

Education at a Glance: OECD Indicators is the authoritative source for information on the state of education around the world. It provides data on the structure, finances and performance of education systems in OECD and partner countries.

European Union countries and economies

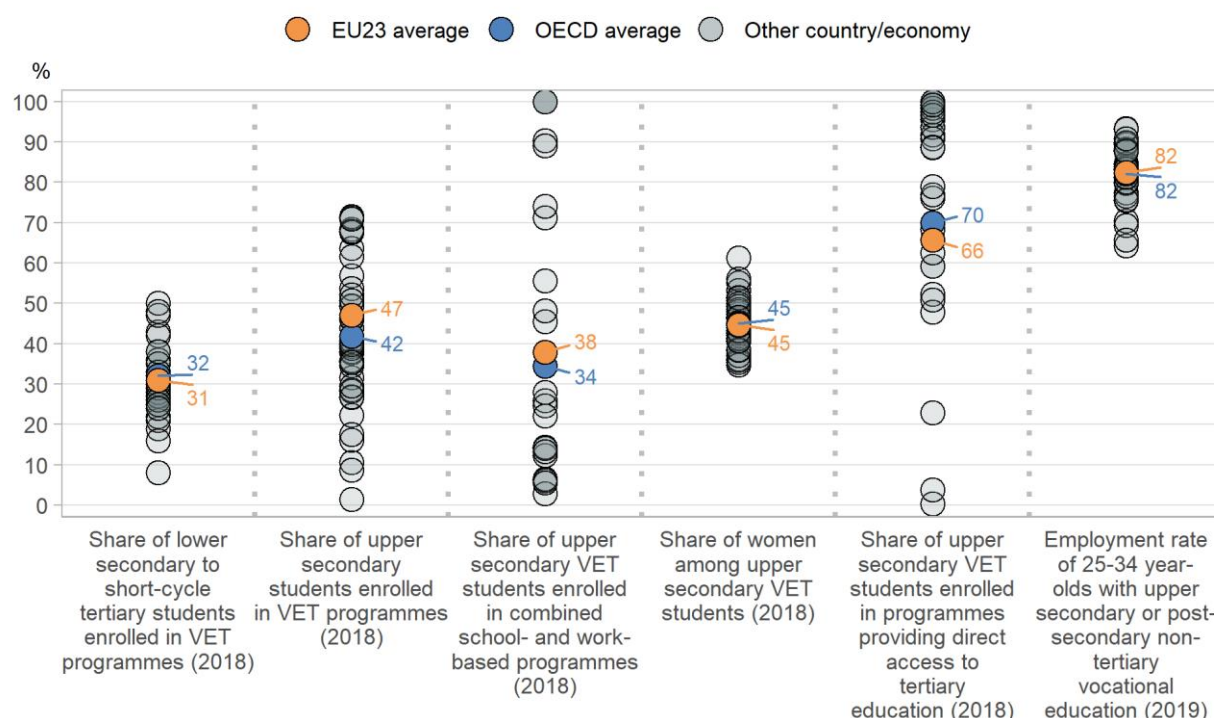
Highlights

- Vocational pathways can help retain young adults within the education system. **About one-third of students from lower secondary to short-cycle tertiary education enrol in vocational programmes** on average across the EU23 countries, ranging from 16% in Lithuania to 50% in Finland.
- If current patterns continue, **it is estimated that 48% of young adults will enter tertiary education for the first time in their life before the age of 25** on average across the EU23 countries (excluding international students), ranging from 15% in Luxembourg to 67% in Poland.
- **Private provision of early childhood education and care (ECEC) is less common in the EU23 than across the OECD more generally.** On average across the EU23, 44% of children enrolled in early childhood development services (ISCED 01) attend private ECEC institutions compared to 54% on average across OECD countries.
- **Between 2012 and 2017, expenditure on primary to tertiary educational institutions grew by 0.9% a year** on average across the EU23, while the number of students remained fairly stable. This resulted in an average annual growth rate of 1.2% in expenditure per student over this period.
- Between 2005 and 2019, **teachers' salaries across the EU23 rose between 2% and 5% at primary and general lower and upper secondary levels**, a slower increase than on average across the OECD (between 5% and 7%).
- The COVID-19 crisis may impact the internationalisation of higher education. In 2018, **4% of tertiary students across the EU23 were enrolled outside their home country**, ranging from about 2% in Denmark, the Netherlands, Poland and Spain to 76% in Luxembourg. **The EU23 itself hosts about one-third of the international student pool.**

Participation and outcomes of vocational education and training

- Vocational education and training (VET) programmes attract a diverse range of students, including those seeking qualifications and technical skills to enter the labour market, adults wishing to increase their employability by developing their skills further, and students who may seek entry into higher education later on.
- About one in three students from lower secondary to short-cycle tertiary level are enrolled in a VET programme on average across OECD countries. In the 23 countries and economies that are member of both the European Union and the OECD (EU23), 31% of students are enrolled in vocational programmes, a similar share to the OECD average, ranging from 16% in Lithuania to 50% in Finland (Figure 1).

Figure 1. Snapshot of vocational education



Note: Only countries and economies with available data are shown. The years shown in parentheses is the most common year of reference for OECD and partner countries. Refer to the source table for more details.

Source: OECD (2020^[1]), Indicators A3 and B7. See Education at a Glance Database. <http://stats.oecd.org/> for more information and Annex 3 for notes (<https://doi.org/10.1787/69096873-en>).

- VET is an important part of upper secondary education in most OECD countries. On average, 47% of all upper secondary students opt for VET programmes in the EU23, a slightly higher proportion than the OECD average of 42% (Figure 1). Certain fields of study are more common than others at this level. On average across the EU23, the most common broad field is engineering, manufacturing and construction with 32% of upper secondary vocational graduates earning a qualification in this field. However, this varies widely across countries, ranging from 50% in Hungary to just 2% in Ireland, where health and welfare is the most common field of study.
- In all EU23 countries with the exception of Poland, the average age of vocational upper secondary students is higher than those in general programmes, as VET programmes tend to attract adults returning to education. On average across the EU23, upper secondary students in vocational programmes are 21 years old compared to 17 years for students in general tracks. However, the age difference can vary significantly across countries. Vocational students are more than 10 years older than their peers in general programmes in Finland and Ireland, while the difference is one year or less in Austria, the Czech Republic, Hungary, Italy, Latvia, Portugal and the Slovak Republic.
- To support upper secondary vocational students' transition to post-secondary education and improve their career prospects, many countries have created direct pathways from vocational programmes to higher levels of education. While on average 66% of upper secondary vocational students across the EU23 are enrolled in programmes that offer direct access to tertiary education, this does not apply in all EU23 countries. No vocational upper secondary students in Ireland, and Sweden have direct access to tertiary education after completing their programme, while all of them do in Finland and Portugal (Figure 1).

- In 2019, 29% of 25-34 year-olds in the EU23 held an upper secondary or post-secondary non-tertiary vocational qualification as their highest educational level, while 15% held a general one. The employment rate of younger adults with a vocational upper secondary or post-secondary non-tertiary education (82%) tends to be higher than for those with general qualifications at this level (73%) on average across the EU23 (Figure 1). In some countries, young adults with an upper secondary or post-secondary non-tertiary vocational qualification benefit from a significant employment advantage. In Denmark, Germany, Italy and Sweden their employment rate is at least 19 percentage points higher than for those with a general qualification at the same level. In these countries, the employment rate is also at least that of tertiary-educated adults of the same age group. In contrast, in Estonia, a vocational upper secondary qualification does not carry an employment advantage compared to a general one.
- Despite the employment advantage from a vocational education, earnings are generally lower. While the difference in relative earnings between adults with general and vocational upper secondary or post-secondary non-tertiary attainment is less than 5 percentage points in about one-quarter of OECD and partner countries, it is 6 percentage points in favour of general qualifications on average across the EU23. Austria, Finland, France and Germany are among the EU23 countries where the relative earnings of adults with a vocational upper secondary or post-secondary non-tertiary education are the lowest; the difference in relative earnings exceeds 15 percentage points in favour of general qualifications in these countries. In contrast, the Czech Republic, Hungary and Latvia are the only EU23 countries where adults with a vocational qualification earn more than those with a general one at upper secondary and post-secondary non-tertiary level.
- On average across the EU23, 5.5% of youth are not enrolled in upper secondary education, but the share is at least 12% in Germany, Hungary and Luxembourg. Vocational upper secondary education can help retain student within the schooling system by providing additional educational pathways. However, the share of adults with an upper secondary or post-secondary non-tertiary vocational qualification has been decreasing across generations in the majority of EU23 countries: 77% of 55-64 year-olds held a vocational qualification at these levels on average across the EU23, compared to 68% of 25-34 year-olds. The biggest falls between these two age groups were observed in Denmark, Luxembourg and Poland. In contrast, young adults are more likely to attain an upper secondary or post-secondary non-tertiary vocational qualification than their elders in Belgium, France, Greece and Spain. This increase was the highest in Portugal where 50% of 25-34 year-olds held such a qualification compared to 12% of 55-64 year-olds.

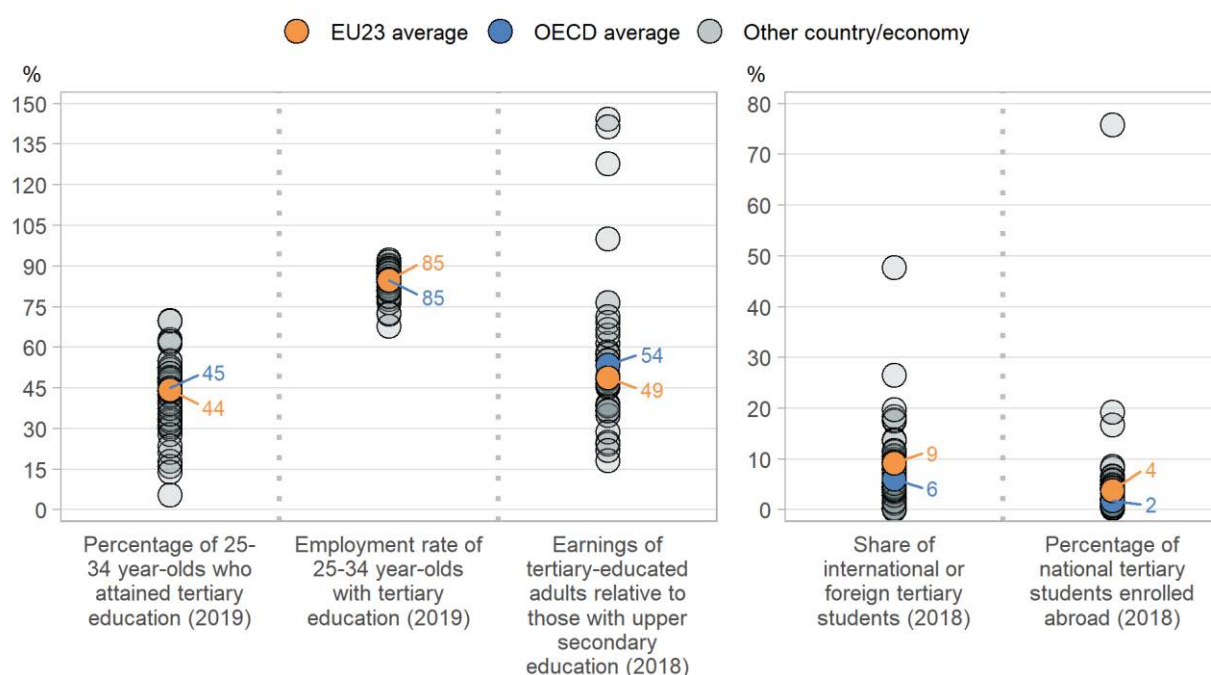
The rising demand for tertiary education

- The EU Education and Training benchmarks call for at least 40% of people aged 30-34 to have completed some form of tertiary education by 2020 (European Commission, 2019^[21]). Between 2009 and 2019, the tertiary attainment rate among 25-34 year-olds increased from 35% to 44%, on average across EU23 countries. Despite this increase, gender inequalities still persist. Women are more likely than men to attain a tertiary degree: 51% of 25-34 year-old women had a tertiary qualification compared to 38% of their male peers on average across EU23 countries (Figure 2).
- If current patterns continue, it is estimated that 48% of young adults will enter tertiary education for the first time in their life before the age of 25 on average across EU23 countries (excluding international students), a similar rate to the average across the OECD. However this varies significantly across countries, from 15% in Luxembourg to 67% in Poland.
- Short-cycle tertiary programmes are generally designed to be vocationally oriented and represent the second most common route of entry into tertiary education on average across OECD countries, after bachelor's programmes. However, in about half of the EU23 countries, this level of education is non-existent or accounts for no more than 2% of first-time entrants to tertiary education. Only in

Austria, Denmark, Luxembourg and Spain do more than 25% of first-time tertiary entrants enrol at this level.

- Young people often struggle to enter the labour market, but higher educational attainment increases their likelihood of being employed and is associated with higher incomes. On average across the EU23, the employment rate in 2019 was 58% for 25-34 year-olds without upper secondary education, 80% for those with upper secondary or post-secondary non-tertiary education as their highest attainment and 85% for those with tertiary education. France, Ireland and Lithuania have the widest differences between the employment rates of tertiary-educated adults and those with upper secondary or post-secondary non-tertiary education, exceeding 10 percentage points. In contrast, in Austria, Estonia and Portugal, the difference is 1 percentage point or less.
- Having a tertiary degree also carries a considerable earnings advantage in most EU23 countries. In 2018, 25-64 year-olds with a tertiary degree earn 49% more for full-time full-year work than those with upper secondary education, ranging from 24% in Denmark to 77% more in Hungary and Latvia (Figure 2).

Figure 2. Snapshot of tertiary education



Note: Only countries and economies with available data are shown. The years shown in parentheses is the most common year of reference for OECD and partner countries. Refer to the source table for more details.

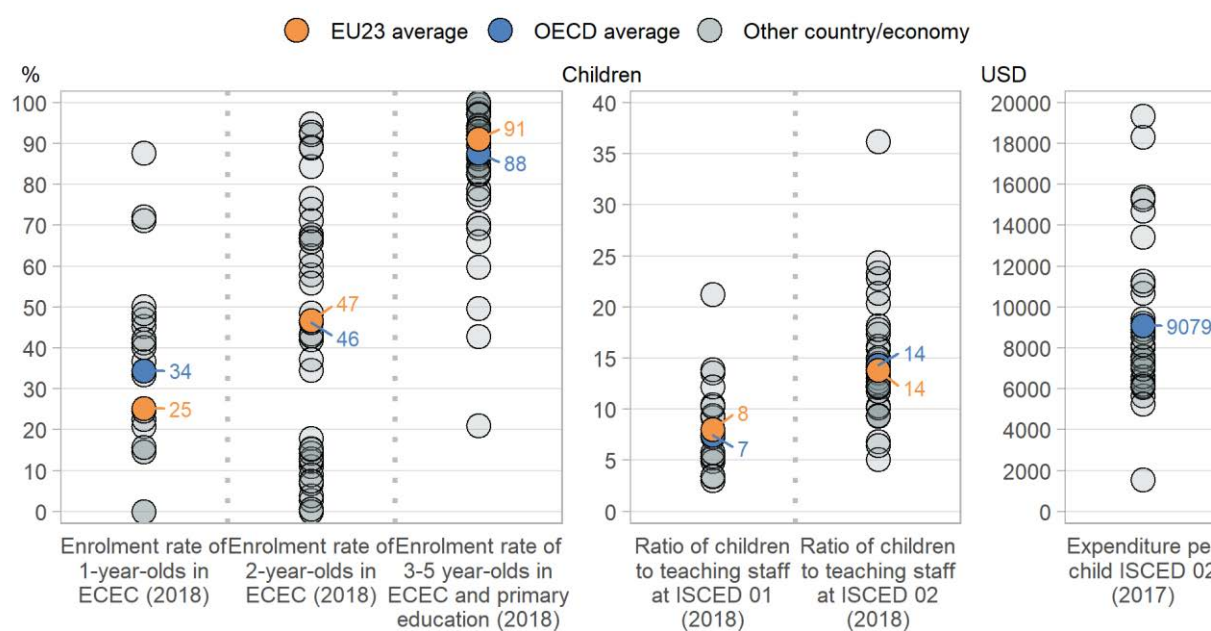
Source: OECD (2020^[1]), Indicators A1, A3, A4 and B6. See Education at a Glance Database <http://stats.oecd.org/> for more information and Annex 3 for notes (<https://doi.org/10.1787/69096873-en>).

Starting strong

- Early childhood education and care (ECEC) has experienced a surge of policy attention in OECD countries in recent decades, with a focus on children under the age of 3 in many countries. In the EU23 countries, 25% of 1-year-olds were enrolled in a formal ECEC programme (ISCED 0) in 2018, below the OECD average of 34%. Among 2-year-olds, the enrolment rate at ISCED 0 is 47%, a similar value to the OECD average (Figure 3).

- By 2020, 95% of children from the age of 4 to the age of compulsory primary education should be enrolled in education across the EU (European Commission, 2019^[2]). Across the EU23, attendance in ECEC has expanded with 91% of 4-year-olds, 94% of 5-year-olds, and 96% of 6-year-olds now enrolled in education.
- Public provision of early childhood education and care is an important factor in ensuring broad access to affordable ECEC. While most countries ensure children have legal entitlement to publicly subsidised ECEC from the age of 3 or a little earlier, seven countries (Denmark, Estonia, Finland, Germany, Latvia, Norway and Slovenia) guarantee a place in ECEC for all children soon after birth, often immediately after the end of parental leave. However, a guaranteed ECEC place at a given age does not mean that attendance is compulsory at this age.
- On average across the EU23, 44% of children enrolled in early childhood development services (ISCED 01) programmes attend private ECEC institutions compared to 54% on average across OECD countries. Enrolment in private institutions is usually less common for 3-5 year-olds, who are usually enrolled in pre-primary education (ISCED 02), than for younger children: 27% of children attending pre-primary education are enrolled in private institutions on average across the EU23, compared to about one in three children on average across OECD countries. However, more than one in two pre-primary children attends a private institution in Belgium and Germany, and almost all do in Ireland.

Figure 3. Snapshot of early childhood education and care



Note: Only countries and economies with available data are shown. Annual expenditure per child is shown in equivalent USD converted using PPPs. The years shown in parentheses is the most common year of reference for OECD and partner countries. Refer to the source table for more details.

Source: OECD (2020^[1]), Indicator B2. See Education at a Glance Database <http://stats.oecd.org/> for more information and Annex 3 for notes (<https://doi.org/10.1787/69096873-en>).

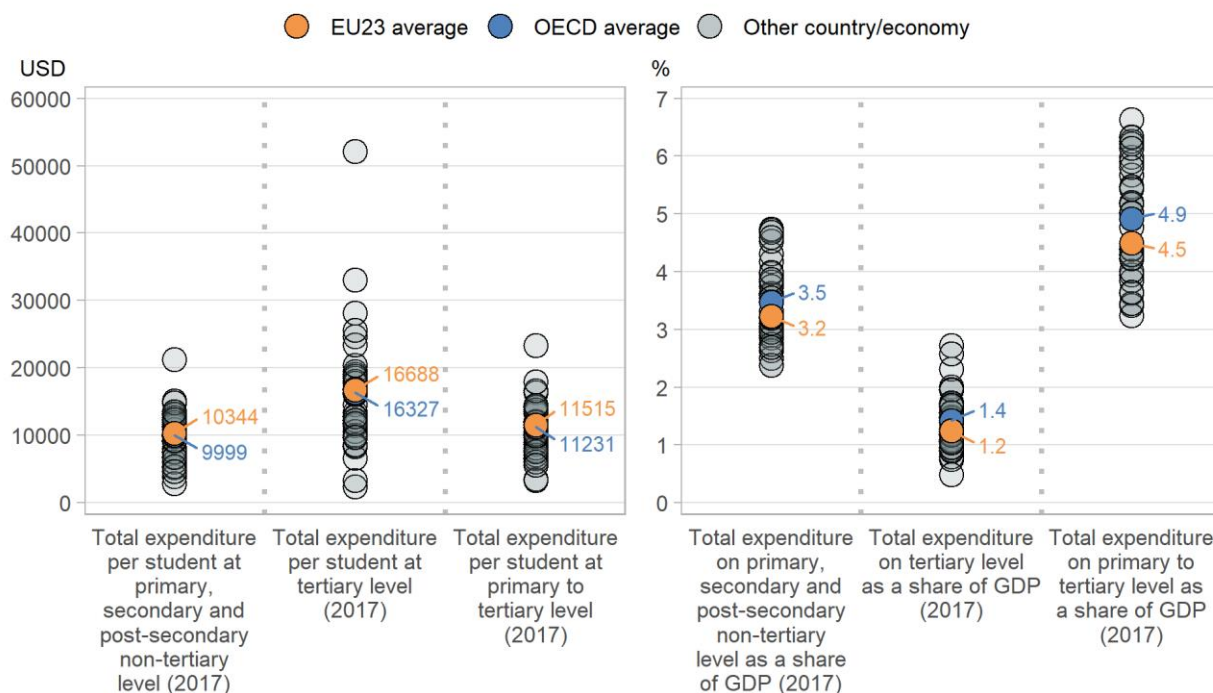
- The workforce is at the heart of high-quality early-childhood education and care: stimulating environments and high-quality pedagogy are fostered by better-qualified practitioners, and high-quality interactions between children and staff facilitate better learning outcomes. In that context,

lower child-staff ratios are found to be consistently supportive of staff-child relationships across different types of ECEC settings (NICHD, 2002^[3]). Across the EU23, there are 14 children for every teacher working in pre-primary education (ISCED 02) on average, the same as the OECD average, ranging from 7 in Denmark to 23 in France (Figure 3).

Investing in education

- Annual expenditure per student on educational institutions from primary to tertiary level provides an indication of the investment countries make in each student. In 2017, spending per full-time student on primary to tertiary educational institutions amounted to USD 11 515 on average across the EU23, a similar value to the OECD average (Figure 4). Across EU23 countries, spending varied from USD 6 652 in Lithuania to USD 23 324 in Luxembourg.
- Between 2012 and 2017, expenditure on primary to tertiary educational institutions grew at an average rate of 0.9% a year across the EU23, while the number of students remained fairly stable. This resulted in an average annual growth rate of 1.2% in expenditure per student over this period, slightly lower than the average across OECD countries. Most EU23 countries experienced annual growth in spending per student over this period, with the exception of Finland and Slovenia where a drop in education expenditure between 2012 and 2017 led to a decline. In contrast, spending per student increased the most in Hungary over this period (due to a combination of increasing expenditure and decreasing student numbers), while it remained generally stable in the Czech Republic, France, Italy and Spain.

Figure 4. Snapshot of the financial resources invested in educational institutions



Note: Only countries and economies with available data are shown. Expenditure in national currencies is converted into equivalent USD by dividing the national currency figure by the purchasing power parity (PPP) index for GDP. The years shown in parentheses is the most common year of reference for OECD and partner countries. Refer to the source table for more details.

Source: OECD (2020^[1]), Indicators C1 and C2. See Education at a Glance Database <http://stats.oecd.org/> for more information and Annex 3 for notes (<https://doi.org/10.1787/69096873-en>).

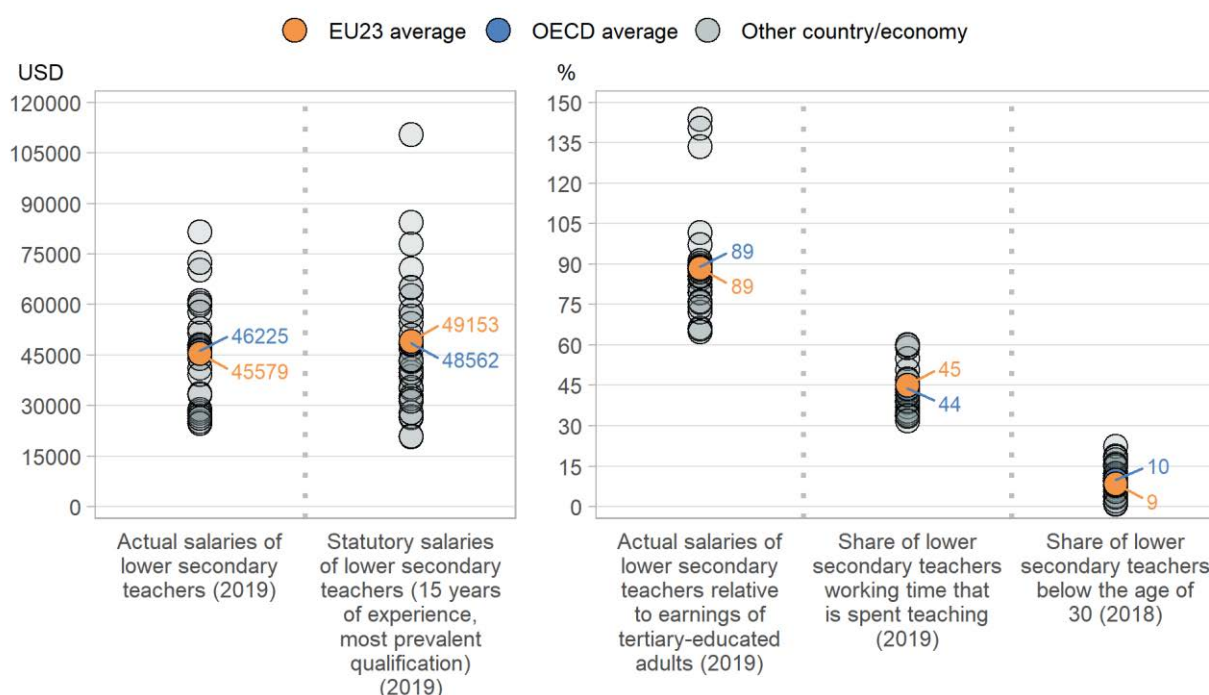
- The share of national wealth devoted to educational institutions is lower on average among EU23 countries than among OECD countries. In 2017, spending on primary to tertiary institutions amounted to 4.5% of gross domestic product (GDP) on average across the EU23, 0.4 percentage points lower than the OECD average. Similarly the EU23 devoted a smaller share of GDP than the OECD average at both non-tertiary and tertiary levels of education (Figure 4).
- Capital costs represent a slightly smaller share of expenditure on primary to tertiary institutions on average across the EU23 than across the OECD. While capital costs account for 6% of total spending on primary, secondary and post-secondary non-tertiary educational institutions on average across the EU23, they account for 10% or more in Finland, Latvia and the Netherlands. At the tertiary level, capital costs represent 10% of spending on average across the EU23. Capital spending on tertiary institutions is highest in Greece, where it amounts to 43% of all spending, and Hungary, where it is 19%.
- Compensation of teachers and other staff employed in educational institutions represents the largest share of current expenditure from primary to tertiary education. In 2017, 75% of current expenditure on primary to tertiary institutions was allocated to staff compensation on average across EU23 countries, varying from less than 70% in Estonia, Finland and Sweden to more than 80% in Belgium, Luxembourg and Portugal.

Working conditions of school teachers

- Statutory salaries of teachers (and school heads) in public educational institutions increase with the level of education they teach. In most OECD countries and economies, they also increase with experience. On average across EU23 countries, the statutory salaries of teachers with maximum qualifications at the top of their salary scales are 66-74% higher than those of teachers with the minimum qualifications at the start of their career at pre-primary, primary and general lower and upper secondary levels. This is lower than the average across OECD countries where maximum salaries are 78-80% higher than minimum salaries at each level of education.
- Salaries and working conditions are important to attract, develop and retain skilled teachers. Between 2005 and 2019, the statutory salaries of teachers with 15 years of experience and the most prevalent qualifications increased by 5-7% at primary and general lower and upper secondary levels on average across the OECD, despite salaries falling after the 2008 financial crisis. Teachers' salaries across the EU23 increased more slowly over the same period, rising by 2-5% at these levels of education.
- Teachers' actual salaries reflect their statutory salaries and additional work-related payments. Average actual salaries also depend on the characteristics of the teaching population such as their age, level of experience and qualifications. On average across the EU23, teachers' actual salaries vary from USD 36 711 at the pre-primary level to USD 49 044 at the general upper secondary level, slightly lower than the OECD average at each level. However, teachers' salaries can vary significantly across countries: at lower secondary level, the actual salary of teachers ranges from more than USD 70 000 in Austria, Germany and the Netherlands to less than USD 25 000 in Latvia (Figure 5).
- Teachers' average actual salaries remain lower than those of tertiary-educated workers in almost all countries, and at almost all levels of education. On average across the EU23, actual salaries range from 79% of the average tertiary-educated worker's earnings at pre-primary level to 85% at primary level, 89% at lower secondary level and 94% at the upper secondary level. Only in Lithuania and Portugal do teachers earn more than their tertiary-educated peers at all levels of education taught (Figure 5).

- The average number of teaching hours per year required of a typical teacher in public educational institutions in EU23 countries tends to decrease as the level of education increases, from 1 042 hours per year at pre-primary level to 738 hours per year at primary level, 663 hours at lower secondary level (general programmes) and 645 hours at upper secondary level (general programmes). During their working hours, teachers also perform various non-teaching tasks such as lesson planning and preparation, marking students' work, and communicating or co-operating with parents or guardians. At the lower secondary level, teachers across the EU23 spend 45% of their statutory working time on teaching, a similar value to the OECD average (Figure 5).
- Large proportions of teachers in many OECD countries will reach retirement age in the next decade, while the size of the school-age population is projected to increase in some countries, putting many governments under pressure to recruit and train new teachers. While 9% of primary to upper secondary teachers are considered young teachers (under the age of 30) on average across the EU23, the share is below 5% in Greece, Italy, Lithuania and Portugal (Figure 5).

Figure 5. Snapshot of teachers' working conditions



Note: Only countries and economies with available data are shown. Teachers' salaries are shown in equivalent USD converted using PPPs. The years shown in parentheses is the most common year of reference for OECD and partner countries. Refer to the source table for more details.

Source: OECD (2020^[1]), Indicators D3, D4 and D5. See Education at a Glance Database <http://stats.oecd.org/> for more information and Annex 3 for notes (<https://doi.org/10.1787/69096873-en>).

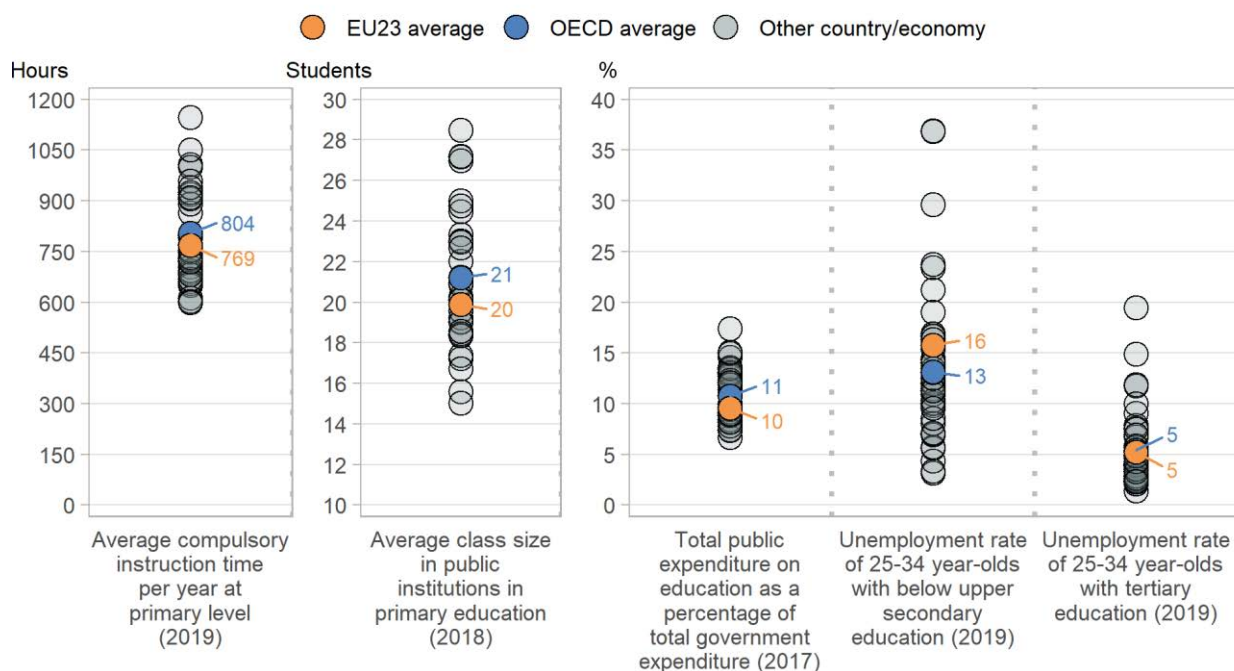
The impact of COVID-19 on education

- The global 2020 COVID-19 pandemic has sent shockwaves around the world. In a first effort to contain the virus, many countries have imposed a lockdown and schools and/or universities have closed for several months across all OECD and partner countries. By the end of June, some form of school closure had been in effect for an average of 14 weeks across the EU23, ranging from 9 weeks in Estonia to 18 weeks in Italy (UNESCO, 2020^[4]). Excluding the non-compulsory part of

the curriculum, each week of school closure represents about 21 hours of compulsory instruction time at the primary level and 25 hours of compulsory instruction time at lower secondary level during which students have physically not attended school. During this time, many countries have turned to distance learning to ensure the continuity of education.

- School reopening in the context of the pandemic is contingent on the capacity to maintain a safe distance of 1-2 metres between pupils and staff. Countries with smaller class sizes will find it easier to comply with new restrictions on social distancing. For example, across the EU23, class size at lower secondary level in public institutions varies from 16 in Latvia to 25 in France and Spain. However, reducing class sizes may depend on other factors such as classroom sizes, the availability of rooms and staff, and personal decisions by students and staff on whether to return to school (Figure 6).
- The crisis may have a severe impact on the internationalisation of higher education as the delivery of online course material and travel restrictions may raise questions among international students about the perceived value of obtaining their degree abroad. In 2018, 4% of EU23 students were enrolled outside their home country, ranging from about 2% in the Denmark, the Netherlands, Poland and Spain to 76% in Luxembourg. The EU23 itself hosts about one-third of the international student pool, who make up about 9% of its tertiary students.
- While there is uncertainty about the likely overall impact of the COVID-19 pandemic on education expenditure, governments will face difficult decisions on the allocation of resources as government funds are injected into the economy and the health sector. In 2017, public spending on primary to tertiary education made up 10% of government expenditure on average across the EU23, ranging from less than 7% in Greece to almost 13% in Denmark and Ireland (Figure 6).
- As unemployment rises, private funding of education may also be at risk. The impact will be most severe in those countries and levels of education that rely most heavily on household expenditure, in particular early childhood education and care and tertiary education. This is less the case on average across the EU23. In pre-primary education, private sources accounted for 14% of total expenditure across the EU23 in 2017, slightly lower than the OECD average of 17%. At tertiary level, 22% of total expenditure comes from the private sector, compared to 29% on average across OECD countries.
- Unemployment may increase, as economies struggle to cope with the reduced activity that resulted from the lockdown. Those with lower educational attainment will be the most vulnerable, as they are the least likely to be able to benefit from remote working. In 2019, before the pandemic hit, 16% of young adults with below upper secondary education were unemployed compared to 5% of tertiary-educated young adults on average across the EU23 (Figure 6). In the aftermath of the last financial crisis, the unemployment rate of young adults without an upper secondary education increased by 6.4 percentage points between 2008 and 2009 on average in the EU23 compared to 1.7 percentage points among those with tertiary education.

Figure 6. Snapshot of indicators relevant to the impact of COVID-19 on education



Note: Only countries and economies with available data are shown. The years shown in parentheses is the most common year of reference for OECD and partner countries. Refer to the source table for more details.

Source: OECD (2020^[1]), Indicators A3, D1, D2, and C4. See Education at a Glance Database <http://stats.oecd.org/> for more information and Annex 3 for notes (<https://doi.org/10.1787/69096873-en>).

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Updated data can be found on line at <http://dx.doi.org/10.1787/eag-data-en> and by following the Statlinks under the tables and charts in the publication.

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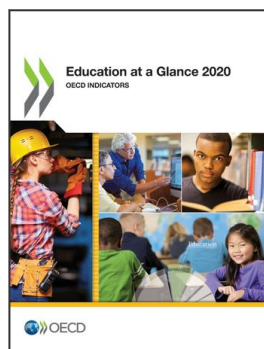
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On 15 May 2020, the OECD Council invited Costa Rica to become a Member. While Costa Rica is included in the OECD averages reported in this note, at the time of its preparation, Costa Rica was in the process of completing its domestic procedures for ratification and the deposit of the instrument of accession to the OECD Convention was pending.

The present publication presents time series compiled by the OECD Secretariat for the European Union which include the United Kingdom for the entire time series, even when data extend beyond the date of the United Kingdom's withdrawal from the European Union on 1 February 2020

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