

METHODOLOGICAL BASIS OF EDUCATION STATISTICS

1. Legal Basis

Education statistics is constructed on the basis of Regulation No. 452/2008 of the European Parliament and of the Council concerning the production and development of statistics on education and lifelong learning, the current legal acts in Bulgaria in the area of education, the International Standard Classification of Education - revision 2011 (ISCED 2011) and the concomitant methodological instructions. At the same time, the main part of the methodology is formed by the methodological documents of Eurostat, which are connected with the preparation of data and filling in the so called UOE annual education questionnaire (a joint questionnaire of UNESCO, OECD and Eurostat).

The basic legal and official acts in the Republic of Bulgaria which are directly applied to the methodology and organization of the current statistical surveys are: the Law on Statistics, the Pre-school and School Education Act, the Law on Vocational Education and Training, the Higher Education Act and the Development of academic staff in the Republic of Bulgaria Act.

Data for school education are not comparable to those for previous years from the 2017/2018 school year because of considerable changes in the education system structure as a result from the Pre-school and School Education Act¹.

2. Main Statistical Surveys

The National Statistical Institute conducts yearly exhaustive surveys that characterize the activity of the educational institutions:

- Pre-primary education in kindergartens and preparatory groups at schools (education level ISCED - 0). From the school year 2021/2022, the NSI has switched to the use of administrative data on pre-school education from the National Electronic System for Pre-school and School Education (NESPSE). The Ministry of Education and Science (MES) organizes the management of NESPSE and maintains an electronic archive of information and documents in electronic format in the system of pre-school and school education, which is organized through electronic information modules and registers in NESPSE. The information and documents in the system of pre-school and school education refer to:

1. institutions in the system of the pre-school and school education;
2. activity of each institution in the system of the pre-school and school education;
3. children, students and persons, included in training under art. 169 and 170 of the Preschool and School Education Act.

There is a break in the time series due to change of the data source;

- Primary and lower secondary stage of basic education, upper secondary education in all types of schools (education levels ISCED - 1, 2 and 3). From the school year 2021/2022, the NSI has switched to the use of administrative data on school education too, from the NESPSE. There is a break in the time series again due to change of the data source and the reference date;

- Vocational training after completed secondary education in vocational colleges (education level ISCED 4). The NSI continues to conduct the annual survey on vocational colleges but the reference date of observation was changed due to which there is a break in the time series;

- Vocational training against payment for attaining a professional qualification level according to the Law on Vocational Education and Training from vocational training centers (VTC), vocational gymnasiums and vocational colleges, which covers individuals older than 16 years of age (education levels ISCED - 2, 3 and 4). The statistical survey on VTC has been conducted jointly with the National Agency for Vocational Education and Training via information system, since 2012;

¹ Prom. SG No. 79/13 October 2015.

- Tertiary education for acquiring Professional Bachelor's, Bachelor's and 'Master's education and qualification degrees from colleges, universities and equivalent higher schools (education levels ISCED - 6 and 7). The statistical survey on tertiary education covers all authorized higher schools according to the Higher Education Act and the private spiritual higher schools, opened under the regulation of the Religious Denominations Act. **Due to a change in the Religious Denominations Act, the three spiritual higher schools are excluded from the scope of the survey, from the 2022/2023 academic year;**
- Tertiary education for acquiring a Doctor's education and scientific degree from universities and scientific organizations (education level ISCED - 8).

3. Main Statistical Units and their Breakdowns of Characteristics

3.1. Students enrolled (children in kindergartens, pupils, students, Ph.D. students)

3.1.1. Definition

A pupil/student is every person enrolled in an educational program of formal education according to ISCED irrespective of the mode of attendance. Formal education includes educational programmes implemented in legitimate educational institutions created according to the existing legal order. Ph.D. students in scientific organisations are also included, irrespective of their mode of attendance.

NSI with its surveys is aiming to determine the number of students in the education system as of a given date of observation. This is the basis for calculating the internationally accepted indicator 'Participation Rate of the Population in the Education System', which represents the relative share of students enrolled from a certain age group in relation to the number of the constant population of the country in the same age group. According to the recommendations for filling in the UOE questionnaire, each country should make efforts to obtain the exact number of students enrolled, without counting twice those who are enrolled in two educational programmes simultaneously, i.e. **annually the number of students enrolled should be obtained and not the number of enrolments.**

3.1.2. Reference date

The reference dates of observation for the different surveys are selected in such a way so to reflect adequately the number of students. The period of 15 - 30 days after the beginning of the school year turned out to be most suitable because in this period the status for each student is finally settled.

For the different surveys, the observation dates are as follows:

- Pre-primary education - December 1;
- Basic and upper secondary education and vocational education after upper secondary education - up to 2020/2021 school year - October 1, from 2021/2022 school year - December 1;
- Training for acquiring a professional qualification level from vocational training centres, vocational gymnasiums and vocational colleges - December 31;
- Tertiary education (Ph.D. excluded) - November 15;
- Tertiary education - doctoral programmes - December 31.

3.1.3. Main breakdowns of characteristics

The main breakdowns of characteristics for collecting and publishing data on students enrolled are: sex, year of birth, grade, repeating a grade, level of education, mode of attendance, type, profile and location of the school, profession/specialty studied, citizenship and country of prior education (for tertiary education), studying of foreign languages, studying of mother tongue (for basic and upper secondary education).

Foreign students are those students who are not citizens of the Republic of Bulgaria as well as those who have dual citizenship and have been enrolled under the regulations about foreign citizens.

The student mobility is measured by country of prior education which means that mobile student is a student who has graduated secondary education abroad.

3.1.4. Some particularities when distributing the students enrolled by ISCED 2011 levels of education

- Children in preparatory groups at schools are presented with the children enrolled in kindergartens or at ISCED level 0 (pre-primary education).
- Pupils in preparatory grade before first grade in classes for hard-hearing children and visually handicapped children are classified at the starting stage of basic education or ISCED level 1 (primary education), because the program is different from the one for kindergartens.
- Students in VIII grade, enrolled in general profiled and vocational programmes with admission after completed VII grade are classified at ISCED level 3, until the school year 2016/2017 including, for as much as these are overall programmes aiming at acquiring upper secondary education and are entirely conducted in gymnasiums, art and sport schools or vocational gymnasiums.
- Until the school year 2016/2017 including, students in vocational schools (VS) and in independent vocational classes with enrolment after VI and VII grade are classified at ISCED level 2 and those studying in VS with enrolment after VIII grade are classified at ISCED level 3.
- Students studying in vocational classes at general schools are presented as vocational education.

3.1.5. Students who left school are defined as students who had been enrolled in the beginning of the previous school year but before its end, due to some of the observed reasons, left the school. Data about the students who left school are available until the school year 2019/2020 because such information is missing in the administrative registers of MES.

3.2. Newly enrolled pupils/students

3.2.1. Definition

Pupils/students who enter for the first time in the initial grade or course of the respective education level are considered newly enrolled. This means that those who was enrolled at the same education level previous years are not included to the number of the newly enrolled.

3.2.2. Main breakdowns of characteristics

The main breakdowns of characteristics for collecting and publishing data on the newly enrolled students are: sex, year of birth, education level, mode of attendance, type, profile and location of the school, profession/specialty taught, education and qualification degree (for tertiary education) and citizenship (for students in tertiary education).

3.3. Graduates with a level of education and a certificate or a diploma received

3.3.1. Definition

Graduates are those pupils/students who received a document for a completed level from a legitimate educational institution, containing all the necessary records and stamps according to the law.

3.3.2. Main breakdowns of characteristics

The main breakdowns of characteristics for collecting and publishing data on graduates are: sex, year of birth, mode of attendance, type, profile and location of the school, profession/specialty taught, level of education attained (basic or upper secondary), level of professional qualification attained, education and qualification degree (for tertiary education) and citizenship (for students in tertiary education).

3.4. Teachers/Academic staff

3.4.1. Definition

The teachers (academic staff) are officials who directly conduct the training sessions according to curriculum irrespective of whether they are full or part time employees. Directors and deputy directors in basic and upper secondary education are observed separately although a great part of them may have lecturing functions as well. The academic staff in tertiary education (ISCED - 6 and 7) includes persons whose main engagement is teaching and research work. This staff includes the officials such as rectors, vice rectors, deans, heads of departments, etc. if they have teaching activity.

3.4.2. Main breakdowns of characteristics

The main breakdowns of characteristics for collecting and publishing data on teachers are: sex, age (5-year age groups), education level completed, education level for teaching, type and location of the school, type of employment - full or part time.

Teachers in basic and upper secondary education are grouped by levels of teaching and by programme orientation (general or vocational). If the same teachers have teaching activity at different levels they are assigned to the level, in which they have the predominant number of teaching hours.

Vocational education data include teachers of vocational classes in general schools until the school year 2020/2021 while from the school year 2021/2022 these teachers are presented in vocational schools.

The number of teachers in Personality development support centres and Special educational support centres is included in the special education data.

Academic staff in higher schools is studied by sex, age, type of employment (full or part time), scientific titles - professors, associate professors, assistants, senior lecturers, lecturers.

3.5. Management personnel

3.5.1. Definition

The management personnel includes officials performing management functions at the level of the educational institution - principals, assistant principals, rectors, deans and their assistants, heads of departments.

3.5.2. Main breakdowns of characteristics are the same as those for teachers/academic staff.

4. Educational Institutions

Type of the educational institutions and their characteristics, defined by different criteria are part of the essential breakdowns of characteristics for the enrolments and the personnel.

4.1. Definition

An educational institution is defined as a centre taking independent decisions, which performs education services for persons and organizations and is created according to the regulations of the law. This means that the institution has a manager (director, rector or another manager), i.e. this is an independent educational institution. Dependent educational institutions are branches or units known under other names which are typically subordinate to an independent institution.

Educational institutions are those, which directly perform training according to educational programs with students in organized classes (groups) at place or by a distant mode of attendance. Self-training persons and enterprises conducting qualification courses, language training and others do not come into the scope of the definition of educational institution.

4.2. Types of educational institutions and their main statistical characteristics.

4.2.1. Kindergartens

Main characteristics:

- Type of ownership (public and private)

4.2.2. Schools² (I - XII grade)

Main characteristics

- Type of school: primary (I - IV grade), basic (I - VII grade), integrated (I – X grade), gymnasiums (VIII - XII grade), secondary (I - XII grade), vocational (art schools, sport schools, vocational gymnasiums, including religious schools, providing training for acquiring a level of professional qualification);

- Type of management: independent and dependent schools.

4.2.3. Vocational colleges with enrolment after upper secondary education.

Main characteristics: type of ownership (public and private).

4.2.4. Higher schools - colleges, universities and equivalent higher schools.

² According to the Pre-school and School Education Act

Main characteristics: type of ownership (public and private).

5. Specific Classifications Used

5.1. International Standard Classification of Education (ISCED 2011).

ISCED is designed to serve as a framework to classify educational activities as defined in programmes and the resulting qualifications into internationally agreed categories.

5.2. 'Classification of the fields of education and training 2015' published in State Gazette, No. 46/17.06.2016.

The classification was developed on the basis of UNESCO 'ISCED Fields of Education and Training (ISCED-F 2013)' and the methodological document 'Fields of Education and Training (ISCED-F 2013) - Detailed field descriptions'. It is applied in the tertiary education statistics since 2017/2018 academic year.

5.3. Classification of the specialties for acquiring Doctor's education and scientific degree, complemented with the new doctoral programmes accredited by the National Evaluation and Accreditation Agency since 2012.

This classification is used in Ph.D. statistics and is based on a Council of Ministers Decree, published in State Gazette, No. 34/1990. As the classification is not harmonized with the classifications mentioned from point 5.1 to point 5.3, a transition key is used for the purpose of ensuring internationally comparable data on Ph.D. students by fields of education. This key ensures the correspondence between the specialties from the Bulgarian classification and the detailed fields of education and training of the international classification (ISCED-F 2013). In the list are also included new doctoral programmes, accredited by the National Evaluation and Accreditation Agency, since 2012.

5.4. List of Professions for Vocational Education and Training approved by Order RD 09-413/12.05.2003 of the Minister of Education and Science, which is applied to statistics of vocational education in schools and VTC.

6. Reducing the Number of pupils/students and teachers/academic staff to a Full-time Equivalent

6.1. Definition of full and part time student/teacher

A student is considered full time if he/she is enrolled in a regular mode of attendance and part time if he/she is enrolled in another mode of attendance (extra-mural training, evening courses, distance or independent learning).

A teacher/academic staff member is considered full time employed if he/she works in an educational institution on a labour contract and has a full norm employment planned for the school year. If these conditions are not fulfilled, the teacher is considered part time employed. This last category includes also all part time teachers working on a second or civil contract.

6.2. Calculating the number of the pupils/students and teachers/academic staff into a full-time equivalent.

It is considered that the Full-time Equivalent (FTE) of a student in regular mode of attendance is equal to one FTE. The number of the part timers is reduced into FTE by dividing it by the so called converting factor which is equal to the ratio of the yearly length (in school hours) of the 'regular' program and the length of the extra-mural or other respective programme. Thus if the regular program is twice the length of the extra-mural program, the converting factor is $K = 2$. If the students in regular mode of attendance are 200 and those in extra-mural are 100 then the $FTE = 200 + 100/K = 250$.

The FTE for teachers is calculated in similar way, with the converting factor for the part timers being determined as a ratio of the number of hours of the teachers working on a labour contract and the average number of hours of the part timers. For tertiary education, FTE is calculated separately for every scientific title (professors, associate professors, senior lecturers, lecturers, assistants).

7. Scope of the Surveys

The statistical surveys cover enrolments, teaching and other staff in all legitimate educational institutions on the territory of the country including their branches.

8. Data Dissemination

Data from the statistical surveys on the pre-school, basic, upper secondary and tertiary education are disseminated by different means.

8.1. Annual statistical publications

- Education in the Republic of Bulgaria;
- Statistical Yearbook;
- Statistical Reference Book;
- Regions, districts and municipalities in the Republic of Bulgaria.

8.2. Internet

- NSI website;
- Information System INFOSTAT.

8.3. Data users

Data are being provided to:

- Other statistical bodies;
- National and foreign users;
- International organizations (UNESCO, Eurostat, OECD, UNICEF, World Bank).