

Denmark

Ensuring equal opportunities for students across socio-economic backgrounds

- Socio-economic status may significantly impact students' participation in education, particularly at levels of education that rely, in many countries, most heavily on private expenditure, such as early childhood education and care and tertiary education. In Denmark, private sources accounted for 24% of total expenditure in pre-primary institutions, higher than the OECD average of 17%. At tertiary level, 12% of expenditure comes from private sources in Denmark, compared to 30% on average across OECD countries.
- Tuition fees in public institutions in Denmark are among the lowest for a bachelor's programme across countries with available data. There are no tuition fees for a bachelor's degree for national students.
- Financial transfers from the public to the private sector and direct public financial support to students may alleviate the financial burden of education. In Denmark, 86% of national tertiary students received financial support in the form of public scholarships, grants or student loans. In 2018, there were no public-to-private transfers on tertiary institutions, while they represented 8% on average across OECD countries. Public-to-private transfers are generally less common at pre-primary level and represent 0.6% of total expenditure on average across the OECD. In Denmark, there are no public-to-private transfers at this level.
- Across most OECD countries, socio-economic status influences learning outcomes more than gender and immigrant status. In Denmark, the proportion of children from the bottom quartile of the PISA index of economic, social and cultural status (ESCS) achieving at least PISA level 2 in reading in 2018 was 22% lower than that of children from the top ESCS quartile, a smaller share than the OECD average of 29%.
- International student mobility at the tertiary level has risen steadily reaching about 32 400 students in Denmark and representing 10% of tertiary students in 2019. The largest share of international tertiary students studying in Denmark comes from Germany. Students from low and lower-middle income countries are generally less likely to study abroad. In 2019, they represented 29% of international students in OECD countries, compared to 7% in Denmark.
- Large differences in educational attainment may lead to starker earnings inequality in many countries. In Denmark, 31% of 25-64 year-old adults with below upper secondary attainment earned at or below half the median earnings in 2019, above the OECD average of 27%.

Gender inequalities in education and outcomes

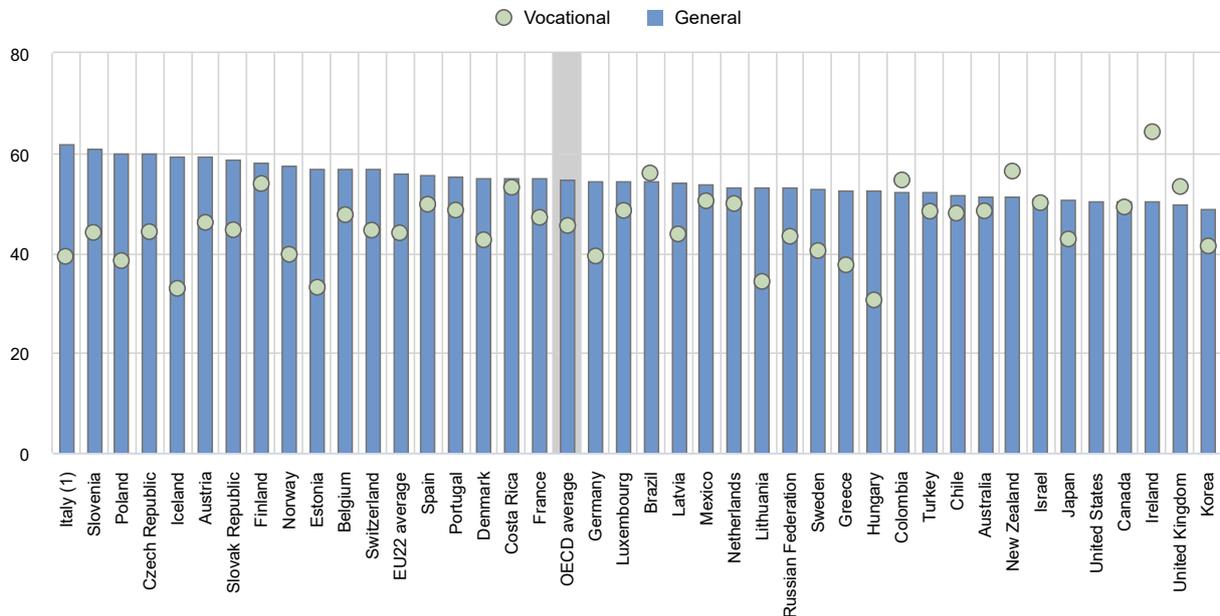
- In Denmark, 1% of students in lower secondary and 0.9% in upper secondary initial education repeated a grade in 2019, compared to 1.9% and 3% respectively on average across OECD countries. Boys are more likely to repeat a grade at lower secondary initial education than girls. In Denmark, 56% of repeaters at lower secondary level were boys, lower than the

OECD average of 61%. At upper secondary level, the share of boys repeating a grade in Denmark decreases to 51%, compared to 57% on average across OECD countries.

- Men are more likely than women to pursue a vocational track at upper secondary level in most OECD countries. This is also the case in Denmark, where 57% of upper secondary vocational graduates in 2019 were men (compared to the OECD average of 55%). Women are generally more likely to graduate from upper secondary general programmes. This is also the case in Denmark, where women represent 55% of graduates from upper secondary general programmes, the same value as on average across OECD countries (Figure 1).
- Tertiary education has been expanding in the last decades, and, in 2020, 25-34 year-old women were more likely than men to achieve tertiary education in all OECD countries. In Denmark, 56% of 25-34 year-old women had a tertiary qualification in 2019 compared to 39% of their male peers, while on average across OECD countries the shares were 52% among young women and 39% among young men.
- Gender differences in the distribution of tertiary entrants across fields of study are significant. Women tend to be under-represented in certain fields of science, technology, engineering and mathematics (STEM) across most OECD countries. On average, 26% of new entrants in engineering, manufacturing and construction and 20% in information and communication technologies were women in 2019. In Denmark, women represented 29% of new entrants in engineering, manufacturing and construction programmes and 24% in information and communication technologies. In contrast, they represented 64% of new entrants to the field of education, a sector traditionally dominated by women. In Denmark, men represent 36% of teachers across all levels of education, compared to 30% on average across OECD countries.
- Young women are less likely to be employed than young men, particularly those with lower levels of education. Only 45% of 25-34 year-old women with below upper secondary attainment were employed in 2019 compared to 64% of men in Denmark. This gender difference is smaller than the average across OECD countries, where 43% of women and 69% of men with below upper secondary attainment are employed.
- In nearly all OECD countries and at all levels of educational attainment, 25-64 year-old women earn less than their male peers: their earnings correspond to 76%-78% of men's earnings on average across OECD countries. This proportion varies more across educational attainment levels within countries than on average across OECD countries. Compared to other education levels, women with tertiary education in Denmark have the lowest earnings relative to men with a similar education level, earning 77% as much, while those with below upper secondary education earn 83% as much.
- On average across OECD countries with available data, 25-64 year-old women tend to participate slightly more in adult learning than men of the same age. In Denmark, 53% of women participated in formal and/or non-formal education and training in 2016, compared to 48% of men. Family reasons were reported as barriers to participation in formal and/or non-formal education and training by 16% of women compared to 19% of men.

Figure 1. Share of women among upper secondary graduates, by programme orientation (2019)

In per cent



1. Includes post-secondary non-tertiary level.

Countries are ranked in descending order of the share of women in general programmes.

Source: OECD (2021). Table B3.1. See Source section for more information and Annex 3 for notes (https://www.oecd.org/education/education-at-a-glance/EAG2021_Annex3_ChapterB.pdf).

Education and migration background

- On average across the OECD, foreign-born adults (25-64 year-olds) account for 22% of all adults with below upper secondary attainment, 14% of those attaining upper secondary or post-secondary non-tertiary attainment, and 18% of tertiary-educated adults. In Denmark, in 2017, foreign-born adults accounted for 15% of all adults with below upper secondary attainment, 11% of those attaining upper secondary or post-secondary non-tertiary attainment, and 15% of tertiary-educated adults.
- Foreign-born adults have more difficulty finding a job than their native-born peers as they face various challenges, such as discrepancies in credential recognition, skills, and language. Thus, foreign-born workers are likely to have a lower reservation wage (the lowest wage rate at which a worker would be willing to accept a particular type of job). As a result, the employment rate for foreign-born adults with low educational attainment is higher than the rate for their native-born peers in many countries. On average across OECD countries, among adults without upper secondary attainment, 57% of native-born adults are employed compared to 61% of foreign-born adults. In Denmark, however, the employment rate of foreign-born adults without upper secondary attainment was 53% in 2017, lower than that of their native-born peers (64%).
- The likelihood of being employed increases with the level of educational attainment, but foreign-born adults with tertiary attainment generally have lower employment prospects than their native-born peers. On average across OECD countries, 86% of native-born tertiary-educated adults are employed compared to 79% for foreign-born tertiary-educated adults. In Denmark,

among tertiary-educated adults, 88% of native-born adults and 76% of foreign-born adults are employed. Foreign-born adults who arrived in the country at an early age have spent some years in their host country's education system and gained nationally recognised credentials. As a result, their labour-market outcomes are generally better than that of those who arrived at a later age with a foreign qualification. In Denmark, among foreign-born adults with tertiary attainment, 77% of those who arrived by the age of 15 are employed, compared to 75% of those who arrived in the country at age 16 or later.

- Foreign-born young adults (15-29 year-olds) are also more likely to be neither employed nor in education or training (NEET) than native-born young adults. On average across OECD countries, 18.8% of foreign-born and 13.7% of native-born adults are NEET. In Denmark, the difference is 5 percentage points (16.6% compared to 11.1%). Early arrival in the country is generally associated with a lower risk of becoming NEET. In Denmark, the share of NEETs among foreign-born young adults who arrived by the age of 15 is 14%, while the share of NEETs among those who arrived at age 16 or later is 20%.
- In many OECD countries, foreign-born adults earn less than native-born adults. This pay gap may narrow with higher levels of educational attainment. On average across OECD countries, foreign-born adults with below secondary attainment working full-time earn 89% as much as their native-born peers, while this gap disappears among tertiary-educated adults. In Denmark, in 2019, among adults with below upper secondary attainment, the earnings of foreign-born full-time workers represented 87% that of their native-born peers, 88% among adults with upper secondary or post-secondary non-tertiary attainment, and 94% among those with a tertiary-education.

Cross-regional disparities in education

- National level data often hide important regional inequalities in children's access and participation to education. In general, inequalities across regions tend to widen at non-compulsory levels of education. For example, in the majority of countries, the variation in enrolment rate of 3-5 year-olds is often greater than the variation among 6-14 year-olds. This is not the case in Denmark, where the enrolment rate of 3-5 year-olds varies from 97% in the region of Zealand to 98% in the region of Central Jutland whereas the enrolment of 6-14 year-olds varies from 99% to 100% across regions. Similarly, the enrolment rate of 15-19 year-olds varies from 79% to 90% in Denmark.
- Tertiary attainment may vary significantly within a country. In Denmark, the share of 25-64 year-old adults with tertiary education varies from 30% in the region of Zealand to 53% in the region of Capital City Region, a similar regional variation as the average across OECD countries with available data.
- On average across OECD and partner countries with subnational data on labour-force status, there is more regional variation in employment rates among those with below upper secondary education (17 percentage points) than for those with tertiary education (8 percentage points). In Denmark, there is a difference of 3 percentage points in the employment rate of adults with below upper secondary education between different regions of the country compared to 4 percentage points for tertiary-educated adults.
- The proportion of young people who are NEET shows significant subnational as well as national variation across OECD and partner countries. In Denmark, the difference in the share of 18-24 year-old NEETs between regions with the highest and lowest value is 4 percentage points, compared to 11 percentage points on average across OECD countries.

COVID-19: 18 months into the pandemic

- The spread of COVID-19 has continued to impede access to in-person education in many countries around the world in 2021. By mid-May 2021, 37 OECD and partner countries had experienced periods of full school closure since the start of 2020.
- In many countries, schools did not fully close but remained open with reduced capacity. Schools at upper secondary (general) level in Denmark for instance experienced 100 days of partial opening between January 2020 and May 2021, 50 of which occurred in 2020 and 50 in 2021. In total, this was higher than the number of days of partial opening in the OECD on average (57 days), where there were 27 days of partially open instruction in 2020, and 30 days in 2021.
- The impact of COVID-19 and school closures on educational equity has been a concern for many countries. 30 out of the 36 OECD and partner countries surveyed, including Denmark, declared that additional measures were taken to support the education of children who might face additional barriers to learning during the pandemic. 22 of these countries, including Denmark, stated that they had subsidised devices for students to help them access education. Measures to encourage disadvantaged or vulnerable students to return to school after closures were also implemented in 29 OECD and partner countries, including in Denmark.
- 20 OECD and partner countries, including Denmark, stated that the allocation of additional public funds to support the educational response to the pandemic in primary and secondary schools was based on the number of students or classes. At the same time, 16 countries targeted additional funds at socio-economically disadvantaged students as a way to ensure that resources targeted those that needed them the most, though this was not the case in Denmark.
- Countries' approach to prioritise teachers in vaccination campaigns against COVID-19 has varied. In total, 19 OECD and partner countries, excluding Denmark, have prioritised at least some teachers as part of the government's plans to vaccinate the population on a national level (as of 20 May 2021).
- At the same time, the number of adults participating in formal and/or non-formal education and training decreased by 27% on average in the OECD between the second quarter of 2019 and the second quarter of 2020 (i.e. during the peak of the first wave of COVID-19 in many OECD countries). In Denmark, the participation of adults in formal and/or non-formal education and training in this period decreased by 43% in Denmark.

Investing in education

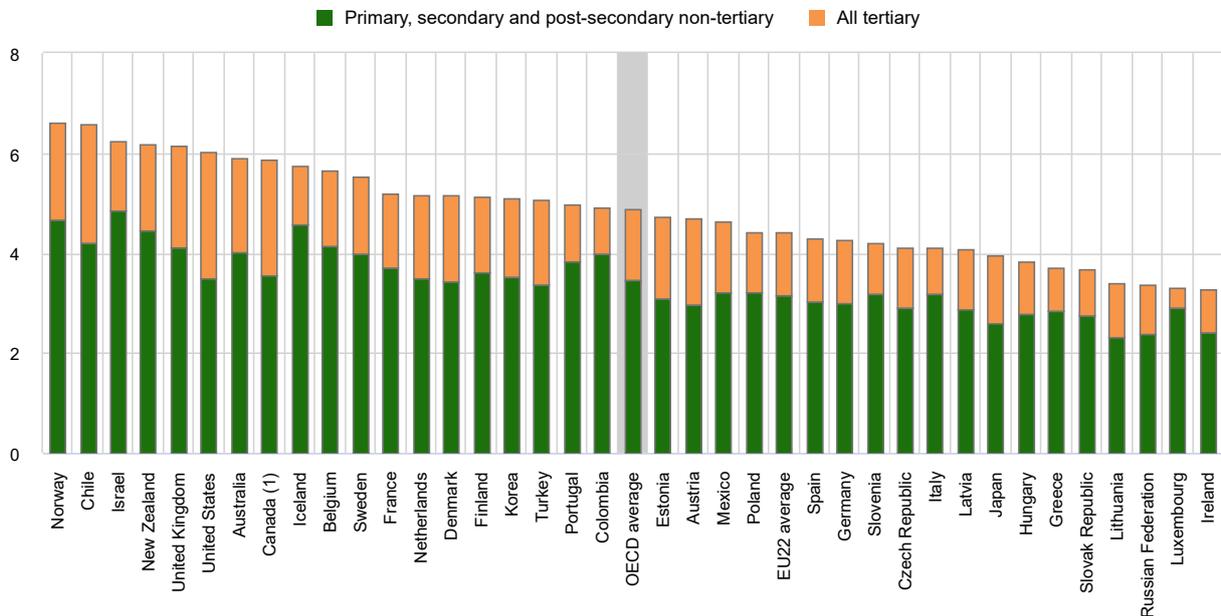
- Annual expenditure per student on educational institutions provides an indication of the investment countries make on each student. After accounting for public-to-private transfers, public expenditure on primary to tertiary educational institutions per full-time student in Denmark was USD 12 293 in 2018 (in equivalent USD converted using PPPs for GDP) compared to USD 10 000 on average across OECD countries.
- Expenditure on core educational services such as instruction and teaching make up the largest share of education expenditure. However, ancillary services (such as student welfare) and research and development (R&D) activities also influence the level of expenditure per student. In primary to tertiary education, 84% of institutions' expenditure per student is devoted to core educational services in Denmark (compared to 89% on average across OECD countries). This share is generally lower at the tertiary level due to expenditure on research and development, including in Denmark where 54% of total expenditure is devoted to core educational services.
- The provision of education across public and private institutions influences the allocation of resources between levels of education and types of institution. In 2018, Denmark spent

USD 11 551 per student at primary, secondary and post-secondary non-tertiary education, USD 1 097 higher than the OECD average of USD 10 454. At tertiary level, Denmark invested USD 19 684 per student, USD 2 619 more than the OECD average. Expenditure per student on public educational institutions is higher than on private institutions on average across OECD countries. This is also the case in Denmark, where total expenditure on primary to tertiary public institutions amounts to USD 13 975 per student, compared to USD 9 489 on private institutions.

- The share of national wealth devoted to educational institutions is higher in Denmark than on average among OECD countries. In 2018, Denmark spent 5.2% of its GDP on primary to tertiary educational institutions, which is 0.3 percentage points higher than the OECD average. Across levels of education, Denmark devoted a similar share of GDP as the OECD average at non-tertiary levels and a higher share at tertiary level (Figure 2).
- The share of capital costs on total expenditure on educational institutions is lower than the OECD average at primary to tertiary level in Denmark. At primary, secondary and post-secondary non-tertiary level, capital costs account for 8% of total spending on educational institutions, similar to the OECD average (8%). At the tertiary level, capital costs represent 5%, lower than the average across OECD countries of 11%.
- Compensation of teachers and other staff employed in educational institutions represents the largest share of current expenditure from primary to tertiary education. In 2018, Denmark allocated 80% of its current expenditure to staff compensation, compared to 74% on average across OECD countries. Staff compensation tends to make up a smaller share of current expenditure on tertiary institutions due to the higher costs of facilities and equipment at this level. In Denmark, staff compensation represents 77% of current expenditure on tertiary institutions compared to 82% at non-tertiary levels. On average across OECD countries, the share is 68% at tertiary level and 77% at non-tertiary level.

Figure 2. Total expenditure on educational institutions as a percentage of GDP (2018)

In per cent



Compare your country: <https://www.compareyourcountry.org/education-at-a-glance-2021/en/5/3059+3060+3061+3062+3063+3064/default>

1. Primary, secondary and post-secondary non-tertiary education includes pre-primary programmes.

Countries are ranked in descending order of total expenditure on educational institutions as a percentage of GDP.

Source: OECD (2021), Table C2.1. See Source section for more information and Annex 3 for notes (https://www.oecd.org/education/education-at-a-glance/EAG2021_Annex3_ChapterC.pdf).

Working conditions of school teachers

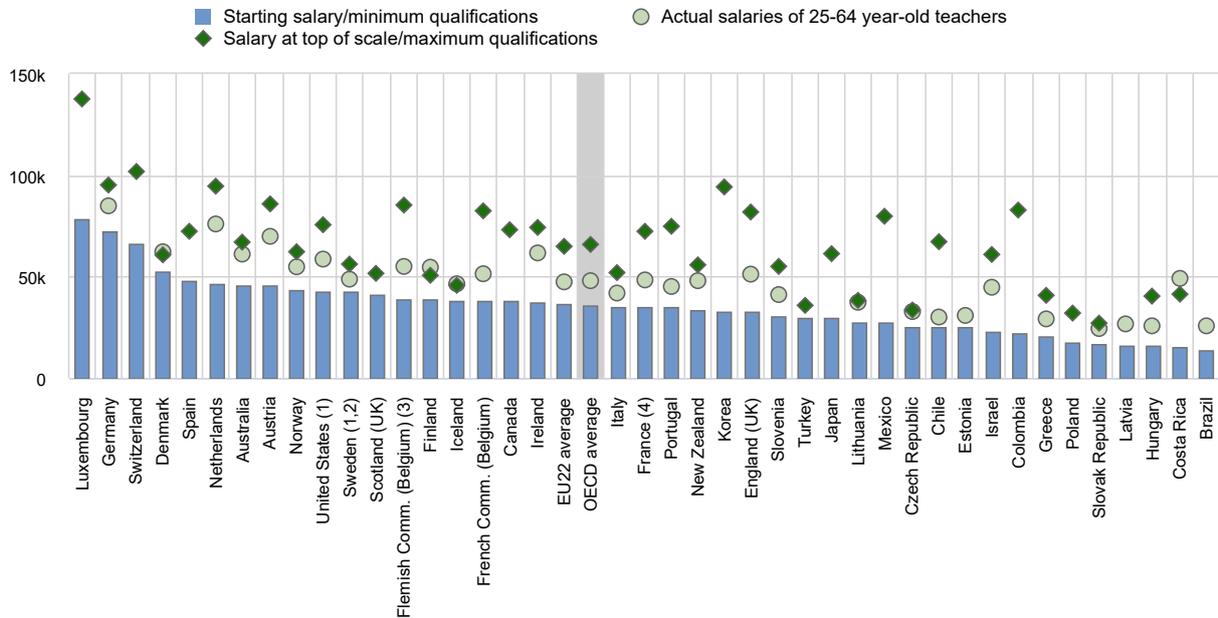
- The salaries of school staff, and in particular teachers and school heads, represent the largest single expenditure in formal education. Their salary levels also have an impact on the attractiveness of the teaching profession. In most OECD countries and economies, statutory salaries of teachers (and school heads) in public educational institutions increase with the level of education they teach, and also with experience. On average, statutory salaries of teachers with maximum qualifications at the top of their salary scales (maximum salaries) were between 86% and 91% higher than those of teachers with the minimum qualifications at the start of their career (minimum salaries) at pre-primary (ISCED 02), primary and general lower and upper secondary levels in 2020. In Denmark, maximum salaries were 13% to 30% higher than minimum salaries at each level of education (Figure 3). However, most teachers were paid between these minimum and maximum salaries.
- Between 2005 and 2020, the statutory salaries of teachers with 15 years of experience and the most prevalent qualifications increased (at constant prices) by 2% to 3% at primary and general lower and upper secondary levels, on average across OECD countries with data for all reference years, despite a decrease of salaries following the 2008 financial crisis. In Denmark, teachers' salaries at these levels increased by 1%-4%.
- 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 qualification level. In Denmark, teachers' average actual salaries (after conversion to USD using PPPs for private consumption) amount to USD 50 866 at the pre-primary level (ISCED 02), USD 61 746 at the primary level, USD 62 156 at the general lower secondary level and USD 73 277 at the general upper secondary level. On average across OECD countries, teachers' average actual salaries were USD 40 707, USD 45 687, USD 47 988 and USD 51 749 at the pre-primary, primary, lower secondary and upper secondary level respectively (Figure 3).

- Teachers' average actual salaries remained lower than those of tertiary-educated workers in almost all countries, and at almost all levels of education. Teachers' average actual salaries at pre-primary (ISCED 02), primary and general secondary levels of education were between 81% and 96% of the earnings of tertiary-educated workers on average across OECD countries and economies. In Denmark, the proportion ranged from 69% to 99% at pre-primary, primary and general secondary levels of education.
- However, there are significant differences between men and women in relative salaries of teachers due to the gender gap in earnings across the labour market (statutory salaries are equal for male and female teachers in public educational institutions). When average actual salaries of teachers are compared to salaries of tertiary educated workers, these relative salaries are usually higher for women, and lower for men. In Denmark, the proportion ranges from 96% to 113% for women (98% to 110% on average across OECD countries and economies), and from 73% to 88% for men (76% to 85% on average across OECD countries and economies) in primary and general secondary education.
- The average number of teaching hours per year required of a typical teacher in public educational institutions in OECD countries tends to decrease as the level of education increases: it ranged from 791 hours at primary level to 723 hours at lower secondary level (general programmes) and 685 hours at upper secondary level (general programmes) in 2020. In Denmark, teachers teach 705 hours per year at primary level, 696 hours at lower secondary level (general programmes) and 517 hours at upper secondary level (general programmes).
- During their working time, teachers also perform various tasks other than teaching itself such as lesson planning and preparation, marking students' work and communicating or co-operating with parents or guardians. At the lower secondary level, teachers in Denmark spend 42% of their statutory working time on teaching, compared to 44% on average among countries with available data.
- In primary and secondary education, about 35% of teachers are at least 50 years old on average across OECD countries and may 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. In 2019, 31% of primary teachers in Denmark were at least 50 years old, which was slightly lower than the OECD average of 33%. On average across OECD countries, the proportion of teachers aged at least 50 years old increases with higher levels of education taught, to 36% in lower secondary education and 40% in upper secondary education. In Denmark, this proportion varies from 30% at lower secondary level to 41% at upper secondary level.

Figure 3. Lower secondary teachers' average actual salaries compared to the statutory starting and top of the scale salaries (2020)

Annual statutory salaries of teachers in public institutions, in equivalent USD converted using PPPs



Compare your country: <https://www.compareyourcountry.org/education-at-a-glance-2021/en/7/all/default>

Note: Actual salaries include bonuses and allowances.

1. Actual base salaries.
2. Salaries at the top of the scale and the minimum qualifications, instead of the maximum qualifications.
3. Salaries at the top of the scale and the most prevalent qualifications, instead of the maximum qualifications.
4. Includes the average of fixed bonuses for overtime hours.

Countries and economies are ranked in descending order of starting salaries for lower secondary teachers with the minimum qualifications.

Source: OECD (2021), Table D3.3 and Education at a Glance Database, <http://stats.oecd.org>. See Source section for more information and Annex 3 for notes (https://www.oecd.org/education/education-at-a-glance/EAG2021_Annex3_ChapterD.pdf).

References

OECD (2021), *Education at a Glance 2021: OECD Indicators*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/69096873-en>.

OECD (2021), "Regional education", *OECD Regional Statistics (database)*, <https://dx.doi.org/10.1787/213e806c-en> (accessed on 27 July 2021).

OECD (2021), "The state of global education – 18 months into the pandemic", OECD Publishing, Paris, <https://doi.org/10.1787/1a23bb23-en>.

More information

For more information on Education at a Glance 2021 and to access the full set of Indicators, see:
<https://doi.org/10.1787/b35a14e5-en>

For more information on the methodology used during the data collection for each indicator, the references to the sources and the specific notes for each country, see Annex 3 (https://www.oecd.org/education/education-at-a-glance/EAG2021_Annex3.pdf).

For general information on the methodology, please refer to the OECD Handbook for Internationally Comparative Education Statistics: Concepts, Standards, Definitions and Classifications (<https://doi.org/10.1787/9789264304444-en>).

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.

Data on subnational regions for selected indicators are available in the *OECD Regional Statistics* (database) (OECD, 2021). When interpreting the results on subnational entities, readers should take into account that the population size of subnational entities can vary widely within countries. For example, regional variation in enrolment may be influenced by students attending school in a different region from their area of residence, particularly at higher levels of education. Also, regional disparities tend to be higher when more subnational entities are used in the analysis.

Explore, compare and visualise more data and analysis using the Education GPS:

<https://gpseducation.oecd.org/>

The data on educational responses during COVID-19 were collected and processed by the OECD based on the Survey on Joint National Responses to COVID-19 School Closures, a collaborative effort conducted by the United Nations Educational, Scientific and Cultural Organization (UNESCO); the UNESCO Institute for Statistics (UIS); the United Nations Children's Fund (UNICEF); the World Bank; and the OECD.

Questions can be directed to:	Country note authors:
Marie-Helene Doumet Directorate for Education and Skills marie-helene.doumet@oecd.org	Etienne Albiser, Heewoon Bae, Andrea Borlizzi, António Carvalho, Eric Charbonnier, Corinne Heckmann, Bruce Golding, Yanjun Guo, Gara Rojas Gonzalez, Daniel Sanchez Serra, Markus Schwabe and Giovanni Maria Semeraro

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document, as well as any data and any map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

The use of this work, whether digital or print, is governed by the terms and conditions to be found at www.oecd.org/termsandconditions/.



From:
Education at a Glance 2021
OECD Indicators

Access the complete publication at:
<https://doi.org/10.1787/b35a14e5-en>

Please cite this chapter as:

OECD (2021), "Denmark", in *Education at a Glance 2021: OECD Indicators*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/66a73189-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. Extracts from publications may be subject to additional disclaimers, which are set out in the complete version of the publication, available at the link provided.

The use of this work, whether digital or print, is governed by the Terms and Conditions to be found at <http://www.oecd.org/termsandconditions>.