
Netherlands

VET in Europe – Country report

2013

Title: Netherlands. VET in Europe – Country Report 2013

Author: ReferNet Netherlands - Hester Smulders, Annemiek Cox, Anneke Westerhuis (ecbo)

Translation: Language unlimited

Keywords: vocational education and training (VET) systems; initial vocational education; continuing vocational training; VET legislative and institutional frameworks; provision and shaping of VET.

Geographic term: The Netherlands

This country report is part of a series of reports on vocational education and training produced for each EU Member State plus Norway and Iceland by members of ReferNet, a network established by Cedefop (European Centre for the Development of Vocational Training).

The content of the text belongs to the responsibility of the author.

Please note that ReferNet reports are based on a common structure and are available at: <http://www.cedefop.europa.eu/EN/Information-services/vet-in-europe-country-reports.aspx>

The preparation of this report has been co-financed by the European Union.

© ecbo – ReferNet Netherlands

Use and taking over of texts out of this publication is permitted without restraint, unless with acknowledgement of this source.



expertisecentrum
beroepsonderwijs

Table of contents

Table of contents.....	3
List of tables, figures and boxes	4
CHAPTER 1. External factors influencing VET	6
1.1. Political and administrative context.....	6
1.2. Population and demographics	6
1.3. Economy and labour market indicators.....	7
1.4. Educational attainment of the population.....	8
CHAPTER 2. Providing VET in a lifelong learning perspective.....	10
2.1. Overview of the Dutch education and training system	10
2.1.1. Diagram	10
2.1.2. Elucidating the diagram.....	11
2.1.3. Transfer possibilities in the system.....	12
2.2. Government regulated vocational education.....	14
2.2.1. Historical background.....	14
2.2.2. Legislative framework	15
2.2.3. Institutional framework	17
2.2.4. Governance	18
2.2.5. Vocational education at lower secondary level.....	19
2.2.6. Vocational education at upper secondary level (including post-secondary – non tertiary level)	21
2.2.7. Professional education at tertiary level.....	24
2.2.8. Teachers.....	27
2.3. Other forms of vocational education and training.....	29
2.3.1. Provision	29
2.3.2. Sectoral and regional approaches.....	29
2.3.3. Participation	30
CHAPTER 3. Shaping VET qualifications	31
3.1. Anticipation of skills needs	31
3.2. Qualification design and curriculum development.....	32
3.3. Assessment.....	33
3.4. Macro-effectiveness of VET provision	34
CHAPTER 4. Promoting participation in VET by funding mechanisms.....	36
4.1. Funding government regulated VET	36
4.2. Funding lower secondary vocational education	36
4.3. Funding upper secondary vocational education (and general adult education).....	36

4.3.1. Government funding	36
4.3.2. Other income	37
4.3.3. Students.....	37
4.3.4. Companies.....	37
4.4. Funding higher professional education	38
4.4.1. Government funding	38
4.4.2. Private funding.....	38
4.4.3. Students.....	38
4.4.4. Companies/enterprises	39
4.5. Funding other forms of VET.....	39
List of abbreviations	41
References.....	43
ANNEX 1. Classification of VET programmes and qualifications.....	45

List of tables, figures and boxes

Figures

Figure 1. Diagram of the Dutch education system, including transfers within the system in % of a cohort of pupils leaving primary education, 2011	13
Figure 2. Flow of funds in vocational and adult education (2012), in millions €.....	38
Figure 3. Flow of funds in higher professional education (2012); in millions €.....	39

Tables

Table 1. Population forecast by age and demographic burden / in percentages.....	6
Table 2. Employment in % per sector	7
Table 3. Net labour participation, by gender, age and country of origin; 15-65 years in % (employed labour force as a percentage of the population)	7
Table 4. Net labour participation, by educational attainment level in %.....	8
Table 5. Unemployment (as a percentage of the labour force) by country of origin and education level of 15-64 year-olds	8
Table 6. Educational level of population aged 15-64 yrs in %	9
Table 7. Organisational levels and functions/roles within initial vocational/ professional education	17
Table 8. Participation in different types of secondary education year 3 by gender; in %.....	20

Table 9.	Participation in MBO: learning pathways.....	22
Table 10.	Participation in MBO and adult education	24
Table 11.	Enrolment in professional higher education. Number of students enrolled x 1000, including green education.....	27
Table 12.	Classification of VET programmes in pre-vocational education, upper secondary vocational education and higher professional education. Duration and stay in years.	45

CHAPTER 1.

External factors influencing VET

1.1. Political and administrative context

The Netherlands is a constitutional monarchy with a parliamentary system comprising two chambers. Central government is the highest tier of administration. However, a trend towards decentralisation began many years ago and is still underway. Tasks and responsibilities are progressively being transferred to lower levels of government and especially to municipalities, but also to social interest groups such as school associations and/or boards of governors. The Netherlands has 12 provinces, each with their own tasks and responsibilities – though these are very limited in terms of education policy. At present, the Netherlands consists of 415 municipalities. In contrast, municipalities have a greater involvement in education and training, being responsible, for instance, for (a) certain aspects of publicly financed schools at primary and secondary level, (b) the introduction of measures to reduce early school leaving and to counteract (potential) underachievement by children and youngsters from about the age of three, and (c) planning general adult education provision.

1.2. Population and demographics

The population of the Netherlands totals 16,778,000 persons (2013). The country occupies an area of 41,526 square kilometres, which comes to 498 inhabitants per square kilometre. In 2013, the demographic burden – the ‘green’ burden – constituted by the young (i.e. the under-twenties as a percentage of the number of 20 to 65-year-olds) is 38.4 percent. In 2013, the burden constituted by the elderly – the ‘grey’ burden – is 28 percent. Table 1 shows the population forecast.

Table 1. Population forecast by age and demographic burden / in percentages

	2013	2040	2060
Population x 1,000	16 778.0	17 816.0	17 899.0
Younger than 20 yrs	23.1	21.4	20.8
20 to 65 yrs	60.1	52.1	52.8
65 yrs or older	16.8	26.5	26.3
‘Green burden’	38.4	41.1	39.5
‘Grey burden’	28.0	50.8	49.9

Source: CBS, Statistical Yearbook 2013

On 1 January 2013 the Netherlands had a population of almost 17 million more than a year earlier. On balance 13 thousand inhabitants came in from abroad in 2012, 17 thousand fewer than in 2011. Some 156 thousand immigrants arrived while 143 thousand emigrants left. Immigration was down for the first time since 2006, while emigration rose for the third year running. Natural growth (births minus deaths) contributed 35 thousand, the lowest figure since 1871.

1.3. Economy and labour market indicators

The service industry makes up about 80% of the Dutch economy and labour market (see table 2).

Table 2. **Employment in % per sector**

	2005	2010	2011
Agriculture and fishery	1.7	1.5	1.4
Manufacturing and construction	17.5	16.1	15.8
Commercial services	48.7	49.4	46.8
Non-commercial services	32.1	33.4	33.5

Source: CBS, Statistical Yearbook 2012

In 2012, the employed labour force concerned 7.9 million people (net participation rate: see table 3). Since 2000, employment has risen in the elderly age segment(s) of the labour force because of the situation in the labour market and the (partial) elimination of arrangements for early retirement, and because more women were entering the labour market.

Table 3. **Net labour participation, by gender, age and country of origin; 15-65 years in % (employed labour force as a percentage of the population)**

	2005	2010	2012
Total	63.7	67.1	67.2
Gender			
Men	73.8	74.4	73.7
Women	53.5	59.7	60.6
Age			
15 to 25 yrs	38.6	37.7	37.2
25 to 35 yrs	80.5	83.5	81.6
35 to 45 yrs	77.9	82.6	81.2
45 to 55 yrs	73.8	78.7	78.8
55 years and over	39.4	48.7	53.4
Country of origin			
Native Dutch	65.8	69.4	69.6
Foreign western	62.6	64.7	65.6
Foreign non-western	49.3	52.8	53.1

Source: CBS, Statistical Yearbook 2013

Table 4. **Net labour participation, by educational attainment level in %**

ISCED level	2005	2010
ISCED 0-1	41	45
ISCED 2	57	61
ISCED 3 general	67	73
ISCED 3-4 vocational	74	77
ISCED 5 Bachelor	81	84
ISCED 5-6 Master/doctor	83	86

Source: OCW, Key Figures 2007-2011

As a result, 6.4% of the labour force was unemployed in 2013 (see table 5). Above this average of 6.4%: women (6.6%), the group aged 15-25 (12.6%), people with a foreign background, especially non-western (15.5%), and those with qualifications at ISCED level 2 or lower.

Table 5. **Unemployment (as a percentage of the labour force) by country of origin and education level of 15-64 year-olds**

	2005	2010 / 2012
Total	6.5	5.4 / 6.4
Country of origin		
Native Dutch	5.2	4.5 / 5.0
Foreign western	7.9	6.5 / 8.2
Foreign non-western	16.4	11.3 / 15.5
Education level		
Primary education	12.7	11.0 / 12.0
Secondary education – stage 1	9.0	8.0 / 9.1
Secondary education – stage 2	6.2	5.1 / 6.3
Bachelor	3.9	3.6 / 4.4
Master / doctor	5.0	3.8 / 4.3

Source: CBS, Statistical Yearbook 2013

In 2012, spending by the ministry of education, culture and science (OCW) on education institutions totalled more than 30.5 billion euros (5.9%). This amount includes student grants and loans and research in the university sector (OCW, Key figures 2008-2012).

1.4. Educational attainment of the population

One reason for the changes in educational attainment of the population between 2000 and 2011 (see table 6) was that young people with qualifications at higher levels of formal education entered the labour force, while older generations with lower levels gradually left.

Table 6. **Educational level of population aged 15-64 yrs in %**

ISCED level	2000	2011
ISCED level 1	12	8
ISCED level 2	26	23
ISCED levels 3 and 4	40	40
Bachelor: level 5	14	18
Master / doctor: level 5/6	7	9

Source: CBS, Yearbook Education in figures - 2013

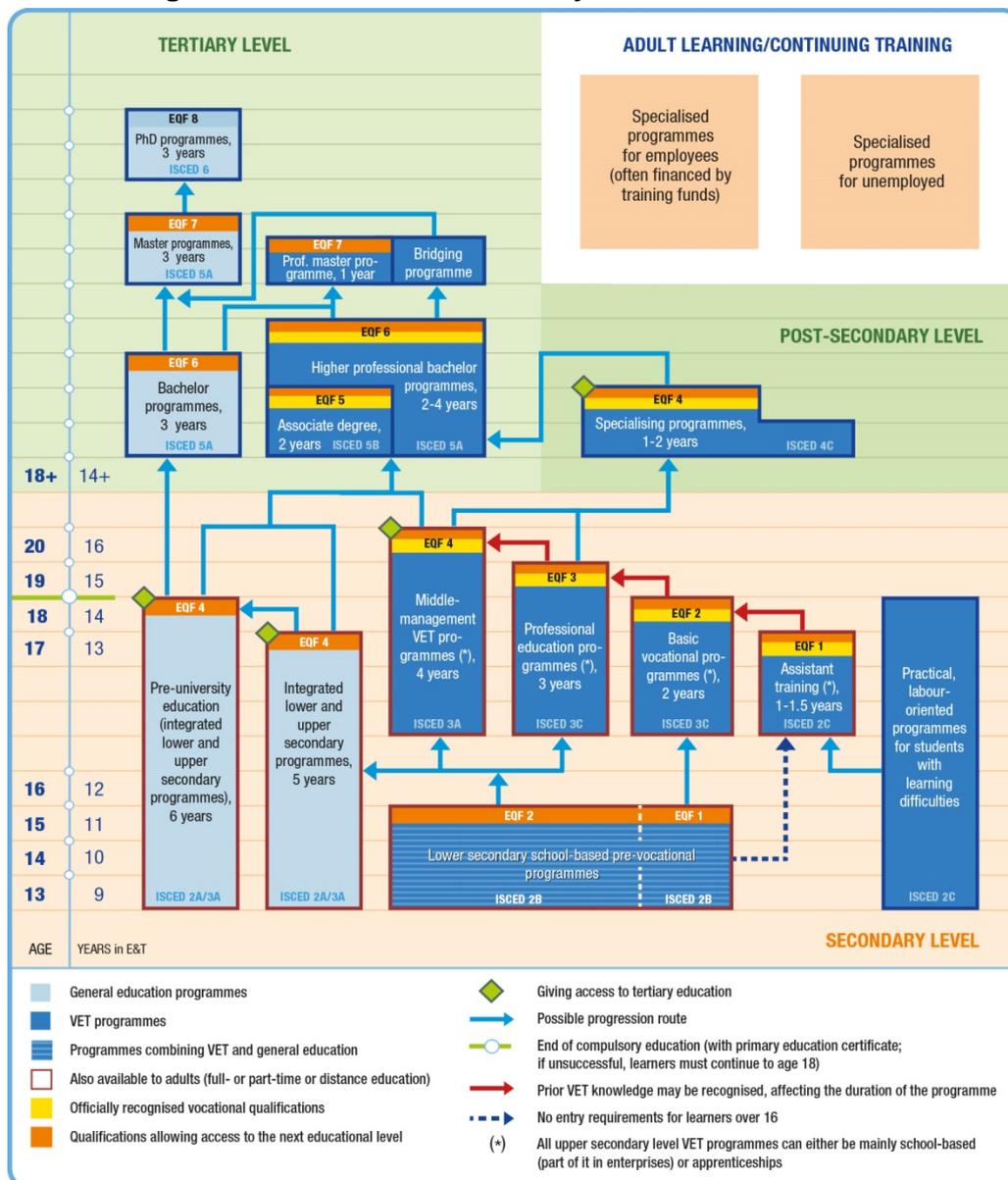
The increase in the educational level of the population is most prominent in the age bracket 25 to 34. In 2011, 41% of 30-34 year-olds had a higher education qualification (ISCED level 5 or 6).

CHAPTER 2.

Providing VET in a lifelong learning perspective

2.1. Overview of the Dutch education and training system

2.1.1. Diagram of the Dutch education system



NB: ISCED 1997 was used on the chart. Conversion to ISCED 2011 is ongoing.

Source: Cedefop and ReferNet Netherlands.

Transfer possibilities within the education system are shown in figure 1; see paragraph 2.1.3.

2.1.2. Elucidating the diagram

The Dutch education and training system comprises six elements: (a) primary education, (b) special education, (c) secondary education, (d) upper secondary vocational education and general education for adults, (e) vocational courses and training for adults (CVET), and (f) tertiary or higher education.

Education is compulsory for pupils from 5 to 16 and for those aged 16-17 on August 1 of any year, if they have not yet attained a general or vocational qualification at upper secondary level (in the diagram: at least *VWO*, *HAVO* or *MBO-2*); the so called ‘qualification duty’. This new arrangement was introduced in 2008 because of the need to reduce the number of early school leavers.

- (a) primary education (ISCED level 1; *PO – primair onderwijs*): for pupils aged 4-12; for eight consecutive years;
- (b) special education at primary and secondary level (*SO/VSO – speciaal onderwijs/voortgezet speciaal onderwijs*): for pupils aged 3-20 with learning or behavioural difficulties and/or with mental, sensory or physical handicaps;
- (c) general secondary education (ISCED levels 2 and 3; *AVO – algemeen voortgezet onderwijs*) includes three types of education:
 - pre-university education (ISCED level 2 after three years and further at level 3; EQF level 4; *VWO – voorbereidend wetenschappelijk onderwijs*). The duration is six years and prepares for further study in higher education: research universities and higher professional education/universities of applied sciences. Age: 12-18 years;
 - upper secondary general education (ISCED level 2 after three years and further at level 3; EQF level 4; *HAVO – hoger algemeen voortgezet onderwijs*): the duration is five years and prepares for further study in higher professional education. Transfer to the fifth year of pre-scientific education is also possible. Age: 12-17 years;
 - lower secondary general and pre-vocational education (ISCED level 2; EQF level 1 or 2; *VMBO – voorbereidend middelbaar beroepsonderwijs*): the duration is four years and prepares for further study in upper secondary vocational education (and partly in upper secondary general education). Age: 12-16 years. This type of education is discussed below as part of VET.
Connected with the latter is a separate practical, labour-oriented programme for pupils who are not able to attain a lower secondary/pre-vocational education (*PRO = praktijkonderwijs*). Age: 12-18/19 years;

- (d) upper secondary vocational education (ISCED levels 2, 3 and 4) and general adult education (ISCED levels 1 to 3) - BVE – *beroepsonderwijs en volwasseneneducatie*
- the first is upper secondary vocational education with several programmes in four sectors of the labour market; at four levels (*MBO* levels 1, 2, 3 and 4, EQF levels 1, 2, 3, 4 and partly 5) with different duration. As part of the Dutch VET system, this type of education is discussed below - *MBO – middelbaar beroepsonderwijs*. Age: from 16;
 - the second is general adult education: basic education (ISCED level 1; *basiseducatie*) and general secondary education for adults (ISCED levels 2 and 3; *VAVO – voortgezet algemeen volwassenenonderwijs*). Age: from 18 (but 16/17- year-olds can also attend this type of education under certain conditions).
- (e) CVET comprises a range of vocational or more general courses for jobseekers, the unemployed, employees, self-employed people, and employers. IVET programmes can also function as CVET.
- (f) the terms 'higher education' and 'tertiary education' have the same meaning. As a binary system, higher education (ISCED level 5) has two components:
- higher professional education (*HBO – hoger beroepsonderwijs*): mainly Bachelor degree (EQF level 6; the duration is four years), also – since 2011 - a 2 year Associate Degree (EQF level 5) and Master's degree (EQF level 7). Provider: 'universities of applied sciences'. As part of the VET system, this type of education is discussed below. Age: from 17/18;
 - scientific/university education (*WO – wetenschappelijk onderwijs*. ISCED level 5; and 6 for doctorates): the duration is four years and for technology studies five years (3 years for a Bachelor's, EQF level 6 -1 or 2 years for a Master's degree, EQF level 7). Age: from 18;
- (g) as part of (academic) adult education, and providing a modular programme structure, the Open University has open access.

2.1.3. Transfer possibilities in the system

The system can be divided into two 'columns' or tracks (see also figure 1):

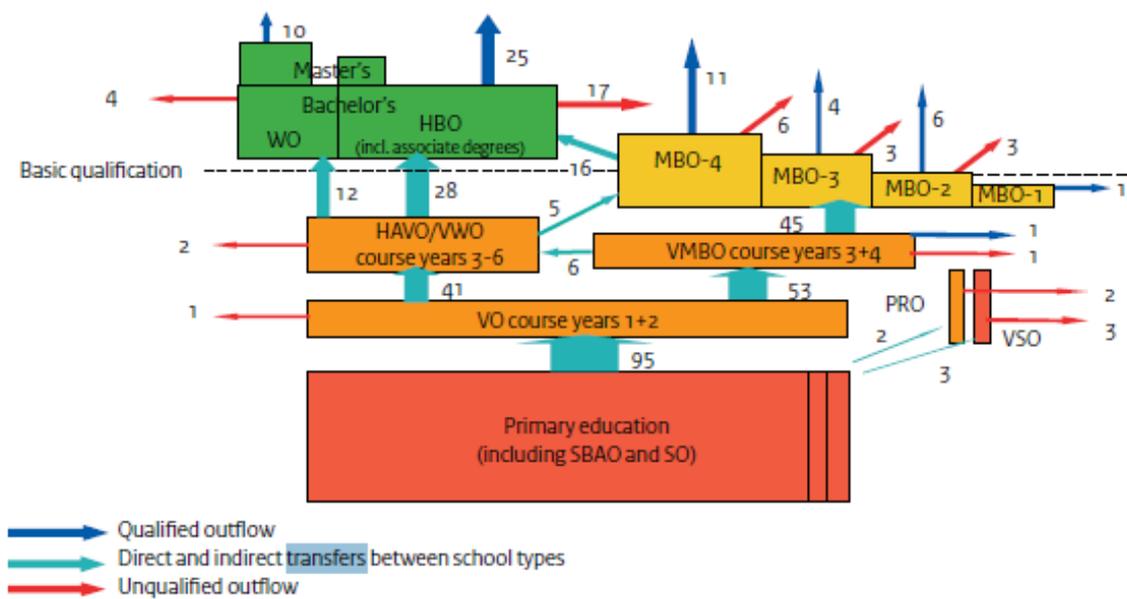
- (a) the general education track starts in general secondary education (*HAVO, VWO*) with direct transfer possibilities to higher education (*HBO, WO*), and
- (b) the vocational education track starts in lower secondary pre-vocational education (study year 3, *VMBO*) with transfer possibilities to upper secondary vocational education; *MBO* level 4 graduates can continue their studies in higher professional education (*HBO*). Upper secondary vocational education (*MBO* level 1-4) is the pivot in this column. For some students, it is the end of initial vocational education, and is completed with an initial

qualification. For others, it is an alternative route to higher professional education; nowadays, about 50% of the level 4 graduates continue without breaks their studies in higher professional education.

Most pupils aged 14 follow the vocational track, although general education is viewed as a superior path towards higher education. Improving parity of esteem between the two tracks is a policy priority.

Figure 1 shows the estimated shares of pupils transferring within the system; this relates to pupils leaving primary education in 2010. These estimates approximately present transfer percentages in one age cohort.

Figure 1. **Diagram of the Dutch education system, including transfers within the system in % of a cohort of pupils leaving primary education, 2011**



BAO - Mainstream primary education	SBAO - Special primary education
BBL - Block or day release in vocational education	SO - Special education
BOL - Full-time vocational programmes	VMBO - Pre-vocational secondary education
HAVO - General secondary education	VO - Secondary education
HBO- Professional higher education	VSO - Secondary special education
MBO - Vocational education	VVE - Early childhood education
OU - Open University	WVO - Pre-university education
PRO - Elementary vocational training	WO Academic higher education

NB: Basic qualification = at least a VWO, HAVO or MBO-2 diploma.
 Source: Key Figures 2008-2012 (Ministry of OCW).

2.2. Government regulated vocational education

2.2.1. Historical background

The development of vocational education can be characterised by a division into different periods of time. The first period, from the second half of the nineteenth century until 1919, when the first law concerning vocational education, the Industrial, Technical and Domestic Education Act (*Nijverheidsonderwijswet*), came into force, is characterised by the founding of technical schools and vocational schools, most of which were privately funded. The 1919 Act also provided for an apprenticeship system that was regarded as an alternative to vocational education in a day school context. This Act came into force in 1921.

Vocational education experienced an explosive growth during the second period, which lasted from 1921 to 1968; real growth from 1945. This was true for lower vocational education which followed on from primary education for children up to the age of 12, and for the apprenticeship system. This growth in secondary school attendance, which was primarily publicly funded, underscored the need for more cohesion between the various forms of secondary education. This resulted in the Secondary Education Act (OCW, 1968) commonly known as the *Mammoetwet*, or Mammoth Act, which came into force in 1968. General secondary education, together with vocational education at lower, intermediate and higher levels, was an integral part of this Act. This joint legislation positioned general education and vocational education as equal alternatives alongside one another with the possibility of reciprocal transfers. The apprenticeship system was given its own independent legal basis in the Apprenticeship Act of 1969.

Educational expansion continued in the third period, a period concerned mainly with upper secondary vocational education and higher professional education. In the case of the latter, this period lasted until 1986, although it continued to grow after that as well. In 1986, higher professional education was provided for in a separate Act, the Higher Professional Education Act (*Wet op het hoger beroepsonderwijs*) and 'liberated' from the constraints of secondary education. Dating from the 1970s, the idea of creating greater cohesion between higher professional and academic education came to fruition in 1993 with the introduction of the Higher Education and Research Act (*Wet op het hoger onderwijs en wetenschappelijk onderzoek*) (OCW, 1993). Vocational education at secondary level also underwent emancipation during this third period of time, culminating in the Adult and Vocational Education Act (*Wet Educatie en Beroepsonderwijs*) (OCW, 1996) in 1996. As far as vocational education is concerned, this legislation provides for both the more academic learning strands and the apprenticeship system.

In terms of size, new legislation for higher professional education legislation, on the one hand, and for upper secondary vocational education, on the other, has created major education providers with high levels of autonomy within a framework of general, statutory regulations – typical of the fourth period.

2.2.2. Legislative framework

Educational laws in the Netherlands provide a broad framework outlining key elements such as general aims and objectives of VET, access and accessibility, design procedures and procedures concerning the determination of qualifications, curricula and examinations, quality assurance procedures, regulations about the administration of publicly financed VET suppliers, procedures with regard to the recognition of private commercial VET suppliers, and financing.

(a) The main legislation concerning (initial) VET is:

- for lower secondary general and pre-vocational education (*VMBO – voorbereidend middelbaar beroepsonderwijs*) as part of general secondary education (see paragraph 2.1.2): the Secondary Education Act (*WVO – Wet op het Voortgezet Onderwijs*; 1968 with later amendments);
- for upper secondary vocational education (*MBO – middelbaar beroepsonderwijs*; see paragraph 2.1.2): the General Adult Education and Vocational Education Act (*WEB – Wet Educatie en Beroepsonderwijs*; 1996 with later amendments) (OCW, 1996);
- for higher professional education (*HBO – hoger beroepsonderwijs*; see paragraph 2.1.2): the Higher Education and Scientific Research Act (*WHW – Wet op het Hoger Onderwijs en Wetenschappelijk Onderzoek*; 1993 with later amendments) (OCW, 1993);
- also for higher professional education: The Quality through diversity Act; 2013. The aim is to raise the quality and make higher education more differentiated for a heterogeneous student population and future-proof. Changing approaches with the legislation introduced: an improved but also stricter study climate; a recognisable, functional educational offering adapted to the needs of the student population and labour market.

(b) Important laws for (initial) vocational education:

- regional Registration Act (early school leavers) and Coordination (*RMC: Regionale Meld- en Coördinatiewet*, 2001). This act is aimed at combatting early school leaving for young Dutch people who are over 18 years old and therefore no longer subject to the compulsory school attendance requirement. According to this Act 39 regions throughout the country are responsible for combatting early school leaving. Each

municipality is a member of one of the 39 Registration and Coordination Regions (“RMC regions”). Each RMC region has a “contact municipality” which coordinates notification and registration of early school leavers;

- student Finance Act (*WSF – Wet op de Studiefinanciering*; for students over the age of 18 and in full-time education) (OCW, 1986);
- the Reduction of Wage Tax Contributions Act (*WVA – Wet Vermindering Afdracht Loonbelasting*). (SZW, 1995) Goal: financial support of enterprises that provide places for apprentices and interns. Because of excessive and unlawfully use of this tax benefit, it will be replaced by a subsidy (January 2014). Companies can apply for funding for educational activities subject of market failure occurs;
- the Professions in Education Act (*Wet BIO – Wet op Beroepen in het Onderwijs*). (OCW, 2006). Valid for primary, secondary and general adult education and for VET at lower/upper secondary level: regulates the minimum requirements for teachers.

Recently some amendments are made to the General Adult Education and Vocational Education Act (*Wet Educatie Beroepsonderwijs*) (OCW, 1996). Based on the policy document ‘Focus on Craftsmanship’ (OCW, 2010) new measures will be introduced primarily focusing on raising efficiency in VET. These measures concern:

- the introduction of a new funding model: a cascade model based on input funding discouraging studying for a longer period of time;
- curtailing the length of training in upper secondary VET in order to achieve a faster transit through the vocational education column, whilst at the same time increasing the study-load (for some of the relevant programmes), because of the compulsory introduction – with central exams in the near future – of some key subjects;
- the introduction of Entry level courses in replacement of the *MBO* 1 courses. Entry level courses will be positioned separately from *MBO* 2, 3 and 4 courses. This policy change was prompted by the huge intake of students without diplomas into the VET schools (*ROC*) and the intensive supervision that some of these youngsters require. This had a major impact on the financial resources of institutes and their organisational capacity, adversely affecting teaching at levels 2, 3 and 4 (Oudeman Committee, 2010);
- the ending of the non-threshold inflow in *MBO* 2. Admittance to *MBO* 2 is open for youngsters with a *VMBO* diploma or a certificate proving their admittance into the fourth year of *HAVO/VWO*.

2.2.3. Institutional framework

There are basically three organisational levels in the Dutch vocational/professional education system:

- national level,
- sectoral level (especially in upper secondary VET),
- regional/local or school level.

Several functions and roles can be identified in the regulated VET system: legislation and financing, development of qualifications, development of curricula, examinations, quality assurance – internal and external, and promotion of interests. Table 7 combines the levels of organisation (including the relevant organisations or bodies) with these functions and roles.

Table 7. **Organisational levels and functions/roles within initial vocational/professional education**

Function	VMBO (ISCED-2)	MBO (ISCED-3/4)	HBO (ISCED-5)
Legislation/ financing	Ministry of Education, Culture and Science/ Ministry of Economic Affairs	The same	The same
Development of qualifications	Design: national level Validity: national	Design: sectoral level by Centres of Expertise on VET – Trade and Industry (social partners & VET). National coordination by Foundation SBB*. Validity: national	Design: school level Validity: national
Development of curricula	School level	School level	School level
Examination	Partly central/national; partly school exams	School exams; external contribution of trainers in enterprises	School exams Internal: self-evaluation.
Quality assurance	Internal External: Inspectorate	Internal External: Inspectorate; special attention: exams	External: accreditation of HBO-programmes by NVAO** European level: use of Dublin level descriptors
Promotion of interests by associations of schools***	VO Council	MBO Council	HBO Council

NB: * S-BB: Foundation Cooperation VET – Trade and Industry

** NVAO = Dutch-Flemish Accreditation Organisation (*Nederlands-Vlaamse Accreditatie Organisatie*).

*** NRTO (*Dutch Council for Training*) promotes the interests of private, non-subsidised VET providers that have been legally recognised by the Ministry of Education, Culture and Science to offer regulated VET courses at upper secondary and tertiary level.

Seventeen Centres of Expertise on vocational education, training and the labour market, each representing a sector or branch of industry, have been appointed by the Dutch Ministry of Education to perform legal tasks in the field of VET:

- (a) the development and maintenance of qualifications as part of the qualification framework for upper secondary VET. Qualifications are developed via full consultation with representatives from social and from educational institutes, supervised by a committee of industry and education stakeholders,
- (b) the accreditation of companies offering work placements and the monitoring of the quality of these work placements (venue, support, qualified staff).

Until 2012 Colo represented the interests of the Centres of Expertise at regional, national and international levels. Since 2012 the Foundation for Cooperation on VET and the Labour Market (SBB) took over. The SBB is established on request of the Dutch Ministry of Education to provide advice on VET policy to the Ministry. The SBB is responsible for the cooperation between VET and the world of work. Within SBB they work together on themes such as the VET qualifications structure, examination, work placement and the efficiency of offer of training programs. With that, SBB optimizes the connection between education and the labour market, the goal of which is: delivering sufficient and well-qualified professionals. The SBB is the main organisation charged with creating this compatibility. Its work includes themes with a cross-regional and cross-sector focus.

As a result of the announcement of decrease of educational subsidies, which will have a profound impact on the Centres of Expertise, a new organisation model is currently under discussion.

2.2.4. Governance

The Adult and Vocational Education Act (*Wet Educatie en Beroepsonderwijs*) (OCW, 1996) grants upper secondary Vet schools relatively ample space for policy making. The school has full control over the deployment of teaching staff, the educational programmes offered, industry-specific training portfolios in the region, the organisation of education, and the choice of collaboration partners. The school management is also responsible for deciding how to allocate the annual lump sum grant from the ministry in the school-budget, e.g. what amount to allocate on personnel costs, materials, housing and reservations for investments in the near future. An auditor's report provides an annual insight into how the subsidy is spent.

Governance is often defined in an internal, vertical and a horizontal axis: the internal axis stands for the organisation of internal management and control, the

vertical axis stands for school-government accountability relations, the horizontal axis for the (accountability) relations between the school and its local stakeholders. Governance relations are regulated by law (in the General Adult Education and Vocational Education Act - *WEB*) (OCW, 1996) and in a Code for Governance (MBO Raad, 2009).

Internal monitoring and control: upper secondary VET schools have small Executive Boards (*CvB*) with one chairperson and one or two associated posts (compare: central management) and an internal Supervisory board (compare: Board of Supervisors in large companies). Middle management is accountable to the Executive Board. Participation of students, teachers and parents in decision making is regulated in the Act on Works Councils (*WOR- Wet op Ondernemingsraden*) (SZW, 1971).

Vertical monitoring and control: The Education Inspectorate is in charge of the so-called external supervision, checking whether statutory provisions are being met and a quality assurance system is in place. A specific point of concern for the education inspectorate is the quality of school-based exams in terms of content, the quality of the tests and procedures. Supervision is proportional in nature, which means that it is stricter where deficiencies are found, and the required improvements are monitored by the inspectorate.

Horizontal dialogue: Using self-chosen tools the Executive Board is also expected to render horizontal account to stakeholders who are important to the school: employers, local government and other organisations in their region (MBO Raad, 2009).

2.2.5. Vocational education at lower secondary level

VET at lower secondary level is part of secondary education. The destination of 14-year-olds within the early tracking system of secondary education (study year 3 in secondary education) is shown in table 8. The table shows an increase in the number of pupils in the 'higher' segment of secondary education (*HAVO/VWO*; EQF level 4) since 2000 and earlier. This is also the case for pupils who need extra support in the 'lower' segment (*VSO/PRO*). The 'middle' segment of secondary education (*VMBO* – excluding *VMBO* with extra support via *LWOO*) has decreased rapidly during the last two decades.

Table 8. **Participation in different types of secondary education year 3 by gender; in %**

Type of education	2000 boys/girls	2010 boys/girls	2011 boys/girls	2012 Boys/girls
VSO (15-year-olds)	2.2 / 1.0	4.3 / 1.8	4.6 / 1.7	4.7/1.9
PRO (15-year-olds)	2.4 / 1.4	3.1 / 2.2	3.2 / 2.1	3.0/2.3
VMBO – LWOO	11.8 / 7.5	12.8 / 11.5	12.6 / 11.7	12.9/11.9
VMBO (excl. LWOO)	51.7 / 47.7	41.3 / 37.1	41.9 / 38.1	42.6/38.3
HAVO	20.1 / 22.3	23.0 / 23.8	23.7 / 24.5	24.3/25.3
VWO	16.1 / 19.6	20.0 / 22.7	20.3 / 22.8	20.0/22.9

NB: * See paragraph 2.1 for abbreviations.
VSO and PRO: special types of secondary education – usually not leading to a diploma at ISCED level 2. VMBO: IVET and general education at lower secondary level leading to a diploma at ISCED level 2 (LWOO = *leerwegondersteunend onderwijs*: extra support for pupils within VMBO). HAVO and VWO: general secondary education/pre-scientific education as preparation for higher education.

Source: Key Figures 2008-2012; OCW.

Pre-vocational secondary education (*VMBO – voorbereidend middelbaar beroepsonderwijs*; EQF levels 1 or 2) lasts 4 years. The first two years consist of general subjects only and years 3 and 4 are characterised by three system elements:

- (a) Pupils can receive extra support in the different programmes;
- (b) Pupils choose a 'learning path' characterised by 'level differentiation', programmatic orientation and different transfer possibilities in the education system. The four learning pathways are:
 - (i) The theoretical learning pathway (*VMBO-TL – theoretische leerweg*). Those graduating from the theoretical learning pathway can transfer to upper secondary vocational education (especially long courses at the highest levels of upper secondary VET – *MBO* levels 3 and 4) or continue their education in the fourth year of upper secondary general education. The content of the programme is general in character;
 - (ii) The mixed/combined learning pathway (*VMBO-GL – gemengde leerweg*). This is similar to the theoretical learning pathway but with a more pre-vocational orientation for about ten to fifteen per cent of the study time. Progression routes towards upper secondary VET are the same as for the theoretical pathway;
 - (iii) The pre-vocational learning pathway – higher level (*VMBO-KL – kaderberoepsgerichte leerweg*): preparation for long courses in VET at secondary level – *MBO* levels 3 and 4;
 - (iv) The pre-vocational learning pathway – lower level (*VMBO-BL – basisberoepsgerichte leerweg*): preparation for short courses in upper secondary VET – *MBO* level 2. Within this pathway, some pupils can participate in a dual track that combines learning and working. Various experiments were started in 2008, including the full integration of these

- programmes and *MBO* level 2 programmes in collaborations between schools (making a 'smooth' progression route without a break halfway).
- (c) Pupils choose a sector in the pre-vocational oriented pathways (agriculture, technology, economy and business, health and welfare) and further specialities within a sector.

The examination subjects are two obligatory subjects for all pupils (Dutch and English), two sector-specific subjects (limited choice) and two other subjects (different options). The vocationally oriented subjects can be broader or more restricted in nature. The programmes lead to nationally recognised qualifications/diplomas. Some examinations are organised centrally/nationally while others are the responsibility of the schools.

In addition, there is a specific practical pathway for low-achievers, which is geared towards preparing them for the labour market (*PRO: praktijkonderwijs*). Some of these pupils also transfer to upper secondary VET (*MBO* level 1, in near future to be replaced by Entry education; see paragraph 2.2.5). Pupils without qualifications can also enter upper secondary VET, i.e. programmes at *MBO* level 1 (these programmes can also be offered in *VMBO* schools in cooperation with upper secondary VET schools) and, under certain conditions, *MBO* level 2 programmes.

2.2.6. Vocational education at upper secondary level (including post-secondary – non tertiary level)

In upper secondary education, 67% of the school population participates in a vocational programme and 33% in general education. The number of participants in VET is high; both youngsters and adults attend upper secondary VET, meaning that the numbers do not represent a division into age cohorts.

The age of the participants in upper secondary vocational education ranges from 16 to 35 and over. The average age of upper secondary VET participants is, in fact, slightly higher than in higher education. Accordingly, upper secondary VET fulfils an emancipatory function.

Subsidised programmes in VET at upper secondary level are offered by 43 regional, multisectoral training VET schools (*ROC – regionale opleidingscentra*), 12 specialist trade colleges (*vakscholen*: specific for a branch of industry), 12 agricultural training centres (*AOC – agrarische opleidingscentra*) and four other schools. The *AOC* are separately financed by the Ministry of Economy, Agriculture and Innovation. In addition, private, non-subsidised providers can offer VET programmes on condition that their programmes are recognised by the Ministry. Consequently, upper secondary VET is an open system. Moreover, the subsidised educational institutions can also offer contract educational activities,

paid for by employers/employees. The system elements in upper secondary VET are:

- 2.2.6.1. *Two learning pathways: school-based full-time or part-time programmes with practical periods in enterprises (BOL – beroepsopleidende leerweg) and a dual pathway (apprenticeship training) in which learning and working are combined (BBL – beroepsbegeleidende leerweg).*

In the school-based pathway, the practical period in companies makes up at least 20% of the study time to a maximum of 59%; in the dual pathway, training takes place in a company during at least 60% of the study time. Both pathways function in the market as communicating vessels; the same qualifications/diplomas can be achieved via both pathways. Participants in the school-based pathway are mainly youngsters, while almost 50% of those following the dual pathway are aged 24 and over.

Table 9. **Participation in MBO: learning pathways**

	2000	2005	2010	2011	2012
Total number	452 000	489 000	525 000	530 000	523 000
% BOL pathway	66	72	66	67	68
% BBL pathway	34	28	34	33	31

Source: CBS: Yearbook education in figures – 2013.

- 2.2.6.2. *Programmes at four levels with different access criteria and transfer possibilities for further learning:*

- (a) *MBO level 1 ‘assistant training’ (assistentenopleiding) lasts six months to a year. It prepares participants to carry out simple executive tasks (ISCED level 2 in Dutch/international statistical information, EQF level 1). There are a few sector-specific programmes, as well as a broader work-oriented programme for vulnerable groups (assistant with a job market qualification–arbeidsmarktgekwalificeerde assistent). The programmes at this level are intended for youngsters who are probably not in a position to attain a minimum starting qualification at MBO level 2; it is an entrance qualification for the labour market. At the time of writing there are no restrictions on access. However new policy is in the making. In the near future the non-threshold inflow at level 2 will be ended and MBO 1 will be replaced by Entry-level courses. Access to this entry level course will be restricted to school leavers from special need education and school leavers from secondary education (VMBO) without a diploma. The entry level course is aimed at qualifying youngsters to entering MBO level 2, as well as guiding youngsters not capable to proceed to level 2, to work. Also the concept of obligatory study advice will be introduced for youngsters over 17; preventing*

the schools to remain responsible for young people making little study progress.

- (b) *MBO* level 2 ‘basic vocational education’ (*basisberoepsopleiding*) lasts two or three years and prepares for executive tasks (ISCED level 3C short, EQF level 2). This level is the ‘official’ minimum qualification level for the labour market, the term ‘official’ in this context meaning that it is related to the definition of early school leaving, which, politically speaking, is regarded as a desirable minimum for every citizen. Access requirements: at least a basic pre-vocational education diploma; completed assistant training (*MBO* level 1); till now under certain circumstances no access requirements apply, but this will change in the near future. Progression to *MBO* level 3 (and sometimes level 4) programmes is possible.
- (c) *MBO* level 3 ‘professional education’ (*vakopleiding*) lasts three/four years (two years after completion of an *MBO* level 2 programme). It prepares people to carry out tasks independently (ISCED level 3C long, EQF level 3). Access requirements: (1) a pre-vocational secondary education certificate/diploma (excluding basic pre-vocational education), or (2) proof that the first three years of upper secondary general education or pre-university education have been successfully completed. Progression to programmes at *MBO* level 4 are possible as are middle management training programmes and specialist training (see below).
- (d) *MBO* level 4 ‘middle-management VET’ (*middenkaderopleiding*) lasts (three or) four years. It prepares people to carry out tasks independently and with more responsibility (ISCED level 3A, EQF level 4). Access requirements: the same as for *MBO* level 3. Progression and transfer to higher professional education are possible. At this moment the duration of *MBO* level 4 courses is reduced with a year to 3 years, as a result of new government policies (Focus on craftsmanship - *Focus op Vakmanschap*) (OCW, 1996), for a majority of the qualifications at that level.
- (e) *MBO* level 4 at post-secondary non-tertiary level, as ‘specialist training’ (*specialistenopleiding*), lasts one to two years (ISCED level 4; EQF level 4). Access requirements: completion of a programme at *MBO* level 3 (or 4). Progression/transfer to higher professional education, especially the dual or part-time pathways, is possible.

Because of efficiency reasons the duration of programmes will be reduced in the near future: the duration of *MBO* level 2 programs will be limited to 1 to 2 years, of *MBO* 3 programs to 2 to 3 years and of *MBO* 4 programs to 3 years and the specialist training to 1 year. The minister has the right to decide to make exceptions to this rule and allow specific *MBO* 4 courses to last 4 years.

2.2.6.3. *A qualification structure is in place that relates to different industry/business sectors.*

Programmes are offered in four different sectors: green/agriculture, technology and engineering, economics/services, and health/welfare. Each sector includes various branches of industry/business.

The qualification structure comprises 237 competence-based qualifications with 612 exit differentiations/diplomas. Each qualification describes the desirable output of programmes based on these qualifications, which is output related to a specific vocation or group of occupations, to citizenship and further learning.

Table 10. **Participation in MBO and adult education**

	2009/10	2010/11	2011/12
Educational institutions	71	73	70
Students (X 1000)	522	528	523
Senior secondary vocational education (bol)	351	358	358
Senior secondary vocational education (bbl)	171	170	165
level 1	24	25	24
level 2	130	129	125
level 3	142	145	144
level 4	226	229	230
Continued education (*) %			
from level 1 to 2	38	-	-
from level 2 to 3	41	-	-
from level 3 to 4	33	-	-
from level 4 to hbo	41	-	-
School-leavers from mbo (*) %			
level 1	36	37	-
level 2	13	13	-
level 3	5	5	-
level 4	4	4	-
Participants in adult education (X 1000)			
basic level	36	28	22
secondary level (<i>vavo</i>)	17	15	14

NB: (*) Provisional figures in 2010/11.

Source: CBS: Yearbook education in figures – 2013.

2.2.7. Professional education at tertiary level

There are two types of higher education: university education (*WO*) and higher professional education (*HBO*). Higher professional education offers professionally oriented programmes. It is outlined in more detail here. Publicly financed providers are the universities of applied sciences. Non-subsidised providers can also offer similar programmes if they have appropriate accreditation.

These educational institutions offer study programmes leading to Bachelor's degrees (ISCED level 5, EQF level 6) – this is their core business. In

addition, pilot projects with short-cycle higher education ('Associate degree' or Ad, ISCED level 5B, EQF level 5) were introduced in the Netherlands a few years ago, and are implemented in the regular education system in September 2013. The Ad programme (120 ECTS; normative duration about two years) is part of a Bachelor's programme (240 ECTS; normative duration four years), so that further progression in higher education for graduates with an associate degree is possible. Although recently is decided an automatic right for continuation in a Bachelor is going to be replaced by a system of admissibility (OCW, 2013a). The Associate Degree is of particular interest to those with a VET background at upper secondary level. In 2012 the total number of students starting an AD in 2012 is 1457, making it in total 4495 (OCW, 2013a).

The higher professional education organisations also offer Master's programmes (EQF level 7) for Bachelor graduates, with more programmes expected in the next decade. These organisations can also organise market-driven contract activities paid by employers and/or individuals/employees, such as educational courses and applied research.

Degrees are awarded by the institutions themselves. Official recognition of the courses is granted on condition that they are accredited by the Dutch-Flemish Accreditation Organisation.

After years of steady growth, enrolment in professional higher education (*HBO*) is falling. On 1 October 2012, the number of students totalled slightly less than 412 thousand (excluding green programmes). The decrease can primarily be attributed to a sharp fall in part-time programmes and a slight fall in work-based learning programmes. Within full-time programmes, enrolment still shows a slight upward trend.

It is expected that student numbers will increase further in the next few years and that the diversity of the student population will also increase. New legislation will be introduced ('Quality through diversity' Act), which urges differentiation on three aspects: differentiation in structure (e.g. number of Associate degrees - AD's), differentiation between institutes (profiling) and differentiation in educational offering (e.g. broad bachelor programmes). Also instruments are developed to improve student choice activities: to support students in their choice for a specific course.

Until now admission into higher professional education requires an upper secondary general education (*HAVO* or *VWO*) or VET qualification (*MBO* 4). Some bachelor programmes have additional admission criteria for prospective entrants, which relate to the set of subjects they studied to attain their qualification. These criteria do not apply to students with an *MBO* 4-qualification, as they currently have a universal right to go on from *MBO* to *HBO*. However, with the introduction of the 'Quality through diversity' Act, admission criteria for

MBO 4 students into higher professional education will be sharpened (for specific courses) in 2014- 2015.

Progression routes: after completing the first year of a Bachelor's programme, entrance to university programmes is possible; a Bachelor's degree gives access to Master's degree programmes in higher professional education, as well as to Master's degree programmes at university, which are often preceded by a bridging programme. The expected success rate for students in higher professional education is 73% (2009).

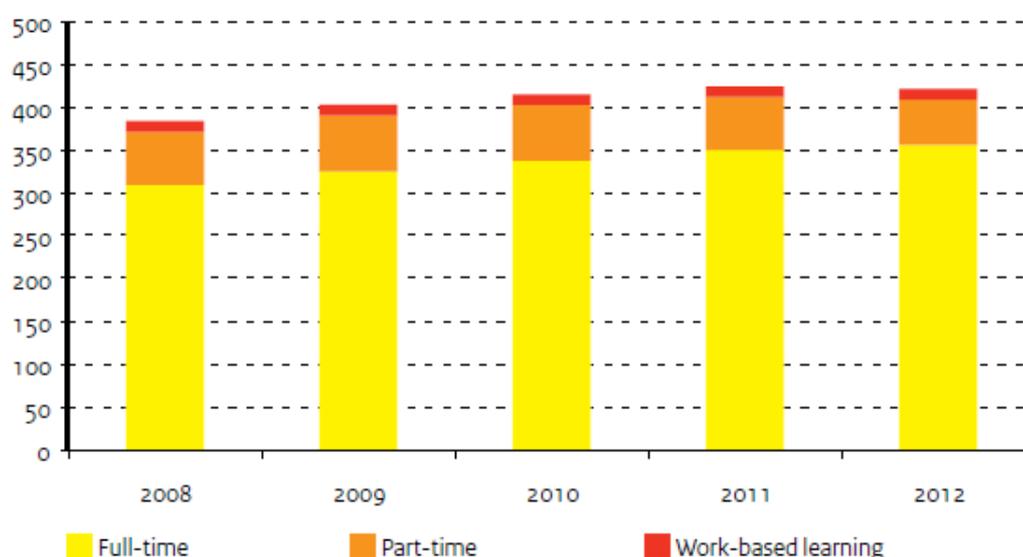
Higher professional education is provided at Universities of Applied Sciences (*hogescholen*) for students aged 17 and over. They generally offer study programmes in one or more of the seven fields of training: 'green'/agriculture, technology, economics and services, health care, behaviour and society, culture and arts, and teacher training.

Higher professional education provides education for professions that require both theoretical knowledge and specific skills. Courses are therefore almost always closely linked to a particular profession or group of professions and most programmes include a work experience placement. This type of education can also be attended part-time as part of professionally oriented adult education, and, for the last ten years, in dual learning pathways.

Curriculum development and assessment are the responsibility of the individual schools. A broad variety of curricula and learning environments exist even for programmes related to the same profession. The intention is to minimise the variety of curricula in different fields, e.g. in teacher training programmes.

Success rates: The expected success rates present a somewhat fluctuating picture. After peaking to 75 per cent in 2003, success rates have shown a gradually declining trend over the years that followed. The average expectation for 2012 fell by 3 per cent compared to 2011 and now amounts to 65 percent. The overall success rates exceed the sum total for the various sectors; this is due to the fact that some students switch disciplines (and sectors), which affects the figures. Average scores are now highest for Language & Culture, followed by Health and Engineering & Technology.

Table 11. **Enrolment in professional higher education. Number of students enrolled x 1000, including green education**



Source: Key Figures 2008-2012 Education, Culture and Science.

2.2.8. Teachers

Three quarters of the teachers in upper secondary vocational education are educated at the higher professional education level; 13% are university-trained. In higher professional education, approximately 60 % of the teachers are university graduates (OCW, 2011c).

The Education Professions Act (*Wet BIO/ Wet op Beroepen in het Onderwijs*) (OCW, 1996) which came into force on 1 August 2006 regulates the standards of competence for both teachers and others working in education-related jobs in primary, general secondary, vocational secondary and general adult education. This legislation requires the competent authority to maintain a teacher competency document for each individual teacher. The teacher competency document details the teacher's competencies and the activities aimed at maintaining and improving these competencies (OCW, 2011c).

Professionalization of teachers is a pivotal political issue, in which over the last few years substantial resources are being invested in order to raise standards. Policies, formulated in the action plan 'Teachers 2020 - A strong profession' (OCW, 2011c), are based on the following developments: a shortage of teachers is expected in the years to come, especially in secondary education; Dutch students' learning achievements are still above average in international rankings, but fail to reach the top five in any category. Student achievement is even declining for a number of indicators; there are concerns about teacher

quality (OCW, 2011c). The Action Plan Teachers 2020 contains three action lines:

- To strengthen the quality of current and future teachers by introducing a professional register. It will encourage teachers to maintain and improve their professional competencies. By 2018, registration will be compulsory for all educational staff.
- Encouraging schools to become highly professional organizations by introducing an ambitious, results-based culture and by stimulating professional HR policies. This means: giving teachers sufficient opportunities for professional growth, providing avenues for professionalization, showing appropriate appreciation for excellent teachers and rewarding it. School boards will receive additional funding to promote teachers to higher positions with appropriate remuneration. This is what is meant by improving the 'salary mix' (differentiation of responsibilities and remuneration).
- Improving the quality of teacher training courses, by educating new teachers to a higher level and to more exacting standards.

In 2009 an agreement between social partners in upper secondary education was reached on the introduction of a Professional Statute. In this Statute the internal right of say is established for the teacher and his team on pedagogical and quality issues in the institute. In combination with the Teacher 2020 action plan and the various sector collective bargaining agreements in VET and higher professional education, these developments are to produce a more modern HRM policy in the educational institutes.

For professionalization activities, teachers in upper secondary education are entitled 59 hours of training and professional development annually. The employee is responsible for justifying these hours to the employer. In addition, there are 107 training hours available per FTE per team. The team determines the content and allocation of hours among the employees concerned, in consultation with the employer. Teachers in higher professional education make individually Personal Development Plans agreement with the employer. At least 59 hours of professional development time is available for teaching staff in order to realize their PDP. The employee also receives a personal budget for professional development of 0.8 % of his/her annual salary.

Trainers responsible for the work-based learning of students in companies (both in the apprenticeship and the work-based learning track) are trained by the Knowledge Centres for VET. These trainers should have didactic skills such as being able to instruct, guide, motivate and assess the students/apprentices. The Knowledge Centres regularly provide (commercial) courses to train these practical trainers in the various branches of industry.

2.3. Other forms of vocational education and training

2.3.1. Provision

There is not an institutional framework for other forms of VET in the Netherlands; especially for continuing vocational training (CVT). Provision is market-driven with a great many suppliers. Social partners can stimulate CVT with the help of their branch-specific Training and Development Funds (*Opleidings- en ontwikkelingsfondsen*). Tax deduction measures for individuals to facilitate training and procedures for the accreditation of prior learning can promote further learning. However this tax deduction facility will be replaced by a subsidy-system, to be implemented in 2014 (see 2.2.2). CVT can be divided into:

- legally regulated and publicly financed part-time/dual IVET that functions as CVET for individuals; see paragraph 2.2.5 and 2.2.6.,
- extensive provision of specific training for the unemployed and jobseekers,
- private, non-government-funded training for employees, self-employed people and employers.

There are various forms of training provision:

- (a) the part-time equivalents of regular full-time / school-based vocational / professional education and the dual pathways within upper secondary vocational education and higher professional education.;
- (b) private correspondence courses and e-learning activities, which are primarily vocational in nature;
- (c) private oral education, which again comprises primarily vocational courses; training courses given outside the company;
- (d) in-company training, off-the-job and on-the-job.

A great many training providers are active in this non-formal continuing vocational training (off-the-job) market for employees. Most are private commercial training providers covering 84% of the training market and a smaller number are publicly funded VET providers that offer contract activities paid by the contractor (approx. 16% of the courses). There is very little, reliable statistical information available about informal on-the-job learning (workplace learning).

2.3.2. Sectoral and regional approaches

Employee training is partly influenced by Collective Labour Agreements, which are valid for a certain branch/sector of the labour market. Financial arrangements for CVET can be made through funds reserved for training and/or research and development (Training and Development Funds - *O&O fondsen: Opleidings- en Ontwikkelingsfondsen*). Employers pay an obligatory part of their personnel costs into these sectoral or branch funds and can benefit from refunds for training

employees, (this applies in particular to training courses offered by private providers linked to a recognition/admission system for these funds). There are about 140 of these funds, covering 85% of employees.

Regional agreements on working-learning arrangements and the use of procedures for the accreditation of prior learning have increased over the past few years, stimulated by the former Interdepartmental Project Directorate for Learning & Working and others. The government has stimulated and facilitated employers, employees, citizens, trade and industry, employment services, educational providers, local governments and regions to take practical steps in the realisation of local one-stop-shops; since the economic crisis, 'mobility centres' have had the same task, namely to guide people from one job to another whether or not via additional training.

To stimulate civic integration, participation in education and the labour market, a 'participation budget' has been introduced at municipality level. This is a merger of three former budgets for social welfare and income support (Work and Income Support Act – *Wet Werk en Bijstand*) (SZW, 2003), employability education and civic integration. The aim is to decrease bureaucracy. The Participation Budget Act has been operational since January 2009.

Unemployed people can search for jobs at their regional *UWV Werkbedrijf* (Employment Service). The municipalities are responsible for paying income support to people with no income from work or the social security/insurance system. The UWV Werkbedrijf-agencies cooperate in helping people to find work. Training can be part of the (re)integration into work. Depending on the circumstances, people themselves have a say in the choice of the most appropriate routes back to work, in the form of training components such as courses/programmes paid by these agencies.

2.3.3. Participation

The Labour Force Survey (LFS) and the Adult Education Survey (AES) asked respondents about their participation in formal and non-formal learning (age bracket 25-64, the active labour force). The results for 2011 were: 16.7% via LFS (reference period: four weeks) and (in 2008) 42.1% via AES (reference period: twelve months). Higher educated persons, younger age groups and persons with a flexible labour contract participate more than lower educated persons, older age groups and persons who are self-employed or possess a solid labour contract.

CHAPTER 3.

Shaping VET qualifications

3.1. Anticipation of skills needs

The Research Centre for Education and the Labour Market (*ROA*) is the institute in the Netherlands that specialises in labour market forecasting and skills anticipation. The forecasts aim to increase transparency of the match between education and the labour market. Two approaches can be distinguished: top-down and bottom-up. In the top-down approach, a general forecasting model for the whole labour market and data from national sources are combined to serve two main functions: policy and information. Every other year, the organisation publishes the report 'The labour market by education and occupation in 20xx' (ROA, 2013) which includes analyses of expected labour market developments in the light of particular policy issues. The information function is primarily intended to assist and support vocational and educational guidance processes.

In the bottom-up approach, partial models of labour market forecasting are used, for example for just a selection of sectors or occupational classes, with input from specific (ad hoc) data sources. This can be complementary to the top-down approach.

The Knowledge Centres for VET and Trade and Industry – active in upper secondary VET – cooperate with the ROA to improve the use of the available data. These 17 branch-specific Knowledge Centres publish the results of 'education and labour market research' for their own sector, making use of ROA information and other resources. These documents contain information on the labour market by sector or branch, such as expected demand for qualified personnel and the expected availability of places in companies for practical training (as part of vocational education programmes), as well as qualitative developments related to changing and new employment. The educational institutions are subsequently responsible for attuning their provision of education at regional level. The regional training centres sometimes carry out their own market research to gain insight into expected needs for qualified employees at regional level.

Social partners and educational institutions can both take the initiative to introduce new occupations or qualifications or renew existing qualifications. Furthermore, social partners have an explicit task to take the initiative to incorporate new occupations or qualifications into the national qualification structure in upper secondary vocational education. The national social security

agency (*UWV*) is also involved in the cooperation between the ROA and SBB to match information on demand and supply in the labour market, at sectoral and regional level.

Private commercial training providers have their own marketing strategies (including market research), so that they can offer courses that are relevant to potential target groups and the labour market.

3.2. Qualification design and curriculum development

The pattern for qualification design differs between the parts of the vocational/professional column:

- (a) in lower secondary pre-vocational education: examination syllabi are laid down in a framework by the Ministry of Education, Culture and Science and developed by the Foundation for Curriculum Development in the Netherlands;
- (b) in upper secondary vocational education: the national qualification structure defines the desired output of the qualifications. Three steps can be identified:
 - (i) social partners develop and determine/validate vocational/occupational profiles;
 - (ii) representatives of social partners and education develop the qualification profiles (educational standards as output), which are adopted by the Ministry of Education, Culture and Science / Economy, Agriculture and Innovation. This development work is done by the 17 branch-specific Knowledge Centres for VET- Trade and Industry;
 - (iii) schools develop curricula – in cooperation with training firms – on the basis of the qualification profiles.
- (c) In higher professional education: qualifications and programmes, developed by the schools, are accredited by the Dutch-Flemish Accreditation Organisation. A curriculum is part of the accreditation request.

Other forms of VET are mostly market-driven and therefore unregulated. The term 'curriculum' has various meanings in the Netherlands. In relation to the term 'qualification', the best definition is: a document that relates to the desired implementation of an entire educational programme, leading to a diploma. The document always contains descriptions of the following: objectives – contents – educational structure – assessment/evaluation. The extent of detail can vary. The development of a curriculum is a matter for the individual schools within the legal frameworks as laid down in the constitution.

Schools are primarily responsible for the modernisation of their curricula. Authority with regard to learning arrangements is assigned to them; this is constitutionally regulated ('state education' has a negative ring to it in the Netherlands), which is to say that (most) 'how' questions are answered by schools (for vocational education) themselves; close collaboration exists with companies in the region. This does not mean, however, that the national government remains completely aloof. It can stimulate those developments and innovations that have consequences for the modernisation of curricula.

Spearheads in the modernisation of vocational education are:

- (a) a turn towards competence-based learning in multiple forms;
- (b) more active forms of work, which call for greater levels of independence and self-regulation amongst participants in vocational education programmes;
- (c) the introduction of a greater variety in practical learning with the emphasis on the practical applicability of knowledge: workplace learning; simulation companies; carrying out assignments for companies, etc.;
- (d) the development of longitudinal learning strands that transcend the different types of vocational education;
- (e) the introduction of different forms of supporting participants: coaching, mentoring (also peer mentoring), career guidance, etc.; and
- (f) the introduction of more varied means of assessment, including the simulation of an aptitude test.

Schools providing vocational education make their own choices when it comes to the finer points of modernisation.

3.3. Assessment

In the Netherlands, the mechanisms to recognise formal learning in government-regulated VET are as follows:

- in lower secondary vocational education, central, national examinations and school examinations are held, both of which are important for gaining a diploma. The Education Inspectorate supervises the quality of school exams;
- in vocational education at upper secondary level, the assessment of learning results is a matter for the school. The law stipulates that the learning company has to be involved in this testing process. The qualification standards serve as benchmarks for the assessments. The Education Inspectorate supervises the quality of the examinations (content, level and procedures at programme level);

- in the near future obligatory central examinations in Dutch as language and arithmetic will be introduced;
- in higher professional education, schools are responsible for the examinations in accordance with the teaching and assessment regulations designed by the provider; these regulations are part of the accreditation request for a recognised *HBO* programme.

Most other forms of VET have their own or no regulations. Accreditation of prior, non-formal and informal learning is an instrument that has been promoted in the Netherlands for the last ten years. Accreditation of prior learning takes place in accordance with the national qualifications/standards in VET at upper secondary vocational and higher professional level in particular. Accreditation is laid down in the form of a diploma or a course certificate; parts of regular VET programmes are exempt. Schools or other training providers play an important role in making use of these procedures – they apply them. Free access to examinations already existed in the Netherlands: various education acts refer specifically to the possibility of external candidates or outsiders sitting examinations.

3.4. Macro-effectiveness of VET provision

The Ministry of Education, Culture and Science determines the provision (learning departments for broad fields related to the labour market) in lower secondary pre-vocational education.

Schools in upper secondary vocational education decide for themselves which qualifications to provide. Recently however, macro-efficiency has been put on the National agenda for upper secondary VET. The aim is to simplify the structure of vocational qualifications and to remove overlaps in the regional provision of VET courses; competition between providers has been replaced by a policy focussing on macro-efficiency. A key focal point is how to arrive at an optimum of qualifications at national and regional level in terms of attractiveness for students and at the same time how to select programs (and numbers of students!) relevant to the (regional) labour market. This operation is been entrusted to SBB as well as the second major operation.

The aim of the second operation, the on-going review of the qualification framework, to become effective in 2014, is to arrive at an 'optimum reduction' of qualifications. A limited number of qualifications will make it easier for students to select a program, and will support school's to work more efficiently. The revision of the qualification structure is a major project with the involvement of VET colleges and representatives of the social partners. VET-institutes, in cooperation

with companies, use these qualifications as input for the development of programmes and examinations. In the summer 2013 a first draft of the new qualifications framework has been made public reducing the number of qualifications to 183 qualifications with 508 exit differentiations/diplomas, almost a reduction of 25% of the qualifications. Of these, 55 qualifications are offered by almost all *ROC*, some 75 qualifications are dedicated, in terms of labour market demand, to a limited number of VET-programmes, and another 50 refer to specific regional-specialisations.

In higher professional education, schools develop their programmes themselves (in cooperation with partners in the labour market). These programmes are accredited by a competent authority. The Ministry of Education, Culture and Science decides whether an accredited programme is to be publicly funded or not (macro-effectiveness test).

CHAPTER 4.

Promoting participation in VET by funding mechanisms

4.1. Funding government regulated VET

The Ministry of Education, Culture and Science administers almost all central government expenditure on education; an agency of the Ministry has been charged with this task (DUO). The Service Institute Education (*Dienst Uitvoering Onderwijs - DUO*) within the Ministry of Education, Culture and Science plays a key role in the administration and financing of state-regulated VET. There is a complex but direct financing relationship between this agency and the schools for upper secondary vocational education.

Funds are channelled either directly to schools or indirectly through municipalities (primary and secondary education for school accommodation; general adult education). Another source of funds consists of the statutory course and tuition fees paid to the institutions by the students themselves. Educational institutions can also generate income from other sources, e.g. contract activities, extra funding from municipal authorities for special projects, e.g. reduction of early school leaving.

4.2. Funding lower secondary vocational education

The funding principle is block grant funding. It gives the competent authority considerable freedom in deciding how to spend the available resources. Schools receive a fixed amount per pupil plus a fixed amount per school. Further: extra financial measures for 'pupils at risk'.

4.3. Funding upper secondary vocational education (and general adult education)

4.3.1. Government funding

For vocational education: block grant funding of schools is within the macro budget at national level: the amount of money is based in part on the number of students per course/learning path and in part on the number of certificates awarded per institution.

Funding of the Knowledge Centres for VET Trade and Industry: In the Coalition Agreement 2012, the Government announced to reduce the budget for these Knowledge Centres by 80%, by reducing the number of Knowledge Centres and transferring of tasks to SBB.

For general adult education: money is allocated to the municipalities on the basis of the number of residents over the age of 18, the number of ethnic minorities and the number of adults with learning difficulties. The municipal authorities purchase adult education courses by concluding contracts with the VET providers.

The municipalities also receive a budget from the central government for civic integration training. This market was liberalised in 2007, so that upper secondary VET schools are no longer the sole providers.

4.3.2. Other income

Contract activities for companies and individuals, and for municipalities in civic integration training.

4.3.3. Students

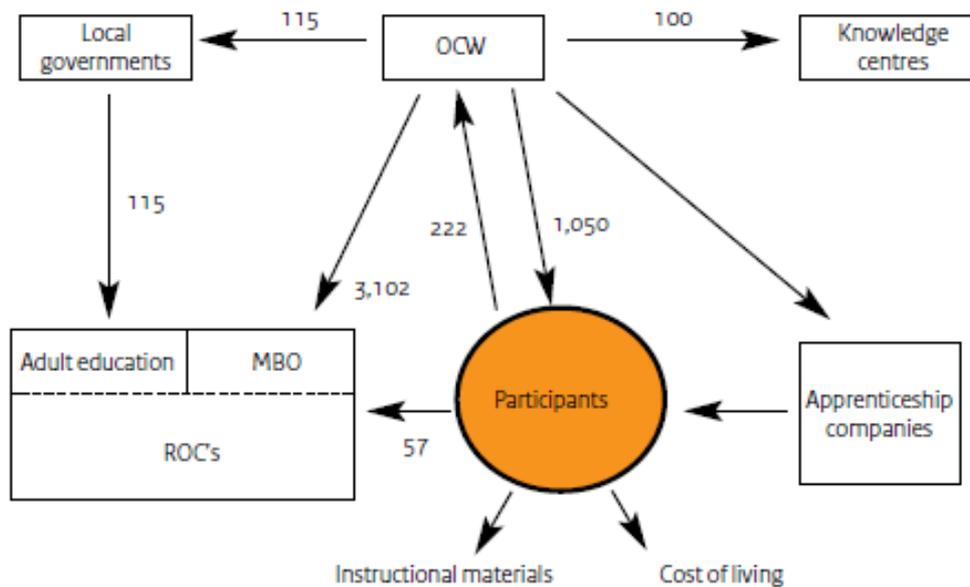
Students pay course fees to the institutions. Students in vocational education and training programmes (school-based pathways) pay fees to the government and qualify for student grants from the age of 18 (Student Finance Act).

4.3.4. Companies

For companies offering learning places for apprentices/dual pathway a tax facility of €2,500 for each place occupied is offered. It is foreseen to turn this tax deduction into a subsidy in the near future. Companies spend an average of €8,400 for 'guided learning activities' for each participant in the dual system (upper secondary and higher VET level) and €1,750 for students in practical learning periods in full-time school-based VET (2006).

The flow of funds is shown in figure 2.

Figure 2. **Flow of funds in vocational and adult education (2012), in millions €**



NB: mbo = upper secondary vocational education; ROCs = regional VET centres; Ministry of Economic Affairs, Agriculture and Innovation and agricultural schools not included in the diagram). Other income for VET providers is not shown in the diagram. The amount of money for civic integration training is not shown in the diagram; municipalities/local governments receive funds from a different Ministry.

Source: Key Figures 2008-2012, Ministry OCW- Education, Culture and Science.

4.4. Funding higher professional education

4.4.1. Government funding

The amount of money is within the macro budget and is based in part on the number of enrolled participants and in part on output/outcome results (number of diplomas). There is also a fixed budget. The pattern of financing will probably change in the near future.

4.4.2. Private funding

Contract activities paid by the contractor (enterprises and / or individuals/employees).

4.4.3. Students

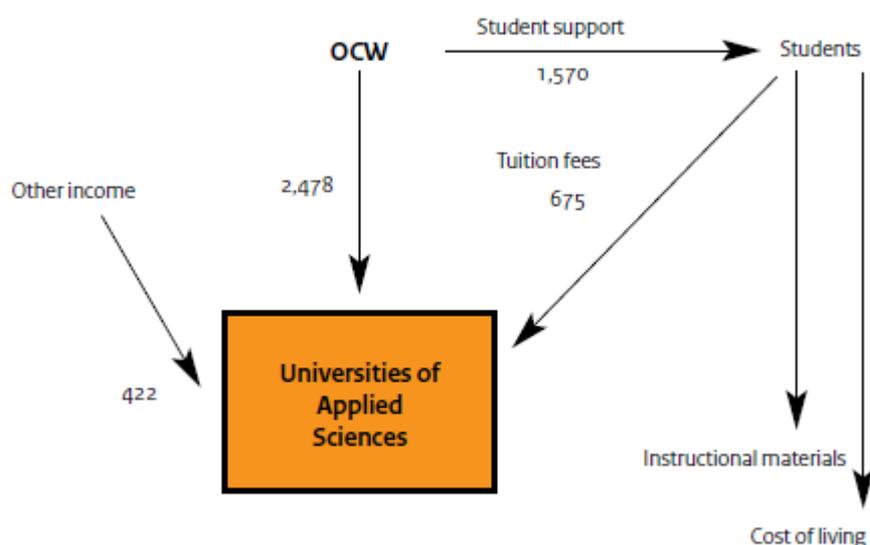
Full-time students receive financial support from the age of 18 under the Student Finance Act (via the Ministry of Education, Culture and Science) and they have to pay tuition fees to the universities of applied sciences.

4.4.4. Companies/enterprises

Enterprises offering learning places in the dual pathway: tax deduction scheme comparable with that of upper secondary vocational education. Companies incur costs for guided learning activities.

The flow of funds is shown in figure 3.

Figure 3. **Flow of funds in higher professional education (2012); in millions €**



NB: Ministry of Economic Affairs, Agriculture and Innovation and agricultural schools not included in the diagram. The flow of money for apprenticeship companies is not shown in the diagram.

Source: Key Figures 2008-2012, Ministry OCW.

4.5. Funding other forms of VET

Enterprise-based CVET for employees is financed by companies, training and development funds (see below), tax facilities and individual initiative. Enterprise-based arrangements for training are often made in the context of Collective Labour Agreements. These agreements are made in each sector of industry and are preceded by negotiations between employers and employees and last for a specified period of time (usually one or two years). Some of these sectoral arrangements contain extra provisions to accommodate specific regional demands or circumstances. Financial arrangements in these agreements – specifically pertaining to continuing training – are made through funds reserved for training and/or research and development. The most prominent of these funds are the Training and Development Funds (*O&O fondsen*), which were

established as a means of creating a more solid foundation for training and ensuring that training became embedded within the various sectors of the economy (and the individual companies within these sectors).

List of abbreviations

Aoc	agrarisch opleidingscentrum [agricultural training centre]
avo	algemeen voortgezet onderwijs [general secondary education]
bao	basisonderwijs [primary education]
bbl	beroepsbegeleidende leerweg [dual pathway (apprenticeship training) in which learning and working are combined]
bol	beroepsopleidende leerweg [school-based full-time or part-time programmes with practical periods in enterprises]
bve	beroepsonderwijs en volwasseneneducatie [upper secondary vocational education and general adult education]
DUO	Dienst Uitvoering Onderwijs [Service Institution Education]
havo	hoger algemeen voortgezet onderwijs [upper secondary general education]
hbo	hoger beroepsonderwijs [higher professional education]
mbo	middelbaar beroepsonderwijs [upper secondary vocational education]
NVAO	Nederlands-Vlaamse Accreditatie Organisatie [Dutch-Flemish Accreditation Organisation]
NRTO	Nederlandse Raad voor Training en Opleiding [Dutch Council for Training]
O&O fonds	Opleidings- en Ontwikkelfonds [Training and Development Fund]
OU	Open Universiteit [Open University]
pro	praktijkonderwijs [practical labour oriented education]
roc	regionale opleidingscentrum [regional, multisectoral training centre]
sbao/so	speciaal basisonderwijs/speciaal onderwijs [special (primary) education]
SBB	stichting Samenwerking Beroepsonderwijs Bedrijfsleven [Foundation Cooperation VET – Trade and Industry]
vmbo	voorbereidend middelbaar beroepsonderwijs [pre-vocational education]

Vmbo – bl	basisberoepsgerichte leerweg [pre-vocational learning pathway]
vmbo – gl	gemengde leerweg [mixed/combined learning pathway]
vmbo – kl	kaderberoepsgerichte leerweg [pre-vocational learning pathway]
vmbo - tl	theoretische leerweg [theoretical learning pathway]
vavo	voortgezet algemeen volwassenenonderwijs [general secondary education for adults]
vo	voortgezet onderwijs [secondary education]
vso	voortgezet speciaal onderwijs [special secondary education]
vve	voorschoolse en vroegtijdige educatie [pre-school education]
vwo	voorbereidend wetenschappelijk onderwijs [pre-scientific education]
wo	wetenschappelijk onderwijs [scientific education]

References

- CBS - Centraal Bureau voor de Statistiek (2012). *Jaarboek Onderwijs in cijfers – 2012* [Yearbook education in numbers – 2012]. <http://www.cbs.nl/nl-NL/menu/themas/onderwijs/publicaties/publicaties/archief/2012/2012-f162-pub.htm> Heerlen/Rijswijk: CBS.
- CBS (2013). *Statistisch Jaarboek 2012* [Statistical Yearbook 2012]. <http://www.cbs.nl/nl-NL/menu/publicaties/boeken/statistisch-jaarboek/archief/2012>
- CBS (2013). *Statistisch Jaarboek 2013* [Statistical Yearbook 2013]. <http://www.cbs.nl/nl-NL/menu/publicaties/boeken/statistisch-jaarboek/archief/2013/2013-statistisch-jaarboek-pub.htm>
- MBO Raad (2009). *Goed bestuur in de bve sector: Branchecode over bestuur, toezicht en horizontale dialoog in het middelbaar beroepsonderwijs en de volwasseneneducatie*. [Good governance in the BVE sector: branche code on governance, supervision and horizontal dialogue in vocational education and adult]. <http://www.mboraad.nl/?page/1244332/Goed+bestuur+Branchecode+goed+bestuur+in+het+mbo.aspx>
- OCW - Ministerie van Onderwijs, Kunsten en Wetenschappen (1968). *Wet op het voortgezet onderwijs*. [Law on Secondary Education]. <http://wetten.overheid.nl/BWBR0002399>
- OCW (1986). *Beroepsprofiel- en leerplanontwikkeling*. [Development of vocational profiles and curricula].
- OCW (1986). *WSF – Wet op de Studiefinanciering*. [Student Finance Act] http://wetten.overheid.nl/BWBR0003955/geldigheidsdatum_04-11-2014
- OCW (1993). *WHW - Wet op het hoger onderwijs en wetenschappelijk onderzoek* [Law on Higher Education and Scientific Research]. <http://wetten.overheid.nl/BWBR0005682>
- OCW (1996). *WEB - Wet Educatie en Beroepsonderwijs*. [Law on Adult and Vocational Education]. <http://wetten.overheid.nl/BWBR0007625>
- OCW (2006). *Wet BIO – Wet op Beroepen in het Onderwijs*. [Professions in Education Act]. <http://wetten.overheid.nl/BWBR0016944>
- OCW (2010). Actieplan mbo 'Focus op Vakmanschap 2011_2015'. [Focus on Craftsmanship]. <http://www.rijksoverheid.nl/documenten-en-publicaties/kamerstukken/2011/02/16/actieplan-mbo-focus-op-vakmanschap-2011-2015.html>
- OCW (2011a). *Key figures education 2006-2010*.

- OCW (2011b). *Monitor Convenant Leerkracht 2010: Eindrapport, Onderzoek in opdracht van OCW*. <http://www.rijksoverheid.nl/documenten-en-publicaties/brochures/2011/09/20/monitor-convenant-leerkracht-2010.html>
- OCW (2011c). *Teaching 2020: a strong profession*. https://www.educ.cam.ac.uk/centres/lf/about/events/pastflsupperseminars/PDFs/Teaching_2020_The_Netherlands_Ministry.pdf
- OCW (2011d). *Working in education 2012*. <http://www.government.nl/files/documents-and-publications/reports/2013/02/27/working-in-education-2012/ocw-wio12-wio-en-compleet-final2-los.pdf>
- OCW (2012). *Key figures education 2007-2011*. <http://www.onderwijsinspectie.nl/binaries/content/assets/Documents+algemeen/2012/netherlands-key-figures-2007-2011-ocw.pdf>
- OCW (2013a). *Aantallen eerstejaars en ingeschrevenen associate degrees*. [Number of freshmen and attached associate degrees]. http://www.trendsbeeld.minocw.nl/grafieken/1_22.php
- OCW (2013b). *Inwerktreding wet Kwaliteit in verscheidenheid*
- OCW (2013c). *Key figures education 2008-2012*. <http://www.government.nl/documents-and-publications/reports/2013/07/31/key-figures-2008-2012.html>
- ROA (2013). *De arbeidsmarkt naar opleiding en beroep tot 2018* [Labour market by education and occupation in 2018] http://www.roa-maastricht.nl/cms/wp-content/pdf_publications/2013/ROA_R_2013_11.pdf
- SZW - Ministerie van Sociale Zaken en Werkgelegenheid (1971). *WOR - Wet op Ondernemingsraden* [Act on Work councils]. <http://wetten.overheid.nl/BWBR0002747>
- SZW (1995). *WVA – Wet Vermindering Afdracht Loonbelasting*. [Reduction of Wage Tax Contributions Act]. <http://wetten.overheid.nl/BWBR0007746/>
- SZW (2003). *WWB - Wet Werk en Bijstand*. [Work and Income Support Act]. <http://wetten.overheid.nl/BWBR0015703>

ANNEX 1.

Classification of VET programmes and qualifications

Table 12. **Classification of VET programmes in pre-vocational education, upper secondary vocational education and higher professional education. Duration and stay in years.**

Dutch level*	ISCED level	Nominal duration**	NLQF / EQF
Lower secondary; study year 3 and 4	2	2	1 and 2
Upper secondary: MBO level 1	2	0.5 - 1	1
MBO level 2	3C - short	2 - 3	2
MBO level 3	3C - long	3 - 4	3
MBO level 4	3A	3 - 4	4 and partly 5
MBO level 4/specialist	4	1 - 2	4
Tertiary: associate degree	5B	2 (120 ects)	5
Tertiary: bachelor	5A	4 (240 ects)	6
Tertiary: master	5A	1 - 2 (60 - 120 ects)	7

NB: *MBO level = upper secondary level. **ects = European credit transfer system (study points).