

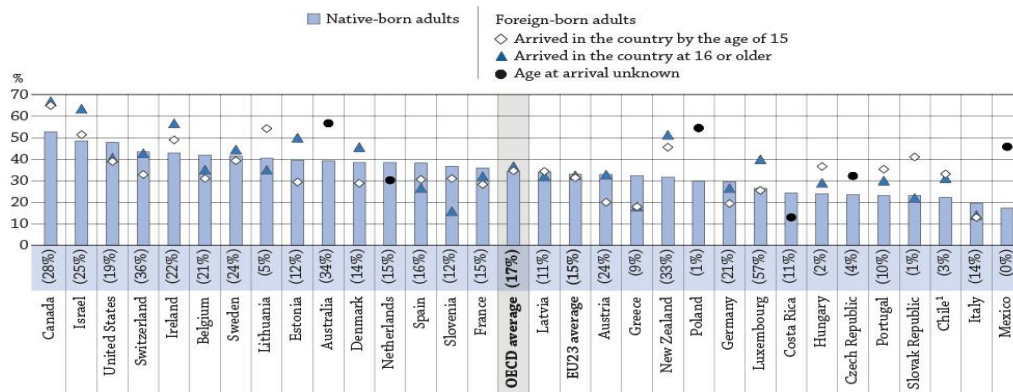
# EDUCATION AT A GLANCE 2018

*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.

## United States

- In 2017, 48% of 25-34 year-olds had attained tertiary education on average across the United States, but this varied from a high of 73% in the District of Columbia to a low of 30% in Nevada.
- In the United States, 40% of foreign-born adults and 48% of native-born adults had completed tertiary education in 2017. Whether foreign-born adults arrived in the United States before or after the age of 16 appeared to have less of an effect on their educational attainment compared to other countries.
- A larger share of students in the United States is expected to enter a short-cycle tertiary programme than on average across OECD countries. In contrast, few will pursue higher education beyond a bachelor's degree, although the rewards in the labour market are among the highest across OECD countries.
- On average, teachers in the United States earn less than 70% of the salaries of tertiary educated workers, among the lowest relative earnings across all OECD countries with data.
- The United States spends more on educational institutions than most OECD countries, and a significantly larger share of their expenditure is devoted to non-teaching staff. In the past five years, expenditure at primary, secondary and post-secondary non-tertiary levels has remained stable, while expenditure on tertiary education has increased.
- Participation in early childhood education and care remains low in the United States relative to other OECD countries, and has been stagnant since 2005.

Figure 1. Percentage of tertiary-educated native- and foreign-born 25-64 year-olds, by age at arrival in the country (2017)



Note: The percentage in parentheses represents the share of foreign-born adults among 25-64 year-olds.  
 1. Year of reference differs from 2017. Refer to the source table for more details.  
 Countries are ranked in descending order of the percentage of tertiary-educated native-born adults.  
 Source: OECD (2018), Table A1.3. See Source section for more information and Annex 3 for notes (<http://dx.doi.org/10.1787/eag-2018-36-en>).  
 StatLink <https://doi.org/10.1787/888933801696>

## Tertiary educational attainment varies more by state than by country of birth or by parents' educational attainment

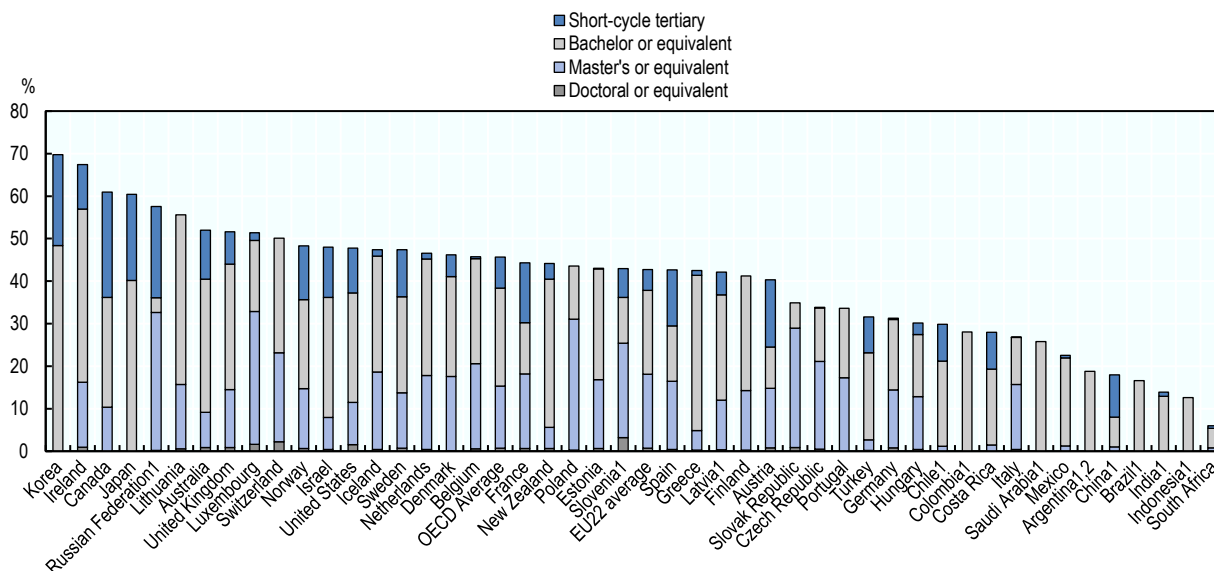
- Educational attainment remains relatively high in the United States: 91% of the adult population had attained at least upper secondary education in 2017 compared to 79% on average across OECD countries. However this ranges from 83% in California to a high of 94% in Hawaii. Variations in attainment at the subnational level generally increase after the end of compulsory education as students select alternate pathways for study or decide to enter the labour market. While 48% of 25-34 year-olds had attained tertiary education in 2017 on average in the United States, this varied from a high of 73% in the District of Columbia to a low of 30% in Nevada. This 43 percentage-point gap in tertiary attainment among young adults is the second highest across all countries with available data, after the Russian Federation.
- Although subnational variations in educational attainment are among the largest across countries with available data, there is substantially less variation in employment outcomes. The share of 15-29 year-olds who are neither in employment nor in education or training (NEET) varies from a high of 20% in Louisiana to a low of 9% in Minnesota, with an average of 14% across the United States. This 11 percentage-point gap is larger than the variation observed across some other countries with a similar NEET rate. For example, 13% of Ireland's youth are NEETs, but the difference between its two regions is 2.7 percentage points. On the other hand, 14% of Russian youth are also NEETs, but the variation between the highest and lowest regions is more than twice that observed in the United States.
- Foreign-born adults are less likely to have attained tertiary education than those born in the United States: 40% of foreign-born adults attained this level in 2017, compared to 48% of native-born adults. In contrast, across OECD countries, foreign-born adults are more likely to have attained tertiary education than native-born ones, although there is a significant variation across countries due to their very different immigration policies. Compared to other countries with data, there is little difference (only 2 percentage points) between the tertiary attainment levels of foreign-born adults who arrived in the United States by the age of 15 and those who arrived at age 16 or older (Figure 1). However 20-29 year-olds with an immigrant background tend to be under-represented among graduates from tertiary education: first- and second-generation immigrants make up 14% of 20-29 year-old first-time graduates, although they represent 23% of the total population of that age group.
- Parents' educational attainment also affects the likelihood of attaining tertiary education in the United States. Among adults with at least one tertiary-educated parent, 70% have attained tertiary education themselves. In contrast, only 44% of those with at least one parent with upper secondary or post-secondary non-tertiary education have attained tertiary education. Those without tertiary-educated parents tend to be more under-represented among tertiary graduates than those with an immigrant background. Although 49% of 20-29 year-olds in the United States do not have a tertiary-educated parent, they make up only 32% of tertiary graduates in that age group. Men without tertiary-educated parents tend to be more disadvantaged than their female counterparts.

## Few students will pursue tertiary education beyond a bachelor's degree although the rewards are high in the labour market

- In the United States, the share of 25-34 year-olds with a tertiary degree has increased by 7 percentage points since 2007, reaching 48% in 2017. This is above the OECD average of 44%, although the gap has narrowed since 2007, partly due to the already high levels of tertiary attainment among 25-34 year-olds in the United States. The most common tertiary qualification among young adults in the United States is a bachelor's degree, which was held by 26% of 25-34 year-olds in 2017, compared to 22% on average across OECD countries. Short-cycle tertiary degrees were also more common in the United States: 11% of 25-34 year-olds had attained this level, compared to 7% across OECD countries. However only 12% of young adults attained a higher level of education (master's or doctorate) compared to 15% on average across OECD countries (Figure 2).
- If current patterns of entry continue, 50% of young adults in the United States, excluding international students, will enter tertiary education for the first time, compared to 58% on average across OECD countries. Short-cycle

programmes continue to play an important role in the educational landscape of the United States, with entry rates at 37% in 2016, the third highest rate across OECD countries after Chile and Turkey, and close to three times the OECD average. However only 11% of adults are expected to enter a master’s degree for the first time, less than the average rate of 19% across OECD countries.

Figure 2. Percentage of 25-34 year-olds with tertiary education, by level of tertiary education (2017)



- The United States has a smaller variation in age at entry to tertiary education compared with other countries and 80% of all first-time new entrants will enter a tertiary programme before the age of 19, compared to an average entry age of 23 across OECD countries. Additionally, American students are more likely to enrol part time: 38% compared to 20% on average across OECD countries. High tuition fees and debt at graduation are all likely factors that encourage students to combine study and work: a bachelor’s student attending a public institution can expect to pay annual tuition fees of USD 8 200, the highest fee across OECD countries.<sup>1</sup>
- In 2016, the United States attracted 19% of all international and foreign tertiary students from OECD and partner countries. However, the United States attracts many more students from abroad than it sends itself. For each national student studying abroad, the United States receives 14 international or foreign students. This is the second highest ratio across OECD countries, after Australia, and much higher than the OECD average ratio of 3. The highest share of international tertiary students in the United States, about one in four, will enrol in the field of business, administration and law, a similar rate to the OECD average.
- In 2016, 20% of U.S. tertiary graduates completed a degree in arts and humanities, making it the most common field in the United States and almost double the OECD average. In contrast, only 7% completed a degree in engineering, manufacturing and construction, the second lowest share across all OECD countries and half the OECD average of 14%.
- Tertiary-educated adults in the United States have a greater employment advantage over those with only upper secondary or post-secondary non-tertiary education than on average across OECD countries. In the United States, 85% of tertiary-educated 25-34 year-olds are employed compared to 73% of those with upper secondary education representing an 11-percentage-point difference compared to 7 percentage points on average across OECD countries. Employment rates increase with higher tertiary attainment: in 2017, 78% of 25-64 year-olds with a short-cycle tertiary degree were employed, 82% of those with a bachelor’s or equivalent, 85% of those with a master’s or equivalent and 90% of those with a doctoral or equivalent degree. These employment rates are between 2 and 4 percentage points lower than the respective OECD averages.
- However the relative earnings advantage of a tertiary education compared to an upper secondary education is higher in the United States than on average across OECD countries, with the exception of adults with short-cycle

<sup>1</sup> Values reported in equivalent US dollars (USD) have been converted using purchasing power parities (PPPs) for GDP.

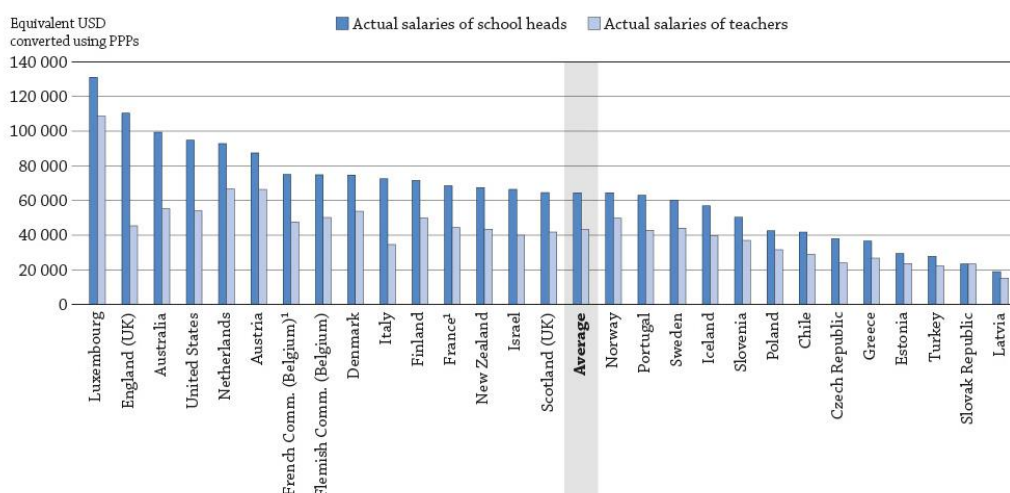
tertiary qualifications. A tertiary graduate in the United States earns 75% more than those with upper secondary education, compared to 55% on average across OECD countries. Those with a master’s or doctoral degree or equivalent have one of the highest earning premiums across OECD countries: 133% more compared to 91% on average across OECD countries.

## Teachers’ salaries are relatively low, but there are stronger financial incentives for school heads

- Teachers from pre-primary to secondary level are expected work about 2 000 hours a year in the United States, compared to approximately 1 600 hours on average across OECD countries. After Switzerland, this is the highest statutory working time across OECD countries and economies with available data. Around half of total working time is spent teaching. Teachers in the United States teach between 200 and 300 more hours a year than on average across OECD countries.
- Students in the United States are also expected to attend class for more hours per year than across OECD countries on average. A typical American student will attend school for a total of 8 884 hours to complete the 9 years of primary and lower secondary education, 1 364 hours more than the OECD average. However, this varies greatly across the different states from 6 480 hours in New Jersey to 11 340 hours in Texas. In contrast to the majority of countries where decisions on instruction time are made at the central level, instruction time is the responsibility of state and local authorities in the United States.
- In the United States, the statutory salaries<sup>2</sup> of teachers with the most prevalent qualifications are higher than on average across OECD countries. For example, the statutory starting salary of a teacher in the United States is USD 39 183 at the primary level, compared to USD 31 919 on average across OECD countries. The increase between starting salaries and salaries after 15 years of experience is also larger for primary teachers in the United States (USD 21 845) than on average across OECD countries (USD 12 361). Similar patterns hold true for lower and upper secondary education.

**Figure 3. Actual salaries of lower secondary teachers and school heads (2016)**

Annual actual salaries of teachers and school heads in public institutions, in equivalent USD converted using PPPs



1. Year of reference differs from 2016. See Table D3.4 for more information.

Countries and economies are ranked in descending order of actual salaries of school heads.

Source: OECD (2018), Table D3.4. See Source section for more information and Annex 3 for notes (<http://dx.doi.org/10.1787/eag-2018-36-en>).

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<sup>2</sup> The United States provided actual base salaries instead of statutory salaries.

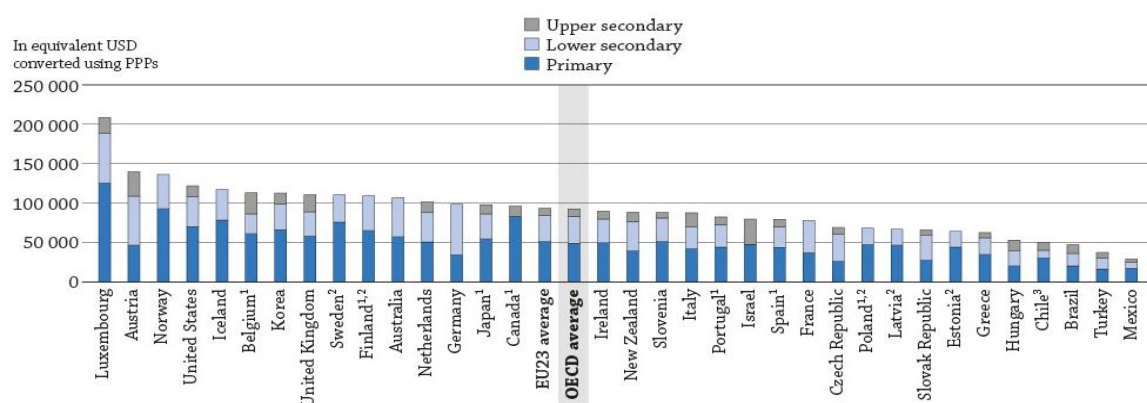
- In spite of higher than average statutory salaries compared to other OECD countries, teachers' actual salaries (including bonuses and allowances) remain below the average salaries of tertiary-educated full-time, full-year workers in the United States. Depending on the level of education taught, teachers' salaries are between 62% and 68% of the average salaries of tertiary-educated workers. These relative earnings are among the lowest across all OECD countries and economies.
- However teachers in the United States have strong financial incentives to become school leaders: their actual salaries as well are among the highest across OECD countries at all levels of education. At the lower secondary level for example, school heads in the United States earn USD 94 775 compared to USD 64 423 on average across OECD countries (Figure 3).

### The United States spends more on educational institutions than most countries, of which a larger share goes to non-teaching staff

- The United States spends one of the largest amounts across OECD countries on primary and secondary educational institutions per student. Total expenditure per student from the age of 6 up to the age of 15 reaches USD 121 917 in the United States, compared to USD 93 561 on average across OECD countries. About 58% of total spending is devoted to primary education, 31% to lower secondary and 11% to upper secondary (Figure 4).
- Between 2010 and 2015, total expenditure on primary, secondary and post-secondary non-tertiary educational institutions remained stable in spite of a 3% increase in the number of students. This has resulted in an equivalent decrease of spending per student of 3% at this level. In comparison, equivalent spending per student on average across OECD countries increased by 5%, driven by an increase in total expenditure.
- In the United States, 54% of total current expenditure on primary, secondary, and post-secondary non-tertiary education is spent on teacher compensation, compared to 63% on average across OECD countries. Furthermore, the United States spends 27% of its current expenditure on the compensation of non-teaching staff, more than any other country and almost double the OECD average of 15%.

**Figure 4. Cumulative expenditure per student on educational institutions between the age of 6 and 15 (2015)**

Annual expenditure on educational institutions per student multiplied by the theoretical duration of studies in equivalent USD converted using PPPs



Note: Cumulative expenditure per student on educational institutions is calculated using expected years in education.

1. Some levels of education are included with others. Refer to "x" code in Table C1.1 for details.

2. Includes one year of pre-primary education as part of core education.

3. Year of reference 2016.

Countries are ranked in descending order of the total expenditure on educational institutions per student over the theoretical duration of primary and secondary studies between the age of 6 and 15.

Source: OECD / UIS / Eurostat (2018), Table C1.6. See Source section for more information and Annex 3 for notes (<http://dx.doi.org/10.1787/eag-2018-36-en>).

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- At the tertiary level, total expenditure on educational institutions amounts to USD 30 003 per student, of which two-thirds are devoted to core educational services, more than twice the OECD average. Between 2005 and 2015, although the number of students enrolled remained constant, total expenditure on tertiary educational



institutions increased by 7%. In 2015, total spending on tertiary educational institutions amounted to 2.6% of gross domestic product (GDP) compared to 1.5% on average across OECD countries.

- Although primary to secondary educational institutions are primarily publicly funded, 65% of total investment in tertiary institutions is privately funded in the United States, one of the highest shares across OECD countries after Japan and the United Kingdom.

### Participation in early childhood education and care is still low and remains stagnant

- There is increasing awareness of the key role that early childhood education and care (ECEC) plays in children's well-being and cognitive, social and emotional development. However, only 38% of 3-year-olds and 67% of 4-year-olds in the United States were enrolled in an ECEC setting in 2016, compared to 76% and 88% on average across OECD countries.
- Between 2005 and 2016, enrolment rates of 3-5 year-olds have gradually increased from 75% to 85% on average across OECD countries. In the United States, however, they have remained fairly stable at 66%.
- Despite greater annual expenditure per child at the pre-primary level (USD 10 830) than on average across OECD countries (USD 8 426), total expenditure on pre-primary education in the United States amounts to 0.4% of GDP, lower than the average across OECD countries (0.6%).
- In the United States, 26% of total investment on pre-primary education is privately funded, compared to 17% on average across OECD countries. The U.S. share of private expenditure on pre-primary education has increased over the past decade from 21% in 2005, while the share of private expenditure on average across OECD countries at this level has fallen by 4 percentage points over the same time period.

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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.

#### Note regarding data from Israel

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.

Lithuania was not an OECD member at the time of preparation of Education at a Glance and is therefore not included in the zone aggregates mentioned in the publication. However this country note, produced at a later stage, includes updated figures for the OECD and EU averages including Lithuania and therefore may differ from the figures mentioned in Education at a Glance.

The Survey of Adult Skills is a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC).


#### References

OECD (2018), *Education at a Glance 2018: OECD Indicators*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/eag-2018-en>.

OECD/NCES (2018), *Education at a Glance Subnational Supplement*, OECD/National Center for Education Statistics, Paris and Washington, DC, <https://nces.ed.gov/surveys/annualreports/oecd/>

**For more information on Education at a Glance 2018** and to access the full set of Indicators, visit [www.oecd.org/education/education-at-a-glance-19991487.htm](http://www.oecd.org/education/education-at-a-glance-19991487.htm).

## United States - Country Note - Education at a Glance 2018: OECD Indicators

Updated data can be found on line at [OECD.Stat](#) as well as by following the [StatLinks](#)  under the tables and charts in the publication <http://dx.doi.org/10.1787/eag-data-en>.

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

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## Key Facts for the United States in Education at a Glance 2018

Source	Main topics in <i>Education at a Glance</i>	United States		OECD average	
	<b>Equity</b>				
	<b>Educational attainment of 25-34 year-olds by gender</b>	2017			
		% Men	% Women	% Men	% Women
Table A1.2	Below upper secondary	9%	7%	17%	14%
	Upper secondary or post-secondary non-tertiary	48%	41%	46%	37%
	Tertiary	43%	52%	38%	50%
	<b>Percentage of 15-29 year-olds NEETs by country of birth</b>	2017			
Table A2.3	Native-born	13%		13%	
	Foreign-born	19%		18%	
	<b>Employment rates of native- and foreign-born 25-64 year-olds, by educational attainment</b>	2017			
		Native-born	Foreign-born	Native-born	Foreign-born
Table A3.4	Below upper secondary	46%	66%	56%	60%
	Upper secondary or post-secondary non-tertiary	69%	74%	76%	72%
	Tertiary	83%	78%	87%	79%
	<b>Earnings of 25-64 women relative to men, by educational attainment</b>	2016			
Table A4.3	Below upper secondary	74%		78%	
	Upper secondary or post-secondary non-tertiary	73%		78%	
	Tertiary	70%		74%	
	<b>Share of girls among repeaters in secondary general programmes</b>	2016			
Table B1.3	Lower secondary	**		39%	
	Upper secondary	**		42%	
	<b>Percentage of women and men entering doctoral programmes by field of study</b>	2016			
		% Men	% Women	% Men	% Women
Table B4.1	Natural sciences, mathematics and statistics	36%	31%	22%	20%
	Engineering, manufacturing and construction	18%	6%	22%	10%
	Health and welfare	3%	11%	12%	19%
	<b>First-time tertiary graduates</b>	2016			
Table B5.1	Share of female first-time tertiary graduates	58%		57%	
	<b>Participation of 25-64 year-olds in formal and/or non-formal education</b>	2012 <sup>1</sup>			
Table A7.1	Participation of native-born adults and foreign-born adults who arrived in the country by the age of 25	60%		49%	
	Participation of foreign-born adults who arrived in the country at 26 or older	53%		48%	
	<b>Early childhood education and care (ECEC)</b>				
	<b>Enrolment rates in ECEC at age 3</b>	2016			
Table B2.1a	ECEC services (ISCED 0) and other registered ECEC services	38%		76%	
	<b>Share of children enrolled in pre-primary education (ISCED 02), by type of institution</b>	2016			
Table B2.2	Public institutions	59%		68%	
	Private institutions	41%		32%	
	<b>Expenditure on pre-primary level (ISCED 02)</b>	2015			
Table B2.3a	Annual expenditure per child in USD (converted to PPPs)	USD 10 830		USD 8 426	
	<b>Vocational education and training (VET)</b>				
	<b>Percentage of upper secondary students enrolled in vocational education, by programme orientation</b>	2016			
Table B1.3	All vocational programmes	**		44%	
	Combined school- and work-based programmes	**		11%	
	<b>Share of women among upper secondary graduates, by programme orientation</b>	2016			
Figure B3.1	General programmes	**		54%	
	Vocational programmes	**		46%	
	<b>Total expenditure on upper secondary educational institutions per full-time equivalent student, by programme orientation</b>	2015			
Table C1.1	General programmes	**		USD 8 981	
	Vocational programmes	**		USD 10 831	
	<b>Tertiary education</b>				
	<b>Share of international or foreign students, by education level<sup>2</sup></b>	2016			
Table B6.1	Bachelor's or equivalent	4%		4%	
	Master's or equivalent	10%		12%	
	Doctoral or equivalent	40%		26%	
	All tertiary levels of education	5%		6%	
	<b>Share of first-time tertiary graduates by education level</b>	2016			
Table B5.1	Short-cycle tertiary	41%		14%	
	Bachelor's or equivalent	59%		75%	
	Master's or equivalent	**		10%	
	<b>Employment rate of 25-64 year-olds, by educational attainment</b>	2017			
Table A3.1	Short-cycle tertiary	78%		81%	
	Bachelor's or equivalent	82%		84%	
	Master's or equivalent	85%		88%	
	Doctoral or equivalent	90%		92%	
	All tertiary levels of education	82%		85%	
	<b>Relative earnings of full-time full-year 25-64 year-old workers, by educational attainment (upper secondary education = 100)</b>	2016			
Table A4.1	Short-cycle tertiary	112		123	
	Bachelor's or equivalent	169		145	
	Master's, doctoral or equivalent	233		191	
	All tertiary levels of education	175		155	



## United States - Country Note - Education at a Glance 2018: OECD Indicators

Source	Main topics in <i>Education at a Glance</i>	United States		OECD average	
	<b>Financial resources invested in education</b>				
	<b>Total expenditure on educational institutions per full-time equivalent student, by level of education (in equivalent USD, using PPPs)</b>	<b>2015</b>			
Table C1.1	Primary	USD 11 727		USD 8 539	
	Secondary	USD 13 084		USD 9 868	
	Tertiary (excluding R&D activities)	USD 26 817		USD 11 049	
	<b>Total expenditure on primary to tertiary educational institutions</b>	<b>2015</b>			
Table C2.1	As a percentage of GDP	6.1%		5.0%	
	<b>Share of expenditure on tertiary educational institutions by source of funds<sup>3</sup></b>	<b>2015</b>			
Figure C3.1	Public expenditure	35%		73%	
	Private expenditure	62%		21%	
	Public to private transfers	3%		6%	
	<b>Total public expenditure on primary to tertiary education</b>	<b>2015</b>			
Table C4.1	As a percentage of total government expenditure	11.9%		11.1%	
	<b>Teachers, the learning environment and the organisation of schools</b>				
	<b>Actual salaries of teachers and school heads in public institutions relative to earnings of full-time, full-year workers with tertiary education</b>	<b>2016</b>			
		Teachers	School heads	Teachers	School heads
Table D3.2a	Pre-primary	0.62	1.09	0.82	**
	Primary	0.63	1.11	0.86	1.21
	Lower secondary (general programmes)	0.65	1.15	0.91	1.34
	Upper secondary (general programmes)	0.68	1.17	0.96	1.42
	<b>Annual statutory salaries of teachers in public institutions, based on most prevalent qualifications, at different points in teachers' careers (in equivalent USD, using PPPs)</b>	<b>2017</b>			
		Starting salary	Salary after 15 years of experience	Starting salary	Salary after 15 years of experience
Table D3.1a	Pre-primary	USD 38 635	USD 64 279	USD 30 229	USD 40 436
	Primary	USD 39 183	USD 61 028	USD 31 919	USD 44 281
	Lower secondary (general programmes)	USD 39 707	USD 63 046	USD 33 126	USD 46 007
	Upper secondary (general programmes)	USD 40 517	USD 63 006	USD 34 534	USD 47 869
	<b>Organisation of teachers' working time in public institutions over the school year</b>	<b>2017</b>			
		Net teaching time	Total statutory working time	Net teaching time	Total statutory working time
Table D4.1	Pre-primary	1 011 hours	1 980 hours	1 029 hours	1 628 hours
	Primary	1 004 hours	2 016 hours	778 hours	1 620 hours
	Lower secondary (general programmes)	966 hours	2 032 hours	701 hours	1 642 hours
	Upper secondary (general programmes)	966 hours	2 047 hours	655 hours	1 638 hours
	<b>Percentage of teachers who are 50 years old or over</b>	<b>2016</b>			
Table D5.1	Primary to upper secondary	30%		35%	
	<b>Share of female teachers, in public and private institutions</b>	<b>2016</b>			
Table D5.2	Primary	87%		83%	
	Lower secondary	67%		69%	
	Upper secondary	58%		60%	
	Tertiary	49%		43%	
	<b>Average class size by level of education</b>	<b>2016</b>			
Table D2.1	Primary	21		21	
	Lower secondary	26		23	

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

1. OECD average includes some countries with 2015 data.

2. For some countries, data on foreign students are provided instead of international students.

3. International expenditure is aggregated with public expenditure

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

Cut-off date for the data: 18 July 2018. Any updates on data can be found on line at <http://dx.doi.org/10.1787/eag-data-en>.



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