



# UNESCO-UNICEF-World Bank-OECD Survey on National education responses to COVID-19

## Technical Note

June 2021

This technical note presents the details of the third round of the UNESCO-UNICEF-World Bank-OECD Survey on National education responses to COVID-19. It includes information about the Survey and the data cleaning process.

### Survey Overview

As part of the coordinated global education response to the COVID-19 pandemic, the UNESCO Institute for Statistics (UIS), the United Nations Children's Fund (UNICEF) and the World Bank conducted a Survey on National Education Responses to COVID-19 School Closures. Survey responses help to better guide local and national policy responses to mitigate the impact of school closures and prepare for school reopening. The results will also inform actions from mobilized partners through the UNESCO Global COVID-19 Education Coalition. The survey is intended to collect data through multiple rounds to capture national developments from government policy responses.

118 countries completed the first round of the survey between May and June 2020 and 149 countries completed the second round between July and October 2020. UNESCO, UNICEF, and the World Bank produced a joint report – "What have we learnt? Overview of findings from a survey of ministries of education on national responses to COVID-19"<sup>1</sup> based on the first two rounds of data collection.

The Organization for Economic Co-operation and Development (OECD) has joined the consortium in this third round of the survey, resulting in a total of 143 country responses<sup>2</sup>. The respondent countries in this round cover 58% of the global school-age population (SAP) and 53% of learners in school.

### How was the survey conducted?

Two surveys were conducted: one by the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Children's Fund (UNICEF) and the World Bank, and one by the Organization for Economic Co-operation and Development (OECD). The survey seeks to collect information on national education responses to school closures related to the COVID-19 pandemic.

<sup>1</sup> <https://data.unicef.org/resources/national-education-responses-to-covid19/>

<sup>2</sup> 31 countries submitted responses to the OECD and 112 countries responded to the UIS.



The surveys were administered by the UNESCO Institute for Statistics (UIS) between February and May 2021 and by the OECD between February and March 2021.

The questionnaire is designed for Ministry of Education officials at central or decentralized levels in charge of school education. Ministries of education and statistics units were contacted regarding the completion of the survey. For OECD countries, the questionnaire was sent to the members of the OECD INES Working Party and its two networks- the INES Network for the collection and the adjudication of system-level descriptive information on educational structures, policies, and practices (NESLI) and the Network for Labour Market, Economic and Social Outcomes of Learning (LSO). For UIS countries, it was suggested that a focal point within the ministry be appointed to collect and submit responses on the country's behalf (ideally, a team of two members to ensure response continuity).

Several steps were taken to ensure the largest degree of survey participation, integrity, and confidence in the data quality. Countries were informed that their responses would be released in an anonymized public database, where country data would be featured without disclosing the respondents' information. In addition, respondents had the choice to be excluded from the anonymized database.

### Third Round of Joint Survey

With the Organization for Economic Co-operation and Development's (OECD) involvement in the third round of the survey, the survey was answered by a total of 143 countries<sup>3</sup>. The size of the final sample is 130 countries, excluding 13 countries who requested not to be included in the publicly available dataset. The final dataset, available on the survey webpage, contains variables including country identifiers (ISO3 and full country name), country region, income group, date of response and variables that correspond to each of the questions in the survey

The following information details processes specific to the third round of survey collection and analysis.

### Structure of the Surveys

The questionnaire consists of a set of core modules aimed at all countries and two sets of supplement modules depending on who the countries report their education data to. . There are:

- 9 core modules (A);
- 3 supplement modules (B);
- 1 supplement module (C) for countries reporting to the OECD.

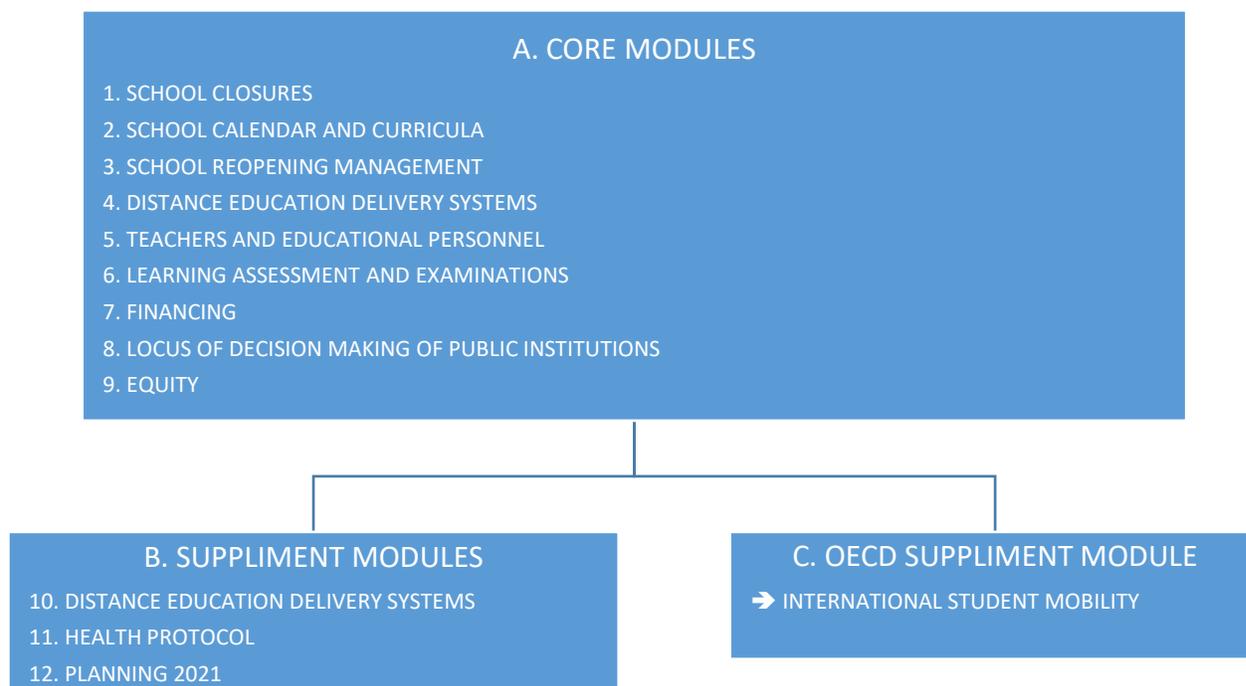
Various aspects of national education responses are covered in the survey such as plans for re-opening schools, school calendar, distance education delivery systems, online distance learning

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strategies, teachers, students, parents/caregivers, learning, assessments and examinations and finance. The analysis of the results will allow for policy learning across diverse country settings in order to better inform local/national responses and prepare for school reopening.



How is the survey conducted?

For questions completed:

- a country that regularly reports to the UIS completes "A. Core Modules" and "B. Supplement Modules"
- a country that regularly reports to the OECD completes "A. Core modules" and "C. OECD Supplement Module".

The UIS survey is available in 5 languages (Arabic, English, French, Spanish, and Russian) and can be submitted by email or an online survey platform. The survey is administered at various waves to capture the latest national impact and responses. The OECD survey is available in English and can be submitted by email.

Details of the recommended data cleaning procedure is documented in the next section.



## Data Cleaning Process

This section provides details of the data cleaning process to the Survey responses.

### Renaming Variables

The questionnaire includes numbered questions across each section in different modules, many with follow up questions from a previous question response. In the data cleaning process, all questions were renamed so that each has a unique identifier name (variable name). A comprehensive mapping of the questions and corresponding variables is available in Appendix 1 – JSW3 Codebook.

### UIS-OECD questionnaire concordance

OECD questionnaires are not exactly equal to UIS questionnaires, due to a) slight differences in structure; b) additional questions; c) some missing modules compared to UIS data. For this reason, multiple considerations are taken into account when processing this data and merging it with UIS data. To resolve the differences (different levels of aggregation, question types, etc.) in the core modules between OECD and UIS questionnaire, the variable names have been further concorded to create the final combined dataset. The concordance of variables and corresponding questions is provided in Appendix 2 – JSW3 UIS-OECD Concordance. Specifically:

#### Data available in both OECD and UIS questionnaires:

Brazil, Colombia, Costa Rica, Poland, the Russian Federation, Sweden, and Turkey answered both questionnaires. After analysis and discussion with countries, it was decided that the UIS questionnaire are used for analysis for Brazil, Costa Rica, Poland, and Turkey. Data from Colombia, Sweden and the Russian Federation are sourced from the OECD questionnaire.

#### Data for Upper Secondary education:

The OECD questionnaire included fields for more granular education levels than the UIS questionnaire. The OECD questionnaire often includes separate data for Upper Secondary general and vocational studies, while the UIS data presents a joint answer for these two types of programmes. For joint analysis, the OECD data for Upper Secondary general is considered Upper Secondary data to merge with UIS data.

#### Data for Belgium:

Answers were submitted by both the Flemish Community of Belgium and the French Community of Belgium to the OECD questionnaire. After analysis, it was perceived that most answers were consistent except for tertiary education, which is not in the scope of the joint analysis. For that reason, data for the Flemish Community of Belgium is presented in this report as representing all of Belgium. This slight simplification can lead to small inconsistencies.



Analysis of data with education levels disaggregated in OECD data but aggregated in UIS data

When there were some differences among levels of education between UIS and OECD data, choices related to a particular education level was taken (as the most representative). This includes the following questions:

- **Question:** *Has any study or assessment been carried out (at the regional or national level) in 2020 to assess the effectiveness of distance-learning strategies?*  
**Methodological note:** Upper secondary general data is utilized in data as representative of aggregated levels of education.
- **Question:** *What percentage of teachers (primary to upper-secondary levels combined), approximately, were required to teach (remotely/online) during all school closures in 2020?*  
**Methodological note:** Lower secondary data is utilized in data as representative of aggregated levels of education, except for Sweden (sourced from primary level).
- **Question:** *What kind of interactions (other than interactions in online lessons) were encouraged by government between teachers and their students and/or their parents during school closures in 2020 (in pre-primary to upper secondary levels combined)?*  
**Methodological note:** Lower secondary data is utilized in data as representative of aggregated levels of education, except for "Use of online parental surveys to gather feedback" (sourced from primary level).
- **Question:** *Have there been changes planned to the fiscal year education budget to ensure the response to COVID-19 for education in 2020 and 2021?*  
**Methodological note:** Lower secondary data is utilized in data as representative of aggregated levels of education, except for the Russian Federation (sourced from pre-primary level).
- **Question:** *Has the distribution of education spending between current and capital expenditures (pre-primary to upper secondary levels combined) changed/is planned to change as a result of the education response to COVID-19?*

**Methodological note:** "Primary, secondary and post-secondary non-tertiary education" level data is utilized in data as representative of aggregated level of education, as tertiary education is excluded from this joint analysis.

- **Question:** *If answered 'increase' to any of the categories in Q2, how were they funded?*  
**Methodological note:** "Primary, secondary and post-secondary non-tertiary education" level data is utilized in data as aggregated level of education, as tertiary education is excluded from UIS survey.

Other questions with structural transformations in the OECD data



- **Question:** *Have/will adjustments been/be made to the school calendar dates and curriculum due to COVID-19 in the school year 2019/2020 (2020 for countries with the calendar year)?*

**Methodological note:** Adaptation of OECD structure into UIS structure and variables. The option "Other" does not exist in OECD questionnaire.
- **Question:** *When is planned to start the vaccination of teachers?*

**Methodological note:** Adaptation of OECD structure into UIS structure and variables. Same answer options available in both questionnaires.
- **Question:** *Have there been any steps taken to assess whether there have been learning losses as a result of COVID related school closure in 2020?*

**Methodological note:** UIS format transformed into OECD variables, as the OECD structure is more extensive.
- **Question:** *At what level were the following decisions made in public primary and lower secondary educational institutions during the pandemic?*

**Methodological note:**

  - A) The OECD questionnaire asked the question separately for each of the two education levels involved, while the UIS questionnaire had a single question for both levels combined. OECD data generally shows consistency in the two answers, and therefore utilizes primary level as a representative answer to merge with UIS data.
  - B) OECD options "State governments" and "Provincial/Regional authorities or governments" merged into a single "Provincial / Regional / State" answer in UIS.
  - C) OECD also allows for option "Multiple levels (please provide details in comments) . While the UIS questionnaire structured allowed respondents to list several levels in the answer individually, the OECD structure did not allow for an explicit listing of such levels, expect for comments provided in a separate location.
  - D) There are country specific exceptions to the matching of OECD data into UIS format in this particular question, including Austria, Korea, Lithuania, Norway and Sweden , when detailed comments that assist in improving data matching are available.
  - E) For cases where "Multiple levels" are selected, but there is no further information on other answers and comments to infer what each of those levels is, the answer is considered as missing when appended to the joint dataset.

## Data Cleaning Procedure

A total of 143 countries submitted a completed questionnaire for the third round of data collection.

The OECD questionnaire answers were discussed with member and partner countries. In the OECD questionnaire structure, it is possible to obtain insights on the different reasons why a country could not provide specific information, such as “do not know”, “not applicable” or if the data is inserted in another column regarding other levels of education. It was also possible to provide complete sets of “Yes” and “No” answers to a series of linked questions, which allowed the feedback process to investigate inconsistencies between answers. This led to revised data and generally complete questionnaires, in which the remaining blank cells could then be assumed to be “not applicable”.

For the anonymized and publicly available dataset of UIS data, countries were asked permission to publish their submissions; 13 countries that responded the UIS questionnaire requested to be excluded. This resulted in a sample size of 130 countries in the publicly available dataset, combining UIS and OECD data. The UIS questionnaire presented different characteristics and answer format compared to the OECD questionnaire, for example with the format allowing more for “Yes” and confirmatory answers, but not on some distinctions between “No”, “do not know” or missing data. As such, the raw data exhibited different properties from OECD raw data, namely with more missing responses that needed further cleaning. Missing responses are recommended to be treated as follows.

### Missing Response

Missing response for each question differs in the type of questions as follows:

- “Select a single answer” questions:
  - If the question requires an answer but no single answer is selected, the response for the question should be considered missing. Note that this also applies to the follow-up questions of a logic connecting questions, i.e., if a respondent answered “Yes” to a main logic connecting question, they will be asked to elaborate in a follow-up question.
- “Select all that apply” questions:
  - It was assumed that countries for which no answer options selected in questions where “Select all that apply” was specified, missing response should be considered for that specific country. Note that this also applies to the follow-up questions of a logic connecting questions, i.e., if a respondent answered “Yes” to a main logic connecting question, they will be asked to elaborate in a follow-up question.
- All questions with an “Other (specify)” answer option and an open-ended response space should be validated to evaluate the relevance of the answer to the question. When the content submitted in the space for “Other (specify)” did not correspond to the question, the value for that question should be recoded as “No”.

### Skip Logic Contradictions

Basic recoding was needed for questions with a skip pattern as presented here.

The survey included questions with a follow-up question based on a given answer (questions with a skip pattern); for example, if the respondent answered "Yes" to a question, they are then asked to elaborate in a follow-up question. In some cases, the main question was left empty but had a recorded answer in the follow-up question. The main question should then be recoded to "Yes". Others answered "No" or "Do not know" to the main question and did not observe the skip pattern by answering the follow-up question, in which case, the main question should be recoded to "Yes".

### Labelling Variables

In general, the value of a variable (except "Select a single answer" or open-ended questions) takes the following values corresponding to the answer of the question:

- 0 "No"
- 1 "Yes"
- 997 "Do not know"
- 998 "Not applicable"
- 999 "Missing"