

## Trends in European education during the last decade

This *Statistics in Focus* presents characteristics of European education and training systems between 2000 and 2009, from when children start in school, until they leave as young adults. It emphasises major trends at each educational level in terms of enrolments, education expectancy, teacher characteristics and graduates.

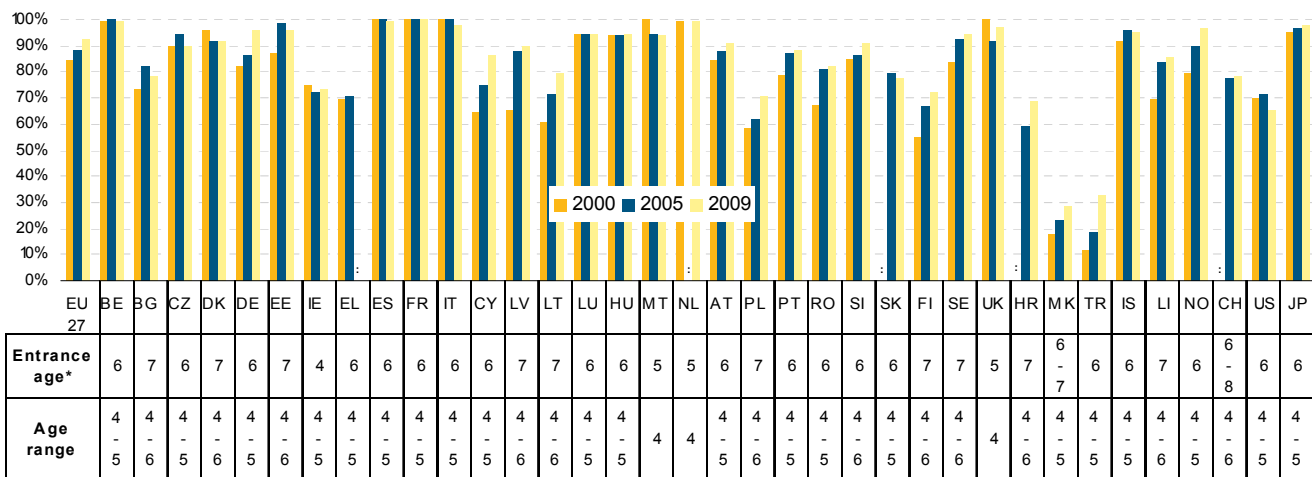
From 2000 to 2009 there was a significant rise in children attending pre-primary education and students could on average expect to stay

17 years in education. The number of students in compulsory education has fallen sharply in many countries, particularly in Eastern Europe.

There are relatively more men in vocational training whereas women dominate in tertiary education with notable subject specific exceptions. Students spend more time in tertiary education but there have also been sharp increases in the number of tertiary education graduates.

### Steady progress in participation of children in pre-primary education during the last decade

**Figure 1: % of children participating in early childhood education (pre-primary education), 2000, 2005 and 2009 (between the age of 4 and start of compulsory primary education)**



\* Entrance age to primary education

Source: Eurostat, Education statistics, UOE data collection ([educ\\_ipart](#))

In February 2011, a Communication from the European Commission<sup>1</sup> underlined the importance of an early entrance to the education system as a basis for establishing success in later school life and beyond.

The EU benchmark<sup>2</sup> on pre-school participation stipulates that by 2020 at least 95% of children between 4 years old and the starting age of compulsory education should participate in early childhood education. Over the last decade this

<sup>1</sup> [COM\(2011\)66](#)

<sup>2</sup> See *Education and Training 2020 benchmarks*: [Council conclusions of 12 May 2009](#)

percentage has risen steadily from 85.6% in 2000 to 92.5% in 2009 at EU level, fast approaching the benchmark target. In Belgium, Spain, France, Italy and the Netherlands, all children are enrolled at the age of 4 until the start of (compulsory) primary education while

Germany, Cyprus, Latvia, Lithuania, Austria, Poland, Portugal, Romania, Slovenia, Finland and Sweden have seen significant increases in participation over the period. In general in the EU Member states, high levels of children attending pre-primary education correspond with high employment rates of women.

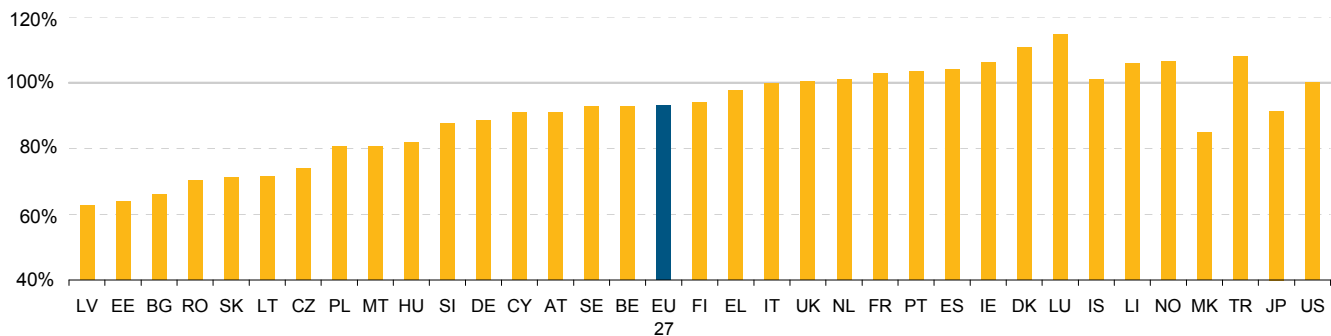
## Significant decline in the number of pupils in compulsory education in many Eastern European countries during the last decade

Overall the pupil population decreased by 7 percentage points between 2000 and 2009 at EU level within compulsory education (primary and lower secondary education (ISCED levels 1 and 2)). The EU weighted average masks big differences from one country to another, with reductions of between 37 and 26 percentage points in a number of Eastern European countries (Latvia, Estonia, Bulgaria, Romania, Slovakia, Lithuania and the Czech Republic). This reflects demographic trends in those

countries over the last decade caused by lower birth cohorts and/or migration patterns. The number of pupils in compulsory education also declined significantly in big countries such as Poland (-19.3 pp) and Germany (-11.4 pp).

The only countries with a significant increase in pupil population (more than 10 pp) are Luxembourg (+14.7) and Denmark (+10.7). The situation was fairly stable in Italy, the United Kingdom, the Netherlands, France, Portugal and Spain within the EU and in the US and Iceland outside the EU.

**Figure 2: Number of pupils in compulsory education (ISCED 1 and 2), 2009 (2000 = 100%)**



Source: Eurostat, Education statistics, UOE data collection ([educ\\_enr11t/](http://educ_enr11t/))

## The number of years a student stays in education has changed little over the last decade

On average, pupils in the EU could expect to stay slightly longer than 17 years in education in 2009; up from a little less than 17 years in 2000 (+3%). This covers some fairly wide differences across the EU Member States. Pupils in Malta, Bulgaria and Cyprus<sup>3</sup> spend less than 16 years in the education system on average, whereas Finnish students spend more than 20 years (followed by Belgium and Sweden with slightly less than 20 years). Moreover, the biggest increases in the numbers of years spent in

education over the period 2000 to 2009 can be found in Cyprus, Greece, Turkey and Portugal as well as in many of the new Member States from Eastern Europe.

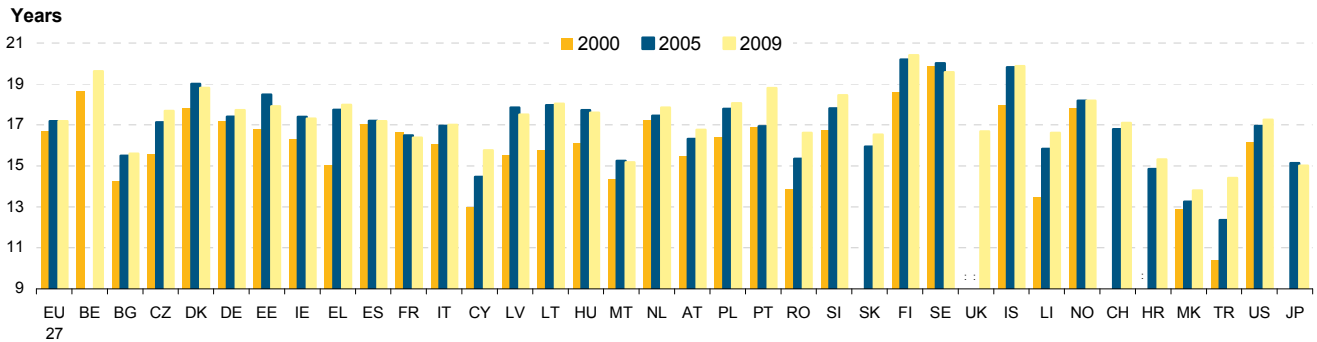
The number of years of school ‘expectancy’ is calculated by subtracting the age at which school begun (set at 5 years old) from the age at which students leave secondary or tertiary educational levels. The calculation includes adults who are participating in programmes similar to those of initial education. In some countries adults participating in lifelong education account for increasingly significant percentages. Hence, they also add to the number of years that a student is likely to spend in the education system.

<sup>3</sup> Many tertiary-level students from Malta and Cyprus study outside their home countries. They are not covered by the statistics of Malta and Cyprus; — and would in all likelihood add to school expectancy if included to show a national-based rather than a domestic-based indicator.

If the effect of adults participating in education in primary to post-secondary education levels is excluded (ISCED levels 1 to 4) then years of education expectancy is indeed reduced and becomes more similar between countries. This

shortens school expectancy by 3 years in Belgium, Finland and Sweden and by more than 2 years in Portugal in 2009. In most other countries the effect of excluding adults is less than a year.

**Figure 3: Expected years of education, 2000, 2005 and 2009**



Source: Eurostat, Education statistics, UOE data collection ([educ\\_igen](#))

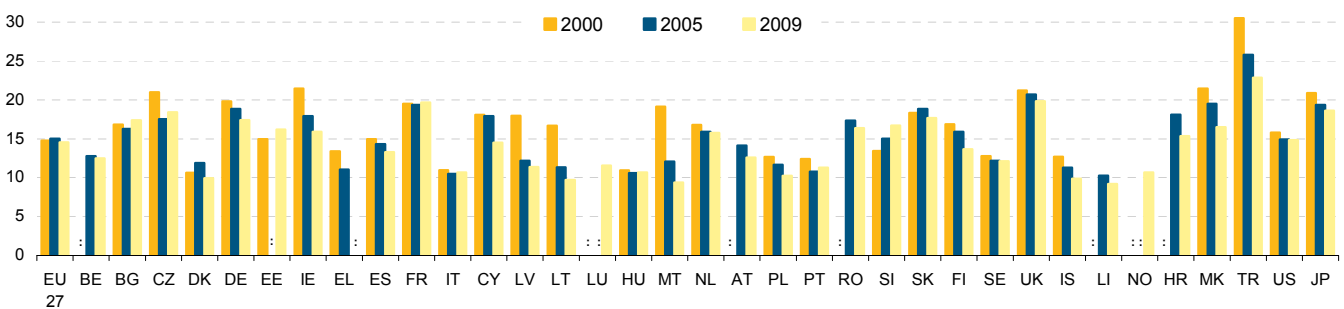
### Student/teacher ratios have fallen at both primary and upper secondary levels over the last decade; at primary level significantly

At primary level student/teacher ratios vary significantly between EU Member States; from around 20 pupils on average per teacher in France and the United Kingdom to around 10 pupils only per teacher in Malta, Lithuania, Denmark and Poland. The average ratio for all countries fell from around 16 pupils per teacher in 2000 to 14 in 2009.

At upper secondary level (general education

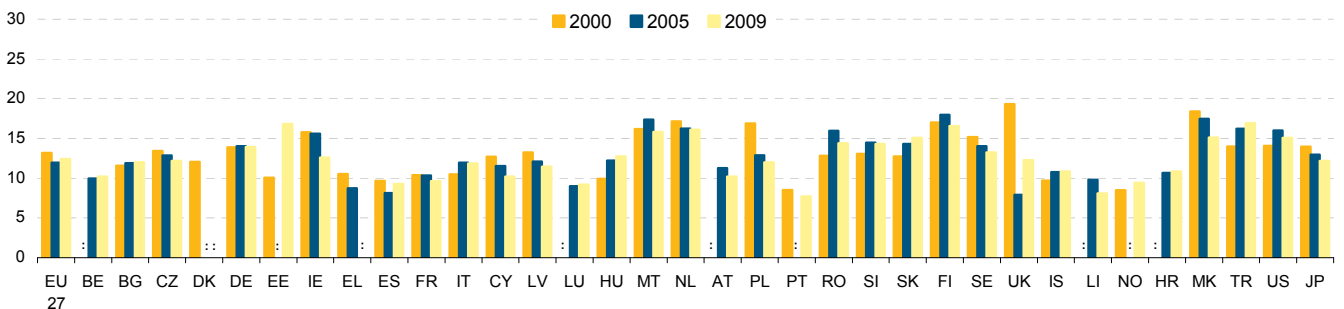
such as high school and vocational training leading to a labour market qualification), student/teacher ratios are slightly lower than at primary level (12.5 students per teacher in 2009), and the decrease has been less significant over the last decade. The variation in ratios between countries is also smaller than for primary education; ranging from 8 to 9 students per teacher in Portugal, Luxembourg and Spain to more than 16 in Estonia, the Netherlands and Finland.

**Figure 4: Student/teacher ratios in primary education**



Source: Eurostat, Education statistics, UOE data collection ([educ\\_iste](#))

**Figure 5: Student/teacher ratios in upper secondary education**



Source: Eurostat, Education statistics, UOE data collection ([educ\\_iste](#))

While this shows that countries have increased teacher resources in the school system, it does not necessarily mean that more teacher time is allocated to pupils (the correlation between the student/teacher ratio and class size is positive at 0.5). This also depends on other factors, such as

special needs education and the degree to which classes are specialised at upper secondary level. Class sizes also decreased during the last decade but by far less than student/teacher ratios (less than 1 percentage point).

### There are relatively more men in vocational training (upper secondary level), while there are more women in tertiary education

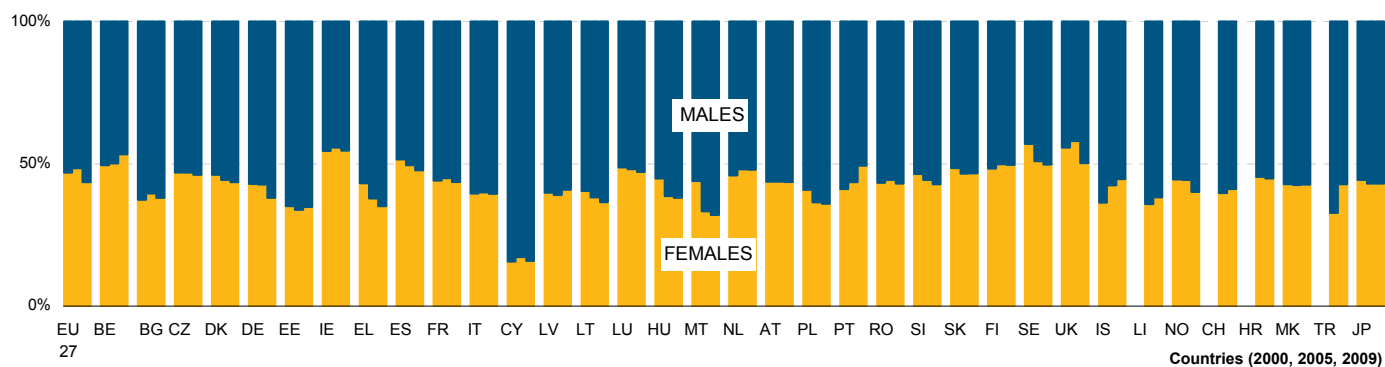
It is a well-known fact that relatively more women than men follow tertiary level programmes (universities, polytechnics etc.). The noteworthy exceptions are subject-related. However, as a general trend, over the last decade more women than men entered tertiary education. In 2000 53.7% of students were women; this percentage rose to 55.7% in 2009 for the EU27. The widest gap was in Latvia and Iceland (outside the EU) where nearly two-thirds of tertiary level students were women. On the other hand, the majority of students in Cyprus, plus Liechtenstein, Turkey and Japan (outside the EU), are men.

By contrast, there were relatively more men in initial vocational education and training (at

upper secondary level). These programmes focus on learning a trade or vocation which normally leads directly to a labour-market-relevant qualification (but can also lead to higher levels of (vocational) education). At EU level 56.5% of those in initial vocational training were men in 2009, up from 53% in 2000. In 2009 men were in the majority in all countries, except Ireland, Belgium and the United Kingdom.

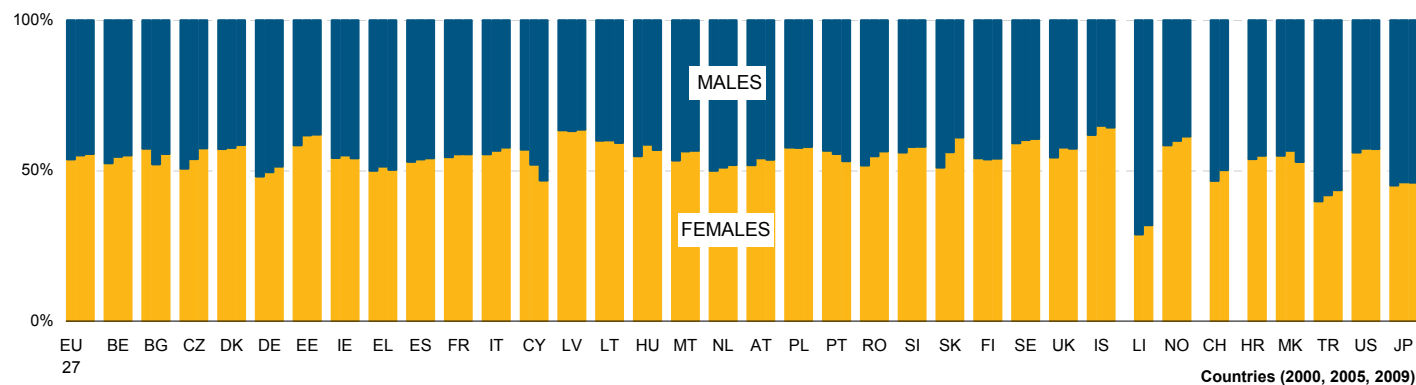
Likewise, at upper secondary level, relatively more women followed general programmes (high school, lycée etc.) giving access to tertiary-level education but normally not to a direct labour market qualification. In 2009 the female majority stood at 54.8%, down from 55.9% in 2000 at EU level and with the same levels in most EU Member states.

**Figure 6: Percentage of females/males in ISCED level 3 vocational and pre-vocational**



Source: Eurostat, Education statistics, UOE data collection ([educ\\_enr1at](#))

**Figure 7: Gender distribution in tertiary (first stage) education**



Source: Eurostat, Education statistics, UOE data collection ([educ\\_igen](#))

## Women dominated the teaching profession, particularly in primary education, but less so at lower and upper secondary education

Table 1	% of women teachers by level			% of teachers aged >50 teaching at	
	primary [S06_2]	lower secondary [S06_3]	upper secondary [S06_4]	primary [S04_4]	secondary [S05_4]
EU27	86.0 s	69.4 s	61.3 s	28.6 s	34.8 s
BE	80.6	61.3	60.2 i	20.8	33.0
BG	93.7	81.3	76.9	26.0	38.2
CZ	97.6	74.1	58.5 i	26.9	37.0 i
DK	68.6 i	:	:	37.6 i	:
DE	85.0	62.4	48.6	49.3	50.7
EE	93.5	81.1	73.7 i	32.4	45.9 i
IE	84.7	:	63.4 i	27.3	32.8 i
EL	:	:	:	:	:
ES	74.3	56.7	49.4	31.7	28.6
FR	82.6	63.9	59.8	21.6	33.0
IT	94.0	70.8	59.9	44.8	57.9
CY	82.6	69.5	58.4	3.1	20.7
LV	93.0	84.2	80.0	31.1	42.2
LT	96.7	81.4 i	:	31.6	37.8
LU	73.6	53.4 i	47.2 i	23.2	26.9
HU	96.1	78.5	64.8	25.5	30.9
MT	88.7	65.9	39.6	22.8	19.2
NL	84.4 i	:	47.7 i	34.7 i	45.7 i
AT	89.6	69.6	52.5	36.2	40.3
PL	83.7	74.2	66.6	13.4	21.3
PT	79.6	71.1	67.7	27.4	20.9
RO	85.9	68.3	66.5	31.9	32.3
SI	97.5	78.8	65.4	18.2	28.1
SK	89.2	78.0	71.5	25.5	36.9
FI	78.5	71.4	58.2 i	27.7	37.3 i
SE	81.6	66.9	51.7	48.1	41.1
UK	80.8	62.6	63.4 i	25.6	30.4 i
IS	80.3 i	:	53.9 i	31.4 i	47.3 i
LI	75.6	53.7	37.0	28.7	24.5
NO	73.9	73.9	49.1 i	35.7	43.2 i
CH	81.1 i	51.7 i	42.9 i	33.7 i	35.7 i
HR	:	:	:	:	:
MK	77.5	53.3	57.8 i	25.8	30.2 i
TR	50.4	-	41.5	:	:
US	86.7	65.6	56.4	32.4	33.6
JP	:	:	:	:	:

Flags: (i) See additional information in the country-specific notes at the end of the SiF. (s) Value estimated by Eurostat

Source: Eurostat, Education statistics, UOE data collection ([educ\\_iteach](#))

At primary level the share of female teachers was above 90% in many new Member States (Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Hungary and Slovenia) as well as in Italy. Within the EU and the EEA, as well as the EU candidate countries, women teachers were always in the majority in primary education, although the distribution was nearly equal in Turkey, and less unbalanced (<80% females) in Denmark, Spain, Luxembourg, Portugal and Finland (table 1).

At upper secondary level this pattern was less pronounced, with a few countries employing a majority of male teachers (Germany, Spain, Luxembourg, Malta and the Netherlands within the EU). However, overall there was also a significant majority of women teachers at upper secondary level, particularly in Latvia, Bulgaria, Estonia and Slovakia.

The proportion of female teachers at upper secondary level has increased in most countries since 2000 and significantly in countries such as the Czech Republic, Luxembourg, Hungary and the Netherlands as well as in the former Yugoslav Republic of Macedonia outside the EU (from 9% to 13%).

The increase was relatively more pronounced in the period from 2000 to 2005, with many countries experiencing a more stable situation since 2005.

### The share of teachers above the age of 50 is high in many EU Member States, although it varies significantly by level and between countries

For some years EU countries have been concerned about an ageing workforce and, in this context, the large numbers of older teachers who will need to be replaced over the next decade.

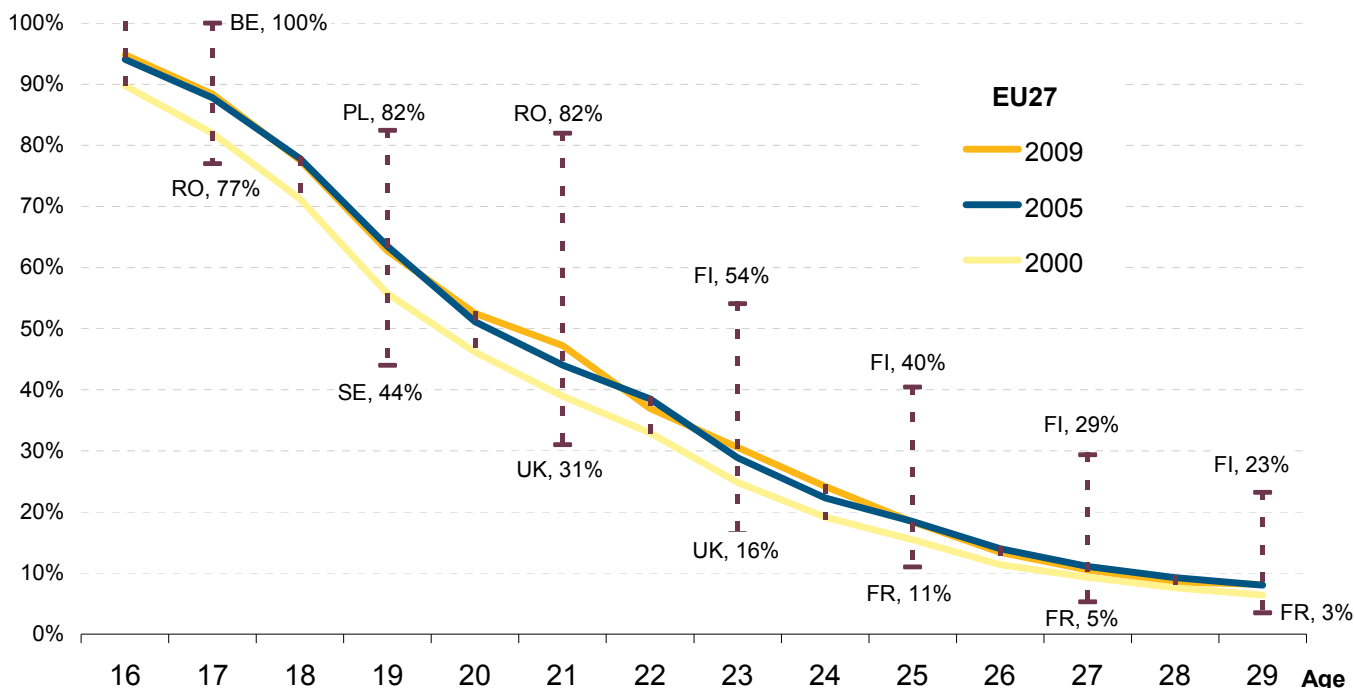
The share of teachers aged over 50 is, in general, higher in secondary education (ISCED levels 2 and 3) than in primary education (34.8% and 28.6% at EU27 level). This share is high at both levels in Germany and Italy. In 2009 half of the teachers in Germany were more than 50 years old.

The share of teachers in this age group is lower in other EU Member States and the age distributions among teachers across all ages are more equal in Malta, Poland and Portugal.

The relative number of older teachers rose in most countries during the period 2000 to 2009, although the rise was higher during the first part of the period (until 2005), stabilising during the later part of the period. During the period 2005 to 2009 the proportion of older teachers rose significantly only in Bulgaria, Latvia and Austria (between 9 and 14 percentage points.)

16 to 17 years old are nearly all in education but the proportion of young people in education drops sharply thereafter to reach an EU average of 10% still in education at the age of 29

**Figure 8: Shares of student population (% per age)**



Note: For the ages 17, 19, 21, 23, 25, 27 and 29, the countries with the minimum and maximum shares are indicated (LU and MT not considered)

Source: Eurostat, Education statistics, UOE data collection ([educ\\_enr11t/](http://educ_enr11t/))

It has already been shown that, on average in the EU, students did not stay much longer in education in 2009 than they did in 2000. However, figure 8 shows that at EU level larger shares of the population were students between the ages of 16 to 29 in 2005 and 2009 compared with 2000. Generally, at ages 16 to 19 the majority of young people are still in the education system, although this drops sharply between ages 16-17 (around 90%) to 19 (around 60%). This drop corresponds to the time at which compulsory education stops. At the age of 20 around half of the population is still in

education. This falls to around 25% at the age of 24. The curve flattens between 25 and 29, when the percentage in education decreases from around 20% to 10%.

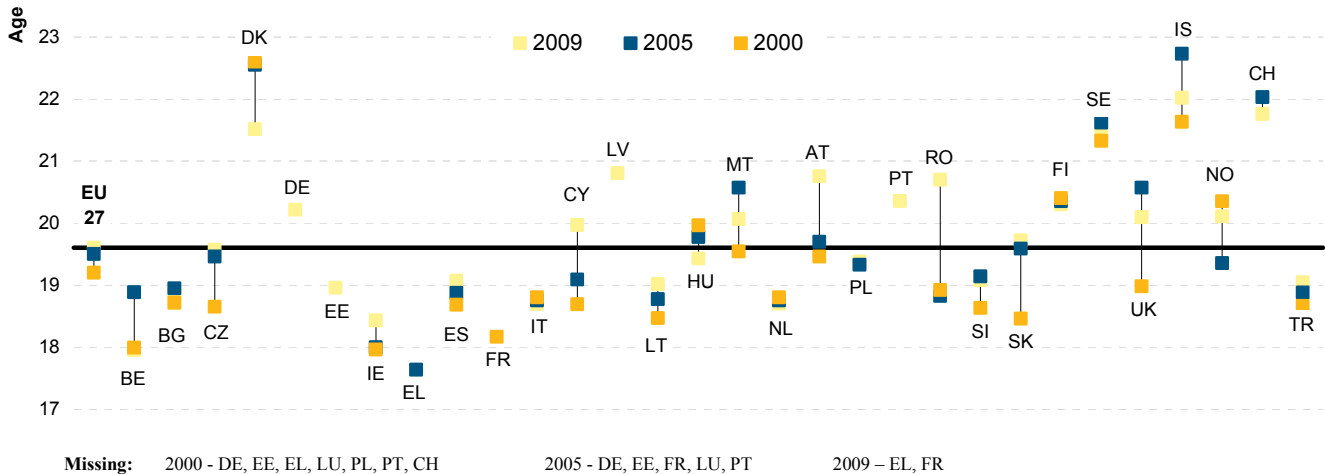
This general development in EU Member States is comparable to that in the US, but masks fairly big country differences. For example, a significant part of the population in the Nordic countries (around 20%) are still in education in their late 20s (Denmark, Finland, Sweden and Iceland), whereas in France and Poland this is the case for 5% or less of the population.

### The age of entry into tertiary education only increased very slightly over the period 2000 to 2009 to around 19 and half years old

The stability of the age at which young people enter tertiary education masks country differences. Students are comparatively older (more than 21) in Denmark, Sweden, Iceland and Switzerland compared with 18 in Belgium, the

Netherlands and Bulgaria. There is a fairly strong correlation between late age of entry to tertiary education and a higher share of the population staying in education in their late 20s.

**Figure 9: Entrance age to tertiary education**



Since 2000, the median age for entering tertiary education has increased by 1 or more years in the Czech Republic, Cyprus, Austria, Romania, Slovakia and the United Kingdom.

It has not fallen significantly in any country except Denmark (by more than 1 year to 21.5 years old). However, Denmark also had the oldest entrance age (22.5) in the year 2000.

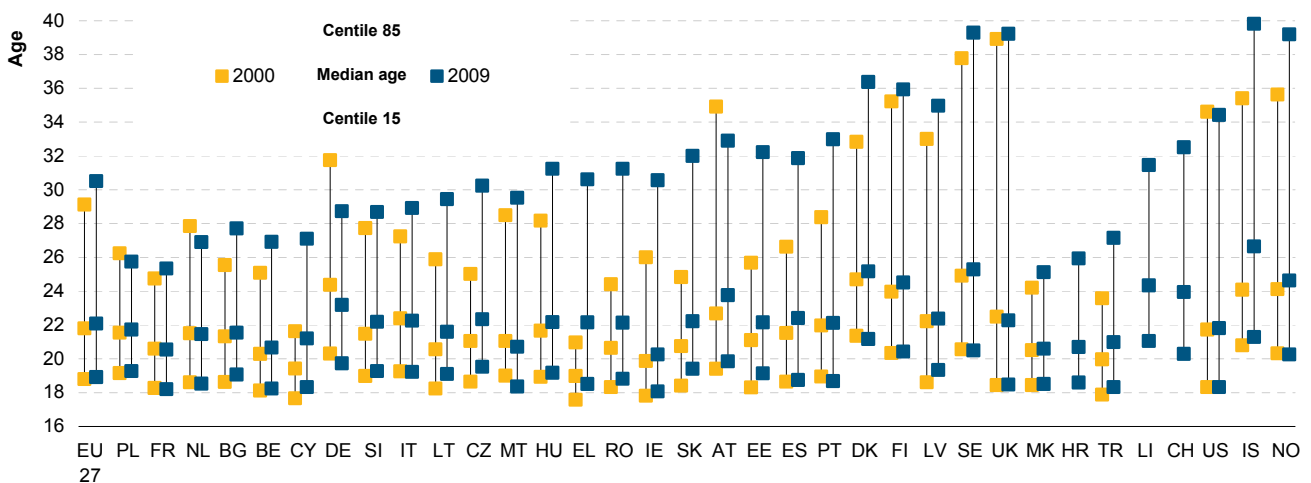
**Students in tertiary education were relatively older in 2009 than in 2000, although the age for starting tertiary education is fairly stable. This shows that students stay in tertiary education longer**

The age distribution of students changed over the decade 2000 to 2009 towards accommodating older students in education systems across Europe (except for Denmark).

In 2009, the 85th centile point in the student age distribution was over 30 years old at EU level and close to 40 years old in two Member States (Sweden and the United Kingdom) and also in Iceland and Norway. This may also reflect lifelong learning patterns in those countries.

In both 2000 and 2009, the 15<sup>th</sup> centile of age for students was nearly 19 years old showing that generally speaking the entrance age to tertiary education is relatively stable.

**Figure 10: Age distribution in tertiary education**



Source: Eurostat, Education statistics, UOE data collection ([educ\\_iterp](#))



## Large increase in student numbers graduating in maths, science or engineering exceeded the EU benchmark well before 2010

In the EU, attention was focused on the numbers of students graduating in maths, science or technology (MST) subjects during the decade 2000 to 2009. The benchmark aim was to increase the total number of MST graduates by at least 15% by 2010, while at the same time lowering the gender imbalance.

Overall numbers in the EU had already increased by more than 15% early on in the decade (2003). At 39.7% the 2000-2009 growth was more than double the original benchmark (see table 2). There were particularly high percentage changes in Romania and Slovakia. However, one reason for the increasing number of MST graduates may also be the structural reforms implemented in many European countries under the Bologna process for the European Higher Education Area during the period. The Bologna process has introduced bachelor and master cycles in tertiary education and, all other things being equal, this is resulting in shorter degree structures and therefore more graduates per reference period. Today most European higher education systems offer first a bachelor degree (normally three to four years long) followed by a masters degree (1 to 2 years) instead of one long first degree

leading directly to a master degree.

In fact, the growth in MST graduates between 2000 and 2009 was relatively low, both at EU level and in most countries, compared with other fields of study such as services, health and social sciences, business and law, where growth rates in the same period ranged from over 65% to close to 100% at EU level. At more than 50%, the average percentage change for all fields of study from 2000 to 2009 was substantially higher than the MST growth rate.

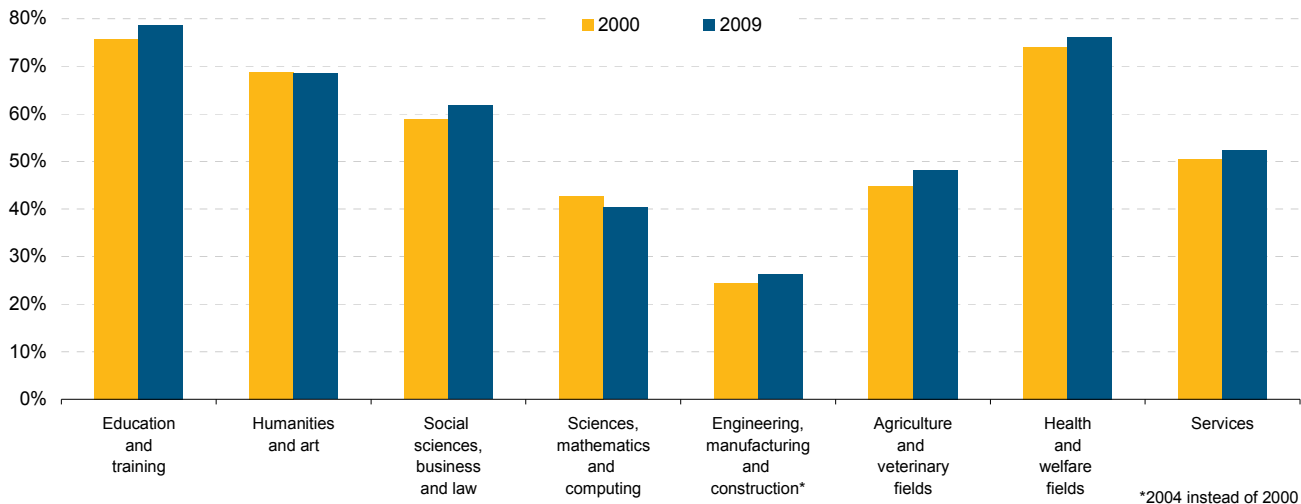
In 2009 around one third of graduates at tertiary level graduated in subjects such as social science (economics, political science and psychology), business studies and law (table 2). Health and welfare (for example medicine, pharmacy and nursing) was the second biggest group with more than 15% of graduates. Four groups account for around 10% of graduates each (engineering, humanities, education and science/maths). At tertiary level there are not many graduates in agriculture/veterinary or service subjects; the former reflects the overall importance of these subjects in terms of employment, whereas the latter reflects the fact that service subjects are mainly studied at lower education levels (upper secondary and post-secondary education (ISCED level 3 and 4)).

## The share of women studying maths, science and technology subjects have remained stable over the last decade, although the overall share of women in tertiary education has risen

In contrast to the development described in the previous section, the MST gender imbalance was not reduced during the decade 2000-2009. Less than one third of MST graduates were women in 2000 and this was still the case in 2009.

Moreover, the country deviation is relatively small. This means there have not been any real success stories in improving the MST graduate rate of women across Europe (see table 2).

**Figure 11: Female graduates by field of study, EU27**



Source: Eurostat, Education statistics, UOE data collection ([educ\\_itec](http://educ_itec))



Table 2	% of graduates by field								% of women graduating in Mathematics, Science and Technology* fields	Percentage change in MST fields 2000-2009*
	Education and Training [TC02_1]	Humanities and Art [TC02_2]	Social Science, Business and Law [TC02_3]	Science, Mathematics and Computing [TC02_4]	Engineering, Manufacturing and Construction [TC02_5]	Agriculture and Veterinary [TC02_6]	Health and Welfare [TC02_7]	Services [TC02_8]		
EU27	9.5 i	11.6 i	35.6 i	9.2 i	12.9 i	1.7 i	15.4 i	4.2 i	32.1 i	39.7
BE	13.5 i	11.5 i	32.5 i	5.8 i	11.1 i	2.7 i	21.3 i	1.5 i	27.2	25.1
BG	6.4	6.5	52.1	3.9	14.9	1.7	6.8	7.7	37.4	34.5
CZ	15.0	7.0	34.9	9.8	15.0	3.7	9.7	4.8	31.0	144.5
DK	7.5	14.4	28.6	7.6	12.0	2.1	24.9	2.9	36.5	13.5
DE	9.4	16.5	22.5	12.5	12.3	1.6	22.5	2.9	31.2	66.8
EE	8.1	11.4	38.9	8.9	10.5	2.1	11.0	9.2	39.8	50.1
IE	10.7	16.6	31.4	11.0	10.9	1.1	13.7	4.6	30.7	-13.6
EL	:	:	:	:	:	:	:	:	:	:
ES	13.4	9.0	26.4	9.0	16.6	1.7	15.9	8.0	30.4	20.7
FR	1.5	10.3	41.6	10.6	15.6	1.5	14.9	4.0	28.5	6.2
IT	6.1 i	16.8 i	34.4 i	7.1 i	15.2 i	1.9 i	15.5 i	3.0 i	38.4 i	:
CY	11.4	9.2	50.6	8.2	5.5	0.1	5.6	9.4	37.0	84.2
LV	11.1	7.6	53.2	4.9	8.4	0.9	7.8	6.1	31.8	42.1
LT	12.7	7.5	43.7	5.1	16.0	1.9	9.8	3.3	30.3	43.1
LU	:	:	:	:	:	:	:	:	:	:
HU	13.0	11.7	40.5	6.3	8.5	2.0	9.6	8.5	28.7	42.7
MT	12.8	16.1	40.6	9.4	5.6	0.8	13.3	1.2	30.6	130.1
NL	13.7	9.0	37.5	6.2	7.8	1.3	18.9	5.5	19.8	42.4
AT	13.3	9.1	33.4	10.6	18.1	1.6	10.1	3.9	24.1	100.3
PL	16.1	8.2	43.6	6.8	8.8	1.7	9.0	5.7	38.2	129.4
PT	6.2	8.3	29.4	7.0	19.6	1.9	21.2	6.5	36.3	102.0
RO	1.8	7.7	53.4	4.4	17.3	2.0	10.0	3.4	36.3	294.7
SI	7.8	6.2	48.1	4.4	13.4	2.5	7.5	10.0	25.3	23.6
SK	16.3	6.3	31.7	7.6	13.0	2.3	17.3	5.6	35.1	228.8
FI	6.4	14.1	23.9	7.6	20.6	2.0	19.8	5.6	29.1	25.3
SE	15.5	6.3	24.0	7.3	16.9	1.2	25.9	2.9	32.6	14.4
UK	11.0	16.2	30.9	12.8	9.1	0.9	17.8	1.3	30.9	4.2
IS	20.6	11.1	39.8	6.5	8.0	0.4	12.1	1.5	36.7	42.7
LI	-	0.5	78.3	-	14.6	-	6.6	-	25.8	:
NO	17.4	8.7	28.6	7.2	8.0	1.0	24.5	4.5	30.1	11.7
CH	9.9	7.9	37.3	8.6	13.0	1.7	14.8	6.7	19.6	:
HR	4.5	11.1	40.0	9.3	15.1	2.8	6.7	10.4	34.1	:
MK	11.9	13.1	34.3	12.7	8.8	2.4	10.0	6.8	41.7	96.2
TR	14.6	7.2	40.7	7.9	13.1	5.6	5.8	5.1	30.2	79.0
US	10.5	12.9	38.1	8.3	7.0	1.0	15.2	6.9	30.9	19.6
JP	7.4	16.0	28.3	3.3	18.7	2.6	13.9	9.9	14.1	-11.9

Flags: (i) See additional information in the country-specific notes at the end of the SiF.

(\*) See additional information in the methodology notes at the end of the SiF

Source: Eurostat, Education statistics, UOE data collection ([educ\\_itterc](#))

The share of female graduates rose slightly in most fields of education at tertiary level during the last decade, at EU level and in most countries, although the picture is more stable for humanities and arts, falling slightly for sciences, mathematics and computing at EU level (see figure 11).

In 2009 women accounted for more than 75% of graduates in education and training, around 75% in health and welfare, 70% in humanities and

arts, and 60% in social sciences, business and law. In Romania, Estonia, and Italy (within the EU) and Croatia (outside the EU) more than 90% of graduates in education and training were women (mainly becoming teachers). On the other hand, men accounted for more than 80% of graduates in engineering, manufacturing and construction in Germany, Ireland, the Netherlands and Austria (within the EU) and in Switzerland, the US and Japan (outside the EU).

## METHODOLOGY

### **Data source used in this edition of Statistics in Focus:**

The UOE collection on education and training systems is part of the EU Statistics on education and lifelong learning, <http://epp.eurostat.ec.europa.eu/portal/page/portal/education/introduction>.

**The UOE collection** (UOE = UIS-UNESCO, OECD and Eurostat), mainly uses existing administrative data sources at national level, where available. Data in this publication are for the 2008/09 school year (reference year 2009) and covers for the EU Member States a total of 107.6 million students: approximately 28.1 million pupils at ISCED level 1, 22.1 million at ISCED level 2, 10.9 million at ISCED level 3 for general education and 10.8 million for vocational training. There are 1.5 million students at ISCED level 4, and 19.5 million at tertiary educational level. Further information about the UOE can be found via the following link:

[http://circa.europa.eu/Public/irc/dsis/edtc/library?l=/public/unesco\\_collection&vm=detailed&sb=Title](http://circa.europa.eu/Public/irc/dsis/edtc/library?l=/public/unesco_collection&vm=detailed&sb=Title).

**ISCED levels and fields of education:** Data are classified in accordance with the International Standard Classification of Education (ISCED), 1997 version. Further information is available on the UNESCO Institute for Statistics website: <http://www.uis.unesco.org/DOCUMENTS/Classifications & Manuals/ISCED97>.

**ISCED level 0: Pre-primary education** — Preceding primary education, not compulsory in most countries. Data refer to education-oriented programmes that recruit staff with specialised qualifications in education.

**ISCED level 1: Primary education** — Depending on the country, it begins between 4 and 7 years of age and generally lasts five to six years. Programmes are designed to give pupils a sound basic education in reading, writing and mathematics along with an elementary understanding of other subjects.

**ISCED level 2: Lower secondary education** — is part of compulsory schooling in all countries analysed. Programmes are typically more subject-focused. Usually, the end of this level coincides with the end of full-time compulsory education.

**ISCED level 3: Upper secondary education** — Typically starts at 15 or 16 years, at the end of full-time compulsory education. Instruction is even more subject-oriented and teachers often need to be more qualified than those at ISCED level 2. Many programmes open up access to tertiary education (ISCED level 5).

**Programme orientation.** Programmes at level 3 can be subdivided into two categories based on their main orientation:

- **general:** covers education that is not designed explicitly to prepare participants for a specific class of occupation or trade or for entry into further vocational or technical educational programmes. The programmes give access to higher levels of education.

- **vocational:** covers education that prepares participants for direct entry, without further training, into specific occupations. Successful completion of such programmes leads to a labour-market relevant vocational qualification.

Pre-vocational programmes are mainly designed to introduce participants to the world of work and prepare them for entry into further vocational or technical education programmes. Student numbers in pre-vocational training are very low. In 2000 this group was aggregated with general education whereas in 2009 it was aggregated with the vocational stream.

**ISCED level 4: Post-secondary non-tertiary education** — These programmes straddle the boundary between upper secondary and tertiary education from an international point of view. They serve to broaden the knowledge of ISCED 3 graduates. Typical examples are programmes designed to prepare students for studies at level 5, while other programmes prepare students for direct entry into the labour market.

**ISCED level 5: First stage of tertiary education** (not leading directly to an advanced research qualification), covering programmes of at least two years' duration.

**ISCED level 6:** Second stage of tertiary education, covering programmes leading to an advanced research qualification (e.g. PhD or Doctorate); devoted to advanced study and original research and not based on course-work only.

**Mathematics, Science and Technology** covers science, mathematics and computing (EF400) and engineering, manufacturing and construction (EF500).

**EU27:** calculated as a weighted average of available country data

### **Abbreviations and symbols**

EU: available EU Member States; BE: Belgium; BG: Bulgaria; CZ: Czech Republic; DK: Denmark; DE: Germany; EE: Estonia; IE: Ireland; EL: Greece; ES: Spain; FR: France; IT: Italy; CY: Cyprus; LV: Latvia; LT: Lithuania; LU: Luxembourg; HU: Hungary; MT: Malta; NL: Netherlands; AT: Austria; PL: Poland; PT: Portugal; RO: Romania; SI: Slovenia; SK: Slovakia; FI: Finland; SE: Sweden; UK: United Kingdom.

Other countries: IS: Iceland; NO: Norway; LI: Liechtenstein; CH: Switzerland; HR: Croatia; MK: the former Yugoslav Republic of Macedonia; TR: Turkey; JP: Japan; US: United States of America

## Country specific notes

Last update of demographic population on 17-FEB-2011

BE Data exclude student in private independent institutions and the German Speaking Community.

CY 2 years compulsory military service for men aged 18-20 (e. g. not in education).

### PUPILS AND STUDENTS

	EU27	2009	EL data 2008
	BG	2005	Inclusion of part-time private vocational training programmes at ISCED level 2, 3 and 4.
	DE	2009, 2005, 2000	Data exclude ISCED level 6
Figure 3	LU	2005, 2000	ISCED 5 and 6 not included: data by age is missing.
	RO, SI	2000	Data exclude ISCED level 6
	UK	2005, 2000	All students at further education colleges included regardless of the length of the course taken.
	MK		Data exclude ISCED 5A second degrees and ISCED 6

### STUDENT-TEACHER RATIOS

	IT	2005	Changes in the coverage / only public sector
Figure 4 and 5	PT	2000	Estimated value. Data on full time equivalent teachers not available. All teachers are included in the denominator.
	LI	2009, 2005	Public institutions only
	NO	2009, 2000	Public sector only
Figure 4	DK	2009, 2005	ISCED 2 is included in ISCED 1
	NL	2009, 2005, 2000	ISCED 1 includes ISCED 0
	IS	2009, 2005, 2000	ISCED 2 is included in ISCED 1
	NO	2000	ISCED 1 is included in ISCED 2
	BE	2009, 2005	ISCED 3 includes ISCED 4
	CZ	2009	ISCED 3 includes ISCED 4 and ISCED 5B.
	EE	2009	ISCED 3 includes vocational programmes at ISCED 2 and 4
	IE, NL	2009, 2005, 2000	ISCED 3 includes ISCED 2 and 4
	EL	2005	Change in coverage
	ES	2005	Data include for the first time students in ISCED 3C short(+ 5,9%)
	ES, UK	2000	ISCED 3 includes ISCED 4
	CY	2000	ISCED 3 includes ISCED 2
			Public sector only
Figure 5	LU	2005	ISCED 2 is included in ISCED 3
		2009	Data on teachers include school level management personnel
	PT	2009, 2000	ISCED 4 is included in ISCED 3 (and in ISCED 5 in 2009)
		2005, 2000	ISCED 3 includes ISCED 4 and 5 vocational and technical programmes
	FI	2005	Improved coverage of ISCED 3 and 4 vocational programmes (14% increase in ISCED 3 and 11% increase in ISCED 4).
	FI, NO	2009	ISCED 3 includes ISCED 4
	UK	2009	ISCED 3 includes ISCED 4 (except General Private dependent Programs)
	MK	2009, 2005, 2000	ISCED 3 teachers include ISCED 4
	IS	2009	ISCED 4 is partly included in ISCED 3
		2005, 2000	Teachers at ISCED 4 are partly included in ISCED 3
	NO	2000	Teachers in ISCED 4 are included in ISCED3.

### TEACHERS AND STAFF

	EU27	[S04_4, S05_4, S06_2:S06_4]	Estimated
	BE	[S06_4]	ISCED 3 includes ISCED 4
	CZ	[S05_4, S06_4]	ISCED 3 includes ISCED 4 and ISCED 5B.
	DK, IS	[S04_4, S05_4, S06_2, S06_3]	ISCED 2 is included in ISCED 1
	EE	[S06_4]	ISCED 3 includes vocational programmes at ISCED 2 and 4
	EE	[S05_4]	Includes ISCED level 4
Table 1	IE, NL	[S05_4]	ISCED 3 includes ISCED 4
	IE, NL	[S06_4]	ISCED 3 includes ISCED 2 and 4
	LT	[S06_3]	ISCED 3 is included in ISCED 2
	LU	[S06_3]	Includes teachers from ISCED 3 independent private institutions
	LU	[S06_4]	Includes teachers from ISCED 2 government dependent private institutions
	NL	[S04_4, S06_2]	ISCED 1 includes ISCED 0
	FI, NO, UK, MK	[S05_4, S06_4]	ISCED 3 includes ISCED 4
	IS	[S05_4, S06_4]	ISCED 4 is partly included in ISCED 3
	CH	[S04_4, S05_4, S06_2:S06_4]	Public institutions only. Data exclude special education programmes

### TERTIARY EDUCATION ENTRANTS

Figure 9	BE, FR, IT, RO	2000	Data refer to 2001
	DE	2005, 2000	Data on entrants to ISCED 5B by age are missing.

### TERTIARY EDUCATION PARTICIPATION

	EU27	2009	EL data 2008
	DE	2009, 2000	
Figure 10	RO	2000	Data exclude ISCED level 6
	SI	2000	
	DE	2005	Changes in coverage at ISCED 5A
	MK	2000	Data exclude ISCED 5A second degrees and ISCED 6

### TERTIARY EDUCATION GRADUATES

Table 2	EU27	2009	EL data 2008
	IT		Data exclude ISCED 5A second degrees and ISCED 6

## Further information

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Eurostat Website: <http://ec.europa.eu/eurostat>

Data on 'Education and training statistics'

<http://epp.eurostat.ec.europa.eu/portal/page/portal/education/data/database>

Further information about 'Education and training statistics'

<http://epp.eurostat.ec.europa.eu/portal/page/portal/education/introduction>

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### European Statistical Data Support:

With the members of the 'European statistical system', Eurostat has set up a network of support centres in nearly every Member State and in some EFTA countries.

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