

Part



THE ISUSS INTERNATIONAL DATABASE

The ISUSS database is available in two formats: in ACCESS format and in SPSS format. The original ISUSS international database was created in ACCESS format because of the inherently hierarchical nature of the dataset. To facilitate analysis, the ACCESS database was converted into two SPSS work files: one for analysing school data and one for analysing programme data. The SPSS files were used in the analyses for the initial report. Unlike the ACCESS database they contain the original as well as the derived variables.

III.1 The ISUSS database in ACCESS format

The ISUSS database stored in ACCESS format contains all the information gathered during the data collection through the ‘*School and Program Questionnaire*’ (Codebook in Annex 4). Data were checked in the course of the year 2002 for accuracy of data entry, fullness and consistency. With the approval of countries, the international database was finalised in May 2003; it contains data for the following countries: Belgium (Flemish Community), Denmark, Finland, France, Hungary, Ireland, Italy, Korea, Mexico, the Netherlands, Norway, Portugal, Spain, Sweden and Switzerland. This is the master file of the ISUSS data. It is stored in the zipped file: *ISUSS_ACCESS_DB.zip* and is available from the website.

The ACCESS database contains four data tables:

- Table ‘*ISUSS table of countries*’: it gives the short names of the originally participating countries (COUNTRY), their ISO3600 three-digit codes (C_CODE), and their weights for estimating international variance and standard error for school-level indicators as well as for indicators by programme type;
- Table ‘*Programs*’: it gives the available programme ID-s and names in each country, their destination and orientation and the grade levels (cumulative years of schooling) typically available in the programme;
- Table ‘*School Questionnaire Data*’: it contains identification variables and responses from Parts I and II of the ISUSS questionnaire. This table contains 4316 rows corresponding to the 4316 schools participating in the survey across fifteen countries. Each row corresponds to one school with all its school variables (but not the programme variables);
- Table ‘*Program Questionnaire Data*’: it contains identification variables and responses from the programme questionnaire (Part III of the ISUSS ‘*School and Program Questionnaire*’). This table contains 6869 rows; each row corresponds to one programme containing identification variables identifying the programme and linking it with the school questionnaire data and responses to Part III of the ISUSS questionnaire. Some schools offer more than one programme and therefore filled in more than one programme questionnaire. This explains why this table contains more rows than the table ‘*School Questionnaire Data*’.

The table ‘*School Questionnaire Data*’ contains the following variables:

- Identification variables for the country and the school: C_CODE, COUNTRY, SCHNAME, CODESTR, SCHID.
- The variable SAMPLEWT (weight) which has been revised for some countries and some schools (see Section I.9 on Weighting for more details) and the weights used for estimating school-level indicators, the international mean and standard deviation (Is3EnrWt and Is3TotWt);

- Responses to the school level questions in the ISUSS Questionnaire (Parts I and II, Questions 1 to 28), *i.e.*, the variables
 - SC01Q01 to SC01Q14: programme offer in the school;
 - SC02Q01: School governance;
 - SC03Q01 to SC03Q04: Funding sources;
 - SC04Q01: School location;
 - SC05Q01 to SC05Q02: Total number of students in the school by gender;
 - SC05Q03 to SC05Q22: Number of students enrolled in upper secondary programmes by programme and gender;
 - SC06Q01 to SC06Q10: Number of personnel by category;
 - SC07Q01 to SC07Q03: Full-time and part-time temporary teachers, full-time and part-time fully qualified teachers;
 - SC08Q01: Teacher hiring responsibility;
 - SC09Q01: Teacher vacancies;
 - SC10Q01 to SC10Q05: Methods of managing teacher vacancies;
 - SC11Q01 to SC11Q11: Covering teacher vacancies by subject of study;
 - SC12Q01 to SC12Q05: School support of professional development
 - SC13Q01 to SC13Q02: Participation of upper secondary teachers to professional development activities;
 - SC14Q01 to SC14Q09: Types of professional development activities for upper secondary teachers;
 - SC15Q01 to SC15Q02: Teacher absenteeism;
 - SC16Q01 to SC16Q07: Admission policies for upper secondary students;
 - SC17Q01 to SC17Q07: Grouping policies for upper secondary students;
 - SC18Q01 to SC18Q12: Keeping records on upper secondary students;
 - SC19Q01 to SC19Q07: Feedback on school functioning from various stakeholders;
 - SC20Q01: Provision of computers/workstations;
 - SC21Q01 to SC21Q08: Availability of computers and networks for students and teachers;
 - SC22Q01 to SC22Q03: Year of introducing various ICT technologies;
 - SC23Q01 to SC23Q03: Percentage of teachers using various ICT technologies
 - SC24Q01 to SC24Q08: Computer-related activities in upper secondary schools;
 - SC25Q01 to SC25Q06: Use of computers for various educational purposes;
 - SC26Q01 to SC26Q25: Co-operation with other organisations in ICT development;
 - SC27Q01 to SC27Q22: Obstacles to reaching ICT-related goals; and
 - SC28Q01 to SC28Q03: The first, second and third most serious obstacles to reaching ICT-related goals.

The table ‘**Program Questionnaire Data**’ contains the following variables:

- Identification variables for the country, stratum, school and the programme (C_CODE, COUNTRY, CODESTR, SCHID, PROGID, ProgramName);
- Enrolments by gender and total in the programme (PROG_B, PROG_G, PROG_T);
- The weights used for estimating indicators by programme type, the international mean and standard deviation (PRGENRWT and PRGTOTWT). Section I.9 gives more details on weightings;
- The responses to Part III of the ISUSS Questionnaire (Questions on the Programme):
 - SC29Q01 to SC29Q08: Completion of programme and transition;
 - SC30Q01 to SC30Q10: Methods of career counselling;
 - SC31Q01: Percentage of students receiving individual career counselling;
 - SC32Q01 to SC32Q24: Instruction time; and
 - SC33Q01 to SC33Q12: Time of scheduled work experience.

Annex 4 provides a Codebook with a detailed description of the variables.

III.2 The ISUSS database in SPSS format

Two SPSS data files have been created from the ACCESS database to facilitate data analysis work for the ISUSS report:

- The ‘*Schools*’ file contains all original variables, weight variables and other calculated variables (*e.g.*, ratios, indices, etc.) related to Parts I and II of the ISUSS School and Program Questionnaire. It is stored as ‘*ISUSS_Schools.sav*’. This file contains 4136 records corresponding to the number of schools surveyed;
- The ‘*Programmes*’ file contains all original variables from the programme questionnaire, weight variables and other calculated variables related to Part III of the ISUSS School and Program Questionnaire. Additionally, all original school variables of the ‘parent’ school are included in the programme record as well. This work file is stored as ‘*ISUSS_Programmes.sav*’. The total number of rows is equal to 6869 corresponding to the number of programme questionnaires filled out in the countries.

Both data files are stored in the zipped file *ISUSS_SPSSdatafiles.zip* which is available from the website.

The ‘*Schools*’ file (*ISUSS_Schools.sav*)

In the SPSS Schools file, each school that participated in the ISUSS project has one record. On the school record, the following information is available:

- Identification variables for the country and the school (same as in the ACCESS database);
- Weight variables (same as in the ACCESS database);

- Responses on Parts I and II of the ‘School and Program Questionnaire’ (same as in the ACCESS database); and
- Derived variables developed for the purpose of the analysis. A description of all derived variables is available in part B of Annex 4.

The ‘Programmes’ file (ISUSS_Programmes.sav)

In the SPSS Programmes file, each programme for which a programme questionnaire was filled out has a separate record. If a school site offers two upper secondary programmes and that a programme questionnaire for each was filled out, this school site is represented by two records in the SPSS Programmes file. For each type of programme, the following information is available:

- Identification variables for the country, the school and the programme (same as in the ACCESS database);
- Weight variables (same as in the ACCESS database);
- School questionnaire data of the ‘parent’ school;
- Programme identification and classification variables;
- School, ISCED 3 and programme enrolments total and by gender;
- Responses to Part III questions of the ‘School and Program Questionnaire’ (same as in the ACCESS database); and
- Derived variables developed for analytic purposes. A description of all derived variables is available in part B of Annex 4.

III.3 Identification of countries, schools and programmes

Codes for identifying countries, schools and programmes are consistent between ACCESS and SPSS databases.

Each school record has a unique ID number consisting of the Country code (C_CODE), the Stratum code (CODESTR) and the School ID (SCHID). Each programme record has a unique ID number consisting of the Country code (C_CODE), the Stratum code (CODESTR), the School ID (SCHID) and the Programme ID (PROGID).

The country identification variables are labelled C_CODE and COUNTRY. The country codes used in ISUSS are the ISO 3166 country codes.

Although school names are included in the master file, they are removed from the published international database for confidentiality reasons.

III.4 Missing data

Three types of missing data are distinguished:

- *Item level non-responses (MIS)*: they are coded 9 for a one-digit variable, 99 for a two-digit variable, 999 for a three-digit variable, etc. in the ACCESS database, while they are coded as ‘.’ in the SPSS data files (it is coded SYSMIS in the syntax of SPSS programmes);
- *Not administered responses*: in some cases, countries decided not to ask a question because it made no sense or did not apply in their situation. To distinguish this kind of missing data (N/ADM) from genuine missing values, the not administered response is coded 8 for a one-digit variable, 98 for a two-digit variable, 998 for a three-digit variable, etc. in both ACCESS and SPSS databases. This option was only used if a question was not asked at the National level or the option does not apply to the school (*e.g.*, a programme is not available); and
- *Multiple or ambiguous responses (M/R, Ambiguous)*: they are coded 7 for a one-digit variable, 97 for a two-digit variable, 997 for a three-digit variable, etc. in both ACCESS and SPSS databases. This option was used if more than one option was selected for the multiple choice type questions. It was also used for illegible, not interpretable responses to numeric type questions and also for responses which were outside the valid range of values for a question.

III.5 Recoding of some variables

Some variables had to be recoded because the responses were not consistent with responses to other related questions. A typical example is the screening variable Question 20 asking whether the school provides computers (workstations) for teachers and students. All subsequent questions 21 to 28 depend on the response to this question, *i.e.*, a ‘No’ response implies that no meaningful answers can be given to the other questions related to school computers. If such a question was ticked as ‘No’ but the following questions that are linked to this question were completed while they should have been missing, the corresponding observations were removed from the analysis.

In addition, some variables were recoded in order to change their type for the purposes of calculation used in the ISUSS report (*e.g.*, in calculations of percentages or standardised frequencies). Full details are presented in the syntax files: *PG_DerVarSchools.sps* and *PG_DerVarProg.sps* contained in the website. A short description of these programmes follows below.

Variables related to staff

- When the variables SC06Q03 and SC06Q04 (number of teachers employed full-time and/or part-time) were greater than 0 and the other staff variables (SC06Q01, SC06Q02, SC06Q05 to SC06Q10) were missing, these latter variables were recoded as 0 to allow a calculation of indicators on staff even if some of these other variables are missing;
- When the variables SC06Q03 and SC06Q04 (number of teachers employed full-time and/or part-time) were missing but the other staff variables (SC06Q01, SC06Q02, SC06Q05 to SC06Q10) were not, all staff variables were recoded as missing;
- When all staff variables (SC06Q01 to SC06Q10) were equal to 0 they were recoded as missing as it would otherwise indicate a school without any staff; and

- In some cases, answers to Question 9 (number of teaching vacancies which had to be filled at the beginning of the school year) and Question 10 (methods used to cover these vacancies) were inconsistent, *i.e.*, the answer to Question 9 was '0' (there were no vacancies to be filled) but there were 'Yes' responses to Question 10 indicating eventual methods to manage vacancies. In such cases the 'Yes' responses were recoded 'No' to be consistent with Question 9. The same procedure was applied when the answer to Question 9 was missing.

Variables related to ICT

- Question 20 asked: 'Does your school provide computers for students and/or staff for educational purposes?' If the answer was 'No', the respondent was supposed to skip Questions 21 to 28 and go to Question 29 and the variables related to Questions 21 to 28 were expected to be coded as missing. These variables were recoded as follows: Q21 was recoded as 0, Q22 as missing, Q23 as 0, Q24 as 2, Q25 as 1 and Q26 to Q28 as missing;
- If the answer to Question 20 was missing, variables for questions 21 to 28 were all coded as missing;
- In some schools, the number of computers designated to teachers was extremely large (*e.g.*, more than five computers were reported to be available for each teacher). Such error suspect observations were removed from the analysis (one or two cases); and
- The ratio of computers to all students (or to full-time equivalent teachers) was calculated only when the number of students (or full-time equivalent teachers) was greater than 0. In the same way, the ratio of computers connected to the Internet (Intranet) was calculated only when the number of computers available at schools was greater than 0. Otherwise the ratio was missing.

Indices

Indices (see Section III.7) could only be calculated if none of the component variables were missing. In some cases, the index is the sum of 'Yes' responses to a series of items (see for example the index of variety of professional development activities). Sometimes schools ticked only the boxes corresponding to a 'Yes' answer but left the boxes with a 'No' answer empty. In order to distinguish these from genuine missing values, an intermediate variable was calculated to obtain the number of valid answers within the range of items from which the index is calculated (in SPSS syntax, the NVALID function calculates the number of valid arguments in a given range). If the result was equal to 0 then all values composing the index were missing and consequently the value of the index is missing. If, however, the result of the NVALID question was greater than 0 then at least one of the sub-questions was answered while some of the other variables were left unanswered. Then these other variables were recoded as 'No' and the index was then calculated.

Other variables

Question 19 asked about the receipt of feedback on the functioning of the school from different groups. The option '*the local school authority or the maintainer of the school*' does not apply in France and the option '*external examinations boards (students' results)*' does not apply in Sweden. Therefore these options were recoded as 0 to allow a calculation of the index for question 19.

III.6 Derived variables

Derived variables developed for the purposes of analysis are included only in the SPSS data files.

In both SPSS data files, there are three types of derived variables:

- Indices developed for the purposes of the analysis. Section III.7 presents the types of indices used in the initial report and explains how these indices were developed;
- Variables used as ‘intermediate’ variables to build the first type of derived variables (see for example the NVALID variables mentioned in the previous section); and
- Variables created only to change the original data type into another data type for analytic purposes. An example is school size (SCHSIZE), which is a categorical variable derived from SCH_T (total enrolment in the school), which is a numeric variable.

Annex 4 gives a complete list and description of derived variables.

III.7 Development and contents of indices and other derived measures

What measures are used?

The following five types of measures are used in the publication *Completing the Foundation for Lifelong Learning - An OECD Survey of Upper Secondary Schools*: weighted frequencies, ratios, aggregate country scores, standardised frequencies, and standardised indices.

- *Weighted frequencies* are country mean values aggregated from school level frequencies or reported percentages weighted by student weight. Section I.9 describes the calculation of the upper secondary enrolment weight and the programme enrolment weight used in reporting weighted frequencies;
- *Ratios* are calculated as weighted country means of school level ratios calculated by dividing two variables;
- *Standardised frequencies* are weighted frequencies rescaled in such a way that the international mean is set to zero, and the unit of the scale is the international standard deviation. Thus, a country value of +1 means that the country average is higher than the international mean, and its distance from the international mean is the international standard deviation. Alternatively, a country value of -1 means the same distance below the international average. For standardising frequencies, a specific weight was used to calculate the international standard deviation, which is the unit of the international scale. Standardised frequencies are used in reporting feedback from various groups of stakeholders.
- *An aggregate country score* is reported for the three most serious obstacles to schools’ ICT-related goals. This score was obtained by adding up coded school responses to the question about the three most serious obstacles to achieving the school’s ICT-related goals. The most serious obstacle was coded 3 a code of 2 was assigned to the second most serious obstacle and a code of 1 to the third most serious obstacle. The scores were weighted by upper secondary enrolments and aggregated on the country level for each of the 22 listed obstacles; and
- *Standardised composite indices* represent the summary of responses to a series of related questions expressed on an international standard scale. The scale is calibrated in such a way that the international mean is set

to zero and the international standard deviation is used as scale unit. Section I.9 describes the weights used for estimating the international standard deviation.

How should standardised frequencies and standardised indices be interpreted?

Standardised frequencies and standardised indices in this study are reported on relative scales depending on the variation across and within countries. The scales measure the distance from the international mean. Negative scale values indicate scores that are lower than the international mean, positive values indicate scores that are higher than the international average. The scale unit is the international standard deviation, which is a measure of variability in the total pool of schools in the participating countries. This means that differences may look bigger than they actually are, if there is generally small variation between schools and countries, and vice versa, differences may seem smaller if there is big variability between schools and countries. The advantage of expressing school's values and country means on an international standard scale is that the same scale can be used for all countries and all schools within countries, showing the relative position of a school or a country in the universe of schools across countries.

Ratios

Ratios of students to teachers, to professional personnel and to total personnel at school (Tables 3.1a to 3.1d)

The ratios of students to teachers, to total professional personnel and to total personnel were calculated as the ratio of the total number of students (headcounts) in the school and the total number of various personnel categories measured as full-time equivalents. Professional personnel includes school management personnel, teachers and professional support personnel. Total personnel includes school management personnel, teachers, teacher aids, professional support personnel and other support personnel. Schools are left out if the ratio of students to teachers (or to professional personnel at school, or to total personnel at school) is equal to or less than 1 or more than 100. Ratios are weighted by the upper secondary student enrolment in the school as described in Section I.9.

Ratio of students to student computers (Table 3.8)

The ratio of students to computers was calculated as the ratio of the total number of students in the school to the number of computers for students' use in the school. Schools that reported that no computers are provided are included in the calculation. Ratios are weighted by the upper secondary student enrolment in the school as described in Section I.9.

Ratio of teachers to teacher computers (Table 3.8)

The ratio of teachers to computers was calculated as the ratio of the total number of teachers (full-time equivalents) in the school and the number of computers designated for teachers' use. Schools not providing computers are included in the calculation. Ratios are weighted by upper secondary student enrolment as described in Section I.9.

Ratios of computers connected to the Internet and local area networks (Table 3.9)

Ratios of computers connected to the Internet and to local area networks were calculated from the total number of computers in the school and the total number of computers connected to the Internet/local area networks. Ratios are weighted by upper secondary student population as described in Section I.9.

Standardised indices

All standardised indices were developed by calculating a score from principals' responses to a series of related questions as described below. The scores were transformed to the international scale which was standardised in such a way that the international mean was set to zero and the international standard deviation was used as scale unit. The weight used for calculating the international standard deviation is described in Section I.9. All indices were weighted by a student enrolment weight also described in Section I.9.

Index of admission and placement policies related to students' performance (Table 2.1b)

The index of performance-related admission policies was calculated by summing the school principal's responses to the question how often they considered the following criteria when admitting or placing students to upper secondary programmes: *student's record of academic performance, entrance examination and recommendation of feeder schools*. The response alternative *always* or *often* was assigned a code of 2, sometimes was assigned a code of 1, and never was assigned a code of 0.

Index of selective grouping policies within schools (Table 2.2b)

The index of selective grouping policies within the school was calculated by summing the school principal's responses to the questions how often upper secondary students were grouped in the school *more or less at random, according to similar ability levels, so that classes contain a mixture of ability levels* and *according to the requests of parents/guardians*. In calculating the overall index, the 'integrative' methods (*i.e.*, random grouping and grouping into classes that contain a mixture of ability levels) were considered with a negative sign. The response alternative *always* or *often* was assigned a code of 2, *sometimes* was assigned a code of 1, and never was assigned a code of 0. Thus a high score on this index means a strong tendency to stream students by ability or socio-cultural background. A low score means an integrative approach to grouping students.

Indices of variety of career guidance and counselling methods in upper secondary schools (Table 2.5)

The index of school-related career guidance methods was calculated as a sum of school principals' responses to the question how often they used the following methods: *specific classes are set aside in the curriculum, teachers include a module in their teaching, a specific guidance plan is provided, information about possible careers is provided, personal guidance is provided and informal guidance is provided*. The index of career counselling methods involving external contacts was calculated as a sum of school principals' responses to the question how often they used the following methods: *the school invites employers/practioners to talk to students, the school invites representatives of further educational institutions to talk to students, the school organises visits for students to employment organisations and/or counselling services and the school organises visits to institutions of further education*. The response alternative *always* or *often* was assigned a code of 2, *sometimes* was assigned a code of 1, and *never* was assigned a code of 0.

Indices of feedback from various stakeholders (Table 2.8, Table 2.9)

The index of feedback from various stakeholders was calculated by summing school principals' positive responses to the questions whether the school received information on its functioning from the following stakeholders: *regional, national education authorities (i.e., inspectorates), local school authorities, employers, parent groups, teacher groups, student groups and external examination boards* (Table 2.9). For each of the listed organisations, standardised frequencies were calculated as well. These are reported in Table 2.8 and Figure 2.11. For Figure 2.11, however, the country mean was set to 3 (instead of 0) to avoid negative values.

Index of difficulty of hiring fully qualified teachers in various study areas (Table 3.6b)

The index of difficulty to hire fully qualified teachers in various study areas is calculated by summing principals' 'Yes' responses to the questions whether they perceived difficulty in hiring a fully qualified teacher in the following subject areas: *mother tongue/language of instruction, mathematics, foreign languages, social studies, sciences, technology, arts, physical education, computer sciences/information technology and business studies.*

Index of variety of professional development activities (Table 3.11b)

The index of variety of professional development activities is calculated by summing the school principal's responses to the questions whether any of their teachers participated in the school year 2000/2001 in the following types of professional development activities: *observational visits to other schools, regularly scheduled collaboration among teachers on issues of instruction, mentoring and/or peer observation and coaching as part of a formal arrangement that is recognized or supported by the school or educational authorities, collaborative research and/or development on a topic related to education, participation in a professional network of teachers (i.e., one organised by an outside agency or over the Internet); courses or workshops on subject matter, methodology and other education-related topics, conferences where teachers and/or researchers present their methodological and scientific results and discuss educational problems, degree programmes (i.e., qualification programme, master's, Ph.D.), and visits to companies/employers.* The index of variety of professional development activities was calculated as the sum of 'yes' answers to the above questions.

Index of variety in educational computer use (Table 3.14b)

The index of variety in educational computer use was calculated by summing school principals' responses to the questions about how much computers are used in upper secondary programmes for the following educational purposes: *to develop skills of independent learning, to provide additional instruction and practicing opportunities for students, to allow students to learn/work at their own pace during lessons, to combine parts of school subjects with one another; to create opportunities for learning by simulation, and to obtain information from the Internet.* The response alternative 'a lot' was assigned a code of 2, 'a little' was assigned a code of 1, and 'not at all' was assigned a code of 0.

Index of variety of computer-related student activities (Table 3.15b)

The index of variety of computer-related student activities was calculated as a sum of the school principal's 'Yes' responses to the questions about which of the following computer-related activities was a regular part of students' assignments in upper secondary education in their school: *operating a computer (saving files, printing, etc.), writing documents with a word processor (typing, editing, layout), making illustrations with graphic programmes, calculating with a spreadsheet programme (sheet creation, use of formulae, organising information), writing programmes, communicating via e-mail with teachers and other students, sending, searching for and using electronic forms of information and using educational software (i.e., taking tests, exercises).*

Indices of obstacles to reaching school goals related to development of information and communication technology (Table 3.16b)

The indices correspond to scores determined by school principals' responses to the following question: do you consider any of the following an obstacle to reaching your school's information technology-related purposes? On the basis of the 22 listed obstacles, five indices were calculated:

- The index of obstacles related to hardware and infrastructure sums affirmative responses to the following listed obstacles: *insufficient number of computers for teachers' use; insufficient number of computers for students' use; outdated (older than 3 years) computers; Internet connection is not available; not enough space to locate computers appropriately; weak infrastructure (telecommunications, electricity);*
- The index of obstacles related to availability of software sums affirmative responses to the following listed obstacles: *not enough copies of software for instructional purposes; not enough variety of software; poor quality of available software;*
- The index of obstacles related to teachers sums affirmative responses to the following listed obstacles: *insufficient time for teachers to prepare lessons in which computers are used; difficult to integrate computers into classroom instruction; difficult to use with low achieving students; no time in teachers' schedule to explore opportunities for using the Internet; lack of interest / willingness of teachers to use computers; teachers' lack of knowledge / skills in using computers for instructional purposes; not enough training opportunities for teachers;*
- The index of obstacles related to organisation and planning is the sum of affirmative responses to the following listed obstacles: *problems in scheduling enough computer time for different classes; no time in the school schedule for using the Internet; insufficient plans and / or resources to prevent theft and vandalism of computers; not enough staff to supervise students using computers; shortage of maintenance and technical support; and*
- The index of lack of support is based on the affirmative answer to the following listed obstacle: *lack of support from the governing body or community.*

'Problem scores' of perceived obstacles to reaching ICT-related goals aggregated on country level (Figure 3.25)

School principals were asked to indicate the three most serious obstacles to reaching the school's ICT-related goals from a list of 22 obstacles. The rankings were coded 3 if the item was considered to be the most serious obstacle, 2 if it was the second most serious obstacle and 1 if it was considered the third most serious obstacle. School rankings for each of the three obstacles mentioned as one of the three most serious obstacles weighted by upper secondary student enrolment and aggregated on the country level to obtain the three highest ranking obstacles in the country.

III.8 SPSS programmes

SPSS programmes have been written to calculate the required weights, to recode some variables, to implement the derived variables and finally to build Tables which are presented in the different chapters of the ISUISS report.

The SPSS data files already contain adjusted weights, weights for estimating school-level indicators, indicators by programme type, the international means and standard deviations, derived variables and recoded variables. The SPSS programmes below are included in the files on the website files to document the procedure of building the SPSS database for the purposes of the ISUISS report.

The programmes were run in the following order:

- *PG1_Wght.sps*: Implementation of weight adjustments (from the variable SAMPLEWT originally provided by countries) for some schools in some countries. Weight adjustment procedures are described in Section I.9 (Weighting procedures);
- *PG2_SE_Wght_ISC3.sps*: Implementation of weights for estimating school-level indicators in the ‘Schools’ data file. For the calculation of weights by ISCED 3 enrolments see Section I.9 (Weighting procedures);
- *PG2_SE_Wght_Prog.sps*: Implementation of weights for estimation of indicators by programme type in the ‘Programmes’ data file. The calculation of weights used in programme level indicators is described in Section I.9 (Weighting procedures);
- *PG3_Recoding.sps*: All details are provided in section III.5 (Recoding of some variables);
- *PG4_DerVar_PROVPG.sps*: Implementation of the derived variable PROVPG. This variable depends on countries because of their number of programmes and their types;
- *PG5_DerVar_Schools.sps*: Implementation of derived variables for the ‘Schools’ data file. Details of calculation for all variables are provided in Annex 4 (Codebook, Part B: List of Derived Variables);
- *PG5_DerVar_Prog.sps*: Implementation of derived variables for the ‘Programmes’ data file. All Details of calculation for all derived variables are provided in Annex 4 (Codebook, Part B: List of Derived Variables);
- *PG_Chapter2.sps*: Building tables in Chapter 2 of the first ISUSS report ‘*Completing the Foundation for Lifelong Learning - An OECD Survey of Upper Secondary Schools*’;
- *PG_Chapter3.sps*: Building tables in Chapter 3 of the first ISUSS report ‘*Completing the Foundation for Lifelong Learning - An OECD Survey of Upper Secondary Schools*’; and
- *PG_Annex2.sps*: Building tables in Annex 2 in the first ISUSS report ‘*Completing the Foundation for Lifelong Learning - An OECD Survey of Upper Secondary Schools*’;

These SPSS programmes are included in the files on the website for users who wish to reproduce tables from the SPSS database. All these SPSS programmes are stored in the zipped ‘*ISUSS_SPSSprogrammes.zip*’.

Since the weights used are different for each ‘*block of tables*’ since there are sometimes filters used (for example, Tables 3.1 and 3.8) it is preferable to run the programmes within programme files separately by ‘*block of tables*’.

AN IMPORTANT NOTE FOR USERS OF THE SPSS PROGRAMMES

After running any of the programmes provided on the website, **NEVER SAVE the original SPSS data files** because some raw (or derived) variables may be modified by the programme for the needs of tables. Moreover, since weights are taken into account and applied they should not be saved in the original SPSS data files.