

**Disruption Survey** 

User Guide for the International Database



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Researching education, improving learning

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#### **CHAPTER 1**

## Overview of REDS, its Data and Implications for Analysis

## 1.1 Main objectives and scope

The Responses to Educational Disruption Survey (REDS, conducted by the International Association for the Evaluation of Educational Achievement (IEA, studied how teaching and learning were affected by the disruptions caused by COVID-19 and aimed to paint a picture of national responses to the global pandemic. REDS was based on the premise that current, robust data were needed to measure the impacts of implemented measures on education systems both across and within countries.

These concepts were elucidated in the REDS International Report, which includes a chapter on the conceptual background. Developed according to a significantly accelerated timeline—when compared to other international large-scale assessments, or ILSAs—certain processes in REDS were curtailed or implemented concurrently, rather than in sequence, to allow for the timely collection of data. Deviations from international standards are likewise detailed in the REDS International Report. Ensuing implications for analysis are detailed in this User Guide.

In general, REDS set out to measure impacts of the COVID-19 pandemic on school staff and students, and the mitigation strategies employed by countries participating in the survey. Accordingly, students, teachers, and school principals were administered questionnaires that probed their experiences with the changes in schooling during this time. Some countries opted to not administer the teacher or student questionnaires.

In total, 11 countries participated in REDS. These were divided into two "waves", referring to the administration period of the survey. The questionnaires were slightly adapted between waves 1 and 2; please refer to the Appendix for more information on the international questionnaire versions.

REDS collected data from 21,063 Grade 8 (or equivalent students, 15,004 teachers, and 1,581 school principals from 11 countries. These data were augmented by data from the REDS national research centres.

The following eleven countries participated in REDS:

- Burkina Faso
- Denmark
- Ethiopia
- India (did not administer the student questionnaire)
- Kenya
- Russian Federation
- Rwanda (did not administer the teacher and the student questionnaire)
- Slovenia
- United Arab Emirates
- Uruguay (did not administer the student questionnaire)
- Uzbekistan

## 1.2 The design in brief

The REDS International Database (IDB) offers researchers and analysts a rich and innovative environment for examining responses to the SARS-CoV-2 pandemic in an international context.

The student target population was defined as all students enrolled in the grade that represents eight years of schooling, counting from the first year of ISCED level 1. Note that in most countries, the academic year changed between the reference period <sup>1</sup> and the survey administration period. Hence, grade 8 students reflected on a situation they experienced in their seventh grade, whenever questions referred to the reference period.

The teacher target population consisted of all teachers who had taught students of the target population during the reference period and were still teaching at the same schools during survey administration.

The school target population comprised those schools where students of the above-described target population could be found. School principals responded to a questionnaire focusing on school-level responses on the educational disruption caused by the COVID-19 pandemic.

The international sampling strategy of REDS was a two-stage stratified random sample design with schools as the first sampling stage, and students and teachers as the second sampling stage. For further information on the sampling design, please refer to section 3.4 of the REDS international report.

## 1.3 Analyzing the data

The REDS 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) or the IEA International Computer and Information Literacy Study (ICILS). The creation of the ICILS IDB was used as a basis for the REDS IDB; accordingly, text passages from the ICILS IDB User Guide (Mikheeva & Meyer, 2019) were used as appropriate throughout this user guide.

However, the themes of the survey and challenges presented by the administration during a global pandemic imposed several additional requirements on flexibility regarding survey operations procedures, timelines, data collection, and analysis. In summary, REDS was an ambitious and demanding study, involving complex procedures for selecting samples, collecting data, and analyzing and interpreting findings. Accordingly, researchers working with the database must understand the characteristics of the survey in order to effectively utilize the data it contains.

#### Resources and requirements

This user guide describes the organization, content, and use of the international database from a practical perspective. It is recommended to be used in conjunction with the REDS International Report (Meinck et al. 2022), which provides a comprehensive account of the conceptual,

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<sup>&</sup>lt;sup>1</sup> The reference period of the COVID-19 disruption was defined as: The first period of time in a country after the beginning of the pandemic, during which most schools were closed for the majority of students, and teaching and learning took place mostly outside of school buildings (Meinck et al. 2022).

methodological, and analytical implementation of the study. Using both 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 REDS, the themes addressed, the populations targeted, the samples selected, the instruments used, and the production of the international database. All this information is covered and explained in detail in the REDS International Report. Researchers using the REDS IDB must also familiarize themselves with the database structure (Chapter 2 in this user guide) and be aware of constraints on comparability of the data (see Chapter 3 in the REDS International Report (Meinck et al. 2022)).

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

- REDS is an observational, non-experimental 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 REDS data alone. The report containing the international results of the study refrains from making such inferences or drawing conclusion about causality.
- The REDS questionnaires 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 school principals, teachers, 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 ...".
- Nearly all variables in REDS are categorical in nature (nominal or ordered). Analysts may
  therefore need to consider using categorical, nonparametric analysis methods for these
  types of variables.

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 SAS (or any other 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.

#### **Estimation Requirements**

Researchers familiar with population estimation in large-scale education-survey databases such as TIMSS, PIRLS, ICILS, ICCS, or other IEA studies will have little difficulty analyzing REDS 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 REDS IDB, 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 main design features of REDS that you will need to take into account during any secondary analysis of the study's data are the unequal selection probabilities of the sampling units that necessitate the use of sampling weights during computation of estimates, and the complex multistage cluster sample design that was implemented to ensure a balance between the research goals and cost-efficient operations.

Please carefully review chapter 3 of the REDS International Report for details on the lack of sampling weights for certain participating countries and corresponding analytical constraints.

This user guide is principally tailored to SPSS (IBM Corp., 2016), one of the most widely used statistical packages in the social sciences and educational research. Unfortunately, the base SPSS to date (i.e., Version 28) does not support complex survey designs such as those used in REDS 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 REDS or most, if not all, other large-scale assessments in education. A "complex samples" module for SPSS is available; however, it supports only one of many variance estimation approaches, namely Taylor series linearization, and does not handle jackknife replication for estimating sampling errors, which was the technique used for estimating sampling error in REDS.

This gap has been filled by IEA's International Database (IDB) Analyzer (IEA, 2021), which is available free of charge to analysts and researchers using the REDS database. The Analyzer employs SPSS and SAS (SAS Institute Inc., 2012) as an engine to compute population estimates and design-based standard errors using replication for a variety of ILSAs. The latest version of IEA IDB Analyzer also includes the possibility to analyze R data. However, please note that the REDS international database has not been provided in R format.

The IEA developed the IEA IDB Analyzer in the context of its flagship studies TIMSS and PIRLS and adapted it for use with data from REDS and other studies. The IEA IDB Analyzer allows users to compute estimates of percentages, means, percentiles, correlations, and linear regression parameters, including their respective standard errors, and logistic regressions. It also simplifies management of the REDS international database by providing a module for selection of subsets of countries and variables and merging files for analysis.

#### Levels and units of analysis

REDS defined three target populations (school, teachers, and students), 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). REDS defined populations to be as inclusive as possible, and designed samples that would yield unbiased estimates for both student and teacher populations.

Many of the tables in the REDS International Report 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.

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) that may occur when

aggregated information is being analyzed. This fallacy assumes that each individual member of a group has the average characteristics of the group at large.

Snijders and Bosker (1999) summarize (in Chapter 3 of their book) the pros and cons of both "disaggregating" and "aggregating" information. 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 analysts 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, multilevel models (e.g., a two-level hierarchical linear model) may be most appropriate.

Although REDS 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 REDS IDB need to fully understand the theoretical and mathematical bases for multilevel analysis, researchers are asked to refer to the existing literature on multilevel modeling. If you are considering undertaking multilevel analyses using the REDS IDB, you will need to take into account the structure of each participating education system. 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 REDS asked teachers and school principals to refer to when completing their questionnaires.

Snijders and Bosker's (1999) introduction to multilevel analysis is highly readable and provides a straightforward description of this method. 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, 2021).

#### 1.4 Limitations of the REDS database

Unlike other IEA surveys, REDS had to be prepared in a short period of time and was implemented in the midst of a global context that was a considerable challenge for survey administration. This situation led to constraints on the comparability and representativeness of the REDS data.

Prior to any analysis activities, we strongly recommend a thorough review of section 3.8 in the International Report (Meinck et al. 2022) which provides a comprehensive description of the limitations that need to be kept in mind when working with REDS data. The following bullet points merely provide a summary of the issues limiting the usage of the data.

- Two versions of the questionnaires were administered.
  - o Version 1 in Denmark, the Russian Federation, Slovenia, the United Arab Emirates, Uruguay, and Uzbekistan
  - o Version 2 in Burkina Faso, India, Ethiopia, Kenya, and Rwanda
- No field trialing of the survey instruments and procedures took place.
- Data collection period stretched over a relatively long period of time (December 2020 to July 2021).

- No international quality control monitoring programme took place (not feasible due to the pandemic).
- Respondents were asked about past experiences, i.e. what they experienced during the initial time of disruption (the difference in time between the initial period and the given responses varies across countries).
- Connected to the previous point, the challenges caused by the pandemic during the initial period of disruptions may have had already transpired or been superimposed by later disruptions and the rapid development in between those time points.
- In some countries it was not feasible to select within-student samples as stipulated in the survey operations procedures manuals (Burkina Faso, Kenya and Ethiopia opted for a lottery on the day of the survey implementation instead of drawing the sample in expert software provided by the IEA).
- Burkina Faso, Ethiopia and Kenya could not provide information on the number of absent students and teachers, preventing accurate computation of selection probabilities, sampling weights, and participation rates (hence, results based on student and teacher data in these countries represent only the experiences and opinions of the respondents and should not be used to infer on the target populations).
- Exclusion rates of over 5% occurred in:
  - o Student samples in Ethiopia, Kenya, Russian Federation, and Uzbekistan
  - o Teacher samples in Denmark, Ethiopia, Kenya, and Russian Federation
  - o School samples in Denmark, Ethiopia, Kenya, Russian Federation, Slovenia, Uruguay, and Uzbekistan
- Participation rates below IEA standards (85% at each level, 75% combined) occurred among:
  - o Students and teachers in Slovenia
  - o Schools in Kenya, Slovenia, and Uruguay
- Doubts about representativity due to low participation rates or missing sampling documentation resulted in un-weighted data for:
  - o Students in Denmark, Burkina Faso, Ethiopia, and Kenya
  - o Teachers in Denmark, Burkina Faso, Ethiopia, Kenya, and Uruguay
  - o Schools in Denmark

It is not recommended to display standard errors or run significance tests for populations with severe issues regarding data validity, i.e., the unweighted sets of data mentioned in the previous point (the standard errors will always be zero when analyzing this data which is obviously not accurate)

## 1.5 Contents of the user guide

This user guide for the REDS IDB describes the content and format of the data in it. In addition to this introduction, the subsequent chapter of this guide describes the structure and content of the REDS IDB. Appendix 1 includes the international version of all international questionnaires administered in REDS (both wave 1 and wave 2 versions). These serve as a reference guide to the questions asked and the variable names used to record the responses in the international database.

#### CHAPTER 2

## The REDS International Database Files

#### 2.1 Overview

The REDS IDB contains student, teacher, and school data collected in 11 countries that participated in the study.

Table 2.1 lists all REDS countries along with the operational codes used to identify them in the international database and includes information about the target populations. Note that the international database includes school-level data from all countries.

For details on participation rates and exclusion rates for countries that participated in REDS, please refer to Chapter 3 of the REDS International Report.

This chapter describes the content of the IDB and is divided into sections describing the different file types and materials included in the database.

Table 2.1: Countries participating in REDS

Countries	Operational Codes		Administration of Student and Teacher Questionnaires		Wave	Delivery Mode
osa.idiles	Alpha-3	Numeric	Student	Teacher	1 or 2	Online or Paper
Burkina Faso	BFA	854	•	•	2	Paper
Denmark	DNK	208	•	•	1	Online
Ethiopia	ETH	231	•	•	2	Paper
India	IND	356		•	2	Paper
Kenya	KEN	404	•	•	2	Paper
Russian Federation	RUS	643	•	•	1	Online
Rwanda	RWA	646			2	Online
Slovenia	SVN	705	•	•	1	Online
United Arab Emirates	ARE	784	•	•	1	Online
Uruguay	URY	858		•	2	Online
Uzbekistan	UZB	860	•	•	1	School and teacher online and paper, student paper

#### 2.2 The REDS database

The REDS database comprises data from all instruments administered to the students, the teachers teaching the students of the respective grade during the reference period, and the

school principals in sampled schools. Note that REDS surveyed students in grade 8 (i.e. 8 years of formal schooling). Now, since the teacher target population includes all teachers that taught these students during the reference period and the fact that in all contries the reference period laid in the previous school year we are practically looking at teachers that taught grade 7 students during the reference period. The data files therefore include the responses to the student, teacher, and school principal questionnaires.

This chapter also describes the contents and format of the REDS data files. These are provided in SPSS format (.sav) and SAS format (.sas7bdat). The files can be downloaded from the IEA Study Data Repository at http://www.iea.nl/data. Data files are provided for each country that participated in REDS and for which internationally comparable data are available.

The three types of REDS data files in the database correspond to the three data levels established in REDS: school level, student level, and teacher level. Files of the same type include the same uniformly defined set of variables across countries. The file name identifies the type of data file and the country (see Table 2.2). For example, BSGBFAV2.sav is an SPSS file that contains Burkina Faso's student data. Each file type contains a separate data file for each participating country.

Table 2.2: REDS data file names

File Names	Descriptions
BSG●●●V2	Student Questionnaire File
BTG•••V2	Teacher Questionnaire File
BCG●●V2	School Questionnaire File

••• = 3-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 REDS 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 Excel 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 ".xlsx".

Please note the SPSS data files are created in Unicode mode. However, when saving SPSS data files in Unicode encoding in code page mode, defined string widths are automatically tripled. These format changes will then cause problems when merging data with the IEA IDB Analyzer (i.e., when merging the data in SPSS). Therefore, please take this into account when saving data files in SPSS.

#### Questionnaire response code values

A series of conventions were adopted to code the data included in the REDS questionnaire data files.

The values assigned to each of the questionnaire variables depend on the item format and the number of options available. For categorical questions, sequential numerical values are used to 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, etc. Check-all-that-apply questions are coded as "checked" if the corresponding option was chosen, otherwise it was coded as "not checked".

#### Student data files (BSG)

Students who participated in REDS were administered a questionnaire with multiple-choice items. The student data files contain the actual responses to these multiple-choice questions.

In addition, the student data files feature a number of identification variables, tracking and timing variables, sampling and weighting variables, and derived variables that were used for the analyses described in the international report. These variables are described later in this chapter. In the student data files, each student has a unique identification number (IDSTUD). The IDSTUD uniquely identifies, within a country, a student.

#### School data files (BCG)

The school data files contain responses from school principals to the questions in the REDS school principal questionnaires.

#### Teacher data files (BTG)

The teachers sampled for participation in REDS were asked to complete the teacher questionnaire. 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.

## 2.3 Survey variables

#### **Identification variables**

All REDS 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 files. However, the variables do not allow identification of individual schools, students, or teachers in a country.

#### **IDCNTRY**

This variable indicates the country the data refers to as a 3-digit numeric code based on the ISO 3166-1 classification. This variable should always be used as the first linking variable whenever files are linked within and across countries.

#### **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. 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 REDS international database

Identification Variables	Data File Types			
Tochtmedicin variables	BCG	BSG	BTG	
IDCNTRY	•	•	•	
IDSCHOOL	•	•	•	
IDSTUD		•		
IDTEACH			•	

#### **Questionnaire** variables

The questionnaire variable names consist of a 6- to 8-character string (e.g., IS2G04A). The following rules are applied in naming the variables of the international instruments as well as for variables from the regional instruments:

- The first character indicates the reference level. The letter "I" is used for variables that are administered on an international level.
- The second character indicates the type of respondent. The letter "C" is used to identify data from school principals, while the letter "T" is used for teacher data. The letter "S" is used for student data.
- The third character indicates the variable's presence in the questionnaire version cycle. Number "1" indicates that the variable is present in both questionnaire versions while "2" indicates only in the 2<sup>nd</sup> version.
- 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 guestion 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, REDS imposed certain automatic edits, for example, the removal of implausible responses, for all countries.

With respect to the international database, the data-cleaning process at the IEA Hamburg 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. Also, some countries decided to not administer a certain variable.

### 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.

Each record in the REDS international database contains one or more variables that reflect the record's selection probabilities (or base weights) and non-response 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 REDS international database are as follows:

#### WGTFAC1

This is the school base weight. It corresponds to the inverse of the selection probability of the school.

#### **TOTWGTC**

This is the final school weight for schools. It is computed as the product of WGTFAC1 and WGTADJ1C. The final school weight for schools must be applied when analyzing the data coming from the school questionnaire.

#### WGTADJ1C

This is the school weight adjustment for schools. It accounts for the non-returned school questionnaires.

#### **TOTWGTS**

This is the final student weight. It is computed as the product of WGTFAC1, WGTADJ1S, WGTFAC2S, WGTADJ2S, WGTFAC3S and WGTADJ3S. The final student weight must be applied when analyzing the students' data.

#### WGTADJ1S

This is the school weight adjustment for students. It accounts for the non-participating schools regarding the student survey. The adjustment is done within explicit strata.

#### WGTFAC2S

This is the class weight factor. It corresponds to the inverse of the selection probability of the class within the school. Please note that classes were selected only in few countries, otherwise students were selected out of all target population students of a school.

#### WGTADJ3S

This is the class weight adjustment. It accounts for the non-participating classes. The adjustment is done within schools.

#### WGTFAC3S

This is the student weight factor. It corresponds to the inverse of the selection probability of the student within the school/class.

#### WGTADJ3S

This is the student weight adjustment. It accounts for the non-participating students. The adjustment is done within the school/class.

#### **TOTWGTT**

This is the final teacher weight. It is computed as the product of the WGTFAC1, the WGTADJ1T, WGTFAC2T, and WGTADJ2T. The final teacher weight must be applied when analyzing the teacher data.

#### WGTADJ1T

This is the school weight adjustment for teachers. It accounts for the non-participating schools regarding the teacher questionnaire. The adjustment is done within explicit strata.

#### WGTFAC2T

This is the teacher weight factor. It corresponds to the inverse of the selection probability of the teacher within the school.

#### WGTADJ2T

This is the teacher weight adjustment. It accounts for the non-participating teachers. The adjustment is done within schools.

The availability of these weight variables in the data files is shown in Table 2.5 below.

Table 2.4: Location of weighting variables in the REDS international database

Weighting Variables	Data File Types		
	BCG	BSG	BTG
WGTFAC1	•	•	•
TOTWGTC	•		
WGTADJ1C	•		
TOTWGTS		•	

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WGTADJ1S	•	
WGTFAC2S	•	
WGTADJ2S	•	
WGTFAC3S	•	
WGTADJ3S	•	
TOTWGTT		•
WGTADJ1T		•
WGTFAC2T		•
WGTADJ2T		•

A variance estimation method that considers the structure of the data is the jackknife repeated replication (JRR) method. The REDS 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. As the IEA IDB Analyzer automatically recognizes the data structure of REDS, it reports correct standard errors for all estimates using JRR with the respective variables.

The following variance estimation variables (or "jackknife variables") are included in the REDS international database. The actual replicate weights are computed "on-the-fly" within the IEA IDB Analyzer, but for analysis off the IEA IDB Analyzer they are also part of the data files.

#### **JKZONES**

This variable indicates to which sampling zone the student belongs. The values of JKZONES can vary between 1 and 75. This variable is used to estimate sampling errors when analyzing student data.

#### **JKREPS**

This variable can take the values 0 or 1. It indicates whether the student should be deleted or its weight doubled when estimating sampling errors.

#### SRWGT1 to SRWGT75

These variables indicate the jackknife replicate weights variables (1-75) for the student survey.

#### **JKZONET**

This variable indicates to which sampling zone the teacher belongs. The values of JKZONET can vary between 1 and 75. This variable is used to estimate sampling errors when analyzing teacher data.

#### **JKREPT**

This variable can take the values 0 or 1. It indicates whether the teacher should be deleted or its weight doubled when estimating sampling errors.

#### TRWGT1 to TRWGT75

These variables indicate the jackknife replicate weights variables (1-75) for the teacher survey.

#### **JKZONEC**

This variable indicates to which sampling zone the school belongs. The values of JKZONEC can vary between 1 and 75. This variable is used to estimate sampling errors when analyzing school data.

#### **JKREPC**

This variable can take the values 0 or 1. It indicates whether the school should be deleted or its weight doubled when estimating sampling errors.

#### CRWGT1 to CRWGT75

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

The availability of the variance estimation variables in the data files is shown in Table 2.5 below. Table 2.6 shows the availability of the variance estimation variables in the data files.

Table 2.5: Location of variance estimation variables in the REDS international database

Variance Estimation	Da	ata File Typ	es
Variables	BCG	BSG	BTG
JKZONEC	•		
JKREPC	•		
CRWGT1 to			
CRWGT75	•		
JKZONES		•	
JKREPS		•	
SRWGT1 to			
SRWGT75			
JKZONET			•
JKREPT			•
TRWGT1 to TRWGT75			•

#### Database creation variables

Information about the version number of the REDS international database and the date of its creation at the IEA Hamburg, Germany is contained in the database creation variables. They are included in all data files.

#### **VERSION**

A system of database version numbers was used throughout the data processing process.

### 2.4 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 the user reads the following section with particular care since the way in which these missing codes are used may have major consequences for analyses.

#### Omitted Response Codes (SPSS: 9, 99, 999, ...; SAS: .)

"Omitted" response codes are used for questions or items that a student, teacher, or school principal should have answered but did not, i.e. an omitted response code is given when an item is left blank. 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: SYSMIS; SAS: .A)

Specific codes were given to items that were "not administered" to distinguish these from data that were missing due to non-response. The not administered code was used in the following cases:

Questionnaire variable was not assigned to the respondent: Some questions are included in the  $2^{nd}$  questionnaire version only. However, since the REDS IDB contains all variables, the added variables have been set to "not administered" for countries administering the  $1^{st}$  version.

Question or item 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 as closely as possible the international version.

A questionnaire was returned empty, was not returned, or was lost: All variables referring to that instrument and any derived variables were coded as "not administered."

#### Logically Not Applicable (SPSS: 6; SAS: .B)

The response to a variable is coded as 'Logically Not Applicable' if the previous filter question has been answered in a way that makes a response to the dependent questions logically impossible. Logically Not Applicable responses are coded in the SPSS files as "6", "96", "996", and so on (depending on the field length of the variable and ".B" in SAS.

#### 2.5 Codebook files

All information related to the structure of the REDS data files, as well as the source, format, descriptive labels, and response option codes for all variables, is contained in a codebook file in Excel format.

In the codebook file, there is a tab for each appropriate data file type in the REDS international database. These tabs describe the contents and structure of the respective data file. Important codebook fields include "Label", which contains extended textual information for all variables, "Value Scheme Detailed", which lists the acceptable responses allowed for each variable, as well as "Missing Scheme Detailed" which lists all applicable missing codes in SPSS and SAS.

#### **CHAPTER 3:**

## Weights and Variance Estimation for REDS

#### 3.1 Overview

This chapter provides an introduction to the use of weight and variance estimation variables in the REDS student, teacher, and school data analyses, and its content is largely based on chapter 3 of the ICILS User Guide (Mikheeva & Meyer 2020). The information provided here demonstrates the importance of using appropriate weight variables and variance estimation techniques in order to achieve a correct estimation of population parameters and calculate standard errors that correctly reflect the uncertainty of these parameters. Accounting for the REDS survey design is important to draw correct conclusions about the population under study. This chapter also includes a discussion of constraints for specific analysis types.

Please take into account the information provided in chapter 1 with regards to the limitations of the international database. For some countries/response-levels, weights were not calculated.

## 3.2 Sampling weights

All data in the REDS international database were derived from randomly selected samples of schools, students, and teachers. In order to arrive to unbiased estimates of the target population under study, database users and analysts must take into account the complex nature of the sampling design implemented in each REDS country. Chapter 3 of the REDS international report (Meinck et al. 2022) provides details about the REDS sampling design.

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 non-participation patterns of schools among strata and of students/teachers within participating schools can lead to biased estimates. All units participating in REDS have sampling weights that consider these two design features; therefore, allowing for an unbiased estimation of population parameters.

Sampling weights were calculated for the REDS student, teacher, and school populations to enable correct analyses of the data.

#### Student weight variables

Seven student weight variables are included in the REDS international database (Table 3.1).

Table 3.1: Weight variables in student data file (BSG)

Variable	Description	Source file
TOTWGTS	Final student weight	BSG
WGTFAC1	School base weight	BSG, BCG, BTG
WGTADJ1S	School weight adjustment - student study	BSG
WGTFAC2S	Class base weight	BSG
WGTADJ2S	Class weight adjustment	BSG
WGTFAC3S	Student base weight	BSG
WGTADJ3S	Student weight adjustment	BSG

#### Teacher weight variables

Five teacher weight variables are included in the REDS international database (Table 3.2).

Table 3.2: Weight variables in teacher data file

Variable	Description in BSG file	Source file
TOTWGTT	Final teacher weight	BTG
WGTFAC1	School base weight	BTG, BSG, BCG
WGTADJ1T	School weight adjustment - teacher study	BTG
WGTFAC2T	Teacher base weight	BTG
WGTADJ2T	Teacher weight adjustment	BTG

#### School weight variables

Three school weight variables are included in the REDS international database (Table 3.3).

Table 3.3: Weight variables in school data file

Variable	Description	Source file
TOTWGTC	Final school weight	BCG
WAGFAC1	School base weight	BCG, BSG, BTG
WGTADJ1C	School weight adjustment - school study	BCG

#### Selecting the appropriate weight variable

Researchers analyzing REDS data must use sampling weights that consider the study's complex sample design in order to obtain unbiased population estimates. The choice of correct sampling weights will depend on the type of data used and the level of analysis. Section 2.3 of this user guide lists and describes all weight variables in the international database. It also provides the variable labels and source files.

#### Single level analysis

The following weights have to 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 using the IEA IDB Analyzer for analyzing REDS data because this software automatically selects the correct weight variable, depending on the level of the requested analysis.

#### Merging files from different levels

Researchers who analyze data simultaneously from different levels need to do so with caution because the process means that different types of data have to be merged. 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 has to be used when analyzing student data together with school data. The IEA IDB Analyzer makes this type of disaggregated analysis straightforward. The software merges school-level data with the student data and automatically selects the correct sampling weight variable for the estimation. School information then 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 attending a school with a female principal.
- In the same way, combined teacher and school data can be analyzed; here TOTWGTT has to 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 teachers working at a school with a female principal, school information becomes an attribute of the teachers.

Please note 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 means that a teacher in a sampled school in the dataset may never have taught a particular student in the same school and, conversely, that surveyed students may never have 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.

Finally, users should be aware that the proportion of missing values tends to increase when data from different datasets are combined. Because missing data can bias the analysis results, it is important to review possible reductions in the sample size due to missing data before conducting the analysis and when interpreting the results. Multiple imputation methods offer a possible solution for dealing with missing data issues.

#### Importance of using weights for data analysis

Although the sampling design used for REDS generally leads to self-weighted samples<sup>2</sup>, 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 smaller schools. If weights are ignored during school-level analysis, large schools will be overrepresented.
- 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.

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<sup>&</sup>lt;sup>2</sup> 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.

- Explicit stratification and disproportional sample allocation was commonly used. This practice would lead to further variation in school selection probabilities.
- Non-response patterns vary in accordance with non-response adjustment cells (i.e., strata or schools).

Circumstances such as these make using weights in all REDS data analysis essential if biased results are to be avoided. In other words, not using weights in data analysis can lead to severely biased results.

#### Analyses of groups of countries

Thus far, the discussion has focused on analysis of data from one country at a time. However, all the above statements also hold when more than one country is analyzed, and researchers should exercise caution when calculating the international averages. If an international average is computed using TOTWGTS, TOTWGTT, or TOTWGTC, larger countries will contribute more to this average than smaller countries, which may not be the intention of the researcher.

Instead of performing weighted analyses across groups of countries, users must conduct weighted analyses separately for each country and calculate an average of these results afterwards. This is true regardless of whether single-level data, aggregated or disaggregated data, or multi-level data files are used for analysis.

Users of the IEA IDB Analyzer do not need to worry about the issue of international averages (called "table averages" there), since the software performs the correct calculations automatically. When calculating an international mean, the IEA IDB Analyzer first calculates national means using the TOTWGT variables and then averages the results over the countries that contribute to the international mean.

#### 3.3 Variance estimation

Because all statements about any REDS population are based upon sample data, they can only be made with a limited degree of certainty. Standard errors reflect the precision of the estimates and should always be reported when analyzing REDS data. Also, because the samples were selected using a stratified complex design, the calculation 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 REDS international database contains variables that support the implementation of this method. They include the "jackknife zone," the "jackknife replicate," and "replicate weights."

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

#### Variance estimation variables in the REDS international database

Student-level, teacher-level and school-level variance estimation variables (or "jackknife variables") are included in the REDS international database (Tables 3.4, 3.5 and 3.6).

Table 3.4: Student-level variance estimation variables in the student questionnaire file (BSG)

Variable	Description	Source Files
JKZONES	Jackknife zo-e - student study	BSG
JKREPS	Jackknife replicate co-e - student study	BSG
SRWGT1, SRWGT2, SRWGT75	Student jackknife replicate weight 1, Student jackknife replicate weight 2, Student jackknife replicate weight 75	BSG

Table 3.5: Teacher-level variance estimation variables in the teacher questionnaire file (BTG)

Variable	Description in BSG file	Source Files
JKZONET	Jackknife zo-e - teacher study	BTG
JKRPET	Jackknife replicate co-e - teacher study	BTG
TRWGT1, TRWGT75	Teacher jackknife replicate weight 1, Teacher jackknife replicate weight 75	BTG

Table 3.6: School-level variance estimation variables in the school questionnaire file (BCG)

Variable	Description	Source Files
JKZONEC	Jackknife zo-e - school study	BCG
JKREPC	Jackknife replicate co-e - school study	BCG
CRWGT1, CRWGT75	School jackknife replicate weight 1, School jackknife replicate weight 75	BCG

#### Selecting the appropriate variance estimation variables

Different variance estimation variables must be applied depending on the type of data:

- For all student level analyses, JKZONES and JKREPS should be used.
- For all teacher level analyses, JKZONET and JKREPT should be used.
- For all school level analyses, JKZONEC and JKREPC should be used.

Even for the same school, the variables at different levels of analysis can differ from each other and thus are not interchangeable. As is the case with weights, researchers should ensure to choose the correct jackknife variables when working with aggregated datasets. The level of analysis (student, teacher, or school) determines which variable to choose.

When calculations are performed with the IEA IDB Analyzer, the correct variables will be selected automatically. However, users may want to use specialized software for those types of analysis that go beyond the range of the IEA IDB Analyzer's capabilities. In this case, the jackknife variables must be specified 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 recommend that data users employ the replicate weights provided for all single-level analysis of REDS data.

#### Estimating sampling variance with jackknife repeated replication

When population parameter  $\mu$  is estimated, then  $\mu_s$  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 REDS are probabilistic,  $\mu_s$  itself is a random variable, and  $\mu$  is therefore estimated with a certain degree of precision. To account for this, we use JRR methodology to estimate the sampling variance of  $\mu$ 

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

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

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

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

#### Comparing groups and statistical significance testing

Analyzing data by subgroups is common practice in research. However, if the aim is to review statistical differences among subgroups, users 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 in this chapter. Even in the case of larger effect sizes, statistically significant differences among subgroups are unlikely 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.<sup>3</sup> In developing research questions and designs, we recommend that users evaluate whether the survey and sampling design support 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

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<sup>&</sup>lt;sup>3</sup> The JRR method measures sampling variance by comparing the variation between paired schools, which makes it important to have enough schools contributing to the computations.

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 two cases.

#### 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  $SE_{dif\_ab}$  and the t-value for two independent groups a and b is computed by the IEA IDB Analyzer as:

$$SE_{dif\_ab} = \sqrt{SE_a^2 + SE_b^2}$$
 , and 
$$t = \frac{(a-b)}{SE_{dif\_ab}}.$$

#### 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.

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.

Estimating standard errors of dependent samples by using the method for independent samples risks overestimating the standard error, thereby detecting fewer significant differences than are actually present.

#### **CHAPTER 4:**

# Students' Home Resources and Socioeconomic Background Scale (SHRSBS)

By Christian Christrup Kjeldsen

## 4.1 Students' socioeconomic background scaled for REDS

Similar to the Trends in International Mathematics and Science Study (TIMSS), the Progress in International Reading Literacy Study (PIRLS) and the Programme for International Student Assessment (PISA), a scale has been constructed for students' home resources and socioeconomic background for the Responses to Educational Disruption Survey (REDS) (Avvisati, 2020; Kjeldsen, Kristensen, & Christensen, 2020; Martin, Mullis, & Hooper, 2017; Mullis, Martin, Foy, & Hooper, 2020). This chapter describes how the scale has been developed and describes its content.

#### 4.2 The overall SES construct and its content

The socioeconomic status (SES) scales in the international database are built on answers about student levels taken from the background questionnaire in REDS.

Making any scale is not a given! With inspiration from Steinar Kvale in regard to qualitative semi-structured interviews, I would rather call scale-making "a construction site of knowledge" (Kvale & Brinkmann, 1996, p. 2). One may argue with, in particular, Gaston Bachelard (see Gaston & McAllester, 2002) that the relationships between the different items are important to construct and in doing so, it becomes clear that the particular scale could have been constructed differently. When one is empirically informed in the process of psychometric "modelling" of the scale, this stance is still in clear opposition to a "naive realist who takes facts as given and not as a result, as something to be conquered and systematically constructed" (Vandenberghe, 1999, p. 41).

Theoretically the scale construction draws on the insights from Pierre Bourdieu and addresses both cultural and economic capital. Even though cultural capital, like other forms of capital, comes in different guises, species of capital have in common that they can all be transferred into economic capital in different ways (Bourdieu, 1986). This is, beside the empirical results from the scaling, the theoretical reason to comprehend the presented composite measure as one distinct dimension of socioeconomic background.

Among the factors used to build the scale construction, I bring in the question of books at home—one of the often-used proxies for SES in international large-scale assessment (ILSAs) (Reimer, Jensen, & Kjeldsen, 2018). The students in the study, among others, are asked about the number of books in their home (variable "IS1G36" in the international database), which has proven to be a good overall indicator of socioeconomic background (Allerup, Belling, Kirkegaard, Stafseth, & Torre, 2016; Beaton, 1996).

Furthermore, the parents' highest completed education ("IS1G38", "IS1G40"), which represents the form of cultural capital that is "institutionalized in the form of educational qualifications" (Bourdieu, 1986, p. 242) is part of this question series.

The spoken language in the home ("IS1G34") is another proxy variable for cultural capital that divides the social field whereas "linguistic capital is related in specific ways to the distribution of the forms of capital (economic capital, cultural capital, etc.) which define the location of an individual within the social space" (Bourdieu, 1991, p. 18). Students' spoken language, and in particular language practices among the dominant position in society, share strong relationships with the teaching in schools and the society's social structures (or classes) as Basil Bernstein argues and "is transmitted to the child essentially through the implications of the linguistic code which the social structure itself generates. From this point of view, every time the child speaks or listens, the social structure of which he is part is reinforced and his social identity is constrained" (Bernstein, 1967, p. 57). In my understanding the relationship between language spoken at home and the school's language of instruction coincide with the social structure and the dominant position of the given society.

The parents' employment and type of job ("IS1G37," "IS1G39") provide information on social status, economic capital, and cultural capital for the scale.

The commodities dimension of the social-economic background is informed by a bundle of goods in the form of home possessions reported by the student. This bundle of commodities at home points to the material side of home resources for learning, but, inspired by Amartya Sen's notion of commodities, this bundle indicates a broader understanding that also entails access to services (Kjeldsen, 2014; Sen et al., 1999; Sen, 2014). Whereas parents'- or guardians' employment and job type both point to social status and economic income, the bundle of goods is an indication of relevant (economic) capital that may foster better capabilities for student learning at home. William Moore Gorman and Kelvin John Lancaster argue to not only have a notion of possessed commodities, but for "breaking away from the traditional approach that goods are the direct objects of utility" (Lancaster, 1966, p. 133), and to instead consider that different goods have several distinct characteristics of use depending on the situation and choice. Therefore, the scale includes material home possessions (goods/commodities) that simultaneously have characteristics that may transform into important support for learning at home ("IS1G35A," "IS1G35B," "IS1G35C," "IS1G17A," "IS1G03"). These items cover whether the students have a computer, laptop, or smartphone, or whether they answer "Always" to the question: "I had a quiet space to work with a desk and chair" or if during the COVID-19 disruption, they had access to the internet at home (services).

Having now presented the overall content of the scale, I will now go into more detail and present the particular treatment of the individual items in order for the reader to reproduce the scale.

#### Books at home

The ordering (factor levels) of the response categories for the question "About how many books are there in your home?" (IS1G36) has been used in a straight forward manner, such that "None or very few (0–10 books)"(1), "Enough to fill one shelf (11–25 books)"(2), "Enough to fill one bookcase (26–100 books)" (3), "Enough to fill two bookcases (101–200 books)"(4) and "Enough to fill three or more bookcases (more than 200 books)"(5).

#### Parents' highest level of education across guardians' highest level of education

The variables for parents' highest level of education ("IS1G38", "IS1G40") have been recoded for the scaling with reverse factor levels, accordingly. Afterwards the parents' highest educational level across that of the possible guardians' (the two variables) are found and a new composite variable has been constructed for the further development of the scale.

#### Parents' highest occupational status

In the questionnaire the students are asked twice for their parents' or guardians' work situation with the following question: "What kind of work does your [parent or guardian 1] do for his/her main [job]?" They are presented a list with guiding descriptions. For instance, for the response category "Small Business Owner," they are provided with the following text: "Includes owners of small businesses (fewer than 25 employees) such as retail shops, services, restaurants."

The response categories have been recoded and collapsed for both parents or guardians accordingly, to the factor levels (response categories in the questionnaire) in the following way:

- Factor levels 1,5,6,7 and 8 -> 0
- Factor levels 3 and 4 -> 1
- Factor level 2 -> 2
- Factor level 9.10 and 11 -> 3

Afterwards the highest occupational status across possible parents or guardians is found.

#### Language spoken at home most of the time

The spoken language at home is recoded as a dichotomous variable from the question "What language do you speak at home most of the time?" ("IS1G34") with the category for language of instruction as 1 and the remaining categories for other languages as 0.

#### Bundle of commodities/goods for learning

According to the description above, a number of home possessions go into the SES scale mainly as variables collapsed into dichotomous variables.

The students were asked: "During the [COVID-19 disruption], did you have access to the internet at home?" They had the following response options: "Yes, it worked well all the time" (a), "Yes, it worked well most of the time" (b), "Yes, but it did not work very well." (c) and "No" (d). The affirmative options "a", "b", and "c" have been coded 1 and "d" coded as 0.

Regarding a quiet place for learning, the students where asked: "For how much of the time during the [COVID-19 disruption] do each of the following statements apply to your learning at home? ... I had a quiet space to work with a desk and chair." The response options were "Never or hardly ever" (1), "Sometimes" (2), "Most of the time" (3) and "Always" (4). In this case factor levels 1,2 and 3 have been coded 0 and 4 coded 1.

The students were also asked: "How many of the following ICT devices are currently used in your home?" with the opportunity to report one of the following options "None" (1), "One" (2), "Two" (3) or "Three or more" (4) for each of the following sub questions "Desktop or [laptop] computers," "Tablet devices (e.g. [iPad, Tablet PC])" and "Smart phones." Factor level 1 was coded 0 and 2, 3 and 4 coded 1.

## 4.3 Non-response and scaling

The questions included in the constructed SES scale are also found in the scales of other international studies for home backgrounds. A common challenge that is faced with this type of analysis is that there are students who skip questions or choose not to answer. As the scale is modelled on answers from several recoded items, a result on the scale has not been estimated for students who did not answer at least half of the questions included in the scale. Those students who have answered more than half (but not all questions) have been assigned predicted values by imputation of missing data (Enders, 2010; Schafer, 1997). In this particular case the Multivariate Imputation by Chained Equations for the missing answers have been applied (Van

Buuren, 2018; Van Buuren & Groothuis-Oudshoorn, 2011). Students that did not fulfil the requirement of having responses on at least half of the items were assigned NA in the scaling and were listwise deleted before the Rasch modelling of the data.

#### Different methods for imputation depending on type of variable

The imputation approach applied in case of a maximum of 50 percent non-response across the item for scaling, takes into account the country differences and iterates across the imputed items. Logistic regression for imputation are used for the dichotomous recoded variables (for instance language at home and home possession items) and the Proportional Odds Model for the ordered variables with several categories (for instance book at home).

#### IRT scaling applied

Rasch modelling (senate weighted partial credit model) has been used to scale in order to have a scale that can be applied across countries in a uniform way (Rasch, 1980; Robitzsch, Kiefer, & Wu, 2021; Van der Linden, 2016). Each country is equally weighted for the international scaling with a constructed senate weight for each country (sums up to 500). In countries with sufficient participation, provided total weights have been used for the construction of the senate weights. The individual student's SES score has been estimated with weighted likelihood estimation (WLE).

## 4.4 Standardizing and rescaling

Like the scales found in other IEA studies (ICILS and ICCS for instance), the score is rescaled—"shifted"—so that it is reported with an overall international average of 50 across all the countries and with one standard deviation corresponding to 10 points on the scale.

As there are no previous REDS-studies, the country average of the scale can be compared directly to the international average of 50 score points. The name of the final scale in the international database is "SES\_irt."

Based on the distribution of the scores on the scale, it has also been divided into three ordinal categories. In TIMSS 2019 for the scale of "Home Resources for Learning (Grade 4)," three categories are provided based on cut scores by looking at the actual content of the questions that constitute the scale and assessing which questions the student must answer in an affirmative way in order to reach a level of home resources. In the case of this SES scale, the cut scores have instead been found by dividing the scale into the lower, middle, and upper thirds of the scale score distribution (weighted). It is thus an empirical division of cut scores rather than an interpretation of the items.

For reproducibility of the scale (imputation and scaling) the seed "1638523584" for the random generator has been used, which was chosen as the numeric result of the absolute date–time value (System time) when the start of the scripting was conducted. The name of the final ordinal scale in the international database is "SES\_irt\_c."

#### **CHAPTER 5:**

## Analyzing the REDS Data using the IEA IDB Analyzer

#### 5.1 Overview

The IEA IDB Analyzer software (IEA 2021) can be used to analyze the REDS international data files. Used in conjunction with either SPSS (IBM Corporation 2016) or SAS (SAS Institute 2013), the IEA IDB Analyzer provides a user-friendly interface to easily merge the various data file types of the REDS international database and seamlessly takes into account the sampling information.

Here we provide examples of analyses to illustrate the capabilities of the IEA IDB Analyzer. The IEA IDB Analyzer can be used to compute a variety of statistics, including percentages of students in specified subgroups, average scores in those subgroups, correlations, regression coefficients, and percentages of students reaching certain proficiency levels. Our examples use student, teacher, and school level data to replicate some of the REDS results included in the REDS international report (Meinck et al. 2022).

Users should be able to perform statistical analyses with the IEA IDB Analyzer with a basic knowledge of the REDS international database. Chapter 2 gives a more detailed description of the data files contained in the international database, including their structure and contents, along with a description of all the supporting documentation provided with the international database.

Developed by IEA, the IEA IDB Analyzer is an interface for SPSS and SAS, which are both well-known statistical analysis software packages. The IEA IDB Analyzer enables users to combine either SPSS or SAS data files from IEA's large-scale assessments, and, without actually writing programming code, conduct analyses using either SPSS or SAS. The IEA IDB Analyzer generates SPSS and SAS syntax that incorporates information from the sampling design in the computation of statistics and their standard errors.

The latest version of the IEA IDB Analyzer includes the possibility to use R data. However, please bear in mind that the REDS international database is only available in SAS and SPSS.

The IEA IDB Analyzer consists of two modules, the merge module and the analysis module, which are integrated and executed in one common application. The merge module is used to create analysis datasets by combining data files of different types and from different countries and selecting subsets of variables for analysis. The analysis module provides procedures for computing various statistics and their standard errors. The latest version of the IEA IDB Analyzer (version 5) is available for download from the IEA website (<a href="https://www.iea.nl/datatools/tools/">https://www.iea.nl/datatools/tools/</a>). Once installed, the IEA IDB Analyzer can be accessed by using the START menu in Windows:

Start 

All programmes 

IEA 

IEA IDB Analyzer

When the IEA IDB Analyzer application is launched, the main window appears (Figure 5.1). Users first need to select either SPSS or SAS as their statistical software of choice. For all the examples in this chapter, we use SPSS software and hence the SPSS data files from the REDS international database.

The main window will direct users to the Merge Module, the Analysis Module, the Help manual, or to simply Exit the application. The IEA IDB Analyzer has an extensive manual, accessible

through the **Help** button, which users are encouraged to consult for full details on all the functionalities and features of the IEA IDB Analyzer.

Figure 5.1: IEA IDB Analyzer main window



### 5.2 Merging files with the IEA IDB Analyzer

The REDS data files are disseminated separately for each country and by file type. In addition to allowing users to combine data from the same file type from more than one country for cross-country analyses, the merge module allows for the combination of data from different levels, e.g., merging student and school data into single SPSS dataset. This enables users to analyze the student data in combination with certain characteristics of the school students attend using the IEA IDB Analyzer Analysis Module.

The REDS design allows several possible combinations of data file types to be merged at different levels (see Table 5.1).

- The school questionnaire file can be merged with every other 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. This is due to the study's sample design; the REDS teacher sample was selected by taking all teachers belonging to the teacher target population into account. Because these teachers are usually not just the teachers who teach the sampled students, it is not possible to link the teacher data to student data at the level of individuals. Instead, linking can only be done 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 same reason.

Merging files from different levels has implications for analysis of the data: when data files from different levels are merged, the weights (see 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" (see Table 5.1).

Table 5.1: Possible merging of data between different file types in REDS

File type	Weight in merged file	Interpretation
Student files of different countries	TOTWGTS	Student characteristics
Teacher files of different countries	TOTWGTT	Teacher characteristics
School files of different countries	TOTWGTC	School characteristics
Student file and school file of a country	TOTWGTS	Student characteristics; school characteristics as properties of students
Teacher file and school file of a country	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.

#### Merging data from different countries

Merging the files from different countries on a single level is simple. The same steps apply for merging student, school, or teacher questionnaire. The following example will create an SPSS or SAS<sup>4</sup> data file with student questionnaire data from all REDS countries (Figure 4.2 shows the screen view after the correct steps are entered):

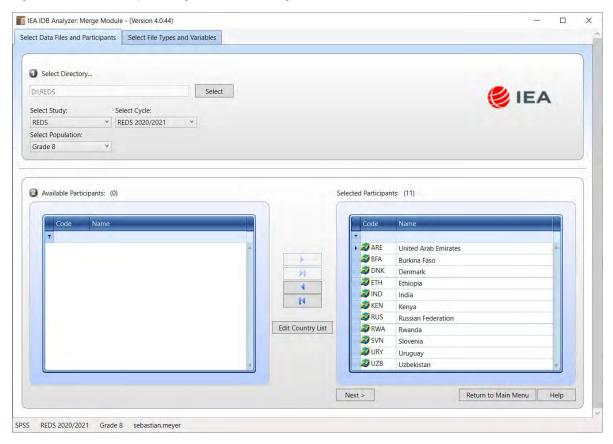
- (1) Start the IEA IDB Analyzer from the START menu and click the Merge Module button.
- (2) In the *Select Data Files and Participants* tab and in the *Select Directory* field, click *Select* and browse to the folder where all data files are located. For example, all SPSS data files are located in the folder titled "C:\REDS\Data". The programme will automatically recognize and complete the *Select Study*, *Select Year*, and *Select Population* 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 from more than one population, the IEA IDB Analyzer will prompt users to select files from the desired combination of study, cycle, and population for analyses. Here, REDS eighth grade is selected.

Click a country of interest from the *Available Participants* list and click the **right arrow** button (**)** to move it to the *Selected Participants* panel. Individual countries can be moved directly to the *Selected Participants* panel by double-clicking on them. To select multiple countries, hold the CTRL key of the keyboard when clicking countries. Click the **tab-right** 

<sup>&</sup>lt;sup>4</sup> Depending on the software selected in the main menu of the IEA IDB Analyzer.

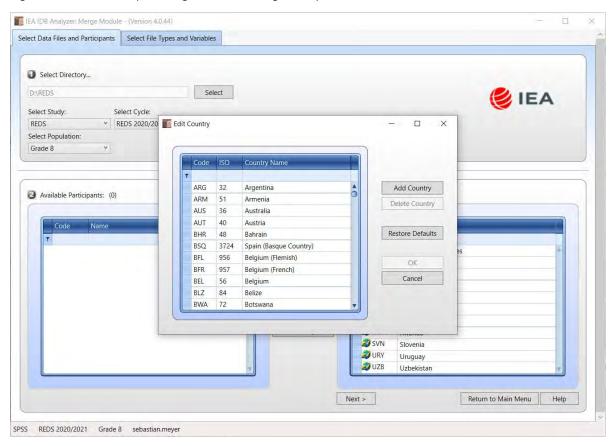
arrow button (▶I) to move all countries to the *Selected Participants* panel. In this example, all available REDS countries were selected.

Figure 5.2: IEA IDB Analyzer Merge Module: selecting countries



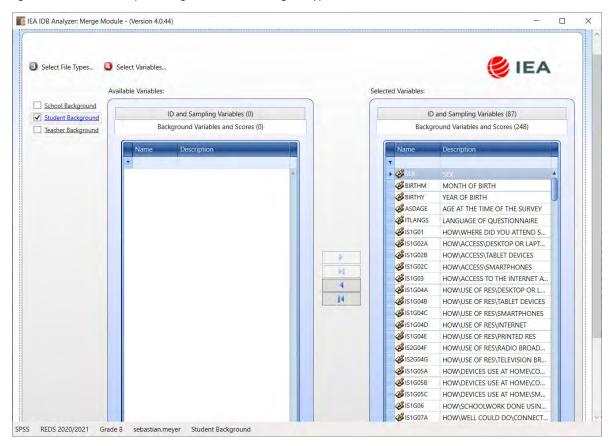
(4) To change how the country names appear in the outputs from the IDB Analyzer when analyzing data, users can select the *Edit Country List* button. Three columns are displayed: *Code* (numeric codes of the countries), *ISO* (the three-letter character codes for the countries), and *Country Name*. The values in the first two columns cannot be changed. Scroll down to the country that needs to be edited, click in the cell in the *Country Name* column and change the entry. Click OK to confirm the change (see Figure 5.3). To restore the default values, click the *Restore Defaults* button. Click OK to close the *Edit County List* window.

Figure 5.3: IEA IDB Analyzer Merge Module: editing country list



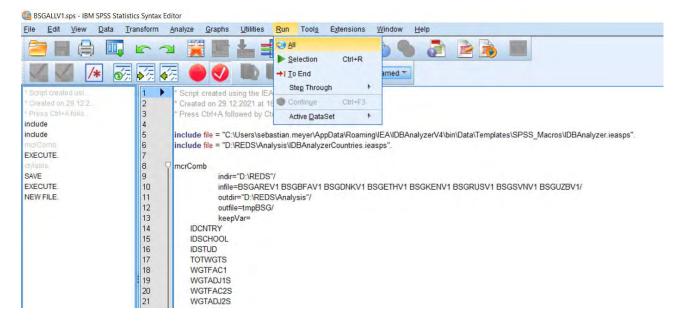
- (5) Click the Next > button to proceed to the next step. The software will open the *Select File Types and Variables* tab of the merge module (Figure 5.4) to select the file types and the variables to be included in the merged data file.
- (6) Select the file types for merging by checking the appropriate boxes to the left of the window. In the example, only the international student questionnaire file is selected (see Figure 5.4). Note that you will receive a warning message that indicates the availability of certain data sets. In this example, the IDB Analyzer will let you know at this point that student data is not available for India, Rwanda, and Uruguay.
- (7) Select the variables of interest from the **Available Variables** list in the left panel. Variables are selected by clicking on them and then clicking the **right arrow** (▶) button. Clicking the **tab-right arrow** (▶I) button selects all variables. Note that there are two tabs: **Background Variables and Scores** and **ID and Sampling Variables**. All identification and sampling variables are selected automatically by the IEA IDB Analyzer. Appendix A of this user guide provides the variable names for all questions in the questionnaires. In the example, all student variables are selected for merging.
- (8) Specify the desired name for the merged data file and the folder where it will be stored in the *Output Files* field by clicking the *Define/Modify* button. The IEA IDB Analyzer also will create a SPSS or SAS syntax file (\*.SPS or \*.SAS) of the same name and in the same folder as the SPSS or SAS code used to perform the merge. In the example, the SPSS data file BSGALLV1.SAV and the syntax file BSGALLV1.SPS are stored in the "C:\REDS\Data\Work" folder. When using SAS, the resulting files would be BSGALLV1.sas7bdat (data) and BSGALLV1.sas (syntax). The merged data file will contain student questionnaire data with the variables shown in the *Selected Variables* panel.

Figure 5.4: IEA IDB Analyzer Merge Module: selecting file types and variables



(9) Click the **Start SPSS** button to create the SPSS syntax file with the specified name. The IEA IDB Analyzer stores the SPSS syntax file in the specified folder and opens it in a SPSS Syntax Editor window (Figure 5.5) ready for execution. The syntax file can be executed by opening the **Run** menu of SPSS and selecting the **All** menu option. In SAS, hitting the **Submit** option from the **Run** menu will execute the syntax. The IEA IDB Analyzer will display a warning if it is about to overwrite an existing file in the specified folder.

Figure 5.5: SPSS Syntax Editor with merge syntax produced by the IEA IDB Analyzer Merge Module



Once SPSS or SAS has completed its execution, it is important to check the SPSS output window or SAS log for possible warnings. If warnings appear, they should be examined carefully because they might indicate that the merge process was not performed properly and that the resulting merged data file might not be as expected.

#### Merging school and student data files

The REDS school samples were designed to optimize the student samples and the student-level estimates. Therefore, it is preferable to analyze school variables as attributes of students, rather than as elements in their own right. However, the school samples are representative probability samples of schools within each participating country and so it is possible to compute weighted numbers of schools with particular characteristics for providing reasonable estimates of percentages and means across the populations of schools in each country.

When merging school and student questionnaire data files, the school data will be disaggregated to student level, so that the school data become an attribute of the students in that school.

To merge the school and student questionnaire data files, select both the **school file** and **student file** types. The variables of interest to be included in the merged data file need to be selected separately by file type using the same set of instructions as described in section 4.2.1. The ID and sampling variables will be selected automatically. Please note that when merging student and school data, only the total student weight (TOTWGTS) variable will be included in the merged file, but not the total school weight (TOTWGTC). An analysis using school variables on student level together with student-level variables will use the total student weight and will not allow the researcher to make inferences for the school themselves. The interpretation of the results will be about students who study in schools with certain characteristics. For example, if merged student and school data uses the principals' gender as the grouping variable, the total student weight would be selected as weighting variable. The results then would be interpreted as percentages of students who study in schools where the school principal is male or female.

#### Merging school and teacher data files

Merging the school and teacher data files follows the same procedure as merging the school and student data files. School data will be disaggregated to the teacher level by adding the respective school level variables to each teacher record. To merge teacher questionnaire and school questionnaire data files, perform steps 1 to 4 as described in the previous section. Then, simply select both file types in the second window of the IEA IDB Analyzer Merge Module. The variables of interest need to be selected separately for both file types, as follows:

- Check the checkbox next to the teacher file type so that it appears checked. The ID and sampling variables are selected automatically and already listed in the right panel.
- Select the variables of interest from the left panel and click the **right arrow** (▶) button to move these variables to the **Selected Variables** panel on the right. Click the **tab-right arrow** (▶I) button to select all available variables.
- Next, check the checkbox next to the school file type. Based on the country selection, the IEA IDB Analyzer might display a warning that certain countries do not have data for the selected questionnaire. Close the warning message and select the variables of interest from the *Background Variables and Scores* panel in the same manner as described in step 1 and 2.
- **Define/Modify** 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) of the same name and in the same folder with the code necessary to perform the merge.
- Click on the **Start SPSS** button to create the SPSS syntax file that will produce the required merged data file, which can then be run by opening the **Run** menu of SPSS and selecting the **All** option.

#### Merged data files for the example analyses

To carry out the sample analyses described in this chapter, users should expect the following merged data files, including all available context and background variables and scores:

(1) BSGALLV1.SAV Merged student (BSG) data files for all countries
 (2) BTGALLV1.SAV Merged teacher (BTG) data files for all countries

(3) BSG\_BCGALLV1.SAV Merged school (BCG) and student (BSG) data files for all

countries

### 5.3 Performing analyses with the IEA IDB Analyzer

The IEA IDB Analyzer can perform statistical analyses on any files created using the **Merge Module** or on any original IEA study data file. There are several statistical procedures available in the **Analysis Module** of the IEA IDB Analyzer (Table 5.2).

Table 5.2: Statistical procedures available in the Analysis Module of the IEA IDB Analyzer

Statistic type	Description
Percentages and Means	Computes percentages, means, and standard deviations for selected analysis variables by subgroups defined by grouping variable(s).
Percentages only	Computes percentages by subgroups defined by grouping variable(s)
Linear regression	Computes linear regression coefficients for selected independent variables to predict a dependent variable by subgroups defined by grouping variable(s). Plausible values can be included as dependent or independent variables.
Logistic regression*	Computes logistic regression coefficients for selected independent variables to predict a dependent variable by subgroups defined by grouping variable(s). Plausible values can be included as dependent or independent variables. When used as a dependent variable, plausible values will be dichotomized using a specified cut-point, such as one of the REDS international benchmarks.
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). Plausible values can be included as analysis variables.
Percentiles	Computes the score points that separate a given proportion of the distribution of scores, by subgroups defined by the grouping variable(s). Plausible values can be included as analysis variables.

Group Differences by Performance*	Computes differences in an analysis variable, between groups,
	conditional on the Achievement or performance levels.

#### Note:

The IEA IDB Analyzer has a Help Manual that provides extensive descriptions of all features. All statistical procedures offered in the analysis module of the IEA IDB Analyzer make appropriate use of sampling weights and standard errors are computed using the jackknife repeated replication (JRR) method.

Table 5.3: Fields for variable selection in the Analysis Module of the IEA IDB Analyzer

Field	Description
Grouping Variables	This is a list of variables to define subgroups of interest. The list must consist of at least one grouping variable. By default, the IEA IDB Analyzer includes the variable IDCNTRY used to distinguish the participating countries. Additional variables may be selected from the available list. If the <b>Exclude Missing from Analysis</b> option is checked, only cases that have non-missing values in the grouping variables will be used in the analysis. If it is not checked, missing values become reporting categories.
Analysis Variables	This is a list of variables for which means, percentages, correlations, or percentiles are to be computed. Usually, more than one analysis variable can be selected.
Independent Variables	This is a list of variables to be treated as independent variables for a linear or logistic regression analysis. More than one independent variable can be selected. Categorical variables and continuous variables can be specified as independent variables. When specifying categorical variables as independent variables, they can be treated either by "effect coding" or "dummy coding" using the <b>Contrast</b> dropdown menu.
Dependent Variable	This is the variable to be used as the dependent variable when a linear or logistic regression analysis is specified. Only one dependent variable can be listed.
Percentiles	These are the percentiles that will be calculated from the distribution of a continuous analysis variable selected in the <b>Analysis Variables</b> section. <b>Achievement Scores</b> can also be selected as an analysis variable. Select the <b>Use PVs</b> option in the <b>Plausible Value</b> option dropdown menu and select the <b>Achievement Scores</b> of interest in the <b>Plausible Values</b> field. Multiple percentiles can be specified, each separated by a blank space.

<sup>\*</sup> The statistics types *Logistic Regression* and *Group Differences by Performance* will not be covered in this chapter. Refer to the IEA IDB Analyzer Help manual for information about these types of analysis.

Weight Variable	This is the sampling weight variable that will be 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. Generally, this will be TOTWGTS for analysis on student level. When analyzing teacher data, TOTWGTT will be used.  Chapter 3 of this user guide provides more information on the REDS sampling weights.
	sampling weights.

### 5.4 Performing analyses with school-level variables

As an example of how to undertake a school-level analysis, we here replicate the analysis of the percentage of schools that made specific changes to school policies and procedures during or following the COVID-19 disruption (Meinck et al. 2022, Table 4.2.7).

Figure 5.6: Example of school-level analysis published in the REDS international report

Country	Varied school starting times for different groups of students	Varied break times between classes for different groups of students	Smaller class sizes	Increased number of staff	Continued remote learning option for students	Supplementing face-to-face teaching with remote teaching
Burkina Faso	17 (3.7)	12 (3.0)	26 (6.1)	8 (2.0)	5 (2.1)	7 (1.9)
Ethiopia <sup>j</sup>	73 (4.9)	70 (3.9)	72 (3.7)	49 (5.3)	46 (3.9)	53 (5.3)
India	67 (7.7)	68 (5.0)	82 (7.0)	36 (8.3)	68 (8.4)	73 (8.6)
Kenya <sup>g</sup> i	48 (6.9)	55 (6.4)	51 (6.6)	17 (3.9)	22 (5.1)	30 (5.3)
Russian Federation <sup>j</sup>	74 (5.6)	71 (5.1)	15 (4.7)	6 (2.6)	63 (5.3)	61 (5.3)
Rwanda	74 (3.4)	66 (3.7)	82 (3.5)	67 (3.8)	51 (4.6)	51 (4.4)
Slovenia <sup>8,j</sup>	39 (3.6)	62 (4.8)	37 (5.5)	311 (2.7)	48 (5.1)	36 (4.7)
United Arab Emirates	77 (4.6)	83 (4.5)	96 (1.2)	933 (5.4)	96 (1.6)	85 (4.0)
Uruguay <sup>©</sup>	96 (2.2)	68 (6.7)	93 (1.8)	12 (3.4)	189 (4.1)	93 (3.6)
Uzbekistani	83 (4.7)	85 (4.4)	63 (4.6)	41 (5.7)	72 (5.9)	76 (4.4)
Data may not be repres	er tative of target population					
Denmark <sup>®</sup> i	80 <sup>n</sup>	76 <sup>n</sup>	57°	41°	23 <sup>n</sup>	53n

Notes:

Standard errors appear in parenthesis.

We will focus on the results shown in the second column in the picture above, i.e. "varied school starting times for different groups of students". As a first step, merge all available school-level data as described above. Then you need to identify the variable of interest in the school questionnaire (see Appendix A). This review reveals that IP1G23A is the variable of interest.

Now perform the following steps in the IEA IDB Analyzer:

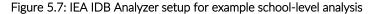
- (1) Open the Analysis Module of the IEA IDB Analyzer.
- (2) Select the merged data file BCGALLV2.SAV as the **Analysis File** by clicking the **Select** button.
- (3) Select REDS (Using School Weights) as the Analysis Type.
- (4) Select **Percentages only** as the Statistic Type.
- (5) The variable IDCNTRY is selected automatically as **Grouping Variable**. No additional grouping variables are needed for this analysis. Leave the default option **Exclude Missing From Analysis** selected.
- (6) Click the Analysis Variables field to activate it. Select S\_AGE from the list of available variables and move it to the Analysis Variables field by clicking the right arrow (▶) button in this section.

g Low participation rates. See Appendix A1, Tables A1.5 to A1.9 for details.

j More than 5% of targeted schools were excluded. See Chapter 3 Table 3.1 for details.

n Data are available for at least 70% but less than 85% of the respondents.

- (7) The **Weight Variable** is automatically defined by the software. As this example analysis uses student questionnaire 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 the IEA IDB Analyzer interface does not indicate or list them individually.
- (8) Specify the name and the folder of the output files in the **Output Files** field by clicking the **Define/Modify** button. The IEA IDB Analyzer will use this name and folder to create six output files. (i) An SPSS syntax file that contains the code for performing the analysis, and, after running the syntax file, (ii) an SPSS data file with the results, (iii) an SPSS output file, and (iv) an Excel file with these same results. Another two files contain significant test results: (v) an SPSS data file, and (vi) an Excel file.
- (9) Press the **Start SPSS** button to create the SPSS syntax file. The file will open in an SPSS syntax window. The syntax file will be executed by opening the **Run** menu of SPSS and selecting the **All** option. If necessary, the IEA IDB Analyzer will prompt the user to confirm overwriting already existing files.



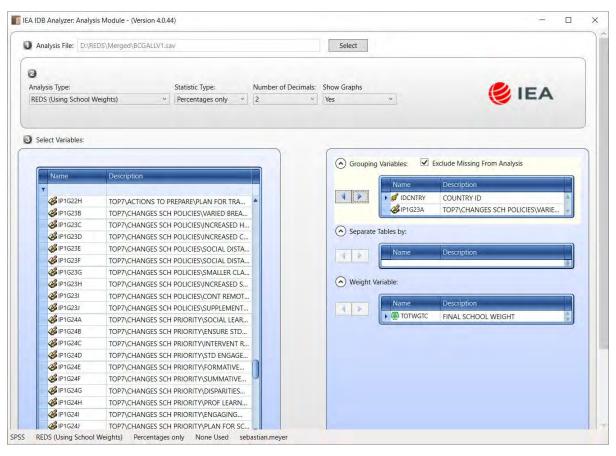


Figure 4.8: Output for example student-level analysis without achievement scores

	TOP7\CHANGES SCH POLICIES\VARIED	N of	Sum of	Sum of TOTWGTC		Percent	
COUNTRY ID	SCH STARTING TIME	Cases	TOTWGTC	(s.e.)	Percent	(s.e.)	nvarstra
Denmark	Yes	39	39	,00	79,59	,00	0
	No	10	10	.00	20,41	,00	0
Ethiopia	Yes	140	15620	1141,72	73,27	4,92	72
	No	40	5698	1065,08	26,73	4,92	34
India	Yes	129	373904	45405,54	66,88	7,71	15
	No	55	185166	53556,41	33,12	7,71	12
Kenya	Yes	48	10302	1665,19	48,10	6,94	40
	No	53	11115	1575,71	51,90	6,94	44
Russian Federation	Yes	152	24252	2425,83	73,94	5,58	53
	No	38	8550	2034,53	26,06	5,58	27
Rwanda	Yes	108	1044	49,54	74,11	3,41	67
	No	37	365	48,74	25,89	3,41	31
Slovenia	Yes	56	168	15,05	38,58	3,63	42
	No	77	268	20,05	61,42	3,63	53
United Arab Emirates	Yes	130	515	33,73	77,15	4,59	69
	No	38	152	33,88	22,85	4,59	32
Burkina Faso	Yes	24	495	93,53	16,51	3,71	22
	No	113	2501	258,75	83,49	3,71	67
Uruguay	Yes	92	465	34,72	95,63	2,22	57
	No	5	21	10.72	4.37	2.22	

### 5.5 Performing analyses with teacher-level data

As already noted, student and teacher data cannot be merged and analyzed together due to the sampling design of REDS. The example of an analysis using teacher questionnaire data presented here roots in question 3a in the teacher questionnaire. The question is "During the [COVID-19 disruption] did you teach your class remotely?"

The results can also be found in table 4.2.2 in the REDS international report (Meinck et al. 2022).

Table 5.9: Example of teacher-level analysis, originally published in the REDS international report

Country	Using online methods only	Using online and offline methods	Using offline methods only	No remote teaching	
India	20 (5.6)	31 (4.4)	21 (7.8)	29 (7.2)	
Russian Federation <sup>i</sup>	35 (2.1)	56 (2.1)	8 (1.2)	1 (0.3)	
Slovenias	63 (1.9)	28 (1.9)	7 (0.8)	2 (0.5)	
United Arab Emirates	81 (1.1)	16 (0.9)	1 (0.2)	2 (0.7)	
Uzbekistan	58 (1.8)	30 (1.5)	11 (1.2)	2 (0.3)	
Data may not be represen	tative of target population				
Burkina Faso	0	1	2	96	
Denmark <sup>u</sup>	74	19	2	6	
Ethiopia <sup>i</sup>	2	9	28	61	
Kenyai	e	e	е	e	
Uruguay*	26	71	2	1	

Notes:

Standard errors appear in parentheses.

- e Due to an adaptation error data cannot be reported.
- g Low participation rates. See Appendix A1, Tables A1.5 to A1.9 for details.

  i More than 5% of targeted teachers were excluded. See Chapter 3 Table 3.1 for details.

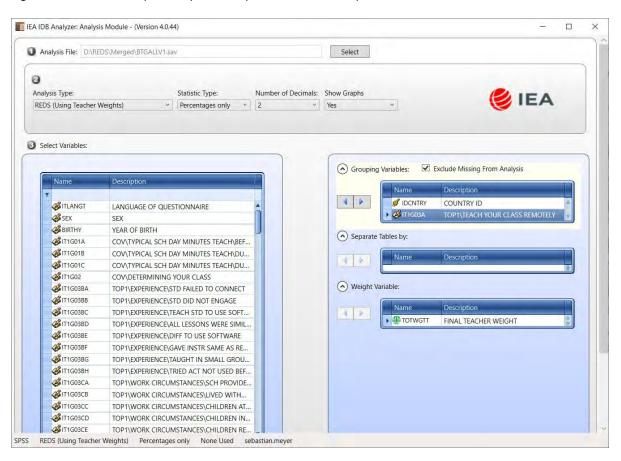
The first step is to identify the variables relevant to the analysis in the appropriate files. Reviewing the teacher questionnaire, one finds that the question is represented by variable

IT1G03A.

Note that you need a merged teacher data file containing teacher data from all countries. Simply follow the same steps as described in the section above for the teacher data. For this example, we assume you have created a merged file named BTGALLV1.SAV.

- (1) Open the Analysis Module of the IEA IDB Analyzer.
- (2) Select the data file BTGALLV1.SAV as the Analysis File.
- (3) Select **REDS** (Using Teacher Weights) as the Analysis Type to analyze the responses of the teachers.
- (4) Select Percentages only as the **Statistic Type**.
- (5) Specify the variable IT1G03A as a second grouping variable by clicking the **Grouping Variables** field to activate it. Select IT1G03A from the list of available variables and move it to the **Grouping Variables** field by clicking the right arrow (▶) button in this section
- (6) The **Weight Variable** is automatically defined by the software. As this example analysis uses only teacher questionnaire data, TOTWGTT is selected by default.
- (7) Specify the name and the folder of the output files in the **Output Files** field by clicking the **Define/Modify** button.
- (8) Click the **Start SPSS** button to create the SPSS syntax file. The file will open in an SPSS syntax window. The syntax file will be executed by opening the **Run** menu of SPSS and selecting the **All** option. If necessary, the IEA IDB Analyzer will prompt the user to confirm that they want to overwrite existing files.

Figure 5.10: IEA IDB Analyzer setup for example teacher-level analysis



The IEA IDB Analyzer outputs each country's results on several lines, one for each value of the IT1G03A variable. In this case, the selected variable has four categories. The output will show one line per category for each country.

Figure 5.11: Output for example teacher-level analysis

COUNTRY ID	TOPI\TEACH YOUR CLASS REMOTELY	N of Cases	Sum of TOTWGTT	Sum of TOTWGTT (s.e.)	Percent	Percent (s.e.)
Denmark	Yes, using online (computer-based) methods only	358	358	,00	73,51	,00
	Yes, using online (computer-based) and offline methods	91	91	,00	18,69	,00
	Yes, using offline methods only	10	10	,00	2,05	,00
	No	28	28	,00	5,75	,00
Ethiopia	Yes, using online (computer-based) methods only	30	30	,00	1,90	,00
	Yes, using online (computer-based) and offline methods	134	134	,00	8,50	,00
	Yes, using offline methods only	449	449	,00	28,49	,00
	No	963	963	,00	61,10	,00
India	Yes, using online (computer-based) methods only	217	436955	152606,8	19,80	5,62
	Yes, using online (computer-based) and offline methods	326	675390	96804,78	30,60	4,35
	Yes, using offline methods only	140	463202	191175,1	20,99	7,82
	No	176	631298	132255,8	28,61	7,22
Russian Federation	Yes, using online (computer-based) methods only	1106	146553	12234,45	34,78	2,08
	Yes, using online (computer-based) and offline methods	1520	235662	16153,44	55,93	2,09
	Yes, using offline methods only	162	34753	5136,12	8,25	1,16
	No	21	4418	1257,31	1,05	,29
Slovenia	Yes, using online (computer-based) methods only	865	3621	113,05	62,70	1,93
	Yes, using online (computer-based) and offline methods	390	1598	120,90	27,66	1,85
	Yes, using offline methods only	110	418	44,73	7,23	,80
	No.	40	139	27,78	2,40	,47
United Arab Emirates	Yes, using online (computer-based) methods only	2160	10359	394,41	81,47	1,12
	Yes, using online (computer-based) and offline methods	415	1998	128,60	15.72	, 93

#### 5.6 Performing analyses with student-level data

As an example of how to undertake a student-level analysis, we here replicate the results presented in table 4.5.4 in the international report. The table shows the percentage of students who were affected by different situations. The response categories of the variables comprising this table are 'yes' and 'no'. In this example we will focus on the first "situation" as illustrated in figure 5.12.

Figure 5.12: Example of student-level analysis, originally published in the REDS international report

Country	One or both of my parents/ guardians lost their job	Our family had to be more careful with money than usual	One or both of my parents/guardians had to work from home	One or both of my parents/guardian were stressed about their job	
Russian Federation <sup>h</sup>	11 (0.9)	26 (1.1)	34 (1.2)	38 (1.2)	
Slovenia <sup>s</sup>	8 (0.6)	25 (0.9)	38 (1.2)	31 (1.0)	
United Arab Emirates	14 (0.8)	49 (1.2)	48 (1.4)	43 (1.2)	
Uzbekistan <sup>h</sup>	37 (1.6)	63 (1.3)	53 (1.5)	53 (1.4)	
Data may not be represen	tative of target population				
Burkina Faso	16	72	28	53	
Denmark	9n	15 <sup>n</sup>	60°	41"	
Ethiopia <sup>h</sup>	36	68	55	69	
Kenyah	63	83	62	80	

Notes:

Standard errors appear in parentheses.

- h More than 5% of targeted students were excluded. See Chapter 3 Table 3.1 for details.
- n Data are available for at least 70% but less than 85% of the respondents.

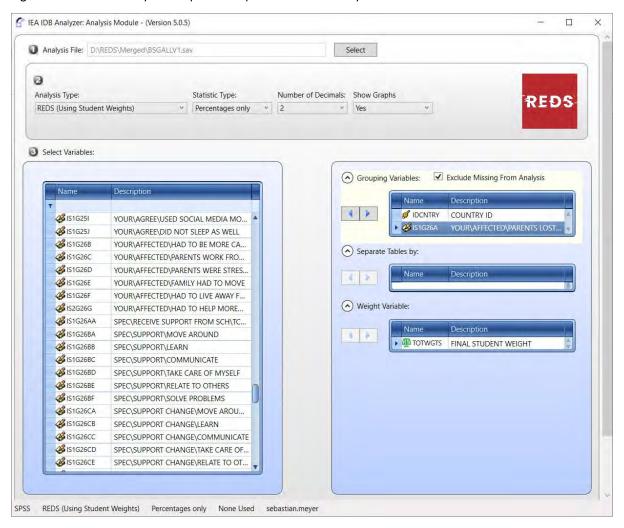
As in the previous examples, the first step is to identify the variables relevant to the analysis in the appropriate files. Reviewing the student questionnaire, one finds that the question is represented by variables IS1G26A-G. Since this examples covers results listed in the highlighted column in figure 5.12 we only need variable IS1G26A.

You need a merged student data file containing student data from all countries. Simply follow the same steps as described in the section above for the teacher data. For this example, we assume you have created a merged file named BSGALLV1.SAV.

- (1) Open the Analysis Module of the IEA IDB Analyzer.
- (2) Select the data file BSGALLV1.SAV as the Analysis File.

- (3) Select **REDS (Using Student Weights)** as the **Analysis Type** to analyze the responses of the teachers.
- (4) Select Percentages only as the **Statistic Type**.
- (5) Specify the variable IS1G26A as a second grouping variable by clicking the **Grouping Variables** field to activate it. Select IS1G26A from the list of available variables and move it to the **Grouping Variables** field by clicking the right arrow (▶) button in this section.
- (6) The **Weight Variable** is automatically defined by the software. As this example analysis uses only teacher questionnaire data, TOTWGTS is selected by default.
- (7) Specify the name and the folder of the output files in the **Output Files** field by clicking the **Define/Modify** button.
- (8) Click the **Start SPSS** button to create the SPSS syntax file. The file will open in an SPSS syntax window. The syntax file will be executed by opening the **Run** menu of SPSS and selecting the **All** option. If necessary, the IEA IDB Analyzer will prompt the user to confirm that they want to overwrite existing files.

Figure 5.13: IEA IDB Analyzer setup for example teacher-level analysis



The IEA IDB Analyzer outputs each country's results on two lines, one for each value of the IS1G26A variable. In this case, the selected variable has two categories. The output will show one line per category for each country.

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Figure 5.13: Output for example student-level analysis

				Sum of			
	YOUR\AFFECTED\PARENTS	N of	Sum of	TOTWGTS		Percent	
COUNTRY ID	LOST JOB	Cases	TOTWGTS	(s.e.)	Percent	(s.e.)	nvarstrat
1,102		-		-		-	
Denmark	Yes	123	123	,00	9,50	,00	0
	No	1172	1172	,00	90,50	,00	0
Ethiopia	Yes	1238	1238	,00	35,69	,00	0
	No	2231	2231	,00	64,31	,00	0
Kenya	Yes	964	964	,00	62,92	,00	0
	No	568	568	,00	37,08	,00	0
Russian Federation	Yes	384	127809	11527,32	10,60	,92	51
	No	3072	1077824	31436,24	89,40	,92	53
Slovenia	Yes	195	1539	121,28	8,08	,61	62
	No	2278	17498	416,64	91,92	,61	75
United Arab Emirates	Yes	395	8267	529,84	13,70	,81	74
	No	2413	52072	1750,75	86,30	,81	75
Burkina Faso	Yes	393	393	,00	16,21	,00	0
	No	2032	2032	,00	83,79	,00	0
Uzbekistan	Yes	1060	161594	7718,61	37,44	1,60	75
	No	1833	270070	8971,19	62,56	1,60	75
Table Average	Yes				24,27	,26	
	No				75,73	,26	

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# Appendix: International Versions of the REDS Questionnaires

#### **Overview**

The REDS IDB includes data for all questionnaires administered as part of REDS. This appendix contains the international version of the REDS questionnaires in the following three sections:

- Section 1: School questionnaire
- Section 2: Teacher questionnaire
- o Section 3: Student questionnaire
- o Section 4: National centre questionnaire

Sections 1 to 3 contain the international version of the questionnaire with variable names labeled next to the corresponding question. Section 4 contains the national centre questionnaire without variable names (question text and response options are included in the data file). Please note that the variable name holds an indicator for determining whether a question or dimension were included in the wave 2 questionnaire version only. If the third digit shows a '1' the variable is part in both questionnaire version. If the third digit is a '2' it is only part the second questionnaire version. These instructions were indicated in the questionnaires by text inserted within angle brackets (<country-specific>) and highlighted in yellow. NRCs were asked to substitute, if necessary, an appropriate national adaptation that would retain the same basic interpretation as the text within brackets.

The REDS 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 angle 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.

## **School Questionnaire**

# RESPONSES TO EDUCATIONAL DISRUPTION SURVEY (REDS)

## School Questionnaire

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### INTRODUCTION

This questionnaire is concerned with the disruption to school education as a direct result of the impact of the COVID-19 pandemic.

In this questionnaire you will find questions about:

- Changes to the way your school was organised during the period the school was disrupted
- Impact on classroom teaching and learning
- Assessment of student learning and provision of feedback to students
- Teacher professional support
- Home engagement/support
- Well-being
- Persisting influences
- You
- Your school

Unless otherwise instructed, please answer the questions in this questionnaire with reference to your school as a whole.

Reference period: The [COVID-19 disruption]

#### Reference period: The [COVID-19 disruption]

Many questions in this survey focus on a specific time period, referenced in this questionnaire as the "[COVID-19 disruption]". You will remember that [most] schools in [country] closed for [the majority of students] in the last school year between [choose a date or approximate time range such as "mid-March"] and [choose a date or approximate time range such as "mid-May"]. Teaching and learning occurred [mostly] outside of school buildings in this period. When responding with regard to the [COVID-19 disruption], please refer to this period.

Q0 During disrupt		period was	your s	chool mo	ost affecte	d by the	[COVID-19
When was th	e beginn	ning of this peri	od?	When wa	as the end of	f this period	?
Please mark	one cho	ice in each col	umn.	Please m	nark one cho	ice in each	column.
Early		January		Early		March	
Mid		February		Mid		April	
Late		March		Late		May	
		April				June	
		May				July	
		June				August	
		July				Septembe	r $\square$
		August				October	
IP1G00A		IP1G00B		IP10	G00C	IP1G0	00D

For some of the questions you are asked to answer referring only to students attending the [target grade] during the [COVID-19 disruption]. Please look at the instructions given in each of the questions.

We thank you for your effort and cooperation!

# TOPIC 1 Description of the [COVID-19 disruption] period in your school

Qla	Please indicate the duration in weeks for the following school's or circumstances starting from the beginning of the [COVID-19 disruptoday.	
	(Please write in the number of weeks. Do not consider school holidays. If the statement apply, please write 0)	ent does not
		Number of weeks
a)	Our school buildings were closed to all staff and students. No teaching and learning provisions were provided to students.	IP1GIAA
	Our school buildings were partially closed. A limited number of staff were onsite to	
b)	facilitate normal [face-to-face] learning for selected groups of students. No remote learning programs were provided to other students.	IP1GIAB
c)	Our school buildings were closed to all students. A remote learning program was	IP1GIAC
-,	implemented to support students.	
d)	Our school buildings were partially closed. A limited number of staff were onsite to facilitate normal [face-to-face] learning for selected groups of students. A remote	IP1GIAD
	learning program was implemented to support all other students.	
e)	Our school buildings remained open for all staff and students and [face-to-face] learning continued, but with significantly changed arrangements (e.g., reduced	IP1GIAE
	number of or shorter lessons, or smaller classes).	
f)	Our school buildings remained open for all staff and students and [face-to-face] learning continued as usual. Some changes were made to school or classroom	IP1GIAF
	teaching arrangements.	LP4 CIA C
g)	There were no changes to the arrangements in response to the COVID-19 pandemic.	IP1GIAG

Qlb	During the [COVID-19 disruption], were there exemptions in case of school closures to allow the attendance at the school for the following groups of students?						
	(Please mark one choice in each row. If your school has not been closed check "Not applicable")						
		Yes	No	Not applicable			
a)	Students with [special needs]			IP1GIBA			
b)	Students considered to be at risk because of their home or personal circumstances			IP1GIBB			
c)	Students of [essential/critical workers]			IP1GIBC			
d)	Students from selected [grade levels]			IP1GIBD			

Q1

		students receive lessons?						
		(Do not count any breaks)						
		(Please mark only one choice in ea	ch row)					
IP1G	:01Δ		Not	9 hours or less	10 to 14 hours	15 to 19 hours	20 to 24 hours	25 hours or more
		Defend the IOOVID 40 dismonting	applicable	,000				
	a)	Before the [COVID-19 disruption]						
	b)	<b>During</b> the [COVID-19 disruption] only through remote learning (e.g.						
IP1G	01B	virtual meetings, telephone calls etc.)						
	c)	<b>During</b> the [COVID-19 disruption]						
IP10	601C1	where there was [face-to-face] learning on school grounds:						
	ci)	(i) through [face-to-face] learning						
	cii)	(ii) through [remote learning]						
IP1G	01C2							
	Q1a	Did your school offer teaching	and learn	ning prov	isions du	ırina the	[COVID-	19
	4.0	disruption]? (Please mark one choice)		<b>9</b> p. o .		g		
	a)	Yes IP2G01A1	□ P	lease go to	the next o	question		
	b)	No	$\Box$ $P$	lease ao to	Question	12		

During a typical school week, for approximately how many hours did [target grade]

Q1a	During the [COVID-19 disruption], on how many days of the week did the school provide remote lessons to students in [target grade]?  (Please mark one choice)					
	1 day		IP1G01AA			
	2 days					
	3 days					
	4 days					
	5 days					
	6 days					

# Q2 During the [COVID-19 disruption], to what extent was your school's capacity to deliver remote teaching limited by the following factors?

		Substantially limited	Somewhat limited	Not limited
a)	Inability to communicate with students and families			IP1G02A
b)	Lack of student access to digital devices			IP1G02B
c)	Lack of teacher access to digital devices			IP1G02C
d)	Lack of student access to the internet			IP1G02D
e)	Lack of teacher access to the internet			IP1G02E
f)	Reliability and/or capacity of internet services for teachers			IP1G02F
g)	Reliability and/or capacity of internet services for students			IP1G02G
h)	Lack of, or poor quality of, [Learning Management Systems] or school learning platforms			IP1G02H
i)	Lack of learning materials for remote teaching (e.g. textbooks, worksheets)			IP1G02I
j)	Difficulty distributing hard-copy resources			IP1G02J
k)	Lack of available teachers			IP1G02K
1)	Lack of teacher experience in remote teaching pedagogy			IP1G02L
m)	Lack of teacher technical skills to manage remote teaching			IP1G02M
n)	Large class sizes			IP1G02N
o)	Privacy/online safety concerns			IP1G02O
p)	Concerns about providing equitable teaching to all students (e.g. students with [special needs] or those from disadvantaged families)			IP1G02P

Q2	During the [COVID-19 disruption], to what extending capacity to deliver remote teaching limited by the	_		
q)	Policies that limit the use of online tools (e.g. limitations on how teachers can interact with students online)			IP1G02Q

## TOPIC 2 Impact on classroom teaching and learning

## Q3 Did your school provide any of the following resources during the [COVID-19 disruption]?

		Yes, this was already provided before the [COVID-19 disruption]	[COVID-19	No	
a)	Internet access for some or all staff				IP1G03A
b)	Internet access for some or all students				IP1G03B
c)	Digital devices for some or all staff				IP1G03C
d)	Digital devices for some or all students				IP1G03D
e)	Virtual Learning Environment or Learning Management System [e.g. Edmodo, Blackboard, Moodle, WebCT, Lotus LearningSpace, COSE]				IP1G03E
f)	Software of programs to ensure online security and safety (e.g. anti-virus or security software or cyber safety protocols)				IP1G03F

## Q4 During the [COVID-19 disruption], did your school make the following resources available to students to support their learning?

		Yes, to all students	Yes, to some students	No
a)	Digital lessons or learning materials created by teachers in the school			IP1G04A
b)	Digital lessons or learning materials created by external providers			IP1G04B
c)	Physically distributed learning materials (e.g. paper-based resources)			IP1G04C
d)	Live virtual lessons were delivered by the students' teachers			IP1G04D
e)	Live virtual teaching support by students' teachers outside of scheduled lesson times			IP1G04E
f)	One-to-one support (e.g. via telephone or virtual meetings)			IP1G04F
g)	Recorded lessons created by teachers			IP1G04G
h)	Support to use internet-streamed audio or video lessons			IP1G04H
i)	Support to use audio or video lessons provided as terrestrial/digital television or radio broadcasts			IP1G04I
j)	Information about available video lessons provided as terrestrial/digital television broadcasts			IP2G04J

# Q5 During the [COVID-19 disruption], how did the time allocated to teachers for the following activities change in comparison to before the [COVID-19 disruption]?

		Substantially increased	Increased to some degree	Did not change	Decreased to some degree	Substantia decrease	•
a)	Delivering teaching						IP1G05A
b)	Preparing lessons						IP1G05B
c)	Meetings with school staff						IP1G05C
d)	Parent/guardian meetings						IP1G05D
e)	Assessing student task completion						IP1G05E
f)	Providing student feedback						IP1G05F
g)	Professional development						IP1G05G

Q6	During the [COVID-19 distortion to teachers to address the	<u>-</u>		-		suppoi	rt
	(Please mark one choice in e	ach row)					
					Yes	No	
a)	Students with mild or modera	te support	needs				IP1G06A
b)	Students with [special needs]			IP1G06B			
c)	Students whose first languag	e is not [ <mark>la</mark>	nguage of instructio	<mark>n</mark> ]			IP1G06C
d)	Students affected by poverty			IP1G06D			
e)	[Students experiencing home	lessness]					IP1G06E
Q7	Do you have students with	[ <mark>special</mark>	<mark>needs</mark> ] in your s	chool?			
	(Please mark one choice)						
	Yes		Please go	to the nex	t quest	tion	
	No		Please	go to Que	stion 9		IP1G07

# Q8 During the [COVID-19 disruption], did your school provide any of the following additional support to students with [special needs]?

		Yes	No	
a)	Home visits by a [special needs education] teacher			IP1G08A
b)	Home visits by a school-based medical professional such as a nurse or therapist			IP1G08B
c)	Provision of specialised ergonomic or technological equipment for educational purposes usually used at school (e.g. assistive technologies including text to speech devices, braille producing/receiving devices)			IP1G08C
d)	Additional guidance for [parents/guardians] to support student learning			IP1G08D
e)	Increased frequency of communication with students by phone or email			IP1G08E
f)	Provision of planning resources such as detailed schedules or timetables to suit students' needs			IP1G08F
g)	Charts to record progress or completion of activities			IP1G08G

# TOPIC 3 Assessment of student learning and provision of feedback to students

## Q9 During the [COVID-19 disruption], were teachers in your school expected to assess student learning in the following ways?

b) Formative and diagnostic assessment approaches (during learning)	
approaches (during learning)  C) Summative assessments (at the end of topics or	P1G09A
	P1G09B
	P1G09C
d) National / [provincial or regional] testing	P1G09D
e) Evaluation of submitted samples of student work	IP1G09E
f) Conduct tests online	P1G09F
g) Conduct tests with students responding on paper	P1G09G
h) Performance and practical assessments	IP1G09H
i) Keep records of student learning progress	IP1G09I

## Q10 During the [COVID-19 disruption], were teachers in your school expected to provide feedback to students in the following ways?

		Expected and required	Expected but not required	Not expected	,
a)	One-to-one virtual meetings				IP1G10A
b)	Small group virtual meetings				IP1G10B
c)	Whole class virtual meetings				IP1G10C
d)	Emails with summary notes and attachments (e.g. annotated feedback on student work samples)				IP1G10D
e)	Phone calls to discuss work				IP1G10E

# Q11 During the [COVID-19 disruption], to what extent did your school implement any of the following policy changes related to assessment and reporting?

		To a large extent	To some extent	Not at all	
a)	Shifting the focus from summative to formative assessments			IP1G11A	١
b)	Changing from grading students to providing more			□ IP1G11B	
D)	informal feedback				
c)	Changing requirements to participate in national			IP1G11C	
	testing programs				
d)	Reducing the scope of reporting requirements			IP1G11D	)

## **TOPIC 4 Teacher professional support**

# Q12 During the [COVID-19 disruption], how did the use of the following resources and activities change in comparison with the time before the [COVID-19 disruption]?

		Not relevant in our school neither before nor during the [COVID-19 disruption]	Substantially increased	Increased to some degree	Did not change	Decreased to some degree	Substantially decreased	
a)	Access to and use of online platforms and tools for self-directed or collaborative learning (online forums, professional learning communities)							IP1G12A
b)	Access to tools that help teachers with remote teaching (e.g. digital lesson planners, online curriculum resources)							IP1G12B
c)	Professional development activities focused on delivering remote teaching							IP1G12C
d)	Resources for effective remote teaching pedagogy							IP1G12D
e)	Peer collaboration opportunities							IP1G12E

## Q13 During the [COVID-19 disruption], to what extent did you feel your school was supported by the following people or organizations?

		Very well	Somewhat	Not at all	
a)	National education authority				IP1G13A
b)	[Provincial education authority]				IP1G13B
c)	Teacher unions				IP1G13C
d)	[Parents/guardians]				IP1G13D
e)	The [local community]				IP1G13E
f)	Teacher subject professional associations				IP1G13F
g)	Commercial educational resource providers (e.g. publishers, subscription services)				IP1G13G

## **TOPIC 5 Home engagement/support**

# Q14 During the [COVID-19 disruption], did your school make use of the following means of communication with students and families?

		Never	Sometimes	Often	
a)	Communicate with students and families through printed letters, notes and newsletters				IP1G14A
L- \					104.04.40
b)	Communicate with students and families via phone calls			Ш	IP1G14B
- \					
c)	Communicate with students and families by email			Ш	IP1G14C
۹/	Communicate with students and families using assist				
d)	Communicate with students and families using social media ([Facebook] etc.), the school website, a school				IP1G14D
	Learning Management System or the intranet				
e)	Conduct virtual information sessions to provide updates				IP1G14E
,	to students and families regarding school closures				
f)	Conduct virtual office hours or meetings with students or				IP1G14F
٠,	their families				11 10141

team

Q15	During the [COVID-19 disruption], did the frequency of the following types of school contacts of [parents/guardians] change in comparison with the time before the [COVID-19 disruption]?  (Please mark one choice in each row)						
		Substantially increased	Increased to some degree	Did not change	Decreased to some degree	Substantially decreased	
a)	Contact with classroom teachers						IP1G15A
b)	Contact with the school administrative staff						IP1G15B
c)	Contact with the school leadership						IP1G15C

# Q16 During the [COVID-19 disruption], did your school provide any of the following support for [parents/guardians]?

			Yes, this was only provided during the		
		[COVID-19 disruption]	[COVID-19 disruption]	No	
a)	Advice on how to plan the school working day				IP1G16A
b)	Information about the curriculum content that students would be covering				IP1G16B
c)	Provision of teaching materials and worksheets				IP1G16C
d)	Advice on how to help children with specific aspects of their schoolwork				IP1G16D
e)	Advice on the amount of work that can be reasonably expected per day				IP1G16E
f)	Explanation of changes in assessment				IP1G16F
g)	Expectations regarding safe and respectful online behaviour				IP1G16G
h)	Advice about how to help their children prepare study plans				IP1G16H
i)	Information about providing emotional support to their children				IP1G16I
j)	Information about support services available to families and children				IP1G16J
k)	Guidelines about how to protect the health of families during the [COVID-19 pandemic]				IP2G16K
l)	Guidelines about how to use digital devices for online learning				IP2G16L
m)	Financial resources for children				IP2G16M

Q17	During tl	he [ <mark>COVID</mark>	-19 disru	ptic	<mark>on</mark> ], to what ex	ctent c	lid pro	visions	of th	e following	}
	support	services	change	in	comparison	with	time	before	the	[COVID-19	)
	disruption	<mark>on</mark> ]?									

		Substantially increased	Increased to some degree	Did not change	Decreased to some degree	Substantially decreased	
a)	Support services for [parents/guardians] of students					IP10	617A
	with [special needs]						
b)	Support services for [parents/guardians] of students whose home language is not [language of instruction]					IP10	617B
c)	Overall provision of support services for [parents/guardians]					IP1	G17C

### **TOPIC 6 Well-being**

## Q18 During the [COVID-19 disruption], did your school provide any of the following support services for staff?

		Yes	No	
a)	Formal support networks such as an [employee assistance program]			IP1G18A
b)	[Peer support system]			IP1G18B
c)	Accommodations for teachers who are primary carers and have children at home			IP1G18C
d)	Professional association links and information such as mental health services			IP1G18D
e)	Access to physical activity resources			IP1G18E
f)	Access to nutritional information and support			IP1G18F
g)	Online well-being management programs and resources (e.g. [National examples])			IP1G18G
h)	Informal/social events such as book club			ID1C10II
•	Training in the support of social and emotion health of others			IP1G18H
i)	5 .FF	Ш		IP1G18I

# Q19 During the [COVID-19 disruption], were there changes in your school's use of the following support resources for students in comparison with the time before the [COVID-19 disruption]?

		Substantially increased	Increased to some degree	Did not change	Decreased to some degree	Substantia decreased	
a)	Counsellors and guidance officers						IP1G19A
b)	Links to mental health support						IP1G19B
c)	Information sheets about coping with [change/stress/isolation]						IP1G19C
d)	Guidance in safe online socialising/respectful online expectations						IP1G19D
e)	Social and emotional support						IP1G19E
f)	Home visits by teachers or specialist school staff						IP1G19F
g)	Telephone counselling sessions						IP1G19G
h)	Work with local support agencies to meet basic needs of students (e.g. food or accommodation)						IP1G19H

## Q20 In your perception, did the following factors have a negative impact on most students during the [COVID-19 disruption]?

		This did not happen at the school	Yes	No	
a)	Reduced [face-to-face] contact with peers				IP1G20A
b)	Changes to daily routines				IP1G20B
c)	Changes in demands of managing workload				IP1G20C
d)	Social isolation				IP1G20D
e)	Reduced contact with teachers				IP1G20E
f)	Reduced contact with other school staff such as chaplains, teacher aides, nurses, therapists				IP1G20F
g)	Reduced access to school physical health and activity resources				IP1G20G

## **TOPIC 7 Persisting influences**

Q21	•	y was closed to st	hool for providing reme tudents for an extended		_	
	Very well prepared	Well prepared	Not very well prepared	Not at all pre	epared	
					IP10	G21
Q22	_	future disruption	owing actions to prepa s such as the one caus			-
				Yes	No	
a)	Training teaching staff	on the use of video	communication programs			IP1G22A
b)	Preparing digital mater existing resources, des		teaching (e.g. modifying			IP1G22B
c)	Preparing paper-based modifying existing reso					IP1G22C
d)	. •	•	ote teaching (e.g. modifying as, assessment policies)	9 🗆		IP1G22D
e)	Preparing digital mate assessment (e.g. [ <mark>quiz</mark>		udent learning via online			IP1G22E
f)	Compiling teaching res	<u> </u>	<mark>guardians</mark> ] to support their			IP1G22F
g)	Ensuring that students	have access to digi	tal resources for online			IP1G22G
h)	Preparing a plan for tracklessroom-based teaction	•				IP1G22H

## Q23 During or following the [COVID-19 disruption], have any of the following changes been made to school policies and procedures? (Please mark one choice in each row)

Yes No Varied school starting times for different groups of students (e.g. by a) IP1G23A class or grade level) Varied break times between classes for different groups of students b) IP1G23B (e.g. by class or grade level) IP1G23C c) Increased hygiene facilities (soap/sanitiser) d) Increased cleaning on school premises IP1G23D [Social distancing] between students e) IP1G23E [Social distancing] between adults f) IP1G23F IP1G23G Smaller class sizes g) IP1G23H h) Increased number of staff i) Continued remote learning option for students IP1G23I IP1G23J j) Supplementing [face-to-face] teaching with remote teaching

# Q24 As a result of the experience during the [COVID-19 disruption], were there any changes in your school's level of priority with respect to the following factors? (Please mark one choice in each row)

		Substantially increased	Increased to some degree	Did not change	Decreased to some degree	Substantially decreased
a)	Developing and implementing new social or emotional learning interventions					IP1G24A
b)	Ensuring students health and safety					IP1G24B
d)	Implementing interventions related to student behaviour					IP1G24C
d)	Promoting student engagement in learning					IP1G24D
e)	Adopting formative or interim assessments					IP1G24E
f)	Preparing for summative or year-end assessments					IP1G24F
g)	Addressing disparities in academic performance among students					IP1G24G
h)	Supporting professional learning for teachers					IP1G24H
i)	Engaging with families					IP1G24I
j)	Planning for future school closures or other emergencies					IP1G24J
k)	Promoting student well-being					IP1G24K
I)	Promoting staff well-being					IP1G24L

## Q25 To what extent do you believe the experience in the [COVID-19 disruption] will have impacted academic outcomes for the following groups of students at your school?

		Substantially increased	Increased to some degree	Did not change	Decreased to some degree	Substantially decreased	
a)	All students						P1G25A
b)	[Target grade] students						P1G25B
c)	Low-achieving students						P1G25C
d)	High-achieving students						P1G25D
e)	Students from low-income backgrounds						21G25E
f)	Students with [special needs]						21G25F
g)	Students whose first language is not the [language of instruction]						21G25G

## TOPIC 8 Provisions following the [COVID-19 disruption]

Q26	Following the [COVID-19 disruption], what teaching and learn provisions for students at [target grade] did your school mak regular ([face-to-face]) teaching?	_	ilitate	
	(Please mark one choice in each row)			
		Yes	No	
a)	Systematic reviews by teachers of the work completed by individual students during the [COVID-19 disruption]			IP1G26A
b)	Assessments of students' achievement following the [COVID-19 disruption]			IP1G26B
c)	Targeted teaching directed to learning areas where student			IP1G26C
d)	achievement had not progressed to the desired extent  Targeted teaching directed to students whose progress during the			IP1G26D
	[COVID-19 disruption] was less than would have been expected			
e)	Provision of supplementary staff or tutoring to assist in classes where students were judged to require additional support			IP1G26E
f)	Reviews of student progression to the next level of school			IP1G26F
g)	Supplementing [face-to-face] teaching with remote teaching			IP1G26G
h)	Partner with external educational services such as tutoring services to help students catch-up			IP1G26H

Q27	Following the [COVID-19 disruption], what provisions to support the social
	and emotional well-being of students at [target grade] did your school
	make to facilitate regular ([face-to-face]) teaching?

		Yes	No	
a)	Developing and implementing additional social or emotional learning interventions			IP1G27A
b)	Additional monitoring of students' health and safety			IP1G27B
c)	Implementing interventions related to student behaviour			IP1G27C
d)	Offering additional support to families regarding student well-being			IP1G27D
e)	Providing activities through which students need to co-operate with each other			IP1G27E
f)	Providing nutrition for students (e.g. lunch programs)			IP1G27F
g)	Organising for other agencies to provide counselling for families where it is thought to be needed			IP1G27G
h)	Contacting agencies that provide food and other essentials to assist families who need help			IP1G27H

### **About You**

, •		
<b>Q28</b>	What is your gender?	IP1G28
	Female	
	Male	
	[Other]	

Q29	How old are you?	104.630	
	(Please mark only one choice)	IP1G29	
	Less than 30		
	30–39		
	40–49		
	50–59		
	60 or over		

## Q30 How many years of work experience do you have as school principal, regardless of whether you worked full-time or part-time?

(Do not include any extended periods of leave such as maternity/paternity leave.)

		2 years or less	3-5 vears	6-10 vears	11-20 vears	21-30 vears	31 Years or more	
a)	Year(s) working as a principal <u>at this</u>							IP1G30A
	school							
b)	Year(s) working as a principal in total							IP1G30B

### Your School

When answering the questions in this section, please refer to the definition of 'school' given in the note at the beginning of this questionnaire.

F	What is the total number of boys and girls in the school? Decord 0 (zero), if none.		
IP1G31A	Total number of girls Total number	er of boys	IP1G31B
	What is the total number of boys and girls in [target grade]?	•	
IP1G32A	Total number of girls Total number	er of boys	IP1G32B
Q33	(a) What is the lowest (youngest) grade that is taught at	your schoo	l?
	(Please mark only one choice)		
	[National Adaptation 1]		
	[National Adaptation 2]		
	[National Adaptation 3]		
	[National Adaptation 4]		104 0004
	[National Adaptation 5]		IP1G33A
	[National Adaptation 6]		
	[National Adaptation 7]		
	[National Adaptation 8]		
	(b) What is the highest (oldest) grade that is taught at yo	ur school?	
	(Please mark only one choice)		
	[National Adaptation 9]		
	[National Adaptation 10]		
	[National Adaptation 11]		IP1G33B
	[National Adaptation 12]		
	[National Adaptation 13]		
	[National Adaptation 14]		

## Q34 Which of the following best describes where your school is located?

			٦	
	(Please mark only one choice)	IP1G34		
	In a community with fewer than 3,000 people			
	In a town with at least 3,000 but less than 15,000 peo	pple		
	In a town with at least 15,000 but less than 100,000 p	eople		
	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			
Q34a	Is your school a public or a private school?			
	(Please mark only one choice)	IP1G34A		
	A public school			
	(This is a school <u>managed</u> directly or indirectly by a part authority, government agency, or governing board, a government or elected by public franchise.)		on $\square$	
	A private school			
	(This is a school <u>managed</u> directly or indirectly by a r organisation; for example, a church, trade union, bus	_		

#### Q35 Please estimate the percentage of students at your school who have the following characteristics. (Please consider that students may fall into multiple categories.) (Please select one response in each row.) Less than More than 26-50% 5-10% 11-25% 50% 5% a) Students whose [heritage language] is IP1G35A different from [language of instruction] b) Students with [special needs] (i.e. IP1G35B according to official criteria) Students from socioeconomically c) IP1G35C disadvantaged homes d) Students from socioeconomically IP1G35D affluent homes e) Students with an immigrant background IP1G35E (i.e. where both [parents/guardians] were born in another country) IP1G35F f) Students from single-parent households **Q36** What was the average class size in [target grade] at your school before the [COVID-19 disruption]? (Please mark only one choice) **IP1G36** 15 students or fewer 16-20 students 21-25 students 26-30 students 31-35 students

More than 35 students

#### Q37 What is the total number of teachers in your school?

Total number of teachers	IP1G37A					
Approximately what proportion of these teachers are full-time teachers?						
A full-time teacher is employed on a regular basis as a teacher for at least 90% of full-time						
hours for the full school year. All other teachers should	hours for the full school year. All other teachers should be considered part-time.					
Percentage of full-time teache	ers IP1G37B					

## THANK YOU FOR YOUR TIME AND EFFORT IN COMPLETING THIS QUESTIONNAIRE

### **Teacher Questionnaire**

# RESPONSES TO EDUCATIONAL DISRUPTION SURVEY

### **Teacher Questionnaire**

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#### RESPONSES TO EDUCATIONAL DISRUPTION SURVEY

#### [INTRODUCTION FOR TEACHERS TO THE QUESTIONNAIRE]

This questionnaire is concerned with the disruption to school education as a direct result of the impact of the COVID-19 pandemic.

In this questionnaire you will find questions about:

- Impact on classroom teaching and learning
- Assessment of student learning and provision of feedback to students
- Teacher professional support
- Home engagement and support
- Well-being
- Persisting influences
- You

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.

#### Reference period: The [COVID-19 disruption]

Many questions in this survey focus on a specific time period, referenced in this questionnaire as the "[COVID-19 disruption]". You will remember that [most] schools in [country] closed for [the majority of students] in the last school year between [choose a date or approximate time range such as "mid-March"] and [choose a date or approximate time range such as "mid-May"]. Teaching and learning occurred [mostly] outside of school buildings in this period. When responding with regard to the [COVID-19 disruption], please refer to this period.

Q1	On a typical school day, approximately how many minutes did you spend teaching
	students for the following periods of time?

(Please round to the nearest 60 minutes. Do not count any breaks) (Please mark only one choice in each row)

		NA	60 minutes	120 minutes	180 minutes	240 minutes	300 minutes	360 minutes or more
IT1G01A a)	<b>Before</b> the [COVID-19 disruption] through [face-to-face] teaching on school grounds							
IT1G01B b)	<b>During</b> the [COVID-19 disruption] through remote teaching (with students at home/not on school grounds)							
IT1G01C <sup>C)</sup>	<b>During</b> the [COVID-19 disruption] through [face-to-face] teaching on school grounds							

#### Your class

Many questions in the questionnaire focus on teaching. You may have been teaching several different subjects, classes, and grades during the [COVID-19 disruption]. However, when answering such questions below, please think of the subject that you taught most (i.e. other than home room, assembly) in the [target grade] before the [COVID-19 disruption] started. We would like you to refer to this subject and grade even if your teaching assignments have changed during the [COVID-19 disruption]. Whenever we would like you to think specifically about this class, we will refer to "your class".

## Q2 Determining *your class*: what is the subject that you taught most at [target grade] before the [COVID-19 disruption] started?

	. ~	_	~
$\Pi \Pi$	LG	U	2

(Please mark only one choice. If you do not find the exact name of the subject, please mark the category you think best fits. If you teach one or more subjects equally, please mark the subject with lessons that you will easiest remember.)

[Language arts: test language]	
[Language arts: foreign or other national languages]	
Mathematics [Add any appropriate national examples]	
Sciences (general science and/or physics, chemistry, biology, geology, earth sciences, technical science)	
Human sciences / Humanities / Social Studies (history, geography, civics, law, economics, etc.)	
Creative arts (visual arts, music, dance, drama, etc.)	
[Information technology, computer studies or similar]	
Practical and vocational subjects [Add any appropriate national examples]	
Other (e.g. [moral/ethics, physical education, personal and social development, learning support])	

### **TOPIC 1 - IMPACT ON CLASSROOM TEACHING AND LEARNING**

Q3a	During the [COVID-19 disruption] did yo	u teach you	ur class remotely?
	(Please mark only one choice)		IT1G03A
	Yes, using online (computer-based) methods only		Go to question 3b
	Yes, using online (computer-based) and offline methods (non-computer-based, e.g. sending paper-materials home, telephone based teaching)		Go to question 3b
	Yes, using offline methods only (non- computer-based, e.g. sending paper- materials home, telephone based teaching)		Go to question 4
	No		Go to question 4

## Q3b To what extent each of the following statements describe your experience of teaching *your* class online?

		To a large extent	To some extent	To a limited extent	Not at all
IT1G03BA a)	Students often failed to connect their computer to the lessons.				
IT1G03BB b)	Students who had connected did not engage with their lessons.				
IT1G03BC c)	I spent a significant amount of time teaching students how to use the software before they could complete their work.				
IT1G03BD d)	I found that all my lessons were very similar to each other.				
IT1G03BE e)	I found it difficult to use software to put files and lessons online.				
IT1G03BF f)	I gave instructions that were the same as in my regular teaching.				
IT1G03BG g)	I taught in small groups rather than teaching the whole class.				
IT1G03BH h)	I tried activities that I had not used before.				

## Q3c Did the following conditions apply to your personal working circumstances during the [COVID-19 disruption]?

	(Please mark one choice in each row)	Yes, all of the time	Yes, part of the time	No
a)	My school provided me with the office infrastructure to assist with teaching from home.			IT1G03CA
b)	I lived with one or more adults all of whom were working from home.			ПТ
c)	I had one or more children who normally would be looked after at my home by other adults when I am at work.			IT1G03CC
d)	I had one or more children at home who would normally be in childcare or [pre-school].			IT1G03CD
e)	I had one or more school-aged children at home who were being taught by remote learning.			IT1G03CE
f)	I had one or more school-aged children at home who would normally be at school but were <b>not</b> being taught by remote learning.			∏1G03CF
g)	I had one or more children with [special needs/disabilities] who would normally be cared for outside of the home when I am at work.			IT]G03CG
h)	I was living alone.			IT1G03CH
i)	I was frequently interrupted by other people in my household when I was teaching or preparing lessons.			IT1G03CI
j)	I found it easy to balance my teaching work with my other responsibilities at home.			IT1G03CJ

# Q4 To what extent do you agree or disagree with the following statements regarding your delivery and planning of [curriculum content] to your class during the [COVID-19 disruption]?

		Strongly agree	Agree	Disagree	Strongly disagree
a)	I followed the regular [curriculum content] without				IT1G04A
	change.				
b)	I was able to deliver the [curriculum content] at the				IT1G04B
	same pace as I did before the [COVID-19 disruption].				
c)	I reduced the [curriculum content] to the most essential elements.				IT1G04C
					- IT4 CO4D
d)	I was able to teach [curriculum content] relating to practical skills and activities.				IT1G04D
- \					□ IT1G04E
e)	I taught highly modified practical components of the [curriculum content].				1110046
	[curriculum content].				
f)	I had to modify the [curriculum content] for individual				IT1G04F
-,	students in new ways for the [COVID-19 disruption].				
۳\	It to all times to adopt well account to a more delivery				□ IT1G04G
g)	It took time to adapt my lessons to a new delivery mode.				1110040
	mode.				
h)	I spent more time planning lessons than before the				IT1G04H
	[COVID-19 disruption].				
i)	I developed lessons with content that was outside the				IT1G04I
ŕ	formal curriculum.				Ш
j)	I was able to deliver enough content to my students to				□ IT1G04J
J <i>)</i>	meet the requirements of the curriculum.				

# Q5 During the [COVID-19 disruption], were there any changes to the time you spent on the following activities related to *your class* in comparison with time spent before the [COVID-19 disruption]?

		Substantially increased	Increased to some degree	Did not change	Decreased to some degree	Substantially decreased
a)	Preparing lessons for the whole class					IT1G05A
b)	Managing student behaviour					IT1G05B
۵)	Managing stadent benaviour			Ш		1110032
c)	Modifying work to suit the needs of individual students					IT1G05C
d)	Modifying teaching activities					IT1G05D
u)	that you have used before the [COVID-19 disruption]					1110035
e)	Using materials provided by					IT1G05E
-,	the school					
f)	Assisting students on a one-					IT1G05F
,	on-one basis					
g)	Looking for new teaching					IT1G05G
	materials or activities					
h)	Creating new teaching					IT1G05H
	materials or activities					
i)	Assessing student learning					IT1G05I
j)	[ <mark>Marking/grading</mark> ] student					IT1G05J
	work					

# Q6 To what extent do you agree or disagree with the following statements about the quality of teaching and learning in *your class* during the [COVID-19 disruption]?

		Strongly agree	Agree	Disagree	Strongly disagree	
a)	I have been able to teach to the same standard as before the [COVID-19					IT1G06A
	disruption].					
b)	My students have shown the same rate of					IT1G06B
	learning growth as before the [COVID-19 disruption].				_	
c)	My students have been able to access the					IT1G06C
	necessary teaching and learning resources.					
d)	The materials I have provided to my students					IT1G06D

# Q7 To what extent do you agree or disagree with the following statements about your capacity to support students of *your class* during the [COVID-19 disruption]?

		Strongly agree	Agree	Disagree	Strongly disagree
a)	It was difficult to provide students with [special needs] the assistance they required.				IT1G07A
b)	It was difficult to provide lower achieving students with the learning support they required				IT1G07B
c)	It was difficult to provide vulnerable students (e.g. students with emotional or behavioural problems or unstable home environments) with the support they required.				IT1G07C
d)	I did not have enough time to provide differentiated teaching to suit the individual needs of my students.				IT1G07D
e)	Students were appropriately challenged by the work given to them.				IT1G07E

# Q8 During the [COVID-19 disruption], where there any changes in the following aspects of student learning and engagement in *your class* in comparison with the time before the [COVID-19 disruption]?

	`	Substantially increased	Increased to some degree	Did not change	Decreased to some degree	Substantially decreased
a)	Student attendance					IT1G08A
b)	Student learning					IT1G08B
c)	Student [engagement] during lessons					IT1G08C
d)	The amount of work students produced					IT1G08D
e)	Student discipline					IT1G08E

# **T**OPIC **2** — **A**SSESSMENT OF STUDENT LEARNING AND PROVISION OF FEEDBACK TO STUDENTS

Q9 To what extent do you agree or disagree with the following statements about the assessment of student learning in *your class* during the [COVID-19 disruption]?

		Strongly agree	Agree	Disagree	Strongly disagree
a)	I used the same types of assessment of students' learning that I typically used before the [COVID-19 disruption].				IT1G09A
b)	Students completed assessment tasks with the same regularity as before the [COVID-19]				IT1G09B
c)	disruption].  The assessments I used during the [COVID-19 disruption] allowed me to appropriately monitor				IT1G09C
d۱	student learning.				d
d)	I adapted assessments used before the [COVID-19 disruption] to suit the changed delivery mode as required.				IT1G09D
e)	I had adequate time to conduct assessments of my students.				IT1G09E
f)	Assessing students with [special needs] was more difficult than before.				IT1G09F
g)	Students' overall results from assessments are an accurate reflection of progression in their				IT1G09G
h)	learning over the [COVID-19 disruption].  Assessing the practical aspects of student work (e.g. science experiments, art projects, music performances) was especially difficult.				[ ІТ1G09Н

# Q10 During the [COVID-19 disruption], were there any changes to your provision of feedback to students in *your class* in comparison with time before the [COVID-19 disruption]?

		/Increased to some degree	Did not change	Decreased to some degree	Substantially decreased
a)	Individualised verbal feedback on tasks during lessons				IT1G10A
b)	Verbal feedback to small groups during lessons				IT1G10B
c)	Feedback on work with reference to [assessment criteria]				IT1G10C
d)	Feedback delivered via students' school emails or messaging				IT1G10D
e)	Feedback delivered through students' accounts on the school [Learning Management System] (e.g. [Google Classroom, SeeSaw]).				IT1G10E
f)	Feedback on observed performance on practical tasks (e.g. science experiments, art projects, music performances)				IT1G10F
g)	The time between students submitting work and my feedback to students on their work.				IT1G10G
h)	The time it took me to explain my feedback to students				IT1G10H
i)	The frequency with which I gave feedback to students				IT1G10I
j)	The amount of feedback I provided to				IT1G10J

### **TOPIC 3 - TEACHER PROFESSIONAL SUPPORT**

### Q11 Have you undertaken professional learning in the following areas?

	(Please mark one choice in each row)	Yes, before the [COVID-19 disruption]	Yes, during or after the [COVID-19 disruption]	No, I have never undertaken professional learning in this area
a)	Working with vulnerable students (e.g. students with emotional or behavioural problems or unstable home environments)			IT1G11A
b)	Using ICT in teaching			IT1G11B
c)	Professional learning specific to the subject(s) you teach			☐ IT1G11C
d)	Teaching classes in which the students have a wide range of achievement			IT1G11D
e)	Online safety			IT1G11E
f)	Developing student [resilience]			IT1G11F
g)	Student well-being			☐ IT1G11G
h)	Teacher well-being			☐ IT1G11H
i)	Students with [special needs]			IT1G11I

## Q12 To what extent did you engage in the following professional learning activities during the [COVID-19 disruption]?

		To a large extent	To some extent	To a small extent	Not at all
a)	Participation in a mentoring program with other teaching staff				Tr1G12A
b)	Participation in training run by teachers or other staff in your school				Tr1G12B
c)	Participation in courses provided by your school's education system				T1G12C
d)	Self-teaching using publicly available materials from the internet				TIT1G12D
e)	Participation in courses provided by a [university or college]				Tr1G12E
f)	Participation in courses provided by a subject association				TT1G12F
g)	Participation in courses provided by				∏r1G12G

# Q13 During the [COVID-19 disruption], were there any changes in the time you spend participating in the following activities in comparison with the time before the [COVID-19 disruption]?

		Substantially <sup>Ir</sup> increased	ncreased to some degree	Did not change	Decreased to some degree	Substantially decreased
a)	Meeting with other teachers of my subject (in person or remotely)					IT1G13A
b)	Meeting or working with teachers at the [target grade] (in person or remotely)					IT1G13B
c)	Meetings of the whole school teaching staff (in person or remotely)					IT1G13C

### **TOPIC 4 - HOME ENGAGEMENT/SUPPORT**

# To what extent did you provide support or information about the topics listed below to students of *your class* and their families during the [COVID-19 disruption]?

		To a large extent	To some extent	To a small extent	Not at all
a)	Emotional well-being				IT1G14A
b)	Health (including information about [the COVID-19 pandemic])				IT1G14B
c)	Nutrition				IT1G14C
d)	Access to learning materials				IT1G14D
e)	Study skills and strategies				IT1G14E
f)	Organisation of school days				IT1G14F
g)	Access to welfare agencies				IT1G14G
h)	Advice about how to access financial support				IT1G14H

Q15 During the [COVID-19 disruption], were there any changes in the frequency of communication you had with [parents/guardians] of your class using the resources listed below in comparison with the time before the [COVID-19 disruption]?

		Substantially increased	Increased to some degree	Did not change	Decreased to some degree	Substantially decreased
a)	The school's email system					IT1G15A
b)	Features within the school's [Learning Management System/school intranet]					IT1G15B
c)	SMS or messaging (outside of the school's learning management system)					IT1G15C
d)	Social media sites (outside of the school's learning management system)].					IT1G15D
e)	The postal service					IT1G15E
f)	Video calls					IT1G15F
g)	Telephone calls					IT1G15G
h)	[Face-to-face] meetings at the school					☐ IT1G15H
i)	[Face-to-face] meetings outside of the school					IT1G15I

#### TOPIC 5 – [WELL-BEING]

#### Q16 To what extent do you agree or disagree with the following statements about your [well-being] during the [COVID-19 disruption]?

		Strongly agree	Agree	Disagree	Strongly disagree
a)	I had concerns about catching [COVID-19] at work.				TT1G16A
b)	I was satisfied with the infection control protocols being implemented at my school.				IT1G16B
c)	I knew where to find assistance to support my wellbeing.				IT1G16C
d)	I was able to cope with changes in teaching and learning methods.				IT1G16D
e)	I was able to meet all the requirements of my job.				IT1G16E
f)	I felt I needed assistance to support my [well-being].				IT1G16F
g)	I was able to use my own methods ([e.g. meditation]) to cope with stress.				IT1G16G
h)	I had time to interact socially with my colleagues.				IT1G16H
i)	I was able to maintain my normal exercise and health routines.				IT1G16I
j)	I felt fatigued most of the time.				IT1G16J
k)	I was able to balance the needs of my work and personal responsibilities.				IT1G16K
l)	My sleep patterns were interrupted.				TT1G16L
m)	I felt isolated whilst working at home.				IT1G16M
n)	I felt in control of my working environment when I was working from home.				IT1G16N

Q17 During the [COVID-19 disruption], were there any changes in the amount of time you spent per week on the following activities related to your work in comparison with the time before the [COVID-19 disruption]?

		Substantially increased	Increased to some degree	Did not change	Decreased to some degree	Substantially decreased	
a)	Communicating with parents					IT1G17A	
b)	Assisting students with their well- being					IT1G17B	_
c)	Replacing absent teachers of other classes in my subject area(s)					IT1G17C	_
d)	Replacing absent teachers of classes outside my subject areas(s)					IT1G17D	_
e)	Attending meetings of the teaching staff					IT1G17E	_
f)	Providing support for other teachers					IT1G17F	_

# Q18 To what extent do you agree or disagree with the following statements about the support offered or given to you by others during the [COVID-19 disruption]?

		Strongly agree	Agree	Disagree	Strongly disagre	
a)	I felt supported by the school leadership.					IT1G18A
b)	I felt supported by my [colleagues].					IT1G18B
c)	I felt supported by the (state/country/region) [education system].					IT1G18C
d)	I felt that the set of support mechanisms offered by my school were sufficient.					IT1G18D
e)	I felt I needed to ask for professional support outside of my school.					IT1G18E
f)	I felt supported by my social network outside of school (e.g. family and friends).					IT1G18F
g)	I felt supported by the [local community]					IT1G18G

#### TOPIC 6 Transitioning back to regular teaching

Q19	Following the [COVID-19 disruption], to what extent did you use the following methods to facilitate the transition of students from the COVID						
	19 disruption] to regular lessons?  (Please mark one choice in each row)	Yes, to a large extent	Yes, to some extent	No			
IT1G19A a)	Systematic reviews of individual student content coverage during the [COVID-19 disruption].						
IT1G19B b)	Assessments of students' achievements following the [COVID-19 disruption].						
IT1G19C C)	Targeted teaching directed to learning areas where student achievement had not progressed to the desired extent.						
IT1G19D d)	Targeted teaching directed to students whose progress during the [COVID-19 disruption] was less than would have been expected.						
IT1G19E e)	Provision of additional work to students requiring additional learning support.						
IT1G19F f)	Spending time talking with students about their well-being.						
IT1G19G g)	Referral of some students to [well-being support] available within the school.						
IT1G19H h)	Referral of some students to additional [well-being support] from agencies outside the school.						

# Q20 Following the [COVID-19 disruption], to what extent do you agree or disagree with the following statements with respect to your class when they returned to regular lessons at school?

	(Please mark one choice in each row)	Strongly agree	Agree	Disagree	Strongly disagree	
a)	Students had not progressed to the extent that I would have normally					IT1G20A
	expected at this time of year.				_	
b)	Students were not as engaged in					IT1G20B
	school work as they were before the [COVID-19 disruption].					
c)	Students found it difficult to focus on tasks that they were assigned.					IT1G20C
۹/	•					IT1G20D
d)	Students did not interact as effectively with their classmates as they did before the [COVID-19 disruption].					
e)	Students found it difficult to re-adjust to the classroom setting.					IT1G20E
f)	Students worked more slowly on tasks					IT1G20F
•	than they did prior to the [COVID-19 disruption].				ا	
g)	Students seemed pleased to be back in their classrooms					IT1G20G
h)	Students seemed to be more anxious					IT1G20H
,	than they were before the [COVID-19 disruption].					

# Reflecting on your experience of the [COVID-19 disruption], how important do you believe will the following practices or procedures be to your teaching in the future?

	(Please mark one choice in each row)			
		Very important	Somewhat important	Not at all import <u>ant</u>
a)	Online individual teaching			IT1G21A
b)	Online small group teaching			IT1G21B
c)	Submission of student work for assessment online			IT1G21C
d)	Regular digital communication with parents			IT1G21D
e)	Regular digital communication with students			IT1G21E
f)	A blend of online learning and face-to-face teaching			IT1G21F
g)	An increased shift in focus to student well-being			☐ IT1G21G
h)	New educational digital tools that I learned to use			IT1G21H
i)	New approaches to teaching and learning			□ IT1G21I
j)	Implementing procedures for personal data security and cyber safety			IT1G21J
k)	Educational broadcasts transmitted via television			□ IT2G21K
I)	Educational broadcasts transmitted via radio			IT2G21L

#### **A**BOUT **Y**OU

Q22	What is your ge	nder?	IT1G22
	(Please mark only	one choice)	
		Female	
		Male	
		[Other]	
000	Have ald an very	.0	
Q23	How old are you		IT1G23
	(Please mark only o	one choice)	
	Less than 25		
	25–29		
	30–39		
	40–49		
	50–59		
	60 or over		

# Q24 What was your employment status as a teacher during the [COVID-19 disruption] and what is your current employment status as a teacher?

(Please consider all your teaching employments during the [COVID-19 disruption] together. Please mark only one choice in each row)

	Full time (90% or more effective full time hours)	Part time (less than 90% effective full time hours	
During the [COVID-19 disruption]		IT1G24A	
Current		IT1G24B	

#### Q25 How many years altogether have you been teaching?

(Please mark only one choice)					
Less than 1 year		IT1G25			
1–2 years					
3–5 years					
6–10 years					
11–20 years					
Over 20 years					

#### **Q26** Do you formally hold any of the following administrative or leadership duties at the current school where you work? (Please mark one choice in each row) Yes No Coordinator of a [subject/area] within or across [grade] levels IT1G26A a) Coordinator of a non-teaching area (e.g. [Well-being, Careers]) b) IT1G26B Coordinator of a [grade] level c) IT1G26C Coordinator of a [sub-school] (e.g. [junior years, middle years, d) IT1G26D senior years]) **Q27** On a typical school week, what proportion of your teaching time was spent teaching [subjects or areas] that you do not have any formal training or qualifications in? (Please mark only one choice in each row) All of my Less than More than teaching About half None half half time **Before** the [COVID-19 disruption] IT1G27A a) **During** the [COVID-19 disruption] IT1G27B b)

THANK YOU FOR YOUR TIME AND EFFORT IN COMPLETING THE QUESTIONNAIRE

#### **Student Questionnaire**

# RESPONSES TO EDUCATIONAL DISRUPTION SURVEY

#### Student Questionnaire

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#### RESPONSES TO EDUCATIONAL DISRUPTION SURVEY

#### [INTRODUCTION FOR STUDENT TO THE QUESTIONNAIRE]

This questionnaire is about the disruption to school education as a direct result of the impact of the COVID-19 pandemic.

Many questions in this survey focus on a specific time period called "[COVID-19 disruption]" in this questionnaire. You will remember that [most] schools in [country] closed for [the majority of students] in the last school year between [choose a date or approximate time range such as "mid-March"] and [choose a date or approximate time range such as "mid-May"]. Teaching and learning occurred [mostly] outside of school buildings in this period. When responding with regard to the [COVID-19 disruption], please refer to this period.

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 'l've finished' at the end of the questionnaire.

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.

#### How teaching and learning changed due to COVID-19

Q1	Where did you attend school lessons during disruption]?  (Please mark only one choice)	the [COV	<mark>/ID-19</mark>
0)	I did not do any schoolwork during the [COVID-19 disruption]> Please go to question 23		0
a)	I continued to come to school for all my lessons.		1
b)	I did <b>not</b> come to school for any of my lessons and attended my lessons from a place away from my school (e.g. at home or another location).		2
c)	I came to school for some lessons but attended <b>most lessons in a place away from my school</b> (e.g. at home or another location).		3
d)	I came to school for most lessons but attended some lessons in a place away from my school (e.g. at home or another location).		4
e)	I came to school for about half of my lessons and attended other lessons in a place away from my school (e.g. at home or another location).		5

Some of the questions that follow ask you about your 'home' as a place you might have attended lessons and done your schoolwork during the [COVID-19 disruption].

In cases where you did your schoolwork outside of school at a place that was not your home (e.g. at someone else's home), please think about this other place when answering these questions.

Q2	During the [COVID-19 disruption], discrepance of ICT devices at home?  (Please mark one choice in each row)	id you have ac	cess to t	he following	
,	Dockton or Henter		Yes	No	S1G02A
a)	Desktop or [ <mark>laptop</mark> ] computers				
b)	Tablet devices (e.g. [iPad, Tablet PC])				S1G02B
c)	Smart phones				S1G02C
Q3	During the [COVID-19 disruption], at home?	did you have a	iccess to	the internet	
	(Please mark only one choice)		IS1G0	13	
a)	Yes, it worked well all the time		13100		
b)	Yes, it worked well most of the time				
c)	Yes, but it did not work very well.				
d)	No				

### Q4 In comparison with the time before the [COVID-19 disruption], how much did your use of the following resources for schoolwork change?

		I did not have access to this resource	It increased during the [COVID-19 disruption]	It stayed the same during the [COVID-19 disruption]	It decreased during the [COVID-19 disruption]	
a)	Desktop or [ <mark>laptop</mark> ] computers					IS1G04A
b)	Tablet devices (e.g. [iPad, Tablet PC])					IS1G04B
c)	Smart phones					IS1G04C
d)	Internet					IS1G04D
e)	Printed resources (e.g., text books, library books, work sheets)					IS1G04E
f)	Lessons provided as radio broadcasts					IS2G04F
g)	Lessons provided as television broadcasts					IS2G04G
Q5	During the [COVID-19 disruptiuse at home? (Please mark one choice in each ro	ow)			es did yo	u
				Yes but it did not work well	No	
a)	A computer or tablet device used of by me	only [				IS1G05A
b)	A computer or tablet device that was shared with others in my home	as [				IS1G05B
c)	A smart phone					IS1G05C

Q6 During the [COVID-19 disruption], how much of the schoolwork you completed at home was done using [pen/pencil] and paper?  (Please mark only one choice)						
	All of my schoolwork		IS1G	06		
	Most of my schoolwork					
	Some of my schoolwork					
	None					
Q7	Before, during and after the you do each of the following	_	<mark>sruption</mark> ], how	well could		
	(Please mark one choice in eac	h row)				
		I already knew how to do this before the [COVID-19 disruption]	I learned how to do this during the [COVID-19 disruption]	I still do no know how t do this		
a)	Connect a device to the internet				IS1G07A	
b)	Send and receive email				IS1G07B	
c)	Log into my [ <mark>school portal or learning system</mark> ]				IS1G07C	
d)	Take photos, or record video or audio of my learning				IS1G07D	
e)	Manage settings on a device to access school software				IS1G07E	
f)	Send photos, videos or audio of my learning				IS1G07F	
g)	Use applications such as [Seesaw and Google classrooms] to communicate with my teacher				IS1G07G	
h)	Maintain devices (e.g. update apps, check storage space)				IS1G07H	
i)	Fix problems when my device is not working properly.				IS1G07I	

#### **REDS Student Questionnaire**

J)	Sending and receiving text, audio or video messages (e.g. using [WhatsApp]		IS2G07J
Q8	Think about the computer application your lessons and schoolwork during		1
	How well did these computer applica (Please mark only one choice)	S1G08	
	They all worked well		
	Most of them worked well		
	Some of them worked well		
	None of them worked well		
	I did not use any computer applications		

### Q9 During the [COVID-19 disruption], how often did you use the following forms of communication with your teachers and classmates?

		Never	Rarely	Sometimes	Often
a)	Videoconferencing (e.g. using [Zoom, MS Teams]) with the whole class for an entire [lesson/period]				IS1G09A
b)	Videoconferencing (e.g. using [Zoom, MS Teams]) with the whole class for part (but not all) of my normal [lesson/period]				IS1G09B
c)	Videoconferencing (e.g. using [Zoom, MS Teams]) with my teacher and small groups of students				IS1G09C
d)	Sharing ideas about our schoolwork with other students using a computer				IS1G09D
e)	Individual videoconferencing (e.g. using [Zoom, MS Teams]) with a teacher				IS1G09E
f)	Communicating with a teacher using emails				IS1G09F
g)	Having a phone conversation with a teacher				IS1G09G
h	Receiving materials on the computer that I needed to print (e.g. worksheets or reference material)				IS1G09H
i)	Receiving printed materials from my school (e.g. worksheets or reference material)				IS1G09I
j)	Receiving short instructional videos (e.g. how to complete a practical task or an explanation of a topic)				IS1G09J
k)	Receiving information/materials related to my schoolwork through Radio or TV				IS1G09K
I)	Communicating with a teacher using a messaging service such as [WhatsApp]				IS2G09L

# Q10 During the [COVID-19 disruption], how much did you like using each of the following forms of communication with your teachers and classmates?

		We did not do this at my school	l liked it a lot	l liked it a little	l did not lik at all	e it
a)	Videoconferencing (e.g. using [Zoom, MS Teams]) with the whole class for an entire [lesson/period]					IS1G10A
b)	Videoconferencing (e.g. using [Zoom, MS Teams]) with the whole class for part (but not all) of my normal [lesson/period]					IS1G10B
c)	Videoconferencing (e.g. using [Zoom, MS Teams]) with my teacher and small groups of students					IS1G10C
d)	Sharing ideas about our schoolwork with other students using a computer					IS1G10D
e)	Individual videoconferencing (e.g. using [Zoom, MS Teams]) with a teacher					IS1G10E
f)	Communicating with a teacher using emails					IS1G10F
g)	Having a phone conversation with a teacher					IS1G10G
h)	Receiving materials on the computer that I needed to print (e.g. worksheets or reference material)					IS1G10H
i)	Receiving printed materials from my school (e.g. worksheets or reference material)					IS1G10I
j)	Receiving short instructional videos (e.g. how to complete a practical task or an explanation of a topic)					IS1G10J
k)	Receiving information/materials related to my schoolwork through Radio or TV					IS1G10K
l)	Communicating with a teacher using a messaging service such as [WhatsApp]					IS2G10L

### Q11 During the [COVID-19 disruption], how often did you receive materials for your lessons in the following ways?

	lessons in the following ways?			
	(Please mark one choice in each row)			
		Never	Sometimes	Often
a)	They were delivered to me by post, school staff or another member of the community (e.g. another parent)			IS1G11A
b)	I collected them directly from the school.			
c)	I used a school-based online platform e.g. [Compass, Seesaw].			S1G11C
d)	I received them by email.			IS1G11D
e)	They were sent by other online methods (e.g. through [Google Drive, Microsoft One Drive]).			IS1G11E
f)	I received them through a messaging service such as [WhatsApp].			IS2G11F

### Q12 During the [COVID-19 disruption], how often did you do the following activities related to your schoolwork?

		Never	Rarely	Sometimes	Often
a)	Research on the internet				IS1G12A
b)	Work from textbooks				IS1G12B
c)	Performance (dancing, role play) or physical activities				IS1G12C
d)	Activities where I used common household items to build models or experiments				IS1G12D
e)	Revision of work from lessons completed before the [COVID-19 disruption]				IS1G12E
f)	Working with other students				IS1G12F
g)	Asking for help from [parents/guardians], other adults or other members of my family				IS1G12G

## Q13 During the [COVID-19 disruption], how often did you use the following learning resources when doing schoolwork or attending lessons?

		Never	Rarely	Sometimes	Often
a)	Tutorial software or [practice programs]				IS1G13A
b)	Computer-based information resources (e.g. websites, wikis, encyclopaedia)				IS1G13B
c)	Interactive digital learning resources (e.g. learning games or applications)				S1G13C
	learning games or applications)				
d)	Digital textbooks				IS1G13D
e)	Printed textbooks				IS1G13E
					_
f)	Printed worksheets				☐ IS1G13F

## Q14 To what extent do you agree or disagree with the following statements about your learning during the [COVID-19 disruption]?

		Strongly agree	Agree	Disagree	Strongly disagree	
a)	I found it hard to understand the schoolwork my teachers gave me.					IS1G14A
b)	I learned more studying at home than when attending regular lessons at school.					IS1G14B
c)	I was able to complete my schoolwork without having to ask anyone to help me.					IS1G14C
d)	I was unable to get help for my schoolwork from a teacher or [school support staff].					IS1G14D
e)	I needed other people at home to help me complete my schoolwork.					IS1G14E
f)	I needed to contact my classmates to help me complete my schoolwork.					IS1G14F
g)	I found it difficult to get extra or different types of work from my teachers.					IS1G14G
h)	I only did the work that I had to submit to my teacher.					IS1G14H
i)	I got [higher grades] than before the [COVID-19 disruption].					IS1G14I

f)

g)

h)

Help to use the school computer

Teaching of additional skills that were

not part of my school assignments

systems (e.g. email, learning

management system)

#### During the [COVID-19 disruption], who was available to help you with your schoolwork at home?

(Please mark one choice in each row) Often or Never Sometimes always a) My [parent(s) or guardian(s)] was/were IS1G15A П available and could help me with my schoolwork. b) Older siblings were available and could **IS1G15B** help me with my schoolwork. c) People other than my [parents/guardians] or siblings were IS1G15C available and could help me with my schoolwork. d) There was no one available who could IS1G15D help me with my schoolwork. Q16 During the [COVID-19 disruption], how much additional help did you receive with your schoolwork from other people? (Please mark one choice in each row) A small A moderate None amount amount A lot Help to find or access my schoolwork on IS1G16A a) computer Help to plan my schoolwork for the day IS1G16B b) Explanations of my schoolwork when IS1G16C c) needed IS1G16D Study advice or tips d) Help to do research IS1G16E e) Encouragement to stay on task

IS1G16F

IS1G16G

IS1G16H

# Q17 For how much of the time during the [COVID-19 disruption] do each of the following statements apply to your learning at home?

		Never or hardly ever	Sometimes	Most of the time	e Always
a)	I had a quiet space to work with a desk and chair.				IS1G17A
b)	I felt safer at home than I usually feel at school.				IS1G17B
c)	I had to look after my siblings.				IS1G170
d)	I had to look after a sick or elderly relative.				IS1G17D
e)	I felt I did not have the things I needed to complete my schoolwork at home.				IS1G17E
f)	I was happy to be at home.				IS1G17F
g)	I missed meals at home because I rely on the [meals/breakfast/lunch] offered at school.				IS1G17G

# Q18 During the [COVID-19 disruption], did the following aspects of your schoolwork change?

		Increased during the [COVID-19 disruption]	Did not change during the [COVID-19 disruption]	Decreased during the [COVID-19 disruption]
a)	My motivation to complete my schoolwork.			IS1G18A
b)	The variety of schoolwork I was given.			IS1G18B
c)	My capacity to plan the completion of my schoolwork.			IS1G18C
d)	The quality of my schoolwork.			IS1G18D
e)	The amount of help I got from my [parents/other family members] with my schoolwork.			IS1G18E
f)	The amount of distraction whilst completing my schoolwork.			IS1G18F
g)	My ability to keep up with my schoolwork.			IS1G18G
h)	My confidence in completing schoolwork.			IS1G18H
i)	My contribution to class discussions.			IS1G18I
j)	My skills in accessing online learning content.			IS1G18J

#### Think about your workload in a typical school week during the [COVID-19 disruption].

#### How much work did you submit to teachers in the learning areas below?

		I did not do this subject.	No work was required.	I did not submit any of the required work.	I submitted <b>some</b> of the required work.	I submitted most or all of the required work.
a)	[Language Arts: test language]					IS1G19A
b)	[Language arts: foreign or other national languages]					IS1G19B
c)	Mathematics [Add any appropriate national examples]					IS1G19C
d)	Sciences (general science and/or physics, chemistry, biology, geology, earth sciences, technical science)					IS1G19D
e)	Human sciences / Humanities / Social Studies (history, geography, civics, law, economics, etc.)					IS1G19E
f)	Creative arts (visual arts, music, dance, drama, etc.)					IS1G19F
g)	[Information technology, computer studies or similar]					IS1G19G
h)	Practical and vocational subjects [Add any appropriate national examples]					☐ IS1G19H
i)	Other (e.g. [moral/ethics, physical education, personal and social development])					☐ IS1G19I

# Q20 During the [COVID-19 disruption], for how much of your schoolwork did your teachers provide feedback using the following methods?

		Never	For some of my schoolwork	For most of my schoolwork	For all or almost all of my schoolwork
a)	Spoken feedback given to me individually				IS1G20A
b)	Spoken feedback given to small groups				IS1G20B
c)	Spoken feedback given to the whole class				IS1G20C
d)	[Scores/grades]				IS1G20D
e)	Written feedback on my work				IS1G20E
f)	Written or spoken feedback recorded through the school-based learning management apps e.g. [Google Classroom, Seesaw]				IS1G20F

# Q21 To what extent do you agree or disagree with the following statements about the support you received from your teachers during the [COVID-19 disruption]?

		Strongly agree	Agree	Disagree	Strongly disagree
a)	My teachers were available when I needed their help.				IS1G21A
b)	My teachers made it clear how to best contact them.				IS1G21B
c)	My teachers gave me feedback that I could understand.				IS1G21C
d)	My teachers made a special effort to keep in contact with me.				IS1G21D
e)	My teachers showed interest in my learning.				IS1G21E
f)	I had a good relationship with my teachers.				IS1G21F
g)	My teachers encouraged me to learn.				IS1G21G
h)	My teachers adapted my schoolwork to meet my individual needs.				□ IS1G21H

## Q22 To what extent do you agree or disagree with the following statements about your learning progress during the [COVID-19 disruption]?

		Strongly agree	Agree	Disagree	Strongly disagree
a)	I learned about as much as before the [COVID-19 disruption].				IS1G22A
<b>b</b> )					□ IS1G22B
b)	I made more progress in some subjects than before the [COVID-19 disruption].				[] [S1G22B
c)	It became more difficult to use my teachers'				П <u>касээс</u>
C)	It became more difficult to use my teachers' feedback to improve my work.				☐ IS1G22C
	•				
d)	It became more difficult to know how well I was progressing.				□ IS1G22D

#### YOUR [WELL-BEING]

Q23 During the [COVID-19 disruption], did your school or teachers give you information on the topics listed below to support your [well-being]?

		Yes and it was helpful	Yes but it was not helpful	No
a)	Looking after my emotional [well-being] (e.g. relaxation methods)			IS1G23A
b)	Looking after my personal safety			IS1G23B
c)	Healthy eating			IS1G23C
d)	How to find people who can provide [well-being] advice			IS1G23D
e)	Health advice about [COVID-19]			IS1G23E
f)	Healthy working habits (such as taking breaks when studying)			IS1G23F
g)	Maintaining physical fitness			IS1G23G

## Q24 To what extent do you agree or disagree with the following statements about how you felt during the [COVID-19 disruption]?

IS1G24A a)	I felt anxious about the changes in my schooling.	Strongly agree	Agree	Disagree	Strongly disagree
IS1G24B b)	I felt overwhelmed by what was happening in the world due to [the COVID-19 pandemic].				
IS1G24C <sup>C)</sup>	I felt overwhelmed by what was happening in my [local area] due to the [COVID-19 pandemic].				
IS1G24D d)	I was worried about how the disruption affected my learning.				
IS1G24E e)	I was worried about how this disruption will affect my future education.				
IS1G24F f)	I missed my usual contact with my classmates.				
IS1G24G g)	I felt supported by my school.				
IS1G24H h)	I had one or more teachers whom I felt comfortable to ask for help.				
IS1G24I i)	I could not get my usual level of support from [non-teaching support staff].				
IS1G24J j)	I still felt part of the school.				
IS1G24K k)	I was worried about catching [COVID-19].				
IS1G24L I)	My classmates were supportive of each other.				
IS1G24M m)	I found it difficult to concentrate on my schoolwork.				

# Q25 To what extent do you agree or disagree with the following statements about your [well-being] during the [COVID-19 disruption]?

		Strongly agree	Agree	Disagree	Strongly disagree
a)	I exercised (including walking) more than usual.				IS1G25A
b)	I was able to do more of my usual outside of school activities [scouts, guides, training for sports].				IS1G25B
c)	I felt fit and healthy.				IS1G25C
d)	I felt more lonely than usual.				IS1G25D
e)	I got upset over things that would not have normally bothered me.				IS1G25E
f)	I felt angry more often than usual.				IS1G25F
g)	I did not feel like contacting my friends.				IS1G25G
h)	I was more worried than usual about my friends and family getting sick.				IS1G25H
i)	I used social media a lot more than before the [COVID-19 disruption].				IS1G25I
j)	I did not sleep as well as before the [COVID-19 disruption].				IS1G25J

# Q26 Were you affected by any of the following situations during the [COVID-19 disruption]?

		Yes	No	
a)	One or both of my [parents/ guardians] lost their job.			IS1G26A
b)	Our family had to be more careful with money than usual.			IS1G26B
c)	One or both of my [parents/ guardians] had to work from home.			IS1G26C
d)	One or both of my [parents/ guardians] were stressed about their job.			IS1G26D
e)	Our family had to move to live in a new location.			IS1G26E
f)	I had to live away from my [parents/ guardians].			IS1G26F
g)	I had to help more at home with household tasks.			IS2G26G

#### STUDENTS WITH [SPECIAL NEEDS]

Q26a	Do you do receive support [disability]?		
	(Please mark only one choice)		IS1G26AA
	Yes		Please go to the next question (question 26b)
	No		Please go to question 27

26b	Before the [COVID-19 disruption], how much support was your school giving you in the following areas?							
	(Please mark one choice in each row)							
		I <b>do not</b> need support in this area.	My school provided <b>a</b> <b>little</b> support in this area.	My school provided <b>a</b> lot of support in this area.				
a)	[How I move around: lifting and carrying things, holding things, moving from place to place, getting around your community]			IS1G26bA				
b)	[How I learn: seeing, hearing, learning to read, learning to write, learning maths]			IS1G26bB				
c)	[How I communicate: understanding what people say, telling people what I need, speaking clearly, having conversations]			☐ IS1G26bC				
d)	[How I take care of myself: personal grooming, using the bathroom, eating and drinking, and keeping myself safe]			IS1G26bD				
e)	[How I relate to others – making friends, keeping friends, managing disagreements, understanding other points of view]			IS1G26bE				
f)	[How I solve problems – solving problems, persisting, staying on task, completing tasks independently, coping with setbacks]			IS1G26bF				

Q26c	How did the support you received from your school in the following areas change during the [COVID-19 disruption]?							
	(Please mark one choice in each row)							
		I do not need support in this area.	Increased during the [COVID-19 disruption]	Stayed the same during the [COVID-19 disruption]	Decreased during the [COVID-19 disruption]			
a)	[How I move around: lifting and carrying things, holding things, moving from place to place, getting around your community]				IS1G26cA			
b)	[How I learn: seeing, hearing, learning to read, learning to write, learning maths]				IS1G26cB			
c)	[How I communicate: understanding what people say, telling people what I need, speaking, having conversations]				IS1G26cC			
d)	[How I take care of myself: personal grooming, using the bathroom, eating and drinking, and keeping myself safe]				IS1G26cD			
e)	[How I relate to others – making friends, keeping friends, managing disagreements, understanding other				IS1G26cE			
f)	points of view]  [How I solve problems – solving problems, persisting, staying on task, completing tasks independently, coping with setbacks]				IS1G26cF			

#### SCHOOLING AFTER THE [COVID-19 DISRUPTION]

#### Q27 To what extent do you agree or disagree with the following statements about your learning at school after the [COVID-19 disruption]?

		Strongly agree	Agree	Disagree	Strongly disagree
a)	I was more motivated to learn when school reopened than at any other time.				IS1G27A
b)	I worried a lot about catching [COVID-19] at school.				IS1G27B
c)	I found it hard to manage the [COVID-19] routines at school (e.g. wearing a mask, [social distancing])				IS1G27C
d)	I found it hard to concentrate during class time.				IS1G27D
e)	I felt that I had fallen behind in my learning compared to other students.				IS1G27E
f)	I had to complete more assessments than usual.				IS1G27F
g)	I was excited to catch up with friends.				IS1G27G
h)	My classmates were friendlier than before the [COVID-19 disruption].				IS1G27H
i)	My teachers seemed more caring towards me than they were before the [COVID-19 disruption].				S1G27I
j)	I felt safe at school.				S1G27J

[COVID-19 disruption].

### Q28 To what extent do you agree or disagree with the following statements about your school experiences after the [COVID-19 disruption]?

(Please mark one choice in each row) Strongly Strongly disagree agree Agree Disagree IS1G28A a) I understood the changed arrangements in my school. b) IS1G28B My teachers went over the work we did during the [COVID-19 disruption]. IS1G28C c) We rushed through a lot of new schoolwork. IS1G28D d) My class was less well-behaved than before the [COVID-19 disruption]. e) Staff from my school other than my IS1G28E teacher came to my class to ask about our [well-being]. f) We were reminded that [school IS1G28F counsellors and support officers were available for individual appointments. IS1G28G g) Extra tuition was available to catch up on schoolwork. h) It was easier for me to access [free IS1G28H lunches and/or breakfast] than before the

### **PERSISTENT INFLUENCES**

Q29	How confident are you now ab schoolwork?	out the	following	aspects	of your
	(Please mark one choice in each row)				
		Very confident	Confident	Not very confident	Not at all confident
a)	Using videoconferencing software [such as Zoom or MS Teams].				IS1G29A
b)	Finding learning resources on my own				IS1G29B
c)	Planning when to do schoolwork on my own				IS1G29C
d)	Completing schoolwork independently				IS1G29D
e)	Assessing my learning progress				IS1G29E
f)	Seeking assistance from others when I need it				IS1G29F
g)	Using a learning management system or school learning platform (e.g. [Seesaw])				IS1G29G
Q30	Overall, how prepared do you feel building closed for an extended pe		_	ome if you	ır school
	(Please mark only one choice)			IS1G3	30
	Not prepared at all			]	
	Not very prepared				
	Well prepared				
	Very well prepared				

Q32

### **ABOUT YOU AND YOUR FAMILY**

### Q31 When were you born?

(Please mark the boxes next to the **month** and **year** you were born)

a) Month	IS1G31A	b) Year	IS1G31B
January		2003	
February		2004	
March		2005	
April		2006	
May		2007	
June		2008	
July		2009	
August		2010	
September			
October			
November			
December			
Are you a girl or	a boy?	IS1G32	
Girl			
Воу			
[ <mark>Other</mark> ]			

In this section you will be asked some questions about your family and your home.
For these questions, 'home' refers to the place where you usually live.
In cases where you did your schoolwork outside of school at a place that was not your home (e.g. at someone else's home), please think of <u>your own home</u> when answering the questions in this section.
Some of these questions will be about home and your parents or guardians who look after you — for example, step-parents or foster-parents. Select one parent or guardian as [parent or guardian 1] and the other as [parent or guardian 2].
If you share your time with more than one set of parents or guardians, please answer the following questions for those parents/guardians with whom you spend the most time. If you share your time only with one parent, please answer the following questions only for this parent.

### Q33 Do any of these people live at home with you most or all of the time? (Please mark only one choice in each row)

	Yes	No
[Parent 1/Guardian 1] (for example, step-parent or foster parent)		IS1G33A
[Parent 2/ Guardian 2] (for example, step-parent or foster parent)		IS1G33B
Older siblings/or same age siblings (brothers or sisters including step-brothers and step-sisters)		IS1G33C
Younger siblings (brothers or sisters including step-brothers and step-sisters)		IS1G33D
Grandparents		IS1G33E
Others		IS1G33F

Q33a	What best describes you? (Please mark only one choice)		IS1G33aA			
	[ <mark>A</mark> ]					
	[ <mark>B]</mark>					
	[ <mark>C</mark> ]					
	[ <mark>D</mark> ]					
Q34	What language do you speak a (Please mark only one choice)  [Language of instruction]  [Other language 1]  [Other language 2]  [Another language]	it home i	most of the	time?		
Q35	How many of the following IChome? (Please mark one choice in each row)		s are curr	ently use	d in your	
		None	One	Two	Three or more	
a)	Desktop or [ <mark>laptop</mark> ] computers				IS1G35A	
b)	Tablet devices (e.g. [ <mark>iPad, Tablet</mark> <mark>PC</mark> ])				IS1G35B	
c)	Smart phones				IS1G35C	

Q36	Do you have any of these things at your home? (Please mark only one choice in each row)		
		Yes	No
a)	Study desk/table for your use		IS2G36A
b)	Books of your very own (do not count your school books)		IS2G36B
c)	Your own room		IS2G36C
d)	Internet connection		□ IS2G36D
e)	[country-specific indicator of wealth]		□ IS2G36E
f)	[country-specific indicator of wealth]		IS2G36F
g)	[country-specific indicator of wealth]		IS2G36G
h)	[country-specific indicator of wealth]		IS2G36H
i)	[country-specific indicator of wealth]		IS2G36I
j)	[country-specific indicator of wealth]		□ IS2G36J
Q36	About how many books are there in your home?  Do not count magazines, newspapers, comic books of	r your schoo	olbooks.
	(Please mark only one choice)		IS1G36
	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)		

#### Q37 What kind of work does your [parent or guardian 1] do for his/her main [job]?

Please mark only one choice indicating the [job] category which best describes what he/she does. Each category has a few examples to help you decide the correct category. If your [parent or guardian 1] is not working now, think about the last job he/she had.

IS1G37

He/she has never worked for pay	
Small Business Owner	
Includes owners of small businesses (fewer than 25 employees) such as retail shops, services, restaurants	
Clerk	
Includes office clerks; secretaries; typists; data entry operators; customer service clerks	
Service or Sales Worker	
Includes travel attendants; restaurant service workers; personal care workers; protective service workers; junior military and police; salespersons; street vendors	
Skilled Agricultural or Fishery Worker	
Includes farmers; forestry workers; fishery workers; hunters and trappers	
Craft or Trade Worker	
Includes builders, carpenters, plumbers, electricians, metal workers; machine mechanics; handicraft workers	
Plant or Machine Operator	
Includes plant and machine operators; assembly-line operators; motor-vehicle drivers	
General Labourer	
Includes domestic helpers and cleaners; building caretakers; messengers, porters, and doorkeepers; farm, fishery, agricultural, and construction workers	
Corporate Manager or Senior Official	
Includes corporate managers such as managers of large companies (25 or more employees) or managers of departments within large companies; legislators or senior government officials; senior officials of special-interest organisations; military officers	
Professional	
Includes scientists; mathematicians; computer scientists; architects; engineers; life science and health professionals; teachers; legal professionals; social scientists; writers and artists; religious professionals	
Technician or Associate Professional	
Includes science, engineering, and computer associates and technicians; life science and health technicians and assistants; teacher aides; finance and sales associate professionals; business service agents; administrative assistants	
Not applicable	

Q38	guardian 1]?  If you are not sure which box to choose, please ask [your teacher/parents]			
	for help.			
	(Please mark only one choice)	IS1G38		
	[ISCED level 6, 7 or 8]			
	[ISCED level 4 or 5]			
	[ISCED level 3]			
	[ISCED level 2]			
	He/she did not complete [ISCED level 2]			

He/she did not complete [ISCED level 2].

### Q39 What kind of work does your [parent or guardian 2] do for his/her main [job]?

Please mark only one choice indicating the [job] category which best describes what he/she does. Each category has a few examples to help you decide the correct category. If your [parent or guardian 2] is not working now, think about the last job he/she had.

IS1G39

He/she has never worked for pay	
Small Business Owner	
Includes owners of small businesses (fewer than 25 employees) such as retail shops, services, restaurants	
Clerk	
Includes office clerks; secretaries; typists; data entry operators; customer service clerks	
Service or Sales Worker	
Includes travel attendants; restaurant service workers; personal care workers; protective service workers; junior military and police; salespersons; street vendors	
Skilled Agricultural or Fishery Worker	
Includes farmers; forestry workers; fishery workers; hunters and trappers	
Craft or Trade Worker	
Includes builders, carpenters, plumbers, electricians, metal workers; machine mechanics; handicraft workers	
Plant or Machine Operator	
Includes plant and machine operators; assembly-line operators; motor-vehicle drivers	
General Labourer	
Includes domestic helpers and cleaners; building caretakers; messengers, porters, and doorkeepers; farm, fishery, agricultural, and construction workers	
Corporate Manager or Senior Official	
Includes corporate managers such as managers of large companies (25 or more employees) or managers of departments within large companies; legislators or senior government officials; senior officials of special-interest organisations; military officers	
Professional	
Includes scientists; mathematicians; computer scientists; architects; engineers; life science and health professionals; teachers; legal professionals; social scientists; writers and artists; religious professionals	
Technician or Associate Professional	
Includes science, engineering, and computer associates and technicians; life science and health technicians and assistants; teacher aides; finance and sales associate professionals; business service agents; administrative assistants	
Not applicable	

Q40	What is the highest level of education	on completed by	your [ <mark>parent or]</mark>
	<mark>guardian 2</mark> ]?		
	If you are not sure which box to choose, for help.	please ask [ <mark>your</mark>	teacher/parents]
	(Please mark only one choice)		IS1G40
	[ISCED level 6, 7 or 8]		
	[ISCED level 4 or 5]		
	[ISCED level 3]		
	[ISCED level 2]		
	He/she did not complete [ISCED level 2].		

### THANK YOU FOR YOUR TIME AND EFFORT IN COMPLETING THE QUESTIONNAIRE

### **National Centre Questionnaire**





# RESPONSES TO EDUCATIONAL DISRUPTION SURVEY

### **National Centre Questionnaire**

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#### INTRODUCTION

This questionnaire is concerned with the disruption to school education in your country as a direct result of the impact of the COVID-19 pandemic.

In this questionnaire you will find questions about:

- How the period of disruption can be characterized and described as it affected schooling in your country
- Responsibilities for responding on the pandemic in the school sector
- Respective national plans and policies put in place regarding measures and the provision of resources impacting classroom teaching and learning
- How effects of the pandemic were monitored

Unless otherwise instructed, please answer the questions in this questionnaire with reference to your country as a whole.

#### Reference period: The COVID-19 disruption

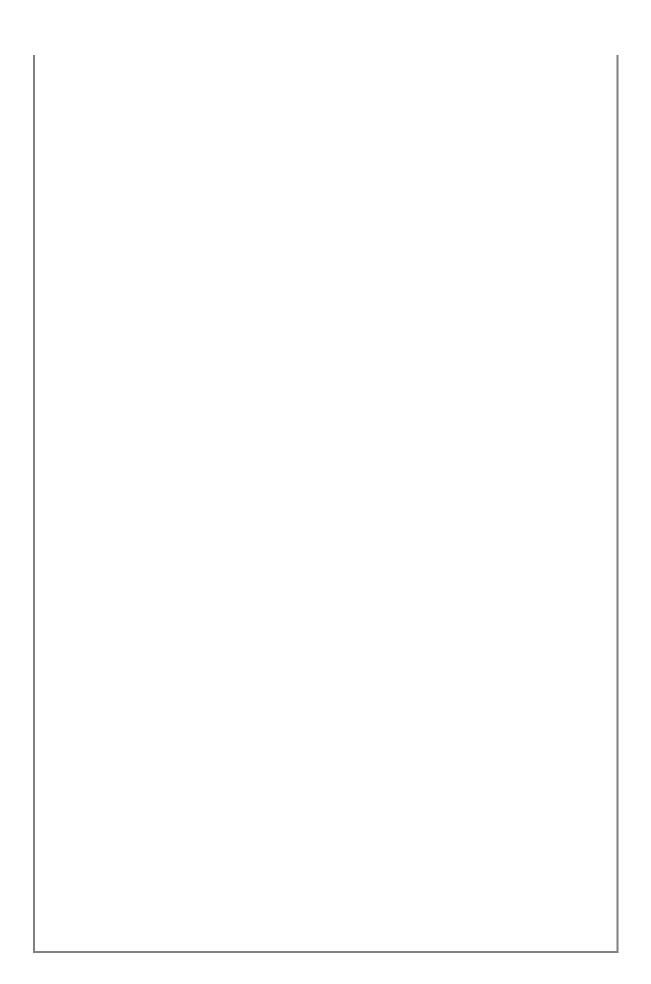
Many questions in this survey focus on a specific time period, referenced in this questionnaire as the "COVID-19 disruption". In many countries schools closed for the majority of students for periods in 2020 and in early 2021. Teaching and learning in these cases occurred mostly outside of school buildings during this period. However, different countries were affected in different ways by the pandemic and we are interested in a description of how schools were impacted by COVID-19 in your education system. When responding with regard to the COVID-19 disruption, please use the same reference period that was defined in your student, teacher and school questionnaires.

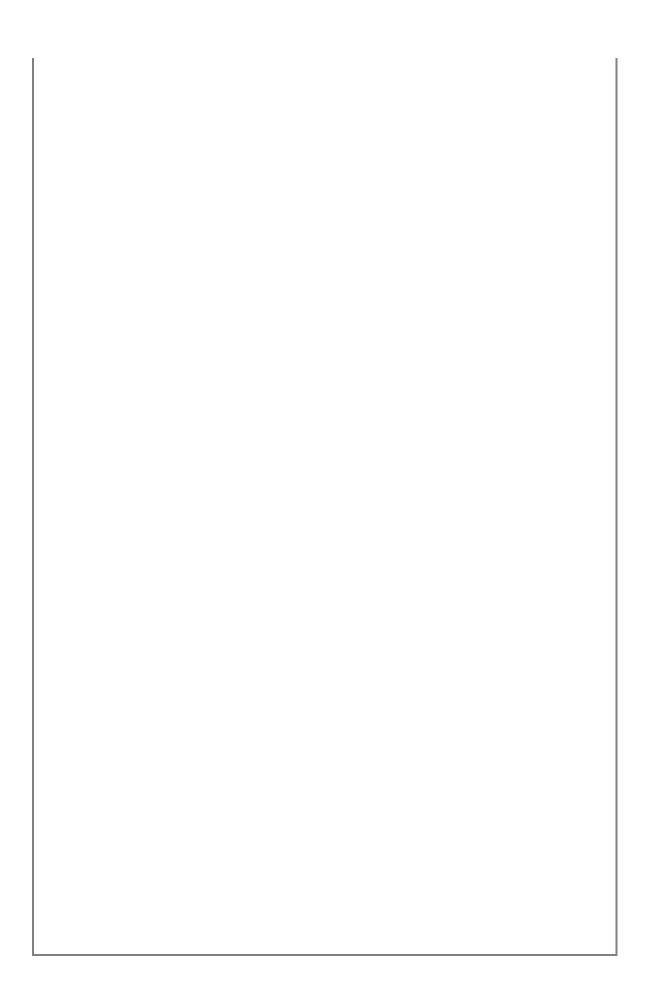
#### Description of the reference period in your country

Please provide a detailed description (not more than 1000 words) of the key features of the COVID-19 disruption in your country. An edited version of this response may be included in the reporting of study results. In this description, please address at least the following points:

- Key dates in which COVID-19 was detected in your country, when the COVID-19 disruption began to affect schools, how long this lasted and whether there were multiple periods of disruption or one continuous disruption. Include any major adjustments to the school calendar (e.g. re-scheduling of school holidays)
- 2. School responses during the COVID-19 disruption with respect to the requirements for students and staff to attend the school buildings (i.e. complete closures, partial closures, rostered attendance) and for ISCED 1, ISCED 2 and ISCED 3 (indicating whether or not the same arrangements were in place for each ISCED level). Please include details such as the time periods the measures were in effect and the nature of partial closures or rostered attendance if these were applicable (e.g. half of the students attend in the morning and the other half in the afternoon or schools were open only to students of essential workers etc.)
- Whether or not all schools within your country were subject to the same closure rules or whether there was variation according to school system (e.g. government versus private) or type (e.g. mainstream or special education schools)
- 4. The general expectations with respect to remote teaching and learning during the COVID-19 disruption
- Ongoing consequences for the operations of schools as a result of the COVID-19 disruption (e.g. staggered start times for schooling; face masks being worn in schools etc.)
- 6. Aspects of practices introduced during COVID disruption that might inform future practices (in 'regular' schooling and should future disruptions occur)

Please add your description here (not more than 1000 words):			





# Q1 Who has responsibility for establishing directions and guidance for teaching and learning at schools in general, and during the COVID-19 disruption?

(Please mark one choice per column)

	In general	During the COVID-19 disruption
Responsibility rests primarily with the national ministry or the department of education		
Responsibility rests primarily with state/provincial jurisdictions		
Responsibility rests primarily with local/municipal jurisdictions		
Responsibility is shared between/across authorities at different levels – please describe below.		
Other – please describe below.		

#### Comments

Please elaborate your answer to Question 1 by describing the responsibility for the response to the COVID-19 pandemic for school education in your country.

# How much autonomy within their jurisdiction do schools with students in the target grade have regarding the establishment of directions and guidance for teaching and learning in general and during the COVID-19 disruption?

			In General		During th	e COVID-19	disruption
		(Please mark	one choice pe	r school type)	(Please mark	one choice pe	er school type)
		Public/ govern- ment schools	Private schools	Other schools	Public/ govern- ment schools	Private schools	Other schools
a)	Complete or a high level of autonomy Schools have full or almost full autonomy						
b)	Some autonomy Schools have some autonomy (including autonomy in some areas but not others)						
c)	Little or no autonomy Schools have little or no autonomy - the authority (or authorities) with responsibility for school education control and specify						

Please provide written comments to support your response, if necessary.

Q3	Were specific plans or policies developed to preguidance for teaching and learning at schools disruption?  (Please mark any combination of 'Yes' responses OR of the second secon	during the C	
a)	Yes, at the national level		If <u>yes.</u>
b)	Yes, at the state/provincial level		please continue
c)	Yes, at the local/district/municipal level.		with question 4
d)	<b>No</b> , neither at the national state/provincial level or local/district/municipal level		If no, please go to question 9
	Comments		
	Please use this space to elaborate your response.		

Q4 What are the key documents that outline the plans or policies developed to address the COVID-19 disruption to school education in your country?

(Please provide a URL for each document if possible)

# Q5 Which of the following resources were already available or provided to schools during the COVID-19 disruption to support instruction and learning of students at the target grade?

(Please mark one choice in each row)

		This was already available in most schools before the COVID-19 disruption	This was provided to most schools during the COVID- 19 disruption	This was neither available in most schools nor provided to most schools.
a)	Virtual Learning Environment or Learning Management System (e.g. Edmodo, Blackboard, Moodle, WebCT, Lotus LearningSpace, COSE)			
b)	Digital lessons or learning materials			
c)	Physically distributed learning materials (e.g. paper-based resources)			
d)	Assessments of student learning			
e)	Digital devices for students to use in remote learning			
f)	Digital devices for teachers to use for remote teaching			
g)	Television broadcasts to support teaching and learning			
h)	Radio or audio broadcasts to support teaching and learning			
	Comments			

Please use this space to elaborate your response.

### During the COVID-19 disruption, were schools required to use the following resources if these were available to them? Q6

(Please mark one choice in each row)

		Yes	No	Not available in any school
a)	Virtual Learning Environment or Learning Management System (e.g. Edmodo, Blackboard, Moodle, WebCT, Lotus LearningSpace, COSE)			
b)	Digital lessons or learning materials			
c)	Physically distributed learning materials (e.g. paper-based resources)			
d)	Assessments of student learning			
e)	Digital devices for students to use in remote learning			
f)	Digital devices for teachers to use for remote teaching			
g)	Television broadcasts to support teaching and learning			
h)	Radio or audio broadcasts to support teaching and learning			
	Comments			

Please use this space to elaborate your response.

## Q7 To what extent do the plans or policies developed to address the COVID-19 disruption to school education emphasize the following resources?

(Please mark one choice in each row)

		They explicitly state the need for the resource	They imply the need for the resource without explicitly stating that it is required	They do not mention this resource
a)	Provision of computer equipment and other ICT resources to schools			
b)	Provision of computer equipment and other ICT resources to teachers			
c)	Provision of computer equipment and other ICT resources to students			
d)	Maintenance of computer equipment and other ICT resources			
e)	Support for teachers for using computer equipment and other ICT in remote teaching			
f)	Internet connectivity			
g)	Video conferencing software			
h)	Development and provision of digital learning materials			
i)	Virtual Learning Environments or Learning Management Systems (e.g. Edmodo, Blackboard, Moodle, WebCT, Lotus LearningSpace, COSE)			
j)	Home access to school-based digital education resources (e.g. through school-hosted online portals)			
k)	Additional non-teaching time for teachers to adapt to remote teaching/changed teaching approaches			
l)	Television broadcasts to support teaching and learning			
m)	Radio or audio broadcasts to support teaching and learning			
n)	Physically distributed learning materials (e.g. paper-based resources)			

o)	Additional resources for infection control (e.g. increased cleaning of school premises)					
	Comments					
	Please use this space to elaborate your response.					

### Q8 To what extent do the plans or policies developed to address the COVID-19 disruption emphasize the following measures?

(Please mark one choice in each row)

		They explicitly state a requirement for implementing this measure	They include recommendatio ns for implementing this measure	They do not refer to this particular measure
a)	Varied school starting times for different groups of students (e.g. by class or grade level)			
b)	Varied break times between classes for different groups of students (e.g. by class or grade level)			
c)	Increased hygiene facilities (soap/sanitiser)			
d)	Increased cleaning on school premises			
e)	Social distancing between students			
f)	Social distancing between adults			
g)	Smaller class sizes			
h)	Increased number of staff			
i)	Continued remote learning option for students			
j)	Supplementing face-to-face teaching with remote teaching			
	Comments			

Please use this space to elaborate your response.

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### Q9 To what extent do the plans or policies developed to address the COVID-19 disruption include the following aspects as priorities?

(Please mark one choice in each row)

		The aspect is explicitly stated in the plans and policies	The need for this aspect is implicit in the plans and policies without being explicitly stated	This is not mentioned in the plans and policies aspect
a)	Professional development for teachers' general use of ICT			
b)	Professional development for teachers' pedagogical use of ICT			
c)	Development of ICT-related competencies in students			
d)	Use of ICT to improve communication with parents.			
e)	Support of students that were falling behind			
f)	Collaboration among teaching staff			
g)	Guidance for schools about how to support parents/guardians			
h)	Infection control measures (e.g. mandated wearing of masks)			
i)	Support for safe working environments and/or healthy work practices			
j)	Social-emotional support for teachers			
	Please provide any further comments to sup detail any other aspects that are indicated a			

Q10	Has there been formal support for the dev (e.g. digital curriculum resources or learn government agencies, incentives for othe encouragement to publishers to produce (Please mark one choice)	ing objects) through r agencies, or
a)	Yes, there has been formal support for the development of digital resources since before the COVID-19 disruption.	
b)	Yes, there is formal support for the development of digital resources in response to the COVID-19 disruption.	
c)	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 dig learning resources.		

# Q11 How did the COVID-19 disruption affect regularly mandated assessments undertaken to monitor the learning progress in each of the following subject areas?

(Please mark one or more responses in each row for each learning area)

		There were no no assessments scheduled during the COVID-19 disruption	Assessments took place as scheduled	Assessments were scheduled but cancelled	Assessments were scheduled but postponed
a)	Language arts: test language				
b)	Language arts: foreign or other national languages				
c)	Mathematics				
d)	Sciences (general science and/or physics, chemistry, biology, geology, earth sciences, technical science)				
e)	Human sciences / Humanities / Social Studies (history, geography, civics, law, economics, etc.)				
f)	Creative arts (visual arts, music, dance, drama, etc.)				
g)	Information technology, computer studies or similar				
h)	Practical and vocational subjects				
i)	Other (e.g. moral/ethics, physical education, personal and social development)				

# Q12 Were there any mandated special assessments of target grade students during and/or after the COVID-19 disruption in order to monitor its impact on learning progress in each of the following subject areas?

(Please mark one or more responses in each row for each learning area)

		No	Yes, during the COVID-19 disruption	Yes, after the COVID-19 disruption
a)	Language arts: test language			
b)	Language arts: foreign or other national languages			
c)	Mathematics			
d)	Sciences (general science and/or physics, chemistry, biology, geology, earth sciences, technical science)			
e)	Human sciences / Humanities / Social Studies (history, geography, civics, law, economics, etc.)			
f)	Creative arts (visual arts, music, dance, drama, etc.)			
g)	Information technology, computer studies or similar			
h)	Practical and vocational subjects			
i)	Other (e.g. moral/ethics, physical education, personal and social development)			

## Q13 Were sample-based or census data collected in each of the following areas to monitor the impact of the COVID-19 disruption on students and teachers in your country?

(Please mark one choice in each row)

		Yes	No
a)	Student achievement		
b)	Student attendance		
c)	Students' emotional health		
d)	Teachers' emotional health		
e)	Students' physical health		
f)	Teachers' physical health		





### The impact of the COVID-19 pandemic on education

International evidence from the Responses to Educational Disruption Survey (REDS)

The Responses to Educational Disruption Survey (REDS) is a joint study launched by IEA and UNESCO, in partnership with the European Commission to investigate how teaching and learning were affected by the COVID-19 pandemic, and how education stakeholders responded to the educational disruption, across and within countries. The REDS international report provides a systemic, multi-perspective, and comparative picture of the impact of COVID-19 on secondary education (eighth grade). The study collected data from countries, schools, teachers, and students spanning four continents, including Africa (Burkina Faso, Ethiopia, Kenya, Rwanda), Asia (India, Uzbekistan), Arab region (United Arab Emirates), Europe (Denmark, Russian Federation, Slovenia), and Latin America (Uruguay).

As education systems plan for recovery, they need data, evidence, and insights to inform policy. REDS offers an overview of schooling situations during the disruption in a variety of educational contexts around the world, providing policy-makers and education leaders with scientifically collected first-hand information for evidence-based decision-making. Furthermore, REDS identifies effective approaches that emerged from the crisis and may serve as good practices for the future of education.

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