

# Vocational education and training statistics

Statistics Explained

*Data extracted in September 2018.  
Planned article update: October 2019.*

This article presents statistics on [vocational training](#) in the [European Union \(EU\)](#) and forms part of an [online publication on education and training in the EU](#). It provides a comprehensive picture of [vocational education and training](#) in the EU. The first half of the article analyses vocational education of pupils and students in schools or similar educational institutions, which may be undertaken as part of secondary or post-secondary non-tertiary education. The second part of the article looks at vocational training within enterprises, presenting initial vocational training (IVT) and more detailed information relating to continuing vocational training (CVT) within enterprises. Only enterprises from the [business economy](#) are included in the analysis; in other words, most economic activities are covered, with the exclusion of agriculture, forestry and fishing, public administration and defence, compulsory social security, education, human health and social work activities.

## Vocational training within secondary and post-secondary non-tertiary education

The first section of this article looks at vocational education within [secondary and post-secondary non-tertiary education](#), typically within educational institutions: generally this concerns initial education, before a person enters the [labour market](#) for the first time, although it may also include [adult education](#). Within these education levels (which are covered by the [international standard classification of education \(ISCED\)](#) levels 2-4), vocational educational programmes are distinguished from general educational programmes, as they are specifically designed for students to acquire the knowledge, skills and competencies for a particular occupation or trade.

## Numbers of pupils

Within lower secondary education (ISCED level 2), vocational programmes are relatively rare: in 2016 they accounted for 3.3 % of the total number of pupils at this level in the [EU-28](#) (including 2015 data for the United Kingdom). A somewhat higher proportion of male pupils (3.7 %) followed vocational programmes within lower secondary education, as the corresponding share among female pupils was 2.9 %. As can be seen in Table 1, five EU Member States reported relatively high proportions of pupils following vocational lower secondary education programmes — Belgium, the United Kingdom, Croatia, Portugal and the Netherlands — while in 12 Member States there were no vocational programmes at this education level; none of the non-member countries included in Table 1 had vocational programmes at lower secondary education level. While the EU-28 had a higher proportion of male pupils than female pupils in vocational training, this was not the case in Croatia, Bulgaria and Estonia, which reported a higher proportion of female than male students following a vocational programme within lower secondary education.

## Share of students in vocational education programmes, 2016

(%)

	Lower secondary				Upper secondary				Post-secondary non-tertiary			
	Total	Male	Female	Total	Male	Female	Total	Male	Female			
EU-28 (*)	3.3	3.7	2.9	49.3	54.0	44.5	91.5	90.7	92.1			
Belgium	21.1	21.6	20.5	59.2	61.4	57.3	93.4	95.7	91.2			
Bulgaria	3.1	2.4	3.8	51.3	58.9	43.1	100.0	100.0	100.0			
Czechia	0.5	0.6	0.4	72.9	78.3	67.2	12.7	21.0	8.4			
Denmark	-	-	-	40.6	45.2	36.1	-	-	-			
Germany	3.7	4.5	2.9	46.3	53.5	37.7	91.5	88.8	93.5			
Estonia	2.1	2.1	2.2	38.7	47.0	30.2	100.0	100.0	100.0			
Ireland	-	-	-	-	-	-	100.0	100.0	100.0			
Greece	1.4	1.8	1.0	29.1	37.0	20.3	100.0	100.0	100.0			
Spain	1.2	1.4	1.0	34.8	37.2	32.4	100.0	100.0	100.0			
France	-	-	-	40.6	45.6	35.5	55.1	45.8	60.2			
Croatia	10.0	7.9	12.1	70.0	77.2	62.8	-	-	-			
Italy	-	-	-	55.6	67.0	43.4	100.0	100.0	100.0			
Cyprus	-	-	-	16.7	25.2	7.9	100.0	100.0	100.0			
Latvia	0.6	0.7	0.4	38.1	44.0	31.8	100.0	100.0	100.0			
Lithuania	2.2	3.2	1.2	27.2	33.3	20.4	100.0	100.0	100.0			
Luxembourg	-	-	-	61.0	63.2	58.7	100.0	100.0	100.0			
Hungary	0.9	1.0	0.7	21.4	26.1	16.5	100.0	100.0	100.0			
Malta	0.7	0.9	0.4	28.8	32.9	24.6	0.0	0.0	0.0			
Netherlands	5.9	6.4	5.3	67.5	68.5	66.5	-	-	-			
Austria	-	-	-	68.8	72.9	64.2	100.0	100.0	100.0			
Poland	-	-	-	51.1	60.0	41.3	100.0	100.0	100.0			
Portugal	9.8	11.4	8.0	41.2	46.5	35.7	100.0	100.0	100.0			
Romania	-	-	-	56.2	63.7	48.4	100.0	100.0	100.0			
Slovenia	-	-	-	70.4	76.3	64.2	-	-	-			
Slovakia	2.5	2.8	2.2	68.9	74.7	63.1	100.0	100.0	100.0			
Finland	-	-	-	71.3	74.2	68.7	100.0	100.0	100.0			
Sweden	-	-	-	36.6	37.6	35.8	80.9	74.8	86.4			
United Kingdom (†)	11.3	12.4	10.0	53.1	51.8	54.4	-	-	-			
Iceland	-	-	-	32.3	38.9	25.5	100.0	100.0	100.0			
Liechtenstein	-	-	-	66.6	72.1	58.6	-	-	-			
Norway	-	-	-	50.4	58.2	41.7	100.0	100.0	100.0			
Switzerland	-	-	-	64.8	71.4	57.5	82.3	79.0	84.3			
Montenegro (‡)	-	-	-	67.2	72.6	61.4	-	-	-			
North Macedonia	-	-	-	60.0	64.6	55.0	100.0	100.0	100.0			
Serbia	-	-	-	74.6	78.9	70.2	100.0	100.0	100.0			
Turkey	-	-	-	47.5	48.3	46.6	-	-	-			

(\*) Lower secondary education: including 2015 data for the United Kingdom.

(†) Lower secondary education: 2015.

(‡) 2015.

Source: Eurostat (online data codes: educ\_uoe\_enrs01, educ\_uoe\_enrs04 and educ\_uoe\_enrs07)

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**Table 1: Share of students in vocational education programmes, 2016(%)**Source: Eurostat (educ\_uoe\_enrs01), (educ\_uoe\_enrs04) and (educ\_uoe\_enrs07)

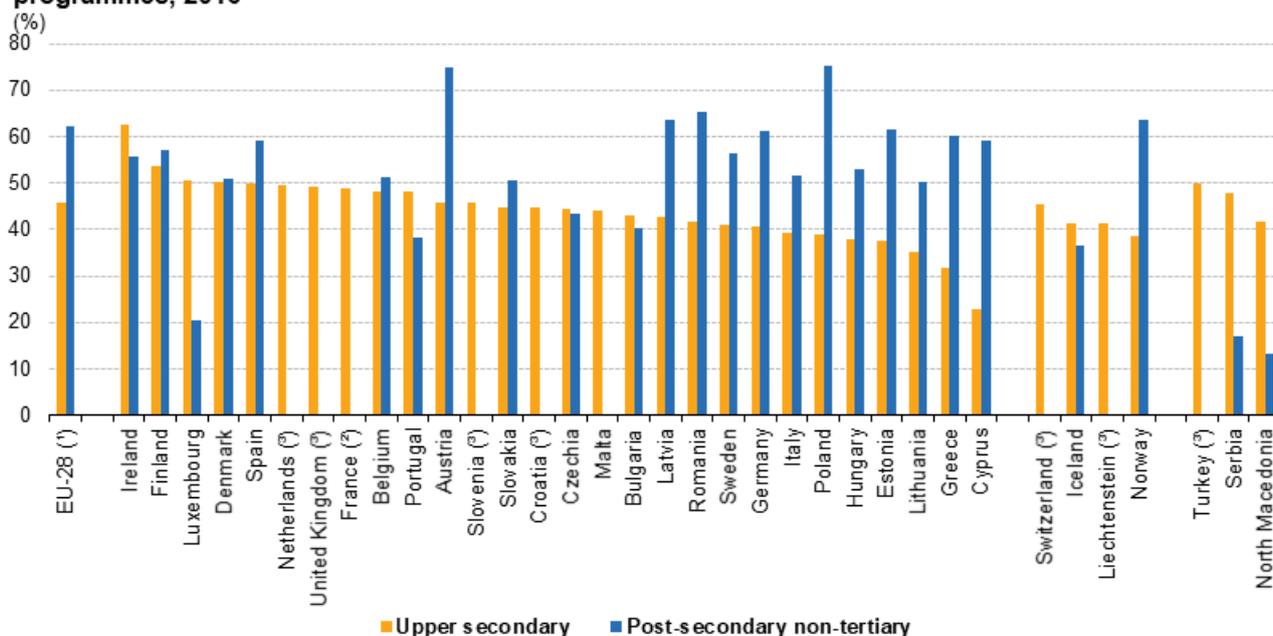
In 2016, close to half (49.3 %) of all upper secondary (ISCED level 3) school pupils in the EU-28 followed vocational programmes, with the share for males (54.0 %) clearly higher than that recorded for females (44.5 %). In 13 of the EU Member States, less than half of all upper secondary pupils were studying vocational programmes, with this share dropping to just over one fifth in Hungary (21.4 %) and lower still in Cyprus (16.7 %); note there were no students in vocational programmes at this education level in Ireland. By contrast, in the Netherlands, Austria and Slovakia more than two thirds of upper secondary pupils followed vocational programmes, with even higher shares — 70.0 % or higher — in Croatia, Slovenia, Finland and Czechia, where a peak of 72.9 % was recorded.

Within post-secondary non-tertiary education (ISCED level 4), the vast majority of pupils followed vocational programmes, an average of 91.5 % across the EU-28 in 2016. Unlike the two secondary education levels, the share (92.1 %) of females following vocational post-secondary non-tertiary programmes was somewhat higher than that for males (90.7 %). In a majority of the EU Member States (17 of the 23 with post-secondary non-tertiary education) all of the pupils at this educational level were enrolled in vocational programmes. Czechia was one of only two Member States where less than half of the total number of pupils within post-secondary non-tertiary education were following vocational programmes (12.7 %), the other was Malta where all students at this level of education were enrolled in general rather than vocational education programmes. Note there were no post-secondary non-tertiary education students in 2016 in Denmark, Croatia, the Netherlands, Slovenia or the United Kingdom and therefore none following vocational programmes.

## Graduates from vocational programmes

In 2016, typically between one third and one half of all graduates from upper secondary vocational programmes in the EU Member States were female, with this share averaging 45.6 % across the EU-28. The lowest share was 22.8 % in Cyprus while shares above 50.0 % were recorded in Denmark, Luxembourg, Finland and Ireland (where a peak of 62.5 % was registered). In all of the Member States except Ireland, the share of female graduates was higher for upper secondary education general programmes than it was for upper secondary education vocational programmes.

**Proportion of females among all graduates from vocational education programmes, 2016**



Note: ranked on upper secondary.

(\*) Post-secondary non-tertiary: excluding France.

(†) Post-secondary non-tertiary: not available.

(‡) Post-secondary non-tertiary: not applicable.

Source: Eurostat (online data code: educ\_uoe\_grad01)

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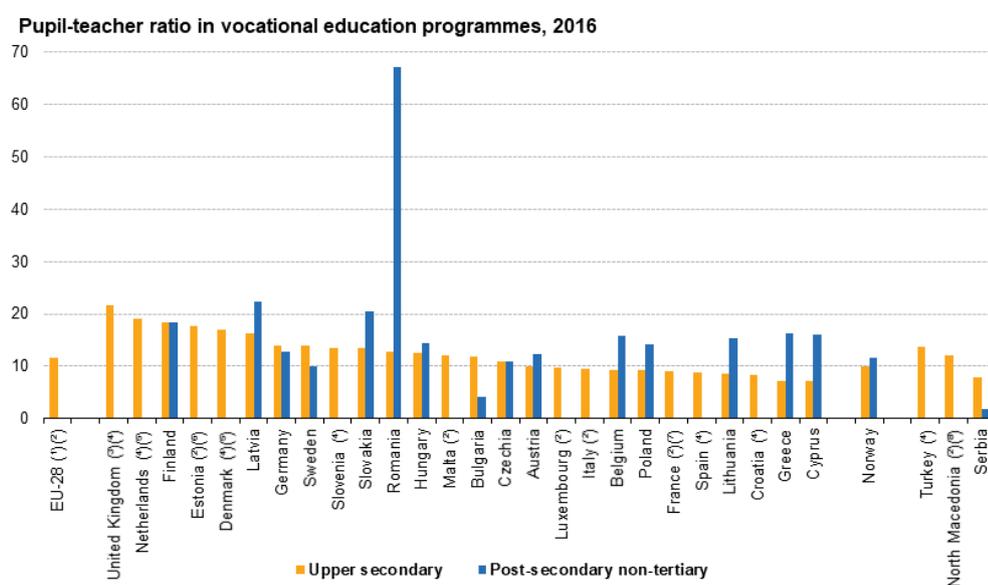
**Figure 1: Proportion of females among all graduates from vocational education programmes, 2016(%)**Source: Eurostat (educ\_uoe\_grad01)

A similar comparison for post-secondary non-tertiary graduates reveals a wider range between the EU Member States. In 2016, there were no female graduates from post-secondary non-tertiary vocational programmes in Malta (and only a very small number of male graduates) while the share of female graduates from vocational programmes at this level of education was around one fifth (20.3 %) in Luxembourg. By contrast, female graduates accounted for close to three quarters of all post-secondary non-tertiary graduates in Austria (74.9 %) and Poland (75.1 %)— see Figure 1.

More information on graduates from secondary and post-secondary non-tertiary education is available in a [separate article](#) .

## Pupil-teacher ratios for vocational programmes

There was a relatively high degree of variation in pupil-teacher ratios for vocational education programmes across the EU Member States, depending on whether these were at upper secondary level or post-secondary non-tertiary level — see Figure 2. In 2016, the largest difference was recorded in Romania, where the ratio for post-secondary non-tertiary education was more than five times as high as that recorded for upper secondary education. A similar pattern, although much less marked, was witnessed in Cyprus, Greece, Lithuania, Belgium, Poland and Slovakia, where the pupil-teacher ratio for post-secondary non-tertiary education was at least 1.5 times as high as that recorded for upper secondary education. There was no difference in pupil-teacher ratios between these two different levels of education in Czechia or Finland, while there were three Member States (out of 15 for which data are available) where pupil-teacher ratios were higher for upper secondary education than for post-secondary non-tertiary education. The largest difference among these was reported in Bulgaria, where the pupil-teacher ratio for upper secondary vocational education was 2.9 times as high as that for post-secondary non-tertiary education.



Note: Ireland and Portugal, not available. Liechtenstein: not applicable. Ranked on upper secondary.

(\*) Average of available data for the EU Member States (including discrepancies noted in the other footnotes).

(†) Post-secondary non-tertiary: not available.

(‡) Upper secondary education: includes all pupils at further education institutions regardless of level taught (so includes a small number of lower secondary and tertiary education courses).

(§) Post-secondary non-tertiary: not applicable.

(¶) 2014.

(\*) Upper secondary education: includes lower secondary and post-secondary non-tertiary education.

(†) Excludes independent private institutions.

(‡) Upper secondary education: includes post-secondary non-tertiary education.

Source: Eurostat (online data code: educ\_uoe\_perp04)

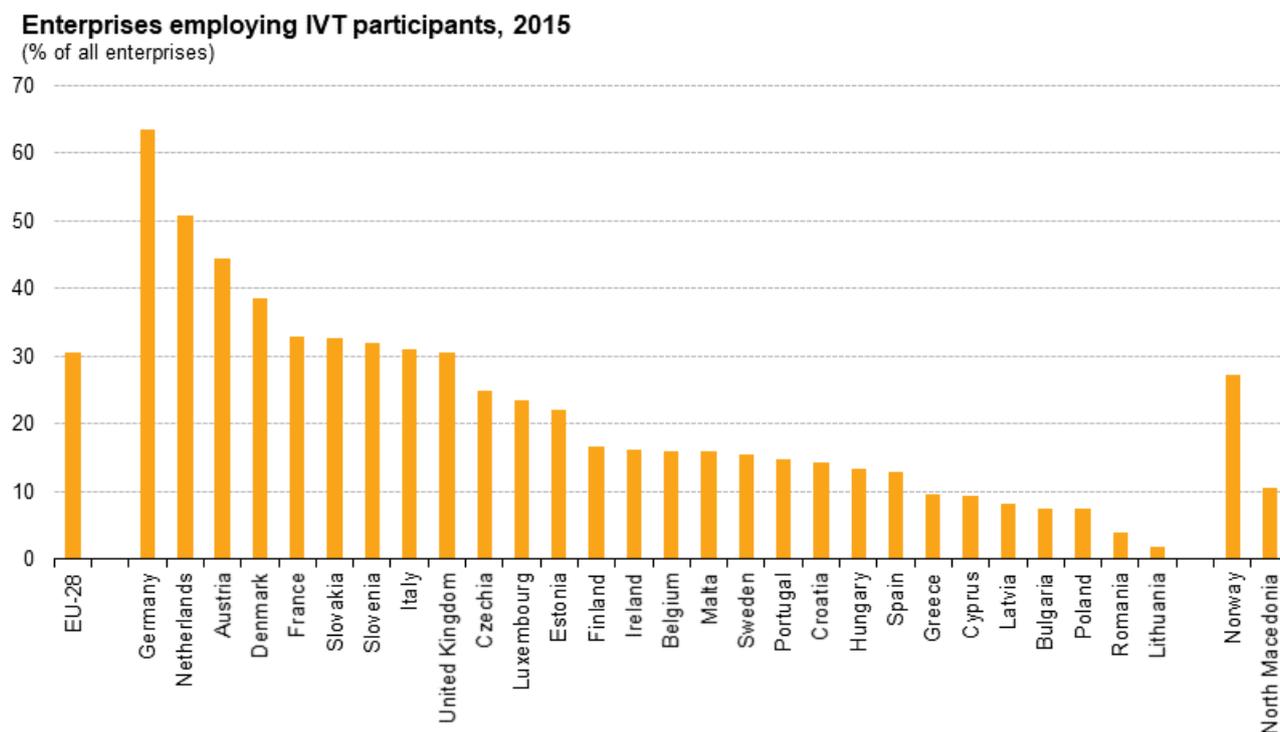
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**Figure 2: Pupil-teacher ratio in vocational education programmes, 2016** Source: Eurostat (educ\_uoe\_perp04)

Comparing pupil-teacher ratios for general programmes with those for vocational programmes at upper secondary level, there was no clear pattern across the EU Member States. Among the 26 Member States for which data are available in 2016 (Denmark, 2014 data; Ireland and Portugal, incomplete or not available), 12 reported higher pupil-teacher ratios for vocational programmes, 13 had higher ratios for general programmes and in Czechia the ratios were the same. The largest differences were in Latvia, the United Kingdom, Denmark and Malta where the pupil-teacher ratio was at least 4.0 pupils higher for vocational programmes than for general programmes. For the EU-28 as a whole, within upper secondary education the ratio was 0.9 points higher for general programmes (12.5 pupils per teacher) than for vocational programmes (11.6).

## Initial vocational training in enterprises

Although the data presented in Figure 3 are from the [continuing vocational training survey \(CVTS\)](#) they show the proportion of enterprises providing initial vocational training (IVT), rather than continuing vocational training (CVT); a detailed description of these terms is provided below in the key concepts section under **Data sources** . In 2015, almost one third (30.5 %) of all enterprises in the EU-28's business economy with 10 or more persons employed provided IVT, although the proportion varied greatly between EU Member States. Only 8 Member States reported a proportion that was above the EU-28 average, with around a third of all enterprises in Italy, Slovenia, Slovakia, France and Denmark providing IVT, around one half in Austria and the Netherlands, and more than three fifths in Germany. At the other end of the scale, less than 1 in 10 enterprises provided IVT in 7 of the Member States, mainly those [Member States that joined the EU in 2004 or 2007](#) , but also Greece.



Source: Eurostat (online data code: trng\_cvt\_34s)

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**Figure 3: Enterprises employing IVT participants, 2015(% of all enterprises)**Source: Eurostat (trng\_cvt\_34s)

## Continuing vocational training in enterprises

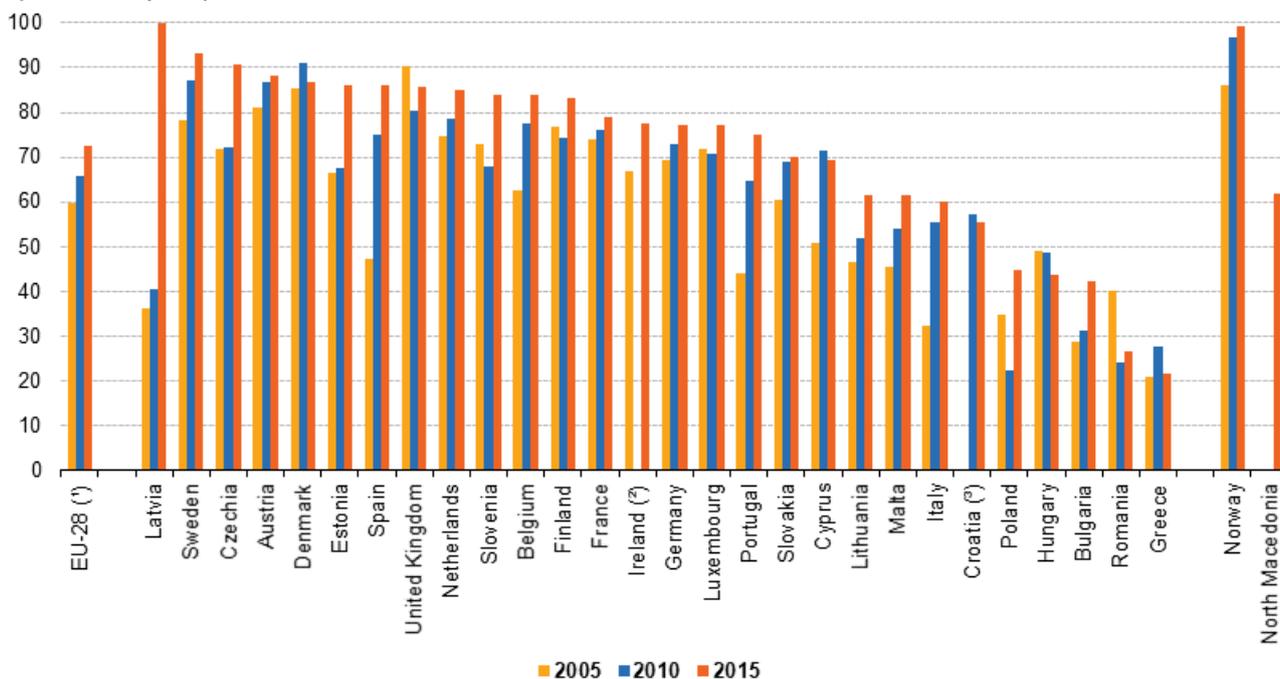
The remainder of this article focuses on data from the continuing vocational training survey and in particular on the provision of continuing vocational training (CVT) by enterprises. This information refers to education or training activities which are financed, at least in part, by enterprises; part financing could include, for example, the use of work time for the training activity; CVT can be provided either through dedicated courses or other forms of CVT, such as guided on-the-job training. In general, enterprises finance CVT in order to develop the competences and skills of the people they employ, hoping that this may contribute towards increasing [competitiveness](#) . A large majority of CVT is non-formal education or training, in other words, it is provided outside the formal education system.

In 2015, 72.6 % of enterprises employing 10 persons and more in the EU-28 provided CVT to their staff (see Figure 4); this marked an increase compared with 2005 and 2010 when the share was 59.7 % and 65.7 % respectively. Among the EU Member States, the share of enterprises that provided such training in 2015 ranged

from 21.7 % in Greece to 99.9 % in Latvia; note this share was also high (99.1 %) in Norway. In Latvia almost all enterprises reported the provision of guided on-the-job training (99.9 %) which explains this exceptionally high share of training enterprises. In Norway, 90.4 % of all enterprises provided CVT courses, and this together with the provision of different other types of training explains the high share of training enterprises.

### Enterprises providing CVT, 2005, 2010 and 2015

(% of all enterprises)



(\*) 2005 and 2010: estimate.

(?) 2010: not available.

(\*) 2005: not available.

Source: Eurostat (online data code: trng\_cvt\_01s)

eurostat

Figure 4: Enterprises providing CVT, 2005, 2010 and 2015(% of all enterprises)Source: Eurostat (trng\_cvt\_01s)

### Enterprises providing continuing vocational training by economic activity

Table 2 provides a more detailed analysis of the proportion of enterprises providing CVT. Within the EU-28, enterprises in services (other than distributive trades or accommodation and food services) were more likely to offer CVT. This was particularly the case for information and communication services and financial and insurance activities where the proportion of enterprises offering CVT peaked at 85.5 %.

In 25 EU Member States, the highest proportion of enterprises providing CVT courses was recorded in information and communication services and financial and insurance activities. In the remaining three Member States — Denmark, Latvia and Lithuania — the highest proportion was recorded for other services, which includes real estate activities, professional, scientific, technical, administrative and support service activities, arts, entertainment and recreation as well as other service activities. Latvia also recorded 100 % of construction enterprises providing CVT. The same pattern as for the big majority of EU Member States was repeated in Norway and North Macedonia, where the highest proportion of enterprises providing CVT courses was recorded in information and communication services and financial and insurance activities.

EU-28 enterprises were slightly more likely to provide CVT through courses (either internal or external) than to provide other forms of CVT, such as planned learning through guided on-the-job training, job rotation, ex-

changes or secondments, conferences and workshops, participation in learning or quality improvement groups, or self-directed learning. In 2015, 61.2 % of EU-28 enterprises offered at least CVT courses and 59.9 % provided at least other forms of CVT; note that some of these enterprises provided both CVT courses and other forms of CVT. The proportion of enterprises providing CVT courses exceeded 80 % in Czechia, Spain, Austria and Sweden, and was also above the EU-28 average in Belgium, Finland, the Netherlands, France, Slovenia, Luxembourg, Denmark, the United Kingdom, Estonia, Slovakia and Germany; it was even higher in Norway (peaking at 90.4 %). By contrast, less than one quarter of enterprises provided CVT courses in Romania and Greece. The proportion of enterprises providing other forms of CVT had a slightly wider range, from below one quarter in Greece and Romania to a peak of 99.9 % in Latvia; the share recorded in Norway was again high (at 93.4 %).

Comparing the proportion of enterprises providing CVT courses and those providing other forms of CVT, differences in excess of 10 percentage points were observed in thirteen of the EU Member States, with enterprises in Finland, Spain, France and Czechia more likely to provide CVT courses, whereas enterprises in Poland, Lithuania, Germany, the United Kingdom, Portugal, Malta, Estonia, Ireland and Latvia were more likely to provide other forms of CVT.

#### Enterprises providing CVT by NACE Rev. 2 activity and type of training, 2015

(% of all enterprises)

	NACE Rev. 2 activity						Type of training	
	All activities	Industry	Construction	Distributive trades and accommodation and food services	Information and communication services and financial and insurance activities	Other services (*)	Proportion providing CVT courses	Proportion providing CVT other than courses
<b>EU-28</b>	72.6	70.6	71.5	68.6	85.5	79.2	61.2	59.9
Belgium	83.9	86.1	82.8	80.7	95.9	85.3	78.4	68.6
Bulgaria	42.2	41.8	47.4	36.1	61.2	50.1	31.9	37.3
Czechia	90.6	92.1	92.5	88.6	95.0	89.5	89.4	38.6
Denmark	86.6	82.6	83.2	83.7	92.2	94.1	69.9	74.4
Germany	77.3	79.9	72.8	75.4	92.4	76.5	61.9	73.7
Estonia	86.1	82.6	87.3	86.8	89.2	88.2	64.4	80.5
Ireland	77.4	75.9	74.3	73.2	89.8	84.3	57.1	74.3
Greece	21.7	23.5	18.1	18.9	41.8	25.2	12.7	18.0
Spain	86.0	87.2	89.7	84.4	93.0	85.0	80.6	64.4
France	78.9	81.5	66.4	76.4	86.2	86.1	75.1	47.9
Croatia	55.4	53.8	49.2	53.0	65.5	64.6	42.7	47.1
Italy	60.2	61.4	74.8	50.6	79.8	65.3	52.3	42.6
Cyprus	69.5	70.9	61.3	65.0	87.1	75.0	52.1	52.8
Latvia	99.9	99.9	100.0	99.9	99.4	100.0	31.3	99.9
Lithuania	61.6	60.4	58.6	57.5	71.5	73.0	43.7	55.3
Luxembourg	77.1	80.3	60.8	75.0	93.1	83.9	71.9	70.5
Hungary	43.8	47.1	46.1	38.6	65.3	43.1	32.1	37.3
Malta	61.6	55.7	41.7	51.4	86.1	81.6	43.3	58.4
Netherlands	85.0	85.0	86.4	83.8	88.1	85.4	75.5	76.4
Austria	88.1	88.6	87.4	85.4	94.9	92.3	81.6	79.5
Poland	44.7	45.5	39.0	39.2	67.2	56.0	29.2	40.6
Portugal	75.0	71.0	67.6	76.2	92.7	83.4	53.8	67.7
Romania	26.7	27.3	26.2	21.9	42.1	32.8	21.1	22.1
Slovenia	84.1	84.8	69.4	85.1	93.4	90.2	72.9	77.2
Slovakia	70.0	71.6	74.3	65.8	85.3	70.3	63.6	56.3
Finland	83.1	81.6	82.3	82.8	93.9	82.1	78.0	63.6
Sweden	93.1	91.9	91.4	91.2	97.1	96.6	81.6	86.7
United Kingdom	85.7	82.2	90.2	81.8	90.5	89.8	67.1	80.2
Norway	99.1	99.7	98.1	99.3	100.0	98.8	90.4	93.4
North Macedonia	61.9	63.6	54.4	58.4	77.2	69.7	45.9	38.9

(\*) NACE Rev. 2 Sections L to N and R and S.

Source: Eurostat (online data code: trng\_cvt\_01n2)

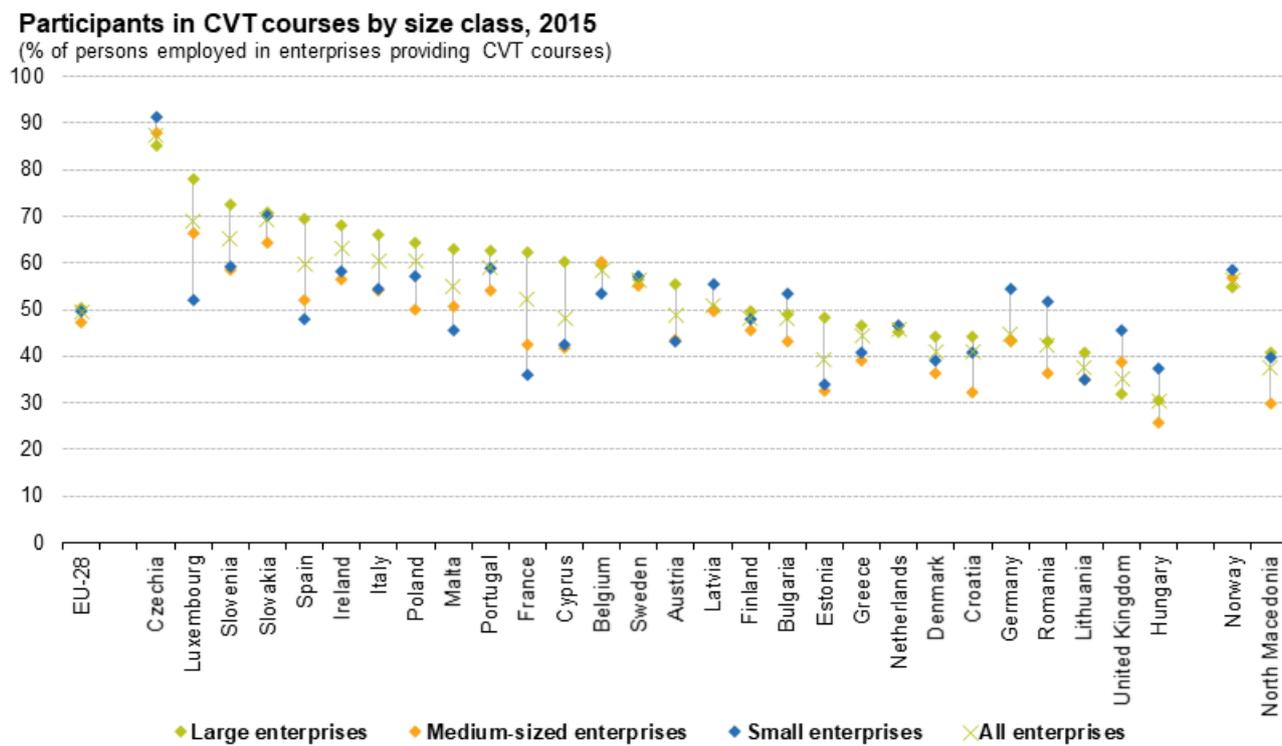
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**Table 2: Enterprises providing CVT by NACE Rev. 2 activity and type of training, 2015(% of all enterprises)**Source: Eurostat (trng\_cvt\_01n2)

### Participation rates for continuing vocational training courses

The data on participation rates in Figure 5 only relate to participation in CVT courses and not to participation in other forms of CVT. On average, [enterprise size](#) appears to be a relatively minor factor influencing the provision of CVT courses across the EU-28: in 2015, just above half (50.2 %) of all persons employed in [large enterprises](#) (with 250 persons employed or more) participated in CVT courses, compared with 47.2 % for [medium-sized enterprises](#) (with 50-249 persons employed) and 49.8 % of those employed by [small enterprises](#)

(with 10-49 persons employed); see Figure 5. However, in 8 Member States, the highest participation rates were reported for small enterprises. The most notable examples were Germany and the United Kingdom where participation rates for CVT courses in 2015 were more than 10 percentage points higher among small enterprises than they were among large enterprises.



Note: ranked on large enterprises.  
Source: Eurostat (online data code: trng\_cvt\_13s)



**Figure 5: Participants in CVT courses by size class, 2015**(% of persons employed in enterprises providing CVT courses)Source: Eurostat (trng\_cvt\_13s)

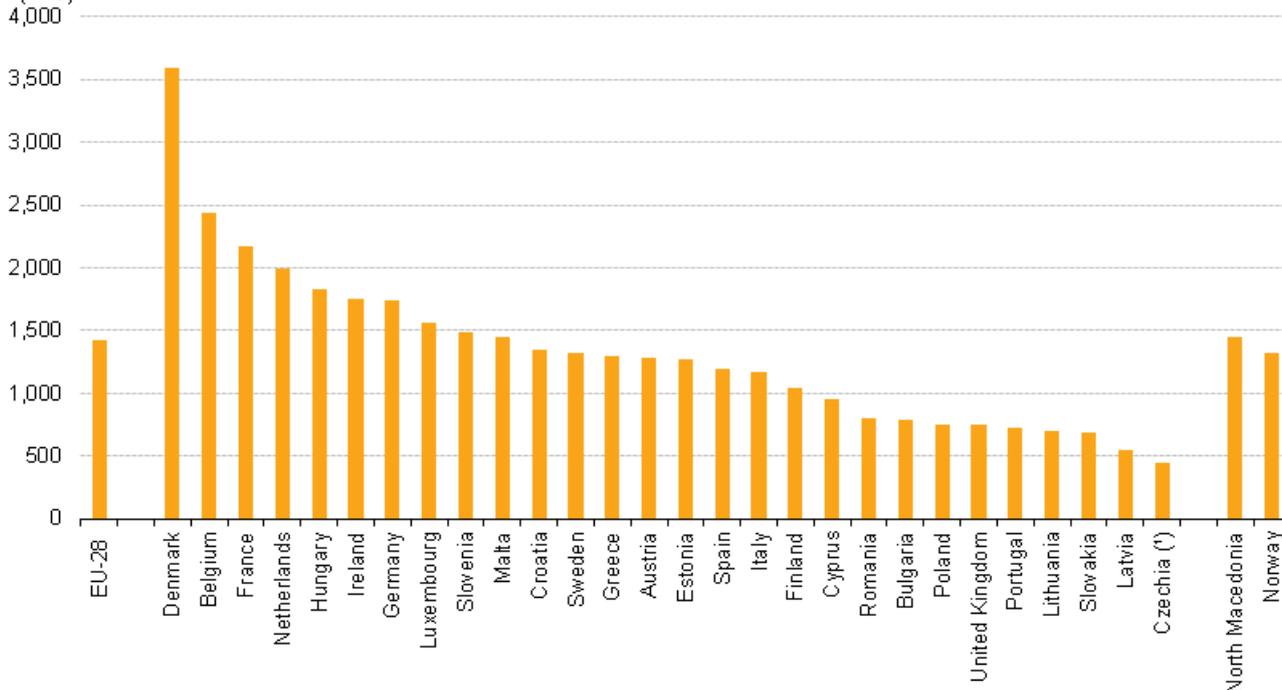
### Cost of continuing vocational training courses

As for CVT participation rates, data on the cost of CVT only relate to CVT courses and not to other forms of CVT. The data on the cost of CVT courses (as shown in Figure 6) have been converted to **purchasing power standards (PPS)** rather than presenting these costs in euros; purchasing power standards are an artificial currency which adjusts for price level differences between countries.

In 2015, the average expenditure on CVT courses by enterprises in the EU-28 was PPS 1 418 per participant; note that each person is only counted once, regardless of how many courses they attend during a year and regardless of how long these courses were. The average expenditure per participant on CVT courses ranged from PPS 446 in Czechia to PPS 3 595 in Denmark, with Belgium, France and the Netherlands below this range. Eight of the ten EU Member States where average expenditure per participant was below PPS 1 000 were Member States that joined the EU in 2004 or 2007, with the United Kingdom and Portugal being the exceptions. By contrast, among the eight Member States where expenditure exceeded PPS 1 500 per participant, one was a Member State that joined the EU in 2004, namely Hungary.

### Cost of CVT courses per participant, 2015

(PPS)



(\*) Definition differs.

Source: Eurostat (online data code: trng\_cvt\_19s)



**Figure 6: Cost of CVT courses per participant, 2015(PPS)Source: Eurostat (trng\_cvt\_19s)**

The overall costs incurred by enterprises for the provision of CVT courses correspond to total monetary expenditure. This total is composed of direct costs, participants' labour costs and net contributions, where the latter is the balance between contributions to and receipts from training funds. In 2015, total training costs for EU-28 enterprises represented an average of 1.7 % of total labour costs (see Table 3); half of this figure (0.8 %) represented participants' labour costs, and most of the rest (0.7 %) was direct costs. Latvia was the only EU Member State in 2015 where the cost of CVT courses was less than 1.0 % of total labour costs, while this ratio reached or exceeded 2.0 % in Luxembourg, Malta, Ireland, the Netherlands, Belgium, France, Slovenia and Denmark.

## Cost of CVT courses, 2015

(% of total labour cost of all enterprises)

	Total	Direct costs	Labour costs of participants
<b>EU-28</b>	4.0	0.7	0.8
Belgium	2.4	0.9	1.5
Bulgaria	1.4	0.7	0.7
Czechia (*)	1.5	0.7	0.8
Denmark	2.7	1.1	1.2
Germany	1.4	0.7	0.7
Estonia	1.8	0.8	1.0
Ireland	2.2	0.9	1.4
Greece	1.1	0.3	0.5
Spain	1.8	0.5	0.9
France	2.5	0.6	1.1
Croatia	1.3	0.6	0.7
Italy	1.3	0.4	0.8
Cyprus	1.2	0.4	0.5
Latvia	0.8	0.4	0.4
Lithuania	1.1	0.7	0.4
Luxembourg	2.1	1.0	1.3
Hungary	1.8	0.6	0.4
Malta	2.1	1.1	0.9
Netherlands	2.3	1.2	1.0
Austria	1.3	0.6	0.8
Poland	1.2	0.6	0.7
Portugal	1.5	0.6	1.0
Romania	1.0	0.4	0.7
Slovenia	2.5	0.7	1.8
Slovakia	1.6	0.7	0.9
Finland	1.1	0.6	0.6
Sweden	1.6	0.8	0.8
United Kingdom	1.8	1.2	0.5
Norway	1.8	1.0	0.9
North Macedonia	0.5	0.3	0.2

(\*) Definition differs.

Source: Eurostat (online data code: trng\_cvt\_16s)

## Reasons for enterprises not providing training

As noted above, 72.6 % of EU-28 enterprises provided CVT (including courses and other forms) in 2015 and therefore 27.4 % did not (as shown in Table 4). The two main reasons given by those enterprises not providing CVT related to recruitment strategies: more than half (54.9 %) of the enterprises not providing CVT did not do so because they tried to recruit people with the required skills while more than four fifths (81.8 %) said that the existing skills and competences of their workforce already corresponded to their needs. A lack of time and CVT being too expensive were the third and fourth most common reasons, given by around one third of enterprises not providing training.

Among nearly all of the EU Member States, the most common reason for enterprises not to provide CVT was that the existing skills and competences of their workforce already corresponded to the enterprise's needs while the second most common reason was that enterprises tried to recruit people with the required skills. The exceptions were: in Czechia, Estonia and Croatia, other reasons was the second most common reason while France reported a lack of time as the second most common reason, and so enterprises trying to recruit people with the required skills therefore became the third most common reason; in Bulgaria, the order of these two reasons was reversed, although the proportions for the two reasons were almost the same.

### Enterprises not providing CVT by reason for non-provision, 2015

(%)

	Proportion of enterprises not providing CVT	Proportion of non-training enterprises citing selected reasons for not providing CVT								
		High costs of CVT courses	Focus on IVT rather than on CVT	Major CVT efforts made in recent years	Existing qualifications, skills and competences corresponded to the current needs of the enterprise	Lack of suitable CVT courses in the market	People recruited with the skills needed	Difficult to assess enterprise's training needs	High workload and limited / no time available for staff to participate in CVT	Other reasons
<b>EU-28</b>	27.4	28.2	24.6	13.0	81.8	13.4	54.9	16.2	32.0	16.6
Belgium	16.1	10.7	3.2	2.0	75.5	6.4	28.3	2.5	19.0	:
Bulgaria	57.8	42.7	21.7	9.5	81.2	21.5	82.8	15.0	39.5	6.7
Czechia	9.4	5.6	1.0	1.4	69.1	2.3	4.3	:	5.6	23.3
Denmark	13.4	22.0	44.0	4.5	73.9	19.5	65.3	38.1	41.9	16.4
Germany	22.7	23.3	47.1	13.9	87.7	12.2	53.2	23.3	32.4	21.8
Estonia	13.9	8.8	1.0	:	43.9	2.3	15.8	:	10.7	36.7
Ireland (*)	22.6	14.8	7.0	3.5	78.6	9.3	51.3	10.3	27.3	15.1
Greece	78.3	28.8	16.4	2.7	65.7	13.8	55.5	9.2	42.2	12.6
Spain	14.0	38.3	4.2	22.0	84.4	31.2	61.4	20.3	47.7	33.4
France	21.1	48.3	58.3	33.5	88.5	21.0	63.4	36.8	72.6	19.0
Croatia	44.6	14.1	4.2	2.2	79.2	7.0	34.5	6.2	12.1	11.6
Italy	39.8	13.3	8.5	12.1	74.3	6.0	15.4	4.9	14.5	17.1
Cyprus	30.5	19.8	7.4	8.7	78.2	13.8	59.7	3.8	34.2	3.3
Latvia	0.1	:	:	:	:	:	:	:	:	100.0
Lithuania	38.4	63.7	15.8	12.2	87.4	26.1	85.2	45.5	40.3	6.6
Luxembourg	22.9	6.0	4.2	:	70.1	3.5	22.3	:	16.1	15.3
Hungary	56.2	30.6	14.2	5.0	85.2	13.4	63.5	10.5	22.7	16.9
Malta	38.4	20.7	6.9	3.8	79.9	8.2	60.9	11.5	39.6	15.0
Netherlands	15.0	14.1	5.9	2.2	73.1	4.4	53.5	3.1	9.5	33.3
Austria	11.9	32.0	12.2	1.6	88.2	10.8	50.0	10.9	44.0	19.2
Poland	55.3	33.7	38.3	16.1	85.2	11.4	70.4	12.1	24.9	17.7
Portugal	25.0	46.3	22.3	7.9	76.5	30.3	64.4	30.6	40.5	40.4
Romania	73.3	34.0	5.4	5.6	83.5	8.0	78.3	6.7	26.1	1.5
Slovenia	15.9	31.3	11.9	30.0	92.0	10.1	64.1	5.5	20.8	13.0
Slovakia	30.0	30.6	22.9	15.0	74.2	8.9	48.1	7.9	30.2	12.2
Finland	16.9	39.9	36.1	5.1	89.3	14.4	66.2	17.5	48.7	16.4
Sweden	6.9	:	:	:	:	:	:	:	:	:
United Kingdom	14.3	19.1	23.3	13.6	88.7	19.4	73.2	30.8	35.7	10.8
Norway	0.9	44.6	:	:	100.0	:	30.0	:	2.9	:
North Macedonia (*)	38.1	26.8	8.6	2.8	47.2	10.2	28.1	7.7	20.4	17.9

(\*) Low reliability.

Source: Eurostat (online data code: trng\_cvt\_02s)

eurostat 

Table 4: Enterprises not providing CVT by reason for non-provision, 2015(%) Source: Eurostat (trng\_cvt\_02s)

## Source data for tables and graphs

- [Vocational education and training statistics: tables and figures](#)

## Data sources

### Sources

The standards for international statistics on education are set by three international organisations:

- the [United Nations Educational, Scientific, and Cultural Organisation \(UNESCO\)](#) institute for statistics (UIS);
- the [Organisation for Economic Cooperation and Development \(OECD\)](#) ;
- [Eurostat](#) , the statistical office of the European Union.

Two sources of data are used in this article:

- a [joint annual UNESCO/OECD/Eurostat \(UOE\) data collection](#) on education statistics which forms the basis for the core components of Eurostat's database on education statistics; data concerning vocational programmes in initial education are presented in this article;
- data from the five-yearly [continuing vocational training survey \(CVTS\)](#) which collects information on enterprises' efforts in the continuing vocational training of their workforce; the most recent year for which data are available is 2015; the coverage is enterprises with 10 or more persons employed in [NACE Rev. 2](#) Sections B to N, R and S (excluding therefore agriculture, forestry and fishing, public administration and defence, compulsory social security, education, human health and social work activities).

More information about these sources is available in the following articles:

- [methodology of the UNESCO-OECD-Eurostat data collection](#) ;
- [methodology of the continuing vocational training survey \(CVTS\)](#) .

### Classification

The [international standard classification of education \(ISCED\)](#) provides the basis for the classification of education statistics, describing different levels of education; it was first developed in 1976 by UNESCO and revised in 1997 and 2011. [ISCED 2011](#) distinguishes nine levels of education: early childhood education (level 0); primary education (level 1); lower secondary education (level 2); upper secondary education (level 3); post-secondary non-tertiary education (level 4); short-cycle tertiary education (level 5); bachelor's or equivalent (level 6); master's or equivalent (level 7); doctoral or equivalent (level 8). The first results based on ISCED 2011 have been published in 2015 starting with data for the 2013 reference period. Within ISCED 2011, two categories of programme orientation are identified for ISCED levels 2-5, namely, general and vocational educational programmes.

### Key concepts

#### *UOE*

**Vocational education programmes** are designed for learners to acquire the knowledge, skills and competencies specific to a particular occupation, trade, or class of occupations or trades. Vocational education may have work-based components (such as apprenticeships or traineeships). Successful completion of such programmes leads to labour market-relevant vocational qualifications acknowledged as occupationally-oriented by the relevant national authorities and/or the labour market.

A **graduate** is an individual who has successfully completed an education programme.

**Pupil-teacher ratios** are calculated by dividing the number of [full-time equivalent](#) pupils and students in each level of education by the number of full-time equivalent teachers at the same level; this ratio should not be confused with average class size, which refers to the number of students in a given course or classroom.

#### *Continuing vocational training*

**CVT in enterprises** concerns training measures or activities which have as their primary objective the acquisition of new competences or the development and improvement of existing ones. CVT in enterprises must be financed, at least in part, by the enterprise and should concern persons employed by the enterprise (either those with a work contract or those who work directly for the enterprise such as unpaid family workers). Persons employed holding an apprenticeship or training contract should not be taken into consideration for CVT. The

training measures or activities must be planned in advance and must be organised or supported with the special goal of learning. Random learning and initial vocational training (IVT) are explicitly excluded.

**CVT courses** are typically clearly separated from the active workplace (learning takes place in locations specially assigned for learning like a classroom or training centre). They show a high degree of organisation (time, space and content) by a trainer or a training institution. The content is designed for a group of learners (for example a curriculum exists), while two distinct types of courses may be identified — internal and external CVT courses.

**Other forms of CVT** are typically connected to active work and the active workplace, but they can also include participation (instruction) in conferences, trade fairs and similar events for the purpose of learning. These other forms of CVT are often characterised by a degree of self-organisation (time, space and content) by the individual learner or by a group of learners. The content is often tailored according to the learners' individual needs in the workplace. The following types of other forms of CVT may be identified:

- planned training through guided on-the-job training;
- planned training through job rotation, exchanges, secondments or study visits;
- planned training through participation (instruction received) in conferences, workshops, trade fairs and lectures;
- planned training through participation in learning or quality circles;
- planned training through self-directed learning/e-learning.

A **participant in CVT courses** is a person who has taken part in one or more CVT courses during the reference year. Each person should be counted only once, irrespective of the number of CVT courses he or she has participated in.

The **costs of CVT courses** cover direct costs, participants' labour costs and the balance of contributions (net contribution) to and receipts from training funds.

**Direct course costs :**

- fees and payments for CVT courses;
- travel and subsistence payments related to CVT courses;
- the labour costs of internal trainers for CVT courses (direct and indirect costs); and
- the costs for training centres, training rooms and teaching materials.

**Participants' labour costs** include the labour costs of participants for CVT courses that take place during paid working time.

The **net contribution** to training funds is made up of the cost of contributions made by the enterprise to collective funding arrangements through government and intermediary organisations minus receipts from collective funding arrangements, subsidies and financial assistance from government and other sources.

The CVTS also collects some information on **initial vocational training (IVT)** within enterprises which is defined as a formal education programme or a component of it where the working time of the paid apprentices/trainees alternates between periods of practical training in the workplace and general/theoretical education in an educational institution or training centre. For 2015, the coverage was training within ISCED levels 2-5, in other words, secondary and post-secondary non-tertiary education as well as short-cycle tertiary education. The length of IVT should be between six months and six years. Voluntary apprenticeships/traineeships are excluded.

## Context

### Copenhagen process and European initiatives

Since 2002, national authorities and social partners from European countries have taken part in the [Copenhagen process](#) which aims to promote and develop [vocational education and training \(VET\)](#) systems; at the time of

**Tables in this article use the following notation:**

Value <i>initalics</i>	data value is forecasted, provisional or estimated and is therefore likely to change;
:	not available, confidential or unreliable value.
–	not applicable.

writing 33 countries are active in this process. In June 2010, the European Commission presented its proposals for ' [a new impetus for European cooperation in vocational education and training to support the Europe 2020 strategy](#) ' (COM(2010) 296 final). In December 2010, in Bruges (Belgium) the priorities for the Copenhagen process for 2011-2020 were set, establishing a vision for vocational education and training.

There are a number of European initiatives to enhance the transparency, recognition and quality of competences and qualifications, facilitating the mobility of learners and workers across the EU. These include the [European Qualifications Framework \(EQF\)](#) , [Europass](#) , the [European Credit System for VET \(ECVET\)](#) , and the [European Quality Assurance Reference Framework for VET \(EQAVET\)](#) .

### Europe 2020 and ET 2020 strategies

The conclusions of the November 2010 [Council](#) underlined the need for data on VET systems in the context of the Copenhagen process and the important contribution VET systems can potentially make to the [Europe 2020 strategy](#) . In particular, the Bruges communiqué of 7 December 2010 on enhanced European cooperation in vocational education and training for the period 2011-2020 states that 'EU level policy-making in VET should be based on existing comparable data. To this end, and using the [lifelong learning](#) programme, Member States should collect relevant and reliable data on VET — including VET mobility — and make these available for Eurostat. Member States and the [European Commission](#) should jointly agree on which data should be made available first'.

The [strategic framework for European cooperation in education and training](#) (known as ET 2020), was adopted by the Council in May 2009. It sets out four strategic objectives for education and training in the EU: making lifelong learning and mobility a reality; improving the quality and efficiency of education and training; promoting equality, social cohesion and active citizenship; and enhancing creativity and innovation (including entrepreneurship) at all levels of education and training.

The ET 2020 strategy set a number of benchmarks to be achieved by 2020, including that an average of at least 15 % of adults aged 25 to 64 should participate in lifelong learning. Two supplementary benchmarks on learning mobility were adopted by the Council in November 2011, including one that, by 2020, an EU average of at least 6 % of 18 to 34 year-olds with an initial [vocational education and training \(VET\)](#) qualification should have had an initial VET-related study or training period (including work placements) abroad lasting a minimum of two weeks, or less if documented by Europass.

### Rethinking education

In November 2012, the European Commission presented ' [Rethinking education](#) : investing in skills for better socio-economic outcomes' (COM(2012) 669), an initiative to encourage EU Member States to ensure that young people develop the skills and competences needed by the labour market. This Communication was developed in the face of increased skills levels among workers outside of the EU and increased [youth unemployment](#) within the EU, alongside sluggish economic performance in Europe. The Communication pays particular attention to combatting youth unemployment:

- developing world-class vocational education and training to raise the quality of vocational skills;
- promoting work-based learning including quality traineeships, apprenticeships and dual learning models to help the transition from learning to work;
- promoting partnerships between public and private institutions (to ensure appropriate curricula and skills provision);
- promoting mobility through the Erasmus+ programme.

Erasmus+

The [Erasmus programme](#) was one of the most well-known European programmes and ran for just over a quarter of a century; in 2014 it was superseded by the [EU's programme for education, training, youth and sport](#), referred to as ' [Erasmus+](#) '. It is expected that four million people will benefit from Erasmus+, including around 650 thousand vocational training and education students. In May 2018, the European Commission adopted [proposals for the Erasmus programme for 2021-2027](#) .

## Other articles

- [Education and training in the EU — facts and figures](#)
- [Being young in Europe today — education](#)
- [The EU in the world — education and training](#)

## Tables

- [Education and training \(t\\_educ\)](#) , see:

Participation in education and training (t\_educ\_part)  
Education personnel (t\_educ\_uae\_per)  
Education and training outcomes (t\_educ\_outc)

## Database

- [Education and training \(educ\)](#) , see:

Participation in education and training (educ\_part)  
Pupils and students - enrolments (educ\_uae\_enr)  
Continuing vocational training in enterprises (trng\_cvt)  
Education personnel (educ\_uae\_per)  
Teachers and academic staff (educ\_uae\_perp)  
Education and training outcomes (educ\_outc)  
Graduates (educ\_uae\_grad)

## Dedicated section

- [Education and training](#)

## Publications

- [Key data on education in Europe 2012](#)

## Methodology

### Metadata

- [Education administrative data from 2013 onwards \(ISCED 2011\)](#) (ESMS metadata file — educ\_uae\_enr\_esms)
- [Continuing vocational training in enterprises](#) (ESMS metadata file — trng\_cvt\_esms)

### Manuals and other methodological information

- [Classification of learning activities — Manual](#)
- [Further methodological information on the CVTS](#)
- [ISCED 2011 operational manual — Guidelines for classifying national education programmes and related qualifications](#)
- [UOE data collection on formal education — Manual on concepts, definitions and classifications, 2014](#)

## Legislation

For information on legislation see [EU legislation on education and training statistics](#)

## External links

- [CEDEFOP — European centre for the development of vocational training](#)
- [CEDEFOP — VET toolkit for tackling early leaving](#)
- [European Commission — Education and training monitor, 2017](#)
- [European Commission — Education and training — Adult learning](#)
- [European Commission — Education and training — Strategic framework for education and training](#)
- [European Commission — Education and training — Vocational education and training](#)
- [European Commission — Programmes — Erasmus+](#)
- [Eurydice — The information network on education in Europe](#)
- [OECD — OECD policy reviews of vocational education and training \(VET\) and adult learning](#)
- [OECD — Skills beyond school](#)
- [UNESCO — Institute for lifelong learning](#)
- [UNESCO — Lifelong learning systems](#)
- [UNESCO — Technical and vocational education and training \(TVET\) strategy 2016-2021](#)

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