-uddannelse (f.eks. lærer, jurist, læge) 2 = Erhvervsakademi- eller kortere videregående uddannelse (f.eks. laborant, datamatiker, bankrådgiver) 3 = Gymnasial uddannelse eller erhvervsuddannelse (f.eks. stx, EUD, hhx, htx, sosu, murer, vvs) 4 = Grundskolen (f.eks. folkeskolen) 5 = Han har ikke gennemført grundskolen.	Nationally defined categories: 1 = Bachelor's, Master's, or PhD degree (e.g., teacher, lawyer, or doctor) 2 = Vocational academy or short further education (e.g., laboratory technician, information technologist, bank adviser) 3 = Upper-secondary education or vocational education (e.g., stx, EUD, hhx, htx, sosu, bricklayer, plumber) 4 = Basic school (e.g., municipal school) 5 = He did not complete basic school's final examination
StQ-11	Germany	StQ-11	D	Nationally defined categories: 1 = Promotion (Doktortitel) 2 = Universitätsabschluss/Fachhochschulabschluss 3 = Abitur/Hochschulreife/Fachhochschulreife 4 = Abschluss Abendgymnasium/Fachoberschule/ Berufsoberschule/Technische Oberschule 5 = Abschluss Berufsakademie/Verwaltungsfachhochschule/ Fachschule 6 = Berufsschule/Berufsfachschule/Berufsgrundbildungsjahr 7 = Realschulabschluss/Polytechnische Oberschule nach Klasse 10 8 = Hauptschulabschluss/Polytechnische Oberschule nach Klasse 8/Volksschulabschluss 9 = Abschluss einer Sonderschule/Förderschule 10 = Er ist ohne Abschluss von der Schule gegangen	National categories recoded for international comparability: 1 = Doctoral degree/University diploma/Diploma at a university of applied science 2 = University entrance qualification (evening schools)/ Specialized vocational high school/Vocational secondary school/ Technical secondary school/Diploma at a vocational academy/ College of public administration/Trade and technical school 3 = University entrance qualification/University of applied science entrance qualification/Dual system/Specialized vocational schools/Basic vocational training year 4 = Lower-secondary school/Polytechnic secondary school after Grade 10/Lower-secondary school/Polytechnic secondary school after Grade 8/Elementary school/Finished special school/special-needs school 5 = He left school without a degree
StQ-11	Hong Kong, SAR	StQ-11	D	Nationally defined categories: 1 = 大学学位，硕士学位，博士学位 2 = 副学士，文凭，高级文凭 3 = 高中 4 = 初中 5 = 小学 6 = 他没有完成小学课程 Nationally defined categories: 1 = 大學學位，碩士學位，博士學位	National categories recoded for international comparability: 1 = Bachelor's degree, Master's degree, doctoral degree 2 = Associate diploma, Diploma/Certificate, Higher diploma 3 = Senior secondary school 4 = Junior secondary school 5 = Primary school/He did not complete primary school

				2 = 副學士，文憑，高級文憑 3 = 高中 4 = 初中 5 = 小學 6 = 他沒有完成小學課程 Nationally defined categories: 1 = Bachelor's Degree, Master's Degree, Doctoral Degree 2 = Associate Diploma, Diploma / Certificate, Higher Diploma 3 = Senior Secondary School 4 = Junior Secondary School 5 = Primary school 6 = He did not complete Primary School	
StQ-11	Korea, Republic of	StQ-11	D	Nationally defined categories: 1 = 대학교 또는 대학원 2 = 전문대학 3 = 고등학교 4 = 중학교 5 = 중학교를 졸업하지 않음	Nationally defined categories: 1 = University or graduate school 2 = College 3 = High school 4 = Middle school 5 = He did not complete middle school
StQ-11	Lithuania	StQ-11	D	Nationally defined categories: 1 = Aukštasis universitetinis išsilavinimas arba daktaro laipsnis 2 = Povidurinis (profesinis) arba aukštasis neuniversitetinis (technikumo, kolegijos) išsilavinimas 3 = Vidurinis išsilavinimas 4 = Pagrindinis išsilavinimas 5 = Jis nebaigė pagrindinės mokyklos	Nationally defined categories: 1 = Higher education in university or doctoral degree 2 = Post-secondary (professional) education or nonuniversity higher education (college) 3 = Secondary education 4 = Basic school education 5 = He did not complete basic school
StQ-11	Netherlands	StQ-11	D	Nationally defined categories: 1 = Universitair 2 = Hoger beroepsonderwijs (bijvoorbeeld heao, hts, lerarenopleiding) 3 = HAVO of VWO of middelbaar beroepsonderwijs (MBO) 4 = Lager beroepsonderwijs (VMBO, LBO, VBO) of MAVO 5 = Hij heeft geen VMBO of eerste 3 jaar HAVO of VWO afgerond	Nationally defined categories: 1 = University 2 = Higher vocational education (examples) 3 = Senior general education, preuniversity education, vocational secondary education 4 = Prevocational secondary education 5 = He did not complete prevocational secondary education
StQ-11	Norway	StQ-11	D	Den høyeste utdanningen Læreren Nationally defined categories: 1 = Høyskole eller universitet i 3 år eller mer 2 = Kort utdanning etter videregående skole på 1 til 2 år	Highest education Teacher Nationally defined categories: 1 = University college or university (3 years or more) 2 = Tertiary education after upper-secondary school (1 to 2

				3 = Videregående skole 4 = Ungdomsskolen 5 = Han fullførte ikke ungdomsskolen Den høgste utdanninga Læraren Nationally defined categories: 1 = Høgskule eller universitet i 3 år eller meir 2 = Kort utdanning etter vidaregåande skule på 1 til 2 år 3 = Vidaregåande skule 4 = Ungdomsskulen 5 = Han fullførte ikkje ungdomsskulen	years) 3 = Upper-secondary education 4 = Lower-secondary school 5 = He did not complete lower-secondary school
StQ-11	Poland	StQ-11	D	Nationally defined categories: 1 = Doktorat 2 = Studia magisterskie 3 = Studia licencjackie/inżynierskie (niemagisterskie) 4 = Szkoła policealna/pomaturalna 5 = Technikum 6 = Liceum ogólnokształcące 7 = Szkoła zawodowa 8 = Ośmioklasowa szkoła podstawowa lub gimnazjum 9 = Nie ukończył ośmioklasowej szkoły podstawowej lub gimnazjum	National categories recoded for international comparability: 1 = Doctoral studies/Master's studies/Bachelor's, Engineer's studies (non-Master's) 2 = Post-secondary schools 3 = Upper-secondary technical school/General upper-secondary school/Upper-secondary specialized school/Basic vocational school 4 = Primary school or middle school 5 = He did not complete primary school or middle school
StQ-11	Russian Federation	StQ-11	D	Stem of the question changed: Какое образование у твоего папы или мужчины-опекуна? К школьному координатору или администратору тестирования Nationally defined categories: 1 = Высшее профессиональное образование 2 = Среднее профессиональное образование 3 = Среднее (полное) общее образование или начальное профессиональное образование 4 = Основное общее образование 5 = Он не получил основного общего образования	Stem of the question changed: What education has your father or male guardian? School coordinator or test administrator Nationally defined categories: 1 = Higher professional education 2 = Vocational education 3 = Secondary (full) comprehensive/general education or initial vocational education 4 = Basic comprehensive/general education 5 = He did not complete basic comprehensive/general education
StQ-11	Slovak Republic	StQ-11	D	Nationally defined categories: 1 = Egyetemi végzettség 2 = Felsőfokú szakvizsga vagy érettségi utáni felépítményi	National categories recoded for international comparability: 1 = University education 2 = Professional or higher education after graduation at the

				szakképesítés 3 = Érettségi vizsgával végződő középiskolai végzettség 4 = Középiskolai végzettség szakmunkás-bizonyítvánnyal 5 = Alapfokú végzettség (az alapiskola felső tagozata) 6 = Nem fejezte be az alapfokú végzettséget (az alapiskola felső tagozatát) Nationally defined categories: 1 = Vysokoškolské vzdelanie 2 = Vyššie odborné alebo pomaturitné kvalifikačné vzdelanie 3 = Ukončené stredoškolské vzdelanie s maturitou 4 = Ukončené stredoškolské vzdelanie s výučným listom 5 = Základné vzdelanie (druhý stupeň základnej školy) 6 = Neukončil základné vzdelanie (druhý stupeň základnej školy)	secondary school 3 = Secondary education with school-leaving examination/ Secondary education with professional certificate 4 = Elementary education (second stage of elementary school) 5 = He did not complete elementary education (second stage of elementary school)
StQ-11	Slovenia	StQ-11	D	Nationally defined categories: 1 = Visokošolska univerzitetna izobrazba ali več 2 = Poklicno izpopolnjevanje po srednji šoli, višješolska izobrazba (npr.2 leti študija po srednji šoli) 3 = Srednješolska izobrazba 4 = Osnovnošolska izobrazba 5 = Ni končal osnovne šole	Nationally defined categories: 1 = High university degree or higher 2 = Vocational specialization after high school or higher education (i.e., 2 years of study after high school) 3 = Secondary school education 4 = Primary school education 5 = He did not complete primary school
StQ-11	Switzerland	StQ-11	D	Nationally defined categories: 1 = Universités, Hautes écoles spécialisées, Hautes écoles pédagogiques 2 = Enseignement supérieur technique et professionnel (par ex. Diplôme fédéral, maîtrise) 3 = Diplôme de maturité académique (Lycée/Collège) 4 = Apprentissage, Diplôme d'une école de métier ou de formation professionnelle 5 = 3ème année du Cycle 3 (9ème année/3ème C.O/11CO) 6 = Il n'a pas achevé la 3ème année du Cycle 3 (9ème année/3ème CO/11CO) Höchsten Billdungabschluss Nationally defined categories: 1 = Universität, Fachhochschule, Pädagogische Hochschule 2 = Höhere Fach- und Berufsbildung (z.B. eidg. Fachausweis, Meisterdiplom) 3 = Maturität (inklusive Berufsmaturität) 4 = Fachmittelschule, Berufslehre oder Berufsschule	*French/German National categories recoded for international comparability: 1 = University, University of applied sciences, College of education 2 = Higher professional and vocational training (e.g., federal certificate, diploma for instruction) 3 = Maturity (including vocational maturity)/Middle school for vocational training, vocational training, vocational school 4 = Secondary Level I 5 = He does not have a secondary school certificate/degree *German Highest certificate/degree *Italian Highest level of graduation National categories recoded for international comparability: 1 = University, University of applied science, teacher training

				5 = Sekundarstufe I (Sekundarschule z.B. Werk-, Real-, Bezirks-, Orientierungs-, Oberschule oder Untergymnasium) 6 = Er hat keinen Sekundarschulabschluss Livello più alto di educazione Nationally defined categories: 1 = Università, scuole universitarie professionali, alte scuole pedagogiche 2 = Istruzione superiore tecnica professionale 3 = Scuole di maturità (incluse maturità professionali) 4 = Scuole medie professionali a tempo pieno, apprendistato 5 = Scuole medie 6 = Non ha terminato la scuola media	college 2 = Schools of maturity (including professional maturity) 3 = Matura (including professional baccalaureate)/School for general knowledge leading to a specific professional domain, apprenticeship 4 = Secondary school 5 = He did not complete secondary school
StQ-11	Thailand	StQ-11	D	Nationally defined categories: 1 = ปริญญาตรีหรือสูงกว่า 2 = อนุปริญญาหรือปวส. 3 = มัธยมศึกษาตอนปลาย (ม.6) หรือปวช. 4 = มัธยมศึกษาตอนต้น (ม.3) 5 = ไม่จบชั้นมัธยมศึกษาตอนต้น (ม.3)	Nationally defined categories: 1 = Bachelor's degree or higher 2 = Diploma in postsecondary programs or practical/technical/occupation programs 3 = High school (Grade 12) or similar 4 = Middle school (Grade 9) 5 = He did not complete middle school (Grade 9)
StQ-11	Turkey	StQ-11	D	Nationally defined categories: 1 = Üniversite veya Yüksek Lisans/Doktora 2 = Meslek Yüksek Okulu 3 = Gelen Lise/Meslek Lisesi 4 = Ortaokul 5 = Ortaokulu tamamlamadı	Nationally defined categories: 1 = University or Master's/PhD 2 = Vocational school of higher education 3 = General/Vocational high school 4 = Secondary school 5 = He did not complete secondary school
StQ-13A-B	Lithuania	StQ-13B	D	Nešiojami kompiuteriai (nešiojami, internetiniai (angl. netbook), iPad ar kitokie planšetiniai įrenginiai)	Portable computer (notebook, netbook, iPad, or other tablet device)
StQ-14	Chile	StQ-14	D	Nationally defined categories: 1 = Ninguna 2 = Línea telefónica 3 = Banda ancha (por ejemplo, vía módem, fibra óptica, satelital, etc.) 4 = Conexión a través de un teléfono celular 5 = Sé que tenemos internet, pero no sé qué tipo de conexión es	Nationally defined categories: 1 = None 2 = Dial-up 3 = Broadband (for example, modem, optical fiber, satellite, etc.) 4 = Connection through mobile phone network 5 = I know we have Internet but I don't know what type of connection it is
StQ-14	Germany	StQ-14	D	Kabel, DSL	Cable, DSL
StQ-14	Netherlands	StQ-14	D	Nationally defined categories: 1 = Geen	Nationally defined categories: 1 = None

				2 = Inbelverbinding 3 = Breedband (bijvoorbeeld kabel, ADSL) 4 = Verbinding via netwerk van mobiele telefonie 5 = Ik weet dat we internet hebben, maar ik weet niet wat voor soort verbinding het is	2 = Dial-up 3 = Broadband (for example, cable, DSL) 4 = Connection through mobile phone network 5 = I know we have Internet but I don't know what type of connection it is
StQ-14	Poland	StQ-14	D	Nationally defined categories: 1 = Brak 2 = Połączenie przez modem telefoniczny 3 = Połączenie szerokopasmowe (na przykład Neostrada, kablowe, DSL, satelitarne) 4 = Połączenie przez sieć telefonii komórkowej 5 = Wiem, że mamy Internet, ale nie wiem, jakiego typu jest to połączenie	Nationally defined categories: 1 = None 2 = Dial-up 3 = Broadband (for example, Neostrada, cable, DSL, satellite) 4 = Connection through mobile phone network 5 = I know we have Internet but I don't know what type of connection it is
StQ-14	Slovak Republic	StQ-14	D	Nationally defined categories: 1 = Semmilyen 2 = Dial-up (telefon vonal) 3 = Szélessávú (pl. kábeles, DSL, szatellites) 4 = Mobil internet kapcsolat 5 = Tudom, hogy van internet-kapcsolatunk, de nem tudom milyen típusú Nationally defined categories: 1 = Ziadny 2 = Dial-up (telefónna linka) 3 = Širokopásmové (napríklad káblové, DSL, satelitné) 4 = Pripojenie prostredníctvom mobilnej siete 5 = Viem, že máme internet, ale neviem, aký typ pripojenia to je	Nationally defined categories: 1 = None 2 = Dial-up (telephone connection) 3 = Cable, DSL, satellite 4 = Connection through mobile phone network 5 = I know we have internet but I don't know what type of connection it is
StQ-14	Slovenia	StQ-14	D	Nationally defined categories: 1 = Nobene 2 = Klicni dostop 3 = Širokopasovni dostop (na primer kabelski dostop, ADSL, optika) 4 = Povezavo preko mobilnega omrežja 5 = Vem, da internet imamo, vendar ne vem, katere vrste povezavo	Nationally defined categories: 1 = None 2 = Dial-up 3 = Broadband (for example, cable, ADSL, optic cable) 4 = Connection through mobile phone network 5 = I know we have Internet but I don't know what type of connection it is
StQ-15	Argentina, Buenos Aires	StQ-15	D	Stem of the question changed: ¿Desde cuándo usás computadoras?	Stem of the question changed: Since when are you using computers?
StQ-16A-B	Poland	StQ-16A-B	D	Nationally defined categories: 1 = Windows (PC)	National categories recoded for international comparability: 1 = Windows (PC)

				2 = Mac OS 3 = Linux 4 = Z innego 5 = Nie wiem 6 = Nie używam komputera w tych miejscach	2 = Mac OS 3 = Linux/Other 4 = I don't know 5 = I do not use a computer in this location
StQ-18A-G	Argentina, Buenos Aires	StQ-18A	D	Crear o editar documentos (por ejemplo para escribir historias o hacer tareas)	Create or edit documents (for example, to write stories or do homework)
StQ-18A-G	Argentina, Buenos Aires	StQ-18B	D	Usar una hoja de cálculo para calcular, almacenar datos o crear gráficos (por ejemplo, usando Microsoft EXCEL ®)	Use a spreadsheet to do calculations, store data, or create graphs (for example, using Microsoft EXCEL ®)
StQ-18A-G	Australia	StQ-18F	D	Java, Basic or HTML	Java, Basic, or HTML
StQ-18A-G	Chile	StQ-18F	D	Programar computadores, escribir macros o scripts (por ejemplo usando Logo, Basic o HTML)	Programming computers, writing macros or scripts (for example, using Logo, Basic, or HTML)
StQ-18A-G	Korea, Republic of	StQ-18F	D	스크래치, 비쥬얼 베이직, HTML	Scratch, Visual Basic, HTML
StQ-18A-G	Lithuania	StQ-18E	D	Naudojatės mokomosiomis programomis mokydamiesi įvairių dalykų (pvz., matematikos, chemijos ar kitomis programomis)	Using education software that is designed to help with your school study (e.g., mathematics, chemistry, or other software)
StQ-18A-G	Lithuania	StQ-18F	D	Rašote kompiuterines programas, makro komandas (pvz. naudodamiesi Logo, Pascal ar HTML redaktoriumi)	Writing computer programs, macros (e.g., using Logo, Pascal, or HTML editor)
StQ-18A-G	Norway	StQ-18F	D	Microsoft Visual Basic, C++ eller HTML	Microsoft Visual Basic, C++, or HTML
StQ-18A-G	Poland	StQ-18F	D	Języku C, Pascal lub HTML	Language C, Pascal, or HTML
StQ-18A-G	Slovak Republic	StQ-18B	D	MS Excel ®, Open Office MS Excel ®, Open Office	MS Excel ®, Open Office
StQ-18A-G	Slovak Republic	StQ-18C	D	MS PowerPoint ®, Open Office MS PowerPoint ®, Open Office	MS PowerPoint ®, Open Office
StQ-18A-G	Slovak Republic	StQ-18F	D	Pascal, Logo, Basic, C vagy HTML Pascal, Logo, Basic, C alebo HTML	Pascal, Logo, Basic, C, or HTML
StQ-18A-G	Slovak Republic	StQ-18G	D	Používanie kresliaceho alebo grafického softvéru	Using drawing or graphics software
StQ-19A-J	Chile	StQ-19H	D	Comunidad virtual	Virtual community

StQ-19A-J	Croatia	StQ-19E	D	Web-stranicama koja se sastoje od pitanja i odgovora	Websites which consist of questions and answers
StQ-19A-J	Croatia	StQ-19H	D	Online profile ili društvene mreže	Online profiles or social networks
StQ-19A-J	Czech Republic	StQ-19E	D	Internetové poradny	Internet-based advisory
StQ-19A-J	Czech Republic	StQ-19H	D	Internetové komunity	Internet communities
StQ-19A-J	Korea, Republic of	StQ-19E	D	지식인	Intellectual
StQ-19A-J	Lithuania	StQ-19C	D	Bendraujate su kitais, siųsdami žinutes ar naudodamiesi socialiniais tinklais (pvz. Messenger, Facebook, Twitter ar kitus)	Communicating with others using messaging or social networks (e.g., Messenger, Facebook, Twitter, or others)
StQ-19A-J	Lithuania	StQ-19E	D	Kitose	Other
StQ-19A-J	Lithuania	StQ-19H	D	Talpinate vaizdus ar filmuotą medžiagą į socialinius tinklus ar internetines bendruomenes (pvz. Facebook ar YouTube)	Uploading images or video to social networks or online communities (e.g., Facebook or YouTube)
StQ-19A-J	Poland	StQ-19C	D	Komunikowanie się z innymi za pomocą komunikatorów lub portali społecznościowych (np. Gadu-Gadu lub Facebook)	Communicating with others through instant messaging software or social networking sites (e.g., Gadu-Gadu or Facebook)
StQ-19A-J	Poland	StQ-19E	D	Zadawanie pytań na forach lub na podobnych stronach internetowych np. zapytaj.pl	Asking questions on forums or similar websites such as zapytaj.pl
StQ-19A-J	Poland	StQ-19H	D	Przesyłanie obrazków, zdjęć lub filmików wideo na profil internetowy lub portal społecznościowy (np. Facebook czy YouTube)	Sending pictures, photos, or short video films to an online profile or a social networking site (e.g., Facebook or YouTube)
StQ-19A-J	Russian Federation	StQ-19A	D	Поиск информации для твоего образования и/или школьных занятий	Searching for information for your education and/or school work
StQ-19A-J	Russian Federation	StQ-19B	D	Обращение к вики-страницам или онлайн-энциклопедиям для твоего образования и/или школьных занятий	Accessing wikis or online encyclopedia for your education and/or school work
StQ-19A-J	Russian Federation	StQ-19C	D	Публикации обновлений в социальных сетях	Updating status in the social networks
StQ-19A-J	Slovak Republic	StQ-19C	D	Kommunikáció másokkal üzenetküldő szoftver felhasználásával, vagy a szociális hálón (pl. ICQ, Skype, Facebook) Písanie správ cez komunikačný softvér alebo sociálne siete (napr. ICQ, Skype, Facebook)	Communicating with others using messaging software or on social networks (e.g., ICQ, Skype, Facebook) Writing messages via communicating software or social networks (e.g., ICQ, Skype, Facebook)
StQ-19A-J	Slovak Republic	StQ-19E	D	Kérdések feltevése fórum weboldalakon, vagy hasonló weboldalakon	Asking questions on forum websites or similar websites

				Kladenie otázok na diskusných weboch alebo fórach	Asking questions on discussion webs or forums
StQ-19A-J	Slovak Republic	StQ-19H	D	Profiloldalra a szociális hálóra (pl. Facebook vagy YouTube) Profil na sociálnej sieti (napr. na Facebook alebo YouTube)	Social network profile (e.g., Facebook or YouTube)
StQ-19A-J	Slovak Republic	StQ-19I	D	Hangos kommunikáció (pl. Skype, Google Talk) felhasználása online beszélgetésre a barátokkal és a családtagokkal Používanie hlasovej komunikácie (napríklad Skype, Google Talk) na on-line chatovanie s kamarátmi alebo s rodinou	Using voice chat (e.g., Skype, Google Talk) to chat with friends or family online
StQ-19A-J	Slovenia	StQ-19C	D	Posodabljanjem profila	Profile updates
StQ-19A-J	Slovenia	StQ-19H	D	Socialno omrežje	Social network
StQ-19A-J	Switzerland	StQ-19C	D	*German Statusmeldungen	*German Status messages
StQ-19A-J	Switzerland	StQ-19E	D	*German Frage-Antwort	*German Question-answer
StQ-19A-J	Switzerland	StQ-19H	D	*German Soziale Plattformen	*German Social platforms
StQ-19A-J	Turkey	StQ-19H	D	Çevrimiçi sosyal ortam	Online social medium
StQ-20A-F	Argentina, Buenos Aires	StQ-20C	D	Jugar	Play
StQ-21A-H	Argentina, Buenos Aires	StQ-21E	D	Completar tareas o hacer ejercicios	Complete homework or exercises
StQ-21A-H	Chile	StQ-21E	D	Tareas	Assignments
StQ-21A-H	Norway	StQ-21E	D	Oppgaver Oppgåver	Assignments
StQ-21A-H	Russian Federation	StQ-21E	D	Заданий	Tasks
StQ-22A-H	Argentina,	StQ-22A	D	Lenguaje y Comunicación	Language

	Buenos Aires				
StQ-22A-H	Argentina, Buenos Aires	StQ-22B	D	Idioma Extranjero o Lenguas Originarias	Foreign language
StQ-22A-H	Argentina, Buenos Aires	StQ-22D	D	Ciencias Naturales	Sciences
StQ-22A-H	Argentina, Buenos Aires	StQ-22E	D	Ciencias Sociales	Social studies
StQ-22A-H	Argentina, Buenos Aires	StQ-22F	D	Artes	Arts
StQ-22A-H	Argentina, Buenos Aires	StQ-22G	D	Educación Tecnologica/Informática	Computer studies
StQ-22A-H	Australia	StQ-22A	D	English	English
StQ-22A-H	Australia	StQ-22B	D	LOTE (Language Other Than English)	LOTE (Language Other Than English)
StQ-22A-H	Canada	StQ-22A	D	English Français	English French
StQ-22A-H	Canada	StQ-22B	D	French and other languages Anglais et autres langues	French and other languages English and other languages
StQ-22A-H	Canada	StQ-22E	D	Social sciences and humanities (for example, history, geography, civic and citizenship education, law, economics) Sciences humaines et sociales (p. ex., histoire, géographie, éducation à la citoyenneté, droit, économie)	Social sciences and humanities (for example, history, geography, civic and citizenship education, law, economics)
StQ-22A-H	Canada	StQ-22G	D	Information technology, computer studies Technologie de l'information, informatique	Information technology, computer studies
StQ-22A-H	Canada	StQ-22H	D	Other (for example, moral/ethics, physical education, home economics, personal and social development)	Other (for example, moral/ethics, physical education, home economics, personal and social development)

				Autres (p. ex., morale et éthique, éducation physique, économie familiale, développement personnel et social)	
StQ-22A-H	Chile	StQ-22A	D	Lenguaje y Comunicación	Language and communication
StQ-22A-H	Chile	StQ-22B	D	Idioma extranjero o lenguas originarias	Foreign language or original languages
StQ-22A-H	Chile	StQ-22D	D	Ciencias Naturales	Natural sciences
StQ-22A-H	Chile	StQ-22E	D	Historia, Geografía o Ciencias Sociales	History, geography, or social sciences
StQ-22A-H	Chile	StQ-22F	D	Artes (Artes Plásticas, Música, Danza, Teatro, etc.)	Arts (visual arts, music, dance, drama, etc.)
StQ-22A-H	Chile	StQ-22G	D	Educación Tecnológica	Technological education
StQ-22A-H	Chile	StQ-22H	D	Otra (asignaturas prácticas o vocacionales, Moral/ Ética, Religión, Educación Física, Economía Doméstica, Orientación)	Other (practical or vocational subjects, moral/ethics, religion, physical education, home economics, orientation)
StQ-22A-H	Croatia	StQ-22A	D	Hrvatski jezik	Croatian language
StQ-22A-H	Croatia	StQ-22B	D	Strani jezik	Foreign language
StQ-22A-H	Croatia	StQ-22G	D	Informatika	Information technology
StQ-22A-H	Croatia	StQ-22H	D	Ostali predmeti (Vjeronauk, Tjelesni odgoj)	Other subjects (religion, physical education)
StQ-22A-H	Czech Republic	StQ-22A	D	Český jazyk	Czech language
StQ-22A-H	Czech Republic	StQ-22B	D	Cizí jazyk/y	Foreign language(s)
StQ-22A-H	Czech Republic	StQ-22G	D	Informační a komunikační technologie	Information and communication technologies
StQ-22A-H	Denmark	StQ-22A	D	Dansk	Danish
StQ-22A-H	Denmark	StQ-22B	D	Fremmedsprog (f.eks. engelsk, tysk, fransk)	Foreign languages (e.g., English, German, French)
StQ-22A-H	Denmark	StQ-22G	D	It-fag (tekstbehandling, teknologi, medier)	IT subjects (wordprocessing, technology, media)
StQ-22A-H	Germany	StQ-22A	D	Deutsch	German
StQ-22A-H	Germany	StQ-22B	D	Fremdsprache (Englisch, Französisch, Italienisch usw.)	Foreign language (English, French, Italian, etc.)
StQ-22A-H	Hong Kong SAR	StQ-22A	D	普通话 中國語文	Putonghua Chinese language

				English	English
StQ-22A-H	Hong Kong SAR	StQ-22B	D	英国语文、中国语文、其他语言 英國語文、普通話、其他語言 Chinese language, Putonghua, and other languages	English, Chinese language, and other languages English, Putonghua, and other languages Chinese language, Putonghua, and other languages
StQ-22A-H	Korea, Republic of	StQ-22A	D	국어	Korean
StQ-22A-H	Korea, Republic of	StQ-22B	D	영어 또는 제 2외국어	English (first foreign language) or second languages
StQ-22A-H	Lithuania	StQ-22A	D	Lietuvių kalbos	Lithuanian language
StQ-22A-H	Lithuania	StQ-22B	D	Užsienio kalbos ir kitos gimtosios (išskyrus lietuvių) kalbos	Foreign languages and other native languages (except Lithuanian)
StQ-22A-H	Lithuania	StQ-22E	D	Socialinių mokslų (istorijos, geografijos, pilietinės visuomenės pagrindų, ekonomikos ir pan.)	Social sciences (history, geography, civics, law, economics, etc.)
StQ-22A-H	Lithuania	StQ-22G	D	Informacinių technologijų	Computer science
StQ-22A-H	Netherlands	StQ-22A	D	Nederlands	Dutch
StQ-22A-H	Netherlands	StQ-22B	D	Nationally defined dimensions: 1 = Moderne vreemde talen (zoals Engels, Duits, Frans) 2 = Klassieke talen (Latijn, Grieks)	National dimensions recoded for international comparability: 1 = Foreign languages (like English, German, French)/Classical languages (Latin, Greek)
StQ-22A-H	Netherlands	StQ-22G	D	Informatiekunde (Informatica, Programmeren, Informatievaardigheden)	Computer studies (information technology, programming, information science)
StQ-22A-H	Netherlands	StQ-22H	X	Dimension not administered or data not available	Dimension not administered or data not available
StQ-22A-H	Norway	StQ-22A	D	Norsk	Norwegian
StQ-22A-H	Norway	StQ-22B	D	Fremmedspråk (f.eks. engelsk, tysk, spansk) Framandspråk (t.d. engelsk, tysk, spansk)	Foreign language (e.g., English, German, Spanish)
StQ-22A-H	Norway	StQ-22F	D	Kunst og håndverk, musikk	Arts and craft, music

				Kunst og handverk, musikk	
StQ-22A-H	Norway	StQ-22G	X	Dimension not administered or data not available	Dimension not administered or data not available
StQ-22A-H	Norway	StQ-22H	D	Andre (RLE, gymnastikk, mat og helse)	Other (religion/ethics, physical education, food and health)
StQ-22A-H	Poland	StQ-22A	D	Język polski	Polish language
StQ-22A-H	Poland	StQ-22B	D	Język obcy, język mniejszości lub regionalny	Foreign language, minority language, or regional language
StQ-22A-H	Poland	StQ-22D	D	Nauki przyrodnicze (przyroda oraz/lub fizyka, chemia, biologia, geografia)	Sciences (general science and/or physics, chemistry, biology)
StQ-22A-H	Poland	StQ-22E	D	Nauki humanistyczne (historia, wiedza o społeczeństwie, wiedza o kulturze, przedsiębiorczość itp.)	Humanities (history, geography, civics, culture studies, entrepreneurship, etc.)
StQ-22A-H	Poland	StQ-22G	D	Informatyka, zajęcia komputerowe lub podobne	Computer science (or IT), computer classes or similar
StQ-22A-H	Poland	StQ-22H	D	Inne (zajęcia techniczne, religia/etyka, wychowanie fizyczne)	Other (practical or vocational subjects, moral/ethics, physical education)
StQ-22A-H	Russian Federation	StQ-22A	D	Русский язык и литература	Russian language and literature
StQ-22A-H	Russian Federation	StQ-22B	D	Иностранные языки, родной (нерусский) язык	Foreign languages, Native language/Mother tongue (not Russian)
StQ-22A-H	Russian Federation	StQ-22G	D	Информатика и ИКТ	Informatics and ICT
StQ-22A-H	Slovak Republic	StQ-22A	D	Magyar nyelv Slovenský jazyk	Hungarian language Slovak language
StQ-22A-H	Slovak Republic	StQ-22B	D	Nationally defined dimensions: 1 = Szlovák nyelv 2 = Degen nyelv Cudzí jazyk	National dimensions recoded for international comparability: 1 = Slovak language/Foreign language Foreign language
StQ-22A-H	Slovak Republic	StQ-22D	D	Természettudományok (fizika, kémia, természetrajz) Prírodovedné predmety (fyzika, chémia, prírodopis)	Sciences (physics, chemistry, natural science)
StQ-22A-H	Slovak Republic	StQ-22G	D	Informatika	Informatics

				Informatika	
StQ-22A-H	Slovak Republic	StQ-22H	D	Egyéb (gyakorlati órák vagy szaktantárgyak, erkölcstan, hittan, testnevelés) Iné (praktické a odborné predmety, etická výchova, náboženská výchova, telesná výchova)	Other (practical or vocational subjects, ethics, religion, physical education)
StQ-22A-H	Slovenia	StQ-22A	D	Slovenščina	Slovenian
StQ-22A-H	Slovenia	StQ-22B	D	Tuj jezik ali manjšinski jeziki	Foreign languages or minority languages
StQ-22A-H	Slovenia	StQ-22G	D	Računalništvo	Computer studies
StQ-22A-H	Slovenia	StQ-22H	D	Drugo (praktični predmeti, etika, telesna vzgoja, gospodinjstvo)	Other (practical or vocational subjects, ethics, physical education, home economics)
StQ-22A-H	Switzerland	StQ-22A	D	Français Deutsch Discipline linguistiche: italiano	French German Language subject: Italian
StQ-22A-H	Switzerland	StQ-22B	D	Langues étrangères (Allemand, Anglais, Italien, etc.) Fremdsprachen (Englisch, Französisch, Italienisch usw.) Discipline linguistiche: per esempio inglese, tedesco o francese	Foreign languages (German, English, Italian, etc.) Foreign languages (English, French, Italian, etc.) Language subjects: for example, English, German, or French
StQ-22A-H	Switzerland	StQ-22G	D	Technologie de l'information, informatique Informatik bzw. Informationstechnologischer Bereich Informatica e materie analoghe	Information technology, computer studies Informatics respectively information technology Information technology and similar
StQ-22A-H	Thailand	StQ-22A	D	ภาษาไทย	Thai language
StQ-22A-H	Thailand	StQ-22B	D	ภาษาต่างประเทศ	Foreign language
StQ-22A-H	Thailand	StQ-22G	D	เทคโนโลยีสารสนเทศและการสื่อสาร คอมพิวเตอร์ศึกษา	Information and communication technology, computer studies, or

				หรือวิชาอื่นที่ใกล้เคียง	similar
StQ-22A-H	Turkey	StQ-22A	D	Türkçe	Turkish
StQ-22A-H	Turkey	StQ-22B	D	Yabancı dil	Foreign language
StQ-24A-E	Denmark	StQ-24E	D	Arbejder i et computernetværk/intranet (fx åbner og gemmer filer på et fællesdrev, finder og printer fra en netværksprinter)	Working in a computer network/intranet (e.g., open and save files on a shared drive, find and print from a network printer)
StQ-24A-E	Slovak Republic	StQ-24E	D	Számítógépes hálózatban dolgozni (pl. beállítani a dokumentumok megosztását) Pracovať v počítačovej sieti (napr. nastaviť zdieľanie dokumentov)	Working in a computer network (e.g., set up document sharing)
StQ-25A-M	Australia	StQ-25J	D	Basic, Visual Basic, Java	Basic, Visual Basic, Java
StQ-25A-M	Chile	StQ-25J	D	Programar o crear una macro (por ejemplo en Basic, Visual Basic)	Programming or creating a macro (for example, in Basic, Visual Basic)
StQ-25A-M	Korea, Republic of	StQ-25J	D	C/C++, 비주얼 베이직	C/C++, Visual Basic
StQ-25A-M	Lithuania	StQ-25J	D	Pascal, Visual Basic programavimo kalba	Pascal, Visual Basic programming language
StQ-25A-M	Slovak Republic	StQ-25J	D	Basic, Pascal, C, Visual Basic, HTML nyelvekben Jazyku Basic, Pascal, C, Visual Basic, HTML	Basic, Pascal, C, Visual Basic, HTML
StQ-S	Argentina, Buenos Aires	StQ-S-A	D	Section instruction changed: En esta sección encontrarás algunas preguntas sobre tu familia y tu casa. Algunas de estas preguntas serán acerca de tu casa, de tu mamá y papá, u otra persona que sea tu tutor/a, por ejemplo, padrastros o padres adoptivos. Si compartes tu tiempo con más de una pareja de papás o tutores, por favor contesta las siguientes preguntas pensando en los papás/tutores con quienes pasas más tiempo.	Section instruction changed: In this section you will find some questions about your family and your home. Some of them will be about your house, your mother and father, or your guardians, for example, stepparents or foster parents. If you share your time with more than a couple of parents or guardians, please answer the following questions, having in mind those parents/guardians whom you spend more time with.
StQ-S	Slovak Republic	StQ-S-A	D	Section instruction changed: V tejto casti dotazníka budeš odpovedat na otázky o tvojej rodine a tvojom domove. Niektoré otázky budú o domove a o tvojom otcovi a mame alebo	Section instruction changed: In this section you will be asked some questions about your family and your home. Some of these questions will be about home and your mother

				opatrovateloch, ktorí sa o teba starajú - napríklad nevlastní rodicia alebo pestúni. Ak sa o teba stará viac osôb naraz (rodicov alebo opatrovatelov), odpovedaj na nasledovné otázky podla tých rodicov/ opatrovatelov, s ktorými trávíš najviac casu.	and father or guardians who look after you— for example, step-parents or foster-parents. If there are more persons that look after you (parents or guardians), answer the following questions for those parents/ guardians you spend the most time with.

List of country-specific adaptations to the principal questionnaire sorted by question group, country, and location

Question group	Country	Location	Code	Adaptation: Language of test	Adaptation: English backtranslation
PrQ-02A-J	Canada	PrQ-02G	D	Communicate with education authorities (e.g., school boards/ districts) Communiquer avec les autorités scolaires (p. ex., conseils/ commissions/districts scolaires)	Communicate with education authorities (e.g., school boards/ districts)
PrQ-02A-J	Canada	PrQ-02I	D	Communicate with parents/guardians Communiquer avec les parents/tuteurs	Communicate with parents/guardians
PrQ-02A-J	Denmark	PrQ-02J	D	Skoleintra ®, Fronter ®	Skoleintra ®, Fronter ®
PrQ-02A-J	Korea, Republic of	PrQ-02J	D	NEIS	NEIS (National Education Information System)
PrQ-02A-J	Lithuania	PrQ-02J	D	Nuotolinio mokymo sistema (pvz. Moodle, WebCT®)	Distance learning system (e.g., Moodle, WebCT®)
PrQ-02A-J	Norway	PrQ-02J	D	Fronter, it's learning Fronter, it's learning	Fronter, it's learning
PrQ-02A-J	Russian Federation	PrQ-02A	D	поиска информации в Интернете или в образовательной сети и на образовательных порталах	Search for information on the Internet or an education system network and web portals
PrQ-02A-J	Russian Federation	PrQ-02J	D	Net-School/(Net-Школа), Moodle, 1С:Образование.Школа	Net-School, Moodle, 1C: Education School
PrQ-02A-J	Slovak Republic	PrQ-02B	D	Poskytovanie informácií ohľadom vzdelávania prostredníctvom webu alebo siete patriacej do systému vzdelávania	Provide information about an educational issue through a website or through a network of the educational system
PrQ-02A-J	Slovak Republic	PrQ-02G	D	Komunikácia s odborníkmi alebo kompetentnými inštitúciami v oblasti vzdelávania	Communicate with experts or competent institutions in the area of education
PrQ-02A-J	Thailand	PrQ-02J	D	มูเดิล (moodle) หรือจุมลา (joomla)	Moodle, Joomla

PrQ-04A-B	Argentina, Buenos Aires	PrQ-04A-B	D	Stem of the question changed: ¿Cuál es el número total de alumnas/os en 1º año?	Stem of the question changed: What is the total number of boys and girls in the first year of secondary school?
PrQ-05A-B	Argentina, Buenos Aires	PrQ-05A	D	Nationally defined categories: 1 = Sala de cinco 2 = Primer grado de nivel primario 3 = Segundo año de nivel secundario 4 = Primer año de nivel secundario	National categories recoded for international comparability: 0 = Kindergarten 1 = 1st grade 2 = Category not administered or data not available 3 = Category not administered or data not available 4 = Category not administered or data not available 5 = Category not administered or data not available 6 = Category not administered or data not available 7 = Category not administered or data not available 8 = Second year of secondary/First year of secondary
PrQ-05A-B	Argentina, Buenos Aires	PrQ-05B	D	Nationally defined categories: 1 = 5º año 2 = 6º año	National categories recoded for international comparability: 8 = Category not administered or data not available 9 = Category not administered or data not available 10 = Category not administered or data not available 11 = Category not administered or data not available 12 = 5th year 13 = 6th year 14 = Category not administered or data not available
PrQ-05A-B	Australia	PrQ-05A	D	Nationally defined categories: 1 = A preparatory year of school (e.g. prep in Victoria, kindergarten in NSW) 2 = Year 1 3 = Year 2 4 = Year 3 5 = Year 4 6 = Year 5 7 = Year 6 8 = Year 7 9 = Year 8	National categories recoded for international comparability: 0 = A preparatory year of school (e.g., prep in Victoria, kindergarten in NSW) 1 = Year 1 2 = Year 2 3 = Year 3 4 = Year 4 5 = Year 5 6 = Year 6 7 = Year 7 8 = Year 8
PrQ-05A-B	Australia	PrQ-05B	D	Nationally defined categories: 1 = Year 8 2 = Year 9 3 = Year 10 4 = Year 11 5 = Year 12	National categories recoded for international comparability: 8 = Year 8 9 = Year 9 10 = Year 10 11 = Year 11 12 = Year 12 13 = Category not administered or data not available 14 = Category not administered or data not available

PrQ-05A-B	Canada	PrQ-05A	D	Nationally defined categories: 1 = Pre-kindergarten 2 = Kindergarten 3 = Grade 1 4 = Grade 2 5 = Grade 3 6 = Grade 4 7 = Grade 5 8 = Grade 6 9 = Grade 7 (Secondary I) 10 = Grade 8 (Secondary II) Nationally defined categories: 1 = Pré-maternelle 2 = Maternelle 3 = 1 re année 4 = 2e année 5 = 3e année 6 = 4e année 7 = 5e année 8 = 6e année 9 = 7e année (Secondaire I) 10 = 8e année (Secondaire II)	National categories recoded for international comparability: 0 = Pre-kindergarten/Kindergarten 1 = Grade 1 2 = Grade 2 3 = Grade 3 4 = Grade 4 5 = Grade 5 6 = Grade 6 7 = Grade 7 8 = Grade 8
PrQ-05A-B	Canada	PrQ-05B	D	Nationally defined categories: 1 = Grade 8 (Secondary II) 2 = Grade 9 (Secondary III) 3 = Grade 10 (Secondary IV/Level I – NL) 4 = Grade 11 (Secondary V/Level II – NL) 5 = Grade 12 (Level III – NL) 6 = Post-Grade (any program that offers credit beyond Grade 12) Nationally defined categories: 1 = 8e année (Secondaire II) 2 = 9e année (Secondaire III) 3 = 10e année (Secondaire IV/Niveau I – NL) 4 = 11e année (Secondaire V/Niveau II – NL) 5 = 12e année (Niveau III – NL) 6 = Au-delà de la 12e année (tout programme offrant des crédits au-delà de la 12e année)	National categories recoded for international comparability: 8 = Grade 8 9 = Grade 9 10 = Grade 10 11 = Grade 11 12 = Grade 12 13 = Post-Grade (any program that offers credit beyond Grade 12) 14 = Category not administered or data not available

PrQ-05A-B	Chile	PrQ-05A	D	Nationally defined categories: 1 = Educación parvularia (kínder inclusive) 2 = 1° básico 3 = 2° básico 4 = 3° básico 5 = 4° básico 6 = 5° básico 7 = 6° básico 8 = 7° básico 9 = 8° básico	National categories recoded for international comparability: 0 = Nursery education (including kindergarten) 1 = Grade 1 2 = Grade 2 3 = Grade 3 4 = Grade 4 5 = Grade 5 6 = Grade 6 7 = Grade 7 8 = Grade 8
PrQ-05A-B	Chile	PrQ-05B	D	Nationally defined categories: 1 = 8° básico 2 = I medio 3 = II medio 4 = III medio 5 = IV medio	National categories recoded for international comparability: 8 = Grade 8 9 = Grade 9 10 = Grade 10 11 = Grade 11 12 = Grade 12 13 = Category not administered or data not available 14 = Category not administered or data not available
PrQ-05A-B	Croatia	PrQ-05A	D	Gang punched to "Grade 1"	Gang punched to "Grade 1"
PrQ-05A-B	Croatia	PrQ-05B	D	Gang punched to "Grade 8"	Gang punched to "Grade 8"
PrQ-05A-B	Czech Republic	PrQ-05A	D	Nationally defined categories: 1 = Nultý ročník - přípravný 2 = 1. ročník 3 = 2. ročník 4 = 3. ročník 5 = 4. ročník 6 = 5. ročník 7 = 6. ročník 8 = 7. ročník	National categories recoded for international comparability: 0 = Grade 0—preparatory grade 1 = Grade 1 2 = Grade 2 3 = Grade 3 4 = Grade 4 5 = Grade 5 6 = Grade 6 7 = Grade 7 8 = Category not administered or data not available
PrQ-05A-B	Czech Republic	PrQ-05B	D	Nationally defined categories: 1 = 8. ročník 2 = 9. ročník 3 = 10. ročník 4 = 11. ročník 5 = 12. ročník 6 = 13. ročník 7 = 14. ročník	National categories recoded for international comparability: 8 = Grade 8 9 = Grade 9 10 = Grade 10 11 = Grade 11 12 = Grade 12 13 = Grade 13 14 = Grade 14
PrQ-05A-B	Denmark	PrQ-05A	D	Nationally defined categories: 1 = 0. klasse	National categories recoded for international comparability: 0 = Grade 0

				2 = 1. klasse 3 = 2. klasse 4 = 3. klasse 5 = 4. klasse 6 = 5. klasse 7 = 6. klasse 8 = 7. klasse 9 = 8. klasse	1 = Grade 1 2 = Grade 2 3 = Grade 3 4 = Grade 4 5 = Grade 5 6 = Grade 6 7 = Grade 7 8 = Grade 8
PrQ-05A-B	Denmark	PrQ-05B	D	Nationally defined categories: 1 = 8. klasse 2 = 9. klasse 3 = 10. klasse 4 = 1. G 5 = 2. G 6 = 3. G	National categories recoded for international comparability: 8 = Grade 8 9 = Grade 9 10 = Grade 10/High school Grade 1 11 = High school Grade 2 12 = High school Grade 3 13 = Category not administered or data not available 14 = Category not administered or data not available
PrQ-05A-B	Germany	PrQ-05A	D	Nationally defined categories: 1 = Bildungsangebot vor der Klassenstufe 1 (z.B. Vorschulklasse) 2 = Klassenstufe 1 3 = Klassenstufe 2 4 = Klassenstufe 3 5 = Klassenstufe 4 6 = Klassenstufe 5 7 = Klassenstufe 6 8 = Klassenstufe 7 9 = Klassenstufe 8	National categories recoded for international comparability: 0 = Preschool activities 1 = Grade 1 2 = Grade 2 3 = Grade 3 4 = Grade 4 5 = Grade 5 6 = Grade 6 7 = Grade 7 8 = Grade 8
PrQ-05A-B	Germany	PrQ-05B	D	Nationally defined categories: 1 = Klassenstufe 8 2 = Klassenstufe 9 3 = Klassenstufe 10 4 = Klassenstufe 11 5 = Klassenstufe 12 6 = Klassenstufe 13	National categories recoded for international comparability: 8 = Grade 8 9 = Grade 9 10 = Grade 10 11 = Grade 11 12 = Grade 12 13 = Grade 13 14 = Category not administered or data not available
PrQ-05A-B	Hong Kong SAR	PrQ-05A	D	Nationally defined categories: 1 = 中一 2 = 中二 3 = 中三 4 = 中四 5 = 中五 6 = 中六	National categories recoded for international comparability: 0 = Category not administered or data not available 1 = Category not administered or data not available 2 = Category not administered or data not available 3 = Category not administered or data not available 4 = Category not administered or data not available 5 = Category not administered or data not available

				Nationally defined categories: 1 = 中一 2 = 中二 3 = 中三 4 = 中四 5 = 中五 6 = 中六 Nationally defined categories: 1 = Secondary 1 2 = Secondary 2 3 = Secondary 3 4 = Secondary 4 5 = Secondary 5 6 = Secondary 6	6 = Category not administered or data not available 7 = Secondary 1 8 = Secondary 2
PrQ-05A-B	Hong Kong SAR	PrQ-05B	D	Nationally defined categories: 1 = 中一 2 = 中二 3 = 中三 4 = 中四 5 = 中五 6 = 中六 Nationally defined categories: 1 = 中一 2 = 中二 3 = 中三 4 = 中四 5 = 中五 6 = 中六 Nationally defined categories: 1 = Secondary 1 2 = Secondary 2 3 = Secondary 3 4 = Secondary 4 5 = Secondary 5	National categories recoded for international comparability: 8 = Secondary 2 9 = Secondary 3 10 = Secondary 4 11 = Secondary 5 12 = Secondary 6 13 = Category not administered or data not available 14 = Category not administered or data not available

				6 = Secondary 6	
PrQ-05A-B	Korea, Republic of	PrQ-05A	D	Nationally defined categories: 1 = 중학교1학년 2 = 중학교 2학년 3 = 중학교 3학년	National categories recoded for international comparability: 0 = Category not administered or data not available 1 = Category not administered or data not available 2 = Category not administered or data not available 3 = Category not administered or data not available 4 = Category not administered or data not available 5 = Category not administered or data not available 6 = Category not administered or data not available 7 = First grade of middle school 8 = Second grade of middle school
PrQ-05A-B	Korea, Republic of	PrQ-05B	D	Nationally defined categories: 1 = 중학교1학년 2 = 중학교 2학년 3 = 중학교 3학년	National categories recoded for international comparability: 8 = Second grade of middle school 9 = Third grade of middle school 10 = Category not administered or data not available 11 = Category not administered or data not available 12 = Category not administered or data not available 13 = Category not administered or data not available 14 = Category not administered or data not available
PrQ-05A-B	Lithuania	PrQ-05A	D	Nationally defined categories: 1 = Priešmokyklinio ugdymo klasė 2 = 1 klasė 3 = 2 klasė 4 = 3 klasė 5 = 4 klasė 6 = 5 klasė 7 = 6 klasė 8 = 7 klasė 9 = 8 klasė	National categories recoded for international comparability: 0 = Preprimary grade 1 = Grade 1 2 = Grade 2 3 = Grade 3 4 = Grade 4 5 = Grade 5 6 = Grade 6 7 = Grade 7 8 = Grade 8
PrQ-05A-B	Lithuania	PrQ-05B	D	Nationally defined categories: 1 = 8 klasė 2 = 9 klasė (arba 1 gimnazijos klasė) 3 = 10 klasė (arba 2 gimnazijos klasė) 4 = 11 klasė (arba 3 gimnazijos klasė) 5 = 12 klasė (arba 4 gimnazijos klasė)	National categories recoded for international comparability: 8 = Grade 8 9 = Grade 9 (or 1st gymnasium grade) 10 = Grade 10 (or 2nd gymnasium grade) 11 = Grade 11 (or 3rd gymnasium grade) 12 = Grade 12 (or 4th gymnasium grade) 13 = Category not administered or data not available 14 = Category not administered or data not available
PrQ-05A-B	Netherlands	PrQ-05A	D	Nationally defined categories: 1 = Leerjaar 1 2 = Leerjaar 2	National categories recoded for international comparability: 0 = Category not administered or data not available 1 = Category not administered or data not available 2 = Category not administered or data not available

					3 = Category not administered or data not available 4 = Category not administered or data not available 5 = Category not administered or data not available 6 = Category not administered or data not available 7 = Grade 7 8 = Grade 8
PrQ-05A-B	Netherlands	PrQ-05B	D	Nationally defined categories: 1 = Leerjaar 2 2 = Leerjaar 3 3 = Leerjaar 4 4 = Leerjaar 5 5 = Leerjaar 6	National categories recoded for international comparability: 8 = Grade 8 9 = Grade 9 10 = Grade 10 11 = Grade 11 12 = Grade 12 13 = Category not administered or data not available 14 = Category not administered or data not available
PrQ-05A-B	Norway	PrQ-05A	D	Nationally defined categories: 1 = 1. trinn 2 = 2. trinn 3 = 3. trinn 4 = 4. trinn 5 = 5. trinn 6 = 6. trinn 7 = 7. trinn 8 = 8. trinn	National categories recoded for international comparability: 0 = Category not administered or data not available 1 = Grade 1 2 = Grade 2 3 = Grade 3 4 = Grade 4 5 = Grade 5 6 = Grade 6 7 = Grade 7 8 = Grade 8
PrQ-05A-B	Norway	PrQ-05B	D	Nationally defined categories: 1 = 9. trinn 2 = 10. trinn 3 = Vg1 4 = Vg2 5 = Vg3	National categories recoded for international comparability: 8 = Category not administered or data not available 9 = Grade 9 10 = Grade 10 11 = Grade 11 12 = Grade 12 13 = Grade 13 14 = Category not administered or data not available
PrQ-05A-B	Poland	PrQ-05A	D	Nationally defined categories: 1 = Pierwsza klasa gimnazjum 2 = Druga klasa gimnazjum 3 = Trzecia klasa gimnazjum	National categories recoded for international comparability: 0 = Category not administered or data not available 1 = Category not administered or data not available 2 = Category not administered or data not available 3 = Category not administered or data not available 4 = Category not administered or data not available 5 = Category not administered or data not available 6 = Category not administered or data not available 7 = First grade of gymnasium

					8 = Second grade of gymnasium
PrQ-05A-B	Poland	PrQ-05B	D	Nationally defined categories: 1 = Pierwsza klasa gimnazjum 2 = Druga klasa gimnazjum 3 = Trzecia klasa gimnazjum	National categories recoded for international comparability: 8 = Second grade of gymnasium 9 = Third grade of gymnasium 10 = Category not administered or data not available 11 = Category not administered or data not available 12 = Category not administered or data not available 13 = Category not administered or data not available 14 = Category not administered or data not available
PrQ-05A-B	Russian Federation	PrQ-05A	D	Nationally defined categories: 1 = 1-й класс 2 = 2-й класс 3 = 3-й класс 4 = 4-й класс 5 = 5-й класс 6 = 6-й класс 7 = 7-й класс 8 = 8-й класс	Nationally defined categories: 0 = Category not administered or data not available 1 = Grade 1 2 = Grade 2 3 = Grade 3 4 = Grade 4 5 = Grade 5 6 = Grade 6 7 = Grade 7 8 = Grade 8
PrQ-05A-B	Russian Federation	PrQ-05B	D	Nationally defined categories: 1 = 9-й класс 2 = 10-класс 3 = 11-й класс	National categories recoded for international comparability: 8 = Category not administered or data not available 9 = Grade 9 10 = Grade 10 11 = Grade 11 12 = Category not administered or data not available 13 = Category not administered or data not available 14 = Category not administered or data not available
PrQ-05A-B	Slovak Republic	PrQ-05A	D	Stem of the question changed: Aký je najnižší ročník, v ktorom sa vyučuje vo vašej škole? Nationally defined categories: 1 = Nultý ročník 2 = Prvý ročník 3 = Druhý ročník 4 = Tretí ročník 5 = Štvrtý ročník 6 = Piaty ročník 7 = Šiesty ročník (alebo prvý ročník osemročného gymnázia) 8 = Siedmy ročník (alebo druhý ročník osemročného gymnázia)	Stem of the question changed: What is the lowest grade that is taught at your school? National categories recoded for international comparability: 0 = Zero grade 1 = First grade 2 = Second grade 3 = Third grade 4 = Fourth grade 5 = Fifth grade 6 = Sixth grade (or first grade of eight-year grammar school) 7 = Seventh grade (or second grade of eight-year grammar school) 8 = Category not administered or data not available

PrQ-05A-B	Slovak Republic	PrQ-05B	D	Stem of the question changed: Aký je najvyšší ročník, v ktorom sa vyučuje vo vašej škole? Nationally defined categories: 1 = Deviaty ročník (alebo štvrtý ročník osemročného gymnázia) 2 = Prvý ročník strednej školy (alebo piaty ročník osemročného g ymnázia) 3 = Druhý ročník strednej školy (alebo šiesty ročník osemročného gymnázia) 4 = Tretí ročník strednej školy (alebo siedmy ročník osemročného gymnázia) 5 = Štvrtý ročník strednej školy (alebo ôsmy ročník osemročného gymnázia) 6 = Piaty ročník strednej školy	Stem of the question changed: What is the highest grade that is taught at your school? National categories recoded for international comparability: 8 = Category not administered or data not available 9 = Ninth grade (or fourth grade of eight-year grammar school) 10 = First grade of secondary school (or fifth grade of eight-year grammar school) 11 = Second grade of secondary school (or sixth grade of eight-year grammar school) 12 = Third grade of secondary school (or seventh grade of eight-year grammar school) 13 = Fourth grade of secondary school (or eighth grade of eight-year grammar school) 14 = Fifth grade of secondary school
PrQ-05A-B	Slovenia	PrQ-05A	D	Nationally defined categories: 1 = Vrtec 2 = 1. razred 3 = 2. razred 4 = 3. razred 5 = 4. razred 6 = 5. razred	National categories recoded for international comparability: 0 = Kindergarten 1 = 1st grade 2 = 2nd grade 3 = 3rd grade 4 = 4th grade 5 = 5th grade 6 = Category not administered or data not available 7 = Category not administered or data not available 8 = Category not administered or data not available
PrQ-05A-B	Slovenia	PrQ-05B	D	Nationally defined categories: 1 = 8. razred 2 = 9. razred	National categories recoded for international comparability: 8 = 8th grade 9 = 9th grade 10 = Category not administered or data not available 11 = Category not administered or data not available 12 = Category not administered or data not available 13 = Category not administered or data not available 14 = Category not administered or data not available
PrQ-05A-B	Switzerland	PrQ-05A	D	Nationally defined categories: 1 = 1ère année du Cycle1 (-1 Cycle Initial/1ère enfantine/1P) 2 = 2ème année du Cycle1 (-2 Cycle Initial/2ème enfantine/2P) 3 = 3ème année du Cycle2 (1ère année CYP1/1P/3P) 4 = 4ème année du Cycle2 (2ème année CYP1/2P/4P) 5 = 5ème année du Cycle2 (3ème année CYP2/3P/5P) 6 = 6ème année du Cycle2 (4ème année CYP2/4P/6P) 7 = 7ème année du Cycle2 (5ème année CYT/5P/7P)	National categories recoded for international comparability: 0 = 1st year of primary level/2nd year of primary level 1 = 3rd year of primary level 2 = 4th year of primary level 3 = 5th year of primary level 4 = 6th year of primary level 5 = 7th year of primary level 6 = 8th year of primary level

				8 = 8ème année du Cycle2 (6ème année CYT/6P/8P) 9 = 9ème année du Cycle3 (7ème année/1ère CO/9CO)	7 = 1st year of secondary level 8 = Category not administered or data not available
				Nationally defined categories: 1 = 1. Kindergarten 2 = 2. Kindergarten 3 = 1. Schuljahr 4 = 2. Schuljahr 5 = 3. Schuljahr 6 = 4. Schuljahr 7 = 5. Schuljahr 8 = 6. Schuljahr 9 = 7. Schuljahr	National categories recoded for international comparability: 0 = 1st year of kindergarten/2nd year of kindergarten 1 = 1st year of school 2 = 2nd year of school 3 = 3rd year of school 4 = 4th year of school 5 = 5th year of school 6 = 6th year of school 7 = 7th year of school 8 = Category not administered or data not available
				Nationally defined categories: 1 = Prima elementare 2 = Seconda elementare 3 = Terza elementare 4 = Quarta elementare 5 = Quinta elementare 6 = Prima media 7 = Seconda media 8 = Terza media	National categories recoded for international comparability: 0 = Category not administered or data not available 1 = First year of primary school 2 = Second year of primary school 3 = Third year of primary school 4 = Fourth year of primary school 5 = Fifth year of primary school 6 = First year of lower-secondary school 7 = Second year of lower-secondary school 8 = Third year of lower-secondary school
PrQ-05A-B	Switzerland	PrQ-05B	D	Nationally defined categories: 1 = 10ème année du Cycle3 (8ème année/2ème CO/10CO) 2 = 11ème année du Cycle3 (9ème année/3ème CO/11CO) 3 = 12ème année (10ème année / classe préparatoire / classe d'insertion)	National categories recoded for international comparability: 8 = 2nd year of the secondary level 9 = 3rd year of the secondary level 10 = Supplementary year of the secondary level (help to find an apprenticeship or other formation) 11 = Category not administered or data not available 12 = Category not administered or data not available 13 = Category not administered or data not available 14 = Category not administered or data not available
				Nationally defined categories: 1 = 8. Schuljahr 2 = 9. Schuljahr 3 = 10. Schuljahr 4 = 11. Schuljahr 5 = 12. Schuljahr 6 = 13. Schuljahr	National categories recoded for international comparability: 8 = 8th year of school 9 = 9th year of school 10 = 10th year of school 11 = 11th year of school 12 = 12th year of school
				Nationally defined categories:	

				1 = Quarta media 2 = Primo anno scuola media superiore 3 = Secondo anno scuola media superiore	13 = 13th year of school 14 = Category not administered or data not available National categories recoded for international comparability: 8 = Category not administered or data not available 9 = Fourth year of lower-secondary school 10 = First year of higher-secondary school 11 = Second year of higher-secondary school 12 = Category not administered or data not available 13 = Category not administered or data not available 14 = Category not administered or data not available
PrQ-05A-B	Thailand	PrQ-05A	D	Nationally defined categories: 1 = เตรียมอนุบาลและอนุบาล 2 = ประถมศึกษาปีที่ 1 3 = ประถมศึกษาปีที่ 2 4 = ประถมศึกษาปีที่ 3 5 = ประถมศึกษาปีที่ 4 6 = ประถมศึกษาปีที่ 5 7 = ประถมศึกษาปีที่ 6 8 = มัธยมศึกษาปีที่ 1 9 = มัธยมศึกษาปีที่ 2 10 = มัธยมศึกษาปีที่ 3	National categories recoded for international comparability: 0 = Pre-kindergarten or kindergarten 1 = Grade 1 2 = Grade 2 3 = Grade 3 4 = Grade 4 5 = Grade 5 6 = Grade 6 7 = Grade 7 8 = Grade 8
PrQ-05A-B	Thailand	PrQ-05B	D	Nationally defined categories: 1 = มัธยมศึกษาปีที่ 2 2 = มัธยมศึกษาปีที่ 3 3 = มัธยมศึกษาปีที่ 4 4 = มัธยมศึกษาปีที่ 5 5 = มัธยมศึกษาปีที่ 6	National categories recoded for international comparability: 8 = Grade 8 9 = Grade 9 10 = Grade 10 11 = Grade 11 12 = Grade 12 13 = Category not administered or data not available 14 = Category not administered or data not available
PrQ-05A-B	Turkey	PrQ-05A	D	Nationally defined categories: 1 = 1. sınıf 2 = 2. sınıf 3 = 3. sınıf 4 = 4. sınıf 5 = 5. sınıf 6 = 6. sınıf 7 = 7. sınıf	National categories recoded for international comparability: 0 = Category not administered or data not available 1 = Grade 1 2 = Grade 2 3 = Grade 3 4 = Grade 4 5 = Grade 5 6 = Grade 6 7 = Grade 7 8 = Category not administered or data not available

PrQ-05A-B	Turkey	PrQ-05B	D	Nationally defined categories: 1 = 8. sınıf 2 = 9. sınıf 3 = 10. sınıf 4 = 11. sınıf 5 = 12. sınıf	National categories recoded for international comparability: 8 = Grade 8 9 = Grade 9 10 = Grade 10 11 = Grade 11 12 = Grade 12 13 = Category not administered or data not available 14 = Category not administered or data not available
PrQ-06A-B	Argentina, Buenos Aires	PrQ-06A	D	Profesores por cargo	Fulltime teachers
PrQ-06A-B	Argentina, Buenos Aires	PrQ-06A-B	D	Stem of the question changed: ¿Cuál es el número total de profesores en la escuela?	Stem of the question changed: What is the total number of teachers in your school?
PrQ-06A-B	Argentina, Buenos Aires	PrQ-06B	D	Profesores por hs. cátedra	Parttime teachers
PrQ-06A-B	Korea, Republic of	PrQ-06A-B	D	Question instruction changed: 기간제 교사, 시간강사 등은 채용 기간에 따라 나누어서 작성해 주시기 바랍니다	Question instruction changed: Fixed-term teachers, instructors, etc., please feel free to fill out time divided according to the recruitment period
PrQ-06A-B	Poland	PrQ-06A-B	D	Stem of the question changed: Ile wynosi łączna liczba nauczycieli pracujących w pełnym i niepełnym wymiarze godzin w Pani/Pana szkole?	Stem of the question changed: What are the total numbers of fulltime and parttime teachers in your school?
PrQ-07	Argentina, Buenos Aires	PrQ-07	D	Gang punched to "In a city with 1,000,000 or more people"	Gang punched to "In a city with 1,000,000 or more people"
PrQ-07	Australia	PrQ-07	D	Nationally defined categories: 1 = A small rural community (with fewer than 1 000 people) 2 = A small country town (1 000 to about 3 000 people) 3 = A medium-sized country town (3 000 to about 15 000 people) 4 = A larger town (15 000 to about 50 000 people) 5 = A very large town (50 000 to about 100 000 people) 6 = A city (100 000 to about 1 000 000 people) 7 = A city with 1 000 000 or more people	National categories recoded for international comparability: 1 = A small rural community (with fewer than 1 000 people)/A small country town (1 000 to about 3 000 people) 2 = A medium-sized country town (3 000 to about 15 000 people) 3 = A larger town (15 000 to about 50 000 people)/A very large town (50 000 to about 100 000 people) 4 = A city (100 000 to about 1 000 000 people) 5 = A city with 1 000 000 or more people
PrQ-07	Canada	PrQ-07	D	Nationally defined categories: 1 = A village or rural area with fewer than 3,000 people 2 = A small town with at least 3,000 but less than 15,000 people 3 = A town with at least 15,000 but less than 100,000 people 4 = A city with at least 100,000 but less than 1,000,000 people 5 = A large city with 1,000,000 or more people	Nationally defined categories: 1 = A village or rural area with fewer than 3,000 people 2 = A small town with at least 3,000 but less than 15,000 people 3 = A town with at least 15,000 but less than 100,000 people 4 = A city with at least 100,000 but less than 1,000,000 people 5 = A large city with 1,000,000 or more people

				Nationally defined categories: 1 = Un village ou une région rurale de moins de 3,000 habitants 2 = Une petite ville de 3,000 à moins de 15,000 habitants 3 = Une ville de 15,000 à moins de 100,000 habitants 4 = Une grande ville de 100,000 à moins de 1,000,000 habitants 5 = Une grande ville de plus d'un million d'habitants	
PrQ-07	Croatia	PrQ-07	D	Nationally defined categories: 1 = U zajednici s manje od 3 000 stanovnika 2 = U mjestu s najmanje 3 000, ali manje od 15 000 stanovnika 3 = U mjestu s najmanje 15 000, ali manje od 100 000 stanovnika 4 = U gradu s najmanje 100 000 stanovnika	National categories recoded for international comparability: 1 = In a community with fewer than 3,000 inhabitants 2 = In a town with at least 3,000 but less than 15,000 inhabitants 3 = In a town with at least 15,000 but less than 100,000 inhabitants 4 = In a city with at least 100,000 inhabitants 5 = Category not administered or data not available
PrQ-07	Hong Kong SAR	PrQ-07	D	Gang punched to "In a city with 1,000,000 or more people"	Gang punched to "In a city with 1,000,000 or more people"
PrQ-07	Norway	PrQ-07	D	Nationally defined categories: 1 = Bygd eller tettsted med mindre enn 3 000 innbyggere 2 = Tettsted eller liten by med 3 000 til 15 000 innbyggere 3 = By med 15 000 til 100 000 innbyggere 4 = Større by med over 100 000 innbyggere Nationally defined categories: 1 = Bygd eller tettstad med mindre enn 3000 innbyggjarar 2 = Tettstad eller liten by med mellom 3000 og 15 000 innbyggjarar 3 = By med mellom 15 000 og 100 000 innbyggjarar 4 = Større by med over 100 000 innbyggjarar	National categories recoded for international comparability: 1 = In a community with fewer than 3,000 people 2 = In a town with at least 3,000 but less than 15,000 people 3 = In a town with at least 15,000 but less than 100,000 people 4 = In a city with at least 100,000 people 5 = Category not administered or data not available
PrQ-07	Slovak Republic	PrQ-07	D	Nationally defined categories: 1 = V obci, kde je menej ako 3 000 obyvateľov 2 = V meste, kde je aspoň 3 000, ale menej ako 15 000 obyvateľov 3 = V meste, kde je aspoň 15 000, ale menej ako 30 000 obyvateľov 4 = V meste, kde je aspoň 30 000, ale menej ako 100 000 obyvateľov 5 = V meste, kde je 100 000 alebo viac obyvateľov	National categories recoded for international comparability: 1 = In a community with fewer than 3,000 people 2 = In a town with at least 3,000 but less than 15,000 people 3 = In a town with at least 15,000 but less than 30,000 people/ In a city with at least 30,000 but less than 100,000 people 4 = In a city with 100,000 or more people 5 = Category not administered or data not available
PrQ-07	Slovenia	PrQ-07	D	Nationally defined categories: 1 = V naselju z manj kot 3.000 prebivalci	National categories recoded for international comparability: 1 = In a settlement with fewer than 3,000 people

				2 = V naselju z najmanj 3.000, vendar manj kot 15.000 prebivalci 3 = V naselju z najmanj 15.000, vendar manj kot 50.000 prebivalci 4 = V naselju z najmanj 50.000 prebivalci, vendar manj kot 100.000 prebivalci 5 = V naselju z več kot 100.000 prebivalci	2 = In a settlement with at least 3,000 but less than 15,000 people 3 = In a settlement with at least 15,000 but less than 50,000 people/In a settlement with at least 50,000 but less than 100,000 people 4 = In a settlement with 100,000 or more people 5 = Category not administered or data not available
PrQ-08	Argentina, Buenos Aires	PrQ-08	D	Category instruction omitted	Category instruction omitted
PrQ-08	Australia	PrQ-08	D	Data for the international variable IP1G08 was provided separately by the national center	Data for the international variable IP1G08 was provided separately by the national center
PrQ-08	Chile	PrQ-08	D	Category instruction changed: 1 = Un establecimiento público (Este es un establecimiento administrado directa o indirectamente por una autoridad pública de educación, organismo del Estado, o junta directiva designada por el gobierno) 2 = Un establecimiento privado	Category instruction changed: 1 = A public school (This is a school managed directly or indirectly by a public education authority, government agency, or governing board, appointed by government) 2 = A private school
PrQ-08	Hong Kong SAR	PrQ-08	D	Stem of the question changed: 贵校属于以下哪一类学校? Nationally defined categories: 1 = 官立 2 = 资助 3 = 津贴 4 = 直资 Stem of the question changed: 貴校屬於以下哪一類學校? Nationally defined categories: 1 = 官立 2 = 資助 3 = 津貼 4 = 直資 Stem of the question changed: What is the finance type of your school?	Stem of the question changed: What is the finance type of your school? National categories recoded for international comparability: 1 = Government/Aided 2 = CAPUT/Direct subsidy scheme

				Nationally defined categories: 1 = Government 2 = Aided 3 = CAPUT 4 = Direct subsidy scheme	
PrQ-08	Slovak Republic	PrQ-08	D	Nationally defined categories/Category instruction changed: 1 = Štátna škola (škola zriadená podľa § 19 ods. 2 písm. a), písm. b) a písm. c) zákona č. 596/2003 Z. z. obcou, samosprávnym krajom alebo krajským školským úradom.) 2 = Súkromná alebo cirkevná škola (škola zriadená podľa § 19 ods. 2 písm.d) a písm.e) zákona č. 596/2003 Z. z. štátom uznanou cirkvou alebo náboženskou spoločnosťou alebo inou právnickou alebo fyzickou osobou. Takáto škola je riadená priamo alebo nepriamo nevládnou organizáciou; napríklad cirkvou, odborovým zväzom, firmou alebo súkromnou inštitúciou.)	Nationally defined categories/Category instruction changed: 1 = State school (a school established under § 19 par. 2 point. a) point. b) a point. c) Act. 596/2003 Coll. community, regional governments or regional school offices.) 2 = Private or church schools (schools established under § 19 par. 2 d), and letter a) of Act no. 596/2003 Coll. state-recognized church or religious society or other legal or natural person. This school is controlled directly or indirectly by non-governmental organizations, such as churches, trade unions, or by private institutions.)
PrQ-09A-F	Argentina, Buenos Aires	PrQ-09B	D	Usar las TIC para fomentar la responsabilidad de los estudiantes respecto de su propio aprendizaje	Use ICT to encourage students' responsibility for their own learning
PrQ-09A-F	Argentina, Buenos Aires	PrQ-09E	D	Desarrollar la capacidad de los estudiantes para acceder y usar información con las TIC	Develop students' capacity to access and use information with ICT
PrQ-09A-F	Canada	PrQ-09B	D	Facilitating students' responsibility for their own learning Aider les élèves à assumer la responsabilité de leurs propres apprentissages	Facilitating students' responsibility for their own learning
PrQ-09A-F	Canada	PrQ-09C	D	Increasing and improving students' learning Accroître et améliorer l'apprentissage des élèves	Increasing and improving students' learning
PrQ-09A-F	Slovak Republic	PrQ-09A-F	D	Stem of the question changed: Podľa vášho názoru, do akej miery je dôležité využívanie IKT vo vašej škole pre nasledovné vzdelávacie ciele?	Stem of the question changed: In your opinion, how important is the use of ICT in this school for each of the following outcomes of educational goals?
PrQ-11A-F	Argentina, Buenos Aires	PrQ-11A-F	D	Stem of the question changed: ¿Existe en su escuela algún tipo de monitoreo respecto del uso de TIC en las clases de 1º año, para alcanzar los siguientes resultados de aprendizaje?	Stem of the question changed: Does your school have any monitor related to the use of ICT in first-year classes, in order to achieve the following learning results?
PrQ-11A-F	Argentina, Buenos Aires	PrQ-11B	D	Usar las TIC para fomentar la responsabilidad de los estudiantes respecto de su propio aprendizaje	Use ICT to encourage students' responsibility for their own learning

PrQ-11A-F	Argentina, Buenos Aires	PrQ-11E	D	Desarrollar la capacidad de los estudiantes para acceder y usar información con las TIC	Develop students' capacity to access and use information with ICT
PrQ-11A-F	Canada	PrQ-11B	D	Facilitating students' responsibility for their own learning Aider les élèves à assumer la responsabilité de leurs propres apprentissages	Facilitating students' responsibility for their own learning
PrQ-11A-F	Canada	PrQ-11C	D	Increasing and improving students' learning Accroître et améliorer l'apprentissage des élèves	Increasing and improving students' learning
PrQ-11A-F	Slovak Republic	PrQ-11A-F	D	Stem of the question changed: Podľa vášho názoru, do akej miery je dôležité využívanie IKT vo vašej škole pre nasledovné vzdelávacie ciele?	Stem of the question changed: Does the school monitor whether teachers use ICT to achieve the following educational goals?
PrQ-12A-J	Argentina, Buenos Aires	PrQ-12A-J	D	Stem of the question changed: ¿En qué medida se espera que los profesores de 1º año adquieran conocimientos y habilidades para cada una de las siguientes actividades?	Stem of the question changed: To what extent is it expected that 1st-year teachers acquire knowledge and skills in each of the following activities?
PrQ-12A-J	Argentina, Buenos Aires	PrQ-12I	D	Usar portafolios electrónicos para las evaluaciones	Use electronic portfolios for examinations
PrQ-12A-J	Canada	PrQ-12F	D	Communicating with parents/guardians via ICT Communiquer avec les parents/tuteurs au moyen des TIC	Communicating with parents/guardians via ICT
PrQ-12A-J	Chile	PrQ-12A-J	D	Stem of the question changed: ¿Se espera que los profesores de su establecimiento adquieran habilidades y conocimientos para desarrollar las siguientes actividades?	Stem of the question changed: Are teachers in your school expected to acquire knowledge and skills to develop each of the following activities?
PrQ-12A-J	Chile	PrQ-12H	D	Usar software educativos específicos para una asignatura (por ejemplo, tutoriales, simulaciones, etc.)	Using subject-specific educational software (for example, tutorials, simulation, etc.)
PrQ-12A-J	Slovak Republic	PrQ-12A	D	Zavádzanie učenia sa žiakov cez internet do ich vyučovacej praxe	Integrating student learning via Internet in their instructional practice
PrQ-12A-J	Turkey	PrQ-12J	D	Öğrenciler için özgün (gerçek yaşamla ilgili) ödevler hazırlanmasında BT'yi kullanma	Using ICT to develop authentic (relevant to real-life) assignments for students
PrQ-13A-I	Argentina, Buenos Aires	PrQ-13A-I	D	Nationally defined categories: 1 = Ministerio de Educación del G.C.B.A. o de la Nación 2 = Director/a de la escuela o su representante	Nationally defined categories: 1 = GCBA or National Ministry of Education 2 = School principal or deputy

				3 = Jefes de departamento o similar 4 = Coordinador/a e TIC 5 = Bibliotecario/a 6 = Profesores individuales 7 = Nadie	3 = Heads of department 4 = ICT-coordinator 5 = Librarian 6 = Individual teachers 7 = No one
PrQ-13A-I	Argentina, Buenos Aires	PrQ-13E	D	Implementar estrategias basadas en las TIC, para la enseñanza	Implement ICT-based strategies for teaching
PrQ-13A-I	Argentina, Buenos Aires	PrQ-13F	D	Implementar estrategias basadas en las TIC, para la administración	Implement ICT-based strategies for administration
PrQ-13A-I	Argentina, Buenos Aires	PrQ-13G	D	Implementar estrategias basadas en las TIC, para la evaluación	Implement ICT-based strategies for evaluation
PrQ-13A-I	Australia	PrQ-13A-I	D	Nationally defined categories: 1 = State/territory education authority 2 = School principal or deputy 3 = Heads of department 4 = ICT coordinator 5 = Information specialist or librarian 6 = Individual teachers 7 = No one	Nationally defined categories: 1 = State/territory education authority 2 = School principal or deputy 3 = Heads of department 4 = ICT-coordinator 5 = Information specialist or librarian 6 = Individual teachers 7 = No one
PrQ-13A-I	Canada	PrQ-13A-I	D	Nationally defined categories: 1 = Ministry of Education or school boards/districts 2 = School principal 3 = Heads of department 4 = ICT coordinator 5 = Information specialist or librarian 6 = Individual teachers 7 = No one Nationally defined categories: 1 = Du Ministère de l'Éducation ou des conseils/commissions/districts scolaires 2 = De la direction d'école 3 = Des chefs de département 4 = De la coordonnatrice ou du coordonnateur des TIC 5 = Du spécialiste de l'information ou du bibliothécaire 6 = Des enseignantes ou enseignants 7 = De personne	Nationally defined categories: 1 = Ministry of Education or school boards/districts 2 = School principal 3 = Heads of department 4 = ICT-coordinator 5 = Information specialist or librarian 6 = Individual teachers 7 = No one

PrQ-13A-I	Chile	PrQ-13A-I	D	Nationally defined categories: 1 = Ministerio de educación, Municipalidad o Sostenedor 2 = Director/a del establecimiento 3 = Jefes de área del establecimiento 4 = Coordinador/a de TIC 5 = Bibliotecario/a o encargado/a del CRA 6 = Profesores individuales 7 = Nadie	Nationally defined categories: 1 = Ministry of Education, local council, or owner of the school 2 = School principal 3 = Heads of department from the school 4 = ICT-coordinator 5 = Librarian or Learning Resources Centre coordinator 6 = Individual teachers 7 = No one
PrQ-13A-I	Croatia	PrQ-13A-I	D	Nationally defined categories: 1 = MZOŠ, gradski/županijski ured za obrazovanje 2 = Ravnatelj škole ili njegov zamjenik 3 = Voditelji stručnih aktiva 4 = ICT administrator škole 5 = Knjižničar ili stručnjak za informacijske znanosti 6 = Sami učitelji 7 = Nitko	Nationally defined categories: 1 = Ministry of Science, Education and Sports, city/county department for education 2 = School principal or deputy 3 = Heads of department 4 = ICT-coordinator 5 = Information specialist or librarian 6 = Individual teachers 7 = No one
PrQ-13A-I	Czech Republic	PrQ-13A-I	D	Nationally defined categories: 1 = Ministerstvo nebo zřizovatel 2 = Ředitel školy nebo jeho zástupce 3 = Vedoucí oddělení/ předmětové komise 4 = Koordinátor ICT 5 = Informační specialista nebo knihovník 6 = Jednotliví učitelé 7 = Nikdo	Nationally defined categories: 1 = Ministry or local authority 2 = School principal or deputy 3 = Heads of department 4 = ICT-coordinator 5 = Information specialist or librarian 6 = Individual teachers 7 = No one
PrQ-13A-I	Denmark	PrQ-13A-I	D	Nationally defined categories: 1 = Ministeriet eller kommunen 2 = Skoleleder eller viceleder 3 = Afdelingsleder 4 = It-koordinator 5 = Læringscentermedarbejder, faglig vejleder eller bibliotekar 6 = Individuelle lærere 7 = Ingen	Nationally defined categories: 1 = Ministry or municipality 2 = School principal or deputy 3 = Heads of department 4 = ICT-coordinator 5 = Information specialist or librarian 6 = Individual teachers 7 = No one
PrQ-13A-I	Germany	PrQ-13A-I	D	Nationally defined categories: 1 = Ministerium oder Schulamt 2 = Schulleitung oder Stellvertretung 3 = Abteilungsleitung 4 = IT-Koordination 5 = Archiv oder Bibliothek 6 = Bestimmte Lehrkräfte 7 = Niemand	Nationally defined categories: 1 = Ministry or education authority 2 = School principal or deputy 3 = Heads of department 4 = ICT-coordinator 5 = Information specialist or librarian 6 = Individual teachers 7 = No one

PrQ-13A-I	Hong Kong SAR	PrQ-13A-I	D	Nationally defined categories: 1 = 教育局/办 学团体 2 = 校长或 副校长 3 = 学科 主任 4 = 资讯科技 统筹主任 5 = 资讯技术 员或图书 馆管理员 6 = 个别 老师 7 = 没有 Nationally defined categories: 1 = 教育局/辦 學團體 2 = 校長或 副校長 3 = 學科 主任 4 = 資訊科技 統籌主任 5 = 資訊技術 員或圖書 館管理員 6 = 個別 老師 7 = 沒有 Nationally defined categories: 1 = Education Bureau, school sponsoring body 2 = School principal or deputy 3 = Heads of department 4 = ICT-coordinator 5 = Information specialist or librarian 6 = Individual teachers 7 = No one	Nationally defined categories: 1 = Education Bureau, school sponsoring body 2 = School principal or deputy 3 = Heads of department 4 = ICT-coordinator 5 = Information specialist or librarian 6 = Individual teachers 7 = No one
PrQ-13A-I	Korea, Republic of	PrQ-13A-I	D	Nationally defined categories: 1 = 교육부 또는 지역교육청 2 = 학교장 또는 교감 3 = 부장 교사 4 = ICT 책임자 5 = 정보 관련 전문가 또는 사서 6 = 개별 교사 7 = 아무도 없음	Nationally defined categories: 1 = Ministry of Education, local educational authority 2 = School principal or deputy 3 = Heads of department 4 = ICT-coordinator 5 = Information specialist or librarian 6 = Individual teachers 7 = No one
PrQ-13A-I	Lithuania	PrQ-13A-I	D	Nationally defined categories: 1 = Švietimo ir mokslo ministerija arba steigėjas 2 = Mokyklos direktorius arba pavaduotojas 3 = Mokymo skyriaus vadovas 4 = IKT koordinatorius	Nationally defined categories: 1 = Ministry of Education and Science or local authority 2 = School principal or deputy 3 = Heads of department 4 = ICT-coordinator

				5 = Informatikos specialistas arba bibliotekininkas 6 = Pavieniai mokytojai 7 = Niekas	5 = Information specialist or librarian 6 = Individual teachers 7 = No one
PrQ-13A-I	Netherlands	PrQ-13A-I	D	Nationally defined categories: 1 = Ministerie van OCW, overkoepelend schoolbestuur, provincie of gemeente 2 = Schoolleider of conrector 3 = Sectieleider of jaarcoördinator 4 = ICT coördinator 5 = Informatiespecialist of bibliothecaris 6 = Individuele docenten 7 = Niemand	Nationally defined categories: 1 = Ministry, school board, province, or community 2 = School principal or deputy 3 = Heads of department 4 = ICT-coordinator 5 = Information specialist or librarian 6 = Individual teachers 7 = No one
PrQ-13A-I	Norway	PrQ-13A-I	D	Nationally defined categories: 1 = Skoleeier 2 = Rektor eller ass.rektor 3 = Faggruppeleder 4 = IKT-ansvarlig 5 = Bibliotekar eller tilsvarende 6 = Enkeltlærere 7 = Ingen Nationally defined categories: 1 = Skuleeigaren 2 = Rektor eller ass. rektor 3 = Faggruppeleiar 4 = IKT-ansvarleg 5 = Bibliotekar eller tilsvarande 6 = Einskildlærarar 7 = Ingen	Nationally defined categories: 1 = School owner 2 = School principal or deputy 3 = Heads of department 4 = ICT-coordinator 5 = Information specialist or librarian 6 = Individual teachers 7 = No one
PrQ-13A-I	Russian Federation	PrQ-13A-I	D	Nationally defined categories: 1 = Министерство образования и науки РФ, органы управления образованием на региональном и местном уровне 2 = Директор школы или его заместитель 3 = Завучи 4 = Ответственный за информатизацию в школе 5 = Библио-текарь 6 = Отдельные учителя 7 = Никто	Nationally defined categories: 1 = Ministry of Education and Science of Russia, education departments at regional and local levels 2 = School principal or deputy 3 = Heads of department 4 = ICT-coordinator 5 = Information specialist or librarian 6 = Individual teachers 7 = No one
PrQ-13A-I	Slovak Republic	PrQ-13A-I	D	Nationally defined categories: 1 = Ministerstvo alebo zriad'ovatel'	Nationally defined categories: 1 = Ministry or local authority

				2 = Riaditeľ školy alebo zástupca riaditeľa 3 = Vedúci predmeto-vej komisie 4 = IKT koordinátor, IT špecialista 5 = Knihovník/ knihovníčka 6 = Jednotliví učitelia 7 = Nikto	2 = School principal or deputy 3 = Heads of department 4 = ICT-coordinator 5 = Information specialist or librarian 6 = Individual teachers 7 = No one
PrQ-13A-I	Slovenia	PrQ-13A-I	D	Nationally defined categories: 1 = MInistrstvo za izobraževanje, znanost, kulturo in šport 2 = Ravnatelj/-ica ali pomočnik ravnatelja/-ice 3 = Vodje oddelkovt 4 = IKT koordinator 5 = Specialist za informatiko ali knjižničar 6 = Posamezni učitelji 7 = Nihče	Nationally defined categories: 1 = Ministry of Education, Science, Culture and Sport 2 = School principal or deputy 3 = Heads of department 4 = ICT-coordinator 5 = Information specialist or librarian 6 = Individual teachers 7 = No one
PrQ-13A-I	Switzerland	PrQ-13A-I	D	*French Nationally defined categories: 1 = Du Département de l'éducation 2 = De la direction d'école 3 = Du Directeur du Département 4 = Du coordinateur (-trice) des TIC 5 = Du spécialiste de l'information ou du bibliothécaire 6 = Des professeur(e)s 7 = De personne *German Nationally defined categories: 1 = Erziehungsdirektion 2 = Schuldirektor oder Stellvertreter 3 = Abteilungsleiter 4 = IKT-Koordinator 5 = Archivar oder Bibliothekar 6 = Bestimmte Lehrperson 7 = Niemand	*French/German Nationally defined categories: 1 = Department of Education 2 = School principal or deputy 3 = Heads of department 4 = ICT-coordinator 5 = Information specialist or librarian 6 = Individual teachers 7 = No one
PrQ-13A-I	Thailand	PrQ-13A-I	D	Nationally defined categories: 1 = กระทรวง กรม หรืองุลยื้นที่การศึกษา 2 = ผู้ออานวยการ โรงงรียนหรือ รอง ผู้ออานวยการ โรงงรียน 3 = หัวหน้ากลุ่ม สาระการ งรียนรู้ 4 = ผู้ประสาน งาน ย้าน ICT 5 = ผู้งชี่ยวชาญย้าน สารสนงทศหรือ บรรณารักษ์ 6 = ครูล่ะคน	Nationally defined categories: 1 = Ministry, department, or district 2 = School principal or deputy 3 = Heads of department 4 = ICT-coordinator 5 = Information specialist or librarian 6 = Individual teachers

				7 = ไม่มี	7 = No one
PrQ-13A-I	Turkey	PrQ-13A-I	D	Nationally defined categories: 1 = Milli Eğitim Bakanlığı veya Milli Eğitim Müdürlüğü 2 = Okul Müdürü veya yardımcısı 3 = Zümre Başkanı 4 = BT koordinatörü 5 = Bilişim uzmanı veya Kütüphaneci 6 = Öğretmenler 7 = Hiç Kimse	Nationally defined categories: 1 = Ministry of Education, Provincial Directorate of National Education 2 = School principal or deputy 3 = Heads of department 4 = ICT-coordinator 5 = Information specialist or librarian 6 = Individual teachers 7 = No one
PrQ-14A-I	Argentina, Buenos Aires	PrQ-14A-I	D	Stem of the question changed: ¿Tiene su escuela o sistema educativo políticas y procedimientos con respecto a los siguientes aspectos de uso de las TIC?	Stem of the question changed: Does your school or education system have policies or procedures with regard to the following aspects of ICT use?
PrQ-14A-I	Canada	PrQ-14H	D	Giving the local community (parents/guardians and/or others) access to school computers and/or the Internet Autoriser la communauté locale (parents/tuteurs et/ou autres) à utiliser les ordinateurs et/ou les connexions Internet de l'école	Giving the local community (parents/guardians and/or others) access to school computers and/or the Internet
PrQ-14A-I	Chile	PrQ-14A-I	D	Stem of the question changed: ¿Tiene su establecimiento o sistema educacional procedimientos relacionados con los siguientes aspectos de uso de las TIC?	Stem of the question changed: Does your school or school system have protocols with regard to the following aspects of ICT use?
PrQ-15A-H	Argentina, Buenos Aires	PrQ-15E	D	Discusiones con grupos de profesores sobre el uso de las TIC en sus clases	Discussions with groups of teachers about their use of ICT in classes
PrQ-15A-H	Argentina, Buenos Aires	PrQ-15F		Comunidades y/o foros de práctica pedagógica relacionada con las TIC en la enseñanza	Participate in a forum of pedagogical practice related to the use of ICT in teaching
PrQ-15A-H	Argentina, Buenos Aires	PrQ-15G		Cursos dirigidos por expertos/as u organismos externos	Courses directed by external experts or entities
PrQ-15A-H	Australia	PrQ-15F	D	Community of practice (for example online training or Internet group)	Community of practice (for example, online training or Internet group)
PrQ-15A-H	Chile	PrQ-15F	D	Grupo de aprendizaje	Group of learning
PrQ-15A-H	Croatia	PrQ-15F	D	Grupe za razmjenu znanja i iskustava	Groups for exchanging knowledge and experience
PrQ-15A-H	Denmark	PrQ-15F	D	Udviklingsarbejde eller formaliseret praksisfællesskab	Innovation work or formalized community of practice
PrQ-15A-H	Germany	PrQ-15F	D	Arbeitsgruppe	Working group
PrQ-15A-H	Korea, Republic of	PrQ-15F	D	교사 연구회	Teacher community

PrQ-15A-H	Norway	PrQ-15F	D	Praksisnettverk Praksisnettverk	Practice network (community)
PrQ-15A-H	Poland	PrQ-15F	D	Koło samokształceniowe	Self-education circle
PrQ-15A-H	Russian Federation	PrQ-15F	D	методического объединения (школьного, районного, виртуального) и других профессиональных сообществ учителей, в т.ч. сетевых	Teacher council/association (school level, regional level, virtual/ web) and other professional communities, including web-based
PrQ-15A-H	Slovak Republic	PrQ-15F	D	V združeniach a záujmových organizáciách	Associations and free-time organizations
PrQ-15A-H	Switzerland	PrQ-15F	D	*German Arbeitsgruppe	*German Working group
PrQ-15A-H	Thailand	PrQ-15F	D	กลุ่มหรือเครือข่าย	Group or network
PrQ-16A-J	Slovak Republic	PrQ-16C	D	Zvyšovanie kapacity alebo rýchlosti internetového pripojenia	Increasing the capacity or speed of Internet connection

List of country-specific adaptations to the ICT-coordinator questionnaire sorted by question group, country, and location

Question group	Country	Location	Code	Adaptation: Language of test	Adaptation: English backtranslation
CoQ-01	Slovak Republic	CoQ-01	D	Stem of the question changed: Ste na vašej škole pracovne zaradený/-á ako koordinátor/-ka IKT? Nationally defined categories: 1 = Áno, oficiálne pracujem ako koordinátor/-ka IKT 2 = Áno, neoficiálne pracujem ako koordinátor/-ka IKT 3 = Nie som koordinátor/-ka IKT, ale odpovedám na otázky ako riaditeľ/-ka školy alebo jeho/jej zástupca/zástupkyňa	Stem of the question changed: Do you, at your school, hold the position of ICT-coordinator? Nationally defined categories: 1 = Yes, I formally serve as ICT-coordinator 2 = Yes, I informally serve as ICT-coordinator 3 = I am not the ICT-coordinator, but I am answering as the school principal or his/her designate
CoQ-02A-D	Slovak Republic	CoQ-02A	D	Vyučujem žiakov predmet týkajúci sa IKT (Informatika a pod.)	I teach students a subject related to ICT (Informatics, etc.)
CoQ-03	Argentina, Buenos Aires	CoQ-03	D	Stem of the question changed: ¿Desde cuándo su establecimiento ha usado computadoras para efectos de enseñanza y/o aprendizaje con los estudiantes de 1° año? Nationally defined categories: 1 = Nunca, nosotros no usamos computadores 2 = Hace menos de 2 años 3 = Hace al menos 2, pero menos de 5 años 4 = Hace al menos 5, pero menos de 10 años 5 = Hace 10 años o más	Stem of the question changed: How long has your school been using computers for teaching and learning purposes for students in first year? National categories recoded for international comparability: 1 = Never, we do not use computers 2 = Less than two years/At least 2 years, but less than 5 years 3 = At least 5 years, but less than 10 years 4 = Ten years or more
CoQ-03	Canada	CoQ-03	D	Nationally defined categories: 1 = Never, we do not use computers 2 = Less than 2 years 3 = At least 2 but less than 5 years 4 = At least 5 but less than 10 years 5 = 10 years or more Nationally defined categories: 1 = Nous n'utilisons pas d'ordinateur à ces fins 2 = Depuis moins de 2 ans	National categories recoded for international comparability: 1 = Never, we do not use computers 2 = Less than 2 years/At least 2 but less than 5 years 3 = At least 5 but fewer than 10 years 4 = 10 years or more

				3 = Depuis au moins 2 ans, mais depuis moins de 5 ans 4 = Depuis au moins 5 ans, mais depuis moins de 10 ans 5 = Depuis 10 ans ou plus	
CoQ-03	Slovak Republic	CoQ-03	D	Nationally defined categories: 1 = Nepoužívame počítače 2 = Menej ako 5 rokov 3 = Aspoň 5 rokov, ale menej ako 10 rokov 4 = 10 rokov alebo viac	Nationally defined categories: 1 = We do not use computers 2 = Fewer than 5 years 3 = At least 5 but fewer than 10 years 4 = 10 years or more
CoQ-04A-F	Argentina, Buenos Aires	CoQ-04B	D	Recursos digitales de aprendizaje interactivo	Interactive digital learning resources
CoQ-04A-F	Slovak Republic	CoQ-04B	D	Interaktívne elektronické výučbové zdroje (napr. elektronické výučbové materiály)	Interactive digital learning resources (e.g., electronic learning materials)
CoQ-05A-I	Argentina, Buenos Aires	CoQ-05A	D	Software educativos para practicar aprendizajes	Education software to practice learning
CoQ-05A-I	Australia	CoQ-05A	D	Tutorial software	Tutorial software
CoQ-05A-I	Canada	CoQ-05A	D	Tutorial or practice software Tutoriel ou logiciel d'exercices	Tutorial or practice software
CoQ-05A-I	Canada	CoQ-05D	D	Multimedia production software (e.g., media capture and editing, web production)	Multimedia production software (e.g., media capture and editing, web production)
CoQ-05A-I	Canada	CoQ-05H	D	Communication software (e.g., email, chat, blogs, forums, other social media)	Communication software (e.g., email, chat, blogs, forums, other social media)
CoQ-05A-I	Chile	CoQ-05A	D	Software educativos para practicar aprendizajes	Educational software for learning training
CoQ-05A-I	Chile	CoQ-05C	D	Programas de Microsoft © Office	Microsoft © Office programs
CoQ-05A-I	Croatia	CoQ-05A	D	Sofver za učenje ili vježbu	Learning or practice software
CoQ-05A-I	Czech Republic	CoQ-05A	D	Program zaměřený na procvičení určitých dovedností	Program for practicing particular skills
CoQ-05A-I	Germany	CoQ-05A	D	Trainingsprogramme	Training programs
CoQ-05A-I	Germany	CoQ-05C	D	Microsoft Office©, Open Office©	Microsoft Office©, Open Office©
CoQ-05A-I	Korea, Republic of	CoQ-05C	D	한컴오피스 한글®, 마이크로소프트 엑셀®	Hancom Office Hangul®, Microsoft Excel®
CoQ-05A-I	Korea, Republic of	CoQ-05G	D	마이크로소프트 파워포인트®, 한컴오피스 한쇼®	Microsoft PowerPoint®, Hancom Office HanShow®

CoQ-05A-I	Lithuania	CoQ-05G	D	Microsoft PowerPoint®	Microsoft PowerPoint®
CoQ-05A-I	Norway	CoQ-05A	D	Programmer for drill Programmer for drill og øving	Drill programs
CoQ-05A-I	Norway	CoQ-05G	D	Microsoft PowerPoint ®, Impress PowerPoint® frå Microsoft eller Impress	Microsoft PowerPoint®, Impress
CoQ-05A-I	Russian Federation	CoQ-05A	D	Практикумы/тренажеры	Practicums/practicals and simulators/tutorials
CoQ-05A-I	Russian Federation	CoQ-05C	D	пакет Microsoft© Office, OpenOffice	Microsoft© Office suite, OpenOffice
CoQ-05A-I	Russian Federation	CoQ-05G	D	Microsoft PowerPoint®	Microsoft PowerPoint®
CoQ-05A-I	Slovak Republic	CoQ-05A	D	Praktické programy	Practical programs
CoQ-05A-I	Slovak Republic	CoQ-05C	D	MS© Office, Open Office	MS© Office, Open Office
CoQ-05A-I	Slovak Republic	CoQ-05G	D	MS PowerPoint ®, Keynote ®, Open Office	MS PowerPoint ®, Keynote ®, Open Office
CoQ-05A-I	Switzerland	CoQ-05A	D	*French Logiciel d'exercices *German Trainingsprogramme	*French/German Training programs
CoQ-05A-I	Switzerland	CoQ-05C	D	*German Microsoft® Office	*German Microsoft® Office
CoQ-05A-I	Thailand	CoQ-05A	D	ซอฟต์แวร์ที่ใช้ในการฝึกทักษะ	Tutorial software or practice programs
CoQ-05A-I	Thailand	CoQ-05G	D	Microsoft PowerPoint ®, OpenOffice.org Impress	Microsoft PowerPoint ®, OpenOffice.org Impress
CoQ-06A-F	Australia	CoQ-06D	D	Moodle or Sharepoint	Moodle or Sharepoint
CoQ-06A-F	Australia	CoQ-06E	D	Google Docs® or Wikispaces	Google Docs® or Wikispaces
CoQ-06A-F	Australia	CoQ-06F	D	Moodle or Blackboard	Moodle or Blackboard

CoQ-06A-F	Canada	CoQ-06B	D	Tablet devices (e.g., iPad) Ardoise électronique (p. ex., iPad)	Tablet devices (e.g., iPad)
CoQ-06A-F	Denmark	CoQ-06D	D	Moodle ®, Fronter ®, SkoleIntra ®	Moodle ®, Fronter ®, SkoleIntra ®
CoQ-06A-F	Denmark	CoQ-06F	D	SkoleIntra ®, Fronter ®, WebCT ®	SkoleIntra ®, Fronter ®, WebCT ®
CoQ-06A-F	Korea, Republic of	CoQ-06D	D	사이버 가정학습, 학교 계정의 카페	Cyber Learning, school-based ecafe
CoQ-06A-F	Korea, Republic of	CoQ-06F	D	NEIS	NEIS (National Education Information System)
CoQ-06A-F	Lithuania	CoQ-06E	D	Google Docs®, Live@EDU	Google Docs®, Live@EDU
CoQ-06A-F	Lithuania	CoQ-06F	D	Nuotolinio mokymo sistema (pvz. Moodle, WebCT®)	Distance learning system (e.g., Moodle, WebCT®)
CoQ-06A-F	Netherlands	CoQ-06F	D	Blackboard	Blackboard
CoQ-06A-F	Norway	CoQ-06D	D	Microsoft Learning Gateway Microsoft Learning Gateway	Microsoft Learning Gateway
CoQ-06A-F	Norway	CoQ-06F	D	Fronter, it's learning Fronter, it's learning	Fronter, it's learning
CoQ-06A-F	Russian Federation	CoQ-06F	D	Net-School/(Net-Школа), Moodle, 1C:Образование.Школа	Net-School, Moodle, 1C: Education School
CoQ-06A-F	Slovenia	CoQ-06E	D	Spletne aplikacije, kjer lahko uporabniki sodelujejo pri delu (npr. Google Docs®)	Web applications where users collaborate (such as GoogleDocs®)
CoQ-06A-F	Thailand	CoQ-06F	D	Joomla	Joomla
CoQ-07A-C	Slovak Republic	CoQ-07A-C	D	Stem of the question changed: Približne koľko počítačov má k dispozícii/vlastní vaša škola?	Stem of the question changed: Approximately how many computers are provided/owned by the school?
CoQ-09A-F	Canada	CoQ-09E	D	In other places accessible to students (e.g., cafeteria, auditorium) En d'autres endroits ouverts aux élèves (p. ex., cafétéria,	In other places accessible to students (e.g., cafeteria, auditorium)

				auditorium)	
CoQ-11A-G	Canada	CoQ-11C	D	Other ICT technical staff at the school Un autre membre du personnel technique des TIC à l'école	Other ICT technical staff at the school
CoQ-11A-G	Canada	CoQ-11F	D	Staff from the school boards/districts to which the school belongs Le personnel du conseil, de la commission ou du district scolaire dont relève l'école	Staff from the school boards/districts to which the school belongs
CoQ-11A-G	Poland	CoQ-11F	D	Pracownicy wydziału edukacji, kuratorium, organu prowadzącego etc., którym podlega szkoła	Staff from the education system, inspection authority, leading institution to which the school belongs
CoQ-11A-G	Slovak Republic	CoQ-11F	D	Zamestnanci iných vzdelávacích inštitúcií zriaďovateľa, pod ktorého škola patrí (napr. MPC, ŠVS, krajský školský úrad)	Staff from the education system to which the school belongs (e.g., Methodology and Pedagogy Centers, School Computer Centers, regional school offices)
CoQ-12A-F	Canada	CoQ-12B	D	Other ICT technical staff at the school Un autre membre du personnel technique des TIC à l'école	Other ICT technical staff at the school
CoQ-12A-F	Chile	CoQ-12D	D	Bibliotecarios/as o personal de la biblioteca	Librarians or library staff
CoQ-12A-F	Poland	CoQ-12F	D	Pracownicy wydziału edukacji, kuratorium, organu prowadzącego etc., którym podlega szkoła	Staff from the education system, inspection authority, leading institution to which the school belongs
CoQ-12A-F	Slovak Republic	CoQ-12F	D	Zamestnanci iných vzdelávacích inštitúcií zriaďovateľa, pod ktorého škola patrí (napr. MPC, krajský školský úrad)	Staff from the education system to which the school belongs (e.g., Methodology and Pedagogy Centers, regional school offices)
CoQ-13A-K	Argentina, Buenos Aires	CoQ-13C	D	No hay suficientes computadoras para las clases	Not enough computers for classes
CoQ-13A-K	Argentina, Buenos Aires	CoQ-13E	D	No hay software suficiente para las computadoras	Lack of sufficient software for computers
CoQ-S	Canada	CoQ-S-B	D	The questionnaire should be completed by the person with designated responsibility for ICT in the school. If there is no person with designated responsibility for ICT in the school, the questionnaire should be completed by the school principal. Le questionnaire devrait être rempli par la personne qui a la responsabilité des TIC à l'école ou, en l'absence d'une personne	The questionnaire should be completed by the person with designated responsibility for ICT in the school. If there is no person with designated responsibility for ICT in the school, the questionnaire should be completed by the school principal.

				affectée spécifiquement aux TIC à l'école, par la direction de l'école.	
CoQ-S	Chile	CoQ-S-B	D	El director/a o quien haya sido designado/a por él/ella	The principal or whomever has been designated by him/her
CoQ-S	Denmark	CoQ-S-B	D	En anden ledelsesperson	Another management person
CoQ-S	Netherlands	CoQ-S-B	D	Conrector of leerjaar-coordinator	Deputy-principal or grade-coordinator
CoQ-S	Switzerland	CoQ-S-B	D	*French La direction de l'école *German Vize-Schuldirektor	*French School principal or deputy *German Vice school director

List of country-specific adaptations to the teacher questionnaire sorted by question group, country, and location

Question group	Country	Location	Code	Adaptation: Language of test	Adaptation: English backtranslation
TcQ-03A-I	Argentina, Buenos Aires	TcQ-03A	D	Lenguaje y Comunicaciòn	Language
TcQ-03A-I	Argentina, Buenos Aires	TcQ-03A-I	D	Question instruction changed: Si usted enseña más de una asignatura por el mismo número de horas, por favor señale todas las asignaturas que correspondan	Question instruction changed: If you teach more than one main subject, please mark all of them
TcQ-03A-I	Argentina, Buenos Aires	TcQ-03B	D	Idioma Extranjero	Foreign language
TcQ-03A-I	Argentina, Buenos Aires	TcQ-03D	D	Ciencias Naturales	Science
TcQ-03A-I	Argentina, Buenos Aires	TcQ-03E	D	Ciencias Sociales	Social studies
TcQ-03A-I	Argentina, Buenos Aires	TcQ-03F	D	Artes	Arts
TcQ-03A-I	Argentina, Buenos Aires	TcQ-03G	D	Educaciòn tecnològica/Informàtica	Computer studies
TcQ-03A-I	Argentina, Buenos Aires	TcQ-03H	D	Asignaturas pràcticas (talleres)	Practical subjects
TcQ-03A-I	Argentina, Buenos Aires	TcQ-03I	D	Otras (materias prácticas o de formación profesional, religió / moral / ética, educación física, economía doméstica, desarrollo personal y social)	Other (practical subjects, religion/moral/ethics, physical education, home economics, personal and social development)
TcQ-03A-I	Australia	TcQ-03A	D	English	English
TcQ-03A-I	Australia	TcQ-03B	D	LOTE (Language Other Than English)	LOTE (Language Other Than English)
TcQ-03A-I	Canada	TcQ-03A	D	English Français	English French

TcQ-03A-I	Canada	TcQ-03B	D	French and other languages Anglais et autres langues	French and other languages English and other languages
TcQ-03A-I	Canada	TcQ-03E	D	Social sciences and humanities (e.g., history, geography, civic and citizenship education, law, economics) Sciences humaines et sociales (p. ex., histoire, géographie, éducation à la citoyenneté, droit, économie)	Social sciences and humanities (e.g., history, geography, civic and citizenship education, law, economics)
TcQ-03A-I	Canada	TcQ-03G	D	Information technology, computer studies Technologie de l'information, informatique	Information technology, computer studies
TcQ-03A-I	Chile	TcQ-03A	D	Lenguaje y Comunicación	Language and communication
TcQ-03A-I	Chile	TcQ-03A-I	D	4 horas pedagógicas	4 modules of teaching activity
TcQ-03A-I	Chile	TcQ-03B	D	Idioma Extranjero o Lenguas Originarias	Foreign language or original languages
TcQ-03A-I	Chile	TcQ-03D	D	Ciencias Naturales (Ciencias en general y/o Física, Química, Biología)	Natural sciences (general science and/or physics, chemistry, biology)
TcQ-03A-I	Chile	TcQ-03E	D	Historia, Geografía o Ciencias Sociales	History, geography, or social sciences
TcQ-03A-I	Chile	TcQ-03F	D	Artes (Artes Plásticas, Música, Danza, Teatro, etc.)	Arts (visual arts, music, dance, drama, etc.)
TcQ-03A-I	Chile	TcQ-03G	D	Educación Tecnológica	Technological education
TcQ-03A-I	Chile	TcQ-03I	D	Otra (Moral/ Ética, Religión, Educación Física, Economía Doméstica, Orientación)	Other (moral/ethics, religion, physical education, home economics, orientation)
TcQ-03A-I	Croatia	TcQ-03A	D	Hrvatski jezik	Croatian language
TcQ-03A-I	Croatia	TcQ-03B	D	Strani jezik	Foreign language
TcQ-03A-I	Croatia	TcQ-03G	D	Informatika	Information technology
TcQ-03A-I	Croatia	TcQ-03I	D	Ostalo (Vjeronauk, Tjelesno-zdravstvena kultura)	Other subjects (religion, physical education)
TcQ-03A-I	Czech Republic	TcQ-03A	D	Český jazyk	Czech language
TcQ-03A-I	Czech Republic	TcQ-03B	D	Cizí jazyk/y	Foreign language(s)

TcQ-03A-I	Czech Republic	TcQ-03G	D	Informační a komunikační technologie	Information and communication technologies
TcQ-03A-I	Denmark	TcQ-03A	D	Dansk	Danish
TcQ-03A-I	Denmark	TcQ-03A-I	D	4 timer	4 hours
TcQ-03A-I	Denmark	TcQ-03B	D	Fremmedsprog (engelsk, tysk, fransk)	Foreign language (e.g., English, German, French)
TcQ-03A-I	Denmark	TcQ-03G	D	It-fag (tekstbehandling, teknologi, medier)	IT subjects (wordprocessing, technology, media)
TcQ-03A-I	Germany	TcQ-03A	D	Deutsch	German
TcQ-03A-I	Germany	TcQ-03B	D	Fremdsprache (Englisch, Französisch, Italienisch usw.)	Foreign language (English, French, Italian, etc.)
TcQ-03A-I	Hong Kong SAR	TcQ-03A	D	普通话 中國語文 English	Putonghua Chinese language English
TcQ-03A-I	Hong Kong SAR	TcQ-03B	D	英国语文、中国语文、其他语言 英國語文、普通話、其他語言 Chinese Language, Putonghua and other languages	English, Chinese language, other languages English, Putonghua, other languages Chinese language, Putonghua, and other languages
TcQ-03A-I	Korea, Republic of	TcQ-03A	D	국어	Korean
TcQ-03A-I	Korea, Republic of	TcQ-03B	D	영어 또는 제 2외국어	English (first foreign language) or second languages
TcQ-03A-I	Lithuania	TcQ-03A	D	Lietuvių kalbos	Lithuanian language
TcQ-03A-I	Lithuania	TcQ-03A-I	D	Question instruction changed: Nurodykite dalykus, kuriuos mokote šioje mokykloje ne mažiau kaip 4 pamokas per savaitę (skaičiuokite visų klasių mokomo dalyko pamokas).Tikslių vieno ar daugiau Jūsų mokomų dalykų pavadinimų gali nebūti išvardinta šiame dalykų (ugdymo sričių) sąraše. Jei savo dalyko sąraše neradote, pasirinkite ugdymo sritį (kategoriją) geriausiai atitinkančią Jūsų mokomą dalyką.	Question instruction changed: Please indicate the subjects that you teach in this school at least 4 lessons per week (please count all subject lessons per week). The exact name of one or more of your subjects may not appear in the list for each category. If it does not, please mark the category you think best fits the subject.

TcQ-03A-I	Lithuania	TcQ-03B	D	Užsienio kalbos ir kitos gimtosios (išskyrus lietuvių) kalbos	Foreign languages and other native languages (except Lithuanian)
TcQ-03A-I	Lithuania	TcQ-03G	D	Informacinės technologijos	Computer science
TcQ-03A-I	Netherlands	TcQ-03A	D	Nederlands	Dutch
TcQ-03A-I	Netherlands	TcQ-03B	D	Nationally defined dimensions: 1 = Moderne vreemde talen (zoals Engels, Duits, Frans) 2 = Klassieke talen (Latijn, Grieks)	National dimensions recoded for international comparability: 1 = Foreign languages (like English, German, French)/Classical languages (Latin, Greek)
TcQ-03A-I	Netherlands	TcQ-03G	D	Informatiekunde (informatica, programmeren, informatievaardigheden)	Computer studies (information technology, programming, information science)
TcQ-03A-I	Norway	TcQ-03A	D	Norsk	Norwegian
TcQ-03A-I	Norway	TcQ-03B	D	Fremmedspråk (f.eks. engelsk, tysk, spansk) Framandspråk (t.d.engelsk, tysk, spansk)	Foreign language (e.g., English, German, Spanish)
TcQ-03A-I	Norway	TcQ-03G-H	X	Dimension not administered or data not available	Dimension not administered or data not available
TcQ-03A-I	Poland	TcQ-03A	D	Język polski	Polish language
TcQ-03A-I	Poland	TcQ-03B	D	Języki obce	Foreign languages
TcQ-03A-I	Poland	TcQ-03D	D	Nauki przyrodnicze (przyroda ogólnie oraz/lub fizyka, chemia, biologia, geografia)	Sciences (general science and/or physics, chemistry, biology, geography)
TcQ-03A-I	Poland	TcQ-03E	D	Nauki humanistyczne (historia, wychowanie obywatelskie/wiedza o społeczeństwie, przedsiębiorczość itp.)	Humanities (history, civic and citizenship education, entrepreneurship, etc.)
TcQ-03A-I	Poland	TcQ-03G	D	Informatyka, zajęcia komputerowe lub podobne	Computer science (or IT), computer classes or similar
TcQ-03A-I	Poland	TcQ-03I	D	Inne (religia/etyka, wychowanie fizyczne etc.)	Other (religion/ethics, physical education, etc.)
TcQ-03A-I	Russian Federation	TcQ-03A	D	Русский язык и литература	Russian language and literature
TcQ-03A-I	Russian Federation	TcQ-03A-I	D	Stem of the question changed: Какие основные предметы Вы преподавали в этой школе в прошлом учебном году?	Stem of the question changed: What were the main subjects that you taught in this school in the last school year?
TcQ-03A-I	Russian Federation	TcQ-03B	D	Иностранные языки, родной (нерусский) язык	Foreign languages, Native language/Mother tongue (not Russian)
TcQ-03A-I	Russian Federation	TcQ-03G	D	Информатика и ИКТ	Informatics and ICT

TcQ-03A-I	Slovak Republic	TcQ-03A	D	Nationally defined dimensions: 1 = Vyučovací jazyk - slovenský jazyk 2 = Vyučovací jazyk - mad'arský jazyk	National dimensions recoded for international comparability: 1 = Language of instruction—Slovak language/Language of instruction—Hungarian language
TcQ-03A-I	Slovak Republic	TcQ-03A-I	D	Question instruction changed: Označte, ktoré predmety vyučujete v tejto škole (označte iba tie, z ktorých vyučujete aspoň štyri vyučovacie hodiny týždenne na tejto škole). Je možné, že sa presný názov jedného alebo viacerých vašich vyučovacích predmetov nebude nachádzať v zozname predmetov pre každú kategóriu. V tom prípade označte kategóriu, ktorá najlepšie zodpovedá danému predmetu.	Question instruction changed: Please indicate the subjects that you teach in this school (indicate only those that individually account for at least four lessons each week in this school). It is possible that the exact name of one or more of your subjects will not appear in the list for each category. In that case, please mark the category you think best fits the subject.
TcQ-03A-I	Slovak Republic	TcQ-03B	D	Cudzí jazyk	Foreign language
TcQ-03A-I	Slovak Republic	TcQ-03D	D	Prírodovedné predmety (fyzika, chémia, biológia)	Sciences (physics, chemistry, biology)
TcQ-03A-I	Slovak Republic	TcQ-03E	D	Humanitné predmety (dejepis, geografia, náuka o spoločnosti, právo, ekonómia, atď.)	Human sciences (history, geography, civic and citizenship education, law, economics, etc.)
TcQ-03A-I	Slovak Republic	TcQ-03F	D	Umelecké predmety (výtvarná výchova, hudobná výchova, dramatická výchova, atď.)	Creative arts (art education, music education, drama education, etc.)
TcQ-03A-I	Slovak Republic	TcQ-03G	D	Informatika	Informatics
TcQ-03A-I	Slovak Republic	TcQ-03H	D	Praktické a odborné predmety (technická výchova, príprava na konkrétnu profesiu)	Practical and vocational subjects (technical education, preparation for a specific occupation)
TcQ-03A-I	Slovak Republic	TcQ-03I	D	Iné (etická výchova, náboženská výchova, telesná výchova)	Other (ethics, religion, physical education)
TcQ-03A-I	Slovenia	TcQ-03A	D	Slovenščina	Slovenian
TcQ-03A-I	Slovenia	TcQ-03B	D	Nationally defined dimensions: 1 = Tuj jezik - angleščina 2 = Jezik manjšin (italjanščina, madžarščina) - ne kot tuj jezik 3 = Tuj jezik - drugo	National dimensions recoded for international comparability: 1 = Foreign language—English/National minority language (Italian, Hungarian)—not as foreign language/Foreign language—other
TcQ-03A-I	Slovenia	TcQ-03G	D	Računalništvo	Computer studies
TcQ-03A-I	Switzerland	TcQ-03A	D	Français Deutsch	French German

				Discipline linguistiche: italiano	Language subject: Italian
TcQ-03A-I	Switzerland	TcQ-03B	D	Allemand et autres langues (p. ex. anglais, italien) Fremdsprache (Französisch, Italienisch, Englisch, ...) Discipline linguistiche: lingue straniere (for esempio francese, tedesco o inglese)	German and other foreign languages (e.g., English, Italian) Foreign language (French, Italian, English, ...) Language subjects: foreign languages (e.g., French, German, or English)
TcQ-03A-I	Switzerland	TcQ-03G	D	Technologie de l'information, informatique Informatik Informatica e materie analoghe	Information technology, computer studies Informatics Information technology and similar
TcQ-03A-I	Thailand	TcQ-03A	D	ไทย	Thai
TcQ-03A-I	Thailand	TcQ-03A-I	D	4 ชั่วโมงต่อสัปดาห์	4 hours per week
TcQ-03A-I	Thailand	TcQ-03B	D	ภาษาต่างประเทศ	Foreign languages
TcQ-03A-I	Thailand	TcQ-03G	D	เทคโนโลยีสารสนเทศและการสื่อสาร คอมพิวเตอร์ศึกษา หรือวิชาอื่นที่ใกล้เคียง	Information and communication technology, computer studies or similar
TcQ-03A-I	Turkey	TcQ-03A	D	Türkçe	Turkish
TcQ-03A-I	Turkey	TcQ-03B	D	Yabancı dil	Foreign language
TcQ-04	Netherlands	TcQ-04	D	Het tweede leerjaar	The second grade
TcQ-04	Russian Federation	TcQ-04	D	Stem of the question changed: В каком количестве школ Вы преподавали в 8 классе в прошлом учебном году?	Stem of the question changed: In the last school year, how many schools did you teach Grade 8 at?
TcQ-05	Canada	TcQ-05	D	Nationally defined categories: 1 = Never 2 = Less than 2 years 3 = 2 to 5 years 4 = 6 to 10 years 5 = More than 10 years Nationally defined categories:	National categories recoded for international comparability: 1 = Never 2 = Less than 2 years 3 = 2 to 5 years/6 to 10 years/More than 10 years

				1 = Je ne l'ai jamais fait 2 = Depuis moins de 2 ans 3 = Depuis 2 à 5 ans 4 = Depuis 6 à 10 ans 5 = Depuis plus de 10 ans	
TcQ-05	Slovak Republic	TcQ-05	D	Nationally defined categories: 1 = Nevyužívam 2 = Menej ako dva roky 3 = Dva roky alebo viac	Nationally defined categories: 1 = I don't use 2 = Less than two years 3 = Two years or more
TcQ-06A-C	Argentina, Buenos Aires	TcQ-06A-C	D	Stem of the question changed: ¿Con qué frecuencia usa una computadora en estas situaciones?	Stem of the question changed: How often do you use a computer in the following situations?
TcQ-07A-N	Argentina, Buenos Aires	TcQ-07A	D	Redactar una carta usando un procesador de texto	Write a letter using a wordprocessing program
TcQ-07A-N	Argentina, Buenos Aires	TcQ-07A-N	D	Stem of the question changed: ¿Cuán bien puede realizar por sí mismo/a estas tareas en una computadora?	Stem of the question changed: How well can you do these tasks on a computer on your own?
TcQ-07A-N	Argentina, Buenos Aires	TcQ-07C	D	Almacenar fotos digitales en un computador	Store digital pictures on a computer
TcQ-07A-N	Argentina, Buenos Aires	TcQ-07F	D	Usar un programa de hojas de cálculo (ej. Lotus 1 2 3 ®, Microsoft Excel ®) para mantener registros o analizar datos (por ejemplo, de alumnos)	Use a spreadsheet program (e.g., Lotus 1 2 3 ®, Microsoft Excel ®) to keep records or analyze data (for example, of the student)
TcQ-07A-N	Argentina, Buenos Aires	TcQ-07J	D	Preparar clases que incluyan el uso de TIC por parte de los estudiantes	Prepare classes that include the use of ICT by students
TcQ-07A-N	Argentina, Buenos Aires	TcQ-07K	D	Encontrar en internet recursos de enseñanza que sean útiles para sus clases	Find on the Internet resources for teaching that are useful for the classes
TcQ-07A-N	Canada	TcQ-07F	D	Using a spreadsheet program (e.g., Lotus 1-2-3 ®, Microsoft Excel ®) for keeping records (e.g., student data) or analyzing data Utiliser un tableur (p. ex., Lotus 1-2-3 ®, Microsoft Excel ®) pour conserver ou analyser des données (p. ex., données concernant les élèves)	Using a spreadsheet program (e.g., Lotus 1-2-3 ®, Microsoft Excel ®) for keeping records (e.g., student data) or analyzing data
TcQ-07A-N	Denmark	TcQ-07F	D	Microsoft Excel ®	Microsoft Excel ®
TcQ-07A-N	Denmark	TcQ-07H	D	Microsoft PowerPoint ®	Microsoft PowerPoint ®
TcQ-07A-N	Korea,	TcQ-07A-N	D	Nationally defined categories:	Nationally defined categories:

	Republic of			1 = 할 수 있음 2 = 방법을 배우면 할 수 있음 3 = 방법을 배워도 할 수 없을 것 같음	1 = I can do this 2 = I think I can do this 3 = I think I cannot do this
TcQ-07A-N	Korea, Republic of	TcQ-07F	D	마이크로소프트 엑셀®	Microsoft Excel®
TcQ-07A-N	Korea, Republic of	TcQ-07H	D	마이크로소프트 파워포인트®	Microsoft PowerPoint®
TcQ-07A-N	Lithuania	TcQ-07F	D	MICROSOFT EXCEL®	MICROSOFT EXCEL®
TcQ-07A-N	Lithuania	TcQ-07H	D	MICROSOFT POWERPOINT® programa	MICROSOFT POWERPOINT® program
TcQ-07A-N	Lithuania	TcQ-07M	D	GoogleDocs®, Live@EDU	Google Docs®, Live@EDU
TcQ-07A-N	Netherlands	TcQ-07F	D	Microsoft Excel ®	Microsoft Excel ®
TcQ-07A-N	Netherlands	TcQ-07H	D	Microsoft PowerPoint®	Microsoft PowerPoint®
TcQ-07A-N	Norway	TcQ-07F	D	CALC, Microsoft Excel®	CALC, Microsoft Excel®
TcQ-07A-N	Poland	TcQ-07F	D	Microsoft Excel ®	Microsoft Excel ®
TcQ-07A-N	Russian Federation	TcQ-07F	D	Microsoft Excel ®	Microsoft Excel ®
TcQ-07A-N	Russian Federation	TcQ-07H	D	PowerPoint®	PowerPoint®
TcQ-07A-N	Slovak Republic	TcQ-07F	D	MS Excel ®, Open Office	MS Excel ®, Open Office
TcQ-07A-N	Slovak Republic	TcQ-07L	D	Hodnotiť výsledky žiakov	To assess students' results
TcQ-07A-N	Slovak Republic	TcQ-07M	D	Spoločne využívať zdieľané zdroje na spoluprácu s inými, napr. Google Docs®	Use shared resources together for collaborating with others, for example, Google Docs®
TcQ-07A-N	Thailand	TcQ-07F	D	Microsoft Excel ®	Microsoft Excel ®
TcQ-08A-B	Argentina, Buenos Aires	TcQ-08A	D	Nationally defined categories: 1 = Lenguaje y Comunicación 2 = Idioma Extranjero 3 = MatemWática 4 = Ciencias Naturales 5 = Ciencias Sociales 6 = Artes 7 = Educación Tecnológica/Informática 8 = Asignaturas pràcticas (talleres)	Nationally defined categories: 1 = Language 2 = Foreign language 3 = Mathematics 4 = Science 5 = Social studies 6 = Arts 7 = Computer studies 8 = Practical subjects

				9 = Otras (materias prácticas o de formación profesional, religió/ moral/ética, educación física, economía doméstica, desarrollo personal y social)	9 = Other (practical subjects, religion/moral/ethics, physical education, home economics, personal and social development)
TcQ-08A-B	Australia	TcQ-08A	D	Nationally defined categories: 1 = English 2 = LOTE (Language Other Than English) 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics etc.) 6 = Creative arts (visual arts, music, dance, drama etc.) 7 = Information technology, computer studies or similar 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (moral/ethics, physical education, home economics, personal and social development)	Nationally defined categories: 1 = English 2 = LOTE (Language Other Than English) 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = Information technology, computer studies or similar 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (moral/ethics, physical education, home economics, personal and social development)
TcQ-08A-B	Canada	TcQ-08A	D	Nationally defined categories: 1 = English 2 = French and other languages 3 = Mathematics 4 = Sciences (e.g., general science, physics, chemistry, biology, geology, earth sciences) 5 = Social sciences and humanities (e.g., history, geography, civic and citizenship, law, economics) 6 = Creative arts (e.g., visual arts, music, dance, drama) 7 = Information technology, computer studies 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (e.g., moral/ethics, physical education, home economics, personal and social development) Nationally defined categories: 1 = Français 2 = Anglais et autres langues 3 = Mathématiques 4 = Sciences (p. ex., sciences générales, physique, chimie, biologie, géologie, sciences de la Terre) 5 = Sciences humaines et sociales (p. ex., histoire, géographie, éducation à la citoyenneté, droit, économie) 6 = Arts de création (p. ex., arts visuels, musique, danse,	Nationally defined categories: 1 = English 2 = French and other languages 3 = Mathematics 4 = Sciences (e.g., general science, physics, chemistry, biology, geology, earth sciences) 5 = Social sciences and humanities (e.g., history, geography, civic and citizenship, law, economics) 6 = Creative arts (e.g., visual arts, music, dance, drama) 7 = Information technology, computer studies 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (e.g., moral/ethics, physical education, home economics, personal and social development) Nationally defined categories: 1 = French 2 = English and other languages 3 = Mathematics 4 = Sciences (e.g., general science, physics, chemistry, biology, geology, earth sciences) 5 = Social sciences and humanities (e.g., history, geography, civic and citizenship, law, economics) 6 = Creative arts (e.g., visual arts, music, dance, drama)

				théâtre) 7 = Technologie de l'information, informatique 8 = Domaines pratiques et techniques (préparation à un emploi en particulier) 9 = Autres (p. ex., morale et éthique, éducation physique, économie familiale, développement personnel et social)	7 = Information technology, computer studies 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (e.g., moral/ethics, physical education, home economics, personal and social development)
TcQ-08A-B	Chile	TcQ-08A	D	Stem of the question changed: ¿Cuál de las siguientes alternativas describe mejor la asignatura que usted enseña en el curso de referencia? Nationally defined categories: 1 = Lenguaje y Comunicación 2 = Idioma Extranjero o Lenguas Originarias 3 = Matemática 4 = Ciencias Naturales (Ciencias en general y/o Física, Química, Biología) 5 = Historia, Geografía o Ciencias Sociales 6 = Artes (Artes Plásticas, Música, Danza, Teatro, etc.) 7 = Educación Tecnológica 9 = Otra (Moral/ Ética, Religión, Educación Física, Economía Doméstica, Orientación)	Stem of the question changed: Which of the following alternatives best describes the subject you teach to the reference class? Nationally defined categories: 1 = Language and communication 2 = Foreign language or original languages 3 = Mathematics 4 = Natural sciences (general science and/or physics, chemistry, biology) 5 = History, geography or social science 6 = Arts (visual arts, music, dance, drama, etc.) 7 = Technological education 9 = Other (moral/ethics, religion, physical education, home economics, orientation)
TcQ-08A-B	Croatia	TcQ-08A	D	Nationally defined categories: 1 = Hrvatski jezik 2 = Strani jezik 3 = Matematika 4 = Prirodna grupa predmeta (Priroda, Biologija, Fizika, Kemija) 5 = Društvena grupa predmeta (Povijest, Geografija) 6 = Kreativne umjetnosti (Likovna kultura, Glazbena kultura) 7 = Informatika 8 = Praktični ili strukovni predmeti (Tehnička kultura) 9 = Ostalo (Vjeronauk, Tjelesno-zdravstvena kultura)	Nationally defined categories: 1 = Croatian language 2 = Foreign language 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = Information technology 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other subjects (religion, physical education)
TcQ-08A-B	Czech Republic	TcQ-08A	D	Nationally defined categories: 1 = Český jazyk 2 = Cizí jazyk/y 3 = Matematika 4 = Přírodní vědy (fyzika, chemie, biologie, geologie, věda o Zemi) 5 = Humanitní předměty (dějepis, zeměpis, základy společenských věd, právo, ekonomie atd.)	Nationally defined categories: 1 = Czech language 2 = Foreign language(s) 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics, etc.)

				6 = Umělecké předměty (výtvarná, hudební, dramatická výchova, tanec atd.) 7 = Informační a komunikační technologie 8 = Praktické a odborné předměty (profesní příprava) 9 = Jiné (etika, tělesná výchova, rodinná výchova, osobní a sociální rozvoj)	6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = Information and communication technologies 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (moral/ethics, physical education, home economics, personal and social development)
TcQ-08A-B	Denmark	TcQ-08A	D	Nationally defined categories: 1 = Dansk 2 = Fremmedsprog (engelsk, tysk, fransk) 3 = Matematik 4 = Naturfag (fysik, kemi, natur/teknik, biologi, geografi) 5 = Humanistiske fag (historie, samfundsfag osv.) 6 = Musisk/kreative fag (musik, drama, billedkunst, film) 7 = It-fag (tekstbehandling, teknologi, medier) 8 = Praktiske og erhvervsrettede fag (f.eks. uddannelses-, erhvervs- og arbejdsmarkedsorientering) 9 = Andre (kristendomskundskab, idræt, sundheds- og seksualundervisning og familiekundskab)	Nationally defined categories: 1 = Danish 2 = Foreign language 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = IT subjects (wordprocessing, technology, media) 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (moral/ethics, physical education, home economics, personal and social development)
TcQ-08A-B	Germany	TcQ-08A	D	Nationally defined categories: 1 = Deutsch 2 = Fremdsprache (Englisch, Französisch, Italienisch, usw.) 3 = Mathematik 4 = Naturwissenschaften (übergreifend und/oder Physik, Chemie, Biologie) 5 = Geistes- und Gesellschaftswissenschaften (Geschichte, Erdkunde, Politik- und Sozialwissenschaften, Recht, Wirtschaft usw.) 6 = Gestaltende Künste (Bildende Kunst, Musik, Tanz, Theater usw.) 7 = Informatik, Informationstechnischer Unterricht o. Ä. 8 = Praktisches Lernen und Berufskunde (als Vorbereitung auf einen spezifischen Beruf) 9 = Andere (Ethik/Philosophie, Religion, Sport, Hauswirtschaftslehre)	Nationally defined categories: 1 = German 2 = Foreign language (English, French, Italian, etc.) 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = Information technology, computer studies, or similar 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (moral/ethics, physical education, home economics, personal and social development)
TcQ-08A-B	Hong Kong SAR	TcQ-08A	D	Nationally defined categories: 1 = 普通话 2 = 英国语文、中国语文、其他语言 3 = 数学	Nationally defined categories: 1 = Putonghua 2 = English, Chinese language, other languages 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology,

				4 = 科学科(综合科学、物理、化学、生物、地质、地球科学等) 5 = 人文科学/人文学科 (历史、地理、 公民教育、法律、 经济等) 6 = 创意艺术 (视觉艺术、音乐、话剧、 舞蹈等) 7 = 电脑、资讯科技或类似科目 8 = 实用和职业性科目（为某个特定职业作准备） 9 = 其他 (如道德/伦理, 体育, 家政, 个人或社会发展) Nationally defined categories: 1 = 中國語文 2 = 英國語文、普通話、其他語言 3 = 數學 4 = 科學科(綜合科學、物理、化學、生物、地質、地球科學等) 5 = 人文科學/人文學科 (歷史、地理、 公民教育、法律、 經濟等) 6 = 創意藝術 (視覺藝術、音樂、話劇、 舞蹈等) 7 = 電腦、資訊科技或類似科目 8 = 實用和職業性科目（為某個特定職業作準備） 9 = 其他 (如道德/倫理, 體育, 家政, 個人或社會發展) Nationally defined categories: 1 = English 2 = Chinese Language, Putonghua, other languages 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics etc.) 6 = Creative arts (visual arts, music, dance, drama etc.) 7 = Information technology, computer studies or similar 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (moral/ethics, physical education, home economics, personal and social development)	geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = Information technology, computer studies, or similar 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (moral/ethics, physical education, home economics, personal and social development) Nationally defined categories: 1 = Chinese language 2 = English, Putonghua, other language 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = Information technology, computer studies, or similar 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (moral/ethics, physical education, home economics, personal and social development) Nationally defined categories: 1 = English 2 = Chinese language, Putonghua, other languages 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.)

					7 = Information technology, computer studies or similar 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (moral/ethics, physical education, home economics, personal and social development)
TcQ-08A-B	Korea, Republic of	TcQ-08A	D	Nationally defined categories: 1 = 국어 2 = 영어 또는 제 2외국어 3 = 수학 4 = 과학(공통 과학, 물리, 화학, 생물, 지질학, 지구과학) 5 = 인문 과학/인문학(역사, 지리, 일반사회, 시민 교육, 법, 경제학 등) 6 = 창작 예술(미술, 음악, 무용, 연극 등) 7 = 정보 기술, 컴퓨터 또는 유사과목 8 = 진로 과목(특정 직업을 위한 준비) 9 = 기타(도덕/윤리, 체육, 가정, 개인 및 사회 개발)	Nationally defined categories: 1 = Korean 2 = English (first foreign language) or second languages 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = Information technology, computer studies, or similar 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (moral/ethics, physical education, home economics, personal and social development)
TcQ-08A-B	Lithuania	TcQ-08A	D	Nationally defined categories: 1 = Lietuvių kalbos 2 = Užsienio kalbos ir kitos gimtosios (išskyrus lietuvių) kalbos 3 = Matematikos 4 = Gamtos mokslų (integruoto gamtos mokslų kurso, fizikos, chemijos, biologijos) 5 = Socialinių mokslų (istorijos, geografijos, pilietinio ugdymo, teisės, ekonomikos ir pan.) 6 = Menų (dailės, muzikos, šokio, dramos ir pan.) 7 = Informacinių technologijų 8 = Technologijų (ar praktinių ir profesinių dalykų, ruošiančių konkrečiai profesijai) 9 = Kitų dalykų (etikos / tikybos, kūno kultūros, asmenybės ir socialinio vystymo, psichologijos ir pan.)	Nationally defined categories: 1 = Lithuanian language 2 = Foreign language and other native languages (except Lithuanian) 3 = Mathematics 4 = Sciences (integrated sciences, physics, chemistry, biology) 5 = Social sciences (history, geography, citizenship education, law, economics, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = Computer science 8 = Crafts (or practical and vocational subjects that prepare for an occupation) 9 = Other subjects (moral education/ethics, physical education, personal and social development, psychology, etc.)
TcQ-08A-B	Netherlands	TcQ-08A	D	Nationally defined categories: 1 = Nederlands 2 = Moderne vreemde talen (zoals Engels, Duits, Frans) 3 = Klassieke talen (Latijn, Grieks) 4 = Wiskunde 5 = Natuurwetenschappelijke vakken (zoals Natuur- en scheikunde, Biologie, Aardrijkskunde, Techniek) 6 = Maatschappijwetenschappen (zoals Geschiedenis, Economie)	National categories recoded for international comparability: 1 = Dutch 2 = Foreign languages (like English, German, French)/Classical languages (Latin, Greek) 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and

				7 = Kunstvakken (Beeldende vorming, Dans en drama, Muziek, CKV) 8 = Informatiekunde (informatica, programmeren, informatievaardigheden). 9 = Praktijk- of beroepsvakken (gericht op beroepsvaardigheden) 10 = Anders (Godsdienst, Bewegingsonderwijs en sport, Verzorging, etc.)	citizenship, law, economics, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = Computer studies (information technology, programming, information science) 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (moral/ethics, physical education, home economics, personal and social development)
TcQ-08A-B	Norway	TcQ-08A	D	Nationally defined categories: 1 = Norsk 2 = Fremmedspråk (f.eks. engelsk, tysk, spansk) 3 = Matematikk 4 = Naturfag 5 = Samfunnsfag 6 = Kunst og håndverk, musikk 7 = Andre (RLE, kroppsøving, mat og helse) Nationally defined categories: 1 = Norsk 2 = Framandspråk (t.d. engelsk, tysk, spansk) 3 = Matematikk 4 = Naturfag 5 = Samfunnsfag 6 = Kunst og handverk, musikk 7 = Andre (RLE, kroppsøving, mat og helse)	National categories recoded for international comparability: 1 = Norwegian 2 = Foreign language (e.g., English, German, Spanish) 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = Category not administered or data not available 8 = Category not administered or data not available 9 = Other (moral/ethics, physical education, home economics, personal and social development)
TcQ-08A-B	Poland	TcQ-08A	D	Nationally defined categories: 1 = Język polski 2 = Języki obce 3 = Matematyka 4 = Nauki przyrodnicze (przyroda ogólnie oraz/lub fizyka, chemia, biologia, geografia) 5 = Nauki humanistyczne (historia, wychowanie obywatelskie/ wiedza o społeczeństwie, przedsiębiorczość itp.) 6 = Przedmioty artystyczne (sztuki plastyczne, muzyka, taniec, teatr itp.) 7 = Informatyka, zajęcia komputerowe lub podobne 8 = Przedmioty praktyczne lub zawodowe (przygotowanie do konkretnego zawodu) 9 = Inne (religia/etyka, wychowanie fizyczne etc.)	Nationally defined categories: 1 = Polish language 2 = Foreign languages 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geography) 5 = Humanities (history, civic and citizenship education, entrepreneurship, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = Computer science (or IT), computer classes or similar 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (religion/ethics, physical education, etc.)

TcQ-08A-B	Russian Federation	TcQ-08A	D	Stem of the question changed: Какой предмет Вы преподавали в «контрольном классе»? Nationally defined categories: 1 = Русский язык и литература 2 = Иностранные языки, родной (нерусский) язык 3 = Математика 4 = Естественно-научные предметы (физика, химия, биология) 5 = Общественно-научные предметы (история, обществознание, включая экономику и право, география и др.) 6 = Искусство (изобразительное искусство, музыка) 7 = Информатика и ИКТ 8 = Практические и профессионально-технические дисциплины (технология) 9 = Другие (например, ОБЖ, физическая культура)	Stem of the question changed: What subject did you teach in the reference class? Nationally defined categories: 1 = Russian language and literature 2 = Foreign languages, Native language/Mother tongue (not Russian) 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = Informatics and ICT 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (moral/ethics, physical education, home economics, personal and social development)
TcQ-08A-B	Russian Federation	TcQ-08B	D	Stem of the question changed: Использовали ли Вы ИКТ при обучении в «контрольном классе»?	Stem of the question changed: Did you ever use ICT in the teaching and learning activities of the "reference class"?
TcQ-08A-B	Slovak Republic	TcQ-08A	D	Nationally defined categories: 1 = Vyučovací jazyk - slovenský jazyk 2 = Vyučovací jazyk - maďarský jazyk 3 = Cudzí jazyk 4 = Matematika 5 = Prírodovedné predmety (fyzika, chémia, biológia) 6 = Humanitné predmety (dejepis, geografia, náuka o spoločnosti, právo, ekonómia, atď.) 7 = Umelecké predmety (výtvarná výchova, hudobná výchova, dramatická výchova, atď.) 8 = Informatika 9 = Praktické a odborné predmety (technická výchova, príprava na konkrétnu profesiu) 10 = Iné (etická výchova, náboženská výchova, telesná výchova)	National categories recoded for international comparability: 1 = Language of instruction—Slovak language/Language of instruction—Hungarian language 2 = Foreign language 3 = Mathematics 4 = Sciences (physics, chemistry, biology) 5 = Human sciences (history, geography, civic and citizenship education, law, economics, etc.) 6 = Creative arts (art education, music education, drama education, etc.) 7 = Informatics 8 = Practical and vocational subjects (technical education, preparation for a specific occupation) 9 = Other (ethics, religion, physical education)
TcQ-08A-B	Slovenia	TcQ-08A	D	Nationally defined categories: 1 = Slovenščina 2 = Jezik manjšin (italijanščina, madžarščina) - ne kot tuj jezik 3 = Tuj jezik - angleščina 4 = Tuj jezik - drugo 5 = Matematika	National categories recoded for international comparability: 1 = Slovenian 2 = National minority language (Italian, Hungarian)—not as foreign language/Foreign language—English/Foreign language—other 3 = Mathematics

				6 = Naravoslovje (splošno naravoslovje in/ali fizika, kemija, biologija, geologija, veda o Zemlji) 7 = Družboslovje/humanistika (zgodovina, geografija, državljanska vzgoja, pravo, ekonomija itd.) 8 = Umetnost (likovna vzgoja, glasbena vzgoja, ples, gledališče itd.) 9 = Računalništvo 10 = Praktični in strokovni predmeti (priprava na določen poklic) 11 = Drugo (etika, telesna vzgoja, gospodinjstvo, osebni in družbeni razvoj)	4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = Computer studies 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (ethics, physical education, home economics, personal and social development)
TcQ-08A-B	Switzerland	TcQ-08A	D	Nationally defined categories: 1 = Français 2 = Allemand et autres langues (p. ex. anglais, italien) 3 = Mathématiques 4 = Sciences (p. ex., sciences générales, physique, chimie, biologie, géologie, sciences de la Terre) 5 = Sciences humaines et sociales (p. ex., histoire, géographie, éducation civique et à la citoyenneté, droit, économie) 6 = Arts de création (p. ex., arts visuels, musique, danse, théâtre) 7 = Technologie de l'information, informatique 8 = Domaines pratiques et techniques (préparation à un emploi en particulier) 9 = Autres (p. ex., morale et éthique, éducation physique, économie familiale, développement personnel et social)	Nationally defined categories: 1 = French 2 = German and foreign languages (e.g., English, Italian) 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = Information technology, computer studies 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (moral/ethics, physical education, home economics, personal and social development)
				Nationally defined categories: 1 = Deutsch 2 = Fremdsprachen (Französisch, Italienisch, Englisch, ...) 3 = Mathematik 4 = Naturwissenschaften (Übergreifend und/oder Physik, Chemie, Biologie, Geologie, Erdkunde) 5 = Geisteswissenschaftliche Fächer (Geschichte, Geografie, Politik und Bürgerkunde, Recht, Wirtschaft usw.) 6 = Gestaltende Künste (Bildende Kunst, Musik, Tanz, Theater usw.) 7 = Informatik 8 = Praktisches Lernen und Berufskunde (als Vorbereitung auf einen spezifischen Beruf) 9 = Anderes (Moralische Erziehung/Ethik, Sport, Hauswirtschaft, persönliche und soziale Entwicklung)	Nationally defined categories: 1 = German 2 = Foreign languages (French, Italian, English, ...) 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = Informatics 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (moral/ethics, physical education, home economics, personal and social development)
					Nationally defined categories:

				Nationally defined categories: 1 = Discipline linguistiche: italiano 2 = Discipline linguistiche: lingue straniere (for esempio francese, tedesco o inglese) 3 = Matematica 4 = Scienze (scienze generali e/o fisica, chimica, biologia, geologia, scienze della terra) 5 = Scienze umane/Discipline umanistiche (storia, geografia, educazione civica, diritto, economia, ecc.) 6 = Materie artistiche (arti visive, musica, danza, recitazione, ecc.) 7 = Informatica e materie analoghe 8 = Materie pratiche e professionali (di preparazione al lavoro) 9 = Altre materie (etica/morale, educazione fisica, economia domestica, sviluppo sociale e personale)	1 = Language subject: Italian 2 = Language subjects: foreign languages (e.g., French, German, English) 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = Informatics 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (moral/ethics, physical education, home economics, personal and social development)
TcQ-08A-B	Thailand	TcQ-08A	D	Nationally defined categories: 1 = ไทย 2 = ภาษาต่างประเทศ 3 = คณิตศาสตร์ 4 = วิทยาศาสตร์ (วิทยาศาสตร์ทั่วไป และ/หรือฟิสิกส์ เคมี ชีววิทยา ธรณีวิทยา โลก ดาราศาสตร์ และอวกาศ) 5 = มนุษยศาสตร์ (ประวัติศาสตร์ ภูมิศาสตร์ หน้าที่พลเมืองและพลเมืองศึกษา กฎหมาย เศรษฐศาสตร์) 6 = ศิลปศึกษา (ทัศนศิลป์ ดนตรี นาฏศิลป์ การละคร ชลช) 7 = เทคโนโลยีสารสนเทศและการสื่อสาร คอมพิวเตอร์ศึกษา หรือวิชาอื่นที่ใกล้เคียง 8 = วิชาเชิงปาิบัติและอาชีวศึกษา (การเตรียมตัวทางานในสายอาชีพเีพาะทาง) 9 = อื่นๆ (ศีลธรรม/จริยธรรม พลศึกษา คหกรรม การพัฒนาบุคคลและสังคม)	Nationally defined categories: 1 = Thai 2 = Foreign language 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = Information and communication technology, computer studies, or similar 8 = Practical and vocational subjects (preparation for a specific occupation) 9 = Other (moral/ethics, physical education, home economics, personal and social development)
TcQ-08A-B	Turkey	TcQ-08A	D	Nationally defined categories: 1 = Türkçe 2 = Yabancı dil 3 = Matematik 4 = Fen Bilimleri (genel fen bilgisi ve/veya fizik, kimya, biyoloji, jeoloji, yer bilimleri vb.) 5 = Beşeri Bilimler (tarih, coğrafya, vatandaşlık bilgisi, hukuk, ekonomi vb.) 6 = Yaratıcı Sanatlar (görsel sanatlar, müzik, dans, drama vb.) 7 = Bilgi teknolojileri, bilgisayar bilimleri veya benzeri konular 8 = Uygulamalı ve Mesleki Eğitim dersleri (belli bir mesleğe	Nationally defined categories: 1 = Turkish 2 = Foreign language 3 = Mathematics 4 = Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) 5 = Human sciences/Humanities (history, geography, civic and citizenship, law, economics, etc.) 6 = Creative arts (visual arts, music, dance, drama, etc.) 7 = Information technology, computer studies, or similar 8 = Practical and vocational subjects (preparation for a specific

				hazırlık) 9 = Diğer (ahlak/etik, beden eğitimi, ev ekonomisi, kişisel ve sosyal gelişim)	occupation) 9 = Other (moral/ethics, physical education, home economics, personal and social development)
TcQ-09A-N	Argentina, Buenos Aires	TcQ-09A	D	Software educativo para practicar aprendizajes	Educational software to practice learning
TcQ-09A-N	Argentina, Buenos Aires	TcQ-09N	D	Portafolios electrónicos	Electronic portfolios
TcQ-09A-N	Australia	TcQ-09A	D	Tutorial software	Tutorial software
TcQ-09A-N	Canada	TcQ-09A	D	Tutorial or practice software Tutoriel ou logiciel d'exercices	Tutorial or practice software
TcQ-09A-N	Canada	TcQ-09A-N	D	Stem of the question changed: How often did you use the following tools/software resources in your teaching of the reference class this school year? Stem of the question changed: À quelle fréquence avez-vous utilisé les outils/logiciels ci-dessous pour enseigner à la classe de référence, pendant cette année scolaire?	Stem of the question changed: How often did you use the following tools/software resources in your teaching of the reference class this school year?
TcQ-09A-N	Chile	TcQ-09A	D	Software educativos para practicar aprendizajes	Educational software for learning training
TcQ-09A-N	Czech Republic	TcQ-09A	D	Program zaměřený na procvičení určitých dovedností	Program focused on practice of specific skills
TcQ-09A-N	Denmark	TcQ-09F	D	Freemind, Mindmaster ®, Inspiration ®	Freemind, Mindmaster ®, Inspiration ®
TcQ-09A-N	Germany	TcQ-09A	D	Trainingsprogramme	Training programs
TcQ-09A-N	Korea, Republic of	TcQ-09C	D	한컴오피스 한글®, 마이크로소프트 파워포인트®	Hangul Hancomm Office®, Microsoft PowerPoint®
TcQ-09A-N	Korea, Republic of	TcQ-09F	D	씽크와이즈©	Think wise©
TcQ-09A-N	Lithuania	TcQ-09F	D	Minčių žemėlapių programinę įrangą (pvz. INSPIRATION®, MINDMAPING®)	Mind mapping software (e.g., INSPIRATION®, MINDMAPING®)

TcQ-09A-N	Norway	TcQ-09A	D	Programmer for drill Program for øving og drill	Drill programs
TcQ-09A-N	Norway	TcQ-09F	D	Creaza®, FreeMind®	Creaza®, FreeMind®
TcQ-09A-N	Poland	TcQ-09I	D	Media społecznościowe (np. Facebook, Twitter, Nasza Klasa)	Social networking media (e.g., Facebook, Twitter, Nasza Klasa)
TcQ-09A-N	Russian Federation	TcQ-09A	D	Практикумы/тренажеры	Practicums/practicals and simulators/tutorials
TcQ-09A-N	Russian Federation	TcQ-09A-N	D	Stem of the question changed: Как часто Вы использовали перечисленные ниже инструменты при обучении учащихся «контрольного класса» в прошлом учебном году?	Stem of the question changed: How often did you use the following tools in your teaching of the "reference class" last school year?
TcQ-09A-N	Russian Federation	TcQ-09F	D	Microsoft Visio®	Microsoft Visio®
TcQ-09A-N	Slovak Republic	TcQ-09A	D	Praktické programy	Practical programs
TcQ-09A-N	Slovak Republic	TcQ-09C	D	MS Word ®, MS PowerPoint ®, Open Office	MS Word ®, MS PowerPoint ®, Open Office
TcQ-09A-N	Slovak Republic	TcQ-09D	D	MS Excel ®, Open Office	MS Excel ®, Open Office
TcQ-09A-N	Slovak Republic	TcQ-09F	D	Softvér na tvorbu pojmových / myšlienkových máp pre využitie v brainstormingu, grafické vnímanie myšlienok, atď. (napr. Inspiration ®, Webspiration ®)	Software for creation of concept/idea maps to be used in brainstorming, graphic perception of thoughts (e.g., Inspiration ®, Webspiration ®)
TcQ-09A-N	Slovak Republic	TcQ-09L	D	Interaktívne elektronické zdroje (napr. interaktívna tabuľa, elektronické výučbové materiály)	Interactive digital learning resources (e.g., interactive board, electronic learning materials)
TcQ-09A-N	Switzerland	TcQ-09A	D	*German Trainingsprogramme	*German Training programs
TcQ-09A-N	Thailand	TcQ-09F	D	Freemind®, Mindmap®	Freemind®, Mindmap®
TcQ-11A-K	Argentina, Buenos Aires	TcQ-11A	D	Presentar información en clases expositivas	Present information in oral classes
TcQ-11A-K	Argentina, Buenos Aires	TcQ-11B	D	Hacer orientación o dar apoyo de nivelación a estudiantes individuales o en pequeños grupos	Provide a guide or enrichment support to individual students or small groups of students
TcQ-11A-K	Argentina, Buenos Aires	TcQ-11C	D	Permitir que los estudiantes lideren presentaciones y discusiones con todo el curso	Allow students to lead presentations and discussions with the whole class

TcQ-11A-K	Argentina, Buenos Aires	TcQ-11D	D	Evaluar el aprendizaje de los estudiantes mediante pruebas	Evaluate students' knowledge through tests
TcQ-11A-K	Argentina, Buenos Aires	TcQ-11F	D	Reforzar la adquisición de habilidades mediante la repetición de ejemplos	Reinforce skills acquisition through the repetition of examples
TcQ-11A-K	Argentina, Buenos Aires	TcQ-11I	D	Permitir que los estudiantes colaboren con otros estudiantes (dentro o fuera del establecimiento)	Allow students to collaborate with other students (within or outside school)
TcQ-11A-K	Russian Federation	TcQ-11A-K	D	Stem of the question changed: Как часто Вы использовали ИКТ в данных видах учебной деятельности при проведении уроков в «контрольном классе»?	Stem of the question changed: How often did you use ICT in the following practices when teaching your "reference class"?
TcQ-11A-K	Slovak Republic	TcQ-11D	D	Pri hodnotení študijných výsledkov žiakov testami	Assessing students' learning results through tests
TcQ-11A-K	Slovak Republic	TcQ-11K	D	Pri podporovaní učenia sa pomocou aktívneho prístupu žiakov (tzv. konštruktivistický princíp vyučovania)	Supporting of learning using an active approach of students (constructive educational method)
TcQ-12A-L	Argentina, Buenos Aires	TcQ-12A	D	Acceder a la información en forma eficiente	Access information in an efficient way
TcQ-12A-L	Argentina, Buenos Aires	TcQ-12C	D	Presentar información para una audiencia o propósito determinado	Present information for a given audience or purpose
TcQ-12A-L	Argentina, Buenos Aires	TcQ-12L	D	Entender las consecuencias de publicar información en línea	Understand the consequences of publishing information online
TcQ-12A-L	Russian Federation	TcQ-12A-L	D	Stem of the question changed: При проведении уроков в «контрольном классе» в прошлом учебном году насколько много внимания Вы уделяли развитию у Ваших учащихся данных ИКТ-навыков и умений?	Stem of the question changed: In your teaching of the "reference class" in the last school year how much emphasis did you give to developing the following ICT-based capabilities in your students?
TcQ-12A-L	Slovak Republic	TcQ-12J	D	Získavanie informácií vyhľadávaním zo širokej škály elektronických zdrojov	Acquiring information by searching a wide range of electronic resources
TcQ-13A-O	Argentina, Buenos Aires	TcQ-13D	D	Solo produce problemas organizacionales en los establecimientos	Only produces organizational problems for schools
TcQ-13A-O	Argentina, Buenos Aires	TcQ-13F	D	Impide la formación de conceptos, lo cual se logra mejor con objetos reales que con imágenes en la computadora	Impedes the formation of concepts, which is better done with real objects rather than computer images
TcQ-13A-O	Argentina, Buenos Aires	TcQ-13G	D	Permite a los estudiantes comunicarse más efectivamente con otros	Allows students to communicate more effectively with others
TcQ-13A-O	Argentina, Buenos Aires	TcQ-13L	D	Ayuda a los estudiantes a desarrollar habilidades de planificación y autoregulación de su trabajo	Helps students develop planning skills and self-regulation of their work

TcQ-13A-O	Chile	TcQ-13C	D	Ayuda a los estudiantes a reunir y procesar información en forma más efectiva	Helps students to collect and process information more effectively
TcQ-13A-O	Slovak Republic	TcQ-13F	D	Sťažujú pochopenie pojmov, ktoré sa lepšie formuje s použitím reálnych objektov než počítačových obrázkov	Impedes the comprehension of concepts, which are better formed using real objects rather than computer images
TcQ-13A-O	Slovak Republic	TcQ-13N	D	Zlepšuje študijné výsledky žiakov	Improves study results of students
TcQ-14A-H	Argentina, Buenos Aires	TcQ-14A-H	D	Stem of the question changed: Pensando en su establecimiento, ¿en qué medida usted está de acuerdo o en desacuerdo con las siguientes afirmaciones sobre el uso de las TIC para la enseñanza?	Stem of the question changed: Thinking of your school, to what extent do you agree or disagree with the following statements about the use of ICT in teaching?
TcQ-14A-H	Argentina, Buenos Aires	TcQ-14F	D	No hay suficiente tiempo para preparar clases que incorporen las TIC	There is not enough time to prepare classes that include ICT
TcQ-14A-H	Canada	TcQ-14C	D	My school does not have access to digital learning resources (e.g., learning objects) Mon école n'a pas accès à des ressources pédagogiques numériques (p. ex., objets d'apprentissage)	My school does not have access to digital learning resources (e.g., learning objects)
TcQ-15A-K	Argentina, Buenos Aires	TcQ-15B	D	Curso avanzado sobre aplicaciones generales (ej. nivel avanzado de procesamiento de textos, hojas de cálculo, bases de datos)	Advanced course on general applications (e.g., advanced level of wordprocessing, spreadsheets, databases)
TcQ-15A-K	Chile	TcQ-15J	D	Discusión o foro sobre enseñanza y aprendizaje sostenido a través de alguna TIC	Discussion or forum on teaching and learning mediated by any ICT
TcQ-15A-K	Slovak Republic	TcQ-15K	D	Zdieľanie a hodnotenie elektronických zdrojov prostredníctvom využívania spoločného (digitálneho) pracovného priestoru	Sharing and evaluating digital resources using a collaborative (digital) work space
TcQ-16A-E	Argentina, Buenos Aires	TcQ-16C	D	Sistemáticamente colaboro con colegas para desarrollar clases ajustadas al currículum con soporte en las TIC	I systematically collaborate with colleagues to develop ICT-based lessons according to the curriculum
TcQ-16A-E	Argentina, Buenos Aires	TcQ-16D	D	Acostumbro observar cómo otros profesores usan las TIC para enseñar	I usually observe how other teachers use ICT for teaching
TcQ-S	Lithuania	TcQ-S-B	D	Section instruction changed: Tai pirmoji 8 klasė, kurią mokėte mokyklos ugdymo plane numatyto dalyko (ne klasės valandėlės ar būrelio) antradienį ar velesnę dieną po paskutinio savaitgalio prieš šią apklausą. Žinoma, Jūs galite mokyti šią klasę ir kitomis savaitės dienomis. Jei antradienį 8 klasėje neturite pamokų, galvokite apie 8 klasę, kurią mokote artimiausią dieną po nurodyto antradienio.	Section instruction changed: This is the first Grade 8 class that you teach for a school's curriculum subject (not an assembly or extra-curricula activities) on or after the Tuesday following the last weekend before you first accessed this questionnaire. You may, of course, teach this class at other times during the week. If you did not teach a Grade 8 class on that Tuesday, please think about the Grade 8 class that you taught on the first day after that Tuesday.

TcQ-S	Russian Federation	TcQ-S-B	D	Section instruction changed: В нашем случае «контрольным классом» является первый 8 класс, в котором Вы провели обычный урок по своему предмету (то есть это не должен быть классный час или общешкольный сбор/линейка и т.д.) во вторник или в другой день после вторника обычной учебной недели в последнем полугодии прошлого (2012-2013) учебного года. Вы, конечно же, могли проводить уроки в этом классе и в другие дни в течение этой недели. Если у Вас не было уроков в 8 классе во вторник, возьмите первый после вторника день, когда Вы проводили уроки в 8 классе.	Section instruction changed: This is the first Grade 8 class (i.e., other than home room, assembly, etc.) that you taught on or after a Tuesday in a typical teaching week from the last (2012–2013) school-year term of the last (2012–2013) school year. You might, of course, have taught the class at other times during the week as well. If you did not teach a Grade 8 class on that Tuesday, please use the Grade 8 class that you taught on the first day after that Tuesday.
TcQ-S	Slovenia	TcQ-S-B	D	Section instruction changed: Referenčni razred je prvi od 8. razredov, v katerem poučujete v torek ali po njem, v tednu, ko ste prvič dostopili do tega vprašalnika. Možno je seveda, da v »referenčnem« razredu poučujete še druge dni v tednu. Ko rečemo, da v »referenčnem« razredu poučujete, s tem mislimo, da učite predmet po rednem urniku (sem ne sodijo razredne ure, sestanki ipd.). V primeru, da na tako določeni torek ne poučujete v katerem od 8. razredov, vas prosimo, da za »referenčni« razred uporabite 8. razred, v katerem učite na prvi dan, ki tako določenemu torku sledi.	Section instruction changed: The reference class is the first 8th grade class that you taught on or after the Tuesday in the week you first accessed this questionnaire. You may, of course, teach the class at other times during the week as well. When we say that you teach, we mean that you teach a regular subject (i.e., other than home room, assembly, etc.). If you did not teach an 8th grade class on that Tuesday, please use the 8th grade class that you taught on the first day after that Tuesday.

APPENDIX 3:

Variables derived from the survey data

Overview

This appendix contains documentation on all the derived variables contained in the ICILS 2013 data files that are based on survey variables. These variables were used to report data in the ICILS 2013 international reports, and they have been made available as part of the ICILS 2013 international database (IDB) so that researchers can use them in secondary analyses.

This appendix has four sections corresponding to each survey instrument, that is, questionnaire, from which the reporting variables are derived:

Section 1: Student questionnaire

Section 2: Principal questionnaire

Section 3: ICT-coordinator questionnaire

Section 4: Teacher questionnaire.

Each section lists first the simple indices and then the scale indices as derived from survey variables, in the order of the variables that were used to derive the variable as they appear in the instruments, respectively. The following information is provided for each derived variable:

Variable name: The name of the derived variable

Description: A description of the variable content

Procedure: A procedural description of how the derived variable was computed

Source: Source variables used to derive scale or index.

Section 1: Student questionnaire

Simple indices

Variable Name:	S_AGE	
Description:	Age of student	
Procedure:	$S\_AGE = (T_y - S_y) + \frac{(T_m - S_m)}{12}$ where T_y and S_y are, respectively, the year of the test and the year of birth of the tested student, in four-digit format (e.g., "2013" or "1998"), and where T_m and S_m are, respectively, the month of the test and the month of the student's birth.	
Source:	When were you born?	
	Month Year	IS1G01A IS1G01B

Variable Name:	S_SEX		
Description:	Sex of student		
Procedure:	Simple recoding		
Source:	Are you a girl or a boy?	IS1G02	Recoding
	Girl Boy	1 2	1 0

Variable Name:	S_ISCED		
Description:	Expected education by student		
Procedure:	Simple recoding		
Source:	Which of the following [levels of education] do you expect to complete? *(Please mark only one choice)*	IS1G03	Recoding
	[ISCED Level 5A or 6] [ISCED Level 4 or 5B] [ISCED Level 3] [ISCED Level 2] I do not expect to complete [ISCED Level 2]	1 2 3 4 5	4 3 2 1 0

Variable Name:	S_IMMIG	
Description:	Immigration status	
Procedure:	Recode with syntax "Compute_IMMIG.SPS"	
Source:	In what country were you and your parents born? *(Please mark only one choice in each **column**)*	
	You Mother or [female guardian] Father or [male guardian]	IS1G04A IS1G04B IS1G04C

Variable Name:	S_IMMBGR		
Description:	Immigration status (dummy coded)		
Procedure:	Simple recoding		
Source:	S_IMMIG (Immigration status)		
	Students and/or at least one parent born in country of test	0	0
	Student born in country of test but both/only parent(s) born abroad	1	1
	Student and both/only parent(s) born abroad	2	1

Variable Name:	S_TLANG		
Description:	Test language spoken at home		
Procedure:	Simple recoding		
Source:	What language do you speak at home most of the time? *(Please mark only one choice)*	IS1G05	Recoding
	[Language of test]	1	1
	[Other language 1]	2	0
	[Other language 2]	3	0
	[Another language]	4	0

Variable Name:	S_MWORK		
Description:	Paid work status of mother		
Procedure:	Simple recoding		
Source:	Does your mother or [female guardian] work in a paid job?	IS1G06	Recoding
	Yes	1	1
	No	2	0

Variable Name:	S_MISCO	
Description:	Occupation of the student's mother	
Procedure:	The occupation codes are based on the ISCO-08 framework.	
Source:	What is your mother's or [female guardian's] main [job]? (for example, high school teacher, kitchen-hand, sales manager) *(Please write in the [job] title)*	IS1G07A
	What was your mother's or [female guardian's] last main [job]? (for example, high school teacher, kitchen-hand, sales manager) *Please tell us her last main [job]. If she has never had a paid [job], please write what she is currently doing.* *(Please write in the [job] title).*	IS1G07C

Variable Name:	S_MISEI	
Description:	Occupational status of the student's mother	
Procedure:	Recode with syntax "Compute_SEI.SPS"	
Source:	What does your mother or [female guardian] do in her main [job]? (for example, teaches high school students, helps the cook prepare meals in a restaurant, manages a sales team) *(Please use a sentence to describe the kind of work she does in that [job])* What did your mother or [female guardian] do in her last main [job]? (for example, taught high school students, helped the cook prepare meals in a restaurant, managed a sales team) *(Please use a sentence to describe the kind of work she did in that [job] or what she is currently doing if she never had a paid [job])*	IS1G07B IS1G07D

Variable Name:	S_MISCED		
Description:	Highest educational level of the student's mother		
Procedure:	Simple recoding		
Source:	What is the highest level of education completed by your mother or [female guardian]? *If you are not sure which box to choose, please ask the [test administrator] for help.* *(Please mark only one choice)*	IS1G08	Recoding
	[ISCED Level 5A or 6]	1	4
	[ISCED Level 4 or 5B]	2	3
	[ISCED Level 3]	3	2
	[ISCED Level 2]	4	1
	She did not complete [ISCED Level 2]	5	0

Variable Name:	S_FWORK		
Description:	Paid work status of father		
Procedure:	Simple recoding		
Source:	Does your father or [male guardian] work in a paid job?	IS1G09	Recoding
	Yes	1	1
	No	2	0

Variable Name:	S_FISCO	
Description:	Occupation of the student's father	
Procedure:	The occupation codes are based on the ISCO-08 framework.	
Source:	What is your father's or [male guardian's] main [job]? (for example, high school teacher, kitchen-hand, sales manager) *(Please write in the [job] title).* What was your father's or [male guardian's] last main [job]? (for example, high school teacher, kitchen-hand, sales manager) *Please tell us his last main [job]. If he has never had a paid [job], please write what he is currently doing.* *(Please write in the [job] title).*	IS1G10A IS1G10C

Variable Name:	S_FISEI	
Description:	Occupational status of the student's father	
Procedure:	Recode with syntax "Compute_SEI.SPS"	
Source:	What does your father or [male guardian] do in his main [job]? (for example, teaches high school students, helps the cook prepare meals in a restaurant, manages a sales team) *(Please use a sentence to describe the kind of work he does in that [job])* What did your father or [male guardian] do in his last main [job]? (for example, taught high school students, helped the cook prepare meals in a restaurant, managed a sales team) *(Please use a sentence to describe the kind of work he did in that [job] or what he is currently doing if he never had a paid [job])*	IS1G10B IS1G10D

Variable Name:	S_FISCED		
Description:	Highest educational level of the student's father		
Procedure:	Simple recoding		
Source:	What is the highest level of education completed by your father or [male guardian]? *If you are not sure which box to choose, please ask the [test administrator] for help.* *(Please mark only one choice)*	IS1G11	Recoding
	[ISCED Level 5A or 6] [ISCED Level 4 or 5B] [ISCED Level 3] [ISCED Level 2] He did not complete [ISCED Level 2]	1 2 3 4 5	4 3 2 1 0

Variable Name:	S_HISEI
Description:	Parents' highest occupational status
Procedure:	S_HISEI=max (S_MSEI, S_FSEI)
Source:	S_MISEI, S_FISEI (see above)

Variable Name:	S_HISCED
Description:	Highest parental educational level
Procedure:	S_HISCED=max (S_MISCED, S_FISCED)
Source:	S_MISCED, S_FISCED (see above)

Variable Name:	S_HOMLIT		
Description:	Home literacy index		
Procedure:	Simple recoding		
Source:	About how many books are there in your home? *Do not count magazines, newspapers, comic books or your schoolbooks.* *(Please mark only one choice)*	IS1G12	Recoding
	None or very few (0–10 books) Enough to fill one shelf (11–25 books) Enough to fill one bookcase (26–100 books) Enough to fill two bookcases (101–200 books) Enough to fill three or more bookcases (more than 200 books)	1 2 3 4 5	0 1 2 3 4

Scale indices

Variable Name:	S_NISB
Description:	National index of students' socioeconomic background
Procedure:	Scale scores with mean of 0 and standard deviation of 1 for equally weighted countries.
Source:	Derived from highest occupational status of parents (S_HISEI), highest educational level of parents (S_HISCED: collapsed the lowest two categories to have an indicator variable with four categories), and the number of books at home (S_HOMLIT: collapsing the two highest categories) (See above)

Variable Name:	S_USEAPP	
Description:	Use of specific ICT applications	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	How <u>often</u> do you use a computer outside of school for each of the following activities? *(Please mark one choice in each row)*	
	Creating or editing documents (for example, to write stories or assignments) Using a spreadsheet to do calculations, store data, or plot graphs (for example, using [Microsoft EXCEL ®]) Creating a simple "slideshow" presentation (for example, using [Microsoft PowerPoint ®]) Creating a multimedia presentation (with sound, pictures, video) Using education software that is designed to help with your school study (for example, mathematics or reading software) Writing computer programs, macros, or scripts (for example, using [Logo, Basic or HTML]) Using drawing, painting, or graphics software	ISRG18A ISRG18B ISRG18C ISRG18D ISRG18E ISRG18F ISRG18G

Variable Name:	S_USECOM	
Description:	Use of ICT for social communication	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	How <u>often</u> do you use the Internet outside of school for each of the following activities? *(Please mark one choice in each row)*	
	Communicating with others using messaging or social networks (for example, instant messaging or [status updates]) Posting comments to online profiles or blogs Uploading images or video to an [online profile] or [online community] (for example, Facebook or YouTube) Using voice chat (for example, Skype) to chat with friends or family online	IS1G19C IS1G19D IS1G19H IS1G19I

Variable Name:	S_USEINF	
Description:	Use of ICT for exchanging information	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	How <u>often</u> do you use the Internet outside of school for each of the following activities? *(Please mark one choice in each row)*	
	Asking questions on forums or [question and answer] websites Answering other people's questions on forums or websites Writing posts for your own blog Building or editing a webpage	IS1G19E IS1G19F IS1G19G IS1G19J

Variable Name:	S_USEREC	
Description:	Use of ICT for recreation	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	How <u>often</u> do you use a computer for each of the following out-of-school activities? *(Please mark one choice in each row)*	
	Accessing the Internet to find out about places to go or activities to do Reading reviews on the Internet of things you might want to buy Listening to music Watching downloaded or streamed video (e.g., movies, TV shows or clips) Using the Internet to get news about things I am interested in	IS1G20A IS1G20B IS1G20D IS1G20E IS1G20F

Variable Name:	S_USESTD	
Description:	Use of ICT for study purposes	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	How often do you use computers for the following school-related purposes? *(Please mark one choice in each row)*	
	Preparing reports or essays	IS1G21A
	Preparing presentations	IS1G21B
	Working with other students from your own school	IS1G21C
	Working with other students from other schools	IS1G21D
	Completing [worksheets] or exercises	IS1G21E
	Organizing your time and work	IS1G21F
	Writing about your learning	IS1G21G
	Completing tests	IS1G21H

Variable Name:	S_USELRN	
Description:	Use of ICT during lessons at school	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	At school, how often do you use computers during lessons in the following subjects or subject areas? *(Please mark one choice in each row)*	
	[Language arts: test language]	IS1G22A
	[Language arts: foreign and other national languages]	IS1G22B
	Mathematics	IS1G22C
	Sciences (general science and/or physics, chemistry, biology, geology, earth sciences)	IS1G22D
	Human sciences/Humanities (history, geography, civics, law, economics, etc.)	IS1G22E

Variable Name:	S_TSKLRN	
Description:	Learning of ICT tasks at school	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	At school, have you learned how to do the following tasks? *(Please mark one choice in each row)*	
	Providing references to Internet sources	IS1G23A
	Accessing information with a computer	IS1G23B
	Presenting information for a given audience or purpose with a computer	IS1G23C
	Working out whether to trust information from the Internet	IS1G23D
	Deciding what information is relevant to include in school work	IS1G23E
	Organizing information obtained from Internet sources	IS1G23F
	Deciding where to look for information about an unfamiliar topic	IS1G23G
	Looking for different types of digital information on a topic	IS1G23H

Variable Name:	**S_BASEFF**	
Description:	ICT self-efficacy basic skills	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	How well can you do each of these tasks on a computer? *(Please mark one choice in each row)*	
	Search for and find a file on your computer	IS1G25A
	Edit digital photographs or other graphic images	IS1G25C
	Create or edit documents (for example, assignments for school)	IS1G25E
	Search for and find information you need on the Internet	IS1G25F
	Create a multimedia presentation (with sound, pictures, or video)	IS1G25L
	Upload text, images, or video to an online profile	IS1G25M

Variable Name:	**S_ADVEFF**	
Description:	ICT self-efficacy advanced skills	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	How well can you do each of these tasks on a computer? *(Please mark one choice in each row)*	
	Use software to find and get rid of viruses	IS1G25B
	Create a database (for example, using [Microsoft Access ®])	IS1G25D
	Build or edit a webpage	IS1G25G
	Change the settings on your computer to improve the way it operates or to fix problems	IS1G25H
	Use a spreadsheet to do calculations, store data, or plot a graph	IS1G25I
	Create a computer program or macro (for example, in [Basic, Visual Basic])	IS1G25J
	Set up a computer network	IS1G25K

Variable Name:	**S_INTRST**	
Description:	Interest and enjoyment in using ICT	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	*Thinking about your experience with computers*: To what extent do you agree or disagree with the following statements? *(Please mark one choice in each row)*	
	It is very important to me to work with a computer.	IS1G26A
	I think using a computer is fun.	IS1G26C
	It is more fun to do my work using a computer than without a computer.	IS1G26E
	I use a computer because I am very interested in the technology.	IS1G26F
	I like learning how to do new things using a computer.	IS1G26H
	I often look for new ways to do things using a computer.	IS1G26J
	I enjoy using the Internet to find out information.	IS1G26K

Section 2: Principal questionnaire

Simple indices

Variable Name:	P_SEX		
Description:	Sex of principal		
Procedure:	Simple recoding		
Source:	Are you female or male?	IP1G01	Recoding
	Female	1	1
	Male	2	0

Variable Name:	P_NUMSTD	
Description:	Number of students in school (School size)	
Procedure:	P_NUMSTD = IP1G03A+IP1G03B	
Source:	What is the total number of boys and girls in the entire school? *(Please record a whole number. Record 0 (zero), if none.)*	
	Total number of girls	IP1G03A
	Total number of boys	IP1G03B

Variable Name:	P_NUMTAR	
Description:	Number of students in target grade	
Procedure:	P_NUMTAR = IP1G04A+IP1G04B	
Source:	What is the total number of boys and girls in [target grade]? *(Please record a whole number. Record 0 (zero), if none.)*	
	Total number of girls	IP1G04A
	Total number of boys	IP1G04B

Variable Name:	P_NGRADE	
Description:	Number of grades in school	
Procedure:	P_NGRADE = IP1G05B – IP1G05A	
Source:	What is the lowest (youngest) grade that is taught at your school? *(Please mark only one choice*) / What is the highest (oldest) grade that is taught at your school? *(Please mark only one choice)*	
	[Lowest grade]	IP1G05A
	[Highest grade]	IP1G05B

Variable Name:	P_NUMTCH	
Description:	Number of teachers	
Procedure:	P_NUMTCH=(IP1G06A + 0.5*IP1G06B)	
Source:	What are the total numbers of full-time and part-time teachers in your school? *A full-time teacher is employed at least 90% of the time as a teacher for the full school year. All other teachers should be considered part-time.* *(Please record a whole number for each. Record 0 (zero), if none.)*	
	Total number of full-time teachers	IP1G06A
	Total number of part-time teachers	IP1G06B

Variable Name:	P_RATTCH	
Description:	Ratio of school size and teachers	
Procedure:	P_NGRADE = IP1G05B-IP1G05A	
Source:	What are the total numbers of full-time and part-time teachers in your school? *A full-time teacher is employed at least 90% of the time as a teacher for the full school year. All other teachers should be considered part-time.* *(Please record a whole number for each. Record 0 (zero), if none.)*	
	Total number of full-time teachers Total number of part-time teachers	IP1G06A IP1G06B

Variable Name:	P_PRIV		
Description:	Private school indicator		
Procedure:	Simple recoding		
Source:	Is this school a public or a private school? *(Please mark only one choice)*	IP1G08	Recoding
	A public school *(This is a school <u>managed</u> directly or indirectly by a public education authority, government agency, or governing board, appointed by government or elected by public franchise.)* A private school *(This is a school <u>managed</u> directly or indirectly by a non-government organization; for example, a church, trade union, business, or other private institution.)*	1 2	0 1

Variable Name:	P_ICTLRN		
Description:	ICT use for teaching and learning activities		
Procedure:	Simple recoding		
Source:	Is ICT used in any teaching and learning activities in your school?	IP1G10	Recoding
	Yes (Please continue with question 11) No (Please go to question 14)	1 2	1 0

Scale indices

Variable Name:	P_VWICT	
Description:	View on using ICT for educational outcomes	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	In your opinion, how important is the use of ICT in this school for each of the following outcomes of education? *(Please mark one choice in each row)*	
	Using ICT for facilitating students' responsibility for their own learning	IP1G09B
	Using ICT to augment and improve students' learning	IP1G09C
	Developing students' understanding and skills relating to safe and appropriate use of ICT	IP1G09D
	Developing students' proficiency in accessing and using information with ICT	IP1G09E

Variable Name:	P_EXPLRN	
Description:	ICT use expected of teachers—learning	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	Are teachers in your school expected to acquire knowledge and skills in each of the following activities? *(Please mark one choice in each row)*	
	Integrating Web-based learning in their instructional practice	IP1G12A
	Using ICT-based forms of student assessment	IP1G12B
	Using ICT for monitoring student progress	IP1G12C
	Integrating ICT into teaching and learning	IP1G12G
	Using subject-specific learning software (e.g., tutorials, simulation)	IP1G12H
	Using e-portfolios for assessment	IP1G12I
	Using ICT to develop authentic (real-life) assignments for students	IP1G12J

Variable Name:	P_PRIORH	
Description:	Priorities for facilitating use of ICT—hardware	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	At your school, what priority is given to the following ways of facilitating the use of ICT in teaching and learning? *(Please mark one choice in each row)*	
	Increasing the numbers of computers per student in the school	IP1G16A
	Increasing the number of computers connected to the Internet	IP1G16B
	Increasing the bandwidth of Internet access for the computers connected to the Internet	IP1G16C

Variable Name:	**P_PRIORS**	
Description:	Priorities for facilitating use of ICT—support	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	At your school, what priority is given to the following ways of facilitating the use of ICT in teaching and learning? *(Please mark one choice in each row)*	
	Increasing the range of digital learning resources	IP1G16D
	Establishing or enhancing an online learning support platform	IP1G16E
	Providing for participation in professional development on pedagogical use of ICT	IP1G16F
	Increasing the availability of qualified technical personnel to support the use of ICT	IP1G16G
	Providing teachers with incentives to integrate ICT use in their teaching	IP1G16H
	Providing more time for teachers to prepare lessons in which ICT is used	IP1G16I
	Increasing the professional learning resources for teachers in the use of ICT	IP1G16J

Section 3: ICT-coordinator questionnaire

Simple indices

Variable Name:	C_EXP		
Description:	ICT experience in years in the school		
Procedure:	Simple recoding		
Source:	How many years has your school been using computers for teaching and/or learning purposes for students in [target grade]? *(Please mark only one choice)*	II1G03	Recoding
	Never, we do not use computers Fewer than 5 years At least 5 but fewer than 10 years 10 years or more	1 2 3 4	0 1 2 3

Variable Name:	C_RATCOM	
Description:	Ratio of school size and number of computers	
Procedure:	C_RATCOM=P_NUMSTD/II1G07A	
Source:	In your school, approximately how many (school-provided) computers are: (*Please record a <u>whole</u> number. Record 0 (zero), if none*.) *For this question please:* • *Count terminals (if they have a keyboard and a screen) as computers* • *Count laptops, netbooks, and tablet devices as computers* • *Exclude computers which are not in use* • *Exclude computers which are only used as servers*	
	In the school altogether?	II1G07A

Variable Name:	C_RATSTD	
Description:	Ratio of school size and number of computers available for students	
Procedure:	C_RATSTD=P_NUMSTD/II1G07B	
Source:	In your school, approximately how many (school-provided) computers are: (*Please record a <u>whole</u> number. Record 0 (zero), if none*.) *For this question please:* • *Count terminals (if they have a keyboard and a screen) as computers* • *Count laptops, netbooks, and tablet devices as computers* • *Exclude computers which are not in use* • *Exclude computers which are only used as servers*	
	Available to students?	II1G07B

Variable Name:	C_RATWWW	
Description:	Ratio of school size and computers with WWW	
Procedure:	C_RATWWW=P_NUMSTD/II1G07C	
Source:	In your school, approximately how many (school-provided) computers are: (*Please record a whole number. Record 0 (zero), if none*.) *For this question please:* • *Count terminals (if they have a keyboard and a screen) as computers* • *Count laptops, netbooks, and tablet devices as computers* • *Exclude computers which are not in use* • *Exclude computers which are only used as servers*	
	Connected to the Internet/World Wide Web?	II1G07C

Variable Name:	C_RATSMB	
Description:	Ratio of school size and smart boards	
Procedure:	C_RATSMB=P_NUMSTD/II1G08	
Source:	In your school, about how many (school-provided) smart boards or interactive whiteboards are available? *(Please record a whole number. Record 0 (zero), if none.*)	
	Smart boards / Interactive white boards	II1G08

Scale indices

Variable Name:	C_ICTRES	
Description:	ICT resources at school	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	This variable was derived from the ICT-coordinator questionnaire: Resources for ICT. This index has been derived from variables II1G04B, II1G05A, II1G05B, II1G05C, II1G05D, II1G05E, II1G05F, II1G05I, II1G06C, II1G06D.	
	Interactive digital learning resources (e.g., learning objects) Tutorial software or [practice programs] Digital learning games Multimedia production tools (e.g., media capture and editing, web production) Data-logging and monitoring tools Simulations and modelling software Graphing or drawing software Space on a school network for students to store their work. A school intranet with applications and workspaces for students to use (e.g., [Moodle])	II1G04B II1G05A II1G05B II1G05D II1G05E II1G05F II1G05I II1G06C II1G06D

Variable Name:	C_HINHW	
Description:	ICT use hindered in teaching and learning—lack of hardware	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	To what extent is the use of ICT in teaching and learning in this school hindered by each of the following obstacles? *(Please mark one choice in each row)*	
	Too few computers connected to the Internet	II1G13A
	Insufficient Internet bandwidth or speed	II1G13B
	Not enough computers for instruction	II1G13C
	Lack of sufficiently powerful computers	II1G13D
	Not enough computer software	II1G13E

Variable Name:	C_HINOTH	
Description:	ICT use hindered in teaching and learning—other obstacles	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	To what extent is the use of ICT in teaching and learning in this school hindered by each of the following obstacles? *(Please mark one choice in each row)*	
	Lack of ICT skills among teachers	II1G13F
	Insufficient time for teachers to prepare lessons	II1G13G
	Lack of effective professional learning resources for teachers	II1G13H
	Lack of an effective online learning support platform	II1G13I
	Lack of incentives for teachers to integrate ICT use in their teaching	II1G13J
	Lack of qualified technical personnel to support the use of ICT	II1G13K

Section 4: Teacher questionnaire

Simple indices

Variable Name:	T_SEX		
Description:	Sex of teacher		
Procedure:	Simple recoding		
Source:	Are you female or male?	IT1G01	Recoding
	Female	1	1
	Male	2	0

Variable Name:	T_AGE		
Description:	Approximate age of teacher		
Procedure:	Simple recoding		
Source:	How old are you? *(Please mark only one choice)*	IT1G02	Recoding
	Less than 25	1	23
	25–29	2	27
	30–39	3	35
	40–49	4	45
	50–59	5	55
	60 or over	6	63

Variable Name:	T_EXPT		
Description:	ICT experience in years for teaching		
Procedure:	Simple recoding		
Source:	Approximately how long have you been using computers for teaching purposes? *(Please mark only one choice)*	IT1G05	Recoding
	Never	1	0
	Less than two years	2	1
	Two years or more	3	2

Scale indices

Variable Name:	T_EFF	
Description:	ICT self-efficacy	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	How well can you do these tasks on a computer by yourself? *(Please mark one choice in each row)*	
	Producing a letter using a word-processing program	IT1G07A
	Emailing a file as an attachment	IT1G07B
	Storing your digital photos on a computer	IT1G07C
	Filing digital documents in folders and sub-folders	IT1G07D
	Monitoring students' progress	IT1G07E
	Using a spreadsheet program (e.g., [Lotus 1 2 3 ®, Microsoft Excel ®]) for keeping records or analyzing data	IT1G07F
	Contributing to a discussion forum/user group on the Internet (e.g., a wiki or blog)	IT1G07G
	Producing presentations (e.g., [PowerPoint® or a similar program]), with simple animation functions	IT1G07H
	Using the Internet for online purchases and payments	IT1G07I
	Preparing lessons that involve the use of ICT by students	IT1G07J
	Finding useful teaching resources on the Internet	IT1G07K
	Assessing student learning	IT1G07L
	Collaborating with others using shared resources such as [Google Docs®]	IT1G07M
	Installing software	IT1G07N

Variable Name:	T_USEAPP	
Description:	Use of specific ICT applications	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	How often did you use the following tools in your teaching of the reference class this school year? *(Please mark one choice in each row)*	
	Tutorial software or [practice programs]	IT1G09A
	Digital learning games	IT1G09B
	Word-processors or presentation software (e.g., [Microsoft Word ®], [Microsoft PowerPoint ®])	IT1G09C
	Spreadsheets (e.g., [Microsoft Excel®])	IT1G09D
	Multimedia production tools (e.g., media capture and editing, web production)	IT1G09E
	Concept mapping software (e.g., [Inspiration ®], [Webspiration ®])	IT1G09F
	Data-logging and monitoring tools	IT1G09G
	Simulations and modelling software	IT1G09H
	Social media (e.g., Facebook, Twitter)	IT1G09I
	Communication software (e.g., email, blogs)	IT1G09J
	Computer-based information resources (e.g., websites, wikis, encyclopedia)	IT1G09K
	Interactive digital learning resources (e.g., learning objects)	IT1G09L
	Graphing or drawing software	IT1G09M
	E-portfolios	IT1G09N

Variable Name:	T_USELRN	
Description:	Use of ICT for learning at school	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	How often does your reference class use ICT in the following activities? *(Please mark one choice in each row)*	
	Working on extended projects (i.e., over several weeks)	IT1G10A
	Working on short assignments (i.e., within one week)	IT1G10B
	Explaining and discussing ideas with other students	IT1G10C
	Submitting completed work for assessment	IT1G10D
	Working individually on learning materials at their own pace	IT1G10E
	Undertaking open-ended investigations or field work	IT1G10F
	Reflecting on their learning experiences (e.g., by using a learning log)	IT1G10G
	Communicating with students in other schools on projects	IT1G10H
	Seeking information from experts outside the school	IT1G10I
	Planning a sequence of learning activities for themselves	IT1G10J
	Processing and analyzing data	IT1G10K
	Searching for information on a topic using outside resources	IT1G10L
	Evaluating information resulting from a search	IT1G10M

Variable Name:	T_USETCH	
Description:	Use of ICT for teaching at school	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	How often do you use ICT in the following practices when teaching your reference class? *(Please mark one choice for each row)*	
	Providing remedial or enrichment support to individual students or small groups of students	IT1G11B
	Enabling student-led whole-class discussions and presentations	IT1G11C
	Assessing students' learning through tests	IT1G11D
	Providing feedback to students	IT1G11E
	Reinforcing learning of skills through repetition of examples	IT1G11F
	Supporting collaboration among students	IT1G11G
	Mediating communication between students and experts or external mentors	IT1G11H
	Enabling students to collaborate with other students (within or outside school)	IT1G11I
	Collaborating with parents or guardians in supporting students' learning	IT1G11J
	Supporting inquiry learning	IT1G11K

Variable Name:	T_EMPH	
Description:	Emphasis on teaching ICT skills	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	In your teaching of the reference class in this school year how much emphasis have you given to developing the following ICT-based capabilities in your students? *(Please mark one choice in each row)*	
	Accessing information efficiently	IT1G12A
	Evaluating the relevance of digital information	IT1G12B
	Displaying information for a given audience/purpose	IT1G12C
	Evaluating the credibility of digital information	IT1G12D
	Validating the accuracy of digital information	IT1G12E
	Sharing digital information with others	IT1G12F
	Using computer software to construct digital work products (e.g., presentations, documents, images, and diagrams)	IT1G12G
	Evaluating their approach to information searches	IT1G12H
	Providing digital feedback on the work of others (such as classmates)	IT1G12I
	Exploring a range of digital resources when searching for information	IT1G12J
	Providing references for digital information sources	IT1G12K
	Understanding the consequences of making information publically available online	IT1G12L

Variable Name:	T_VWPOS	
Description:	Positive views on using ICT in teaching and learning	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	To what extent do you agree or disagree with the following statements about using ICT in teaching and learning at school? *(Please mark one choice in each row)* Using ICT at school:	
	Enables students to access better sources of information	IT1G13A
	Helps students to consolidate and process information more effectively	IT1G13C
	Helps students learn to collaborate with other students	IT1G13E
	Enables students to communicate more effectively with others	IT1G13G
	Helps students develop greater interest in learning	IT1G13I
	Helps students work at a level appropriate to their learning needs	IT1G13J
	Helps students develop skills in planning and self-regulation of their work	IT1G13L
	Improves academic performance of students	IT1G13N

Variable Name:	T_VWNEG	
Description:	Negative views on using ICT in teaching and learning	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	To what extent do you agree or disagree with the following statements about using ICT in teaching and learning at school? *(Please mark one choice in each row)* Using ICT at school:	
	Results in poorer writing skills among students	IT1G13B
	Only introduces organizational problems for schools	IT1G13D
	Impedes concept formation better done with real objects than computer images	IT1G13F
	Only encourages copying material from published Internet sources	IT1G13H
	Limits the amount of personal communication among students	IT1G13K
	Results in poorer calculation and estimation skills among students	IT1G13M
	Only distracts students from learning	IT1G13O

Variable Name:	T_RESRC	
Description:	Perspective on the lack of computer resources at school	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	To what extent do you agree or disagree with the following statements about the use of ICT in teaching at your school? *(Please mark one choice in each row)*	
	My school does not have sufficient ICT equipment (e.g., computers).	IT1G14B
	My school does not have access to digital learning resources.	IT1G14C
	My school has limited connectivity (e.g., slow or unstable speed) to the Internet.	IT1G14D
	The computer equipment in our school is out-of-date.	IT1G14E
	There is not sufficient provision for me to develop expertise in ICT.	IT1G14G
	There is not sufficient technical support to maintain ICT resources.	IT1G14H

Variable Name:	**T_COLICT**	
Description:	Perspective on collaboration between teachers in using ICT	
Procedure:	IRT WLE scores with mean of 50 and standard deviation of 10 for equally weighted countries.	
Source:	To what extent do you agree or disagree with the following practices and principles in relation to the use of ICT in teaching and learning? *(Please mark one choice in each row)*	
	I work together with other teachers on improving the use of ICT in classroom teaching.	IT1G16A
	There is a common set of rules in the school about how ICT should be used in classrooms.	IT1G16B
	I systematically collaborate with colleagues to develop ICT-based lessons based on the curriculum.	IT1G16C
	I observe how other teachers use ICT in teaching.	IT1G16D
	There is a common set of expectations in the school about what students will learn about ICT.	IT1G16E

APPENDIX 4:

ICILS 2013 sampling stratification information

Overview

This appendix contains documentation on the explicit and implicit stratification variables included in the ICILS 2013 data files. Stratification, which involves categorizing sampling frame units (here, schools) by specific features, is used in order to increase sampling efficiency and, if needed, disproportional sample allocation. ICILS 2013 collected independent samples for each explicit stratum in a country. The implicit strata, which are nested within the explicit strata, were used for sorting the sampling frame before the school sample selection. Details of the ICILS 2013 sample design and implementation can be found in the ICILS 2013 technical report (Fraillon et al., 2015).

Stratification variables

The explicit and implicit stratification variables are named IDSTRATE and IDSTRATI, respectively. Country-specific codes and labels are provided for each stratum. These codes and labels are presented in Table A4.1 for explicit strata and Table A4.2 for the implicit strata.

Notes and considerations

The stratification variables contain information useful for secondary analyses. However, users are cautioned that stratification in some countries is very detailed, resulting in strata—either explicit or implicit—with sample sizes that may be too small to produce reliable estimates. Users should exercise caution when drawing conclusions based on estimates obtained from small samples.

Stratification codes are comparable only within but not across countries. For example, the characteristics of a "rural" school in Chile may be very different from those of a "rural" school in Lithuania. Therefore, stratification variables cannot be employed in international comparisons.

Stratification is based on information provided by each country in the school sampling frames. ICILS 2013 compiled these sampling frames well in advance of data collection, sometimes two years prior. Thus, users may find the stratification information no longer appropriate when consulting more current sources and may also find that changes in a sampled school's status have occurred. For example, a school in the "public" stratum in a given country may have changed its status to "private." Note also that if the information of interest was also collected via the school questionnaire, the information from this data source is always the more reliable source. In some countries, explicit or implicit stratification was used for school sample selection, but the respective national research coordinator (NRC) did not agree to the release of the stratification variables. If this was the case, the variables were set to "not available" in the ICILS 2013 data files.

Table A4.1: IDSTRATE (explicit stratification)

IDCNTRY	Country	IDSTRATE	Explicit Stratum
36	Australia	1	Australian Capital Territory (ACT)
		2	New South Wales (NSW)
		3	Victoria (VIC)
		4	Queensland (QLD)
		5	South Australia (SA)
		6	Western Australia (WA)
		7	Tasmania (TAS)
		8	Northern Territory (NT)
		9	Remote Schools
152	Chile	1	Grades 8 & 9 - Private - Rural
		2	Grades 8 & 9 - Private - Urban
		3	Grades 8 & 9 - Private subsidized - Rural
		4	Grades 8 & 9 - Private subsidized - Urban
		5	Grades 8 & 9 - Public - Rural
		6	Grades 8 & 9 - Public - Urban
		7	Grade 8 - Private - Urban
		8	Grade 8 - Private Subsidized - Rural
		9	Grade 8 - Private Subsidized - Urban
		10	Grade 8 - Public - Rural
		11	Grade 8 - Public - Urban
191	Croatia	1	Central Croatia
		2	Eastern Croatia
		3	Northern Croatia
		4	Western Croatia
		5	Southern Croatia
		6	City of Zagreb
203	Czech Republic	1	Elementary schools
		2	Multi-year gymnázium
208	Denmark	1	None
276	Germany		Not available
344	Hong Kong SAR	1	Monthly income <= 15,000
		2	Monthly income 15,001 to 18,500
		3	Monthly income > 20,000
410	Korea, Republic of		Not available
440	Lithuania	1	Lithuanian - Private - Rural
		2	Lithuanian - Private - Urban
		3	Lithuanian - Public - Rural
		4	Lithuanian - Public - Urban
		5	Minority Language - Private - Urban
		6	Minority Language - Public - Rural
		7	Minority Language - Public - Urban
528	Netherlands	1	PRO/VMBO (practical training and prevocational secondary education)
		2	HAVO/VWO (senior general secondary education and preuniversity education)
		3	PRO/VMBO/HAVO/VWO (practical training, prevocational secondary education, senior general secondary education, and preuniversity education)
578	Norway (Grade 9)	1	Low performance
		2	Medium performance
		3	High performance
		4	Performance unknown

Table A4.1: IDSTRATE (explicit stratification) (contd.)

IDCNTRY	Country	IDSTRATE	Explicit Stratum
616	Poland	1	Creative schools
		2	Regular schools - Low score - Public
		3	Regular schools - Low score - Private
		4	Regular schools - Medium score - Public
		5	Regular schools - Medium score - Private
		6	Regular schools - High score - Public
		7	Regular schools - High score - Private
643	Russian Federation		Not available
703	Slovak Republic	1	Grammar - Hungarian
		2	Grammar - Slovakian
		3	Gymnasium - Hungarian
		4	Gymnasium - Slovakian
705	Slovenia	1	Pomurska
		2	Podravska
		3	Koroška
		4	Savinjska
		5	Zasavska
		6	Spodnjeposavska
		7	Jugovzhodna Slovenija
		8	Osrednjeslovenska
		9	Gorenjska
		10	Notranjsko-Kraška
		11	Goriška
		12	Obalno-Kraška
756	Switzerland		Not available
764	Thailand	1	Basic Education Commission
		2	Private Education Commission
		3	Bangkok Metropolitan Administration
		4	Department of Local Administration
		5	Higher Education Commission
792	Turkey	1	Public
		2	Private
Benchmarking participants			
9132	Ontario, Canada		Not available
9137	Newfoundland and Labrador, Canada	1	English
		2	French
32001	City of Buenos Aires, Argentina	1	Public
		2	Private

Table A4.2: IDSTRATI (implicit stratification)

IDCNTRY	Country	IDSTRATE	Explicit Stratum
36	Australia		Not available
152	Chile	1	Low Performance
		2	Medium Performance
		3	High Performance
		4	Performance Unknown
191	Croatia	1	Large city
		2	Town
		3	Other
203	Czech Republic		Not available
208	Denmark	1	Capital area – Independent boarding schools for lower-secondary students
		2	Capital area – Public schools
		3	Capital area – Independent schools
		4	Central Jutland – Independent Boarding schools for lower-secondary students
		5	Central Jutland – Public schools
		6	Central Jutland – Independent schools
		7	Northern Jutland – Independent boarding schools for lower-secondary students
		8	Northern Jutland – Public schools
		9	Northern Jutland – Independent schools
		10	Sealand – Independent boarding schools for lower-secondary students
		11	Sealand – Public schools
		12	Sealand – Independent schools
		13	Southern Denmark – Independent boarding schools for lower-secondary students
		14	Southern Denmark – Public schools
		15	Southern Denmark – Independent schools
276	Germany		Not available
344	Hong Kong SAR	1	Coeducational - Aided
		2	Coeducational - Government
		3	Coeducational - CAPUT (Non-profit-making private secondary schools)/Direct subsidy
		4	Boys - Aided
		5	Boys - Government
		6	Boys - CAPUT/Direct subsidy
		7	Girls - Aided
		8	Girls - Government
		9	Girls - CAPUT/Direct subsidy
410	Korea, Republic of	1	Boys
		2	Girls
		3	Mixed
440	Lithuania	1	Belorussian
		2	English
		3	Lithuanian
		4	Mixed (Polish, Lithuanian)
		5	Mixed (Polish, Russian)
		6	Mixed (Russian, Lithuanian)
		7	Polish
		8	Russian

Table A4.2: IDSTRATI (implicit stratification) (contd.)

IDCNTRY	Country	IDSTRATE	Explicit Stratum
528	Netherlands	1	None
578	Norway (Grade 9)	1	Bokmål
		2	Nynorsk
616	Poland	1	Village
		2	Small city
		3	Medium-sized city
		4	Large city
		5	None
643	Russian Federation	1	Rural
		2	Urban
703	Slovak Republic	1	Bratislava
		2	Trnava
		3	Trencín
		4	Nitra
		5	Žilina
		6	Banská Bystrica
		7	Prešov
		8	Košice
705	Slovenia		Not available
756	Switzerland	1	Public - German
		2	Public - French
		3	Public - Italian
		4	Private - German
		5	Private - French
764	Thailand	1	Bangkok
		2	Southern
		3	Central
		4	Northeastern
		5	Northern
792	Turkey	1	Marmara
		2	Ege
		3	Akdeniz
		4	Iç Anadolu
		5	Karadeniz
		6	Dogu Anadolu
		7	Güneydogu Anadolu
		8	None
Benchmarking participants			
9132	Ontario, Canada		Not available
9137	Newfoundland and Labrador, Canada	1	None
32001	City of Buenos Aires, Argentina	1	Low SES
		2	Medium SES
		3	High SES

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