

Annex 3B. Source, methodology and technical notes for Chapter B

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Description

This document is intended to provide guidance as to the methodology used during the data collection for each indicator, the references to the sources and the specific notes for each country. For general information on methodology, please refer to the *OECD Handbook for Internationally Comparative Education Statistics: Concepts, Standards, Definitions and Classifications* (<https://doi.org/10.1787/9789264304444-en>).

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Note: All tables in Annex 3 are available on line, see the StatLink below


StatLink  <https://stat.link/0opnw2>

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Note: All tables in Annex 3 are available on line, see the StatLink below

StatLink  <https://stat.link/rcz0h4>

Most of the indicators in Chapters B, C and D are calculated using the UOE data collection. The tables below contain information on the sources and methodology for each of the UOE questionnaires, as well as relevant technical notes.

Tables X3.UOE.ENRL. Sources, methods and technical notes for UOE enrolment data in Indicators B1, B2, B6 and the *Education at a Glance Database*

INST	This sheet compiles all countries comments and missing data in ENRL1A-INST and ENRL1B-INST
AGE	This sheet compiles all countries comments and missing data in ENRL2-AGE&FP and ENRL3-AGE&P
FIELD	This sheet compiles all countries comments and missing data in ENRL4-FIELD and ENRL5-MOB&FIELD
COUNTRY	This sheet compiles all countries comments and missing data in ENRL6-MOB&COUNTRY
REPEATER	This sheet compiles all countries comments and missing data in ENRL7-REP
GRADE	This sheet compiles all countries comments and missing data in ENRL8-GRADE
ADULT	This sheet compiles all countries comments and missing data in ENRL9-ADULT
METADATA	This sheet compiles all countries selected information in Val_Metadata

Note: The Education at a Glance database can be found at <http://stats.oecd.org/>. All tables in Annex 3 are available on line, see the StatLink below.


StatLink  <https://stat.link/q9jolp>

Table X3.UOE.ENTR. Sources, methods and technical notes for UOE entrants data in Indicator B4 and the *Education at a Glance Database*

AGE	This sheet compiles all countries comments and missing data in ENTR1-Age and ENTR2-Mobile&Age
FIELD	This sheet compiles all countries comments and missing data in ENTR3-Field
METADATA	This sheet compiles all countries selected information in Val_Metadata

Note: The Education at a Glance database can be found at <http://stats.oecd.org/>. All tables in Annex 3 are available on line, see the StatLink below.

StatLink  <https://stat.link/zl3asd>

Table X3.UOE.GRAD. Sources, methods and technical notes for UOE graduates data in Indicator B3 and the *Education at a Glance Database*

INST	This sheet compiles all countries comments and missing data in GRAD1-INST
AGE	This sheet compiles all countries comments and missing data in GRAD2-AGE, GRAD3-FIRST&AGE and GRAD4-MOB&AGE
FIELD	This sheet compiles all countries comments and missing data in GRAD5-FIELD and GRAD6-MOB&FIELD
COUNTRY	This sheet compiles all countries comments and missing data in GRAD7-MOB&COUNTRY
METADATA	This sheet compiles all countries selected information in Val_Metadata

Note: The Education at a Glance database can be found at <http://stats.oecd.org/>. All tables in Annex 3 are available on line, see the StatLink below.



StatLink  <https://stat.link/x9jgwm>

Table X3.UOE.PERS. Sources, methods and technical notes for UOE personnel data in Indicators B2, D8 and the *Education at a Glance Database*

STUD	This sheet compiles all countries comments and missing data in PERS1-STUD
INST	This sheet compiles all countries comments and missing data in PERS2-INST
AGE	This sheet compiles all countries comments and missing data in PERS3-AGE
MANAGEMENT	This sheet compiles all countries comments and missing data in PERS4-MANA
METADATA	This sheet compiles all countries selected information in Val_Metadata

Note: The Education at a Glance database can be found at <http://stats.oecd.org/>. All tables in Annex 3 are available on line, see the StatLink below.

StatLink  <https://stat.link/l130ch>

Tables X3.UOE.FIN. Sources, methods and technical notes for UOE education finance data in Chapter C and the *Education at a Glance Database*

METADATA	General information on the data collected through the UOE Finance questionnaire
FIN_STUDENTS	Number of students with coverage adjusted to statistics on educational finance by type of institution
FIN1_SOURCE	Educational expenditure by level of education, source and destination
FIN2_NATURE	Education expenditure by level of education, type of institution and nature

Note: The Education at a Glance database can be found at <http://stats.oecd.org/>. All tables in Annex 3 are available on line, see the StatLink below.

StatLink  <https://stat.link/1rn6ye>

Indicator B1. Who participates in education?

Methodology

Data generally refer to the school year 2019/20. Statistics that relate participation data to population data are published for the reference date that was used by national authorities for these statistics. It is assumed that age references in the enrolment data refer to 1 January of the reference year. For Australia, 30 June is used as the reference date for ages in both enrolments and population data for all education levels except pre-primary, which has the reference date 1 July for enrolments. For Japan, 1 October is used as the reference date for ages in population data and 1 May is used as the reference date for enrolments. For the United States, 1 October is used as the reference date for ages in enrolments data, but the reference date for ages in population data is 31 October.

The dates or periods at which students, educational staff and educational institutions were counted were not provided by all countries. Some countries collect these statistics through surveys or administrative records at the beginning of the school year while others collect them during the school year, and yet others at the end of the school year or at multiple points during the school year. It should be noted that differences in the reference dates between, for example, enrolment data and population data can lead to overestimated or underestimated figures (for instance, net enrolment rates exceeding 100%) when there is a significant decrease or increase over time in any of the variables involved. If the reference date for students' ages used in the enrolment data differs from the reference date for the population data (usually 1 January of the reference year), this can be a further source of error in enrolment rates.

Due to the fact that the calculation of enrolment rates is based on different data sources and sometimes includes estimates, the calculated enrolment rates were slightly higher than 100% in a few instances. In those cases, the enrolment rate was rounded down to 100%.

Information on the sources and instruments used by countries to collect data on enrolments is given in EAG2022_Annex3_ChapterB_ENRL (<https://stat.link/q9j0lp>), which also indicates missing data points and explanatory notes on the raw data collected.

The typical enrolment ages in Table B1.2. are calculated on the number of enrolments reported in each level of education whose age is known. The lower age in the range is the age of the student at the 20th percentile, and the upper age in the range is the age of the student at the 80th percentile. The age range given therefore includes at least 60% of the students in the level of education whose age is known, although it may cover a larger share of students if many of those enrolled have the same age.

Source

Data on enrolments are based on the UOE data collection on education systems administered annually by UNESCO, the OECD and Eurostat for all OECD and partner countries. Data from Argentina, China, India, Indonesia, Saudi Arabia and South Africa are from the UNESCO Institute of Statistics (UIS).

Notes on specific countries

Australia: Break in series in 2018. The methodology to attribute students to public and private institutions at ISCED levels 3 to 5 and to attribute students to vocational programmes at ISCED levels 2 to 5 was improved.

Austria: Data exclude participants in short courses for sports instructors. Students enrolled in VET in schools programmes are not reported in vocational enrolments (ISCED 25, 35, 45, 55) to remove double counting.

Belgium: Data on the German-speaking Community are not integrated in the enrolments data for Belgium; however the population data refer to Belgium (and therefore include the German-speaking Community). Data on independent private institutions refer to European Schools (ISCED 1 – 2 – 3) and, at higher education levels, only refer to the Flemish Community. About 120 000 adult learners (French Community) at ISCED level 2 to 7 are not included in the data broken down by age, which may lead to the underestimation of enrolment rates, especially in the age group 20-22.

Data on enrolments in ISCED 55 programmes from the French-speaking Community are marginal and are included in enrolments in ISCED 6 programmes. Break in series in 2019/20; from this year, associate degree programmes of higher vocational education (at ISCED 5) are organised by university colleges. Previously, these courses could be followed at the

centres for adult education. An exception to this is the HBO5 nursing course, which will still be organised by secondary schools, in a partnership with a university college. In addition to the associate degree programmes, the university colleges also offer the HBO5 courses (phasing out) for students who had already started this course at a centre for adult education.

Data collection by field of study and mobility status is undergoing an ongoing process of being improved, which may explain some fluctuations in trend data.

Data on enrolments by age for the French Community of Belgium in the years 2005 and 2013 are based on estimations regarding adults who have returned to education after the age of 18. Data on such enrolments are missing for 2020.

Brazil: People in military careers are excluded. Special education programmes are included.

Canada: The ending age of compulsory education is 16 except in Ontario, New Brunswick, Manitoba and Nunavut where it is 18. Data on enrolments by field of study at ISCED 5 exclude private institutions.

Chile: As of 2018, Chile revised the methodology to attribute students to upper secondary general and vocational programmes. This was done to better reflect the structure of upper secondary education, in which two years of upper secondary education are taught under a general formation programme in sciences and humanities. After the successful completion of the second year, students can opt to continue in a differentiated general or vocational programme for the remaining two years of upper secondary education. The revised methodology was implemented for years as of year 2019.

The share of students by category at ISCED 3 excludes ISCED 341 and the share of students by age and category excludes students younger than 16.

Czech Republic: Break in series in 2017/18. The 2016 Higher Education Law introduced new study programmes, the fields of a small number of old study programmes was reclassified for better quality data. A new data collection was introduced for post-secondary non-tertiary education, resulting in a lower total number of students at this level. A new data collection was introduced for bachelor's, master's and equivalent, resulting in a lower total number of part-time students at these levels.

From 2020, programmes at ISCED 65 that were previously classified as child care and youth services (Field F0922) are classified as training for pre-school teachers (Field F0112).

Data on part-time students by age at ISCED 4 covers only students in general programmes.

Denmark: In the school year 2019/20, a number of institutions providing ISCED 342 programmes became classified as public institutions, leading to a decreased in the number of enrolments reported from private institutions.

A reform of two social and health education programmes on 1 January 2017 led to an increase in their length. This has contributed to an increase in the number of enrolments in welfare programmes (Field F092).

The creation of a new education programme in 2019/20 that is classified as a social sciences, journalism and information programme (Field F03) contributed to an increase in the number of enrolments reported in this field at ISCED 75. In the same year, a new special youth education programme was established, which contributed to a rise in the number of enrolments in ISCED 342. The increased number of enrolments at this level is also partly due to the reclassification of an education programme from ISCED level 251 to ISCED level 342.

Estonia: The classification of institutions was modified in 2016 (school year 2015/16). The majority of ISCED 0-3 independent private institutions were classified as government-dependent private institutions due to core funding received from government agencies. Government dependent private universities (ISCED 6-8) were classified as public universities due to overall control criteria. These changes lead to non-compatibility by type of institution between year 2015 and year 2016.

Finland: Finland's vocational education system (ISCED 3 vocational, ISCED 4 vocational) was revised in 2018. This had an impact on legislation, qualification system, financing, monitoring and provision of vocational education. The changes affect the data from school year 2018-19 and calendar year 2018 onwards. Due to the changes in the vocational education system the data is not wholly comparable to previous years.

The data source on enrolments at ISCED levels 3-4 changed to the Finnish National Agency for Education's KOSKI data warehouse data in school year 2019-20. Previously data were based on Statistics Finland's data collections. This causes some differences in the data on students especially for ISCED 3-4 vocational education. E.g. data on enrolment in vocational school- and work-based programmes (ISCED 3) is the situation in 20 September starting from the school year 2019-20. Previously this data covered the whole school year.

Break in series regarding the division of ISCED 3 and 4 vocational education enrolment to public and government-dependent private institutions in 2019/20. From school year 2019/20 onwards, data on vocational education are based on the Finnish National Agency for Education's KOSKI data warehouse data. This led to a change in the reporting of vocational school- and work-based programmes. Previously, all students in vocational school- and work-based programmes were recorded as enrolling in public institutions. From 2019/20, information is available on whether enrolments in vocational education at ISCED 3 and 4 are in public or government-dependent institutions.

France: The classification of students by type of institutions at ISCED levels 4-8 changed as of school year 2017/18. In addition, there is a break in time-series in the classification by field of education due to change in methodology as of school year 2017/18.

Germany: Full-time education is compulsory until age 16; for 16-18 year-olds, part-time education is compulsory. Beginning with 2016, figures are impacted by the unusually high immigration, especially asylum seekers. Enrolment data for 2005 were proxied by 2006 data.

Data on enrolments at ISCED 554 are based on annual results of statistics on graduates of Advanced vocational training (Aufstiegsfortbildung). The first pilot study used 2018/19 data from providers of advanced vocational training programmes to estimate the number of enrolments and entrants. Results are forecasted in the years that follow by using given numbers of graduates. In 2020, there was a decrease in the number of graduates due to the COVID-19 pandemic.

Break in series from 2019/20, after which a new data source for ISCED 844 (Promovierendenstatistik) based on administrative data has been used. Previously, statistics were based on data collected in sampled surveys. In addition, the criterion used to identify mobile students in 2019/20 was citizenship, instead of country of prior education as in previous years.

Greece: As of 2019/20, most ISCED 75 programmes were abolished or integrated into ISCED 74 programmes, contributing to an increase in the number of enrolments reported at ISCED 74 in 2020. In this year, technological institutions were also either abolished or integrated into universities. This led to a decrease in enrolments in ISCED 65 programmes as there were no new entrants to this level in 2019/20.

Hungary: Compulsory education starts in the calendar year when the child turns 6 until 31 August, but not more than one year later, and ends when the student turns 16. As regards students that began their studies in 9th grade in the 2011/2012 school year or earlier, their compulsory education shall terminate at the end of the school year in which they turn 18. The programme orientation of 'Upper vocational grammar schools' has been modified and is no longer qualify as general, but as vocational programmes; this reform was introduced in the 2016/2017 academic year.

Iceland: All students in evening classes and distance learning at ISCED 3 and 4 are counted as students in adult education, irrespective of their age or the programme attended.

Ireland: The data collection on ISCED 5 private institutions is on a voluntary basis and does not cover all enrolments at this level. All leaving certificate programmes are classified as secondary general education. SOLAS programmes were reported as post-secondary non-tertiary vocational programmes until year 2015/16, while the education level breakdown is available starting with year 2016/17 between upper secondary and post-secondary non-tertiary vocational programmes.

Israel: Israel has mandatory military service from ages 18 to 21 for men and 18 to 20 for women. This postpones the age of enrolment in post-secondary and tertiary education. In 2016, Israel updated the methodology to track enrolment in independent private institutions, which may result in a break in series with respect to previous years. Data on ISCED 5 independent private institutions are no longer collected.

Italy: The increase in participation and school expectancy is largely due to the fact that compulsory schooling was extended to the age of 15 in 1999/2000. Legislation on compulsory schooling has progressively changed since then. Italy has moved away from the concept of compulsory school attendance until a required age to the principle of the right and obligation to receive education or training until the age of 18. This principle has been fully enforced since 2003. As of school year 2016/17, ISCED 4 enrolments are included with upper secondary education (ISCED 3).

Japan: Full-time equivalents in tertiary education are calculated as the sum of the number of full-time students and 50% of the part-time students.

Korea: In 2009, there was a change in the Elementary and Secondary Education Act affecting the age of enrolment. This affected students born in 2002, who were in first grade in 2009. To reflect this change, only a 10-month range was included in the survey for that particular age cohort. The age cohort of 16 and 17 year-olds enrolled in ISCED 3 in 2020 is therefore smaller than in previous years.

Latvia: According to international definitions, most higher education institutions in Latvia are classified as private government-dependant due to their autonomy and governance model, although they are considered nationally as public institutions.

Luxembourg: A significant proportion of the youth cohort study in neighbouring countries. Nearly all students in tertiary education have to study outside the country. The data for tertiary education (ISCED 5, 6, 7 and 8) is underestimated as it does not cover all tertiary programmes. Enrolment rates for Luxembourg are underestimated because many resident students go to school in the neighbouring countries.

Mexico: Distance learning is included in enrolment figures as of year 2016/17.

Netherlands: Enrolments data only include publicly financed institutions, referred to as “public institutions” in the Dutch national statistical and educational environment.

New Zealand: “Upper Secondary” as used in this publication includes programmes done both as part of the initial compulsory school system, and programmes done in post-schooling institutions. Initial school-based upper secondary education is generally-oriented, while the large majority of post-school study at ISCED 3 is vocational. Both systems have different funding and regulatory arrangements, and different types of students. While initial upper secondary mainly relates to students aged 15-18, adults of any age can enrol in post-school programmes at ISCED 3.

While general and vocational education at ISCED 3 level is not exclusively split between initial and post-initial schooling in New Zealand, to better help policy makers and other readers interpret and use comparisons at ISCED level 3, all New Zealand results relating to New Zealand's initial schooling upper secondary system have been reported as “upper secondary general” (ISCED 34), while all results relating to New Zealand's post-schooling ISCED 3 system (level 1-3 qualifications on the NZQF) have been reported as “upper secondary vocational” (ISCED 35).

In 2020, government interventions related to the pandemic contributed to increased numbers of enrolments in ISCED 4 programmes. Relevant measures taken include the Targeted Training and Apprenticeship fund (TTAF), which made fees free for students enrolled in qualifications in specific industries (see <https://www.tec.govt.nz/funding/funding-and-performance/funding/fund-finder/targeted-training-and-apprenticeship-fund>). Another initiative, Apprenticeship Boost, provides subsidies to employers to take on and retain first and second year apprentices (see <https://www.workandincome.govt.nz/employers/subsidies-training-and-other-help/apprenticeship-boost/index.html>).

Norway: In 2018, there was a change in the Vocational Education Act. As a result, certain education programmes were considered as tertiary level (at ISCED 554) for the first time. Programmes previously classified as ISCED 453 have since been reclassified as ISCED 454 since they give access to programmes at ISCED 554, which are now considered as tertiary.

Poland: Full-time compulsory education normally continues until pupils are 16 years old (i.e. the age for completion of the lower secondary level (*gimnazjum*)). Part-time compulsory education, however, in schools or out of school, lasts until 18 years of age (based on the constitution of the Republic of Poland adopted in 1997). In the school year 2004/05 one year of obligatory pre-school education for 6-year-olds was introduced by the Ministry of National Education and Sport. Since September 2009 ECEC became a legal entitlement for 5-year-olds. In school years from 2011/12 to 2015/16 the start of compulsory pre-primary education was extended to age 5. Since September 2015, ECEC became a legal entitlement for 4-year-olds. Due to changes in the education system, starting from September 2016 ECEC became compulsory for 6-year-olds while the starting for primary school became 7. ECEC became a legal entitlement for 3-year-old children from September 2017. The reorganization of the education system in Poland in 2017/18 included changes in the primary and lower secondary education: lower secondary schools were abolished and replaced by 8-year-long primary school which covers two ISCED levels of primary and lower secondary education (so-called single structure education). All adult students (part-time students) of the new primary schools are reported as enrolled in ISCED 2.

As of 2019/20, the reporting of enrolments in post-secondary schools are not separated into those of young people and adults. Previously, all students in such institutions were considered as part-time students. From 2019/20, the calculation of the number of enrolments at ISCED 4 is able to draw on new information about the form of learning in post-secondary schools, between full-time (day and other) programmes and part-time/extramural programmes.

In Poland, the Higher Education Act allows for newly-admitted students in their first year of study not to be assigned to a particular programme. Increasing number of students in “Field unknown” (Field F99) can be explained by the growing popularity of “individual inter-field studies”.

Slovenia: Break in series in data by field of study in year 2017/18 at ISCED level 8 for fields 05 Natural sciences, mathematics and statistics, 07 Engineering, manufacturing and construction, 08 Agriculture, forestry, fisheries and veterinary and 09 Health and Welfare.

Spain: Doctoral studies are being modified in Spain within the Bologna Process, possibly affecting enrolment at this level. Students with the new system have direct access to the phase of the thesis development. In the past system, they had to follow doctoral courses before working on their thesis.

Sweden: In 2019/20, the Swedish National Agency for Higher Vocational Education recoded some of their programmes. This contributed to some fluctuations in trend data e.g. the increase in the number of students in management and administration (Field F0413) and the decrease in students in secretarial and office work (Field F0415).

Switzerland: In most cantons, compulsory pre-primary education (kindergarten or a first learning cycle) starts in August when the child turns 4 before 31 July in the same calendar year and lasts for two years. In a few cantons of German-speaking Switzerland, there is no obligation to send children to kindergarten, or only an obligation of one year. Nevertheless, the vast majority of children in these cantons attend kindergarten also for two years.

United Kingdom: The rapid growth of “free” and “academy” schools (England only) has led to a significant reduction in the proportion of students attending public schools with a corresponding increase in those attending government-dependent private schools. Enrolment data are split between general/academic education programmes and vocational/professional programmes based on institution type. At ISCED 2-3 levels, programmes taken in school settings are classed as general and programmes taken in Further Education settings (e.g. FE colleges) are classed as vocational. At ISCED 5, programmes taken in university settings are classed as academic and programmes taken in Further Education settings (e.g. FE colleges) are classed as professional. ISCED 5 professional programmes also include a small number of bachelor's and master's professional programmes.

Break in series. A new subject coding system - the Higher Education Classification of Subjects (HECoS) - was implemented in 2019/20, therefore field of study data before 2019/20 is not directly comparable with data from 2019/20 onwards. For further information please see [The Higher Education Classification of Subjects \(HECoS\)](#).

United States: There is no standard, federally determined age at which one can leave school. Every state determines the age at which compulsory school attendance ends, and it generally ranges from 16 to 18. In 2018, the United States reclassified all the enrolment data on upper secondary education as general programmes.

For data on enrolments by type of institution and age, the data source has been updated from National Postsecondary Student Aid Study 2015-16 (NPSAS:15-16) to NPSAS: 18-AC. This has contributed to some changes in the number of enrolments reported, particularly at ISCED levels 45, 5, 6, and 8.

Indicator B2. How do early childhood education and care systems differ around the world?

Methodology

Data refer to the school year 2019/20 and financial year 2019. Statistics that relate participation data to population data are published for the reference date that was used by national authorities for these statistics. It is assumed that age references in the enrolment data refer to 1 January of the reference year. For Australia, 30 June is used as the reference date for ages in both enrolments and population data for all education levels except pre-primary, which has the reference date 1 July for enrolments. For Japan, 1 October is used as the reference date for ages in population data and 1 May is used as the reference date for enrolment statistics. In addition, 1 October (age at 30 September) is used as the reference date for enrolment statistics in day care centres. For the United States, 1 October is used as the reference date for ages in enrolment data, but the reference date for ages in population data is 31 October.

The dates or periods at which students, educational staff and educational institutions were counted were not provided by all countries. Some countries collect these statistics through surveys or administrative records at the beginning of the school year while others collect them during the school year, and yet others at the end of the school year or at multiple points during the school year. It should be noted that differences in the reference dates between, for example, enrolment data and population data can lead to overestimated or underestimated figures (for instance, net enrolment rates exceeding 100%) when there is a significant decrease or increase over time in any of the variables involved. If the reference date for students' ages used in the enrolment data differs from the reference date for the population data (usually 1 January of the reference year), this can be a further source of error in enrolment rates.

The concepts used to define full-time and part-time participation at other ISCED levels, such as study load, child participation, and the academic value or progress that the study represents, are not easily applicable to ISCED level 0. In addition, the number of daily or weekly hours that represent typical full-time enrolment in an education programme at ISCED level 0 varies widely between countries. Because of this, full-time-equivalents cannot be calculated for ISCED level 0 programmes in the same way as for other ISCED levels. It explains why expenditure data per child are reported in Education at a Glance 2022 in head counts and not using full-time equivalents.

Estimated expenditure for all children aged 3 to 5 enrolled in ECEC and primary education are reported for the fourth time in Table B2.3. The calculation of this measure is based on the share of children aged 3 to 5 enrolled in ISCED 01, ISCED 02 and primary education (ISCED 1). For each country, the calculation was based on what proportion of all children enrolled at each of these three ISCED levels were aged 3 to 5. For instance, in Australia, children aged 3 to 5 accounted for 5% of all children enrolled in ISCED 01, 99% of all children enrolled in ISCED 02 and 11% of all children enrolled in ISCED 1. These percentages were used to estimate total expenditure for all children aged 3 to 5 enrolled in ECEC and primary education. Thus, the figure for Australia is equivalent to:

5% of all expenditure allocated to ISCED 01 + 99% of all expenditure allocated to ISCED 02 + 11% of all expenditure allocated to ISCED 1.

A similar calculation was made for all countries (see Table X3.B2.1, columns 1 to 4, <https://stat.link/0opnw2>).

Information on the sources and instruments used by countries to collect data on enrolments is given in EAG2022_Annex3_ChapterB_ENRL (<https://stat.link/q9jolp>) and EAG2022_Annex3_ChapterB_PERS (<https://stat.link/l130ch>), which also indicate missing data points and explanatory notes on the raw data collected.

Source

Data on enrolments and finance are based on the UOE data collection on education systems administered annually by UNESCO, the OECD and Eurostat for all OECD and partner countries. Some additional data on ECEC services outside the scope of ISCED-2011 have been collected during the UOE cleaning process through the Enrolment trend formula file in 2022. Data from Argentina, China, India, Indonesia, Saudi Arabia and South Africa are from the UNESCO Institute of Statistics (UIS).

Interpretation

Metadata on the specific ECEC programmes available in OECD and partner countries were collected in the period December 2021 to January 2022. Table X3.B2.2 (<https://stat.link/0opnw2>) illustrates key features of ECEC provision available in countries, including: the theoretical starting age and duration of programmes and whether childcare components are integrated into programmes. Some countries also have provided this information about ECEC services that do not meet ISCED criteria to be defined as an educational programme. Table X3.B2.2 also indicates the ages of compulsory education and types of access to ECE, including universal entitlements (when every child has the legally enforceable right to access ECE) and free access to ECE (i.e. no tuition fees).

Details on the duration and intensity with which children participate in the various ECEC programmes are given in Table X3.B2.3 (<https://stat.link/0opnw2>). Information on staff qualification requirements (for teachers and teachers' aides and their equivalents) are provided in Table X3.B2.4 (<https://stat.link/0opnw2>).

Notes on specific countries

Australia: From the 2015 reference year, Australia reported full-time equivalent enrolments in ISCED 0 as head counts. In previous years full-time equivalent enrolments were estimated based on the average hours per week. This has affected results for expenditure per student compared with previous years. In addition, from 2016 reference year all children aged three years enrolled in Long Day-care Centres have been reported as enrolled in ISCED 02 (pre-primary). In previous years three year-olds in Long Day-care Centers were only reported in ISCED 02 (pre-primary) if they were recorded as enrolled in a preschool program. However, that data element is no longer collected. Hence, the enrolment rates for three year-olds in ISCED 01 and ISCED 02 are not comparable before and after 2016.

Belgium: Enrolment data do not include the German-speaking Community. Data on independent private institutions refer to the European Schools. For these reasons, enrolment figures have a lower coverage than the population, which leads to an underestimation of enrolment rates.

Chile: The last level of ISCED 02 (Kinder, for 5 year old children) was established as mandatory through law 20.710 of 2013. However, the law that brings this norm to practice is currently in process of approval. Enrolments at ISCED 02 include children enrolled in special needs education, regardless of their age.

Colombia: Data on ISCED 01 by age refer only to pupils enrolled in public institutions.

Estonia: Early childhood education (ISCED 0) data for Estonia cannot be disaggregated into early childhood educational development (ISCED 01) and pre-primary education (ISCED 02) due to the fact that Estonia has a fully unitary system of ECEC that integrates both care and education before children begin primary school. There is one curriculum for all ages up to six years old. The classification of institutions was modified since 2016 (school year 2015/16). The majority of ISCED 0-3 independent private institutions were classified as government-dependent private institutions due to core funding received from government agencies. These changes lead to non-compatibility by type of institution between year 2015 and year 2016. Additionally it is important to take note that educational expenditure comparison in ECEC can be done only since year 2014, because before that year 70% of the pre-primary education was considered non-educational and therefore not submitted to UOE data collection. Since 2014, all expenditure (100%) on pre- primary education is considered educational.

Finland: Age and gender distribution are partly estimated at ISCED 0. The distribution of expenditure to ISCED 01 Early childhood educational development and ISCED 02 Pre-primary education is an estimate based on the estimated difference between expenditure per children at ISCED 01 and ISCED 02. The estimate is based on the difference in stipulated group sizes at ISCED 01 and ISCED 02 (the stipulated group sizes are bigger in ISCED 02 than in ISCED 01).

France: From EAG2022 data on teachers and students have been backdated to 2015 using a further improved methodology. Consequently data before 2015 cannot be presented. Data only covers educational system under the supervision of ministries of national education. The total of private institutions is equal to government-dependent private institutions. Data on independent private institutions are incomplete, but this is a sector with negligible weight.

Germany: The reference year for the trend data is 2006 (school year 2005/2006) instead of 2005. The reason for the deviating reference year is the restructuring of major parts of education statistics in 2006. Due to this break in time series it is not possible to calculate reference data for 2005.

Greece: ISCED 01 was considered as incomplete and was reported as missing.

Ireland: The expenditure on early childhood educational institutions figure does not include spending on integrated care and education, which accounts for a significant portion of public spending and a larger proportion of private spending. In Ireland only spending on the free pre-school ECEC programme is classified as ISCED 02. Other public spending is not classified as ISCED 0 as it supports both care and education, though it often has a similar educational focus to the ECCE programme.

Israel: Break in time series. In 2016, the method of data collection was changed and use of the LFS allowed for the collection of broader information about private institutions. This contributed to an increase in the number of enrolments reported for children aged 0 to 3 years.

Italy: The theoretical starting age of early childhood education programmes is 3 years but children who will be 3 years of age by 30 April may also access these programmes if places are available.

Japan: The coverage of staff (teachers, teachers' aides) in the Table showing child-to-staff ratios and the data reported in the indicator on financing of ECEC in ISCED 02 are limited to some ECEC services (Kindergartens and Kindergarten Department of Special Needs Education School). Currently, the percentage of children enrolled in reported ECEC services (Kindergartens and Kindergarten Department of Special Needs Education School) is approximately 42% of 3 to 5 year old children enrolled in all ECEC services.

Day care centre and integrated centre for early childhood education and care are excluded of these two indicators.

As for public expenditure for Day care centre and Integrated centre for early childhood education and care, both public and private facilities have been paid operating expenses and facility maintenance expenses, etc.

Since October 2019, free early childhood education and care is a universal legal entitlement for children aged 3-5 enrolled in ECEC services.

Luxembourg: Starting from scholar year 2009/2010, early childhood education, pre-primary and primary education are grouped in a coherent and continuous programme called "enseignement fundamental". This programme is divided into four cycles. The first cycle, corresponding to pre-primary education spans for 3 years. The first year, early childhood education, is not compulsory, the second and third years, for pupils aged 4 and 5, are compulsory.

Slovak Republic: Students with special educational needs or from socially disadvantaged backgrounds, who are older than the theoretical age intended, can attend kindergartens or preparatory classes at ISCED 0 before enrolling in primary education.

Switzerland: In most cantons compulsory pre-primary education (kindergarten or a first learning cycle) starts in August when the child turns 4 before 31 July in the same calendar year and lasts for two years. In a few cantons of German-speaking Switzerland, there is no obligation to send children to kindergarten, or only an obligation of one year. Nevertheless, the vast majority of children in these cantons attend kindergarten also for two years.

United Kingdom: From 2018, the methodology for calculating FT/PT/FTE enrolment in government dependent private institutions is based on 15 hours of provision to match with government policy (universal entitlement). Before 2018, intensity was based on 25 hours of provision. This presents a break in the time series. Enrolment figures in government dependent private institutions (in PERS-STU and FIN-STU ISCED 01) only cover pupils from the age at which they become eligible for some funded early education (from age 2 for selected pupils). This results in an underestimation of student figures at ISCED 01 level.

Indicator B3. Who is expected to graduate from upper secondary education?

Source

Data are based on the UOE data collection on education systems administered annually by UNESCO, the OECD and Eurostat for all OECD and partner countries. Data from Argentina, China, India, Indonesia, Saudi Arabia and South Africa are from the UNESCO Institute of Statistics (UIS).

Information on the sources and instruments used by countries to collect data on graduation is given in EAG2022_Annex3_ChapterB_GRAD (<https://stat.link/x9jgwm>), which also indicates missing data points and explanatory notes on the raw data collected.

Notes on specific countries

Argentina: All graduates are reported as first-time graduates.

Australia: Data on graduates has the reference year 2019 for vocational programmes at ISCED 3, ISCED 4 and ISCED 5 due to availability constraints on national data.

Austria: Austria plans on ending the programme known as *Schule für Gesundheits- und Krankenpflege* (Schools for qualified nursing care) by 2023, which may explain a decrease in the number of graduate students at ISCED 4.

Belgium: For the year 2020, data on the French community of Belgium is excluded at ISCED 5.

Break in series in 2019/20; from this year, associate degree programmes of higher vocational education (at ISCED 5) are organised by university colleges. Previously, these courses could be followed at the centres for adult education. An exception to this is the HBO5 nursing course, which will still be organised by secondary schools, in a partnership with a university college. In addition to the associate degree programmes, the university colleges also offer the HBO5 courses (phasing out) for students who had already started this course at a centre for adult education. This could increase the number of graduated students at ISCED 5.

Brazil: The COVID-19 pandemic may explain some of the sharp decreases in the number of graduates at ISCED 4, ISCED 6 and ISCED 7.

China: All graduates are reported as first-time graduates.

Canada: Data on upper secondary vocational programmes in Canada is only reflective of the education system in the province of Quebec. In other Canadian jurisdictions, vocational training is offered within the general post-secondary system, although vocational learning opportunities are available at the secondary level across the country.

In the school year 2018/19, the concordance file for the field of study variable was updated, so caution should be used when comparing to previous years.

In 2020, the province of Ontario changed its methodology for reporting data at ISCED 5. Data are not comparable with previous years.

Labour shortages due to the COVID-19 pandemic have negatively affected the graduation rates at the upper secondary level.

Colombia: From 2019, Colombia started classifying programmes following the ISCED 2013 classification for education programmes at ISCED 5. Data are not comparable with previous years.

Costa Rica: Costa Rica is currently working to improve the collection and dissemination of tertiary education data. Caution is advised when using graduation data.

Czech Republic: Due to the COVID-19 pandemic, some of the 2020 graduation data had to be estimated.

Denmark: In 2017, Denmark made reforms to increase the duration of specific social and health education programmes at ISCED 35. Caution should be used when comparing to previous years.

Finland: Finland's vocational education system (ISCED 3 vocational, ISCED 4 vocational) was revised in 2018. This had an impact on legislation, qualification system, financing, monitoring and provision of vocational education. The changes affect

the data from school year 2018-19 and calendar year 2018 onwards. Due to the changes in the vocational education system the data is not wholly comparable to previous years.

As of the school year 2019/20, data are based on the Finnish National Agency for Education's KOSKI data warehouse data. Previously data were based on Statistics Finland's data collections. This implies a break in time series at ISCED 3 and ISCED 4. Caution should be used when comparing the data to previous years.

France: Since the start of 2019, training programmes in arts at ISCED 4 have no longer been available.

Germany: Germany's graduate data for lower secondary education are incomplete as some students entering upper secondary general schools are not reported as graduates if they stayed in the same school as their lower secondary education (e.g. *Gymnasium*).

Greece: In 2020, Greece changed its data collection methodology at ISCED 4. Data are not comparable to previous years.

Since 2019, most ISCED 65 programmes have been integrated into ISCED 64 programmes.

Hungary: 2020 graduate data are highly affected by Hungary's COVID-19 mitigation strategies at ISCED 6 and ISCED 7.

Ireland: Ireland does not receive full data from private government independent institutions. Indicators regarding the graduation rate by type of institution could underestimate the shares of graduates in private institutions as data are not complete.

From 2020, Ireland reclassified some health and welfare programmes at ISCED 35. Caution should be used when comparing the data with previous years.

Luxembourg: A significant proportion of the youth cohort studies in neighbouring countries at ISCED 3 level.

Data for independent private school graduations does not include information on previous degrees for 2019/2020. Luxembourg then reports graduates from independent private institutions as first-time graduates.

Poland: As of 2020, Poland uses country of prior education instead of country of upper secondary diploma to report mobile students at ISCED 6 second or further degree and ISCED 8. Caution should be used when comparing the data with previous years.

New Zealand: Initial school-based upper secondary education is generally-oriented. The vast majority of post-school study at ISCED 3 is vocational, of one year or less duration. While post-school certificates are at the same level as school-based qualifications, they are not part of the upper secondary school system in New Zealand. Students who do not graduate from initial upper secondary programmes at school may at a later stage go on to graduate from a vocational ISCED 3 post-school programme.

The field of study has been updated due to changes in method of national classification. The single field of study assigned to a qualification may not illustrate the list of fields actually studied by graduate students. To make it more likely that the field of study a student specialises in will be selected as the predominant field, the study load is now weighted by the level of the course on the New Zealand Qualification Framework (NZQF).

Sweden: In Sweden, graduation from upper secondary education only concerns the part of the school system designed for students below the age of 21. Students enrolled in adult education may have completed ISCED 3 and received a leaving certificate without being reported as graduates. In addition, following the introduction of the new upper secondary reform in academic year 2011/2012 (GY11), the requirements for graduation have been made more strict, and the numbers of graduates have gone down. Students with a full exam are regarded as graduates, while students with a leaving certificate (*studiebevis*) are reported as "partial completion".

Turkey: Open education is excluded.

United Kingdom: A new subject coding system - the Higher Education Classification of Subjects (HECoS) - was implemented in 2019/20, therefore field of study data before 2019/20 is not directly comparable with data from 2019/20 onwards. For further information please see [The Higher Education Classification of Subjects \(HECoS\)](#).

United States: The majority (nearly all) of ISCED 3 graduates are first-time graduates. While the graduates may be in programmes described as vocational, academic, or general, all graduates must have met requirements for completing a designated number of academic courses. General Educational Development (GED) programmes and other alternative forms

of upper secondary school completion are not included in the graduation-rate calculations. Data for graduates by age in the United States are calculated by applying totals by ISCED level from universe data to age distributions by ISCED level, which are drawn from a nationally representative sample of households in the United States. These age distributions fluctuate from year to year, resulting in estimates at some ages increasing and at other ages decreasing. These fluctuations become particularly notable for population bands on the fringe of an ISCED level from which relatively few people graduate. Also, for ISCED 4, the first-time graduates data are equivalent to the total graduates at ISCED 4 because there is no way of estimating “first-time”. First-time graduation rates from post-secondary non-tertiary programmes are high in the United States (over 20%) compared to other countries. This can be due, in part, to the fact that these are programmes of a vocational nature that might be classified as secondary programs in some countries. Due to methodological changes, caution should be used when comparing classifications of ISCED 4 graduates by fields of study in 2020 to prior years.

Indicator B4. Who is expected to enter tertiary education?

Source

Data are based on the UOE data collection on education systems administered annually by UNESCO, the OECD and Eurostat for all OECD and partner countries. Data from Argentina, China, India, Indonesia, Saudi Arabia and South Africa are from the UNESCO Institute of Statistics (UIS).

Information on the sources and instruments used by countries to collect data on entrants is given in EAG2022_Annex3_ChapterB_ENTR (<https://stat.link/zl3asd>), which also indicates missing data points and explanatory notes on the raw data collected.

Notes on specific countries

Australia: For Australia, international students are excluded from the numerator but not the denominator when calculating entry rates and this has the effect of understating the adjusted rate. It should also be noted that many international students may reside in Australia for some time after the completion of their studies and that this should be kept in mind when interpreting these data.

Belgium: Data on the German-speaking Community are not integrated in the data for Belgium in the UOE data collection. Short-cycle tertiary programmes exist in the French Community of Belgium but data are not reported. This small amount of entrants, around one hundred in 2020, are instead reported in ISCED 6 data. Associate degree programmes (ISCED 5) were introduced in the academic year 2019-2020 organized by university colleges. Previously, these courses could be followed at the centres for adult education, where data for entrants was not available.

Chile: Entrants are considered as students who were not enrolled between 2007 and the reference year, due to data availability. Since 2018, the number of mobile students has been calculated by determining the country of previous studies, as opposed to the country of previous residence, which was the criteria that was used up until 2017. The number of new entrants decreased in 2020 due to several factors, especially in institutions that provide technical education. There have been delays in the enrolment process of students in tertiary education institutions, as a consequence of the protests that occurred in October 2019. In addition, there have been several postponements of the University Selection Test for the admission of students to tertiary education institutions. The COVID-19 pandemic has also contributed to the decrease in the number of new entrants.

Colombia: Data on entrants corresponds to calculations based on the date and country of birth reported by higher education institutions in the National Higher Education Information System. As of 2019, the ISCED 2013 classification for education programs has been applied to data collected in Colombia, which resulted in the reclassification of some academic programmes. New entrants to adult education in ISCED 3 are not included in data for 2020.

Costa Rica: 2020 entry to tertiary education data are reported as missing. Costa Rica is currently working to improve the collection and dissemination of tertiary education data.

Denmark: In 2018, Statistics Denmark improved reporting systems as to have better coverage on PIN-number for students entering ISCED 5. This has an effect on the number of international students entering ISCED 5 as there is now better information on students' previous education, nationality and immigration (especially for one specific grey area group, which previously had an invalid PIN-number). Therefore the amount of international students entering ISCED 5 decreased compared to previous years.

Estonia: The proportion of secondary school graduates who continue their studies in Estonia has been steadily decreasing in recent years. This is due to several reasons, including the facts that youth study abroad, or are more likely to join the labour market, or prefer completing their military service before continuing their studies. Moreover, the fall in the number of entrants to ISCED 6 level is also related to the higher education reform implemented in 2013. Since this reform, public and government-dependent private higher education institutions mainly provide free (i.e. based on state budget) education and cannot afford to accept as many students as before. As a result, students need not only to pass final examinations but also entrance examinations to be admitted to higher education institutions. Methodology has been changed to avoid double counting new entrants between years. Therefore the 2016 data are not comparable with data available for year 2015. Data on new entrants before 2016 are overestimated.

France: In the school year 2017/18, a new entrant was defined as a student who was not enrolled at a same ISCED in the past. This method cannot be generalized to all the students but only for individual data. It is the reason why the new entrants in some ISCED levels cannot be provided (ISCED 4, ISCED 7 long first-degree...). This new methodology has an impact on the number of new entrants in ISCED 8 calculated before (the new entrants were estimated according to the programme followed the previous year). The decline of new entrants in ISCED 8 compared to previous years is due to this new approach. Break in time series for data by fields of education from the year 2019/20 due to change in methodology for classification. In 2019, there was a reform in upper secondary in professional programmes ('Famille de métier').

Germany: Beginning with reference year 2020 (academic year 2019/2020) detailed results from the new statistic on students in doctoral studies could be provided and fully replaced the somehow incomplete figures from the previous sample surveys provided until 2019. The absolute values for 2020 are 10 % lower than estimated data based on the previous sample survey.

Break in time series in 2019 due to the inclusion of Advanced vocational training (Aufstiegsfortbildung) in the UOE data collection for the first time, which led to increases in ISCED 5 and 6.

Greece: Since 2019, most of ISCED 65 programmes have been integrated into ISCED 64, and ISCED 75 programmes have been abolished or integrated into ISCED 74 programmes.

Italy: Break in time series: 2018 data report new entrants both international and by fields by using the snapshot-1-month method whereas in the past the method used was snapshot-10-months.

Luxembourg: A significant proportion of the youth cohort study in neighbouring countries at the ISCED levels 5, 6, 7 and 8. There has been a change in enrolment procedures requiring students to pay tuition fees immediately upon enrolment, which may have contributed to decreases in the number of entrants at ISCED 4. Previously, all students had two months before payment and were considered to be enrolled automatically even without payment.

Mexico: In 2018, students in "open studies" were included in the data collection for the first time, leading to a sharp increase in new entrants to ISCED levels 5, 6, and 7.

Netherlands: Entrance data only include publicly financed institutions, referred to as "public institutions" in the Dutch national statistical and educational environment.

In the Netherlands, some national students are considered first-time entrants to tertiary education at ISCED level 7 (master's or equivalent) even though Long first degree programmes are inexistent in the country. Therefore the number of first-time entrants to tertiary education at ISCED 7 is overestimated because it includes students who have probably gone abroad to study at Bachelor's level and come back to the Netherlands to pursue a master's degree. In that case, they are not truly first-time entrants to tertiary education, but to the Dutch tertiary education system.

Norway: Education through three years in general upper secondary programmes or via a general supplementary programme in year 3 building on two years in vocational education, are the main routes granting access to bachelor's or equivalent (ISCED 6 and ISCED 746). These are categorized as general programme in the UOE data collection. There are nevertheless a few vocational upper secondary programmes with specific tracks qualifying for access to bachelor's, i.e. Media and Communication (for those starting upper secondary pre-autumn 2016) and Agriculture, fishing and forestry. These are included in the UOE data collection as vocational together with other students from purely vocational programmes.

The ISCED-code for the programmes 453 is now changed to 454 due to a change in The Vocational Education Act in 2018. In 2018, programmes 554 were for the first time considered as tertiary vocational education in Norway, and since the programmes in question now give access to 554 considered as tertiary, they have been coded as 454. New entrants at ISCED 5 may therefore have been registered at ISCED 4 previously.

New Zealand: In 2020, the COVID-19 mitigation strategy of closing the border, which prevented significant numbers of mobile students attending courses in New Zealand, affecting the number of entrants in ISCED 5 to 8. Due to COVID-19, participation in non-vocational programmes such as ISCED 54 declined, while the participation in vocational programmes increased.

Poland: Data on new entrants to tertiary education and doctoral programmes are estimated on the basis of the POL-on system (administered by the Ministry of Education and Science). Currently this is the only source of information on tertiary education in Poland.

In Poland, the Higher Education Act allows for newly-admitted students in their first year of study not to be assigned to a particular programme. Increasing number of students in "Field unknown" (Field F99) can be explained by the growing popularity of "individual inter-field studies".

New long first degree programmes offered by higher education institutions for prospective teachers attracted many entrants to ISCED 7 long first degrees, contributing to a decrease in entrants to bachelor's programmes in the field of education (F01) in 2020. From 2019/20, doctoral training is provided only in doctoral schools for newly enrolled students, contributing to a decrease in new entrants at ISCED 8.

Portugal: In 2014/15, a new programme (higher education professional courses) was created at ISCED 5.

Saudi Arabia: Higher education in Saudi Arabia is experiencing massive expansion, which leads to more educational institutions, the developments of new programmes at different tertiary levels, and accompanied with higher demand on education, produced pronounced increments in enrolment, annually, and should explain the "up normal" increase in entry rates.

Spain: The number of students entering tertiary education for the first-time in Spain is higher than that of new entrants to long first degrees. Thus, the number of first-time entrants to tertiary education at ISCED 7 is overestimated due to the fact that some students are counted as "first-time entrants" tertiary education even though they might already have acquired a degree in another country. They are "first-time entrants" to the Spanish tertiary education system, but probably not to tertiary education.

Slovenia: Following implementation of ISCED-F-2013 into the administrative data sources, medical doctoral studies have been reclassified and there is a break in the series from 2018 at ISCED 8 for agriculture, forestry, fisheries and veterinary (Field F08) and health and welfare (Field F09).

Switzerland: The count of new entrants is possible only for entrants at the universities (the ten state universities, the two federal technical colleges and other university-like institutions) and universities of applied sciences. For other levels the values were estimated. Mobile new entrants for ISCED 5 are missing, but their numbers are very limited.

United Kingdom: At ISCED 5, programmes taken in university settings are classed as academic and programmes taken in Further Education settings (e.g. FE colleges) are classed as professional. ISCED 5 professional programmes also include a small number of bachelor's professional programmes.

2019 figures include alternative providers (higher education providers who do not receive recurrent public funding), which were not included in previous years. This currently leads to a structural break (increase) in ISCED 5-8 data.

A new subject coding system - the Higher Education Classification of Subjects (HECoS) - was implemented in 2019/20, therefore field of study data before 2019/20 is not directly comparable with data from 2019/20 onwards. For further information please see [The Higher Education Classification of Subjects \(HECoS\)](#).

United States: U.S. data for new entrants by age are calculated by applying totals by ISCED level from universe data to age distributions by ISCED level which are drawn from a nationally representative sample of households in the United States. These age distributions fluctuate from year to year, resulting in estimates at some ages increasing and at other ages decreasing. These fluctuations become particularly notable for population bands on the fringe of an ISCED level which have relatively few people entering. The UOE definition of "new entrant to a level of education" specifies that students should be counted as new entrants if they enter for the first time any programme in a given level of education, irrespective of whether the student enters the programme at the beginning or at an advanced stage of the programme. In the United States, students who transfer into an ISCED 6 program from an ISCED 5 program often enter ISCED 6 at a class level beyond year one and the United States' data source used for reporting ISCED level 6 entrants does not identify these students as new entrants. Because the United States data do not capture new entrants to ISCED level 6 as defined by the UOE, estimates for first-time entrants to ISCED level 6 are reported as missing. Field of study data for entrants are not very relevant for the United States and it is difficult to accurately capture the field of study for entrants. With the structure of the U.S. system for ISCED 4/5/6, it is not unusual for a student to enter a program without declaring a major, or to declare one and then change it several times. The United States does not submit field of study data for entrants.

Indicator B5. Who is expected to complete tertiary education?

Methodology

There are two main methods for calculating completion rates, the true-cohort method and the cross-cohort method. Details on the scope of data used in calculations are outlined in Table X3.B5.1 (<https://stat.link/rcz0h4>). For both calculation methods, data on new entrants to each tertiary level was used for most countries. This refers to students who entered the specific tertiary level for the first time, as opposed to students who entered tertiary education for the first time, regardless of the ISCED level. However, some countries provided data on first-time entrants to tertiary education (Table X3.B5.1). Only full-time students were considered, defined as those who start their programme as full-time, even if they later changed to part-time status during their studies. International students were also excluded from calculations unless otherwise indicated in Table X3.B5.1 (<https://stat.link/rcz0h4>).

The **true-cohort method** requires following an entry cohort through a specific time frame, which in the case of this survey corresponds to the theoretical duration N and the theoretical duration plus three years ($N+3$). Only countries with longitudinal surveys or registers are able to provide such information. Panel data can be available in the form of an individual student registry (a system including unique personal ID numbers for students) or a cohort of students used for conducting a longitudinal survey.

Students may have graduated from multiple levels of tertiary education within the time frames specified in the survey. If entrants to ISCED 6 programmes completed both an ISCED 6 and an ISCED 7 by $N+3$, then only the ISCED 6 graduation is reported. However, entrants to ISCED 5 programmes have their highest graduation level recorded, up to ISCED 6 level completion only. This accommodates for specific contexts where it is common for students who enter a bachelor's programme to obtain a short-cycle degree before obtaining their bachelor's degree.

It should be noted that when countries provided data on new entrants to each tertiary level, it is possible that students had previously entered tertiary education in another level. This can mean that the time reported for students to complete a tertiary degree in the ad-hoc survey could be misleading. For example, entrants to ISCED 6 who had previously entered an ISCED 766 programme may have accumulated credits that they were able to transfer and use to fulfil their ISCED 6 requirements. In this case, students may appear to have completed their programme in a shorter timeframe than they took in reality to accumulate all the relevant credits. In another scenario, entrants to ISCED 6 who had previously entered an ISCED 766 programme may choose to revert to their ISCED 766 programme. In this case, students entering ISCED 6 may appear to complete an ISCED 766 programme in an unrealistically short timeframe.

Calculations were also carried out on stop-out behaviour for the first time in Education at a Glance 2022. Stop-out refers to when students enrol in a programme, temporarily withdraw from their studies, and then later re-enrol. Students with stop-out behaviour were defined as those who spent at least one academic year out of education after entry, then either graduated or were still in education at $N+3$. Individuals were considered as being out of education if they leave tertiary education (drop outs) or if they suspend their studies (inactive students). The method used to identify students who have spent at least one year out of education may differ between countries and result in some comparability issues. In Norway, information on students' status is only available every autumn semester (on 1 October). Therefore, students who are not registered as enrolled on this date are defined as having spent a year out of tertiary education, though they might have been enrolled the following spring semester.

The **cross-cohort method** only requires the number of new entrants to a given ISCED level and the number of graduates N years later, where N corresponds to the theoretical duration of the programme. Under the assumption of constant student flows (constant increase or decrease in the number of students entering a given ISCED level throughout the years), the cross-cohort completion is closer to a total completion rate (i.e. the completion rate of all students, regardless of the time it took them to graduate).

Source

Data in Indicator B5 are based on the 2021 ad-hoc survey on tertiary completion rates administered triennially by the OECD for OECD and partner countries. The data collection period was December 2021 to January 2022. The survey collected information on tertiary education programmes ISCED levels 5, 6 and 766 (long-first degree programmes). Only programmes leading to full level completion, with the fulfilment of all required obligations to be awarded a degree, were considered.

The reference year for new entrants and graduates follow the same guidelines as in the UOE data collection. New entrants in 2016, for example, refer to those who entered either in the Aug/Sept of 2015 or in Jan/Feb of 2016, depending on the country's academic year. Similarly, graduates in 2020 refer to students who graduates either in May/Jun of 2020 or in Nov/Dec of 2020.

The 2021 ad-hoc survey also collected a range of metadata on national policies, studies, and contextual information relevant to the interpretation of data on completion and (non-)continuation. Information on criteria used for entry and admissions to first-degree tertiary programmes is outlined in Table X3.B5.2 (<https://stat.link/rcz0h4>). Policy measures related to direct or delayed entry to tertiary education from upper secondary and those aimed at increasing completion rates, as well as studies related to dropout, are detailed in Table X3.B5.3 (<https://stat.link/rcz0h4>). Table X3.B5.4 (<https://stat.link/rcz0h4>) gives information on national contexts related to completion and the COVID-19 pandemic.

Notes on specific countries

Australia: This data collection excludes students commencing an ISCED 5 programme. It also excludes students commencing an ISCED 6 programme with a duration other than 3, 4 or 5 years. It also excludes students studying at institutions that are outside the scope of the data source, in particular students who transfer to VET programs.

Austria: Data on programmes cannot be split by duration. This mostly concerns ISCED 7 long first degrees, which are reported according to the longest theoretical duration of study.

Belgium (French Community): Information on ISCED 6 programmes with a duration of 4 years (bachelor's degrees in midwifery and nursing) are missing from cross cohort calculations. Bachelor's programmes in nursing have only had a duration of 4 years since the academic year 2016/17.

Brazil: The data collection covers only ISCED 6.

Canada: Only data for ISCED 5, ISCED 6 and ISCED 766 entrants from public colleges and universities have been included. The estimates exclude some institutions in Manitoba, British Columbia, the Territories and a small number of other institutions.

New ISCED 6 undergraduate degree entrants are ages 15 to 64 at entry and are identified by confirming that they were not enrolled in any ISCED 6-level program in the past 2 years. Other students who may enter an ISCED 6 program with transfer credits towards program completion are not separated out. Students who obtain a bachelor's degree by completing 3 undergraduate certificates in Quebec are excluded.

ISCED 6 entrants only include students enrolled in a program that will result in the ISCED 6 level credential of undergraduate degree. ISCED 6 entrants in programs that result in a lower credential than ISCED 6 are excluded. Entrants in shorter ISCED 6 programs that result in an ISCED 6 credential above the first undergraduate degree level are excluded.

Reference years are adjusted due to data availability, as follows:

ISCED 5 (2 years): Entry cohort 2015/2016, Beginning of the second year 2016/2017, Graduation within 2 years 2017/2018, 1 year after Graduation 2018/2019

ISCED 6 (4 years): Entry cohort 2013/2014, Beginning of the second year 2014/2015, Graduation within 4 years 2017/2018, 1 year after Graduation 2018/2019

ISCED 7 (6 years): Entry cohort 2011/2012, Beginning of the second year 2012/2013, Graduation within 6 years 2017/2018, 1 year after Graduation 2018/2019

Programme durations vary (i.e. typically 3 to 5 years for an undergraduate degree). Currently, records cannot be separated by expected program duration. In theory, new entrants to ISCED 6 that "transferred to ISCED 5" and "graduated from ISCED 5" include anyone who "transferred to"/"graduated from" any other ISCED level at a public college or university. Similarly, "still in tertiary" means still enrolled in any ISCED level at a college or university and not yet graduated from any program. In most circumstances, changes to other programs would exclude ISCED 7 (except for switching to professional degree programs in medicine, dentistry, law, pharmacy, optometry, or veterinary medicine). It is assumed that it would be less common for an ISCED 6 undergraduate degree student to switch to a program below an ISCED 5 level.

Colombia: The data reported covers all tertiary programs that lead to the full completion of ISCED 5 and 6. In Colombia, first-time graduates and other graduates cannot be differentiated, so it is assumed that all are first-time graduates. Unfortunately, SPADIES does not include information on ISCED 7 students.

Finland: ISCED 5 programmes do not exist in Finland. The number of students in ISCED 766 programmes is small. These groups are not reported.

If an individual enters a bachelor's programme and then graduates from both a bachelor's (ISCED 6) and a master's (ISCED 7) degree within the specified timeframe, then they are reported as having graduated from a master's degree. This includes all ISCED 7 degrees and not only ISCED 7 long first degrees.

France: Data on the type of institution at entry was not available for 27787 out of all the 165559 new entrants at ISCED level 6.

In France, the first year of a "Licence" degree (ISCED 6) remains a particularly pivotal year for most students, with high repeating and reorienting rates. More information on this matter can be found on the data.esr website, and at the following sites:

<https://www.enseignementsup-recherche.gouv.fr/fr/reussite-et-assiduite-en-premiere-annee-de-licence-impact-de-la-loi-ore-nouveaux-indicateurs-47695>

<https://www.enseignementsup-recherche.gouv.fr/fr/parcours-et-reussite-en-licence-les-resultats-de-la-session-2020-82060>

Germany: Completion rates are calculated for academic programmes in ISCED 64 and ISCED 74. Up to now, this cohort is not computed on students flow data, but a real entrants cohort is connected retrospectively with recent graduate data.

The completion rate has been calculated for all 269.860 graduates directly linked to entrants in 2009. The completion rate is 76.2% (ISCED 645: 75,8%, ISCED 746: 78,3%).

This calculation excludes estimated graduation figures for students still enrolled. Hence this results slightly differ from national results, but reflects a real true cohort for all graduates taken into account.

National results: Erfolgsquoten (Completion rates):

https://www.statistischebibliothek.de/mir/receive/DESerie_mods_00000834

Data include all universities, all fields of study and all students (with German or foreign citizenship). Only data on academic programmes are available. Only the first university degree obtained after entry to tertiary education is considered. However, the calculations do not take into account the length of time taken to graduate. **Iceland:** All full-time (using the UOE definition of 75% or more of full study load) students with Icelandic citizenship were used to define new entrants. There are too few new entrants in level 5 and level 766 for data to be included on these levels. Students who graduate from more than one field at counted in the field they entered originally, assuming they graduated from that field, as well as from another field.

Israel: There is an ISCED 5 program with theoretical duration of one year, which has not been included. This program includes some students who finish after a year and then are considered as technicians; the remaining students graduate after 2 years and receive a practical engineer/technician certificate.

For ISCED 6 to 8, the Council for Higher Education (CHE) grants only full academic degrees: bachelor's, master's and doctorate. Possible distinction between 'full-time' and 'part-time' study/students could be regarding to the duration of studies towards full academic degree. At some higher education institutions there are programs based on taking fewer course credits in a semester and therefore extending the general study period towards full academic degree. In the data provided, there is no difference between the data regarding part-time and full-time students.

Italy: Only ISCED6 and ISCED766 are included.

Netherlands: Numbers starting in ISCED 5 are so small that new entrants at these levels have not been included.

New Zealand: The data reported relates to students who studied full-time in their first year. This includes many students who entered as full-time but who then switched to part-time study later. It is common in New Zealand for people to study part-time in tertiary education, for example, for many older adults coming back into study. This will lower tertiary completion rates compared to that group which were enrolled full-time continuously for every year they studied.

Norway: Programmes with ISCED programme code 554, 645 and 746 are included. Norway does not use codes 65, 75 and 54 on programmes. Data for Norway refer to first-time entrants to the ISCED-level in tertiary education. For instance, individuals who are new entrants to ISCED level 554 have never previously attended this level, but they may have been recorded in both ISCED 6 and 7. Similarly, new entrants to ISCED level 645 have never previously attended this level, but they may have been recorded in both ISCED 5 and 7 (and other ISCED 6 programmes (not equal 645)).

Orientation of ISCED 3: Data on the graduation by upper secondary orientation is not available for all individuals. In general, only general upper secondary programmes grant direct access to ISCED 6 or equivalent (see Annex 3 for Indicator B4).

Prioritization of graduations from ISCED 3: Only graduations from ISCED 3, which happened before the date of entry for the programme (for example October 2015 for ISCED 5), were considered. Even so, some entrants may have graduated from both a vocational and a general ISCED 3 programme. Entrants with double graduations were counted with the vocational graduates for ISCED 5, as this is the acceptance criteria for ISCED 5, and with the general graduates at ISCED levels 6 and 7, as this is the acceptance criteria for these levels. This also affects if they are counted as transferring directly to tertiary, as the date for the chosen orientation is used to determine the time of their graduation. For example, if an individual graduated from a vocational programme in 2014 and a general programme in 2015, he or she is counted as a vocational graduate if he/she enters ISCED 5, with the completion date of ISCED 3 set as 2014, while he/she will count as a general graduate if he/she enters ISCED 6 or 7, with 2015 as graduation date for ISCED 3. Only the date of the first graduation from ISCED 34 and 35 respectively has been considered, i.e. if a student has completed two vocational programmes at level 3, only the date of the first one will be considered, and correspondingly if he/she has completed two general programmes.

The first graduation after the entry date has been considered. The exception to this is that if an individual has completed multiple programmes within the same academic year, the highest is counted.

Data on entrants to ISCED 7 with a theoretical duration of six years (ISCED 7, 360 credits) includes programmes of 5.5 years (330 credits).

If an individual has graduated within the first year of study, the status at the beginning of the second year is reported as "Are still enrolled" if they have graduated from the same ISCED level that they started in. If they graduated from another ISCED level, they are reported as "transferred to" and the level from which they graduated. Thus, it may not reflect the actual status at the beginning of the second year.

One academic year out of education: in Norway, information on students' status is collected every autumn semester, i.e. every October 1. If they are not registered as enrolled in October 1, they are defined as having spent "one year out of tertiary education", even though they might have been enrolled the following spring semester. Thus, the figures on students who have spent one year out of education might in reality be lower. The identification of students spending a year out of education is based on checks in the years between the beginning and graduation of a study programme. For example: if an individual has graduated within the first year of study, they are defined as not having spent a year out of education. If an individual has graduated in the third year of study in a 5-year programme, only check the second year is checked for absence.

Poland: The POL-on system does not provide information about students at the ISCED level 5. In the case of ISCED 7 (6-years duration), there is no reliable data for the 2011/2012 academic year (the POL-on system has stored data since 2012-09-01). There are no data in the POL-on database about graduates from upper secondary.

Spain: ISCED 5 only includes Specific vocational training – advanced level programmes and ISCED 6 only universities studies.

Sweden: For Sweden, the definition of the theoretical duration of programmes includes 1 extra semester after the duration of programmes for Higher education. This is because Swedish students in higher education institutions have to apply for their graduation certificate, which normally delays their final date of completion. After applications from students are received, it takes about two months of processing time to administer the degree. This does not apply to Higher vocational education (only ISCED 5). Data on upper secondary programme orientation is not available for all tertiary entrants.

Students who entered programmes at several institutions or fields have been counted with the programme with the highest study load. Entrants with the same study load at multiple institutions or fields are excluded from analyses of completion rates by type of institution and field of study at entry.

Switzerland: Colleges of higher education (ISCED 6) are not included in the data reported.

United Kingdom: In the data provided, there is no distinction between students who graduated in the same subject area in which they started at ISCED 6 and those who graduated from another. Completion data covers students in programmes (at ISCED 6) with theoretical durations of 3 and 4 years. This represents the majority of learners at this level, but in some instances, such as those on medical degrees, the expected length of programmes may be 5 or 6 years, and so these are excluded in the "Health and Welfare" group.

United States: Completion data for ISCED 766 has not been reported.

Due to data availability, estimates reported for ISCED 6 only represent theoretical duration plus two years. Completion rates at ISCED 5 level tend to be lower than those at ISCED 6 due to multiple factors, including actual lower retention rates at the ISCED 5 level and the intentional fluidity between ISCED 5 and 6 programmes in the USA. Students may initially enrol in ISCED 5, but then transfer to ISCED 6 without attaining an ISCED 5 degree.

If a student was enrolled for at least a single month in the duration of the program, they were not included in the estimate of stop-outs. Due to this methodology, the calculation may undercount the number of students with stop-out behaviour.

Indicator B6. What is the profile of internationally mobile students?

Methodology

The specific criteria used to define international students in countries is listed in EAG2022_Annex3_ChapterB_ENRL (<https://stat.link/q9jolp>).

Table X3.B6.a. lists the neighbouring countries used in calculations for the percentage of international or foreign students coming from neighbouring countries in Table B6.1.

Table X3.B6.a. Lists of neighbouring countries

Country	Neighbouring countries
Australia	Indonesia (M), New Zealand (M), Papua New Guinea (M), Solomon Islands (M), Timor-Leste (M)
Austria	Czech Republic, Germany, Hungary, Italy, Liechtenstein, Slovakia, Slovenia, Switzerland
Belgium	France, Germany, Luxembourg, Netherlands, United Kingdom (M)
Canada	United States
Chile	Argentina, Bolivia, Peru
Colombia	Brazil, Ecuador, Nicaragua, Panama, Peru and Venezuela
Costa Rica	Panama and Nicaragua
Czech Republic	Austria, Germany, Poland, Slovakia
Denmark	Iceland (M), Germany, Netherlands (M), Norway (M), Poland (M), Sweden, United Kingdom (M)
Estonia	Finland, Latvia, Russian Federation, Sweden (M)
Finland	Estonia (M), Norway, Russian Federation, Sweden
France	Andorra, Antigua and Barbuda (M), Barbados (M), Belgium, Brazil, Comoros (M), Dominica (M), Germany, Italy, Luxembourg, Madagascar (M), Mauritius (M), Mozambique (M), Monaco, Saint Lucia (M), Spain, Switzerland, Suriname, United Kingdom (M), Venezuela (M), Montserrat (M), Netherlands Antilles (M)
Germany	Austria, Belgium, Czech Republic, Denmark, France, Luxembourg, Netherlands, Poland, Sweden (M), Switzerland, United Kingdom (M)
Greece	Albania, Bulgaria, Cyprus ^{1,2} (M), Egypt (M), Italy (M), Libya (M), TFYR of Macedonia, Turkey
Hungary	Austria, Croatia, Romania, Serbia, Slovakia, Slovenia, Ukraine
Iceland	Denmark (M), Norway (M)
Ireland	United Kingdom
Israel	Cyprus ¹ (M), Egypt, Jordan, Lebanon, Syria, Palestinian Autonomous Territories
Italy	Albania (M), Algeria (M), Austria, Croatia (M), France, Greece (M), Libya (M), Malta (M), Montenegro (M), San Marino, Slovenia, Spain (M), Switzerland, Tunisia (M)
Japan	China (M), North Korea (M), South Korea (M), Philippines (M), Russia (M)
Korea	China (M), Japan (M), North Korea
Latvia	Belarus, Estonia, Lithuania, Russian Federation, Sweden (M)
Lithuania	Belarus, Latvia, Russian Federation, Sweden (M)
Luxembourg	Belgium, France, Germany
Mexico	Belize, Guatemala and the United States
Netherlands	Belgium, Denmark (M), Germany, United Kingdom (M)
New Zealand	Australia (M), Fiji (M), Tonga (M), Kiribati (M), Samoa (M)
Norway	Denmark (M), Finland, Iceland (M), Russia, Sweden, United Kingdom (M)
Poland	Belarus, Czech Republic, Denmark (M), Germany, Lithuania, Russia, Slovakia, Sweden (M), Ukraine
Portugal	Morocco (M), Spain
Slovak Republic	Austria, Czech Republic, Hungary, Poland, Ukraine
Slovenia	Austria, Croatia, Italy, Hungary
Spain	Algeria (M), Andorra, France, Italy (M), Morocco, Portugal, Gibraltar
Sweden	Denmark (M), Estonia (M), Finland, Germany (M), Latvia (M), Lithuania (M), Norway, Poland (M), Russia (M)

Switzerland	Austria, France, Germany, Italy, Liechtenstein
Turkey	Armenia, Azerbaijan, Bulgaria, Cyprus ^{1,2} (M), Egypt (M), Georgia, Greece, Iran, Iraq, Romania (M), Russia (M), Syria, Ukraine (M)
United Kingdom	Belgium (M), Denmark (M), France (M), Germany (M), Ireland, Netherlands (M), Norway (M)
United States	Bahamas (M), Canada, Cuba (M), Kiribati (M), Mexico, Russia (M)
Argentina	Bolivia, Brazil, Chile, Paraguay, Uruguay
Brazil	Argentina, Bolivia, Colombia, France, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela
China	Afghanistan, Bhutan, Democratic People's Republic of Korea, India, Kazakhstan, Kyrgyzstan, Laos, Mongolia, Myanmar, Nepal, Pakistan, the Russian Federation, Tajikistan and Vietnam
India	Afghanistan, Bangladesh, Bhutan, China, Indonesia (M), Myanmar, Nepal, Pakistan and Sri Lanka
Indonesia	Australia (M), Timor-Leste, India (M), Malaysia, Palau (M), Papua New Guinea, Philippines (M), Singapore (M), Thailand (M), Vietnam (M)
Saudi Arabia	Bahrain, Eritrea (M), Islamic Republic of Iran (M), Iraq, Jordan, Kuwait, Oman, Qatar, Sudan (M), United Arab Emirates, Egypt (M), Yemen
South Africa	Botswana, Lesotho, Mozambique, Namibia, Swaziland, Zimbabwe

Note: (M) Maritime border

1. Note by Turkey: The information in this document with reference to « Cyprus » relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Source

Data are based on the UOE data collection on education systems administered annually by UNESCO, the OECD and Eurostat for all OECD and partner countries.

The UNESCO Institute of Statistics (UIS) provided data 1) for Argentina, China, India, Indonesia, Saudi Arabia and South Africa; 2) for all countries beyond the OECD and partner countries; and 3) for OECD countries for the period not covered by OECD statistics (2005 and 2010-20).

Information on the sources and instruments used by countries to collect data on enrolments is given in EAG2022_Annex3_ChapterB_ENRL (<https://stat.link/q9jolp>), which also indicates missing data points and explanatory notes on the raw data collected.

Notes on specific countries

Belgium: Data on international tertiary students do not include students of social promotion education in the French Community, and students of the Open University, the Institute for Tropical Diseases and the Evangelic Theological Faculty in the Flemish Community. Therefore, the coverage of international and foreign students is different and the data cannot be compared. Data for ISCED 5 are based on nationality and only include data from the Flemish Community (ISCED 5 does not exist in the French Community).

Canada: Since 2018/19, there have been improvements in coverage to ISCED 5. Caution should be used when making comparisons of mobile students by country to previous years.

Costa Rica: Data on foreign students are underestimated as they cover only public universities, where about half of all tertiary students are enrolled.

France: As of academic year 2017/18, Erasmus+ (credit mobile) students are excluded from the number of international students. In addition, there is a break in time-series in the classification by field of education due to change in methodology as of school year 2017/18.

Germany: The number of mobile students in professional programmes in ISCED 554 and 655 is negligible and reported with the value zero. Prior to academic year 2017/18, homecoming students were not included in the number of international students at all tertiary levels.

Netherlands: Data on international and foreign students do not include those enrolled at the Open University.

New Zealand: In 2020, preventative measures against COVID-19 included border closures, which contributed to significant drops in the number of mobile students.

Norway: A change in the reporting methodology for international students to track students without a valid ID resulted in an increase in the number of international students as of the academic year 2017/18.

Switzerland: Data on mobile students by field of study and by country of origin cover only students in universities and universities of applied sciences at ISCED levels 6 and 7.

United Kingdom: Data on mobile students by field of study at ISCED 5 cover only those in academic programmes.



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