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| Appendix to the order of the head of the bureauApproved by the order of the Acting Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan dated December 23, 2015 220dated January 10, 2022no. 51 |
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**Methodology for the formation of statistical indicators for education according to the scheme "International Standard Classification of Education–2011"**

**Chapter 1. General provisions**

1. The methodology for the formation of statistical indicators in the field of education according to the scheme "International Standard Classification of Education – 2011 " (hereinafter – Methodology) was developed in accordance with international standards and [the Law](http://adilet.zan.kz/rus/docs/Z100000257_#z0) of the Republic of Kazakhstan "On State Statistics" (hereinafter – Law) and establishes a list of indicators in in the field of education statistics, formed within the framework of nationwide statistical surveys.

2. The following definitions are used in this Methodology:

1) ISCE level – the international standard classification of education, which is a guide for streamlining educational programs and related qualifications by levels and areas of education;

2) ISCE–0 level – education of young children who have not reached the age for entry to the ISCE–1 level and is aimed at developing some of the skills necessary to prepare children for educational activities and for admission to primary education programs;

3) ISCE–1 level – primary education, educational and educational activities aimed at teaching the basic skills of reading, writing and mathematics (i.e. literacy and numeracy), and at creating a serious basis for the study and understanding of the main areas of knowledge, for personal development, for the preparation of training at the first stage of secondary education;

4) the ISCE–2 level is the basic secondary education, which is aimed at building up the knowledge gained on the basis of ISCE–1;

5) the ISCE–3 level is the level of secondary education, consisting of general secondary and technical vocational education, developed in order to obtain secondary education and prepare for tertiary education or for further employment;

6) ISCE–4 level – post–secondary non–tertiary education, defines the acquisition of learning experience on the basis of secondary education, preparation for entering the labor market, and the acquisition of tertiary education. This level of education is aimed at students who have completed the second stage of secondary education (ISCE–3 level), but who want to improve their chances in the labor market or continue to study in the tertiary education system;

7) ISCE–5 level – short cycle of tertiary education. Designed to provide participants with professional knowledge and develop professional skills and competencies. ISCE–5 level programs are usually designed to prepare for work, and are also the basis for transition to ISCE–6 or 7 level programs;

8) ISCE–6 level – Bachelor's degree or its equivalent is often designed to provide participants with intermediate academic and professional knowledge, skills and competencies leading to the award of a first degree or equivalent qualification. Programs at this level tend to have a theoretical basis as well as practical components and are characterized by a high level of research and best professional practice;

9) ISCE–7 level – magisters degree or its equivalent, often designed to provide participants with enhanced academic and professional knowledge, skills and competencies leading to the award of a second degree or equivalent qualification. Programs at this level have a significant research component, but do not yet lead to a doctoral degree;

10) The ISCE–8 level – doctoral studies or equivalent is primarily designed to lead to an advanced research qualification. Programs at this level are dedicated to advanced and independent research and are generally only offered at tertiary educational institutions such as research–oriented universities;

3. Sources of information about the educational process and the level of education of the population are statistical forms of national statistical observations, administrative data of authorized state bodies in the field of education.

**Chapter 2. Calculation of key indicators by levels of education**

**Paragraph 1** . **Calculation of the average number of students**

**per educational institution**

4. The purpose of this indicator is to measure the level of uneven territorial distribution of educational institutions, from shortage to overabundance of student places in the country. This indicator is calculated by levels of education from pre–school education to technical and vocational education. The indicator is especially necessary to determine the need for the design capacity of educational institutions in rural areas.

5. Calculation methodology: the degree of capacity and utilization of educational institutions as a percentage of the number of students and the number of places. It is calculated by dividing the number of students in educational institutions according to the levels of education according to ISCE–0 – ISCE–5 by the design capacity (student places) of educational institutions.

The indicator is calculated using the following formula:

$$N^{l}=\frac{Ns^{l}}{C^{l}}$$

where:

$N^{l}$– average number of students per educational institution;

$Ns^{l}$– the number of students in educational institutions of the level of education according to ISCE – 2011;

$C^{l}$– design capacity of educational institutions;

l – levels of education according to the breakdown of ISCE – 2011.

**Paragraph 2. The ratio of students and teachers**

6. The purpose of this indicator is to determine the level of shortage of teachers in educational institutions for all levels of education in accordance with ISCE – 2011, including educators in preschool institutions and masters of industrial training in colleges.

7. The calculation methodology is defined as the ratio of the number of students of a given level of education to the number of teachers of the corresponding level of education in a given academic year. When calculating the indicator, it is necessary to take into account the working hours of teachers: full or part–time.

The student–teacher ratio is calculated using the following formula:

$$R\_{t}^{l}=\frac{NS\_{t}^{l}}{NT\_{t}^{l}}$$

where:

$R\_{t}^{l} $ – student–teacher ratio at educational level l

for the academic year t;

$NS\_{t}^{l} $ – total enrollment at education level l

for the academic year t;

$NT\_{t}^{l} $ – the total number of teachers at the level of education l for the academic year t , taking into account the workload;

l – levels of education, according to the breakdown of ISCE – 2011;

t is the academic year.

8. The ISCE–0 level (Early Childhood Education) includes caregivers engaged in educational activities with a workload of at least 2 hours a day and with a program duration of at least 100 calendar days a year without caregivers, working in seasonal kindergartens;

the ISCE–1 level (primary education) includes the number of teachers working in primary grades (grades 1–4). If the staff is involved in only one level of ISCE, then when calculating the indicator, the workload is calculated as 100%;

levels ISCE–2 – ISCE–8. The available data does not allow to calculate the student–teacher ratio separately for each level, due to the fact that the teacher works at different levels of ISCE. For part–time teaching staff, a coefficient of 0.5 is used.

**Paragraph 3. Acceptance rate**

9. This indicator represents the proportion of students admitted to study in the official age group established for a given level of education from the size of the corresponding population group.

10. The enrollment rate is calculated as the ratio of the number of people admitted to study at educational institutions at a given level of education to the population in the official age group established for a given level of education, expressed as a percentage.

The indicator is calculated using the following formula:

$$K\_{p}^{l}=\frac{Ns\_{a}^{l}}{Np\_{a}^{l}} ×100$$

where:

$K\_{p}^{l} $ – coefficient of acceptance at a given level of education according to ISCE – 2011;

$Ns\_{a }^{l}$ – the number of students enrolled in programs at that level, as broken down by ISCE–2011, in the officially established age group for that level of education;

$Np\_{a}^{l} $ – population size in the official age group established for a given level of education;

l – levels of education according to the breakdown of ISCE–2011;

a – age groups corresponding to the level of ISCE–2011.

**Paragraph 4. Net enrollment rate**

11. The purpose of this indicator is to determine the degree of participation in the learning process at a given level of education of children and young people belonging to the age group corresponding to a given level of education. At each level of education, the net enrollment rate is based on complete enrollment records for all types of schools, colleges and institutions of higher education, including public and private educational institutions providing educational services for the respective curriculums.

12. The net enrollment rate is the proportion of students in the official age group for a given level of education, expressed as a percentage of the relevant population group. It is calculated by dividing the total number of pupils (students) in the official age group established for a given level of education by the population of the same age group and multiplying by 100.

The indicator is calculated using the following formula:

$$K\_{n}^{l}=\frac{Ns\_{a}^{l}}{Np\_{a}^{l}} ×100$$

where:

$K\_{n}^{l} $ – net enrollment rate at a given level of education according to ISCE–2011;

$Ns\_{a}^{l} $ – the number of students enrolled in programs at that level, as broken down by ISCE–2011, in the officially established age group for that level of education;

$Np\_{a}^{l}$ – population size in the official age group established for a given level of education;

l – levels of education according to the breakdown of ISCE–2011;

a – age groups corresponding to the level of ISCE–2011.

**Paragraph 5. Gross enrollment rate**

13. This indicator indicates the ability of the education system to reach students of a certain age group. The gross enrollment rate supplements the net enrollment rate by indicating the enrollment rate for students above or below the appropriate age category for a given level of education.

Gross enrollment ratio is the proportion of students (regardless of age) at a particular level of education, expressed as a percentage of the population, established by international standards for a given level of education in a given age group.

The age group for tertiary education corresponds to the five–year period after the theoretical age of completion of upper secondary education.

14. Calculated by dividing the total number of pupils (students) of a certain level of education, regardless of age, by the population of the officially established age group for this level of education, and multiplied by 100.

The indicator is calculated using the following formula:

$$K^{l}=\frac{Ns\_{a}^{l}}{Np\_{a}^{l}} ×100$$

where:

$K^{l}$– gross enrollment ratio at a given level of education according to ISCE–2011;

$Ns\_{a}^{l} $ – the number of students enrolled in programs of a given level of ISCE, regardless of age;

$Np\_{a}^{l} $ – the population of the officially established age group for a given level of education;

l – levels of education, according to the breakdown of ISCE–2011;

a – age groups corresponding to the level of ISCE – 2011.

**Paragraph 6. Dropout rate from the education and training system**

15. The purpose of this indicator is to determine the number of students who dropped out of the education system without obtaining the appropriate qualification (diploma, certificate).

16. The calculation methodology is defined as the proportion of students enrolled in a certain educational program at an educational institution in a given academic year, but not attending this educational institution at the beginning of the next academic year (excluding graduates).

The indicator is calculated using the following formula:

$$K\_{t}^{l}=\frac{No\_{t}^{l}}{N\_{t-1}^{l}-Ng\_{t}^{l}-Ns\_{t}^{l}}×100\%$$

where:

$K\_{t}^{l}$– dropout rate from the system of education and training;

$No\_{t}^{l }$– the number of students who dropped out of the corresponding level of ISCE–2011 at the end of the academic year;

$N\_{t-1 }^{l}$ – the total number of students who studied at the corresponding level of ISCE–2011 in the previous academic year;

$Ng\_{t}^{l}$– the number of graduates who completed the corresponding level of ISCE–2011 between academic years t –1 and t;

$Ns\_{t}^{l}$– the number of repeaters of the corresponding level of ISCE–2011;

l – levels of education, according to the breakdown of ISCE–2011;

t – academic year;

t –1 – the previous academic year.

**Section 7. Level of repetition**

17. The repetition rate measures the proportion of students in a particular grade who repeat that grade in the current school year as a percentage of the total number of children who attended the same grade last year.

18. The repetition rate is calculated as the number of repetitions in a given grade in the current school year divided by the number of students in the same grade in the previous school year:

$$DR\_{gt}=\frac{D\_{gt}}{S\_{gt-1}}$$

where:

$DR\_{gt}$– the rate of dropouts from the ISCE–2011 level in the time period t;

$D\_{gt}$– the number of students (students) in the period of time t–1, no longer studying in an educational institution in the period of time t;

$S\_{gt-1}$– the number of pupils (students) studying at the corresponding level of ISCE–2011 in the previous academic year t–1;

l – levels of education, according to the breakdown of ISCE–2011.

**Paragraph 8. Rate of graduation**

19. Output ratiois used to evaluate the results of the functioning of the education sector.

This indicator represents the share of graduation of students in educational institutions in the official age group of the population established for a given level of education from the size of the corresponding population group.

20 . The graduation rate is calculated as the ratio of the number of graduates of educational institutions at a given level of education to the population in the official age group established for a given level of education, expressed as a percentage.

The indicator is calculated using the following formula:

$$K\_{v}^{l}=\frac{Ns\_{a}^{l}}{Np\_{a}^{l}} ×100$$

where:

$K\_{v }^{l}$– graduation rate at a given level of education according to ISCE–2011;

$Ns\_{a}^{l} $– the number of graduates , programs of a given level according to the breakdown of ISCE–2011 in the age group officially established for a given level of education;

$Np\_{a}^{l}$ – the number of the population in the official age group established for a given level of education;

l – levels of education according to the breakdown of ISCE–2011;

a – age groups corresponding to the level of ISCE–2011.

**Paragraph 9. Target employment of graduates**

21. Target employment of graduates is defined as the proportion of graduates who graduated from educational institutions and found jobs out of the total number of graduates (graduates).

The indicator is calculated using the following formula:

$$E=\frac{Ng\_{e}}{Ng}$$

where:

E – target employment of graduates;

$Ng\_{e}$ – the number of graduates who successfully graduated from an educational institution and found a job;

$Ng$– the number of graduates who successfully completed their education .

**Paragraph 10. Expected duration of education**

22. Expected years of schooling indicates the number of years that a pupil (student) who has reached the officially established age of entry into educational institutions will spend studying at all levels of education, provided that the current enrollment rates remain unchanged.

23. This indicator characterizes the degree of coverage of the population with education and is equal to the sum of all levels of education according to the breakdown of ISCE–2011:

$$P\_{a}^{t}=\sum\_{t-a}^{n}\frac{D\_{it}}{T\_{it}}$$

where:

$P\_{a }^{t}$– expected duration of training;

$D\_{it}$– the number of students aged i in academic year t;

$T\_{it} $– the population at age i in academic year t;

i – age;

t – academic year;

a – age groups corresponding to the level of ISCE–2011;

n is the upper age limit of training.

Matching results

Agency for Strategic Planning and Reforms of the Republic of Kazakhstan – Director of the Department Samat Sovetovich Zhasuzakov, 12/28/2021 11:23:30, positive result of the EDS verification

Ministry of Justice of the Republic of Kazakhstan – Vice Minister Natalya Vissarionovna Pan, 01/05/2022 18:32:25, positive result of the EDS verification

Signing results

Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan – Acting Head Zh. Dzharkinbaev, 10.01.2022 18:22:12, positive result of verification of the EDS