

Vocational education and training in Denmark

Short description





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Europe 123, 570 01 Thessaloniki (Pylea), GREECE
PO Box 22427, 551 02 Thessaloniki, GREECE
Tel. +30 2310490111, Fax +30 2310490020
E-mail: info@cedefop.europa.eu
www.cedefop.europa.eu

Christian F. Lettmayr, *Acting Director*
Hermann Nehls, *Chair of the Governing Board*

Foreword

Vocational education and training (VET) in Denmark is key to ensure a flexible and skilled workforce able to adapt to changes within the labour market. This gains even more relevance as Denmark is witnessing accelerated erosion of non- and low-skilled jobs, as a result of the global financial crisis.

As was the case during the crisis of the mid-1970s, VET has the role of equipping young people and adults with higher (new) qualifications as a response to rising levels of (long-term) unemployment. The traditional strong partnership with the social partners that characterises the Danish VET system is instrumental in ensuring the responsiveness of education and training provision to the changing needs of the labour market, enabling both enterprises and individuals to adjust their skills and competences accordingly.

Recent reforms of the VET system have focused on making it simpler, more transparent, more coherent, and flexible to both the needs of the labour market and social challenges. Further, the aim has been to make the system more individually focused and tailored to both strong and weak learners. In a lifelong learning perspective, the overall VET system (vocational upper secondary education and training and adult education and continuing training) is being streamlined to ensure coherence and transferability. Improving pathways and bridging the gap between vocational and general education and avoiding dead-ends is another goal.

Denmark has the highest participation rates in adult education and continuing training in the European Union (EU). As this report shows, high participation rates reflect conditions such as the national strategy to focus on knowledge-intensive specialist sectors and lifelong learning, a large public sector, and a tradition for strong ties between enterprises, educational institutions and the social partners.

The present report is published during the seventh Danish Presidency of the Council of the EU. Reflecting on national education and training priorities, and recent developments in the system, priority has been given to the link between education and training and employment, in particular by developing a benchmark for employability and a recommendation on recognition of informal and non-formal learning. The ultimate goal is to ensure flexibility and responsiveness to labour market needs in education and training and to provide a strong framework for lifelong learning.

We hope that this report will contribute to better understanding VET in Denmark, and will promote peer learning and sharing best practice at EU level.

Christian F. Lettmayr
Acting Director

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Map of Denmark and country fiche



Kingdom of Denmark	Denmark, and the autonomous constituent countries the Faroe Islands and Greenland ^(a)
Government	Constitutional monarchy with a single chamber parliamentary system
Parliament (<i>Folketinget</i>)	179 members: <ul style="list-style-type: none"> • 135 are elected by direct proportional representation within 10 constituencies • 40 supplementary seats divided proportionally between the parties • 4 seats reserved for two representatives from the Faroe Islands and two from Greenland.
Political parties	Between eight and 10 political parties are usually represented in the Danish Parliament with government generally consisting of a coalition of two or more parties.
Elections	The maximum period between national elections is four years, although the prime minister is able to call an election at an earlier date. Municipal and regional elections are held every four years. The most recent national election took place on 15 September 2011. Denmark also elects delegates to the European Parliament. The latest election on 7 June 2009 elected 13 Danish members of the European Parliament.
Administrative division	Five regions and 98 municipalities A major reform of Denmark's administrative structure, implemented in 2007, significantly reduced the number of local governing organs.
Area	43 000 square kilometres and a coastline of 7 300 kilometres The reason for the extensive coastline is that Denmark consists of the peninsula of Jutland and a total of 407 islands
Population density	129.4 people per square kilometre The largest and most densely populated areas are Zealand, on which the capital of Copenhagen is situated, the island of Funen, and the peninsula of Jutland (Statistics Denmark, 2011).

^(a) As both Greenland and the Faroe Islands have home rule and are independently responsible for local matters such as the education and social systems, welfare, taxes etc., these countries are not included in the following presentation of the Danish VET system. Similarly, Greenland and the Faroe Islands have opted to remain outside the EU.

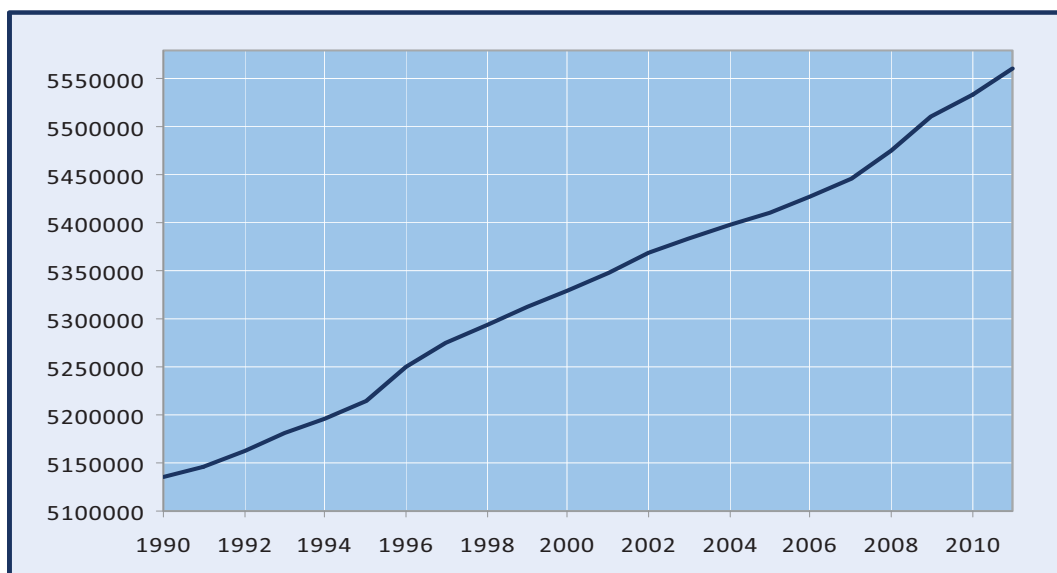
CHAPTER 1.

General context for VET: external factors influencing VET

1.1. Demographics

At the beginning of 2011, the population of Denmark was approximately 5.6 million, representing a steady increase during the previous two decades (Figure 1).

Figure 1 **Population figures from the censuses by time (all Denmark)**



Source: Compiled from StatBank Denmark.
<http://www.statbank.dk/statbank5a/default.asp?w=1024>.

Denmark has one of the highest fertility rates in the EU with 1.88 live births per woman in 2010 (Statistics Denmark, 2011). One explanation for the relatively high fertility rate is the extensive system of reasonably affordable public day-care centres and Danish laws regarding maternity and paternity leave. Both men and women are active on the labour market or participate in education and training activities, and most children are therefore in day-care centres.

Like the rest of Europe, the Danish population is getting older. The average age is 40.3 years at 1 January 2011 (39.4 years for men and 41.3 years for women). The increase in the average age is due to an increase of 61% in the number of people over the age of 80 since 1980 (Statistics Denmark, 2011). The

average life expectancy in 2009 was 77.1 years for men and 81.2 for women. While life expectancy has increased, Denmark continues to lag behind most other countries in western Europe, not least its Scandinavian neighbours (Statistics Denmark, 2011). The reasons for this are the subject of much debate.

Table 1 **Population projections**

Years	2011	2015	2020	2025	2030	2035	2040	2045	2050
0-4	325495	317358	323175	341357	350374	348108	343436	340988	344812
5-9	327867	328899	319209	324844	342989	352035	349781	345068	342562
10-14	341725	331729	330554	320873	326519	344713	353809	351586	346873
15-19	356466	350154	336325	335139	325513	331227	349545	358718	356513
20-24	337459	368578	367962	354850	354053	345097	351107	369586	378870
25-29	311548	337147	380149	380760	368287	367851	359416	365593	384117
30-34	342593	314329	337707	381820	383078	370733	370314	362012	368221
35-39	389788	355457	313861	336708	381321	382886	370694	370320	362100
40-44	403306	388088	355249	312806	335460	380402	382187	370174	369876
45-49	409904	412247	385813	352935	310364	332977	378079	380105	368339
50-54	367225	393619	405589	379799	347345	305164	327752	372864	375189
55-59	349543	354723	383739	395867	371240	339738	298462	321120	366166
60-64	363928	336545	342386	371576	384263	361293	331176	291249	314107
65-69	318797	351148	319411	326763	356393	369978	349242	321046	283009
70-74	223846	272621	322796	296341	305481	335581	350193	332544	306990
75-79	162633	184604	235668	281698	262007	273026	303148	318635	305392
80-84	117189	120693	142412	185526	224213	212298	224514	253076	268527
85-89	72950	73121	77040	93052	124329	151819	147121	158518	182345
90-94	30166	33035	33794	36672	45513	62751	77189	77061	84946
95-99	7300	7927	9459	9940	11163	14286	20452	25294	26187
100+	900	1059	1194	1453	1578	1834	2415	3598	4477

The old age dependency ratio ⁽¹⁾ for Denmark in 2010 was 24.87%, close to the EU average of 25.92%. Projections compiled in 2011 suggest that this figure is expected to rise steadily, mirroring the trend for the EU as a whole, until 2040 after which the EU average is predicted to continue rising while the Danish ratio is expected to plateau at around 42% ⁽²⁾. A possible explanation for this levelling out is the relative success of government policy seeking to improve fertility rates as indicated above. Nevertheless, the aging population means that the next two

⁽¹⁾ Defined as the projected number of persons aged 65 and over expressed as a percentage of the projected number of persons aged between 15 and 64.

⁽²⁾ Eurostat, *Projected old-age dependency ratio*
<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsdde511>.

decades are expected to see a considerable increase in the number of citizens receiving public benefits and a decrease in the active workforce.

The government is therefore encouraging the population to remain within the labour market beyond the minimum pensionable age and offering retraining initiatives to increase older generations' attractiveness to employers. The 2009 welfare settlement means that the pensionable age will gradually rise from 65 to 67.

1.2. Migration

Immigration is higher than emigration (in 2010 immigration: 68 282 and emigration: 45 882 resulting in a net migration of 22 400, Statistics Denmark, 2011), but considerably lower than neighbouring countries such as Germany and Sweden. Also, in 2010, almost one in three immigrants (31%) was a Danish citizen returning home after a period abroad or a Danish citizen born outside the country. Polish, German and US citizens accounted for the three largest nationality groups immigrating to Denmark in 2010 ⁽³⁾. Similarly, Danes only comprise 45% of the total annual emigration figures, with the remainder being foreign citizens leaving again following a period of residence. Nevertheless, an increasing proportion of the total population is made up of foreign immigrants and their descendants. In January 2011, this group comprised 10.1% of the Danish population. Of these, 54% originate from another European country. Turkey is the most common country of origin, followed by Germany, Poland and Iraq (Statistics Denmark, 2011).

Providing education and training opportunities to those with a non-Danish ethnic background to ensure their integration within the labour market continues to be a policy focus.

1.3. Labour market

The Danish labour market is characterised by a high participation rate, partly due to the high activity rate of women (2010 economic activity rate: women 72.4%; men 76.5%). Of the total population of approximately 5.6 million, the labour force in the second quarter of 2011 constituted approximately 2.7 million persons (1.4 million men and 1.3 million women) representing an employment rate of 70.9%

⁽³⁾ StatBank Denmark, *VAN1AAR: immigration by region, sex, age, country of origin and citizenship* <http://www.statbank.dk/van1aar>.

and unemployment as defined by the International Labour Organisation (ILO) of 7.3%. In terms of where people are employed, Table 2 shows that the primary sector in Denmark is much smaller than the European average while the non-marketed services sector is particularly large, accounting for one third of total employment. These differences can be ascribed, respectively, to the highly industrialised nature of agriculture in Denmark and an extensive public sector.

Table 2 **Economic composition by sector (% employment) (2010)**

Sector	EU-27	DK
Primary sector and utilities	7.0	3.5
Manufacturing	15.7	12.6
Construction	7.7	5.9
Distribution and transport	26.4	26.6
Business and other services	17.9	17.7
Non-marketed services	24.8	33.3

NB: A small residual share of employment not attributable to no sectors (no answer) is not presented. Sums may differ from 100%.

Source: Eurostat, *employment by sex, age groups and economic activity (from 2008, NACE rev.2) (1 000)* (http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa_egan2&lang=en).

The overall unemployment rate reached its lowest for 34 years during summer 2008 at 2.8% for the second quarter, but has since risen sharply to the current 7.3% (2011) as a result of the global economic downturn. Among the more worrying signs is a sharp increase in the numbers of long-term unemployed ⁽⁴⁾: in 2010, long-term unemployed persons made up 15% of the total unemployment rate compared to 10% the year before (Statistics Denmark, 2011).

Young people have been particularly vulnerable to unemployment with the latest figures (2011) for unemployment among young people aged 15-29 at 12.7%, the highest level since 1993 (Bjørsted and Knigge, 2011).

According to Table 3, the most dramatic drop in employment (from 58.6% in 2006 to 51.8% in 2010) is found among 15-24 year-olds with low educational attainment levels. Conversely, the one notable exception to the trend of falling employment levels is found among 50-64 year-olds with low educational attainment levels (from 50.5% in 2006 to 55.5% in 2010). It is difficult to ascertain precisely what reasons might explain the considerable growth in employment rates within this group; seemingly employers are more inclined to retain their

⁽⁴⁾ Defined here as an unemployment degree of at least 80% (corresponding to 292 days) during the preceding year.

more experienced employees rather than take on younger employees; however, the same does not seem to apply to higher educational attainment levels.

Table 3 **Employment rates by age group and educational attainment level (2010 [2006]) (%)**

		Age		
		15-24	25-49	50-64
EU-27	iscd 0-2	21.5 [24.8]	62.8 [66.9]	43.1 [43.5]
	iscd 3-4	45.0 [48.1]	79.7 [80.5]	59.6 [57.9]
	iscd 5-6	57.1 [60.5]	87.4 [88.5]	74.5 [74.2]
	total	34.1 [36.6]	78.1 [79.1]	56.7 [54.4]
DK	iscd 0-2	51.8 [58.6]	70.2 [73.1]	55.5 [50.5]
	iscd 3-4	70.1 [73.8]	85.4 [87.4]	67.5 [70.5]
	iscd 5-6	66.6 [69.7]	89.7 [90.8]	77.6 [80.0]
	total	58.1 [64.6]	83.4 [86.4]	66.1 [68.7]

Source: Eurostat, *employment by sex, age groups and economic activity (from 2008, NACE rev.2) (1 000)* (http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa_egan2&lang=en).

One explanation for the rapid growth in youth unemployment is that one in five has yet to embark on a course of education or training providing genuine job qualifications at a time when demand for unskilled labour continues to fall with more and more jobs requiring qualifications and participation in courses of further education and training. This follows a period where extremely low unemployment levels meant it was relatively easy to find work even without qualifications (*Politiken*, 2009). However, education and training provide little guarantee of employment with, for example, young people with training in the most market-sensitive sectors, such as construction, and young academics, affected by cutbacks within the public sector, particularly hard hit (*Politiken* 2011).

Reintegrating the growing number of long-term unemployed within the workforce and ensuring that young people are not left estranged from the labour market is likely to pose one of the major challenges to education and training in Denmark, not least adult VET, over the coming years.

Box 1 **Effects of the crisis on jobs**

An analysis of the Danish labour market published in August 2010 (Bjørsted, 2010) looked at the effects of the economic crisis since its outbreak autumn 2008 in terms of jobs. All in all, there were 175 000 fewer jobs. However, this figure includes an increase in public-sector jobs meaning that the figure for the private sector alone is even higher at 199 000 (approximately 10% of the total labour force).

Effects of the economic crisis in terms of job loss have been particularly hard in the industrial and construction sectors. These two sectors account for half the total number of jobs lost (66 000 and 34 000 respectively) representing falls in employment rates of more than 16.6% for industry and 17.7% for construction. With these sectors traditionally male-dominated, in 2009, unemployment levels among men exceeded the levels for women for the first time since 1976 ^(a). The retail, hotel and restaurant sector, meanwhile, experienced a 5.7% fall (33 000 jobs), while the transport, post and telecommunications sector shrunk by 10.2% (19 000 jobs).

Nevertheless, the construction sector can be expected to recover with economic growth, although there may be a degree of lag with both the public and private sectors likely to postpone commencing any large-scale construction projects until they are reasonably certain of a sustained period of growth. However, some of the jobs lost in the industrial sector may never return due to rationalisation and relocation processes. In these cases, there will be increased need for reskilling, particularly of non- and low-skilled workers, if long-term structural employment is to be avoided. However, there is sooner talk of the crisis resulting in accelerated erosion of non- and low-skilled jobs in Denmark than any sea change.

^(a) StatBank Denmark: <http://www.statbank.dk/ras1f1>.

CHAPTER 2.

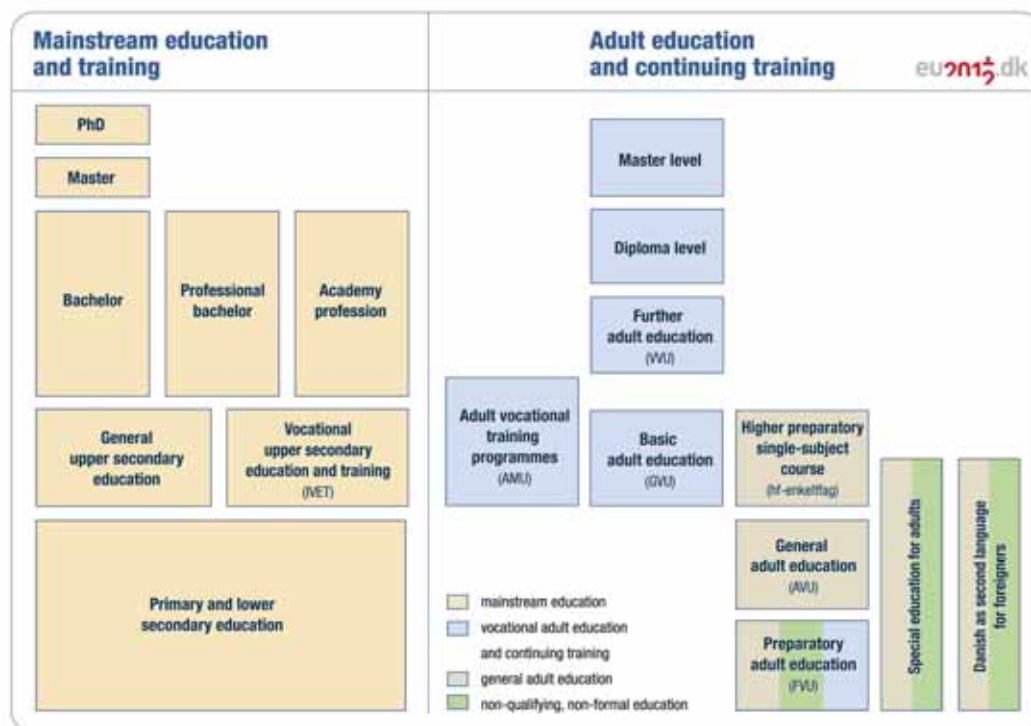
VET within the Danish education and training system

2.1. Overall Danish education and training system

The Danish education and training system can be divided into two parallel parts:

- (a) the mainstream education system;
- (b) the (vocational and general) adult education and continuing training system (Figure 2).

Figure 2 The Danish education and training system



Source: Adapted from the Danish Agency for Universities and Internationalisation (<http://en.iu.dk/publications/the-danish-education-system-1/The%20Danish%20Education%20System%202011.pdf>).

The mainstream education system is attended by children from the age of six who progress through the system during their youth and adulthood. The adult education and continuing training system mirrors the qualifications provided within the mainstream system, but is designed specifically for adults and also

provides opportunities for gaining supplementary qualifications. As such, the two parallel systems combine to provide a framework for lifelong learning.

2.1.1. Primary and lower secondary education (basic schooling)

In Denmark, basic schooling has for several years been compulsory from the age of seven to 16, from first to ninth grade. However, since 2009 the hitherto optional (but attended by most) pre-school class has been compulsory, meaning all children now enter schooling at the age of six. After the ninth grade, 60% of a youth cohort elects to continue within the optional 10th grade, rather than direct entry to an upper secondary (youth education) programme. The 10th grade is intended as an option for young people in need of further academic competence and clarification regarding their future choices before entering youth education (either general or vocational upper secondary education).

Primary and lower secondary education in Denmark is generally integrated and located within the comprehensive Danish *Folkeskole* ⁽⁵⁾, although other types of institution, such as private independent schools, also exist. Primary and lower secondary education is completed with a leaving examination providing access to upper secondary (youth) education.

Within the adult education and continuing training system, there are two programmes at this level. Preparatory adult education (FVU) provides courses in basic literacy and mathematics, as well as courses for those with learning difficulties and those with Danish as their second language. General adult education (AVU) is provided to adults who, for whatever reason, did not complete lower secondary education or need a supplement within particular subjects. Qualifications at this level are equivalent to the ninth or 10th grade leaving examination.

2.1.2. Upper secondary education (youth education)

Upper secondary education consists of both general upper secondary education and vocational upper secondary education and training – IVET. General upper secondary education programmes usually last three years and are preparatory for higher education at tertiary level. Four different qualifications result from four corresponding courses ⁽⁶⁾:

⁽⁵⁾ Municipal primary and lower secondary school – literally meaning folk or people's school.

⁽⁶⁾ In these four programmes, there are several opportunities to specialise to some extent in e.g. modern languages or natural sciences, but the final qualification remains the same.

- (a) upper secondary leaving qualification (*Studentereksamen - Stx*);
- (b) higher preparatory examination (*højere forberedelseseksamen -Hf*) ⁽⁷⁾;
- (c) higher commercial examination (*højere handelseksamen - Hhx*);
- (d) higher technical examination (*højere teknisk eksamen - Htx*).

The latter two are sometimes referred to as vocationally-oriented upper secondary education and specifically target higher education at business schools and technical and engineering courses of higher education respectively; however, they do not provide direct vocational qualifications, requiring that students complete higher education before entering the labour market, and are therefore placed in the general education category. Despite their different emphases, all four programmes potentially (dependent on the student's choice of subjects and the grades achieved) provide access to all areas of higher education.

Vocational upper secondary education and training – IVET – includes agricultural, commercial, technical, and social and healthcare programmes. They typically start with a foundation course with a duration of between 20 and 60 weeks. The basic/foundation course is generally college-based, although alternative pathways exist (Section 3.2.1). To then continue with the main programme, students are required to have a training contract with an enterprise ⁽⁸⁾. These main programmes vary in length, but generally take around three years.

IVET qualifications provide access to the labour market as skilled workers or to specific short- and medium-cycle higher education programmes at vocational colleges and academies or university colleges. IVET will be explored in much more detail in Chapter 3.

A newly introduced programme (EUX) bridges the gap between general upper secondary education and vocational upper secondary education and training – IVET –, offering young people the opportunity to gain both vocational qualifications providing direct access to the labour market and general qualifications providing the same opportunities of continuing in higher education as students in the four general upper secondary programmes ⁽⁹⁾.

⁽⁷⁾ The higher preparatory examination requires completion of the optional 10th grade (or equivalent experience, for example in the labour market or IVET) and generally only lasts two years.

⁽⁸⁾ There are exceptions where students without training contracts are allowed to follow college-based practical training (*Skolepraktik*) instead.

⁽⁹⁾ EUX is described in further detail in Section 3.2.3.

The adult education and continuing training system includes three programmes at upper secondary level: higher preparatory single subjects (*hf-enkeltfag*), basic (vocational) adult education (GVU, *Grunduddannelse for voksne*), and adult vocational (continuing) training programmes (AMU, *Arbejdsmarkedsuddannelser*). The main target group for the first programme is adults needing to supplement an existing upper secondary qualification to gain access to a particular higher education programme. With the correct combination of subjects, however, a full higher preparatory examination (*højere forberedelseksamen*) can be gained. GVU programmes are aimed at low-skilled workers with at least two years relevant work experience and allow acquisition of qualifications equivalent to IVET which incorporate prior learning ⁽¹⁰⁾. AMU programmes provide specific work-related skills training aimed at both skilled and unskilled workers. The programmes can be split into three main categories:

- (a) general skills;
- (b) specific job/sector-related skills;
- (c) labour management skills.

AMU will be explored in considerably greater detail in Chapter 4.

2.1.3. Higher education

Higher education can be broadly divided into:

- (a) professionally-oriented short- and medium-cycle programmes where the former lead to an academy profession degree and are offered at academies of professional higher education, while the latter lead to a professional bachelor's degree and are offered by university colleges;
- (b) research-based long-cycle programmes offered at universities where most students continue after completing a bachelor's degree to a master's degree programme. The latter can then provide access to doctoral programmes.

Again, there are corresponding programmes within the adult education and continuing training system: short-cycle further (vocational) adult education (VVU), medium-cycle diploma programmes, and long-cycle master's programmes. These programmes are, however, designed as part-time courses to allow participants to combine education with a working career, and also better incorporate an individual's professional and life experience.

⁽¹⁰⁾ GVU is described in further detail in Section 4.1.2.

2.2. Enrolment in education and training

Tables 4 and 5 provide the most recent figures for enrolment in the different areas of mainstream and adult education and continuing training respectively.

Table 4 **Pupils/students in the mainstream education system by gender, number and percentage (2010)**

	Men		Women		Total	
	number	%	number	%	number	%
Primary and lower secondary	365 421	51	348 228	49	713 649	100
• compulsory part	345 656	51	328 872	49	674 528	100
• 10th form, etc. (*)	19 765	51	19 356	49	39 121	100
Non-qualifying education (e.g. Schools of production)	3 858	61	2 473	39	6 331	100
General upper secondary education	61 159	47	70 346	53	131 505	100
Vocational upper secondary education and training (IVET)	71 521	56	56 717	44	128 238	100
Short-cycle tertiary education	11 370	55	9 372	45	20 742	100
Medium-cycle tertiary education	54 934	40	81 811	60	136 745	100
• Professional bachelor education	23 715	34	45 421	66	69 136	100
• Other medium-cycle tertiary education	996	54	848	46	1 844	100
• University bachelor education	30 223	46	35 542	54	65 765	100
Long-cycle tertiary education (candidatus)	25 124	44	32 559	56	57 683	100
PhD etc.	4 587	51	4 328	49	8 915	100
Total	597 974	50	605 834	50	1 203 808	100

(*): Includes the 11th form and maritime preparatory course.

Source: Danish Ministry of Children and Education (forthcoming).

Table 5 **Full-time equivalent students in adult education and continuing training 2009/10**

	Full time equivalent students
Lower and upper secondary level	36 758
• Preparatory adult education (FVU)	1 839
• General adult education (AVU)	8 288
• Supplementary examination courses (GSK) ⁽¹⁾ ^(*)	1 822
• Higher preparatory single subject course (hf-enkeltfag)	10 934
• Other general ⁽²⁾	13 875
Vocational oriented level ⁽³⁾	16 433
• Adult vocational training (AMU) ⁽³⁾	16 433
Tertiary level	17 445
• Short-cycle tertiary education ⁽⁴⁾	2 756
• Medium-cycle tertiary education	12 716
• Long-cycle tertiary education	1 973
Total	70 636

NB: Includes education programmes under the responsibility of ministries other than the Danish Ministry of Children and Education.

⁽¹⁾ Also includes all other supplementary examination courses than higher preparatory single subject course.

⁽²⁾ Includes participants in another adult education and continuing training: Danish for adult migrants, training of dyslexic, teaching in folk high schools, etc.

⁽³⁾ Does not include open education activity at vocational colleges in the first half of 2010.

⁽⁴⁾ Does not include higher adult education programmes (VVU) at vocational colleges in the first half of 2010.

^(*) Like hf-enkeltfag, GSK offers single subjects at general upper secondary level. GSK is specifically tailored to individuals who have completed a general upper secondary programme (this is an entry requirement) but are missing a particular subject or a subject at a particular level, or who need to improve their grade in a particular subject, to enter a specific higher education programme.

Source: Danish Ministry of Children and Education (forthcoming).

Table 5 shows that total participation in adult education and continuing training in 2009/10 corresponded to 70 636 full-time equivalent students. Many adult education and continuing training programmes have a short duration and in total about 634 000 persons participated in one or more adult education and continuing training programmes in 2009/10 (Danish Ministry of Children and Education, forthcoming).

Within three months of completing ninth or 10th grade, 80% of all students in 2009 had commenced some form of further education or training activity: either general upper secondary education (56%), or IVET (23%) (Statistics Denmark, 2011). In terms of total student enrolment, approximately 260 000 students enrolled in upper secondary education in 2010 were more or less evenly split between IVET and general upper secondary education (Table 4). As suggested by the discrepancy in these two sets of figures, students within IVET are generally older than those within general upper secondary education. While the average age for young people commencing general upper secondary education

is under 17, the equivalent for those entering IVET is 21. Young people also take longer to complete IVET programmes: the average age for those completing a general upper secondary qualification is under 20, while in IVET, the average age is 28. There is a very wide spread in age not found within general upper secondary education (Danish Ministry of Education, 2010b).

One reason why young people generally start later and spend longer completing IVET programmes than general upper secondary programmes is that the transition from lower secondary to general upper secondary education is often seen as a more natural transition than that to IVET, as this involves a move away from the classroom into the workplace. Also, many young people enrol in general upper secondary education, but later transfer to a vocational pathway. A typical duration of three to four years for an IVET programme compared with generally three years for general upper secondary education provides another natural explanation for the differences between these two sets of figures.

However, there is also a final and more worrying explanation: at any time a considerable number of students enrolled in IVET are likely to be inactive, not currently attending classes or in a training placement, although they have not (as yet) officially dropped out. These students also exist in general education, but drop-out rates are considerably higher within IVET. Of those commencing an IVET programme in 2008, only 48% were expected to complete it, compared to 82% of those commencing a general upper secondary programme (Danish Ministry of Education, 2010b).

Improving pathways from IVET to higher education is currently a political priority and recent figures demonstrate why further efforts are necessary: the most recent figures for students completing an IVET programme in 2006 show that, 27 months later, only 13.9% continued in education. Of these, more than half (7.4%) commenced a new IVET programme. Only 6% entered some form of higher education, and virtually none (0.1%) entered a university programme (Danish Ministry of Education, 2010b). In part, these figures can be seen as a reflection of the limited opportunities available with IVET students frequently needing to gain additional general subject qualifications at higher levels to gain access to higher education.

CHAPTER 3.

Vocational upper secondary education and training – IVET

3.1. Key reforms

The vocational upper secondary education and training – IVET – system in Denmark has undergone several reforms since the end of the 1980s. The aim has been to simplify it, make it more transparent, more coherent, flexible (to the needs of the labour market and social changes) and attractive to students. Also, the aim has been to make the system more individually-focused and tailored to both strong and weak learners.

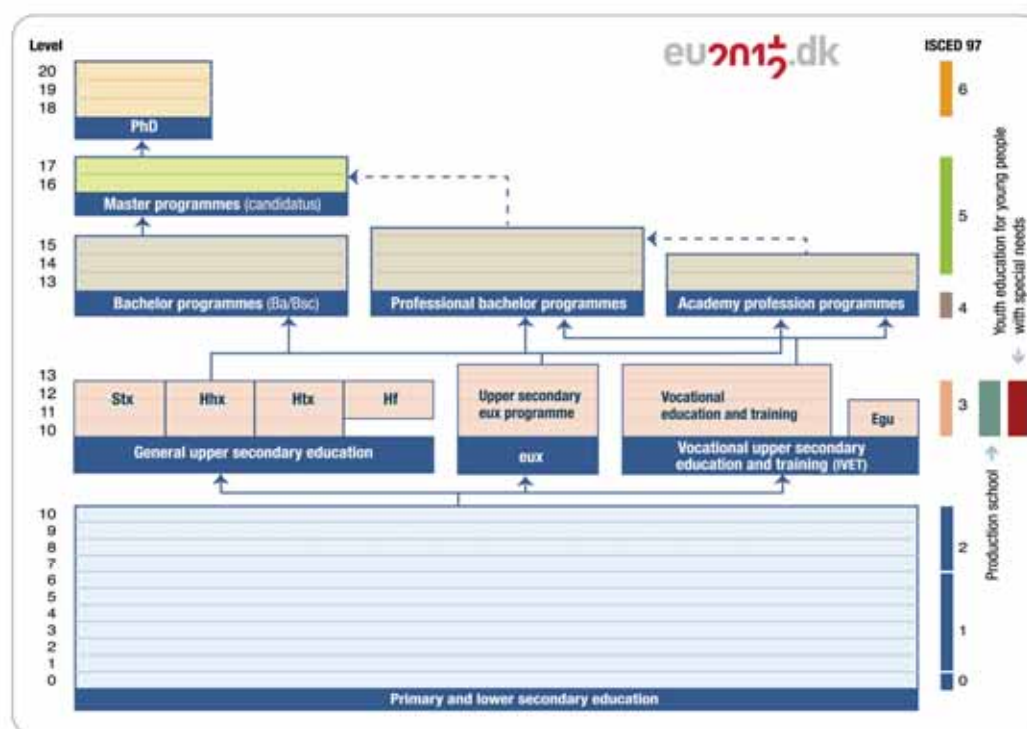
Reforms include:

- (a) 1991 reform introduced principles of decentralisation, management-by-objectives, semi-privatisation of colleges and free choice of colleges for students (primarily concerning governance and funding);
- (b) 1996 reform of commercial training programmes introduced competence-based curricula and a higher degree of individualisation (primarily concerning curriculum reform and innovative approaches to teaching);
- (c) 2000 reform changed technical training programmes by reducing the number of entry routes, introducing a modularised structure in the foundation course, by making provision more individualised and flexible, and by introducing new pedagogical principles, new teacher roles and new pedagogical tools such as the education plan and logbook (primarily concerning curriculum reform and innovative approaches to teaching);
- (d) 2003 amendments strengthened individualisation of programmes, and focused on making general subjects more relevant to practice. It also introduced the principle of assessment of prior learning (*Realkompetencevurdering*) and created several short VET programmes (this reform involved curriculum reform, validation of non-formal and informal learning, and skills needs);
- (e) 2007 reform gathered all IVET programmes (commercial, technical, agricultural and social and healthcare education and training), under the same legislation. The reform introduced more structured foundation courses aimed at weaker students who have problems handling the highly individualised system; new foundation courses constituting 12 access routes; increased possibilities for partial qualifications (called *trin* or steps);

and the individual education plan system, Elevplan, was made compulsory. Introduction of steps linked to learning outcomes also gives students an opportunity to enter the labour market with a partial qualification, documenting their competences and enabling completion of a VET programme at a later date, if desired. The law came into force in August 2007; however many of the changes were not implemented before July 2008 (this most recent substantial set of reforms therefore primarily concerned curriculum reform with particular attention to weaker students).

3.2. Available IVET programmes and pathways

Figure 3 Overview of the Danish mainstream education system



Source: Danish Ministry of Children and Education (<http://eng.uvm.dk/Uddannelse/Education%20system.aspx>).

By far the largest area of IVET in Denmark is comprised of vocational foundation courses and main programmes, referred to in Figure 3 simply as vocational education and training. These programmes, therefore, form the backbone of the presentation below.

Several other vocationally-oriented programmes are offered to young people upon completion of compulsory schooling. These include combined vocational

and general upper secondary education (EUX), courses at schools of production, and basic vocational training (*Erhvervsgrunduddannelse*, EGU). All these programmes will be presented later in this chapter.

Figure 3 places the various forms of IVET within the context of the mainstream Danish education system. (For further descriptions of other areas of education in Denmark, see Section 2.1).

In addition to the above, there are a few IVET programmes providing access to specific trades with legislation separate from overall IVET legislation and where access is not via the common IVET access route of the 12 foundation courses. These are:

- (a) training as a train driver (10 months);
- (b) training as a chiropodist (18 months);
- (c) maritime training such as boat mechanic and commercial fisherman.

However, these specific IVET programmes are not covered in the present report.

3.2.1. Foundation courses and main programmes in IVET

Since 2008, IVET has typically consisted of 12 broad, foundation courses each providing access to several more specialised main programmes.

Table 6 **Key figure: foundation courses**

Foundation course	Number of main programmes	Number of specialisations and steps
1. Automobile, aircraft and other transportation	8	22
2. Building and construction	15	38
3. Construction and user service	3	6
4. Animals, plants and nature	9	31
5. Body and style	3	4
6. Human food	10	29
7. Media production	7	10
8. Commercial	7	25
9. Production and development	27	71
10. Electricity, automation and IT	9	27
11. Health, care and pedagogy	4	7
12. Transportation and logistics	7	31

In technical subjects, the foundation courses last an average of 20 weeks, although this can vary from 10 to 60 weeks depending on the needs of the individual student, while the foundation course in commercial subjects lasts either 38 or 76 consecutive weeks (with a possibility of prolonging the programme up to 116 weeks).

Foundation courses alone do not provide students with the necessary qualifications for entering the labour market; however, having completed a foundation course, students are eligible to enter one of the 109 main programmes, each leading to a specific full vocational qualification ranging from flight mechanic to event coordinator and from fitness instructor to multimedia animator. The main programmes also include several 'steps' (*trin*) and specialisations, each corresponding to a specific position in the labour market.

The steps allow students to leave college without completing one of the main programmes in its entirety while still achieving a partial qualification providing access to the labour market. An additional advantage is that students can easily return at a later date and pick up where they left off to acquire additional qualifications corresponding to the relevant main programme.

Specialisations, meanwhile, divide the main programmes into branches, each providing more specific competences targeted at a particular area of the vocational field. An example is the main programme 'veterinary nurse': there are two specialisations 'veterinary nurse, small animals' and 'veterinary nurse, horses', each taking three years and two months to complete. However, there is also a step 'veterinary nursing aide' which takes one year and 10 months. Students completing the latter qualification will be able to assume a position as a veterinary nursing aide within the labour market, but will also be able to return at a later date and resume their studies to become a qualified veterinary nurse.

Considering these steps and specialisations, a total of 301 different vocational qualifications are available (Danish Ministry of Education, 2011⁸). The main programmes in technical subjects typically take three to three-and-a-half years, although they range from one to five years. Commercial programmes are generally shorter, typically lasting two years.

In terms of the number of main programmes, specialisations and steps, production and development is by far the largest area of IVET (Table 6). However, this is not the case in terms of number of students. By this parameter, commercial programmes are the largest area, accounting for almost one in four IVET students, with building and construction ⁽¹¹⁾ and human food accounting for the second and third largest proportions of the IVET student population respectively (Table 7).

⁽¹¹⁾ Despite a recent fall in enrolment within building and construction, likely attributable to the current economic crisis, the area still remains the second largest field of IVET in terms of number of students.

Table 7 **Number of students commencing the main programmes by foundation course, 2010 (n=52 265)**

Foundation course	Students (%)
1. Automobile, aircraft and other transportation	9
2. Building and construction	15
3. Construction and user service	2
4. Animals, plants and nature	7
5. Body and style	1
6. Human food	12
7. Media production	4
8. Commercial	23
9. Production and development	7
10. Electricity, automation and IT	9
11. Health, care and pedagogy	10
12. Transportation and logistics	2

Source: Statbank Denmark (<http://statweb.unic.dk/Databanken/uvmdataWeb/ShowReport.aspx?report=EAK-tilgang-erhudd>).

Overall, there are more male than female students in IVET: 56% men and 44% women in 2010. However, the distribution is very uneven among the various strands of IVET. In commercial training and social and healthcare training, for example, there is a predominance of female apprentices while the opposite applies to building and construction ⁽¹²⁾.

3.2.1.1. Admission

Admission to one of the 12 foundation courses is, in principle, offered to anyone who has completed compulsory schooling at *Folkeskole* (or equivalent). There are no specific requirements in terms of grades, etc. However, young people under the age of 18 are required to either have a training agreement with an enterprise, or declared 'study-ready' based on an assessment of academic, personal and social competences conducted either by the college or the local youth guidance centre (*ungdommens uddannelsesvejledning*) (Chapter 8). These assessments consider a broad range of factors such as grades, motivation and conflict management skills and are used in compiling individual education plans (Elevplan). These requirements are related to legislation requiring 15 to 17 year olds to be engaged in education and training, employment or other relevant activities ⁽¹³⁾ and therefore do not apply to those over 18 (Danish Ministry of Education, 2011).

⁽¹²⁾ Statbank Denmark (<http://www.statbank.dk/statbank5a/default.asp?w=1024>).

⁽¹³⁾ *Bekendtgørelse om pligt til uddannelse, beskæftigelse eller anden aktivitet* [Statutory order regarding the obligation for education, employment or other activity].

In terms of progression from the 12 foundation courses to one of the main programmes, there is a guarantee in place meaning that all students completing a foundation course are entitled to complete one of the associated main programmes. The main programmes generally commence with an on-the-job training placement. As such, the student must not only have completed the relevant foundation course, but also have an apprenticeship contract with an approved training company⁽¹⁴⁾ prior to being admitted to the main programme. Colleges broker training placements and are duty-bound to seek out suitable placements. When no suitable placements are available in a desired programme, students are offered admission to another associated main programme where placements are available. Another possibility is for the student to enter a training agreement with the college itself, where practical training also takes place at the college. Students are, however, obliged to continue applying for relevant training placements at enterprises.

Box 2 Impact of the crisis on training placements

The economic crisis seems to have had a negative impact in terms of enterprises' willingness to offer apprenticeship contracts. Since an apprenticeship contract is necessary for a student to move from a basic course to a more specialised main course, lack of suitable placements represents a considerable problem which can result in dropout. Between 2003 and 2007, the number of entered apprenticeship contracts rose from 26 800 to 36 900. However, this figure dropped to just 26 900 new contracts in 2009, more or less a return to 2003 levels. Figures for 2011, meanwhile, show a considerable recovery, rising to 32 600 ^(a). Government initiatives aimed at increasing the number of training placements, such as offering a bonus to companies providing training placements, public information campaigns to recruit more companies, and establishment of new training centres at training colleges, may have begun to have a positive impact.

^(a) To ensure consistency, training agreements within the social and healthcare programme and the assistant pedagogue programme are not included here, as they were not included in previous statistics. If these programmes are included, the total number of new apprenticeship contracts in 2011 is 47 400 (All figures: Hwang and Girotti, 2011).

⁽¹⁴⁾ See below for further detail on the approval process and opportunities for training placements within a college.

There are also few main programmes where admission is limited. This is to ensure that the number of students is in accordance with labour market needs ⁽¹⁵⁾. In 2012, this applies to the following programmes:

- (a) textile worker (*Beklædningshåndværker*);
- (b) digital media;
- (c) film and TV production;
- (d) fitness instructor;
- (e) photographer;
- (f) hairdresser;
- (g) cosmetician;
- (h) media graphic designer;
- (i) health service secretary;
- (j) theatre, exhibition and event technician;
- (k) veterinary nurse;
- (l) precious stone smith (*Ædelsmed*).

In these cases, all students are either admitted according to a quota or are required to have a training agreement with an enterprise prior to commencing the relevant foundation course.

IVET is free of charge and also entitles the student to an apprentice salary and/or student grant (the latter only for students aged 18 or over).

3.2.1.2. *Content*

Virtually all IVET programmes are organised according to the dual principle where students alternate between periods spent at a training placement, generally in an enterprise, and periods of college-based learning.

Foundation courses are predominantly college-based ⁽¹⁶⁾ and combine theoretical, classroom-based learning with more practical workshop-based learning to varying degrees with, for example, the commercial programme concentrating more on classroom-based learning than many of the more technical programmes. Foundation courses combine common competence goals, where students are given a broad introduction to the competences to be acquired in the associated main programmes, and specific competence goals aimed at individual programmes.

⁽¹⁵⁾ Danish Ministry of Education, *Adgang til erhvervsuddannelser* [Access to vocational education] (<http://www.uvm.dk/Uddannelse/Erhvervsuddannelser/Adgang%20og%20eksamen/Adgang.aspx>).

⁽¹⁶⁾ Other possible pathways are presented later in this chapter.

While exact distribution varies according to both programme and needs of the individual student, the main programmes generally comprise alternating periods of workplace-based training and college-based learning with a ratio of 2:1. The former generally takes place at a local enterprise with which the student has a training agreement brokered by the college. There are three exceptions where training is entirely college-based:

- (a) building montage technician;
- (b) health service secretary;
- (c) web integrator.

College-based teaching in the main programmes can be divided into four types of subjects:

- (a) general subjects are often familiar to students from their previous schooling including English, mathematics, Danish, etc. However, in IVET, content of these subjects is adapted to the particular programme so that, for example, mathematics for carpenters will concentrate on areas relevant to working as a carpenter and will be quite different to mathematics for veterinary nurses. General subjects also include other broad subjects such as product development and basic materials science;
- (b) area subjects are branch-specific. For carpenters, they may include subjects such as introduction to carpentry tools and basic technical drawing;
- (c) specialised subjects will often build on the competences provided by area subjects, but will be further geared to specific job functions. Carpenter training could be timber constructions or carpentry tools level 2;
- (d) optional subjects provide students with an opportunity to gain either specific vocational competences aiding transition to the labour market or competences providing access to further education such as qualifications in general subjects at a higher level.

College-based teaching in the main programmes is organised according to an integrated approach and students frequently work on projects where they are expected to incorporate what they have learned in different subjects and combine both general and more specialised competences.

3.2.1.3. *Training placements*

Training placements are based on a contract, or training agreement, between an apprentice and a company. All training companies are approved by the social partners via the relevant trade committee and thereby have to live up to certain requirements, for example a certain level of available technology and ability to offer various tasks in an occupation. Currently over 60 000 companies are

approved to offer apprenticeship training in at least one training field. Many can offer apprenticeships in several fields, representing over 140 000 approvals ⁽¹⁷⁾. Once a company has been approved to provide training placements, they do not need to renew this accreditation unless they have not been active for five years or more.

Colleges and companies work closely together to make sure that training takes place in accordance with the law when compiling an individual education plan for the student in question. These plans are compiled for every student to ensure coherence between the student's wishes and the actual training programme. Students also have a personal educational portfolio that is intended to increase their awareness of the learning process. While the educational plan indicates learning pathways, how the various elements of the training programme, both college-based and workplace-based, combine to provide the student with the necessary competences, the portfolio documents indicate actual learning and skills acquired by the student.

3.2.1.4. *Assessment*

Foundation courses are completed with a project which forms the basis of an externally-graded examination ⁽¹⁸⁾. This examination constitutes an assessment of student achievements in relation to the competence goals necessary to enter their chosen main programme. Students are issued with a certificate documenting the subjects and levels they have achieved; this certificate forms the basis for entering the main programme.

In the main programmes, there are various forms of assessment throughout the course, including both oral and written examinations, and both theoretical and practical project work. The exact form of assessment can differ from programme to programme.

Programmes include both subject-specific examinations (for example in English or mathematics) and broader assessments to evaluate students' ability to combine skills, competences and knowledge acquired from the programme as a whole.

At the end of each training placement, the company issues a certificate to the college, the student, and the trade committee presenting the student's achievements.

⁽¹⁷⁾ *Praktikpladsen - mødested for elever og virksomheder* [The training place — a meeting point for students and businesses] <http://www.praktikpladsen.dk>.

⁽¹⁸⁾ A corps of external examiners is appointed by the college.

The final examination, which generally takes place during the final period of college-based learning, also varies from programme to programme. In some cases it consists entirely of a college-based examination; in others it comprises a combination of a college-based examination and a journeyman's test (*svendep prøve*); in others only the journeyman's test conducted by local trade committees. A combination is, however, most common assessing both project-based practical assignments and a theoretical examination, either oral, written or both.

The relevant local trade committee nominates external examiners. Generally, two external examiners assess individual students in cooperation with the teacher. The content of examinations is developed by the training college in consultation with trade committees. After passing the journeyman's certificate, the graduate acquires a qualification at skilled-worker level and is able to enter the labour market. ⁽¹⁹⁾

3.2.1.5. *Quality assurance*

For quality assurance of vocational colleges, various approaches are employed. Self-assessment remains the primary mechanism, but external monitoring is increasing. Since the 1980s, a shift has taken place from detailed regulation on input to framework regulation on output. The aim of output regulation is to increase focus on results and quality so that the practices of institutions meet political objectives, and on adaptation to the needs of regional and local business sectors for education and competence development ⁽²⁰⁾.

Monitoring is conducted at two levels:

- (a) system level. This looks at the effectiveness of the 109 different main programmes in terms of employment frequency among graduates. The Ministry of Children and Education then enters into dialogue with national trade committees about any programmes which fail to reach the targets to assess the relevance in terms of labour market needs and possible steps for improvement;

⁽¹⁹⁾ Danish Ministry of Education: *Prøver og eksamen i erhvervsuddannelserne [Tests and examinations in VET]*
<http://www.uvm.dk/Uddannelse/Erhvervsuddannelser/Adgang%20og%20eksamen/Eksamen.aspx>.

⁽²⁰⁾ Cort, 2008; Danish Ministry of Education: *Tilsyn med erhvervsuddannelserne [Monitoring of VET]*
<http://www.uvm.dk/Uddannelse/Erhvervsuddannelser/Styring%20og%20ansvar/Tilsyn.aspx>.

- (b) institutional level. At this level, monitoring can be divided into content monitoring and financial monitoring. The first concerns the degree to which a vocational college provides the programmes in accordance with the legislative framework. The second monitors a college's compliance with budgetary constraints set out by the Ministry of Children and Education.

Completion/drop-out rates and examination pass rates likewise enter into the quality appraisal of a vocational college.

Within companies, the social partners supplement ministerial monitoring via national trade committees and local training committees, appraising the quality of graduates, curricula, apprenticeships within enterprises, etc.

3.2.2. New apprenticeship: an alternative pathway to an IVET qualification

As well as entering a main programme through one of the 12 foundation courses, since 2006 it has been possible for learners to start directly in a company with which they have an apprenticeship contract. This pathway is known as new apprenticeship (*ny mesterlære*). New apprenticeship was introduced as an alternative pathway into the main programmes and is part of the government's strategy for reducing dropout within IVET. Pupils undertaking a main programme via the new apprenticeship pathway will typically spend the first year of their education receiving practical training in an enterprise. The initiative is aimed in particular at pupils who may struggle or lack motivation to complete the more theoretical school-based education without first gaining a practical insight into the field. However, pupils will still have to follow some school-based teaching as agreed in their individual education plans.

New apprenticeship has been introduced in all areas of IVET (technical, commercial, etc.), although a few national trade committees have chosen to opt out, meaning that students cannot enter the associated main programmes (such as electricians and plumbers) via this route. The school and the enterprise, with the pupil, are responsible for planning and organising the form and content of practical training and developing the pupil's individual education plan based on a description of the competences to be gained from the main programme in question and assessment of the pupil's actual competence.

New apprenticeship, with other new programmes such as EUX (see below for further details) increase flexibility of the various pathways in IVET and reflect an overall policy trend throughout the educational sector towards more differentiated and individualised teaching methods.

Most students still choose to start their education with a foundation course at a vocational college. In 2010, the number of new 'regular' apprenticeship contracts was 23 376 while the number of new 'new apprenticeship' contracts

was 1 946. Those entering new apprenticeship contracts were generally younger. There were also considerable differences between programmes. New apprenticeship was most popular in the areas body and style (training as a hairdresser accounted for the single largest number of new apprenticeship contracts in any field), and human food. In other fields, new apprenticeship contracts were more or less non-existent (Quaade, 2011).

3.2.3. Other vocational programmes and alternative pathways

Besides foundation courses and main programmes described above, several schemes exist for young people who are unsure of their educational/occupational choice, have learning disabilities, or social and personal problems. They can enrol in a course at a school of production (*produktionsskole*), in a basic vocational training programme (*Erhvervsgrunduddannelse*, EGU) or in youth education for young people with special needs (*Ungdomsuddannelse for unge med særlige behov*).

For young people wanting to keep as many options open as possible, there is also the newly launched upper secondary EUX programme which combines a full vocational qualification with general subjects at a level equivalent to that in the general upper secondary programmes, thereby providing full access to higher education.

3.2.3.1. Basic vocational training (EGU)

Basic vocational training is aimed at unemployed young people aged under 30 unable to complete another form of education or training which might equip them with qualifications to enter the labour market. The purpose is to improve their vocational and personal skills and inspire them to enter the labour market or pursue further training possibilities.

Training is full-time and lasts for two years on average. It is primarily practical with little theoretical content and combines alternating school-based (one third) and workplace-based training (two thirds). The training programme is set on an individual basis and may contain elements from main programmes; training may take place at vocational colleges, agricultural colleges, social and healthcare colleges, etc., but is not anchored in one particular institution. Each training period should be concluded as an individual training element which may be accredited for other training programmes. Statements are issued on details of training content, job function, marks, etc. On completion of the entire training programme, a certificate is issued by the college. Any completed elements from a main programme can later be transferred as credit if entering the relevant programme.

Trainees receive a salary during periods of workplace training and financial support from the State during training at college. The wage level is set by collective agreement in the trade. The provision for basic vocational training is at the discretion of the municipality in which the trainee lives.

Table 8 **Number of enrolments within EGU**

2009	2008	2007
1 248	952	789

Source: Danish Ministry of Education:
<http://www.uvm.dk/service/Statistik/Erhvervsuddannelserne/Erhvervsgrunduddannelse-egu.aspx>.

The substantial increase in enrolment in 2009 is a result of an ongoing campaign to raise public awareness of EGU.

3.2.3.2. *Schools of production*

Schools of production are aimed at young people aged under 25 who have not completed upper secondary education or find it difficult to see a way forward in further education or in the labour market. Most come either from compulsory schooling or have completed a basic IVET course without completing a main course. The purpose is to help clarify the individual's future career path, and individual guidance is provided on a day-to-day basis.

The 78 schools of production base activities on workshops and give priority to learning through experience and practical work cooperation. Workshop subjects range from carpentry or metalwork to media or theatre, and the teachers are skilled craftsmen with a pedagogical background.

Learning mainly takes place by doing, but theoretical training is also offered (although not mandatory). There are no examinations but participants must be present at practical training if they want to stay at the school for the entire training period.

Participation is limited to one year or shorter. The schools are independent institutions but receive funding from the municipality and State, as do participants. A certificate of attendance is issued at the end of the stay, but there are no exams and no marks given.

Table 9 **Number of graduates of a course of training at a production school**

2009	2008	2007
10 261	9 520	8 851

Of the total number of graduates in 2009, 37% participated in courses of less than three months duration⁽²¹⁾. On completion of a course at a production school, 37% continue in the educational and training system (generally entering one of the 12 foundation courses), while 12% gain employment (Pedersen, 2010).

3.2.3.3. *Youth education for young people with special needs*

Youth education for young people with special needs is intended for young people with intellectual disabilities or other special needs, 16 to 25 years of age, who are unable to complete another upper secondary programme, even with special needs assistance. The Act on Young People with Special Needs (2007) stipulates that local authorities are obliged to offer young people with special needs a three-year youth education programme upon completion of compulsory schooling.

The programme is not necessarily vocational, but generally combines general, vocational and practical elements. The three-year programme begins with a 12-week clarification period based on which an individual education plan is drawn up in collaboration with local youth guidance services (Chapter 8), students and their parents. The objective is that students acquire personal, social and academic competences enabling them to have as independent and active an adult life as is possible, and perhaps access to further education and training and/or employment. In preparing students for adult life, the programme seeks not only to continue academic development begun during compulsory schooling, but to ensure students encounter everyday practical situations and develop socially. As such, an education plan can consist of periods spent at various institutions including VET colleges, schools of production, folk high schools, continuation schools and schools of domestic science as well as various work placements. On completion, students receive documentation of the competences acquired.

As a new programme, youth education for young people with special needs is in a phase of rapid growth (Table 10). This is, of course, partly because the programme started in 2007 and lasts three years; nevertheless the most recent figures represent a significant increase. A total of 3 731 students have begun the

⁽²¹⁾ Danish Ministry of Education, *Statistik om produktionsskoler [statistics on schools of production]*
<http://www.uvm.dk/service/Statistik/Erhvervsuddannelserne/Produktionsskoler.aspx>.

programme since its inception with 6% dropping out, 3% having so far completed the programme and the remainder still underway ⁽²²⁾.

Table 10 **Number of students in youth education for young people with special needs**

2010	2009	2007
3 418	1 832	379

3.2.3.4. Combined vocational and general upper secondary education (EUX)

Combined vocational and general upper secondary education (EUX) was introduced in 2010 and offers an opportunity for young people to obtain a qualification providing full access to both higher education and the skilled labour market. The programme is still in its early stages and is currently only offered in conjunction with 17 of the main programmes and at a few VET colleges, although others are under development. Programmes are developed by relevant national trade committees and approved by the Ministry of Children and Education.

Programme duration varies, just as for main programmes, but will be longer than standard IVET (Danish Ministry of Education, 2011).

3.2.4. VET pathways at tertiary level

Several short-cycle higher education programmes (*kort videregående uddannelse*, KVV) lasting two to two-and-a-half years are offered by the nine new ⁽²³⁾ business and technical academies (*erhvervsakademi*) resulting in award of an academy profession degree (*erhvervsakademigrad*, AK). Medium-cycle professional bachelor programmes lasting three to four years are generally offered by seven university colleges ⁽²⁴⁾ and award professional bachelor's degrees. Admission requirements for academy profession and professional bachelor programmes are either relevant vocational upper secondary education and training – IVET – or general upper secondary education combined with

⁽²²⁾ Danish Ministry of Education, *Statistik om ungdomsuddannelse for unge med særlige behov* [Statistics on youth education for young people with special needs]

<http://www.uvm.dk/service/Statistik/Tvaergaende/Ungdomsuddannelse%20for%20unge%20med%20saerlige%20behov.aspx>.

⁽²³⁾ Established 1 January 2009.

⁽²⁴⁾ These were established on 1 January 2010 by amalgamating several existing colleges from various areas (such as teaching colleges and nursing colleges). In addition to these seven university colleges, two engineering colleges and the Danish School of Media and Journalism can award professional bachelor's degrees.

relevant labour market experience. There can be more specific requirements regarding certain attainment levels within particular general subjects for some programmes (applicants with an IVET background may have to supplement with additional general education qualifications). KVV can provide access to a supplementary diploma degree programme. The latter allows graduates to build on an academy profession degree up to a bachelor-equivalent level in the same field. A professional bachelor's degree, meanwhile, can provide access to certain university-based master's programmes. IVET does not provide direct access to university-based bachelor programmes.

KVV, professional bachelor and diploma degree programmes qualify students for performing practical tasks on an analytical basis. Apart from theoretical subjects, programmes are usually completed with a project examination and always contain some degree of workplace training.

Examples of KVV programmes (25 in total) include:

- (a) dental hygienist,
- (b) installation electrician,
- (c) multimedia designer,
- (d) laboratory technician,
- (e) marketing management, etc.

The 80 professional bachelor programmes include:

- (a) schoolteacher,
- (b) social educator,
- (c) midwife,
- (d) radiographer,
- (e) nurse,
- (f) leisure management,
- (g) software development,
- (h) journalist,
- (i) social worker,
- (j) a wide array of different engineering programmes.

In 2010, 21 100 students enrolled in KVV and 70 400 students in professional bachelor programmes ⁽²⁵⁾. Both figures indicate significant increases on previous years. Eurostat figures show that most students enrolled in higher

⁽²⁵⁾ StatBank Denmark, <http://www.statbank.dk/statbank5a/default.asp?w=1024>.

education at ISCED 5 in Denmark are classified within ISCED 5A⁽²⁶⁾ (84.7%), while only 12.2% are placed within ISCED 5B⁽²⁷⁾. Professional bachelor degrees, despite their orientation towards entry to a particular vocation, are classified at ISCED 5A. Figures are, however, consistent with EU averages.

Programmes are State-financed and part of the higher education system. Until autumn 2011, responsibility for higher education was largely divided between the Ministry of Education (KVV and professional bachelor's degrees) and the Ministry of Science, Technology and Innovation (universities). The ministerial restructuring by the new government means, however, that tertiary education is now collectively placed under the jurisdiction of the new Ministry of Science, Innovation and Higher Education. It is hoped this will aid permeability at tertiary level.

⁽²⁶⁾ Covering tertiary programmes largely theory-based and designed to prepare students for entry to advanced research programmes or professions with high skill requirements.

⁽²⁷⁾ Covering tertiary programmes focusing on practical, technical or occupational skills for direct entry to the labour market, typically of shorter duration.

CHAPTER 4.

Adult education and continuing training

The adult education and continuing training system has undergone several reforms to make it more flexible, demand-led and oriented towards enterprise needs. The 2003 reform saw a shift to a competence-based system where around 130 joint competence descriptions were drawn up by the social partners, in cooperation with the Danish Ministry of Children and Education. These competence descriptions are divided into around 3 000 different modules of typically one week's duration (Cort, 2008a).

In 2007, a legal framework was implemented for recognition of prior learning within adult education and continuing training. This bestows all adults with the right to an assessment of prior learning, which can act as the basis for designing an individual educational plan (Elevplan) or be detailed on a certificate officially recognising competences gained through informal or non-formal learning.

It has also been a policy objective to streamline the overall VET system (IVET and adult education and continuing training) to ensure coherence and transferability between the two subsystems. One of the measures has been to begin integrating AMU training centres and vocational colleges so that single institutions are responsible for provision of both kinds of VET ⁽²⁸⁾.

Denmark has the highest levels of participation in adult education and continuing training within the EU regardless of educational attainment levels. In 2010, Danish participation among the population with at most ISCED 0-2 was 23.4% compared with a 3.8% EU average; at ISCED 3-4, the respective figures were 30.7% and 8.0%; and for ISCED 5-6, 41.1% and 16.7% respectively ⁽²⁹⁾.

The high participation rates reflect several conditions such as the national strategy to focus on knowledge-intensive specialist sectors and lifelong learning, a large public sector, and a tradition for strong ties between educational institutions and the social partners.

⁽²⁸⁾ Danish Ministry of Education, *Love og regler på voksenuddannelsesområdet [Laws and regulations on adult education]*
<http://www.uvm.dk/Uddannelse/Uddannelse%20og%20undervisning%20for%20voksne/Love%20og%20regler.aspx>.

⁽²⁹⁾ Eurostat, *Participation in education and training by sex, age groups and educational attainment*
http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=trng_ifs_02&lang=en.

4.1. Available measures, programmes and pathways

Adults in Denmark have full access to IVET. However, there is also a basic (vocational) adult education programme (*Grunduddannelse for voksne*, GVU), as well as programmes at tertiary level, including further adult education (*Videregående voksenuddannelse*, VVU), offering equivalent qualifications to those in the mainstream education system, but specifically tailored to adults ⁽³⁰⁾. Several education and training opportunities are also offered to the unemployed and groups vulnerable to exclusion from the labour market.

The main type of (vocational) adult education and continuing training in Denmark is, however, adult vocational (continuing) training (AMU) programmes offered by AMU training centres and vocational colleges. These programmes are important provisions in the policy objective of furthering lifelong learning and contributing to creation of a flexible labour market.

All the above types of vocational adult education and continuing training enter under the responsibility of the public sector which plays a major role in provision of vocational adult education and continuing training, as well as general adult education. These types of vocational adult education and continuing training will be presented in the following sections.

In addition, the past 10 to 20 years have seen growth in private provision. This includes courses provided by consultancy firms, the social partners, private course providers, and internal HRM departments. These private initiatives are not covered by the present report.

4.1.1. Adult vocational (continuing) training (AMU)

AMU programmes provide participants with skills and competences applicable in the labour market and primarily directed towards specific sectors and job functions. The programmes may either deepen the participant's existing knowledge in a particular field, or broaden it to related fields.

AMU programmes are targeted at low-skilled and skilled workers, but are open to all either resident or employed in Denmark, irrespective of educational background. Some AMU courses are also targeted at the unemployed ⁽³¹⁾. The objectives are threefold:

⁽³⁰⁾ For more details on the two parallel education and training systems, see Chapter 2.

⁽³¹⁾ For further details on education and training opportunities for the unemployed, see Section 4.1.3.

- (a) 'to contribute to maintaining and improving the vocational skills and competences of participants in accordance with the needs on the labour market and to furthering competence development of participants;
- (b) to contribute to solving labour market restructuring and adaptation problems in accordance with the needs on the labour market in a short- and a long-term perspective;
- (c) to give adults the possibility of upgrading competences for the labour market as well as personal competences through possibilities to obtain formal competences in vocational education and training'. ⁽³²⁾

To meet these objectives, AMU must be a flexible system, responsive to changing demand for different skills and competences within the labour market.

As such, approximately 3 000 AMU programmes meet the continuing training needs of adult unskilled and skilled workers and technicians in a wide range of sectors and trades. About 200 new programmes are developed each year, while existing programmes deemed outdated for current labour market requirements may be scrapped. However, to provide an easy overview, these programmes have been gathered into approximately 130 joint competence descriptions, equivalent to 130 job areas. These descriptions consist of a description of a typical workplace, relevant competences in the job area, and a list of adult training programmes or single subject courses leading to these competences. As such, joint competence descriptions group programmes relevant for upskilling in a particular area of the labour market. The same programme can figure on more than one joint competence description. AMU programmes and joint competence descriptions are compiled by the social partners, in the form of 11 national, trade-specific adult education and continuing training committees (Section 5.2), and approved by the Ministry of Children and Education. The exception is programmes specifically developed for and funded by a particular enterprise to meet their training needs.

The programmes are generally of a relatively short duration, ranging from half a day to 50 days, with an average duration of one week. AMU programmes can be grouped into three broad categories:

- (a) specific job/sector related competences, such as gaining new technical knowledge;
- (b) general competences, such as use of (non-job specific) ICT;

⁽³²⁾ Danish Ministry of Education, *Adult vocational training in Denmark: short vocational training programmes mainly for low skilled and skilled workers on the labour market*. <http://eng.uvm.dk/Uddannelse/Adult%20Education%20and%20Continuing%20Training/Adult%20vocational%20training.aspx>.

(c) personal competences, such as communication skills.

Depending on what best corresponds to needs of enterprises and participants, courses can be held as traditional classroom teaching, in open workshops, as distance learning or at the workplace; over several consecutive days, spread over a longer period or as evening classes. Programmes can be combined both within and across qualification areas and alternate between theory and practice. Each participant has an individual training plan (Elevplan) which outlines the goals to be achieved and can combine any programmes covering different areas and competences relevant to the individual's job sector.

In compiling individual training plans, an assessment of prior learning often plays a key role. In 2007, a legal framework was implemented for recognition of prior learning in the adult education and continuing training system. This bestows all adults with the right to an assessment of non-formal and informal learning, which can act as the basis for designing the individual educational plan or be detailed on a certificate officially recognising competences gained through informal or non-formal learning. The individual competence assessment procedure ensures that the needs for further education are determined on an individual basis. The plans have to consider the following core elements:

- (a) labour-market policy needs as the basis for the AMU programme;
- (b) programme aims and objectives;
- (c) purpose of the individual educational plan (initial or specialised training, etc.);
- (d) skills of the participant and required entrance qualifications;
- (e) certification.

AMU providers are responsible for providing adequate training according to individual training plans and ensuring that aims and objectives are met. Upon completion, participants receive a certificate. In certain cases (around 120 programmes), this certification is a formal requirement for fulfilling certain job functions (such as operating certain machinery). The certificates do not, however, provide direct access to further education and training, although they can be included in an assessment of prior learning resulting in credit transfer, for example if entering a mainstream IVET programme in the same field (Section 3.2).

Providers of the programmes – vocational colleges, AMU training centres, and private providers – are locally based. Programme success depends on close cooperation between local enterprises and training institutions, and programmes being adapted to local conditions.

In 2010, there were more than one million participants in AMU courses, a very slight fall from 2009 figures where there was an increase of more than 250 000 compared to 2008. However, as many of these courses are of very short duration (as little as half a day), the figures for number of full-time equivalent students are much lower at just 15 200. This again represents a slight fall from the record 2009 figures. A closer look at the figures for 2010, however, shows a considerable fall in the number of employed participants with a steep rise in the number of unemployed people completing an AMU course (VEU-rådet, 2011). Most participants in the programmes either have IVET as their highest level of education (51%) or compulsory schooling (25%) (VEU-rådet, 2011).

4.1.2. Basic adult education (GVU)

Basic (vocational) adult education (*grundlæggende voksenuddannelse*, GVU) is specifically tailored to adults with labour market experience but few educational qualifications wishing to obtain formal vocational qualifications. Admission requirements are a minimum age of 25 and at least two years of relevant work experience. Participants are offered an assessment of prior learning, including practical on-the-job experience and participation in AMU courses. On this background, individual education and training plans are drawn up to supplement these competences to provide a complete, formal vocational qualification.

As such, GVU consists of an individual education and training plan, based on recognition of prior learning, which can be comprised of a combination of:

- (a) single subjects and elements from IVET programmes;
- (b) AMU programmes;
- (c) single subjects from adult general education.

This plan can be compiled by any AMU centre or VET college approved to provide the relevant programme, while actual provision of training can be shared between several institutions.

A GVU qualification corresponds fully with a similar IVET qualification, with the same educational objectives and with participants completing the same final examination. While adults also have full access to IVET, GVU offers greater opportunity for tailoring education and training to individual needs. Greater flexibility is also provided as the individual education and training plan is valid for up to six years, better enabling adults to continue in their jobs while acquiring formal vocational qualifications ⁽³³⁾.

⁽³³⁾ Danish Ministry of Education, *Grunduddannelse for voksne (GVU) [Basic adult education (GVU)]*.

In 2010, only 1 000 full-time equivalent students were enrolled in GUV. This is, however, a significant increase compared to 2009, and more than doubles the figures for 2008. By far the largest GUV programme is the pedagogical assistant programme, accounting for 65% of total full-time equivalent students (VEU-rådet, 2011).

4.1.3. Measures to help job-seekers and people vulnerable to exclusion from the labour market

Some training provisions specifically target unemployed people and people at risk of exclusion, such as those with a criminal background or with a history of substance abuse, refugees, and the disabled. Previously, two stakeholders were central: the public employment service (*Arbejdsformidling*, AF) and local municipalities, where the latter were responsible for persons who had not contributed to unemployment insurance. However, since 2007, these efforts have been collected in 91 job centres under municipal jurisdiction. They use the following labour market instruments:

- (a) activation offers for young unemployed persons comprising education and training opportunities in the mainstream IVET system, special courses at AMU training centres, production school courses and folk high school courses⁽³⁴⁾. The objective is to improve skills and competences, improving individuals' opportunities in the mainstream education and training system and in the labour market. Duration and certification differ greatly dependent on the individualised educational plan;
- (b) specialised AMU courses requested by municipalities. These help ensure that training offers correspond to local skills needs and are organised according to the same principles as the remaining AMU system;
- (c) municipal activation schemes which may include production school courses, courses at folk high schools or other activities initiated by the municipality;
- (d) basic (vocational) adult education programmes (GUV, see above), although this offer is not restricted to unemployed people;
- (e) wage subsidies – individuals who have been unemployed for more than nine months (three months for individuals under 30) can be employed with a public wage subsidy. Those employed within the public sector receive up to

<http://www.uvm.dk/Uddannelse/Uddannelse%20og%20undervisning%20for%20voksne/Uddannelser%20for%20voksne/Grunduddannelse%20for%20voksne.aspx>.

⁽³⁴⁾ Folk high schools (*folkehøjskoler*) provide non-formal, non-vocational adult education.

DKK 113 per hour (EUR 15), while private enterprises can receive a subsidy of DKK 69 per hour (EUR 9) for up to a year when employing individuals meeting the criteria (2011 figures) ⁽³⁵⁾. Employment with wage subsidy can be combined with participation in training programmes. The objective is first that the workplace may decide to retain an employee on normal conditions after completion of the subsidised period, and second that the individual gains work experience and relevant labour market competences. It is generally the task of the individual to find such a position, although caseworkers will sometimes be able to provide assistance.

The precise requirements for entering the various activation schemes, as well as their form and content, vary considerably, as they fall under municipal jurisdiction and are thereby subject to local conditions and priorities. They are also greatly dependent on the economic situation with demands made on the unemployed generally greater during periods of economic growth.

4.1.4. Vet pathways at tertiary level

Adults have full access to the mainstream tertiary education system (Chapter 3). However, there is also a parallel system at tertiary level specifically tailored to the needs of adults, for example by providing courses over a longer duration on a part-time basis, largely during evenings and weekends, to allow ongoing employment (Chapter 2). Further (vocational) adult education (*Videregående voksenuddannelse*, VVU) provides qualifications equivalent to an academy profession degree. Like academy profession programmes, they are also offered at business and technical academies, but, in addition to an appropriate IVET qualification or a general upper secondary qualification, they also require two to three years of relevant work experience. By drawing on participants' prior learning in the labour market, the same qualifications can be gained over a shorter period of study with VVU programmes being the equivalent of one year full-time study, compared to between two and two-and-a-half years for mainstream academy profession programmes. However, as VVU programmes are offered as part-time programmes, the actual duration will usually be between two and three years – students must complete the programme within six years of commencing. A total of 20 VVU programmes are offered including areas such as retail, interpreter, international transport and logistics, and information technology.

⁽³⁵⁾ National Labour Market Authority [*Arbejdsmarkedsstyrelsen*]:
http://www.ams.dk/Love-og-Regler/Satser/Satser.aspx?sc_lang=da.

Both mainstream KVV and adult VVV qualifications can provide access to a supplementary diploma degree programme allowing graduates to build on an academy profession degree up to a bachelor-equivalent level within the same field, while VVV qualifications also provide access to relevant full-time professional bachelor programmes. As such, there is full horizontal permeability between mainstream and adult education and continuing training systems.

CHAPTER 5.

Governance

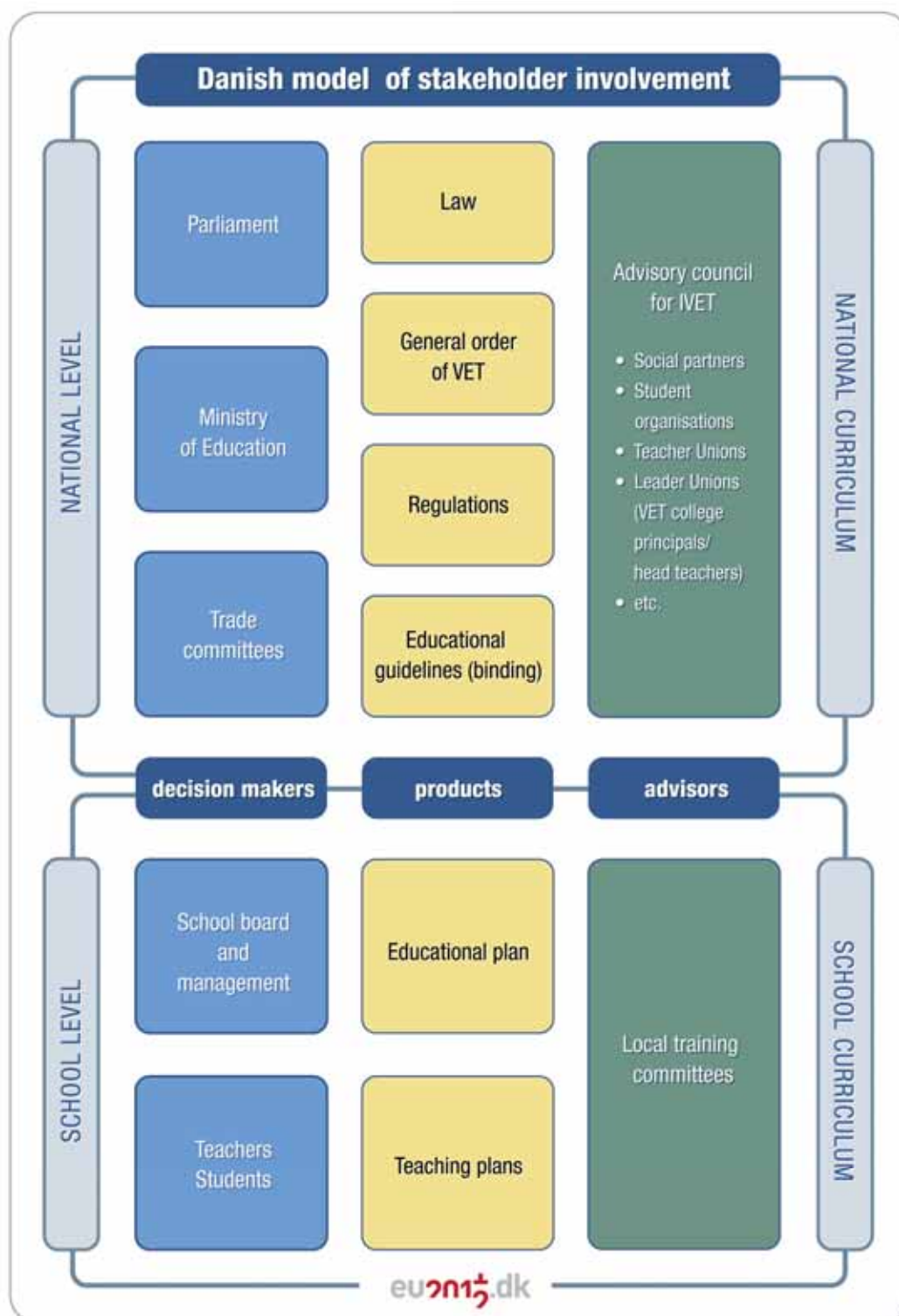
VET in Denmark is organised according to the dual principle, meaning that the social partners play a key role in relation to both the content and organisation of VET. Moreover, the Danish VET system is characterised by a high level of stakeholder involvement where not only the social partners, but vocational colleges, teachers and students are involved in development of VET based on consensus and shared responsibility.

While there is much common ground between IVET and adult education and continuing training, with some vocational colleges offering both, the exact composition of the two organisational frameworks differs in terms of precisely which organs and institutions are involved, and the two fields will, therefore, be presented separately.

5.1. Governance IVET

The IVET system is centralised in terms of providing nationally-recognised qualifications (decision-making level), and to some extent (pedagogically) decentralised as VET providers are autonomous in terms of adapting VET to local needs and demands (implementation level). Figure 4 presents the Danish model of stakeholder involvement.

Figure 4 IVET stakeholders



Source: Cort, 2008b, p. 25.

5.1.1. Public authorities

The parliament sets out the overall framework for IVET which is administered by the Ministry of Children and Education. The ministry has overall parliamentary, financial and legal responsibility for IVET, laying down the overall objectives for IVET programmes and providing the legislative framework within which stakeholders, social partners, colleges and enterprises are able to adapt curricula and methodologies to labour market needs and students. The ministry is responsible for ensuring that IVET programmes have the breadth required for a youth education programme and for allocating resources. Since the beginning of the 1990s, the ministry has regulated IVET provision through a system of targeted framework governance based on providing ‘taximeter’ grants per student ⁽³⁶⁾.

5.1.2. Social partners

The social partners play an institutionalised role at all levels of IVET, from the national advisory council on vocational upper secondary education and training (Rådet for de grundlæggende Erhvervsrettede Uddannelser) advising the Ministry of Children and Education on principal matters concerning IVET to playing an advisory role at local level through local training committees, comprised of representatives from the social partners who advise colleges on local adaptation of IVET. Their most important role is to ensure that provision of VET is in line with the needs of the labour market ⁽³⁷⁾.

5.1.3. Advisory council

The above advisory council consists of 31 representatives from the social partners. In its advisory capacity, the council monitors developments in society and highlights trends relevant to IVET. The council makes recommendations to the ministry regarding establishment of new IVET programmes and adaptation, amalgamation or discontinuation of others.

5.1.4. National trade committees

National trade committees (faglige udvalg) constitute the backbone of the IVET system. Approximately 50 trade committees are responsible for 109 main courses. The committees normally have 10 to 14 members and are formed by

⁽³⁶⁾ See Chapter 6 for a short description of the Danish taximeter system.

⁽³⁷⁾ See Annex 1 for a detailed presentation of the role of social partners in matching VET provision with labour market needs.

labour market organisations (with parity of membership between employer and employee organisations).

Among their core responsibilities, national trade committees:

- (a) perform a central role in creation and renewal of IVET courses by closely monitoring developments in their particular trade and have a dominant position in formulating learning objectives and final examination standards, based around the key competences deemed as required in the labour market;
- (b) conduct relevant analyses, development projects, etc., and maintain close contact with relevant stakeholders;
- (c) decide the regulatory framework for individual courses within boundaries set by the legislative framework – they decide which trade is to provide the core of the training, the duration of the programme, and the ratio between college-based teaching and practical work in an enterprise;
- (d) approve enterprises as qualified training establishments and rule on conflicts which may develop between apprentices and the enterprise providing practical training;
- (e) function as gatekeepers to the trade as they are responsible for issuing journeyman's certificates, both in terms of the content, assessment and actual holding of examinations.

Trade committees and their secretariats are financed by participating organisations (Danish Ministry of Education, 2008).

5.1.5. Local training committees

Local training committees, meanwhile, are affiliated with each vocational college⁽³⁸⁾ and ensure close contact between vocational colleges and the local community, improving responsiveness to particular local labour market needs. They consist of representatives from local employers and employees, appointed by national trade committees, as well as representatives of staff, management and students appointed by colleges. Training committees work closely alongside colleges in determining the specific curriculum at colleges, including which optional subjects are available. They assist and advise national trade committees in approving local enterprises as qualified training establishments and in mediating conflicts between apprentices and enterprises. Finally, training committees help to ensure enough suitable local training placements.

⁽³⁸⁾ Typically, more than one local training committee is associated with each college, with the various committees covering different fields of IVET.

5.1.6. VET providers

Colleges assume everyday responsibility for teaching and examination. As stated, they work closely with local training committees in determining course content. As self-governing institutions, vocational colleges are led by a governing board with overall responsibility for the administrative and financial running of the college and educational activities in accordance with the framework administered by the Ministry for Children and Education. The board consists of teachers, students and administrative staff representatives, and social partner representatives. The board takes decisions regarding which programmes are offered at the college and their capacity, imposes local regulations and guidelines, guarantees responsible administration of the college's financial resources including approval of budgets and accounts, and hires and fires the operational management (director, principal, dean or similar).

The operational management, meanwhile, is responsible for implementing the overall objectives and strategies set out by the governing board.

Around 100 institutions offer IVET programmes at upper secondary level, most self-governing institutions under the jurisdiction of the Ministry of Children and Education. These include:

- (a) 25 business colleges;
- (b) 21 technical colleges;
- (c) 19 combined colleges with, for example, both business and technical departments;
- (d) 9 agricultural colleges;
- (e) 16 basic healthcare colleges;
- (f) several specialised institutions such as hairdressers' school (Danish Ministry of Education, 2010d).

In addition to IVET, these colleges may offer the general upper secondary qualifications higher commercial examination (*højere handelseksamen*) and/or higher technical examination (*højere teknisk eksamen*), as well as AMU (adult vocational training courses). Further, courses and programmes specifically commissioned by enterprises are offered, and, often, short-cycle higher education programmes are offered in cooperation with other colleges. In recent years, the trend has been towards institutional consolidation with a series of mergers leading to considerable reduction in the number of institutions which, in turn, are larger and can offer the student a greater choice of programmes.

To provide students with the relevant transversal competences, vocational colleges focus on learning instead of teaching. Students, therefore, work on a project-oriented basis and in groups, learning how to collaborate to achieve a

goal. Students play an active role in their own learning processes rather than passively receiving knowledge from teachers.

5.2. Governance of adult education and continuing training ⁽³⁹⁾

Cooperation with the social partners is an integral part of national labour market policy, also in areas primarily regulated by statute: for example, health and safety at work, job placement services, measures to combat unemployment, and unemployment insurance. Likewise, while adult vocational (continuing) training (AMU) is the overall responsibility of the Ministry of Children and Education, the social partners are involved at both national and local levels, playing a key role in management, development, priority setting, organisation and quality assurance, as well as being represented on school boards and educational committees ⁽⁴⁰⁾.

In the adult education and continuing training system, the same institutional structure exists as in IVET (Figure 4), with the following bodies ensuring involvement of the social partners in development of adult education and continuing training:

- (a) a national council for adult education and continuing training (*Voksen og efteruddannelses-rådet*, VEU-rådet), responsible for advising the Minister for Education on all matters concerning adult education and continuing training;
- (b) 11 national, trade-specific adult education and continuing training committees (*efteruddannelsesudvalg*) responsible for developing the form and content of programmes and courses within the frameworks set out by this legislation and for drawing up joint competence descriptions;
- (c) local training committees advising colleges and AMU training centres on local adaptation of adult education and continuing training.

Until 2009, there were two advisory councils, one for general adult education and one for vocational adult education and continuing training. Their amalgamation into the National Council for Adult Education and Continuing Training is part of efforts to increase links between the two areas, thereby better

⁽³⁹⁾ Applies to AMU (adult vocational training) and any elements of GUV (basic adult education) provided as AMU (GUV is intended to provide equivalent qualifications to IVET and is as such largely governed by the same educational objectives).

⁽⁴⁰⁾ Danish Ministry of Education, *Adult vocational training in Denmark*.
<http://eng.uvm.dk/Uddannelse/Adult%20Education%20and%20Continuing%20Training/Adult%20vocational%20training.aspx>.

enabling a holistic view of the individual's competence requirements (VEU-rådet, 2010).

There are approximately 100 public providers of AMU in Denmark, including colleges also offering IVET programmes, and AMU centres, as well as some private providers. There are an estimated 5 000 private providers. However, registration of activities, expenditure, participants, etc., is not centralised and makes it difficult to provide a definitive overview of private adult education and continuing training activities. There is evidence, however, that this field is dominated by areas such as management training, communication, and personal development with only few vocational training programmes (Danish Ministry of Finance, 2010).

To receive accreditation as a public AMU provider, an institution must participate in the local VEU centre (Voksen- og Efteruddannelses Centre or VEU centres). The 13 VEU centres were established in January 2010 to provide a unified gateway to both general adult education and vocational adult education and continuing training, including educational and career guidance, with greater focus on quality and effectiveness. Within AMU, where short-term responsiveness to local and regional labour market training needs is essential, VEU-centres have identification and integration of skill needs as one of their five primary functions.

Providers of programmes are locally based with programme success dependent on close cooperation between local enterprises and training institutions, and programmes adapted to local conditions. As such, another objective in associating all public AMU providers with a local VEU centre is to improve their ties with the local and regional labour market and possibilities of closely coordinating local educational, employment, and business and growth policy.

Colleges' and AMU training centres' governing boards are responsible for appointing local training committees. These must consist of an equal number of representatives from employee and employer organisations. A college or AMU centre determines whether to appoint one or several committees (separate committees for different vocational fields). They can also decide to cooperate with local vocational colleges (IVET providers) and appoint local committees covering both IVET and AMU. This is part of a government strategy to encourage collaboration and synergy between IVET and AMU providers.

CHAPTER 6.

Funding arrangements and mechanisms

In Denmark, public financing of VET is a central trait of the system and there is no sign that this is going to change. The government attaches great importance to improving the quality and efficiency of education and training systems to equip all individuals with the skills required for a modern workforce in a knowledge-based society and which, at the same time, permit career development and reduce skills mismatch and bottlenecks in the labour market.

The basis to achieve these objectives is a highly-developed and publicly-financed system for basic, secondary and further education and training which also recognises relevant non-formal and informal competences and – in particular – practical work experience.

6.1. IVET

IVET is based on alternance models where training takes place at college and in an enterprise in turns. The State finances training at colleges, and enterprises finance on-the-job training; apprentices receive an apprentice salary while in the company.

6.1.1. Financing training colleges

In 2011, the State spent a total of DKK 7 479 million (EUR 1 006 million) on foundation courses and main programmes (Table 11). A considerable proportion of these funds were distributed to colleges in accordance with the 'taximeter' principle, whereby funding is linked to some quantifiable measures of activity, for example number of full-time equivalent students, with a set amount awarded per unit.

Besides the 'taximeter' rate, VET providers also receive an annual fixed grant for maintenance of buildings, salaries, etc. The total State grant is provided as a block grant which institutions use at their own discretion within the boundaries of the legislative framework and specific institutional objectives.

Table 11 Expenditure on main youth education pathways (2011)

Foundation courses and main programmes	EGU and production schools	General upper secondary education
DKK 7 479 million (EUR 1 006 million)	DKK 1 057 million (EUR 142 million)	DKK 10 977 million (EUR 1 476 million)

While the government remains committed to a publicly-financed system, in recent years there has been a focus on increasing cost-efficiency and effectiveness. The present funding system for IVET in accordance with the 'taximeter' principle was introduced following a major reform in 1991. Among other things, such a system provides an incentive for colleges to increase retention within the system. Critics point out that such a measure endangers quality as it encourages colleges to be more lax in assessing student performance. The 1991 reform, which was primarily organisational, introduced management-by-objectives as a means to improve overall provision of IVET. The funding system was introduced as part of a new public management (NPM) strategy to decentralise and make institutions compete on 'quasi markets'.

Over the years, however, the budgetary room to manoeuvre of vocational colleges has been restrained, and, in fact, the trend seems to be towards greater centralisation as the Ministry of Children and Education sets up more specific objectives, quality indicators and targets for colleges. From 2003, the concept 'value for money' was introduced. To obtain earmarked funding, institutions have to show their 'will to change within specific prioritised policy areas' (Danish Ministry of Education, 2003).

6.1.2. Financing training in companies

All employers, both public and private, pay an amount into a fund called the employers' reimbursement scheme (*Arbejdsgivernes Elevrefusion*, AER), regardless of whether or not they provide training placements. This fund finances both IVET and AMU (see below). In 2012, all employers are obliged to pay an annual contribution of DKK 2 921 (EUR 393) per full-time employee. These funds are then allocated to the places of work taking in apprentices so they do not bear the cost of training alone. These employers receive wage reimbursement during apprentices' periods of college-based training.

Box 3 **Distribution of AER funds (2010)**

In 2010, a total of DKK 4 160 million (EUR 560 million) was paid to AER by employers. These funds were distributed as follows:

- DKK 2 671 million (EUR 360 million) were spent in wage reimbursement. This amount was distributed between 24 115 employers offering training placements to a total of 89 713 students.
- DKK 2 241 million (EUR 300 million) was paid out in the form of employer award schemes, for example for establishment of new training placements,
- DKK 1 039 million (EUR 140 million) formed a contribution to the government's wage reimbursement to employers for employee participation in AMU.

Overall, in 2010 there was a deficit of DKK 2 068 million (EUR 280 million) (AER, 2011) which has led to increases in the annual contribution which enterprises are obliged to pay.

6.2. **Adult vocational (continuing) training (AMU)**

AMU is largely publicly financed. Providers receive 'taximeter' funding and must annually negotiate budgets and targets with the Ministry of Children and Education. In addition, there is a participant fee, on average corresponding to approximately 15% of the total operating cost, on most courses, generally paid by the employer. Unemployed participants taking part in AMU as part of their individual employment plan are exempt from any fees. These costs are covered by the Ministry of Employment.

Participants are entitled to a fixed allowance financed by the State, the State grant system for adult training (*VEU-godtgørelse*). In 2012, the amount available is DKK 3 152 (EUR 425) per week, corresponding to 80% of the maximum unemployment insurance benefit rate. As most participants are employed and receive full salary during the training period, this allowance is primarily paid to employers as partial wage reimbursement. As with apprenticeship training within IVET (see above), expenditure for the allowances is covered by the employers' reimbursement scheme (*Arbejdsgivernes Elevrefusion*, AER) to which all enterprises contribute a fixed amount regardless of levels of participation in adult education and continuing training activities, as well as State financing (Table 12).

Participants may also receive a transport allowance and financial support for board and lodging, covered by AER, if programmes are offered a considerable distance from the participant's home.

For 2009, total expenditure on public provision of AMU and GUV was approximately DKK 3.7 billion (EUR 500 million) representing an almost 50% increase on 2007 levels. This is despite transfer of expenses related to

participation in AMU among the unemployed to the Ministry of Employment (Danish Ministry of Finance, 2010). Increases in the adult education and continuing training system far exceed those in general and tertiary adult education.

Table 12 **Expenditure on public adult education and continuing training provision 2009 (DKK billion)**

State contribution to operating costs	User contribution to operating costs	State contribution to grant system	Employers' contribution to grant system (AER)	Total
1.7	0.3	0.6	1.1	3.7

Source: Danish Ministry of Finance, 2010, p. 83.

The State contribution to adult education and continuing training costs is financed through the labour market contribution (*arbejdsmarkedetsbidrag*) where a special tax of 8% is levied on all employed people. In 2009, total State income from this tax was DKK 80 billion (EUR 10.7 billion) according to national statistics ⁽⁴¹⁾.

⁽⁴¹⁾ Danish Ministry of Taxation: *National accounts of total taxes and duties*
<http://www.skm.dk/foreign/statistics/nationalaccountsoftotaltaxesandduties.html>.

CHAPTER 7.

Training VET teachers and trainers

7.1. Teachers

Two distinct teacher profiles can be identified in VET:

- (a) general subject teacher: usually university graduates or graduates with a professional bachelor's degree in teaching;
- (b) vocational subject teacher: usually with a VET background and substantial experience in the field (normally at least five years of professional experience is required).

There are no requirements for teachers to have a pedagogical qualification prior to their employment. Pedagogical training is provided as part-time in-service training and is based on interaction between theory and practice. It is provided by the National Centre for Vocational Pedagogy (Nationalt Center for Erhvervspædagogik, NCE), a centre of excellence collecting, producing and disseminating knowledge on vocational pedagogy. NCE provides the tertiary level diploma degree programme in vocational pedagogy (*Diplomuddannelsen i Erhvervspædagogik*) (60 ECTS points), as well as several further education courses for VET teachers and other programmes centred on, for example, teaching adults or mentoring teachers during the diploma programme.

This programme was introduced for all teachers employed in IVET and AMU after 15 January 2010 and replaces the previous teacher training course (*Pædagogikum*). The objective is to improve teaching skills to a level equivalent to teachers in compulsory education with a professional bachelor's degree. The broader objective is related to the government's goal of a 95% completion rate resulting in several new challenges facing VET teachers due to an increasingly heterogeneous student body. The new programme is the equivalent of one year full-time study (60 ECTS). It is, however, generally conducted as a part-time study to root training in practical teaching experience.

New teachers must enrol in the programme within one year of gaining employment at a VET college or AMU centre. The programme must be completed within a period of six years.

The programme was developed by the National Centre for Vocational Pedagogy with cooperation of an advisory group comprised of representatives of teacher associations and college management organisations as well as the Ministry of Children and Education. There are three compulsory modules and two optional as well as a final examination project.

7.1.1. Recruitment

Colleges and training centres have autonomy in staff recruitment. The Ministry of Children and Education is not involved in teacher recruitment procedures and teachers are not civil servants entering the system through tests. Many part-time teachers have no formal pedagogical competences, but are well respected within their field of work and are able to ensure that VET students acquire knowledge which is up-to-date with developments in the trades.

7.1.2. Role/functions

As to roles and functions, teachers are involved in developing local educational plans, research and development projects, quality development, and daily management of lessons – often through teacher teams. The role of teacher has changed into one of facilitator of learning, coach, and guidance counsellor. These changes have happened due to introduction of new pedagogical and didactical principles, for example focusing more on individual learning needs than a fixed body of knowledge to be acquired by the student, and changing qualification and curricula structures with increased modularisation.

7.1.3. In-service

Once qualified to teach in VET, there is no general legislation on in-service training. Individual teachers are obliged to keep their subject-specific and pedagogical knowledge up to date. The college is required to draw up a plan for the competence development of the teachers at the college. On this basis, and in cooperation with the teacher, the college determines the individual's professional in-service training plan. Courses are offered locally by many providers according to market conditions. A certificate is normally awarded to participants, but no recognised qualification is generally awarded

7.2. In-company trainers

In-company trainers play an important role in VET given the dual training principle characteristic of all Danish VET. There are different types of trainers with different responsibilities: planners, training managers, and daily trainers. However, there are very few legal requirements to become a trainer.

Trainers in enterprises who are responsible for apprentices must be master craftsmen. They must have completed a VET programme, receiving a 'journeyman's certificate', and have work experience.

Trade committees (Section 5.1) for each VET programme (consisting of social partner representatives) are in charge of approving enterprises as training

enterprises. Committees consider technical equipment, variety of products and tasks performed by the enterprise, and in some instances the number of qualified staff to perform the training. In that way, they assess whether the training provided is at an acceptable level.

Just as there are no teaching qualifications requirements made of in-company trainers, there are also no in-service training requirements or control mechanisms. Quality assurance, beyond that undertaken voluntarily by the enterprise, is restricted to informal contact between the VET college and enterprise, and official complaints from students.

CHAPTER 8.

Guidance and counselling for learning, career and employment

8.1. The guidance system in brief

Educational and vocational guidance is given high priority in Denmark. The overall structure and eight national targets concerning guidance are defined in the Act on guidance in relation to choice of education, training and career, which was adopted by the Danish parliament in April 2003. Subsequently, the 2003 act has been amended in 2006, 2007, 2008, 2009 and 2010. The Ministry of Children and Education is responsible for continuous supervision and development of guidance services in the education sector.

The Act on guidance is primarily targeted at young people up to the age of 25 but it also concerns services for adults wishing to enter a higher education programme. The eight national targets outlined are that guidance related to choice of education, training and career should:

- (a) 'help to ensure that choice of education and career will be of greatest possible benefit to the individual and to society, and that all young people complete an education, leading to vocational/professional qualifications;
- (b) be targeted particularly at young people who without specific guidance will have difficulties in relation to choices and completion of education, training and career;
- (c) consider the individual's interests and personal qualifications and skills, including informal competences and previous education and work experience, as well as the expected need for skilled labour and self-employed businessmen;
- (d) contribute to limiting, as much as possible, the number of dropouts and students changing from one education and training programme to another; contribute to support students in making choices included in education and training;
- (e) contribute to improving the individual's ability to seek and use information, including ICT-based information and guidance, about choice of education, educational institution and career;
- (f) help to ensure coherence and progression in the individual's guidance support;
- (g) be independent of sectoral and institutional interests;

- (h) be provided by practitioners with an approved guidance education or recognised competences at the same level' (Cirius, 2008).

Great importance has been attached to ensuring that guidance on choice of education, training and career is independent of sector interests or the interests of institutions of education. Guidance on choice of education, training and career must also be conducive to compliance with objectives of lifelong learning and promotion of a culture of independence.

In 2004, the Minister for Education established a national dialogue forum on guidance to secure close dialogue between the minister and relevant organisations, institutions, guidance practitioners' associations, end-users and individuals holding a leading position in guidance. This forum meets about four times per year to discuss relevant career guidance issues and also conducts an annual conference on a topical theme.

8.2. Provision

Four different types of guidance centre exist:

- (a) youth guidance centres – *Ungdommens Uddannelsesvejledning*;
- (b) regional guidance centres – *Studievalg*;
- (c) a virtual guidance centre – *e-guidance centre*;
- (d) centres for adult education and continuing training – VEU centres (Section 5.2).

In addition, the Ministry of Children and Education is responsible for a national guidance portal: www.uddannelsesguiden.dk (education guide) which is an Internet-based information and guidance tool.

All educational institutions are also obliged to provide guidance and counselling to their students, particularly with regard to helping students complete their education and training.

8.2.1. Youth guidance centres: *Ungdommens Uddannelsesvejledning*

Local authorities must ensure that guidance is provided on choice of youth education and career.

Forty-eight municipal youth guidance centres provide guidance services for young people up to the age of 25. The 48 centres represent the 98 local authorities in Denmark, each centre covering a 'sustainable' area in terms of the number and variety of upper secondary institutions as well as geographical distance.

Table 13 **Key figures: youth guidance centres**

Number of full-time employees	Annual expenditure	Number of recipients
1000 guidance practitioners (approximately.)	DKK 400 million (EUR 54 million) (approximately)	300 000-400 000/year

Source: Unpublished figures for 2010 from the Ministry of Children and Education.

Youth guidance centres focus on guidance in relation to the transition from compulsory to upper secondary education or, alternatively, to the labour market. The main target groups are:

- (a) pupils in compulsory school – forms 8 to 9 (10) – there is clear focus on the group of young people aged 15 to 17, and new legislation from 2010 confers special responsibility for this target group to youth guidance centres. Guidance practitioners assess – in cooperation with schools – the ‘educational readiness’ of young people before entering youth educational programmes. Individual educational plans for every young person in eighth, ninth and 10th grade are a crucial tool in guidance of young people;
- (b) young people under the age of 25 who have not yet completed a youth education or training programme and are not in employment. The centres are obliged to establish contact with this group of young people and help them get back into education and training or employment;
- (c) young people with a special need for guidance – a transversal target group that includes young people whose problems relate to continuation or completion of an education programme.

Local authorities define the overall framework for guidance activities in their areas. Objectives, methods, planned activities, as well as performance (results, outcome) of each youth guidance centre are published on the Internet.

The importance of cross-sectoral cooperation is emphasised in Danish legislation on guidance to ensure a coherent guidance system and regular sharing of experience, knowledge and best practice. Youth guidance centres must thus work closely with:

- (a) primary and lower secondary schools and youth education institutions in their respective areas;
- (b) local business life and the public employment service.

In cooperation with school principals, youth guidance centres organise guidance activities at schools. Teachers are still responsible for provision of general careers education from form 1 to form 9 (10), while specific guidance on transition from compulsory to youth education and students' individual education

plans are provided by guidance counsellors from youth guidance centres who visit schools.

In accordance with the philosophy behind legislation on guidance, guidance is regarded as a continuous process that should increase young people's awareness of their abilities, interests and possibilities, thus enabling them to make informed decisions regarding education and employment. Youth guidance centres may be considered the first step in a lifelong guidance process.

8.2.2. Regional guidance centres: Studievalg

Seven regional guidance centres have responsibility for guidance of:

- (a) students in upper secondary programmes;
- (b) young people and adults outside the education and training system who wish to enrol in a programme of higher education.

Content of guidance provided applies nationally, but guidance is offered on a regional basis in collaboration with institutions of youth education, institutions of higher education and the Employment Service.

Regional guidance centres are responsible for:

- (a) guidance on transition from upper secondary programmes to programmes of higher education;
- (b) provision of quality information about all higher education programmes in Denmark and the occupations or professions that higher education programmes may lead to.

Regional centres organise a wide variety of careers education and careers guidance activities for all students in upper secondary education – at students' schools. This includes workshops, seminars and careers fairs, as well as individual and group guidance sessions.

Further, people from both of the above-mentioned target groups are welcome to call, e-mail, or visit the centres to obtain information or to make an appointment for a guidance session. People are also able to meet regularly guidance counsellors from centres at public libraries or other venues in their local areas to ensure that geographical distance does not prevent people from getting access to relevant guidance services.

Table 14 **Key figures: regional guidance centres**

Number of full-time employees	Annual expenditure	Number of recipients
75 guidance practitioners (approximately)	DKK 43 million (EUR 6 million)	100 000-150 000/year

Source: Unpublished figures for 2010 from the Ministry of Children and Education.

The seven regional guidance centres were selected after a call for tenders. They are contracted with the Ministry of Children and Education for periods of four to five years. Most are consortia of different educational institutions. Like youth guidance centres, regional guidance centres are obliged to cooperate with relevant partners in their regions to ensure a coherent guidance system and a regular exchange of experience, knowledge and best practice. Relevant partners include:

- (a) youth education and higher education institutions;
- (b) the social partners;
- (c) local authorities;
- (d) the new e-guidance centre (see below).

8.2.3. E-guidance centre

In January 2011, the Ministry of Children and Education launched the national virtual guidance portal (www.evejledning.dk). This is a national guidance unit which offers guidance through virtual communication and guidance tools to guide applicants and others who want information about education and careers. It is possible for anyone to get in touch with guidance counsellors seven days a week (Monday-Thursday 10 am to 10 pm, Friday 10 am to 8 pm, and at weekends 12 am to 8 pm). Counsellors can be reached by e-mail, phone, text message and online chat. The unit consists of full-time staff in a centre in Copenhagen, and part-time staff spread geographically and connected to local and regional guidance centres.

E-guidance offers guidance on choice of upper secondary and higher education. It also offers help in getting an overview of job and career opportunities after completing education and training, as well as adult and continuing education and training opportunities. As such, e-guidance is targeted at both adults and young people. e-guidance can be contacted both for specific questions about enrolment, study or provision of education, and for more comprehensive guidance on options.

8.2.4. VEU centres

The national network of 13 VEU-centres was established in January 2010. As part of their objective of improving quality and effectiveness in vocational and general adult education at non-tertiary level, they provide a common gateway for guidance in this area, available to both enterprises and individuals.

Enterprises can arrange a consultation where they learn more about opportunities for further education and training of their employees, available courses and opportunities for specially-tailored courses to suit their particular needs, and practical matters concerning, for example, financing.

For individuals, whether in employment or not, an individual skill development plan will be compiled working towards achievement of career-oriented goals.

As well as responding to requests for information and guidance, VEU centres also operate an outreach programme aimed at making contact with (especially small and medium-sized) enterprises that might otherwise not have considered the possibilities available to them. Guidance offered is independent from any individual educational institutions tied to a VEU centre.

8.2.5. National guidance portal: Uddannelsesguiden.dk

In 2004, the Danish Ministry of Education set up Uddannelsesguiden.dk (the education guide), which is an Internet-based information and guidance tool. This guidance portal contains comparable information about upper secondary programmes, programmes of higher education and other relevant education programmes, as well as possible occupations following completion of the programmes and up-to-date labour market information.

Increased use of ICT-based careers information and guidance is one of the objectives of the Danish Guidance Act. If more people can help themselves by finding the careers information they need to make informed decisions about education, training and careers, there will be more resources available for people with special needs for guidance.

Target groups of the guidance portal are:

- (a) students in forms 6 to 10 to whom guidance is provided in the school system;
- (b) young people enrolled in youth education and training programmes to whom guidance is provided;
- (c) young people in programmes of higher education who want to enrol in a relevant master's programme or a programme of continuing education, or who wish to switch to another study programme;

- (d) other young people and adults who want to enrol in a youth education programme or a programme of higher education that falls outside the general guidance structure;
- (e) adults who want to return to the education system;
- (f) guidance counsellors, teachers and education consultants who provide guidance to the groups mentioned above;
- (g) others who seek information about the education system, but who are not seeking enrolment in a study programme, and who have no formal guidance responsibility.

Information provided at Uddannelsesguiden.dk includes:

- (a) complete information about education and training programmes in Denmark;
- (b) information about occupations in Denmark;
- (c) information about current employment perspectives in relation to individual articles about education and career;
- (d) news about labour market issues and the long-term labour market situation;
- (e) surveys and articles providing guidance, including articles aimed at specific target groups;
- (f) a gateway to education programmes or jobs in other countries;
- (g) externally-managed portal areas which ensure that regional issues relevant for choosing an education or training programme are shown in the portal;
- (h) a net-based education log with personal log-in;
- (i) a virtual resource centre (see below).

The Ministry of Children and Education is responsible for the portal, the operation of which has been outsourced to a private service provider. Since 2004, there has been ongoing cooperation between the Ministry of Children and Education and the private provider to ensure updated information and guidance tools at the site ⁽⁴²⁾.

8.2.5.1. *Virtual resource centre*

Following the latest reforms, the Danish Ministry of Children and Education functions as a national centre of guidance expertise for guidance practitioners. The centre is mainly aimed at professional guidance counsellors, people working with guidance counsellor training, public authorities, and decision-makers. The most important task is to contribute to coordination and quality development of

⁽⁴²⁾ The English language area of the site, providing information about programmes offered in English, can be found here: <http://www.ug.dk/Programmes.aspx>.

guidance provided by making information about guidance-related subjects available to people involved in guidance.

The resource centre collates, processes and disseminates information about all aspects of guidance, and produces some information itself. The centre covers all areas of education, training and career guidance across educational and occupational boundaries. International aspects are considered wherever relevant. The resource centre's information is available to the public at www.uddannelsesguiden.dk.

8.3. Guidance and counselling personnel ⁽⁴³⁾

One of the objectives of the Danish guidance reform is to improve the qualifications and competences of guidance practitioners to professionalise Danish guidance services. Consequently, one common training programme is offered to guidance counsellors from all sectors. With the 2007 amendments of the Act on guidance, it is now a requirement that educational guidance practitioners complete a diploma programme in educational and vocational guidance. Alternatively, guidance practitioners with extensive experience can apply for assessment and recognition of their competences and prior learning.

Five centres for higher education across the country offer the training programme on a part-time basis. It is equivalent to 12 months full-time studies (60 ECTS points) and consists of three basic modules, two optional modules and a diploma project. The basic modules are:

- (a) careers guidance and the guidance practitioner (guidance theories and methodologies, ethics, ICT in guidance, etc.);
- (b) careers guidance and society (labour market conditions and policies, the education system and educational policies, development of society and business, etc.);
- (c) careers guidance and the individual (different target groups, human development, learning theories, etc.).

The optional modules have more specific focus, and students elect modules relevant to their guidance practice. The diploma project is defined by the student. The training programme is offered as an adult learning programme and corresponds to a diploma degree. Entry requirements are, as a minimum, a completed short-cycle (two-year) higher education programme and two years of

⁽⁴³⁾ Information presented here is taken from Cirius, 2008, p. 15.

relevant working experience. Further, it is possible to follow a master programme in guidance at the Department of Education, University of Aarhus. Both training programmes are offered within the framework of the Danish adult education and training system. They are aimed at and adapted to adults who already have another higher education degree and two years relevant work experience.

Acronyms and abbreviations

AK	Erhvervsakademiuddannelse [academy profession degree]
AMU	Arbejdsmarkedsuddannelser [adult vocational training]
AVU	Almen voksenuddannelse [general adult education]
DKK	Danish Krone (currency)
ECTS	European credit transfer and accumulation system
EGU	Erhvervsgrunduddannelse [basic vocational training]
EU	European Union
EUX	vocational and general upper secondary examination
FVU	Forberedende voksenundervisning [preparatory adult education]
GSK	Gymnasiale suppleringskursus [upper secondary supplementary examination courses]
GVU	Grunduddannelse for voksne [basic adult education]
ICT	information and communication technologies
ISCED	international standard classification of education
IVET	initial vocational education and training [in Denmark, equivalent to vocational upper secondary education and training]
KVU	Kort videregående uddannelse [short-cycle higher education]
VET	vocational education and training
VVU	Videregående voksenuddannelser [further adult education]

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Other resources

Further publications can be accessed online at the website of the Danish Ministry of Children and Education:

English language

<http://www.eng.uvm.dk/service/Publications.aspx>

Danish language on IVET

<http://www.uvm.dk/Service/Publikationer/Erhvervsuddannelser>

Danish language on adult education

<http://www.uvm.dk/Service/Publikationer/Uddannelse-og-undervisning-for-voksne>

The Danish Ministry of Children and Education's English language homepage:

<http://eng.uvm.dk/>

The Danish Agency for Universities and Internationalisation's information on education and training in Denmark: <http://en.iu.dk/>

The Danish Ministry of Children and Education's guide to education and training:

<http://www.ug.dk/> [primarily in Danish, but also including a section on programmes available taught in English]

National statistics available at StatBank Denmark:

<http://www.statbank.dk/statbank5a/default.asp?w=1024>

Information in Danish regarding training placements:

<http://www.praktikpladsen.dk/>

Annual status reports from the national trade committees [in Danish]:

http://www.fagligeudvalg.dk/index.php?option=com_content&view=category&layout=blog&id=70&Itemid=91

ANNEX 1.

Role of social partners in matching provision with labour market needs in mainstream education

National level

National trade committees and national advisory councils on vocational upper secondary education and training (*Rådet for de Grundlæggende Erhvervsrettede Uddannelser*, REU) and on adult education and continuing training (*Rådet for Voksen- og Efteruddannelse*, VEU) (Chapter 5) are responsible for updating VET programmes and ensuring that they integrate the skill and competence needs of the labour market at national level.

A new VET programme is set up after a need has been identified by one of the national trade committees. They draw up a proposal containing some recommendations and information regarding projected job and apprenticeship opportunities, estimated intake, and analyses and forecasts regarding the skill and competence needs within the field. This proposal is sent to the Ministry of Children and Education which, based on advice from REU or VEU, has the final word on whether or not to establish a suggested VET programme. Should the Ministry of Children and Education decide to approve the proposal, the national trade committee is responsible for outlining the objectives and scope of the programme after which the ministry determines the financial aspects and other details before issuing a regulation describing the aim of the programme, its content, assessment, examinations, etc.

The Ministry of Children and Education annually compiles reports on developments in all vocational fields and the need for changes in supply of VET programmes based on responses submitted by national trade committees. These reports are produced for each of the 12 basic access routes (Section 3.1) ⁽⁴⁴⁾.

VET programme curricula are agreed between national trade committees (*Faglige udvalg*) and the Ministry of Children and Education for each individual programme. Trade committees submit recommendations to renew curricula so that VET programmes and qualifications keep up with demands of industry,

⁽⁴⁴⁾ Most recent reports are available (in Danish) from:
http://www.fagligeudvalg.dk/index.php?option=com_content&view=category&layout=blog&id=70&Itemid=91.

based on qualification analyses and in-depth knowledge of the field in question. Recommendations must be accompanied by quantitative and qualitative data. Committees must, for example, provide information on opportunities for employment and practical work training, on the annual intake for the scheme, and information on any existing analyses and forecasts concerning qualification requirements in this area.

In a report on modernising VET, the Ministry of Children and Education put forward an idea of centralising VET analysis and forecasting to ensure that new skills demands, changing labour market conditions and new occupational profiles are detected earlier than today. As a consequence, the ministry launched a survey of the trade committees' analysis and prognosis practices to clarify the need for supplementary analyses and prognoses. Since 2008, the ministry has gathered these activities in the 'central analysis and prognosis unit' (*central analyse- og prognosevirksomhed*) with the specific goal of matching VET provision to labour market needs. A series of predetermined areas for analysis are put to tender every year⁽⁴⁵⁾. This unit has replaced previous, more loosely structured research and development funding, where organisations could apply for funding of research and development projects in VET.

Regional/local level

At regional/local level, vocational colleges and social partners are able to influence VET programmes so they are adapted to the specific skills needs of local business and industry, and to regional development plans through local training committees. Their main function is to provide assistance to colleges regarding planning of VET programme content, as well as strengthening contacts between colleges and the local labour market. Each college is attached to at least one local training committee to assist with its VET provision.

⁽⁴⁵⁾ Reports published in Danish are available from:
<http://www.uvm.dk/Uddannelse/Erhvervsuddannelser/Om%20erhvervsuddannelserne/Fokusomraader/Rapporter%20fra%20Analyse-%20og%20prognosevirksomheden.aspx>.

ANNEX 2.

Historical background

IVET

The earliest forms of organised apprenticeship training in Denmark can be traced to guilds of the Middle Ages. There were guilds for each of the various trades in every town which decided the form and content of apprentices' training and conducted journeyman's tests.

The first attempt to introduce more formalised and school-based learning on a larger scale was in 1622, when King Christian IV founded a school for training in cloth production with German and Dutch master craftsmen as instructors. This was followed in 1690 by the apprenticeship school of the naval dockyard which trained carpenters. In 1800, Sunday schools were established for apprentices, the purpose of which was to improve their literacy and numeracy skills. Participation was, however, entirely voluntary.

It was not until the Freedom of Trade Act in 1857 that there were significant changes to the guild-based system of apprenticeship. This act considerably weakened the power of the guilds, including their monopoly on apprenticeship training and bestowal of the title of master craftsman. Indeed, this title no longer required that the individual was actually trained in his specific trade. Naturally, existing craftsmen felt threatened by these changes and formed local trade associations to protect their interests. These associations established and ran technical colleges to ensure a certain standard among those entering their trades. By 1870, approximately 50 of such colleges existed.

Soon after, national and local government decided to support this development by providing grants to technical and business colleges and in 1889 a national Apprenticeship Act was introduced reestablishing the contractual relationship between master and apprentice. Around the same time, the Association of Technical Schools was founded providing a common framework for curriculum development and production of common textbooks for apprentices.

Parallel with these developments, comprehensive social change brought about the nascent industrialisation process in Denmark, resulted in radical changes within the labour market. Local trade associations developed into national federations and in 1898, the umbrella body, the Danish Federation of Trade Unions, was established. In the same year, a national employer association was founded: the Danish Employers' and Masters' Confederation. Both these bodies still exist today, forming key social partners, albeit under

slightly different names: the Danish Confederation of Trade Unions (*Landorganisationen i Danmark*) and the Confederation of Danish Employers (*Dansk Arbejdsgiverforening*, DA).

In the 1920s, the first trade committees were established to ensure quality and working conditions of college-based elements of training programmes. The Apprenticeship Act of 1937 provided these trade committees with legal jurisdiction and several key functions, as well as introducing compulsory instruction for all apprentices. The role of trade committees was further strengthened by a new Act in 1956 – they were now to be consulted regarding curricula content.

In the 1960s and early 1970s, as an increasing number of young people chose an academic education instead of vocational training, demand for skilled labour began to outstrip supply. It was felt that the IVET sector was in need of a comprehensive reform, and in 1977, the Act on basic vocational education (*Lov om erhvervsfaglige grunduddannelser*) was introduced. While the original intention of greater integration of vocational and general upper secondary education with vocational programmes providing access to university education was never realised, for the first time, VET students could now begin their training with a year of classes at a vocational college instead of in a training placement. At vocational colleges, students were introduced not to one specific trade, but a group of related vocational programmes before making their choice. It was the intention that this new system should be gradually phased in over the following five years, so that by 1982, basic vocational education (EFG) would entirely replace existing apprenticeship training programmes. However, problems arose due to the economic downturn brought about by the oil crisis. With growing youth unemployment, the security provided by the traditional apprenticeship system became more attractive once again and broad political support of its abolishment crumbled.

As a direct consequence, the older system continued to exist parallel with EFG. The two systems differed in terms of access routes and in the roles of trade committees. While this caused some problems, not until 1991 was a wide-reaching reform introduced. This reform unified the two systems, integrating IVET into the overall national education system as youth education programmes which confer vocational qualifications and can form the basis of further studies.

At the beginning of 2001, the Reform 2000 was introduced. This reform introduced increased individualisation, flexibility, and modularisation of basic courses within the programmes. One of the objectives was to make it possible for strong students to fast-track the basic course and improve access from VET to higher education. For weaker students, the idea was that they could spend more

time in the basic course to acquire the necessary competences to continue in the main course.

Subsequent analyses have shown that the reform did not achieve its objectives, especially in regard to the weaker students in the system. The reform took individualisation and modularisation too far, dissolving the highly important sense of belonging to a community among students.

In part to combat these issues, and thereby reduce spiralling drop-out rates, some adjustments have since been made. Among the most significant is introduction of new apprenticeship (*ny mesterlære*) in 2006. This formed a new pathway to vocational training specifically targeting practically-oriented young people who struggle with the more 'academic' aspects of school-based training programmes. The most recent notable reform in 2008 divided study programmes into 12 main areas (also known as access routes) and created new plans of action and learning objectives (Eurydice, 2010).

Adult education and continuing training system

Danish adult education has its roots in the concept of general liberal adult education (*folkeoplysning*, literally enlightenment of the people). While the tradition for general adult education at evening classes covering a huge variety of subjects continues to exist, high unemployment levels during the inter-war period created a growing need for improving the qualifications of unskilled and low-skilled workers.

As seen in IVET, the social partners once again played a key role, establishing courses for this group. In 1950, the Ministry of Labour established five schools offering short-duration vocational training courses for the unemployed and low-skilled. A further 10 years would pass before these activities were gathered under common legislation with introduction of the first Act on adult vocational training (AMU), comprising vocational courses for both low-skilled and skilled workers.

As a result, the social partners received wide-reaching freedom as well as an economic fundament for providing specifically vocationally-oriented training and education to both non-skilled and skilled workers. In the early years, AMU's major challenges were the continuing transformation of Denmark from an agricultural to an industrial society, and the widespread entry of women to the labour market. In both cases, there was a huge need for reskilling, ensuring that workers gained the skills and competences required.

The economic crisis beginning in the mid-1970s resulted in increasing unemployment, especially among unskilled workers, as many jobs previously

available to this group dried up, never to return. Again, AMU had a vital role to play in providing new qualifications which could give access to the changing job market.

The massive technological development at workplaces over the past few decades has resulted in a continuous need for further training of employees, as workers need to adjust to and learn how to exploit fully the possibilities of new technologies in their everyday working lives. In more and more areas, education and training went from being acquisition of basic knowledge, skills and competences providing access to the labour market to an ongoing process of personal and professional development.

As Denmark has entered what has been variously termed an information society, knowledge economy or even a learning economy, adult and continuing education and training have increasingly become seen as vital in ensuring Denmark's future economic welfare, resulting in the paradigm shift to a lifelong learning approach.

In 2001, a set of 10 acts concerning reform of the adult education and continuing training area (the further education reform) was introduced. This reform package comprised a new system of adult education and continuing training, a new form of educational support for adults as well as new grant allocation schemes for institutions offering adult education and continuing training.

In the adult education and continuing training system, programme courses are now structured in such a way that the level of qualification can be compared to levels in the mainstream education system. At the same time, new concepts and courses have been developed. The credit transfer system has been extended and courses at all education and training levels must take their point of departure in the work experience of adult participants (Eurydice, 2010; Danish Ministry of Education, 2010a).

ANNEX 3.

Danish qualifications framework for lifelong learning

The various qualifications offered in the Danish education and training system are organised in the national qualifications framework below. The Danish qualifications framework for lifelong learning was developed by an interdepartmental working group with representatives from four separate ministries, as well as some other stakeholders from the Danish education system. At the end of 2006, the Minister for Education launched work to draw up a Danish national qualifications framework. A proposal was approved in 2009 to place existing qualifications in the framework completed at the end of 2010.

The Danish national qualification framework (NQF)

Certificates and degrees		Certificates for supplementary qualifications	
1	Primary and lower secondary school certificate (9 th class)	1	Preparatory adult education certificates
2	Primary and lower secondary school certificate (10 th class)	2	General Adult Education certificates
3		3	
4	General upper secondary certificates	4	Higher preparatory single subject certificates Supplementary upper secondary certificates
5	Academy Profession degrees and VVU Degrees	5	
6	Bachelor and Diploma Degrees	6	
7	Master's Degree (Candidatus) and Master Degrees	7	
8	PhD Degree	8	

Source: EVA, 2011, p. 18.

In total, the Danish qualifications framework has eight levels covering all levels from the leaving examination of primary and lower secondary school to the PhD degree. It also covers supplementary qualifications, such as adult VET ⁽⁴⁶⁾. Only officially recognised, validated and quality-assured programmes are included in the qualifications framework. Informal and non-formal learning are

⁽⁴⁶⁾ A full overview of the various qualifications covered and their placement within the framework is available from: <http://en.iu.dk/transparency/qualifications-frameworks/types>.

only recognised to the extent that they are formalised through a process of validation of prior learning corresponding to one of the included qualifications.

Quality assurance mechanisms are part of the validation process in relation to inclusion of new qualifications in the framework. In terms of VET, trade committees (at the upper-secondary level) and further education and training committees (adult VET) assess programmes and make recommendations for their placement in the framework to be approved by the Ministry of Children and Education. For each educational field, guidelines have been produced to aid committees in their assessment and quality assured through consultation with independent experts. Procedures and criteria for placement of VET qualifications in the framework are the subject of an evaluatory report compiled by the Danish Evaluation Institute (EVA, 2011).

ANNEX 4.

Legislative framework

For IVET

- (a) Act, LOV No 510 of 19 May 2010 (the Vocational Education and Training Act – *Erhvervsuddannelsesloven*) – is the most important law and revises the previous act of 2007. This act covers the entire IVET system, providing overall objectives as well as more specific frameworks concerning access, form and content of programmes, appointment of advisory committees, role of enterprises offering apprenticeship placements, students' legal rights, etc.
- (b) Act for institutions for vocational education and training, LBK No 951 of 2 October 2009 – governs vocational colleges. It concerns frameworks for authorisation of vocational colleges, their governing boards, State subsidies, budgetary and accounting practices, monitoring and notification duties, intra-institutional cooperation and consultancy, etc.
- (c) the Statutory order regarding vocational education and training, BEK No 901 of 9 July 2010 – implements the two above acts and translates the legislative frameworks into a more concrete set of rules.
- (d) Statutory orders – exist for each of the 12 foundation courses for IVET and for some more specific areas.
- (e) National guidelines – apply to the 23 general subjects, which can form part of an IVET programme, as well as concerning apprenticeship contracts.

In addition to these laws, statutory orders and guidelines, there are several more specific laws, for example concerning awarding a bonus to students upon completion of an IVET programme. Some general laws apply to the educational system as a whole and thereby also apply to IVET, such as those concerning guidance or occupational health.

Each of the 109 main programmes (following the foundation courses) is governed by an agreement compiled and issued by national trade committees, comprised of representatives of the social partners, stipulating duration, contents, competence levels, etc. ⁽⁴⁷⁾.

⁽⁴⁷⁾ Danish Ministry of Education, *Love og regler på voksenuddannelsesområdet [Laws and regulations on adult education]*
<http://www.uvm.dk/Uddannelse/Erhvervsuddannelser/Love%20og%20regler.aspx>.

For adult education and continuing training

- (a) The primary law governing AMU is the Adult Vocational Training Act (AMU-loven), LBK No 381 of 26 March 2010. This act revises and replaces the earlier act of 2008. It covers vocational adult and continuing training and education providing legislative frameworks concerning overall objectives, common competence descriptions, advisory committees, adult and continuing education and training centres, adult vocational training programmes, authorisation as training providers, registration and notification of withdrawal, subsidies, quality assurance, complaint procedures, etc.
- (b) Another important piece of legislation is the Act on institutions for vocationally-oriented education and training (IEU-loven), LBK No 878 of 8 August 2011. This act stipulates the framework for approving education and training providers, institutional governance, public financing, quality assurance mechanisms, etc.
- (c) The basic adult education programme (GVU) is governed by the Act on vocationally-oriented basic and further education and training for adults (VFV-loven), LBK No 881 of 8 August 2011.

As was the case with IVET, some very issue-specific laws and broader educational laws apply to the adult education and continuing training system.

ANNEX 5.

Glossary

Erhvervsakademi (Erhvervsakademiuddannelse, erhvervsakademier):

Academy of professional higher education.

Folkehøjskole (Folkehøjskoler):

Residential non-qualifying courses of one to 32 weeks' duration, which offer adult students (over 18 years of age) liberal education. There are no examinations or tests, and the aim of teaching is to further the personal development, maturity and independence of students.

Folkeskole (Folkeskoler, Folkeskolen):

Municipal basic school offering 10 years of comprehensive primary and lower secondary education (from the first to ninth form level) and a supplementary optional 11th year (the 10th form level).

Paedagogikum:

Professional postgraduate teacher training for teachers in upper secondary education.



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Vocational education and training in **Denmark**

Short description

Vocational education and training in Denmark has embarked on a process of modernisation aiming at, primarily, increasing flexibility, and individualisation, quality and efficiency.

Assessment and recognition of informal and non-formal learning, competence-based curricula, innovative approaches to teaching, and increased possibilities for partial qualifications are factors that bring Danish education and training closer to learners.

Recent introduction of new apprenticeship and EUX programmes increase flexibility of various pathways in vocational upper secondary education and training – IVET – and reflect an overall educational policy trend towards more differentiated and individualised working methods. The latter programme is particularly relevant in improving progression of IVET students to higher education, which is still rather limited and is currently a political priority in Denmark.

Public financing of VET is a central feature of the system. The government attaches great importance to improving quality and efficiency of the Danish education and training system to equip all individuals with the skills required for a modern workforce in a knowledge-based society, permit career development, and reduce skills mismatches.


CEDEFOP

 European Centre for the Development
of Vocational Training

Europe 123, 570 01 Thessaloniki (Pylea), GREECE
PO Box 22427, 551 02 Thessaloniki, GREECE
Tel. +30 2310490111, Fax +30 2310490020, E-mail: info@cedefop.europa.eu

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