

Work Package 3a



## DUTCH REPORT



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Education and Culture DG

Lifelong Learning Programme



**LEONARDO DA VINCI TRANSFER OF INNOVATIONS PROJECT DEVAPPRENT**

**WORK PACKAGE 3a**

**COMPARATIVE ANALYSIS OF THE DEVELOPMENT  
OF APPRENTICESHIP  
IN GERMANY, FRANCE, THE NETHERLANDS AND THE UK**

**REPORT**

**Apprenticeship in the Netherlands: Institutional patterns, organisation and methods  
(with reference to the sectors of sales, gastronomy, construction, and machinery  
including metal and electrics)**

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The Netherlands, 2011



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# **1 Background and short overview of the education system in The Netherlands**

## **1.1 The Education System in the Netherlands**

The higher education system in the Netherlands is based on a three-cycle degree system, consisting of a bachelor, master and PhD. Till 2002, the first two cycles at research universities were combined in a single integrated cycle. The three-cycle system was officially introduced in the Netherlands at the beginning of the academic year 2002-2003, but degrees from the former, integrated system can be awarded until 2007-2009. Therefore both the old and new system will be described.

The Netherlands has a binary system of higher education, meaning that we have two types of programmes: research-oriented education (wetenschappelijk onderwijs, WO), traditionally offered by research universities, and professional higher education (hoger beroepsonderwijs, HBO), traditionally offered by hogescholen, or universities of professional education. In this description, the Dutch abbreviations WO and HBO are used.

## **1.2 Primary and secondary education**

Children are allowed to start school at the age of four, but are not legally obliged before they turn five years old. Primary education lasts eight years (seven years of it are compulsory), in the last year pupils are advised as to the type of secondary education they should continue.

Secondary education, which begins at the age of 12 is compulsory until the age of 16. It is offered at several levels. VMBO programmes (four years) combine general and vocational education and creates the opportunity to continue the senior secondary vocational education and training (MBO) lasting one to four years. The two programmes of general education that grant admission to higher education are HAVO (five years) and VWO (six years).

Pupils are enrolled according to their ability, and although VWO is more rigorous, both HAVO and VWO can be characterized as selective types of secondary education. The VWO curriculum prepares pupils directly for university, only the VWO diploma grants access to WO. The HAVO diploma is the minimum requirement for access to HBO. The final two years of HAVO and the last three years of VWO are referred to as the tweede fase (literally, second phase), or upper secondary education. During these years, pupils focus on one of four subject clusters (profiles), which emphasizes on a certain field of study in addition to satisfying general education requirements. Each cluster of profile is designed to prepare pupils for programmes of study at tertiary level. A pupil enrolled in VWO or HAVO can choose from the following subject clusters:

1. Science and Technology (Natuur en Techniek)
2. Science and Health (Natuur en Gezondheid)

3. Economics and Society (Economie en Maatschappij)
4. Culture and Society (Cultuur en Maatschappij)

### **1.3 Senior secondary vocational education and training (MBO)**

Senior secondary vocational education and training (MBO, secundair beroepsonderwijs) is offered in the areas of economics, technology, health, personal care, welfare and agriculture. MBO programmes vary in length from one to four years as well as in level (1 to 4). Graduates of VMBO programmes are eligible for admission to MBO, and completion of MBO programmes at level 4 qualifies gives access to HBO.

### **1.4 Higher education**

Higher education in the Netherlands is offered at two types of institutions: research universities (universiteiten) and universities of professional education (hogescholen). Research universities include general universities, universities specialized in engineering and agriculture, and the Open University. Research universities are primarily responsible for offering research-oriented programmes (Wetenschappelijk Onderwijs, WO). Universities of professional education include general institutions as well as institutions specializing in a specific field such as agriculture, fine and performing arts, or teacher training. Universities of professional education are primarily responsible for offering programmes of higher professional education (Hoger Beroepsonderwijs, HBO), which prepare students for particular professions. These tend to be more practically oriented than programmes offered by research universities.

Before 2002 Dutch research universities provided education and conducted research in a wide range of disciplines: language and culture, behaviour and society, economics, law, medical and health sciences, natural sciences, engineering, and agriculture. Initial study programmes lasted four years in most fields, but five years in agriculture, engineering, mathematics and most natural sciences, at the end of which the doctorale getuigschrift (doctoral degree) or getuigschrift van het afsluitend examen (final examination degree certificate) was awarded. Integrated study programmes in medical and health sciences lasted either five years (dentistry), or six years (medicine, pharmacy, veterinary medicine). The first year of every programme, referred to as the propedeuse, provided students with introductory courses fundamental to the field in question. In the years that followed, every doctoraal programme featured training in research methodology and completion of a thesis as required components. Graduates of doctoraal programmes have been permitted by law to use a particular title, depending on the discipline. Graduates in engineering and technology and in agriculture and the natural environment received the title of ingenieur, abbreviated to ir. Graduates in law obtained the title of meester, abbreviated to mr. Graduates in all other disciplines obtained the title of doctorandus, abbreviated to drs. All graduates could also opt to use the title Master



(M.) if they wish. Graduation from a doctoraal programme made students eligible to pursue a doctorate.

The higher education system also includes a third branch, with a relatively small number of students, known as internationaal onderwijs (IO), or international education. These institutes offer advanced training courses originally designed for people from developing countries whose jobs require highly specialized knowledge. Problem-oriented courses and programmes of various types, including master's programmes, are offered in a wide range of specific fields. Emphasis can be either on research or on the practical application of knowledge. Courses are given in English and last from a few weeks to two years. With one exception (the Institute of Social Studies in The Hague), the institutes of international education do not offer PhD programmes themselves but have concluded agreements with Dutch universities which enable their students to pursue doctorates. Admission requirements vary according to the course in question, but in most cases a bachelor's degree or its equivalent is required for admission to a master's degree programme, and a master's degree for admission to a PhD programme. An additional requirement is work experience. International education is subsidized by the government, which finances the institutes and provides scholarships for students.

All research universities in the Netherlands were entitled to award the country's highest academic degree, the doctoraat, which entitles a person to use the title doctor, abbreviated to dr. The process by which a doctorate is obtained is referred to as the promotie. The doctorate is primarily a research degree, for which a dissertation based on original research must be written and publicly defended. The minimum amount of time required to complete a doctorate was four years.

Before the year 2002 Dutch universities of professional education prepare students for a wide variety of careers in seven sectors: agriculture, engineering and technology, economics and business administration, health care, fine and performing arts, education (teacher training), and social welfare. Initial study programmes lasted four years, at the end of which the Getuigschrift Hoger Beroepsonderwijs or HBO degree was awarded. The first year of every programme, referred to as the propedeuse, consisted of introductory courses fundamental to the discipline in question. In addition to lectures, seminars, projects and independent study, students were required to complete an internship or work placement (stage) which normally takes up part of the third year of study, as well as a final project or a major paper in the fourth year.

Graduates of an HBO programme in engineering and technology or agriculture and the natural environment received the title of ingenieur, abbreviated to ing. Graduates in all other disciplines obtained the title of baccalaureus, abbreviated to bc. All graduates could also opt to use the title Bachelor (B.) if they wished. HBO graduates are fully qualified to practise their profession without any further study, licensing or registration with a professional association.

## 2002 – 2007

Since September 2002, the higher education system in the Netherlands has been organized around a three-cycle degree system consisting of bachelor, master and PhD degrees. At the same time, the ECTS credit system was adopted as a way of quantifying periods of study. The higher education system continues to be a binary system, however, with a distinction between research-oriented education (wetenschappelijk onderwijs, WO) and professional higher education (hoger beroepsonderwijs, HBO).

The focus of degree programmes determines both the number of credits required to complete the programme and the degree which is awarded. A WO bachelor's programme requires the completion of 180 credits (3 years) and graduates obtain the degree Bachelor of Arts or Bachelor of Science (BA/BSc), depending on the discipline. An HBO bachelor's programme requires the completion of 240 credits (4 years), and graduates obtain a degree indicating the field of study (for example, Bachelor of Engineering, B. Eng., or Bachelor of Nursing, B. Nursing). The old title appropriate to the discipline in question (bc., ing.) may still be used.

Institutions offer WO master's programmes that in most cases require the completion of 60 or 120 credits (1 or 2 years). Some programmes require 90 (1,5 years) or more than 120 credits. In engineering, agriculture, and math and the natural sciences, 120 credits are always required. Graduates obtain the degree of Master of Arts or Master of Science (MA/MSc). The old title appropriate to the discipline in question (drs., mr., ir.) may still be used. An HBO master's programme requires the completion of 60 to 120 credits and graduates obtain a degree indicating the field of study (for example, Master of Social Work, MSW). The third cycle of higher education, leading to a doctor's degree, will be offered only by research universities in the same way as described above.

Requirements for Admission to Higher Education For access to WO bachelor's programmes, students are required to have a VWO diploma or to have completed the first year (60 credits) of an HBO programme. The minimum access requirement for HBO is either a HAVO diploma or a level-4 MBO diploma. The VWO diploma also grants access to HBO. For access to both types of higher education, pupils are required to have completed at least one of the subject clusters that fulfills the requirements for the higher education programme in question. A quota, or *numerus fixus*, applies for access to certain programmes, primarily in the medical sciences, and places are allocated using a weighted lottery. Potential students older than 21 years of age who do not possess one of the qualifications mentioned above can qualify for access to higher education on the basis of an entrance examination and assessment. The only access requirement for the Open University is that applicants be at least 18 years of age.

For access to all master's programmes, a bachelor's degree in one or more specified disciplines is required, in some cases in combination with other requirements. Graduates with an HBO bachelor's degree may have to complete additional requirements for access to a WO master's degree programme.



Credit System and Grading Workload is measured in credits (studiepunten). Before 2002, one credit represented one week of full-time study (40 hours, counting both contact hours and hours spent studying and preparing assignments). Study programmes offered by research universities and universities of professional education lasting four years required completion of a total of 168 credits, or 42 credits per year. The academic year was (and still is) 42 weeks long.

Since 2002, a student's workload is measured in ECTS credits, whereby-according to Dutch law-one credit represents 28 hours of work and 60 credits represents one year of full-time study. The grading system has been the same for several decades: the scale is from 1 (very poor) to 10 (outstanding). The lowest passing grade is 6; 9s are seldom given and 10s are extremely rare and grades 1-3 are hardly ever used.

Two degree programmes in dentistry (300 credits) and medicine and veterinary medicine (360 credits) will continue to be offered as integrated programmes until approximately 2007-2008.

Programmes in pharmacy will continue to require completion of 360 credits, divided into a bachelor's and a master's phase (3 + 3 years).

## **1.5 Accreditation and Quality Assurance**

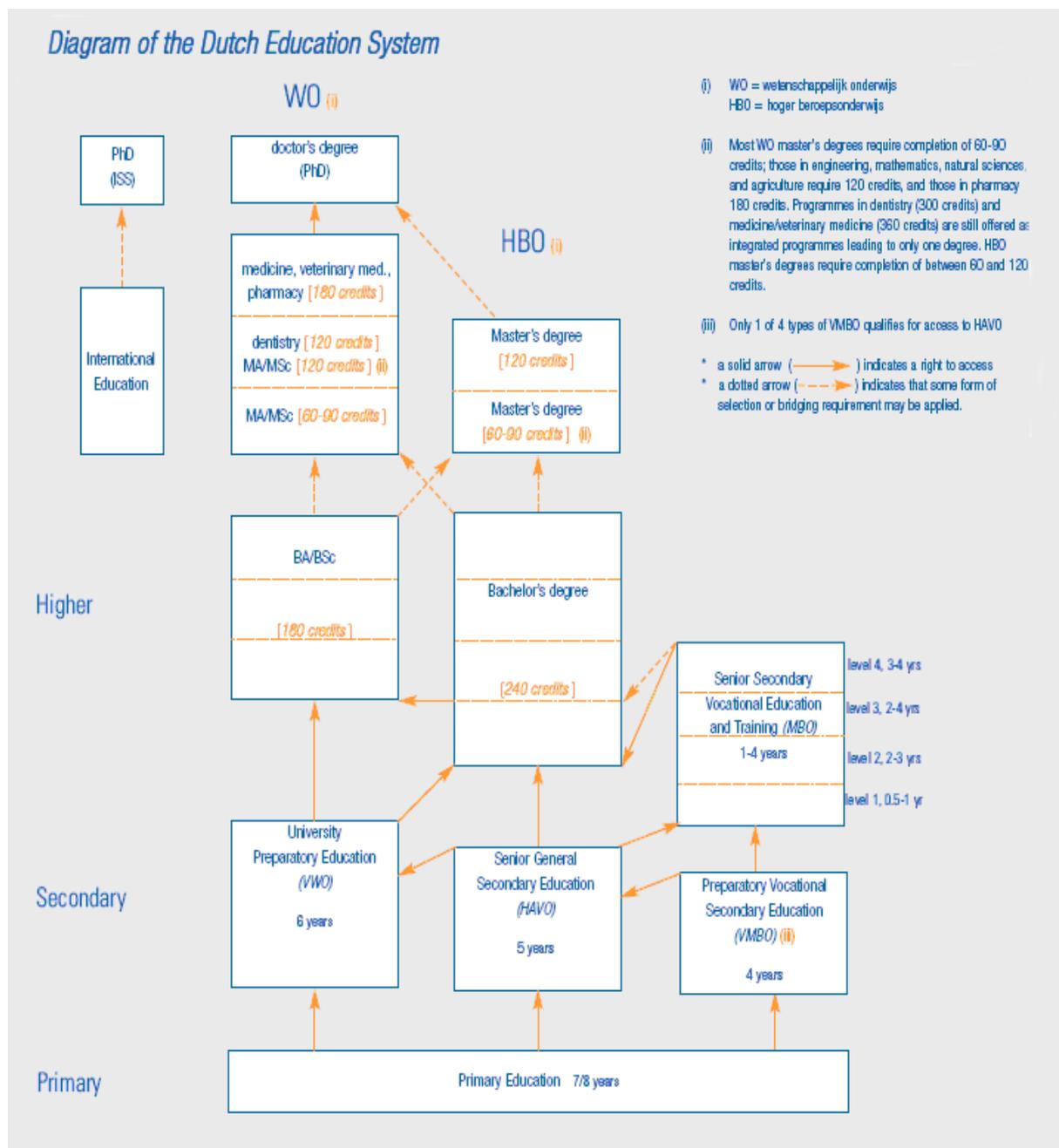
A guaranteed standard of higher education is maintained through a national system of legal regulation and quality assurance. The Ministry of Education, Culture and Science is responsible for legislation pertaining to education. The agriculture and public health ministries play an important role in monitoring the content of study programmes in their respective fields, and until 2002, the VSNU (Association of Universities in the Netherlands) and the HBO-raad (Netherlands Association of Universities of Professional Education) were responsible for implementing the system of quality assurance.

This system has been converted to a system of accreditation. As of 2002, responsibility for accreditation lies with the Netherlands-Flemish Accreditation Organization (NVAO). According to the section of the Dutch Higher Education Act dealing with the accreditation of higher education (2002), all degree programmes offered by research universities and universities of professional education will be evaluated according to established criteria, and programmes that meet those criteria will be accredited: i.e. recognized for a period of six years. Only accredited programmes will be eligible for government funding, and students will receive financial aid and graduate with a recognized degree only when enrolled in, or after having completed, an accredited degree programme. Accredited programmes will be listed in the Central Register of Higher Education Study Programmes (CROHO) and the information will of course be available to the public. The NVAO plans to review all study programmes by 2006. Before that time, all programmes that are registered in CROHO that have adhered to the quality assurance regulations, are considered to be recognized by law.

Alongside the accreditation of degree programmes, the Netherlands has a system by which the Ministry of Education, Culture and Science recognizes higher education institutions by conferring on them the status of either *bekostigd* (funded) or *aangewezen* (approved).

Bekostigd indicates that the institution is fully financed by the government. Aangewezen indicates that the institution does not receive funds from the government and has to rely on its own sources of funding. Whether a degree programme is offered by a 'funded' or an 'approved' institution, it must be accredited and registered in CROHO to be considered recognized.

According to legislation regarding accreditation, institutions are required to write on degree certificates the date that the degree programme in question was granted accreditation. At this stage, only a few programmes have actually been accredited. Because accreditation is an ongoing process, it will be important that people who review Dutch degrees make sure that a programme was accredited at the time the degree was awarded. Once accredited, the validity of the accreditation of that particular degree is of course permanent.





## **2 Adult and vocational education (official government information)**

Vocational education is provided at secondary schools (pre-vocational secondary education, VMBO), institutions for secondary vocational education (MBO) and institutions for higher professional education (HBO). It is important that all three levels of vocational education harmonise with each other, so that pupils and students can move on to the next level without any problems. It is also essential that vocational education matches labour market demand. This chapter discusses vocational education as set out in the Adult and Vocational Education Act (WEB), which does not cover higher professional education (HBO) or pre-vocational secondary education (VMBO).

### **The structure of secondary vocational education**

Secondary vocational education (MBO) is provided at four levels:

Level 1: training to assistant level (6 months – 1 year) equips students to perform simple tasks;

Level 2: basic vocational training (2 - 3 years) equips students to perform executive tasks;

Level 3: professional training (2 – 3 years) equips students to work independently;

Level 4: middle-management training (3 - 4 years) and specialist training (top-up course of one to two years) equips students to work independently on a wide range of tasks, or to do specialist work.

Students qualifying at level 4 can go on to higher professional education (see 2.10.1.). Every level has its own requirements which are defined in terms of exit qualifications. Exit qualifications comprise an overview of the knowledge, insight, skills and in some cases professional attitude which students should have acquired by the end of the course. They are the building blocks of a qualification, and a qualification at level 1, 2, 3 or 4 thus comprises a number of exit qualifications.

At the moment, there are some 700 different qualifications, each consisting of a series of partial qualifications, for which separate certificates are awarded (see 2.10.1. and 2.14.1.). Students can take these courses consecutively, the diploma from one course serving as the entry requirement for the next. All these qualifications together form the qualification structure for vocational education (KSB), which was introduced in 1997. For each course there are in principle two learning pathways:

- vocational training (BOL) where practical training will take up between 20% and 60% of the course (was MBO);
- block or day release (BBL) where practical training will take up more than 60% of the course (was apprenticeship system).

Within the context of lifelong education, forms of adult education falling outside the formal structure are important. The sector includes:

- nature and environmental education;
- private education (distance learning, language schools);
- radio and television;
- libraries;
- adult education institutes ('volksuniversiteiten');
- arts education for adults;
- courses provided by trade unions;
- health education (courses provided by home nursing associations and patients' associations);
- education for the elderly;
- education provided by churches and mosques;
- women's organisations;
- ethnic minority organisations;
- residential adult education.

### **Future developments**

The qualification structure is currently under review, since there are too many qualifications and vocational education cannot respond fast enough to changes in the world of work. The Office of the National Vocational Education Bodies (COLO), the Adult and Vocational Education Council and the Platform for Approved and Recognised Private Educational Institutions in the Netherlands (PAEPON) are working together on this new structure (see 2.10.1.).

The new qualification structure should be more competence-related, harmonising more closely with the world of work. The central element is the changeover from exit qualifications to competences. The main difference is that competences will be defined in more general terms, and will be explicitly linked to practical applications. The qualification profiles will specify the competences students should have acquired on completing the course. With competence profiles students will be better equipped for the labour market, and it will be easier to compare qualifications.

A bill has yet to be drafted laying down the rules for the new qualification structure and for new courses based on it.

### **Features of secondary vocational education**

Secondary vocational education (MBO) provides both theoretical instruction and practical training in preparation for the practice of a wide range of occupations for which a vocational qualification is necessary or useful. It also furthers the general education and personal



development of students and helps them to play an active part in society. Its main target group is young people from the age of sixteen.

### **Types and length of courses**

All courses within the qualification structure are entered in the Central Register of Vocational Courses (CREBO). This register records:

- which institutions provide which courses;
- what the exit qualifications are;
- which learning pathway is involved and;
- which of the partial qualifications awarded are subject to external validation.

The exit qualifications comprise an overview of the knowledge and skills students should have gained by the end of the course. The register also indicates which courses are funded by the government and which bodies are authorised to validate examinations. Anyone who wishes may consult the register to find out what courses are on offer and how they fit into the qualification structure.

Private (i.e. non-government-funded) educational institutions can incorporate their courses into the new system subject to the same conditions as government-funded institutions.

### **The structure of adult education**

In 1997 a new qualification structure for adult education (KSE) was introduced with four types of courses and six levels of qualification, ranging from basic skills to secondary education. Courses in Dutch as a second language (NT2) offer five levels (see 2.10.2.).

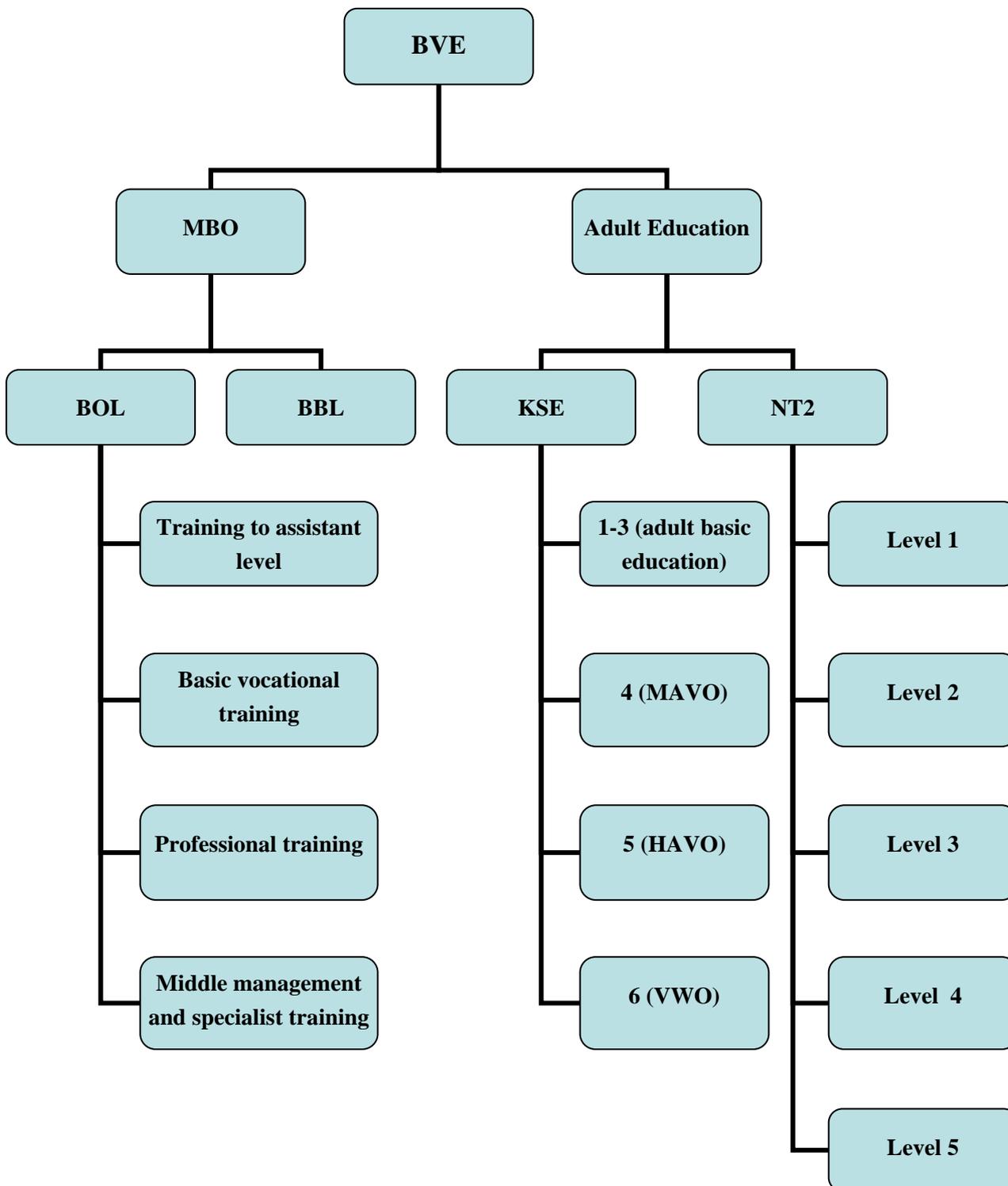
Since 1 January 1997, the Adult and Vocational Education Act has identified four types of courses:

1. adult general secondary education (VAVO), leading to a pre-vocational secondary education (VMBO theoretical programme), senior general secondary education (HAVO) or pre-university education (VWO) certificate (levels 4, 5 and 6);
2. courses providing a broad basic education;
3. courses in Dutch as a second language (NT2);
4. courses aimed at fostering self-reliance.

Since adult education has been decentralised to municipal level, other courses can also be provided, depending on local policy. The municipalities buy in adult education courses from the regional training centres. The purpose of adult education, unlike vocational education, is not to train students for a particular occupation, but to provide a solid foundation for vocational and secondary education courses and enable adults to participate in society (self-reliance). Since the introduction of the Adult and Vocational Education Act, adult education courses have been provided by the regional training centres (ROCs). Adult Vocational Training Centres, Centres for Vocational Orientation and Training and Women's Training

Centres, which provide training under the Manpower Services Act, have the option of either becoming part of an ROC or working closely with them as independent institutions.

Diagram: Structure of adult and vocational education





## Features of adult education

Adult education is geared to furthering the personal development of adults and their participation in society by developing their knowledge, understanding, skills and attitudes in a way that fits in with their needs, potential and experience. Where possible, it brings students up to the level required for admission to vocational education courses. Adult education does not include any form of higher education.

### 2.1 Historical overview

In 1794, the Society for the Promotion of the General Good was set up. This organisation, whose aim was to educate the working classes, grew very quickly and soon had branches all over the country. Many of the forms of adult education that exist today originated in the nineteenth century, often thanks to private benefactors setting up educational and training facilities for adults. From 1850, many initiatives were launched to set up forms of adult education, most of them inspired by the Toynbee lectures and debates in Britain, when professors talked about developments in their fields. The first adult education institute ('volksuniversiteit') was set up in Amsterdam in 1913. The idea was to provide education without the pressure of examinations, with instruction based on scientific objectivity, and accessible to people from all walks of life. The government did not become involved in adult education – in the sense of statutory provision – until the twentieth century. As a result of the trend towards the democratisation of education in the 1970s, a form of adult education was introduced that aimed to give people of 18 and over a second chance to obtain a school-leaving certificate. Since only examination subjects were taught, adults could obtain a MAVO certificate within three years or they could study for separate subject certificates. This form of adult education was particularly popular among women with children, since classes were taught at times that were particularly suited to them. The early 1980s saw the introduction of legislation aimed at harmonising adult education provision – the Adult Education Framework Act.

Vocational education, too, was for many years reliant on private initiative. The Occupational Education Act, the first piece of legislation governing vocational education, was not introduced until 1919, in response to the growth in the number of vocational schools. Since then, the sector has expanded greatly both in terms of the number of institutions and the range of specialisations offered:

- The Secondary Education Act of 1963, which entered into force in 1968, brought general secondary education and vocational education (including higher professional education) together under one Act;
- From 1966 to 1993 the apprenticeship system, combining school and work, either for a company or in a practical training workshop, was regulated separately in the Apprenticeship Act;

- From 1993 to 1996 when the Adult and Vocational Education Act came into effect, apprenticeship training and part-time MBO fell under the Part-time Vocational Education Act (WCBO, 1993-1996);
- From 1986 until 1993 higher professional education was regulated separately in the Higher Professional Education Act (WHBO);
- Since 1993 it has been governed by the Higher Education and Research Act (WHW);
- On 1 January 1996 the Adult and Vocational Education Act (WEB) was introduced, bringing greater unity to the system of adult and secondary vocational education.

Of the existing types of adult and vocational education (part-time non-formal education for young people, adult basic education, adult general secondary education, apprenticeships and senior secondary vocational education) some disappeared altogether while others have continued in a new form or under a new name.

## **2.2 Ongoing debates and policy trends**

### **Personal budget in MBO**

Problems have emerged in providing aids for individual disabled students moving on from prevocational secondary education (VMBO) to MBO, who rely on special facilities. The Ministry of Education, Culture and Science is therefore exploring ways of better distributing the funds available for individual facilities for disabled students. Under a provisional scheme, to be introduced on 1 January 2006, personal budgets will also be available in MBO. The Expertise Centres Act (WEC) is currently being amended so that personal budgets will become a permanent feature of MBO. The amended Act should enter into force on 1 January 2008.

### **Portable grants**

Unlike students in higher education, students attending schools for secondary vocational education cannot study abroad on a Dutch grant. In May 2004, the Ministry of Education, Culture and Science commissioned a pilot project on portable grants for vocational training (BOL). The aim is to award grants to Dutch students wanting to do a course abroad with a final level equivalent to that of vocational training. The COLO's Evaluation of Foreign Diplomas Department (IDW) is playing an important role in the project. It evaluates courses on the basis of criteria such as length, form, ratio of theory to practice, content, entry requirements and so on. A course must meet the same requirements as those to be met by Dutch courses for which student grants can be awarded. The pilot will run from August 2005 to August 2008. If a student applies for a grant for a course that is not on the Ministry's list, the IDW will investigate whether it is eligible.



## **Cooperation in the non-formal sector**

In 2005, the educational broadcasting services (Educom), the Public Libraries Association and the Union of Adult Education Institutes entered into an alliance to encourage cooperation between their members and to collect information on lifelong learning. This will result in a project in 2006.

## **2.3 Specific legislative framework**

The Adult and Vocational Education Act (WEB), which entered into force on 1 January 1996, brings together the various forms of adult and vocational education in a single statutory framework. The WEB Implementation Decree regulates the funding of vocational education and the knowledge centres for vocational education and business, and central government grants to adult education institutions. The Manpower Services Act provides a statutory framework for training measures for the unemployed.

### **2.3.1 Adult and Vocational Education Act**

The Adult and Vocational Education Act (WEB) entered into force on 1 January 1996. The Act was introduced in stages between 1 January 1996 and 1 January 2000 beginning with the introduction of the qualification structure for vocational education in 1997. The last group of new regional training centres (ROCs), offering the complete range of adult and vocational education courses under one roof, opened their doors in 1998. Finally, on 1 January 2000, the new funding system was introduced. Under this system, institutions are funded partly on the basis of student numbers by course and learning pathway, and partly on the basis of numbers gaining qualifications.

At the heart of the Act are the national qualification structures for adult and vocational education. Each qualification structure is a structured system of qualifications and partial qualifications, each with its own diploma or certificate. Private educational institutions can take part in the national qualifications structure for vocational education subject to the same conditions as government-funded institutions, although they are not entitled to funding.

### **Objectives of the Act**

Social trends and the need for lifelong learning have made adult and vocational education of crucial importance for individuals, the labour market and society as a whole. One of the Act's aims is to ensure that every person is able to obtain a minimum basic qualification.

The student comes first. Institutions are required to offer courses that are geared to the needs of young people who have no job experience, employed people and those seeking work. Adult and vocational education courses must be properly attuned to each other. Various options will be available, both full time and part time, to suit students' personal circumstances and preferences. The WEB gives institutions the opportunity to devise special learning pathways for educationally disadvantaged students.

Adult education can serve various purposes, including preparation for vocational training, assimilation and social integration of migrants and the personal and social development of people who are at risk of becoming marginalised. As well as a socioeconomic function (matching supply to demand, greater employability), the Act therefore also has a socio-cultural function (integration of disadvantaged groups, greater participation).

In a policy document published in 2004, the government sets out its policies on adult and vocational education over the next few years. The main innovation relates to the relationship between the various parties within the sector, with students, institutions and the business sector working together at regional level.

### **Knowledge centres for vocational education and business**

The Adult and Vocational Education Act contains measures to bring education more into line with the world of work. The knowledge centres for vocational education and business form the link between vocational education and the business sector organisations. Organised by sector, they are managed by representatives of employers and employees, and in most cases, educational institutions. The centres are responsible for developing a clear qualification structure setting out the knowledge and skills required by employers. They also decide which companies or organisations are qualified to provide practical training, doing so on the basis of specific criteria. Employers meeting these criteria receive official recognition and are entered in the knowledge centre's register.

### **2.3.2 Work and Income (Implementation Structure) Act**

Centres for Work and Income (CWI) have been set up throughout the Netherlands as a direct result of the introduction of the Work and Income (Implementation Structure) Act (SUWI), which was drafted by the Ministry of Social Affairs and Employment and entered into force on 1 January 2002. The role of the CWI is to serve the unemployed, other jobseekers and employers by matching labour market supply and demand. They do so by helping jobseekers find work and employers to fill their vacancies, in both cases as quickly as possible. The availability of relevant market information plays an essential part in matching supply and demand quickly and efficiently and enables individual jobseekers and employers to take the initiative themselves. In this light, the centres provide information and advice on employment, the labour market and social security matters. They also support sectoral, regional and occupational group-specific initiatives, where necessary and possible.

Where necessary, intake interviews are held to collect and assess information in order to establish whether individuals are entitled to unemployment or social assistance benefit. These were previously conducted by the municipal social services and the various benefit agencies, but are now the responsibility of the CWIs.

The motto of the new Act is 'work above income'. This has been made possible by combining the activities of jobseeking and applying for benefit under one roof. The CWIs have also taken over most of the other statutory tasks performed in the past by manpower services, such



as support for jobseekers and benefit claimants in seeking work and support for employers in finding employees.

Another result of the new Act is the merger of the National Social Insurance Institute (LISV) and the existing benefit agencies (GAK, Cadans, GUO, etc.) to form a single body, the Employee Insurance Agency (UWV). The UWV (like the municipal social services) assesses benefit applications from the CWIs and pays out benefits. It also collects social insurance contributions from employers and calls on the services of reintegration agencies for clients the CWIs are unable to assist.

The government's aims are as follows:

- to establish an operational network of approximately 130 Centres for Work and Income;
- to find suitable work for jobseekers by offering a job placement service (and where necessary arranging for benefit) so that they are able to re-enter the labour market as quickly as possible;
- to offer an appropriate service to every employer that registers a vacancy at a CWI, either via access to [www.werk.nl](http://www.werk.nl), the vacancies and job applicants database, or by putting forward suitable candidates so that vacancies are filled as quickly as possible.

### **2.3.3 Education Participation Act**

Under the Education Participation Act 1992 (WMO 1992), every primary and secondary school and every adult and vocational education institution is legally required to set up a participation council (see also 2.7.1.). At institutions for adult and vocational education, this comprises representatives of both the staff and students. Members of the competent authority of the institution may not sit on the participation council. The participation council has a number of general powers and has the right to give its advice or consent and to put forward proposals.

#### **Future developments**

In December 2003, a bill was submitted amending the Education Participation Act in relation to adult and vocational education. Under this amendment, the Works Council Act (WOR) would replace the WMO for staff in this sector. Because this would mean that participation councils under the WMO could no longer function, it was decided that college councils should be set up to represent students' interests. Regulations on college councils will therefore have been added to the Adult and Vocational Education Act (WEB).

The adult and vocational education sector has opted for separate participation, with staff and students represented by separate bodies. The reason for this is to give students a stronger position. College councils can have any number of members.

### **2.3.4 Training measures**

Employees without a basic qualification (equivalent to secondary vocational education (MBO), level 2) who were previously unemployed are often the first to lose their jobs when

there is a downturn in the economy. In order to ensure that this group of individuals has a better chance of staying in work, it is essential that they have the opportunity, while working or before starting a job, to obtain a basic qualification. Until now, the following instruments have been deployed for this purpose:

- reductions in tax and social insurance contributions to offset the wage costs of employees on day release schemes;
- training for the employed to basic qualification level, upgrading to MBO level 4 and cross-sectoral training.

These types of training are funded with a grant from the European Social Fund (ESF).

As of 2002 employers have also been eligible for a reduction in their tax and social insurance contributions to offset the extra costs of training and supervising employees who subsequently obtain a basic qualification and who (a) had to abandon a training scheme in order to accept their current job or (b) did not have a basic qualification when they started work and were not already receiving training. The size of the potential target group is estimated at 150,000 people a year.

## **2.4 General objectives**

### **2.4.1 Secondary vocational education**

The aim of secondary vocational education, as defined in the Adult and Vocational Education Act, is to provide both theoretical instruction and practical training in preparation for the practice of a wide range of occupations for which a vocational qualification is necessary or useful. It also furthers the general education and personal development of students and helps them to play an active part in society.

### **2.4.2 Adult education**

Adult education is geared to furthering the personal development of adults and their participation in society by developing their knowledge, understanding, skills and attitudes in a way that fits in with their needs, potential and experience and the needs of society.

## **2.5 Types of institution**

There were 40 regional training centres (ROCs) operating in the 2004/2005 school year (excluding those in the agricultural sector), offering a complete range of adult and vocational education courses, both full-time and part-time. On 1 January 1998 institutions which were not part of an ROC ceased to be eligible for government funding with the exception of 13 specialist colleges providing training for a specific branch of industry. Two other institutions have been granted exemption on religious grounds, two are attached to institutes for the deaf and one is integrated into an institution for higher professional education



Agricultural courses are now provided at agricultural training centres (AOCs). Vocational education courses in the agriculture and natural environment sector are the responsibility of the Ministry of Agriculture, Nature and Food Quality.

There are 96 adult education institutes ('volksuniversiteiten') in the Netherlands, working in more than 250 municipalities and providing courses for some 200,000 people every year. Adult education institutes give a wide range of courses on many different subjects, the most popular being foreign languages, history, art and culture, and arts and crafts. Other tasks are:

- to encourage study and discussion of philosophical and social issues;
- to organise lectures, discussions, exhibitions and so on;
- to develop educational programmes for special groups, such as volunteers in the care sector,
- ethnic minority mothers, seniors and people with a minor learning disability.

## **2.6 Geographical accessibility**

The government pursues no special policies on the geographical accessibility of institutions for adult and vocational education.

## **2.7 Admission requirements**

### **2.7.1 Secondary vocational education**

Under the qualification structure introduced by the Adult and Vocational Education Act:

- anyone is able to enrol for a course at assistant or basic vocational training level. There are no requirements regarding previous education;
- the admission requirements for a course at professional or middle-management training level are:
  - a certificate of pre-vocational secondary education (VMBO) or:
  - a certificate of junior general secondary education (MAVO) or:
  - proof that the first three years of senior general secondary education (HAVO) or pre university education (VWO) have been successfully completed;
- admission to a course at specialist level is possible with a professional training qualification for the same occupation or occupational group.

The rights of VMBO (pre-vocational secondary education) certificate-holders regarding admission to secondary vocational education (MBO) are regulated in the Adult and Vocational Education Act (WEB) by analogy with HAVO and VWO:

- Students who successfully complete the theoretical, combined or middle-management vocational programme at VMBO level are eligible for professional and middle-management training (MBO levels 3 and 4);
- Students who complete the basic vocational programme are eligible for basic vocational training (MBO level 2). The choices open to them within these programmes depends on the subjects taken at VMBO level.

In order to improve the link between learning in schools and learning in the workplace, in 2001, a system was set up whereby skills acquired elsewhere, e.g. through experience in the workplace, can be officially recognised. This makes it easier to ascertain the precise training needs of individuals. It will also permit the comparison of competences acquired at school or college with those acquired at work. The Knowledge Centre for Prior Learning Assessment and Recognition primarily targets people in employment (see also [www.kenniscentrumevc.nl](http://www.kenniscentrumevc.nl)). Its tasks are threefold: to promote knowledge transfer, contribute to the development of prior learning recognition (EVC) schemes and promote their use. It carries out research, collects and distributes information, and also has a network function.

To start with, the centre was funded by the Ministry of Economic Affairs, the Ministry of Culture, Education and Science and the Ministry of Social Affairs and Employment. An evaluation in 2004 led to the establishment of the Learning and Working Project Department, a joint venture of the Ministry of Education, Culture and Science and the Ministry of Social Affairs and Employment, which took over the funding and running of the centre. The aim of the Project Department is to support employers, employees and other members of the public, the business community, educational institutions, Centres for Work and Income, municipalities, and all other parties involved in making lifelong learning possible.

The Project Department will work with companies, educational institutions and municipal authorities to design projects, for instance to set up dual courses combining working and learning or to build a regional infrastructure for learning and working. Dual courses give employees, jobseekers or benefit recipients the chance to work while undergoing training. To this end, educational institutions such as ROCs and institutions for higher professional education work closely together with employers. People completing a dual course may be eligible for promotion within their company, obtain a basic qualification or a job, or be better equipped for their current work.

The CWI will work with the providers of courses to set up training and employment helpdesks as part of a regional infrastructure bringing together applicants and providers of training and EVC. The business community will be involved to ensure a close match between supply and demand. The helpdesks' main tasks will be to provide information about EVC, training, dual courses, careers and funding, and to recruit participants among employers, employees, benefit agencies, jobseekers and other members of the public. The training and employment helpdesks will therefore be front offices for educational institutions (MBO, HBO and universities). They may also be instrumental in expanding provision, and it is also possible that in some regions and branches of industry they may provide training themselves.



The Project Department plans to start developing four regional and two branch-specific helpdesks in 2005, with another 16 regional and four branch-specific helpdesks planned for 2006. A scheme to promote the further development of helpdesks will appear in late 2005. The Learning and Working Project was launched on 1 March 2005 and will run for two years, after which the training and employment helpdesks will be funded independently by the social partners (ROCs, local authorities and the business community).

### **2.7.2 Adult education**

Adult education courses are open to adults only, that is to say persons aged 18 or over who are resident in the Netherlands. In view of the numbers of young people under the age of 18 taking VAVO courses it was decided in 1997 to waive the minimum age requirement for 16 and 17-year-olds for a transitional period. This period has been extended to 31 December 2006.

## **2.8 Registration and/or tuition fees**

### **2.8.1 Secondary vocational education**

As of 1 August 2005, school fees have been abolished for all pupils and students aged 16 and 17. Students aged 18 and older on 1 August who are undergoing full-time vocational training (BOL) in secondary vocational education (MBO) or taking full-time adult general secondary education (VAVO) courses (see 7.8.2.) have to enrol using an education card and therefore have to pay school fees. The Information Management Group (see 2.6.1.) collects fees for the Minister of Education, Culture and Science. The fees for the 2005/2006 school year amount to €949. Students of 18 and older undergoing full-time or part-time training on day-release schemes (BBL) (more or fewer than 850 teaching periods a year) have to pay course fees instead of school fees. The amount depends on the level of the course. The same applies to students undergoing part-time vocational training (fewer than 850 hours a year). In the 2005/2006 school year, course fees for BBL levels 1 and 2 were set at €196.35 and for levels 3 and 4 at €477.44.

### **2.8.2 Adult education**

Adult learners who are aged 18 or over on 1 August and are taking either full-time or part-time adult general secondary education courses (VAVO) have to pay fees. In the 2004/2005 school year, these amounted to €949 for full-time courses (more than 850 teaching periods a year) and €0.61 per 45 minutes for part-time courses (fewer than 850 teaching periods a year).

There are no government regulations for the non-formal adult education sector. Adult education institutes ('volksuniversiteiten') charge an average of €5 per 45 minutes for a course.

## 2.9 Financial support for learners

With the abolition of fees for 16 and 17-year olds, financial assistance is no longer necessary. From the 2005/2006 school year, the government allowance towards the cost of fees has therefore been abolished for students who no longer have to pay fees, or their parents or carers. However, MBO students below the age of 18 can still get financial assistance to help with educational expenses under the Fees and Educational Expenses (Allowances) Act (WTOS).

As of the 2005/2006 school year, the rights and duties of MBO and HBO students aged between 18 and 34 have been brought into line. This means that both MBO and HBO students are entitled to student finance, comprising a basic grant, a supplementary grant (depending on parental income), an interest-bearing loan and a public transport pass. For MBO students doing levels 1 and 2, no conditions are attached to the basic and supplementary grants. Students doing levels 3 and 4 receive performance related grants. This means that the grant is first awarded in the form of a loan, which students only have to pay back if they fail to complete their course within ten years. Students are entitled to a performance-related grant for four years. They can then take out a straightforward loan for another three years.

## 2.10 Main areas of specialisation

### 2.10.1 Secondary vocational education

The qualification structure for secondary vocational education introduced on 1 August 1997 comprises four levels of training:

- Level 1: courses at assistant level equip students to perform simple executive tasks. These courses are intended for those who are not able to obtain a basic qualification (level 2) but can thus obtain a certificate nonetheless;
- Level 2: basic vocational training prepares students to perform executive tasks at a slightly higher level. The diploma awarded at this level is equivalent to a basic qualification, which is the minimum qualification that everyone should have;
- Level 3: holders of a professional training diploma are able to carry out tasks completely independently. They must also be able to account for their actions to colleagues and monitor and supervise the application of standard procedures by others;
- Level 4: middle-management or specialist training prepares students to carry out tasks completely independently, combined with the ability to perform a broad range of tasks or specialisation in a particular field. Students must also demonstrate that they possess non-jobspecific skills, such as tactical and strategic thinking, and can expect to take up posts in which they have hierarchical, formal and organisational responsibilities.

The 2004 policy document on adult and vocational education proposes introducing an entry-level qualification, which would come before level 1, for young people who are unable to complete training at assistant level.



All courses (or, in official terminology, qualifications) forming part of the qualification structure are listed in the Central Register of Vocational Courses (CREBO). A total of 700 qualifications have been registered to date. In principle, each of these courses should be offered in two variants (i.e. two alternative learning pathways). This currently applies to just over half of all courses. Since the introduction of the new legislation, private (i.e. non-government-funded) educational institutions have also been able to offer courses within the new qualification structure.

### **Changes to the qualification structure**

The current structure, and the educational provision based on it, no longer dovetails with trends on the job market or in society. A new qualification structure, based on competences, is therefore being developed for secondary vocational education (see [www.colo.nl](http://www.colo.nl)). The new structure will be:

- more relevant to the labour market;
- more relevant to society;
- easier to use;
- transparent and recognisable;
- flexible and long-lasting.

The parties involved – the COLO, the Adult and Vocational Education Council and the Platform for Approved and Recognised Private Educational Institutions in the Netherlands (Paepon) – signed a covenant to this end on 1 October 2003. It deals with:

- the new qualification profiles;
- the tasks and powers of:
  - the social partners
  - the knowledge centres
  - COLO
  - funded and non-funded institutions
  - the Adult and Vocational Education Council and Paepon
  - the Examination Quality Centre and
  - the education and agriculture ministers.

As of 1 August 2005, the Adult and Vocational Education Act has allowed for trials with competence based qualification profiles in secondary vocational education. Ministerial orders are drafted and published each year to this end. An important condition for these trials is that teaching materials are presented in the right place, at the right time and with the right content. The use of ICT and the Internet to permit time-independent and place-independent learning is essential in this regard.

Another focus of attention is technical education. The number of students taking technical courses has been falling, whereas the demand for skilled technical staff is high. The scope for further integration of the partial qualification structures for metalworking, electrical engineering, fitting and process technology is being looked into, with a view to cooperation and harmonisation between the various knowledge centres for vocational education and business and even a possible merger.

### **Future developments**

The law will have to be amended to enable the new-style MBO to be introduced across the board. To this end, the qualification structure steering committee has appointed a working group to explore the legal parameters. The steering committee will publish a report in the spring of 2006, based on the working group's recommendations.

### **2.10.2 Adult education**

Adult education has been decentralised, and is now the responsibility of the municipal authorities. It is now up to the sector, working with the municipal authorities, to develop the qualification structure.

The sector has identified the following levels:

- KSE 1 self-reliance level
- KSE 2 threshold level
- KSE 3 basic level

### **Integration courses**

It is compulsory under the Newcomers Integration Act for all newcomers to the Netherlands to attend special courses designed to help them integrate into Dutch society. The courses aim to increase the self-reliance of newcomers, and give them more opportunities to undergo further training and get jobs.

### **NT2 framework**

One of the recommendations in the report on policy on ethnic minorities that was published by the Advisory Council on Government Policy in 1989 was to introduce nationally recognised certificates for fluency in Dutch as a second language. This recommendation was adopted and resulted in the first state examinations in Dutch as a second language (NT2) in 1992. Organised by the Information Management Group, the examinations comprise tests in reading, writing, fluency and aural comprehension, and can be sat at two levels, I and II. The syllabus dates from before the entry into force of the Adult and Vocational Education Act in 1996 and the introduction of the vocational education qualification structure in 1997.

The NT2 framework distinguishes five levels:

- NT2 1 Students have a very elementary knowledge of Dutch, sufficient at the very most for referral to an NT2 course at level 2;



- NT2 2 Students have a sufficient knowledge of Dutch to get by in Dutch society and cope with a vocational education course at assistant level or a manpower training course or training in the workplace at an equivalent level, provided the course in question comprises enough language components so that, on its completion, the student's command of the Dutch language is in line with the exit level;
- NT2 3 Students have a sufficient knowledge of Dutch to cope with a secondary vocational education course at basic vocational or professional training level or a manpower training course or training in the workplace at an equivalent level. Their command of the language is such that they can work in unskilled jobs. This level is the target level for integration programmes for newcomers to the Netherlands;
- NT2 4 Students have a sufficient knowledge of Dutch to take a secondary vocational education course at middle-management or specialist level or enrol at a university or institute of higher professional education. Their command of the language is such that they can work at intermediate level or higher;
- NT2 5 Students have a sufficient mastery of Dutch to be able to speak it fluently with very little trace of an accent.

### **Future developments**

In February 2006, parliament approved an amendment enshrining the NT2 framework in law. This framework is the Dutch version of the Common European Framework of Reference (CEF) which was drafted by the Council of Europe to provide a common basis for the development of language courses and guidelines for curriculum development and examinations in Europe (standards for fluency levels). The CEF distinguishes six levels, but the NT2 framework has only adopted the first five. Levels one to four (A1 and A2 and B1 and B2) are specified by law. The fifth level C1 is not, because there are no state examinations at this level. Levels A1 and A2 are elementary, levels B1 and B2 more advanced and level C fluent. The amendment still has to be approved by the Senate.

At the moment, the only examinations offered are the NT2 state examinations. The Ministry of Education, Culture and Science is also considering introducing college examinations, set by the competent authorities of the ROCs. These examinations would have to be structured in the same way as examinations in modern languages in secondary schools, i.e. a combination of an internal exam in the form of a portfolio and a national exam.

### **Courses providing a broad basic education**

These are courses which teach the skills needed for people to function independently in everyday situations, for instance in contacts with their child's primary school or the healthcare services. They include speaking, reading, listening and arithmetic.

## **Courses aimed at fostering self-reliance**

The aim of these courses is to achieve a minimum level of self-reliance, for instance in arithmetic or social skills. The Minister may stipulate by ministerial order what falls into the category of courses providing a broad basic education and courses aimed at fostering self-reliance. No other provisions are laid down concerning the precise nature of the courses to be provided within these categories.

### **2.11 Teaching methods**

Nothing is laid down in the Adult and Vocational Education Act (WEB) regarding teaching methods. It is up to the institutions themselves and the field to organise courses and teaching in such a way that students are able to obtain a diploma.

### **2.12 Trainers**

The knowledge and skills required of teachers in adult and vocational education are specified in the Adult and Vocational Education Act (WEB). Qualified secondary school teachers may also teach adult and secondary vocational courses. Graduates who have not undergone teacher training are required to obtain a certificate of competence, as designated by ministerial order. Certificates of competence are also required of people who have at least three years' practical experience in the profession for which the course trains, or have gained the necessary skills through a combination of training and experience.

### **2.13 Learner assessment/progression**

#### **2.13.1 Secondary vocational education**

The teaching and examination regulations drawn up by the administration of the institution describe the content and organisation of each course offered by the institution and the examinations to be held.

The contract concluded between the institution and the student includes provisions on supervision, including regular advice to students as to whether they should continue with their course or switch to another one. The method of assessment during the period of practical training is set out in the practical training contract. Some of the courses in the vocational pathway can be taken part time.

#### **2.13.2 Adult education**

The contract concluded between the institution and the student includes provisions on supervision, including regular advice to students as to whether they should continue with their course or switch to another one.



## 2.14 Certification

### 2.14.1 Secondary vocational education

Every course in secondary vocational education leads to a certain qualification, made up of partial qualifications with the relevant set of exit qualifications (see also 7.10.1.). Exit qualifications are standards in terms of knowledge, skills and professional attitudes, in which students are examined. The examination comprises sections corresponding to the partial qualifications. A certificate is proof that the student has obtained a full qualification. A diploma is proof that the student has obtained a full qualification. Students have passed their examinations if they have passed all the tests for the partial qualifications, and have successfully completed their practical training and all other parts of the course.

The institutions themselves are responsible for setting and holding the examinations for the courses they provide. Their responsibility covers all aspects, including the regulations and exam syllabus, organisation, preparation and marking, the holding of exams, and the awarding of diplomas. Institutions are responsible for ensuring that the quality of the examinations meet the national standards. This makes them responsible for quality assurance and for making any improvements that might be needed. They are also accountable to the public. Every year, the Examination Quality Centre (KCE) carries out an external assessment of the examinations and issues an unqualified certificate, a qualified certificate or an adverse certificate. Under the new system introduced in August 2004, institutions receive an unqualified certificate of approval from the KCE if they fulfil the indicators for each domain (i.e. for each group of related standards).

The Minister of Education, Culture and Science may withdraw the right to hold examinations from institutions that fail to meet the standards. These institutions then have to contract the examinations out to an institution holding a KCE certificate of approval.

Under the Adult and Vocational Education Act, the competent authorities (governing bodies) of the institutions are obliged to draw up teaching and examination regulations for every course they provide, including for instance the exit qualifications and the content and parts of the examination.

A new examination system was introduced on 1 August 2004. The main changes are as follows: External monitoring of examinations is conducted by a single body, the Examination Quality Centre (KCE), instead of by a number of examining bodies and the Inspection.

- External monitoring by the KCE and internal monitoring by the institution itself take place on the basis of national standards, drawn up by the KCE. Examinations therefore have to meet these standards. The KCE gives an independent assessment and issues institutions with a certificate accessible to the public;
- The institutions are responsible for demonstrating that their examinations meet the standards, this has consequences for internal monitoring;
- All partial qualifications – not just 51% – are subject to external monitoring;

- If examinations are not up to scratch, the Minister may withdraw the institution's right to hold them;
- The Inspectorate supervises the quality of the KCE's work;
- 'New-style' examining bodies may also acquire the right to hold examinations, but only if institutions contract examinations out to them. They may of course also provide support services;
- The aim of the new system is greater involvement of industry, more innovation and greater efficiency.

Institutions may decide to contract examinations out if they cannot guarantee the quality required or, if only a few students attend the course, for reasons of efficiency. In doing so, however, they also transfer responsibility for them. Institutions are obliged to contract examinations out if their right to hold them has been withdrawn.

The national objective is for at least 85% of examinations to meet the national standards by 2005. The institutions can use the period up to 1 August 2004 to work towards the new system by participating in incentive projects.

### **2.14.2 Adult education**

Exit qualifications have been formulated for some adult education courses. These describe the qualities in terms of knowledge, understanding, skills and, where applicable, professional attitude, which those completing the course should possess with a view to their future career and role in society and which, in some cases, are necessary for entry to further or higher education.

In 1997 exit qualifications approved by the Minister were introduced for the most common types of adult education course, i.e. courses in Dutch, Dutch as a second language, English, mathematics and social orientation.

There are no separate exit qualifications for VAVO, although the level to be achieved corresponds with the examination syllabuses for VMBO, HAVO and VWO, which are revised each year. The 1999/2000 school year saw the first in a series of changes to the examinations in line with the reforms in the second stage of secondary education.

The Minister may stipulate by ministerial order what falls into the category of courses providing a broad basic education and the category of courses aimed at fostering self-reliance. He may also draw up exit qualifications for these courses. No other provisions have been laid down concerning the precise nature of the courses to be provided within these categories.

Where no exit qualifications have been laid down by the Minister, the regional training centres (ROCs) must formulate their own.

Apart from VAVO and Dutch as a second language courses, the examination syllabus for adult education courses is part of the teaching and examination regulations, a document setting out the main elements of teaching and the examinations to be held. These regulations



are drawn up by the administration of the institution for each course offered by the institution and include the exit qualifications and the content and parts of the examination.

Regulations are laid down by order in council governing the examinations, examination syllabuses and parts of the examination for VAVO courses. A certificate is awarded for each part of an examination. Students who pass the examination are awarded a diploma.

For foreign language teaching in non-formal adult education, a system is now being created in which the European Language Portfolio is applied to courses. The system will probably be introduced nationwide for Spanish courses in 2007.

## **2.15 Education/employment links**

### **2.15.1 Secondary vocational education**

Social trends, including lifelong learning, have made adult and vocational education of crucial importance for individuals, the labour market and society as a whole. The Adult and Vocational Education Act (WEB) and the formation of the regional training centres (ROCs) have created the conditions necessary to perform this broad social function. The Act includes a number of measures designed to improve the alignment of education and employment, including a clear qualification structure for vocational education with an integrated system of courses and considerable emphasis on practical training. Employers' organisations and trade unions in the relevant sector of employment are represented in the knowledge centres for vocational education and business, which formulate the exit qualifications. Industry can therefore influence the exit qualifications.

Both learning pathways include practical training. This takes up between 20% and 60% of the course in the case of the vocational training pathway and more than 60% for the block or day release pathway. The diploma awarded at level 2 of the qualification structure for vocational education is equivalent to a basic qualification, which is the minimum qualification that everyone should have. Holders of this diploma are capable of carrying out slightly more complicated routines and standard procedures and are equipped to enter the labour market.

### **Technocentres**

Cooperation between education and industry was strengthened in 1999 with the creation of a number of technocentres: intermediary organisations set up at regional level by educational institutions (including the regional training centres and higher professional education institutions), local businesses, the local authorities, manpower services and other relevant partners. The role of these centres is threefold: to improve the alignment of education and employment, to further the diffusion and application of knowledge, and to allow the joint use of advanced equipment. The Technocentres Framework Scheme was evaluated in 2005 and will be continued until 2010.

## Fiscal measures

In order to encourage employers to make work experience places available for block or day release students, a special tax exemption scheme has been introduced. Employers can deduct a fixed amount per practical training contract per calendar year from the total amount of salaries tax and social insurance contributions owed by the company or organisation in that year, up to a maximum of €2,500 per year. To be eligible for the scheme, the employer must have a “genuine” employment relationship with the trainee. The trainee’s wage may not exceed €20,793.

### 2.15.2 Adult education

The Adult and Vocational Education Act is the last in a series of developments which were set in motion some time ago, including a shift towards greater emphasis on the requirements of the labour market. The Act includes a number of measures designed to improve the alignment of education and employment, including a separate qualification structure for adult education with improved scope for transferring to vocational education.

## 2.16 Private education

Private schools are governed by the same legislation as public-authority schools. Article 23 of the Constitution places public and private schools on an equal financial footing. As a condition of funding from the public purse, the law lays down that private educational establishments must be maintained by a legal person with full legal competence, whose aim is to provide education, without any profit-making motive.

## 2.17 Statistics

Unless otherwise stated, all statistics have been taken from ‘Key Figures 2000-2004 Education, Culture and Science in the Netherlands’.

### 2.17.1 Students (secondary vocational education)

Number of students (x 1.000)	2003	2004
<b>Secondary vocational education (total)</b>	451.8	454.3
<b>Block of day release pathway (BBL)</b>		
- levels 1 and 2	71.7	61.4
- level 3 and 4	79.3	75.1
<b>Vocational training pathway (BOL) – full time</b>		
- levels 1 and 2	65.2	72.5
- level 3 and 4	215.6	228.9
<b>Vocational training pathway (BOL) – part time</b>		
- levels 1 and 2	8.6	6.7
- level 3 and 4	11.4	9.6



### 2.17.2 Students (adult education)

<b>Number of students (x 1.000)</b>	<b>2003</b>	<b>2004</b>
<b>Adult education (total)</b>	156.3	147.0
<b>Adult education qualification structure (KSE)</b>		
- levels 1 to 3	44.2	38.1
- level 4	5.1	4.8
- levels 5	5.9	6.7
- levels 6	2.3	2.5
<b>Dutch as second language (NT2)</b>		
- levels 1 and 2	66.0	69.4
- level 3	19.5	14.5
- level 4	11.6	11.1
- level 5	1.7	--

### 2.17.3 Adult education institutes

<b>Institutes</b>	<b>2003</b>	<b>2004</b>
Number	<b>94</b>	<b>96</b>
Part of ROC		10
<b>Staff</b>		
FTE	136	144
Teachers on staff	162	140
Freelance teachers	5.328	5.400
Volunteers	3.000	3.400
<b>Learners</b>		
number (in thousands)	185	191
on language courses (total of 34 languages) (in thousands)	58	61

### 2.17.4 Institutions and staff

<b>Number of students (x 1.000)</b>	<b>2003</b>	<b>2004</b>
<b>Total number of institutions</b>	59	58
- ROC's	41	40
- Specialist	13	13
- Other	5	5
Number of staff in FTE (thousands)	37.5	36.7
% aged 50 or over	40.9	42.9

### 3 Vocational Education and Training en competence based programmes

#### 3.1 Introduction

In the late 20th century and the beginning of the 21st century the concept of competences became very popular in the Dutch Vocational Education and Training (VET) system, both at the level of policy-making and educational practice. Competence-based education is the leading paradigm for innovation at system level and at the level of learning environments. This is one of the main conclusions formulated by Van Merriënboer, Van der Klink and Hendriks (2002) in their study on the concepts of competence and competence-based education, carried out for the Educational Council of the Netherlands. An example of this tendency is the current practice that competence-based professional profiles are currently being developed in Dutch secondary vocational education at the national level. These serve as a basis for designing competence-based education programmes. In 2007 the process of implementation of competency-based professional training has started in the field of ICT-training (Ecabo). In higher vocational education, many educational programmes can already be described as competence-based so the introduction of competence-based vocational education in the Netherlands is an interesting case for educational researchers. Competence thinking also appears to have made its way back into education in the United States (U.S. Department of Education, National Center for Educational Statistics, 2002) and in various countries in Europe (Descy and Tessaring, 2001).

An important reason for the popularity of the concept of competence is the expectation held by many stakeholders in the VET field that the gap between the labour market and education can (and will) be reduced through competence-based education. The underlying idea is that vocational education should enable students to acquire the competencies needed in their future professions, and in society as a whole. Additionally, while working as professionals, they should continue to develop their competencies so that they are able to react to and anticipate future developments in their work (and outside) (Jenewein, Knauth and Zülch, 2002). In this respect, lifelong learning can be defined as ‘a continuous, stimulating and supporting process, initiated in regular education, supporting needs, possibilities and experiences of persons, to develop their ability to acquire competencies necessary for personal development and professional functioning in their own organisations and the rapidly changing society’ (Lans, Wesselink, Biemans and Mulder, 2004, p. 77). One could state easily see a direct impact on the concept of employability. Thus, there is a growing recognition of the need for vocational education to be directed at developing competencies, and not just at acquiring a diploma; the emphasis has to be on capabilities and not on qualifications. Capability is an important prerequisite for employability. Shifting the emphasis to developing capabilities is therefore assumed to improve the link between education and the labour market (Mulder, 2004). Moreover recognition of informally gained competencies and the testing of these competencies acquired outside the educational system also play an important role, not only in the Netherlands but also in many other countries (Descy and Tessaring, 2001).



Additionally, there is public interest in recognising these informally gained competencies, as unnecessary costs can thus be avoided. Finally, the tendency to design vocational education on the basis of competencies is influenced by the current Dutch government policy to only determine the global outlines of future vocational education programmes and not to define fragmented qualification structures.

The notion of competence-based education also receives a lot of attention in the research on Dutch VET (see e.g. Van Merriënboer, Van der Klink and Hendriks, 2002). The Dutch Programme Board for Educational Research formulated the following main questions to be examined in VET research carried out in 2003: How do processes of competence development take place in learning environments in vocational education? How can these processes be conceptualised and explained? Which factors have a direct influence on these processes, and how can competence development processes be optimised? These main questions refer to three different themes that are all related to processes of competence development and determining factors of such processes:

1. learner characteristics and competence development;
2. design of learning programmes and environments;
3. the role of teachers and supervisors of practical internships in the learning environment.

Research on competence-based assessment can be integrated in each of these themes, this chapter provides a critical reflection on the usefulness of the competence movement for the development of Dutch VET. In 2.2 a historical analysis of competence-based education in various countries is described to explain the attractiveness of competence-based education for Dutch VET. The concept of competence is explored in chapter 2.3 and 2.4. In chapter 2.5 and possible pitfalls and roads for future development are sketched.

### **3.2 Competence-based education in retrospect**

Interest in competence-based education and training arose in the 1960s and 1970s as a result of various publications on competence-based organisational training and competence-based teacher training in the United States. In their study “On competence. A critical analysis of competence-based reforms in higher education”, Grant et al. (1979) concluded that competence was a broad term, and that the competence-based education programmes that he and his colleagues had studied were very diverse with respect to their theoretical orientation, their scope, their intentions and their scientific focus (see also Mulder, 2004). Grant et al. defined competence-based education as follows: “Competence-based education tends to be a form of education that derives a curriculum from an analysis of a prospective or actual role in modern society and that attempts to certify student progress on the basis of demonstrated performance in some or all aspects of that role” (Grant et al., op cit, 6).

Competence-based education and training have a long history. Achtenhagen and Grubb (2001) trace the first task analysis approaches back to Moscow in the 1860s. Victor della Vos

developed methods for task analysis, partly based on the conditioning theory of Pavlov, and soon these methods found their way into the American movements for manual and technical training. Competence-based approaches usually start with a task analysis in which jobs are broken down into single tasks, resulting in skill-based instruction and training Nijhof (2003) also stresses a long history of competence-based education, referring to Bobbitt's approach in the 1920s of a scientific analysis of human actions to identify underlying abilities needed for high performance. A behaviourist approach for directly translating task descriptions into behavioural attainment targets in the 1960s led to single S-R responses in programmed instruction chains. Cognitive learning theories replaced these programmed instruction models in the 1970s.

During the 1970s, the “competency movement” (see e.g. Friedlander, 1996; Lucia and Lepsinger, 1999; McAshan, 1979; Parry, 1998) was characterised by detailed analysis of the various behavioural aspects of professional tasks. Tasks of professionals were dissected in the particular component parts, resulting in long lists of fragmented behavioural elements. Competence-based education became primarily associated with behaviourism, mastery learning and modular teaching (Mulder, 2004). This approach turned out to be unfruitful, which resulted in decreasing interest in the original competency movement in the 1980s (Mulder, 2003).

In Australia and the United Kingdom, competence-based education has been implemented as a crucial part of national training reform agendas. In Australia, the National Training Framework was implemented to increase Australia's competitiveness in the marketplace (Velde, 1999). According to Velde, reform in Australia is now settling in two broad directions: a fundamental reform of the Australian System for Apprenticeships and Traineeships and the transformation of upper secondary school. In her opinion, “Australia and the United Kingdom possess many similarities both in the method of implementation and the behaviouristic stance adopted towards competence-based training (...) both systems appear to have been based on the behaviouristic approach to competence, with little thought given to other, more holistic approaches. Although research attempts are being made to explore more holistic conceptions of competence (...), these appear, in the main, not to be applied to actual practice” (Velde, 1999, p. 438-439). James (2002) states of the Australian scene that competence-based training tends to be conservative in nature: it enhances the development of procedural, technical knowers and adaptable workers, instead of reflective problem-solvers and innovators. The cause of this conservatism is the standardisation involved in the curriculum development methods (backward mapping from job requirements to learning trajectories; cf. Den Boer and Nieuwenhuis, 2002).

With respect to competence-based VET in the United Kingdom, Boreham (2002) argues that the competence-based training model behind the UK National Vocational Qualifications (NVQ)-system is ‘mechanistic, reductionist and denies the importance of human agencies in processes of learning’. In the NVQ-system, school-based learning is erased because of the claim that any theory taught in college would be inert because active knowledge is necessarily constructed through performance in the workplace. In a Taylorist industrial age this leads to



empty skills in a low-skilled economy (Payne, 2000). Modularisation often goes along with competence-based curricula. This reinforces the disintegrative approach to job analysis. The same argument applies to the use of behavioural assessment techniques: these tend to measure only the overt, routine aspects of tasks.

So, in the Anglo-Saxon literature, competence-based education does not generally have a positive connotation. A rigid backward mapping approach, in which the state of the art on the shop floor is the untouchable starting point for the definition of occupational competencies, leads to routinised job descriptions, in which the proactive and reflective worker is left out (cf. the canonisation process, mentioned by Brown and Duguid, 1996). Achtenhagen and Grubb (2001) conclude that competence-based training is appropriate for a Taylorist world, but is an inadequate preparation for the highly-skilled workplace, where flexibility and problem-solving abilities are required.

Despite the objections made against competence-based education and training, countries have continued to adopt competence-based systems during the last decades. According to Arguelles and Gonczi (2000, p. 9), “the educational framework for addressing the deficiencies of vocational education and training has become, in an increasing number of countries, competence-based education. This can be defined as education based on outcomes and pre-determined standards, on what students can do ....” Moreover, competence-based education has continued to evolve in countries where the system has been in place for some time. For example, in Australia , competence-based education is now quite different from how it was originally introduced (Miller, 2001).

Arguelles and Gonczi (2000) examined the implementation of competence-based education and training in a number of countries. They provided case studies of the application of competence-based education and training to VET systems in countries including Mexico , Australia , Costa Rica , France and New Zealand . According to Miller (2001), these case studies provide insight into the implementation of competence-based education into various cultural and educational systems and show the importance of having the various stakeholders (particularly government, industrial bodies, the education profession and enterprises) working together with a common purpose.

In the ongoing debate on competence-based education, Arguelles and Gonczi (2000) clearly support the continuation of an integrated approach to competence-based education. In this respect, Hyland (2001) suggests that the authors have expressed a general and sometimes uncritical commitment to VET reform along competence-based education and training lines. According to Miller (2001), there are still many unresolved issues and much more research is needed before competence-based education can be regarded as meeting the expectations of its proponents.

In the recent German and Dutch discussions on competence-based education, a more holistic approach is advocated, to overcome the risks of the disintegrative approaches. In these discussions, competence is regarded as the integrated abilities required to cope with complex tasks. Boreham (2002) suggests work-process knowledge as an innovative approach,

embedding and integrating specific jobs in full production processes. Work-process knowledge should enable workers to have an idea of the meaning of their job in relation to other tasks and jobs. In the recent policy debates on Dutch VET the same holistic approach is seen as a vehicle for educational innovation and the introduction of lifelong learning. Toolsema (2003) concludes, however, that although the policy device is a holistic approach, the practical design of learning processes and assessment procedures is still based on a narrow definition of tasks and competencies. Van der Klink (2003) describes the same movement: the holistic approach is often used as window dressing for behaviourist instruction. He argues that assessment is the drawback to a holistic competence-based education approach.

To conclude, competence-based education was historically based on a behaviourist model of training and learning, within a Taylorist industrial model. In the recent competence-based movement, a holistic approach is normatively put forward, but in practice the pitfalls of a disintegrative S-R model are still great. Modularisation and assessment techniques are pushing educational practice back to the traditional mechanistic and reductionist approach. In his critique of Bastiaens and Martens (2003), De Jong (2003) argues that implementing IT tools in vocational education is reinforcing this tendency, by delivering virtual, individual training trajectories. De Jong states that competencies "... should not be acquired, but should be developed in a collective community of practice and knowledge." In this view, competence is not only a technical aspect of work, but should be seen as culturally embedded.

### **3.3 The current popularity of the concept of competence**

Competence-based education has rapidly become very popular both in vocational educational practice and in the policy field in the Netherlands and other countries as well. Its attractiveness to schools and other VET institutes lies first of all in the emphasis that the concept places on the positive side of education and learning. Making people competent has a more positive, and also a more practically relevant, connotation than making up for their knowledge deficits. The approach matches well with the culture of advancement and empowerment espoused by many in educational practice. VET teachers also feel that, because of its practical relevance, competence-based education can motivate students to finish their school much more than traditional education can. Moreover, through their direct contacts with work organisations, VET institutes notice immediately how modern companies, occupations and jobs are changing, encouraging schools to deliver graduates with broad skills in addition to specific knowledge.

As mentioned above, the main reason why competence-based education has gained so much popularity in the VET policy arena is its alleged capacity to reduce the gap between the school system and the labour market. There is a belief among policy-makers that graduates educated under a competence regime will be better able to perform in jobs required by modern organisations than those with traditional qualifications. Also, the notion of competence-based education fits very well within the policy discourses of employability and lifelong learning. Competence systems carry with them the promise of rendering learning processes and outcomes that are measurable and manageable throughout their life span. On a



related note, the concept of competence can easily be linked to the performance approach of learning and education made popular by ideas on core competencies of organisations (Prahalad and Hamel, 1990). The latter reason is another example of the perceived potential inherent in the concept of competence to bridge the education-work divide.

An interesting phenomenon in the whole competence discussion at the practice and policy level is the tendency to largely ignore the disadvantages that may be associated with it. Over the last five years a major bandwagon effect has been visible among Dutch schools and VET institutes, when it comes to shifting to the competence paradigm. From an academic point of view, this is all the more pressing because of the serious lack of scientific research and theory to underpin its claim to fame. What we do know from the earlier competency movement that peaked during the 1970s, but also from more recent UK experiences with National Vocational Qualifications and Investors in People programmes, is that the risk of bureaucratisation of an essentially good idea is very real. The question is warranted to what extent competencies are perhaps viewed as a panacea for all problems of an educational and labour market nature. For example, can one system, whether competence-based or not, realistically serve all stakeholders in the practice, policy and political arenas? Can student dropout rates really be substantially reduced by introducing another educational model? Such questions deserve to be asked and answered, but to date they are not very prominent in the competence discussion at the practice and policy level.

A final, rather different take on the popularity of the concept of competence revolves around the question to what extent schools are already working according to the competence arrangement without referring to it as such. In other words, when does competence-based VET 'officially' become competence-based VET? The lack of a clear definition does not help much in this matter, but it seems that many schools have been using teaching practices and methods that are at least compatible with competence-based education for some time already. Notions around self-directed, participatory and project-based learning, for instance, may differ from each other but are similar – and compatible with competence-based education – in that transferring subject matter is no longer their primary concern. Instead, they focus on the way in which learners (co-)construct situated knowledge and learn to learn (collaboratively) by doing so. To a certain extent, therefore, the popularity of the competence approach may be a case of old wine in new bottles.

### **3.4 Defining the concept of a competence**

As mentioned above, the concept of competence has a fairly long history in education and training research and practice. Nowadays, the notion of competencies as integrated capabilities has become very popular. Reviewing the many studies on competence development, however, it is possible to conclude that the concepts competence and competence-based education are still very diffuse and require clear definition and conceptualisation. It would therefore not be prudent to present a fixed definition of the terms competencies and competence, so we adopt a working definition from which to proceed. In this connection, Mulder (2001) formulated the following working definition for the term

competence, taking the opinions of other relevant VET researchers into account: Competence is the capability of a person (or an organisation) to reach specific achievements. Personal competencies comprise integrated performance-oriented capabilities, which consist of clusters of knowledge structures and also cognitive, interactive, affective and where necessary psychomotor capabilities, and attitudes and values, which are required for carrying out tasks, solving problems and more generally, effectively functioning in a certain profession, organisation, position or role. Building upon this definition, competence-based education implies creating opportunities for students and workers, close to their world of experience in a meaningful learning environment (preferably professional practice) where the learner can develop integrated, performance-oriented capabilities for handling the core problems in practice.

Van Merriënboer, Van der Klink and Hendriks (2002) carried out a study to determine whether it is possible to harmonise the concept of competence. After a literature study and expert consultation, they also concluded that many conceptions of competence exist, both in theory and in educational practice. Competence as a concept turned out to be (too) elastic. This raised the following question: what are the commonalities with respect to the concept of competence in various sectors and contexts? They derived six common characteristics of competencies, as defined by relevant authors in the field:

1. competencies are context-bound;
2. competencies are indivisible (knowledge, skills and attitudes are integrated);
3. competencies are subject to change;
4. competencies are connected to activities and tasks;
5. competencies require learning and development processes;
6. competencies are interrelated.

Therefore, in their opinion, the concept of competence is valid, although the relationships with other concepts such as key qualifications and expertise can be quite strong.

### **3.5 Challenges in competence-based VET**

This section discusses several possible pitfalls in applying competence-based education. The overview starts with conceptual and institutional problems, then several technical issues are presented, and finally problems related to the implementation of competence-based education within the context of Dutch VET are dealt with.

#### **3.5.1 Concept of competence**

As Van Merriënboer, Van der Klink and Hendriks (2002; see also Toolsema, 2003) have shown, there are many conceptual definitions of competence and competency. There is little consensus on the meaning of these concepts among the many researchers and authors (see also Van der Sanden, De Bruijn and Mulder, 2003). Also in practice, institutional actors and colleges use different descriptions. This sometimes serves as an excuse for defining



competencies as one likes, decreasing the trustworthiness of the concept (Mulder, 2000, 2003). According to Nijhof (2003), designing competence-based curricula, learning processes and assessment procedures can only be done fruitfully, when competence is operationalised as unambiguously as possible. Therefore, it is necessary to understand the underlying learning processes (cf. Van der Sanden et al., 2003; Onstenk, 2003; Simons, 2003). On the other hand, it is important to avoid competence jargon while actually designing and implementing competence-based education and to choose a more practical approach (Mulder, 2003). In this respect, a common vision of the desired competencies should be reconstructed in interaction with all actors involved (students, teachers, social partners, government; Simons, 2003).

### **3.5.2 Standardisation**

A second pitfall is an over-reliance on standardisation of competencies, whereas the power of competence-based education lies in its context-embeddedness. Usually, the reality of work is quite different from job descriptions and organisational regulations on paper (Klarus, 2003). Using overly standardised competencies is really missing the point, since every abstraction from actual practice makes them less applicable. Related to the problem of standardisation is the belief in forecasting techniques: competence standards should describe jobs in the future, for which students are educated, but they can only describe jobs from the past (cf. Den Boer and Nieuwenhuis, 2002). Too strict a use of competence standards leads to conservative training, instead of preparing students for innovative developments. Competencies are more than the sum of their composing parts, so a certain context-independence should exist. However, the risk of bureaucratisation looms large when attempts are made to separate the system of (required) competencies from actual work practice. The potential power of working with a concrete set of meaningful competencies will soon be lost as a result (Klarus, 2003).

### **3.5.3 School and workplace learning**

It is often underestimated how difficult it is to integrate learning in schools with learning in the workplace (Klarus, 2003). Different actors are involved, speaking different languages, coming from different cultural and historical backgrounds, and pursuing different interests. It is no wonder that aligning the two different learning systems is difficult. However, the distinction between the two settings should be reconsidered (Klarus, 2003): in a sense this boundary is artificial, because in the end it is all about individual students, learning in different places at different times, constructing and adjusting their mental models of the reality of work. Trying to ensure some form of continuity throughout their learning pathways (e.g. by developing their meta-cognitive skills) may be easier than solving the integration problem at system level.

According to Simons (2003), the implicit character of workplace learning leads to a major problem (how to foster implicit learning?) that should be taken into account in designing learning arrangements and environments both in school and in the workplace. Onstenk (2003) raises the question whether a new mix of implicit learning, guided learning and self-directed learning is needed. People should be made aware of their competencies and ways of learning, but this requires different approaches in the workplace than in school settings. Formalising

work-based learning for acquiring standardised competencies is still an unsolved dilemma in designing effective pathways to becoming competent. This aspect has specific consequences for competence-based education but holds for vocational education and training in general.

### **3.5.4 Determining learning activities**

Specifying the competencies to be acquired by students does not automatically result in the design of effective learning activities. Planning, designing and implementing effective ways of learning require specific attention. Many authors in this field argue that learning arrangements and pathways should be based on principles of social, constructivist learning (cf. Van der Sanden et al., 2003; Simons, 2003, Mulder 2003). Teachers should work in multi-disciplinary teams to design new competence-oriented learning activities, using existing practical periods and on-the-job training. Translating competence-oriented goals into actual learning activities is crucial in the implementation of competence-based education. If the implementation gets stuck at the preparation phase and/or does not get carried into the execution phase, true innovation will fail. In this respect, students should not only develop work-related competencies, but also learning competence if they are to be equipped for lifelong learning (Mulder, 2003; Van der Sanden et al., 2003).

### **3.5.5 Assessment of competencies**

Assessment of competencies should be considered as a pitfall, assessment of competencies is, especially in work situations, a labour-intensive and time-consuming exercise (Jellema, 2003). It is hard to standardise and often involves structured observation rather than classroom examination. Developing and using valid and reliable assessment tools is a crucial but very difficult task. Moreover, the criteria for the quality of assessment become stricter as its importance increases (cf. Nieuwenhuis, Van Berkel, Jellema and Mulder, 2001). For example, if selection or certification rather than self-development is the main goal of assessment, it is even more crucial to use high-quality instruments and tools (cf. Roelofs and Sanders, 2003). In this respect the dilemma between national standards for assessment and local flexibility is pressing (cf. Nieuwenhuis et al., 2001). Since traditional assessment methods are ill-suited to a competence-based curriculum, schools, enterprises and institutional actors have to find new ways to develop appropriate assessment tools (cf. McClelland, 1973).

### **3.5.6 Changing roles for teacher and management**

The extent to which the role of teachers (and students!) changes can easily be overlooked when competence-based education is implemented (Jellema, 2003). The teacher is supposed to switch from the role of an expert, transferring knowledge to a coaching role, guiding students' learning processes. Students are supposed to take responsibility for their own learning, whereas the teacher used to be in charge. This requires a totally different attitude from both parties, perhaps even a paradigm shift. Achieving this challenge is all too easily forgotten by policy-makers, talking about implementing competence-based education.

In developing competence-based education, it is essential that structural attention is paid to competence development of teachers and school managers. 'Practice what you preach' should



be the leading principle. According to Mulder (2000), competence-based management implies an open culture and co-operation. If these conditions are not met, competence-based management will be a failure. Management itself has to ‘walk the talk’; otherwise people at lower levels in schools will perceive it as an ordinary management tool, instead of appreciating it as a supporting strategy to develop both the school organisation and the individual.

### **3.6 Concluding remarks**

The recent development of competence-based education in Dutch VET has raised an innovative challenge for both teachers and policy-makers at all levels in the system. However, it should be recognised that the concepts of competence and competence-based education have been in use for a long time in education and human performance technology. Competence-based education is seen as an alternative for working with qualifications and qualification structures, as has been the case in Dutch VET during the last 20-30 years. In fact, both approaches are based on the same assumptions: qualifications and competencies are both derived from job analysis and forecasting techniques and are both used as input for curriculum development and for assessment of learning outputs. So the innovative flavour of competence-based education can easily become ‘old wine in new barrels’, especially when job requirements are translated into fixed goals for educational pathways.

However, introducing competence-based education in Dutch VET has raised substantial interest in and support for developing and introducing teaching-learning arrangements in the direction of flexible pathways and self-directive learning, according to the principles of socio-constructivist learning theories. The introduction of competence-based education stimulates and facilitates the development of customised pathways, in which students, teachers and masters on the shop floor can build learning communities. This creates a paradox in the competence-based education movement: at the level of learning processes it is expected to deliver more flexibility, whereas at national level, competence-based education fits well in the trend towards standardisation based on job descriptions. Most of the pitfalls and dilemmas described have to do with the balancing of local flexibility with national standardisation. To guarantee the exchange value of qualifications, and to regulate (financial) duties and rights, national arrangements are needed. But often, national regulations hinder local flexibility and professionalism. The discussions concerning competence-based education in Dutch VET can be understood within the context of this system-level dilemma.

A holistic approach to competencies is difficult to establish (cf. Toolsema, 2003): empirical scaffolds are urgently needed. For curriculum and assessment instrumentation, an analytical/atomistic approach can easily be adopted from the older competence-based education movement: this adoption can be observed in the daily policy practice of the Dutch VET system. To use competence-based education as a vehicle for flexible VET trajectories, in which students and teachers have a large quantity of self-steering power, requires debate and measures at the national level: the policy instruments for financing, accreditation and assessment are built on features of the older competence-based education movement, based

on fixed goals and an atomistic approach. Flexible VET for a knowledge-based economy requires policy instruments that enable self-steering by students and tailor-made trajectories fitted to the requirements of local labour markets. A knowledge-based economy requires more than knowledge from professionals. Current society demands more individual independence in the context of work, which requires coping with uncertainty, taking calculated risks, making deliberate but informed choices. This requires competence.



## References

- Achtenhagen, F.** and Grubb, N.W. (2001). Vocational and occupational education: pedagogical complexity, institutional diversity. In: Richardson, V. (ed.). *Handbook of Research on Teaching*. Washington : AERA, pp. 604-639.
- Arguelles, A.** and Gonczi, A. (eds.) (2000). *Competency Based Education and Training: A World Perspective*. Balderas, Mexico : Editorial Limusa S.A. de C.V. Grupo Noriego Editores.
- Bastiaens, T.J.** and Martens, R.L. (2003). ICT en competentiegericht onderwijs. In: M. Mulder, Wesselink, R., Biemans, H., Nieuwenhuis, L. and Poell, R. (eds.). *Competiegericht beroepsonderwijs. Gediplomeerd, maar ook bekwaam?* Houten: Wolters Noordhoff.
- Boer, P. den** and Nieuwenhuis, A.F.M. (2002). *Wendbaar beroepsonderwijs. Lessen uit groen onderwijs*. Wageningen: Stoas.
- Boreham, N.** (2002). Work process knowledge, curriculum control and the work-based route to vocational qualifications. In: *British Journal of Educational Studies*, 50, 2, pp. 225-237.
- Brown, J.S.** and Duguid, P. (1996). Organisational learning and communities-of-practice: towards a unified view of working, learning and innovation. In: Cohen, M.D. and Sproull, L.S. (eds.). *Organisational Learning*. Thousand Oaks, CA : Sage Publications, pp. 58-82.
- Descy, P.** and Tessaring, M. (2001). *Training and Learning for Competence. Second report on vocational training research in Europe : executive summary*. Luxembourg : Office for Official Publications of the European Communities.
- Friedlander, P.** (1996). Competency-driven, component-based curriculum architecture. In: *Performance & Instruction*, 35, 2, pp. 14-21.
- Grant, G., Elbow, P., Ewens, T., Gamson, Z., Kohli, W., Neumann, W., Olesen, V. and Riesman, D.** (1979). *On Competence. A critical analysis of competence-based reforms in higher education*. San Francisco : Jossey-Bass.
- Hyland, T.** (2001). Book review of *Competency Based Education and Training: A World Perspective* by A. Arguelles and A. Gonczi (eds.) (2000). In: *Journal of Vocational Education and Training*, 53 (3), pp. 487-490.
- James, P.** (2002). Discourses and practices of competence-based training: implications for worker and practitioner identities. In: *International Journal of Lifelong Learning*, 21, 4, pp. 269-391.
- Jellema, K.** (2003). Competentiegericht leren binnen een AOC. In: M. Mulder, Wesselink, R., Biemans, H., Nieuwenhuis, L. and Poell, R. (eds.). *Competiegericht beroepsonderwijs. Gediplomeerd, maar ook bekwaam?* Houten: Wolters Noordhoff.
- Jenewein, K., Knauth, P. and Zülch, G.** (2002). *Kompetenzentwicklung in Unternehmensprozessen*. Aachen: Shaker.

- Jong, F.P.C.M. de** (2003). Leren in en voor een beroep. In: M. Mulder, Wesselink, R., Biemans, H., Nieuwenhuis, L. and Poell, R. (eds.). *Compentiegericht beroepsonderwijs. Gediplomeerd, maar ook bekwaam?* Houten: Wolters Noordhoff.
- Klarus, R.** (2003). Werkplekleren en leerresultaten. In: M. Mulder, Wesselink, R., Biemans, H., Nieuwenhuis, L. and Poell, R. (eds.). *Compentiegericht beroepsonderwijs. Gediplomeerd, maar ook bekwaam?* Houten: Wolters Noordhoff.
- Klink, M.R. van der** (2003). Competenties en hoger onderwijs: stand van zaken en toekomstperspectief. In: M. Mulder, Wesselink, R., Biemans, H., Nieuwenhuis, L. and Poell, R. (eds.). *Compentiegericht beroepsonderwijs. Gediplomeerd, maar ook bekwaam?* Houten: Wolters Noordhoff.
- Lans, T., Wesselink, R., Biemans, H.J.A. and Mulder, M.** (2004). Work-related lifelong learning for entrepreneurs in the agri-food sector. In: *International Journal of Training and Development*, 8 (1), pp. 72-88.
- Lucia, A.D. and Lepsinger, R.** (1999). *The Art and Science of Competency Models. Pinpointing critical success factors in organizations.* San Francisco : Jossey-Bass Pfeiffer.
- McAshan, H.H.** (1979). *Competency-based Educational and Behavioral Objectives.* Englewood Cliffs: Educational Technology Publications.
- McClelland , D.C.** (1973). Testing for competence rather than for “intelligence”. In: *American Psychologist*, 28 (1), pp. 423-447.
- Merriënboer, J.J.G. van, Klink, M.R. van der and Hendriks, M.** (2002). *Competenties: van complicaties tot compromis. Over schuifjes en begrenzers.* Den Haag: Onderwijsraad.
- Miller, P.** (2001). Book review of *Competency Based Education and Training: A World Perspective* by A. Arguelles and A. Gonczi (eds.) (2000). In: *Journal of Workplace Learning*, 13 (6), pp. 260-261.
- Mulder, M.** (2000). *Competentieontwikkeling in bedrijf en onderwijs. Inaugural address.* Wageningen: Wageningen University.
- Mulder, M.** (2001). *Competentieontwikkeling in organisaties. Perspectieven en praktijk.* ‘s-Gravenhage: Elsevier Bedrijfsinformatie.
- Mulder, M.** (2003). Ontwikkelingen in het competentiedenken en compentiegericht beroepsonderwijs. In: M. Mulder, Wesselink, R., Biemans, H., Nieuwenhuis, L. and Poell, R. (eds.). *Compentiegericht beroepsonderwijs. Gediplomeerd, maar ook bekwaam?* Houten: Wolters Noordhoff.
- Mulder, M.** (2004). *Education, Competence and Performance: On Training and Development in the Agri-Food Complex. Inaugural address.* Wageningen: Wageningen University.



- Nieuwenhuis, L.F.M., Berkel, H. Van, Jellema, M. and Mulder, R. (2001).** Kwaliteit getoetst in de BVE. Kwaliteit en niveau van aanbod en examinering in het beroepsonderwijs en de volwassenen educatie. Zoetermeer: Stuurgroep Evaluatie WEB/OC&W.
- Nijhof, W.J. (2003).** Naar competentiegericht beroepsonderwijs? In: M. Mulder, Wesselink, R., Biemans, H., Nieuwenhuis, L. and Poell, R. (eds.). *Compentiegericht beroepsonderwijs. Gediplomeerd, maar ook bekwaam?* Houten: Wolters Noordhoff.
- Onstenk, J.H.A.M. (2003).** Leren en beroepsgerichte didactiek: onderzoek naar het hart van het beroepsonderwijs. In: M. Mulder, Wesselink, R., Biemans, H., Nieuwenhuis, L. and Poell, R. (eds.).
- Compentiegericht beroepsonderwijs. Gediplomeerd, maar ook bekwaam? Houten: Wolters Noordhoff.
- Parry, S.B. (1998).** Just what is a competency? (And why should you care?). Training, June 1998, 58-64.
- Payne, J. (2000).** The unbearable lightness of skill; the changing meaning of skill in UK policy discourses and some implications for education and training. *Journal of Educational Policy*, 15, 3, 353-369.
- Prahalad, C.K. and G. Hamel (1990).** The core competence of the corporation. In: *Harvard Business Review*, May-June, pp. 79-91.
- PROO (2002).** Programma Onderwijsonderzoek 2003. Den Haag: NWO/PROO.
- Roelofs, E.C. and Sanders, P.F. (2003). Beoordeling van docentcompetenties. In: M. Mulder, **Wesselink, R., Biemans, H., Nieuwenhuis, L. and Poell, R. (eds.).** *Compentiegericht beroepsonderwijs. Gediplomeerd, maar ook bekwaam?* Houten: Wolters Noordhoff.
- Sanden, J.M.M. van der, Bruijn, E. de and Mulder, R.H. (2003).** Ontwikkelingen in het onderzoek op het terrein van het beroepsonderwijs. In: M. Mulder, Wesselink, R., Biemans, H., Nieuwenhuis, L. and Poell, R. (eds.). *Compentiegericht beroepsonderwijs. Gediplomeerd, maar ook bekwaam?* Houten: Wolters Noordhoff.
- Simons, P.R.J. (2003).** Competenties verwerven met en zonder instructie. In: M. Mulder, R. Wesselink, H. Biemans, L. Nieuwenhuis and R. Poell (eds.), *Compentiegericht beroepsonderwijs. Gediplomeerd, maar ook bekwaam?* Houten: Wolters Noordhoff.
- Toolsema, B. (2003).** Werken met competenties. Naar een instrument voor de identificatie van competenties. Doctoral dissertation Twente University.
- U.S. Department of Education, National Center for Educational Statistics (2002).** Defining and assessing learning: exploring competency-based initiatives. NCES 2002-159, prepared by E.A. Jones and R.A. Voorhees, with Karen Paulson, for the Council of the National Postsecondary Education Cooperative Working Group on Competency-Based Initiatives. Washington, D.C. : U.S. Department of Education.

**Velde, C.** (1999). An Alternative Conception of Competence: implications for vocational education. In: *Journal of Vocational Education and Training*, 51 (3), pp. 437-447