

EDUCATION AT A GLANCE 2016

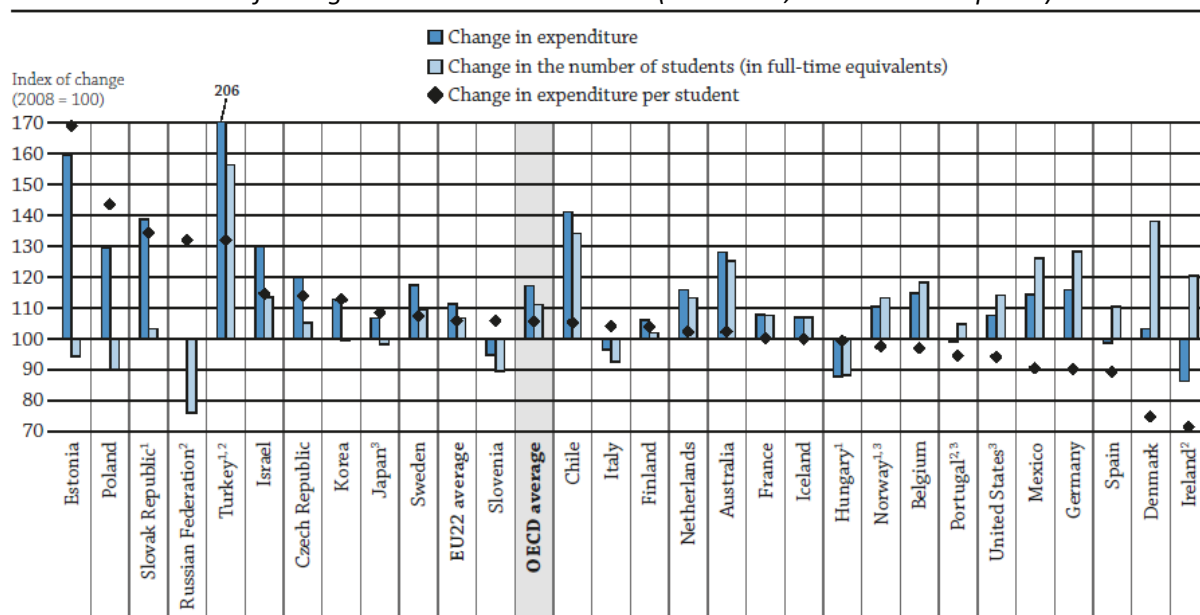
Education at a Glance: OECD Indicators is the authoritative source for information on the state of education around the world. It provides data on the structure, finances and performance of education systems in the 35 OECD countries and a number of partner countries.

Denmark

- Denmark spends one of the highest shares of its wealth on primary to tertiary education among OECD countries, with expenditure reaching 6.4% of its gross domestic product (GDP) in 2013, up from 5.8% in 2008.
- Despite a 3% increase in expenditure on tertiary education between 2008 and 2013, a dramatic increase in enrolment rates over the same period resulted in a 25% fall in expenditure per student at the tertiary level.
- Denmark is an attractive destination for internationally mobile students: Denmark's share of international students is higher than or equivalent to the OECD average at all tertiary levels.
- The gender distribution of teachers in primary and secondary education is more balanced than the OECD averages: 69% of teachers at the primary level are female, compared to the OECD average of 82%, and at the upper secondary level, the gender ratio is nearly evenly split with 49% female teachers compared with 58% on average for the OECD.
- As of 2014, 42% of upper secondary students in Denmark were enrolled in vocational programmes, in which virtually all students participated in combined school- and work-based programmes.

Figure 1. Changes in the number of students, expenditure on educational institutions, and expenditure per student in tertiary education (2008, 2013)

Index of change between 2008 and 2013 (2008=100, 2013 constant prices)



1. Public expenditure only.

2. Public institutions only.

3. Some levels of education are included with others. Refer to "x" code in Table B1.1 for details.

Countries are ranked in descending order of change in expenditure per student by educational institutions.

Source: OECD, Table B1.5b. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink <http://dx.doi.org/10.1787/888933397633>

High-quality education needs sustainable funding

- Expenditure on educational institutions from primary to tertiary levels amounted to 6.4% of GDP in 2013, one of the highest shares among OECD countries, and up from 5.8% in 2008. Close to all expenditure (97%) on primary, secondary and post-secondary non-tertiary educational institutions is publicly funded and makes up 12.8% of Denmark's total public expenditure, compared to 11.2% among OECD countries.
- Annual expenditure per student at the primary level is USD 11 355,¹ far higher than the OECD average of USD 8 477. As a share of GDP, Denmark's expenditure on primary educational institutions (2.2%) also exceeds the average across OECD countries (1.5%).
- The number of students in primary, secondary and post-secondary non-tertiary education increased by 14% between 2008 and 2013, faster than the increase in expenditure by educational institutions at those levels, resulting in a 5% decrease in expenditure per student (Figure 1).
- Similar trends are seen at tertiary level: between 2008 and 2013, Denmark experienced a 25% fall in expenditure per tertiary education student. Even though expenditure on tertiary educational institutions had increased by 3% over that period (which was below the OECD average of 17%), this drastic decrease was driven by a 38% increase in tertiary enrolment.
- Despite this, annual expenditure per student in tertiary institutions in Denmark is USD 16 460, still above the OECD average of USD 15 772. Expenditure on research and development (R&D) accounts for 56% of tertiary expenditure, the second highest share of all OECD countries, after Switzerland.
- Denmark is one of only a few countries with no private household expenditure on tertiary education, and public funds for tertiary education are highly centralised: 100% of funds come from the central government, against an OECD average of 85%.

Tertiary education has a strong impact in the labour market

- As of 2015, 44% of 25-34 year-olds in Denmark had attained a tertiary degree, slightly above the OECD average of 42%. Since 2005, this proportion has increased by 4 percentage points in Denmark and by 9 percentage points on average among OECD countries.
- If current patterns are maintained, 64% of young adults in Denmark are expected to graduate at least once in their lifetime from a tertiary programme, compared with 49% on average among OECD countries. However, when only national students are considered, the tertiary graduation rate drops to 56% in Denmark and to 45% for OECD countries overall.
- Across all tertiary levels, the proportion of international students graduating in Denmark is either higher than or equivalent to the OECD average. At doctoral level, 32% of graduates are international students, compared to 26% on average among OECD countries.
- These relatively high shares suggest that Denmark is an attractive destination for internationally mobile tertiary students. However, a 2006 reform introduced tuition fees for international students on short-cycle tertiary, bachelor's and master's programmes, affecting the entrance rates of non-European students. The number of new entrants from the European Economic Area (EEA), who were not affected by the reform, almost doubled between 2006 and 2014, while the number of students from outside the EEA increased by only 22%. In 2014, the largest shares of international students enrolled in Denmark were from Norway (12.0%), Germany (11.4%) and Sweden (8.8%).

Salary, the school environment and workload all influence teachers' decisions to enter – and remain in – the profession

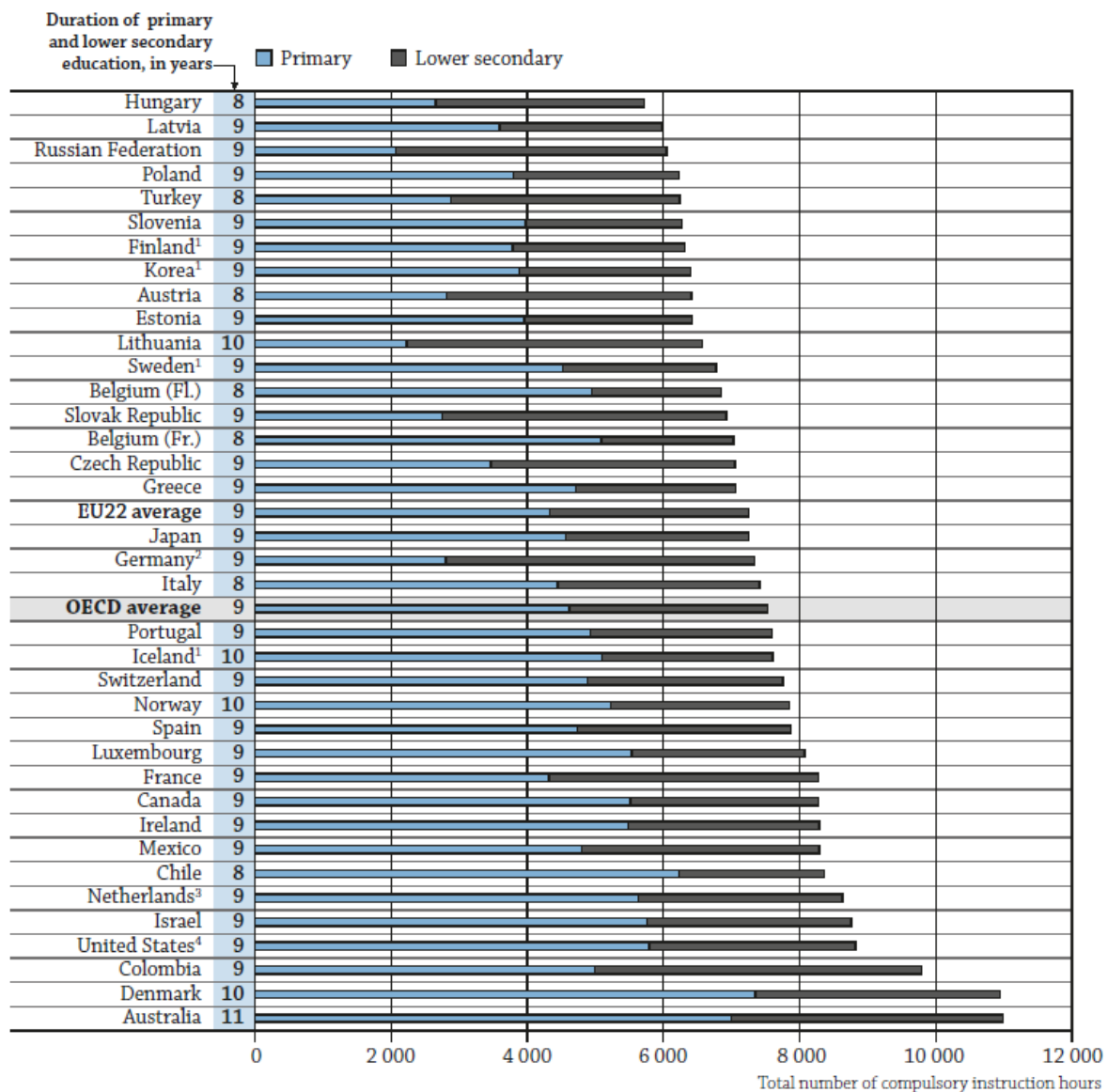
- Teachers' statutory starting salaries in Denmark exceed the OECD averages for all levels of instruction: pre-primary (USD 40 437 against the OECD average of USD 29 494), primary (USD 45 909 versus USD 31 028), lower secondary (USD 46 188 versus USD 32 485) and upper secondary levels (USD 46 033 versus USD 34 186).
- Despite these high average salaries relative to other OECD countries, Danish teachers' in pre-primary, primary and lower secondary education earn lower salaries than other tertiary-educated workers in the country. Actual teachers' salaries at the primary and lower secondary levels are 87% and 88% of salaries for other tertiary-educated workers, respectively. Upper secondary teachers, however, earn equivalent salaries to other professionals with tertiary education on average.
- The average hours of instruction per year at the primary level are considerably higher than the OECD average: 1 051 hours compared to 799. Given that primary education in Denmark extends for seven years, longer than is

¹ Values reported in equivalent US dollars (USD) have been converted using purchasing power parities (PPPs).

common across OECD countries, total compulsory instruction time for primary education is by far the highest in the OECD (Figure 2).

- As in many OECD countries, the share of female teachers in Denmark is higher at initial levels of education and decreases as the level of instruction increases. However, the gender distribution of teachers is more balanced than the OECD averages for primary and secondary education: 69% of teachers at the primary level are female compared with 82% on average for OECD countries, 64% at lower secondary (OECD average 68%) and 49% at upper secondary (OECD average 58%).
- Around one-third of all principals work full-time and have teaching obligations, the same as the OECD average. A smaller share report frequently observing instruction in the classroom – 17% compared with the OECD average of 40.5% – and less than half report often taking action to ensure that teachers feel responsible for their students' learning outcomes, compared to 71% of principals across the OECD.

Figure 2. Compulsory instruction time in general education (2016)
In primary and lower secondary education



1. Estimated number of hours by level of education based on the average number of hours per year, as the allocation of instruction time across multiple grades is flexible.

2. Year of reference 2015.

3. The number of grades in lower secondary education is three or four, depending on the track. The fourth year of pre-vocational secondary education (VMBO) was excluded from the calculation.

4. Year of reference 2012.

Countries and economies are ranked in ascending order of the total number of compulsory instruction hours.

Source: OECD, Table D1.1. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink <http://dx.doi.org/10.1787/888933398830>

Vocational education and training can provide more direct pathways into the labour market

- At 46%, the graduation rate from upper secondary vocational programmes in Denmark is equivalent to the average of OECD countries. Nevertheless, it has fallen by 4 percentage points between 2005 and 2014, whereas across the OECD the corresponding rate increased by 4 percentage points over the same period.
- As of 2014, 42% of upper secondary students in Denmark were enrolled in vocational programmes, just below the OECD average of 44%. Nearly all (99.7%) secondary level vocational students in Denmark participate in combined school- and work-based programmes. This means 42% of Danish secondary students participate in such programmes, whereas the average share across the OECD is just 13%.
- Danish upper secondary graduates from vocational programmes are older than in other countries: the average age of graduation from these programmes in Denmark is 28 years, 5 years older than the OECD average.
- The employment rate among 25-34 year-olds with an upper secondary or post-secondary non-tertiary vocational education qualification as their highest level of education is 85%, higher than the employment rate among those with a tertiary degree (82%).

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Note regarding data from Israel

The statistical data for Israel are supplied by and are 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.

References

OECD (2016), *Education at a Glance 2016: OECD Indicators*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/eag-2016-en>.

For more information on Education at a Glance 2016 and to access the full set of Indicators, visit www.oecd.org/education/education-at-a-glance-19991487.htm.

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.

Explore, compare and visualise more data and analysis using:  **EducationGPS**
<http://gpseducation.oecd.org/CountryProfile?primaryCountry=DNK&treshold=10&topic=EO>.

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Key Facts for Denmark in Education at a Glance 2016

Source	Main topics in <i>Education at a Glance</i>	Denmark		OECD average		EU22 average	
	Gender						
	Employment rate of 25-64 year-olds, by educational attainment	2015					
Chart A5.2.		Men	Women	Men	Women	Men	Women
	Below upper secondary	69%	51%	66%	46%	62%	44%
	Upper secondary or post-secondary non-tertiary	84%	76%	81%	67%	79%	68%
	Tertiary	89%	83%	88%	80%	88%	80%
	Full-year earnings of women as a percentage of men's earnings, by educational attainment (25-64 year-olds)	2014					
Table A6.2		Ratio (women/men)		Ratio (women/men)		Ratio (women/men)	
	Below upper secondary	83%		76%		77%	
	Upper secondary or post-secondary non-tertiary	81%		77%		79%	
	Tertiary	76%		73%		74%	
	Percentage of people not in employment, nor in education or training (NEET)	2015					
Table C5.2		Men	Women	Men	Women	Men	Women
	15-29 year-olds	10%	11%	12%	17%	13%	16%
	Percentage of female graduates, by tertiary levels of education	2014					
Table A3.4		% Women		% Women		% Women	
	Short-cycle tertiary	50%		56%		59%	
	Bachelor's or equivalent	60%		58%		60%	
	Master's or equivalent	57%		57%		58%	
	Doctoral or equivalent	47%		47%		49%	
	Field of education studied among tertiary-educated adults (25-64 year-old non-students)	2012		2012 ¹		2012	
Table A1.5.		Men	Women	Men	Women	Men	Women
	Teacher training and education science	13%	27%	7%	18%	n.a.	n.a.
	Engineering, manufacturing and construction	24%	6%	31%	7%	n.a.	n.a.
Vocational Education and Training (VET)							
	Distribution of enrolment, by programme orientation	2014					
Table C1.3a		General	Vocational	General	Vocational	General	Vocational
	Upper secondary education	58%	42%	56%	44%	52%	48%
	Educational attainment, by programme orientation	2015					
Table A1.4.		General	Vocational	General	Vocational	General	Vocational
	25-34 year-olds with upper secondary or post-secondary non-tertiary education	11%	28%	17%	26%	13%	30%
	Unemployment rate, by programme orientation	2015					
Table A5.5		General	Vocational	General	Vocational	General	Vocational
	25-34 year-olds with upper secondary or post-secondary non-tertiary education as their highest educational attainment level	6.9%	5.3%	10%	9.2%	11.7%	10.8%
Financial Investment in Education							
	Annual expenditure per student, by level of education (in equivalent USD, using PPPs)	2013					
Table B1.1		USD 11 355		USD 8 477		USD 8 545	
		USD 10 933		USD 9 811		USD 10 053	
		USD 16 460		USD 15 772		USD 15 664	
	Total expenditure on primary to tertiary educational institutions	2013					
Table B2.2	As a percentage of GDP	6.4%		5.2%		5%	
	Total public expenditure on primary to tertiary education	2013					
Table B4.2	As a percentage of total public expenditure	12.8%		11.2%		9.9%	
Early Childhood Education and Care (ECEC)							
	Enrolment rates in early childhood education at age 3	2014					
Table C2.1		96%		71%		77%	
	Expenditure on all early childhood educational institutions	2013					
Table C2.3		1.3%		0.8%		0.8%	
		81%		81%		86%	
Teachers							
	Actual salaries of teachers in public institutions relative to wages of full-time, full-year workers with tertiary education	2014					
Table D3.2a		0.73		0.74		0.74	
		0.87		0.81		0.81	
		0.88		0.85		0.86	
		1.00		0.89		0.92	
	Annual statutory salaries of teachers in public institutions, based on typical qualifications, at different points in teachers' careers (in equivalent USD, using PPPs)	2014					
Table D3.1a		Starting salary	Salary after 15 years of experience	Starting salary	Salary after 15 years of experience	Starting salary	Salary after 15 years of experience
		USD 40 437	USD 45 898	USD 29 494	USD 39 245	USD 28 934	USD 38 992
		USD 45 909	USD 52 481	USD 31 028	USD 42 675	USD 30 745	USD 42 285
		USD 46 188	USD 53 226	USD 32 485	USD 44 407	USD 32 274	USD 44 204
		USD 46 033	USD 58 317	USD 34 186	USD 46 379	USD 33 420	USD 46 420

Denmark - Country Note - Education at a Glance 2016: OECD Indicators

Source	Main topics in <i>Education at a Glance</i>	Denmark		OECD average		EU22 average	
	Mean monthly earnings of tertiary-educated 25-64 year-old, by selected field of education studied	2012		2012 ¹		2012	
Table A6.4	Teacher training and education science	USD 3 500		USD 3 004		n.a.	
	Engineering, manufacturing and construction	USD 5 200		USD 3 883		n.a.	
	Ratio of students to teaching staff	2014					
Table D2.2	Primary education	12 students per teacher		15 students per teacher		14 students per teacher	
	Secondary education	12 students per teacher		13 students per teacher		12 students per teacher	
	Tertiary education	14 students per teacher		17 students per teacher		17 students per teacher	
Tertiary Education							
	Percentage of adults who have attained tertiary education, by tertiary level of educational attainment and age group	2015					
		25-34 year-olds	25-64 year-olds	25-34 year-olds	25-64 year-olds	25-34 year-olds	25-64 year-olds
Table A1.2	Short-cycle tertiary	4%	4%	8%	8%	5%	6%
	Bachelor's or equivalent	24%	20%	21%	16%	18%	13%
	Master's or equivalent	16%	11%	14%	11%	16%	13%
	Doctoral or equivalent	1%	1%	1%	1%	1%	1%
	All tertiary levels of education	44%	37%	42%	35%	40%	32%
	Employment rate of 25-64 year-olds, by tertiary educational attainment	2015					
Tables A5.1 & A5.3	Short-cycle tertiary	86%		80%		80%	
	Bachelor's or equivalent	84%		82%		81%	
	Master's or equivalent	89%		87%		86%	
	Doctoral or equivalent	94%		91%		91%	
	All tertiary levels of education	86%		84%		84%	
	Relative earnings of full-time full-year 25-64 year-old workers, by tertiary educational attainment (upper secondary education = 100)	2014					
Table A6.1	Short-cycle tertiary	109		120		120	
	Bachelor's or equivalent	114		148		139	
	Master's, doctoral or equivalent	150		191		175	
	All tertiary levels of education	126		155		152	
	Share of international or foreign students, by level of tertiary education	2014					
Table C4.1.	Bachelor's or equivalent	6%		5%		6%	
	Master's or equivalent	17%		12%		13%	
	Doctoral or equivalent	30%		27%		22%	
	All tertiary levels of education	10%		6%		8%	
	First-time entry rates into tertiary education	2014					
Table C3.1.	All tertiary levels (including international students)	89%		68%		63%	
	All tertiary levels (excluding international students)	76%		61%		57%	
	All tertiary levels (students younger than 25 years old and excluding international students)	57%		51%		50%	
		Other: Immigration and intergenerational mobility in education					
	Proportion of adults with same educational attainment levels as their parents, by parents' immigrant status ²	2012		2012 ¹		2012	
		Native-born parents	Foreign-born parents	Native-born parents	Foreign-born parents	Native-born parents	Foreign-born parents
Table A4.3	25-44 year-old adults with below upper secondary education as their highest educational attainment level	24%	40%	27%	37%	n.a.	n.a.
Other: Adult education and learning							
	Participation of 25-64 year-olds in formal and/or non-formal education, by level of education ²	2012		2012 ¹		2012	
Table C6.3	Below upper secondary	44%		26%		n.a.	
	Upper secondary or post-secondary non-tertiary	62%		46%		n.a.	
	Tertiary	82%		70%		n.a.	
Other: Education and social outcomes							
	Percentage of 25-64 year-old adults reporting that they are in good health, by selected literacy proficiency level	2012		2012 ¹		2012	
Table A8.1 (L)	Low literacy proficiency (Level 1 or below)	64%		67%		n.a.	
	High literacy proficiency (Level 4 or 5)	92%		90%		n.a.	
	Life satisfaction today and life satisfaction expected in five years for 25-64 year-olds, by educational attainment ³	2015					
		Life satisfaction today	Life satisfaction in 5 years	Life satisfaction today	Life satisfaction in 5 years	Life satisfaction today	Life satisfaction in 5 years
Table A8.3a	Upper secondary or post-secondary non-tertiary	96%	98%	83%	87%	83%	86%
	Tertiary	96%	98%	92%	94%	92%	93%

The reference year is the year cited or the latest year for which data are available.

Refer to Annex 3 for notes and for more information on data presented in this key facts table (www.oecd.org/education/education-at-a-glance-19991487.htm).

1. OECD average includes some countries with 2015 data.

2. Data refer to ISCED-97 instead of ISCED-A 2011.

3. Educational attainment categories collected by Gallup World Poll may differ from ISCED-A 2011.

** Please refer to the source table for details on this data.



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