

The educational system of the Netherlands

Ruud Luijkx and Manon de Heus¹

1 Short historical overview

The first act on compulsory education got implemented in 1900. This act made primary education of six grades compulsory to all children between 6 and 12 years of age. Repeatedly, there had been made adjustments to this act, but in 1969 it was completely replaced. According to the new act, all children aged 6 to 16 were obliged to fully attend daytime classes.

In 1985, the lower limit was adjusted to the age of 5, and since then, full-time education is compulsory for at least 12 complete school years. Students who have reached the age of 16 in the past school year are not obliged to attend education full-time anymore. However, they are compelled to attend part-time education (that is, at least 1 or 2 days a week) for at least another year. This is known as the act on partial compulsory education (*partiële leerplichtwet*). At the end of the school year in which the student turns 17, the student is not obliged to attend part-time-education anymore (Eurydice, 2005a).

Since the start of compulsory education in the Netherlands, the educational system has changed in many respects. However, there is one very important characteristic of the Dutch educational system that has stayed intact since the beginning of the 20th century. That is, since 1917, public and private education have been treated equally by law. This so-called freedom of education (article 23 of the Dutch constitution) refers to the right of all Dutch citizens to found schools or follow education based on certain religious, ideological, or educational persuasions. Irrespective of their exact foundation, all schools (public and private) are equally financed by the Dutch government. However, if they are to receive (financial) governmental support, both private and public schools have to meet the qualitative standards provided by the education authority of the Ministry of Education, Culture and Science. Whether those qualitative standards are met or not, is determined by the Dutch Inspection of Education. The aim of this Inspection, which is part of the Dutch Ministry of Education, Culture and Science, is to warrant the quality of all Dutch private and public schools.

Approximately 70 per cent of all Dutch children in both primary and secondary education attend private schools, which are mostly Roman Catholic or Protestant in origin (Eurydice, 2005a). Despite the growing number of non-religious people in the

¹ We would like to thank Anita Hanssen for research assistance.

Netherlands, the high percentage of children attending confessional primary and secondary education has by and large remained constant since the 1970s. This can be explained by the fact that confessional education is not only popular among religious people: 35 to 40 per cent of all non-religious parents choose a confessional school for their children, and this number is still growing (Herweijer and Vogels, 2004).

2 Structure of the educational system

2.1 Pre-primary education

Before the age of 5, when education becomes compulsory, there is no official pre-primary education in the Netherlands. However, in June 2000, the Minister of Education, Culture and Science, the Minister of Health, Welfare and Sports, and the Minister of Urban Policies and Integration stated that pre-primary schooling would be beneficial to those children between the age of 2 and 5 who run a risk to get behind later on in their educational career. Children that particularly need this extra educational time are often children of ethnic minorities and children of poorly educated parents. In educating them before officially entering primary school, the educational starting position of those children could be improved. In 2003, a programme that provided pre-primary education to those disadvantaged children was launched and 25 per cent of the children who were eligible for the programme were reached.

Since 1988, (small-scale) programmes of this kind have been regularly introduced. These so-called step-projects (*stap-projecte*) have focused on children of poorly educated parents and children of ethnic minorities. With active involvement of the parents of those children, the children are encouraged to acquire all kinds of new skills at home before entering the educational system. However, not all projects managed to continue for longer periods of time (Nederlands Jeugd Instituut, 2007).

2.2 Primary education

In the Netherlands, primary education is compulsory from the age of 5. However, most children already start attending primary schools at the age of 4, so at that age 99.3% of the children already attend primary schools (Eurydice, 2005a).

Before 1985, there were separate schools for children aged 4 to 6 years (kindergarten) and children aged 6 to 12 years (lower education). However, after the introduction of the Act on Primary Education (Wet op het Basisonderwijs, WBO), these schools integrated in primary schools for children aged 4 to 12 years. Special primary education was arranged by an interim law on special and secondary special

education and was strictly separated from normal primary education. However, in 1998, the WBO was replaced by the WPO (Wet op het Primaire Onderwijs). In combining aspects of special education and regular primary education, this new act on primary education aimed at equipping primary schools in a better way for dealing with pupils with behavioural and learning disorders.

Compulsory full-time education consists of eight grades. Pupils usually move up to a higher grade every year. So, most children finish primary school around the age of 12. Generally, children of the same age are in the same classes. However, since primary schools are free to decide how to arrange their classes, some schools group their pupils by skills and capacities instead of age. Primary schools consist of two parts: the first 4 grades are the so-called lower school (*onderbouw*), and the last 4 grades form the upper school (*bovenbouw*) (Ministerie van Onderwijs, Cultuur en Wetenschap, 2007a)

At the end of primary school, schools advise their pupils on secondary school choice. At most schools, this advice is guided by the results of the so-called CITO-test, which is administered at 70 per cent of all schools. This CITO-test, which is the same for all pupils and takes place at the end of primary education, aims at providing information on an individual pupil's learning skills. The test contains questions to test language skills, reading comprehension, and mathematic skills, and the standardized results range from 501 to 550 (Citogroep, 2007). Although the CITO-score is an important determinant of secondary school choice, pupils and parents are not obliged to follow the advice (Boezerooy, 2003).

Compulsory education up to the age of 16, and therefore also primary education, is free of charge. Although schools can ask for a parental contribution, parents are not obliged to contribute.

2.3 Secondary education

After finishing primary school, children enter secondary education. The current structure of Dutch secondary education has its roots in the Act on Secondary Education (WVO), implemented in 1968. This act, better known as the 'Mammoth Act', gave cause for a rigorous change in the structure of secondary education. One important reason for implementing the new structure was to enlarge the possibility for pupils to flow from one type of education to another (Eurydice, 2005a). Whereas within the old structure the choice for a certain type of secondary education after leaving primary education generally was a final one, the structure implemented in 1968 has allowed for greater vertical or horizontal movements in the system. Although many small changes have been made to the educational structure from 1968 on, the Mammoth Act has provided the basis for the current structure of Dutch secondary education.

2.3.1 Secondary education before 1968

As a result of the Mammoth Act, the old secondary school types MULO, MMS, and HBS were replaced by the new MAVO, HAVO, and VWO. Moreover, the '*Huishoudschool*' ('School for Housekeeping') and '*Ambachtsschool*' ('Technical School') were transformed into respectively LHNO and LTS (*Lagere Technische School*; Lower technical education), but this was no more than a change in names.

Huishoudschool: *Huishoudschool* and *Ambachtsschool* were types of education for children of the poorest working-class origins. The *Huishoudsschool*, which was implemented in 1888, prepared girls for the role of wife and mother. They learned how to cook, take care of children and clean the house (Prick, 2006). Nowadays, *Huishoudschool* does not exist any more in its original form. Part of its curriculum is now part of the lower levels of VMBO education.

Ambachtsschool: This type of education was implemented in 1865 and was especially designed for boys. In 1968, the name *Ambachtsschool* was changed into LTS. *Ambachtsschool/LTS* provided (lower) technical education that prepared students for entrance into the labour market. Sons from working-class families were taught professions such as smith, carpenter, or furniture maker (Prick, 2006). Like *Huishoudschool*, *Ambachtsschool/LTS*, does not exist anymore in its original form. Part of its curriculum is now part of the lower levels of VMBO education.

MULO: MULO, sometimes called ULO, was implemented in 1857 and consisted of two tracks: MULO A and MULO B. Both MULO A and MULO B had a duration of 4 years and offered the general subjects German, Dutch, French, English, History, and Geography. Moreover, they provided the opportunity to attend extra classes in Drawing and Chemistry. Next to these subjects, MULO B pupils were obliged to additionally attend Mathematics and Physics. MULO can be seen as the predecessor of the in 1968 implemented MAVO (www.statline.cbs.nl).

MMS (MSVM): MMS got implemented in 1867 and was predominantly designed for girls. It had a duration of 5 years. Although girls had to attend a wide range of subjects, such as several languages, Chemistry, Biology, and Mathematics, the languages were of overriding importance in deciding whether a girl was allowed to move up to a higher grade. Graduating from MMS did not provide entry into university education, but into programmes that are nowadays part of higher professional education (HBO, see 2.5). An example of such a programme is the so-called '*kweekschool*' (nowadays: PABO) that prepared students to become a teacher in primary education. MMS can be seen as the predecessor of the HAVO implemented in 1968.

HBS: HBS was introduced in 1863 and was regularly changed from then onwards. In 1924, HBS got divided into HBS A and HBS B. Whereas HBS A mainly focused on economic sciences and modern languages, HBS B focused on the exact sciences. Both tracks had a duration of 5 years. Completion of HBS A and B did only provide

access to a limited number of university programmes. Only a gymnasium degree provided full access to university education. Before 1968, gymnasium education was provided by so called '*lycea*' that usually offered gymnasium, HBS (A and B) and (sometimes) MMS education. With the introduction of the Mammoth Act in 1968, HBS was replaced by VWO education.

The structure of the educational system before the implementation of the Mammoth Act was highly related to the class structure of Dutch society (Prick, 2006). Children from working-class parents mainly attended *Huishoudschool* (girls), *Ambachtsschool* (boys), or MULO education; middle class children attended HBS education (mainly boys) or MMS education (mainly girls); children from the upper class (elite) attended gymnasium education. Since the content of the programmes of MULO, MMS, HBS, *Huishoudschool*, and *Ambachtsschool* differed a lot, it was hardly possible to switch to another type of education (either before or after graduation). Therefore, MULO, MMS, *Huishoudschool*, and *Ambachtsschool* were so-called 'terminal' programmes. Graduation from any of these types of education lead to entrance into the labour market instead of further studies. Only students who graduated from HBS (with restrictions) or gymnasium education had the chance to continue their studies at a university.

2.3.2 Secondary education after 1968

After its implementation in 1968, some adjustments have been made to the Mammoth Act. From 1998 on, the renewals in the Act were aimed at improving the connection between secondary education and both tertiary education and the labour market. Therefore, a new type of secondary education was established out of Junior General Secondary Education (MAVO, *middelbaar algemeen voortgezet onderwijs*) and Pre-vocational Education (VBO, *voorbereidend beroepsonderwijs*), namely pre-vocational Secondary Education (VMBO, *voorbereidend middelbaar beroepsonderwijs*). Moreover, in August 1998, a complete new system of education was introduced: the so-called study house (*studiehuis*) (Eurydice, 2005b; Boezerooy, 2003).

Since the establishment of VMBO in 1998, secondary education in the Netherlands consists of 3 types of education:

- VMBO: Pre-vocational secondary education, with a duration of 4 years.
- HAVO (*hoger algemeen voortgezet onderwijs*): Senior general secondary education, with a duration of 5 years. This is a preparation for higher vocational education.
- VWO (*voorbereidend wetenschappelijk onderwijs*): Pre-university education, with a duration of 6 years. VWO can be divided into athenaeum and gymnasium, with the latter offering at least one out of the mandatory classical languages Greek and Latin.

Most schools that provide secondary education offer different types of secondary education (e.g. VMBO, HAVO and VWO). However, there are also schools that offer only VMBO or VWO.

VMBO: Pupils attending VMBO can choose between 1 of 4 so-called learning pathways (*leerwegen*), which were developed in order to optimally suit the different capacities of different pupils. Although all pathways combine general and vocational education, the pathways range from mostly learning in practice (level 1, basic labour oriented pathway) to mostly theoretical education (level 4, theoretical pathway). The pathway attended at VMBO determines the level at which a pupil can enter secondary vocational education. The three most theoretically oriented pathways (levels 2, 3, and 4) provide access to levels 3 and 4 of MBO (see section 2.4), and the practically oriented ‘basic labour oriented pathway’ provides access to level 2 of MBO. Only the theoretical pathway (VMBO level 4) provides access to year 4 of HAVO. Next to the pathways, the pupils have to choose 1 out of 4 sectors with fixed examination subjects, namely ‘technology’, ‘care & welfare’, ‘economy’ or ‘agriculture’. For those who are not capable of attending regular classes, there is also a possibility to exclusively follow practical education. This type of education does not prepare the pupil for further vocational education, but prepares for entering the local labour market.

Nowadays, secondary education is divided into two phases. The first phase consists of the first 3 years of education at the HAVO and VWO, and the 4 years of education at VMBO. So, unlike HAVO and VWO, VMBO consists of only one phase.

HAVO/VWO: The first phase of HAVO and VWO education is called basic education (*basisvorming*). Every pupil attending basic education at HAVO and VWO is obliged to take at least 15 subjects and the main focus is on the development of general knowledge and skills. However, schools have been given some leeway in the implementation of basic education. Whereas some schools have chosen to form heterogeneous classes with pupils of different backgrounds and abilities during the period of basic education, others have decided to separate the pupils (based on their skills and abilities) shortly after entering the basic education period (Boezerooy, 2003). In the former case, schools provide the same education to HAVO and VWO pupils during the first one or two years of secondary education. In these so-called bridging classes (*brugklassen*), the group consists of mixture of pupils that were given a VWO- or a HAVO-advice based on the CITO-score. At the end of the one or two-year bridging class period, the school gives a final advice for which type of education to follow. In the latter case, schools have not adopted the bridging classes and separate pupils with a HAVO- or VWO- advice right from the start.

Basic education can be seen as an alternative to the never implemented ‘*Middenschool*’. In the 1970s and 1980s, a fundamental debate took place on the abolition of the different tracks for pupils aged 12 to 16 and the organisation of general education in one school type: the so-called *Middenschool*. The *Middenschool*, inspired

by the idea of the Scottish 'comprehensive schools' and the German *Gesamtschule*, was supposed to decrease educational inequalities by postponing pupils' choices (Boezeroy and Huisman, 2000). The current basic education can be seen as a compromise to the *Middenschool*. Schools are free to decide on the duration of basic education and to what degree the grouping of pupils in classes should be heterogeneous.

The school years 4–5 at HAVO and school years 4–6 at VWO belong to the second phase in secondary education. Within this second phase, the pupils can choose between 4 kinds of subject clusters (*profielen*) that make up a coherent education programme. The subject combinations prepare for the different types of programmes of study at tertiary level, in:

- Science & Technology (*Natuur & Techniek*)
- Science & Health (*Natuur & Gezondheid*)
- Economics & Society (*Economie & Maatschappij*)
- Culture & Society (*Cultuur & Maatschappij*).

Every subject combination is made up of 3 different parts (Boezeroy, 2003):

- A common component, which is the same for all pupils and takes up around 50 per cent of the total schooling time. This is reserved for general education.
- A specialized component, which consists of subjects relating to the chosen subject combination. This takes up around 30% of the curriculum-time and is a preparation for higher education.
- An optional component in which pupils are free to choose a subject they are interested in. The number of optional subjects depends on the study load in the specialized component, but it takes up around 20% of the curriculum.

As mentioned before, in August 1998 the so-called system of study house (*studie-huis*) got introduced to the second phase of HAVO and VWO. The study house refers to a new form of teaching and learning (Boezeroy, 2003). It implies that pupils learn in an active and autonomous way and that an independent attitude should be encouraged. Knowledge-acquisition by pupils themselves is seen, in this system, as more valuable than knowledge-transfer by teachers. This focus of the study house has been primarily chosen in order to better prepare students for the independent attitude required at higher (university) education.

At the end of the first phase of VMBO and the second phase of HAVO and VWO, pupils have to take a central exam for the majority of their subjects. This standardized central exam of a subject is the same for all pupils attending the same level of secondary education in the Netherlands. So, in other words, all pupils attending the same secondary educational level and taking the same subjects have to take the same central exam (www.minocw.nl). Besides this central exam, the final graduation grades (ranging from 1 to 10) for most subjects depend on tests designed and administered by the schools (the so-called '*schoolexamens*').

2.4 Secondary vocational education

After VMBO, pupils can enter secondary vocational education, that is MBO (*middelbaar beroepsonderwijs*). In its current form, secondary vocational education in the Netherlands exists since 1996. In 1996, The Adult and Vocational Education Act (WEB, *wet educatie en beroepsonderwijs*) categorized a number of existing types of education into two broad groups: secondary vocational education (SOB) and adult education. Since then, all secondary vocational education and all adult education has been offered by regional training centres, the so-called ROCs (*regionaal opleidingscentrum*) (Boezerooy, 2003).

Like VMBO, MBO education offers the possibility to choose between several levels of education. Unlike VMBO, however, those levels differ in duration. Moreover, within each level, students have to choose one out of two tracks. Those tracks, also called pathways, determine the time spent on learning at school and learning in practice (Eurydice, 2005a).

- Vocational training (BOL, *beroepsopleidende leerweg*). Practical training takes up 20–60% of the courses.
- Block or day release (BBL, *beroepsbegeleidende leerweg*). Practical training takes up more than 60% of the courses.

So, the time spent at school or on the job (the so called apprenticeships), is determined by the track chosen by the student. Although both tracks offer a combination of learning and practical training, the block or day release track devotes a larger amount of time to practical training than the vocational training track does. Spending time on the job in a company has some advantages for both parties; the student gains some practical experience and at the same time provides the company with new knowledge.

MBO-education is offered in the areas of economics, technology, health, personal care, welfare, and agriculture. MBO programmes vary in length from one to four years, depending mainly on the level one has chosen. Access to the different levels is determined by the pathway attended at VMBO (see section 2.3), and successful completion of a certain level allows access to a higher level.

The division in separate levels is as follows (Boezerooy, 2003):

- Assistant training: Simple executive work, duration of 0.5 to 1 year. This level is intended for those who are not able to enter one of the higher levels due to their insufficient preparatory training (e.g. an unfinished VMBO education) (Eurydice, 2005a).
- Basic vocational training: Executive work, duration of 2 to 3 years.
- Professional training: Independent execution of work, duration of 2 to 4 years.
- Middle management training: Independent execution of work with broad usability, duration of 3 to 4 years.

And/or

- Specialist training: Independent execution of specialized work, duration of 1 to 2 years.

Although both middle management training and specialist training offer education on MBO level 4, specialist training differs from middle management training in that it allows students to further specialize in their profession. Entrance into a certain specialist training programme is only allowed for those students who have successfully finished a programme within the same field of study on MBO level 3 or 4 (middle management training) (Ministerie van Onderwijs, Cultuur en Wetenschap, 2007b).

Moreover, there is a special kind of MBO level 4 education for students who have successfully completed HAVO: the so-called MBO-plus education. This type of education makes it possible to enter the labour market relatively fast after completing HAVO. With a HAVO-certificate it is possible to complete MBO level 4 education in 2 instead of 4 years and to additionally receive extra certificates. Only completion of MBO programmes at level 4 qualifies students for access to HBO (see section 2.5).

In sum, MBO-education in the Netherlands can be seen as a system of qualifications. In distinguishing between different levels and different pathways, almost everyone is capable of achieving a certain minimum-qualification to enter the labour market. Because of this broad range of opportunities, almost every individual is also able to find a programme that best suits his/her interests and abilities.

2.5 Higher education

The Netherlands has a binary system of higher education (Nuffic, 2004): Higher professional education (HBO, *hogere beroepsonderwijs*), offered by HBO institutions (*hogescholen*), which are so-called universities of professional education. HBO-institutions give students a theoretical and practical preparation for what is needed to practice specific jobs. University education (WO, *wetenschappelijk onderwijs*), offered by research universities. Important in university education is the close link between education and scientific research. Students are prepared to carry out scientific research themselves. About two-thirds of all students following tertiary education study at HBO-institutions.

As a result of the Bologna agreement, Dutch higher education has adopted a bachelor-master structure since September 2002. Consequently, since 2002, the higher education system in the Netherlands has been based on a three-cycle degree system, consisting of bachelor, master and PhD. Until then, the first two cycles were combined in one cycle. However, although the structure of higher education has changed since the introduction of the BA/MA-system, the differences in focus

of HBO- and university education have remained intact (Eurydice, 2005a). That is, HBO-education is generally more labour market oriented than university education (see next two sections for a detailed description).

HBO: Until 2002, HBO study programmes had a duration of 4 years in total, of which the first year was the '*propedeuse*'; a preparatory year with basic introductory courses. All students were required to complete an internship or work placement ('stage'), mostly in the third year. Further, in the last year, a final project or paper had to be completed. Since 2002, however, this has changed somewhat. Higher professional education now has a bachelor phase of 240 ECTS (4 years). Next to this, it has become possible for institutions of higher professional education to offer HBO-master education (Eurydice, 2005a). Examples of these HBO-master programmes are HBO-master as Physician Assistant (since 2004), HBO-master in Advanced Nursing Practice (since 2005), and HBO-master in the Arts Teacher Track (since 2006) (Ministerie van Onderwijs, Cultuur en Wetenschap, 2007c).

Students who want to attend higher professional education are required to have completed one of the following types of education (Eurydice, 2005a):

- Senior general secondary education (HAVO)
- MBO level 4 (middle-management or specialist training)
- Pre-university education (VWO)

As was the case in the old structure, HBO-students are generally obliged to conduct traineeships. Therefore, Dutch HBO programmes are closely connected to the labour market. With an HBO-bachelor's degree, it is possible to practice an occupation, so most HBO-bachelors will enter the labour market after finishing their studies. However, it is also possible to attend a master's programme at HBO, or to go to university education. The level at which HBO graduates are allowed to enter university education depends on the connection between their completed studies and their aspired follow-up studies at university. Direct entrance into the master's programme is hardly ever possible. In general, in order to get admitted to the academic master of their choice, HBO graduates are required to attend a preparatory university year (a so-called 'pre-master programme'). During this year, they are obliged to take key courses from the bachelor's phase of their chosen master's programme. However, this preparatory year is only offered in case of a reasonable fit between the completed HBO programme and the aspired university programme. For instance, an HBO Mathematics graduate who wants to study German at university level will have to attend all four university years.

HBO graduates obtain a Bachelor's degree, which is abbreviated to (B) and indicates the field of study. However, one is also entitled to use the old Dutch titles, being engineer (ing.) after completing education in the field of agriculture or technology, or baccalaureus (bc.), after completing other kinds of HBO-education (Eurydice, 2005a).

WO: Participation in university education was restricted to a very small group of privileged people for a long time. However, since the 1950s, participation in university education and higher professional education increased. This has been mainly achieved by increases in expenditures on education by the government and the availability of study-grants for all students. Especially during the period between 1960 and 1975, the number of students enrolled in university education increased a lot (Eurydice, 2005a). This trend can be seen among both men and women. Moreover, from 1980 onwards, the differences in university enrolment between men and women have decreased enormously. Nowadays, as many women as men attend university education in the Netherlands.

Before the implementation of the bachelor-master structure in 2002, educational programmes at WO usually had a duration of 4 years, and in some cases 5 or 6 years. At the end, a *'doctoraal'* degree or final examination degree certificate was awarded. As was the case at HBO, the first *'propedeuse'* year consisted of basic introductory courses. The following years, called *'doctoraal'*, consisted of training in research methodology and the completion of a thesis at the end of the last year (Nuffic, 2004). Since 2002, however, university education consists of a bachelor's programme of 180 ECTS (3 years) and an additional master's programme of 60 ECTS (1 year). Examples of master's programmes that take longer than 1 year are (Eurydice, 2005b):

- Teacher (1st degree): 60–120 ECTS (1 to 2 years)
- Doctor, veterinarian, pharmacist: 180 ECTS (3 years)
- Dentist, or beta²-, technical and philosophy education: 120 ECTS (2 years)
- Research Master: 60–120 ECTS (1 to 2 years; see below)

The research master is a master's programme provided by research universities. It has a stronger emphasis on scientific research than a regular master and its purpose is to stimulate young talent to pursue a career in the field of research (Ministerie van Onderwijs, Cultuur en Wetenschap, 2007d). In order to get admitted to a research master programme, students should not only have completed their bachelor, but should also have high average grades, sufficient command of English, and a high interest in doing scientific research.

- Admission to the bachelor phase of university education is possible with (Eurydice, 2005a):
- A pre-university education (VWO) certificate
- A HBO qualification
- A HBO propaedeutic certificate

² Beta-education refers to the so called 'exact sciences', such as Mathematics, Physics, Chemistry, and Biology.

After successful completion of the bachelor phase (that is, after obtaining the obliged 180 ECTS), students can enter the master phase of the same, or in some cases, a related field of study. The admission procedures for master's programmes that do not perfectly match the completed bachelor's programme (e.g., admission to a master of Political Sciences after completion of a bachelor of Sociology) differ between universities. In general, admission is possible if the field of study of a master's programme is related to the field of study of the bachelor's programme. However, if so, most universities additionally require students to attend extra courses either during the bachelor phase or during a pre-master year (see 'HBO') that prepare them for the master phase.

Persons aged 21 or over may also be admitted to HBO and WO bachelor's programmes after passing a special entrance examination. However, for most studies nowadays, it is required to have taken a certain subject cluster (*profiel*) in secondary school. Moreover, some studies ask for specific skills, so an entrance exam can be required to select students.

In some fields of studies, quota or *numerus fixus* are used to select students. Examples of this kind of studies are medical science and dentistry. Which students are being permitted to the programme is partly determined by the board of the institution, and partly by a weighted lottery. In this system, students who have a higher average grade in secondary school, have a higher chance of being selected into the programme. Students who have an average grade of 8 or higher (on a scale of 1 to 10) are automatically admitted to the study programme of their choice (Eurydice, 2005a).

Graduates with a university Bachelor's degree are entitled to use the title Bachelor of Arts (BA) or Bachelor of Science (BSc), depending on their discipline. Graduates with a university Master's degree are entitled to hold the title Master of Arts (MA) or Master of Science (MSc), again depending on their discipline. However, graduates may also opt for using a traditional Dutch title. One is entitled to use '*ingenieur*' (ir.) after finishing a master in the field of agriculture or technology. The title '*meester*' (mr.) is for those who completed a study of law. Other graduates can use the title '*doctorandus*' (drs.) (Eurydice, 2005a).

Post-graduate education: The third cycle of higher education, leading to a doctor's degree (dr.), is only offered by research universities. Graduation from what until 2002 was called a '*doctoraal*' programme, and after 2002 a master's programme, provides the opportunity to pursue a doctorate. The process by which a doctorate is achieved is called '*promotie*' and usually takes at least 4 years.

Research universities provide advanced research training in such a way that the PhD candidates have to participate actively in university research. Moreover, they have to participate in teaching and administrative activities. Most PhD students have an appointment at a research university and are therefore paid by university.

However, some PhD candidates are not directly employed by a research university. The so-called '*bursalen*' receive a four-year scholarship instead of being employed by the university (Eurydice, 2005a). In practice, *bursalen* are often foreign students. Finally, so-called 'external PhD students' are neither employed by university, nor do they receive a four-year scholarship. Under the condition that they are able to find a supervisor, external PhD students work on the completion of their doctorate independently from the research university. So, unlike PhD students employed by university, they do not have to participate in teaching and other administrative activities.

3 Classifications of the Dutch educational system

Next to the internationally oriented ISCED-classification, the Netherlands has its own national classification systems. A widely used Dutch classification is the so-called SOI (Standaard Onderwijs Indeling). Both the ISCED- and SOI-classification take educational level and field into account. Whereas the first two digits in both SOI and ISCED refer to the educational level, the last four (in case of SOI) and last three (in case of ISCED) refer to the field of study. The next two sections will describe the classification of Dutch *educational levels* according to SOI (3.1) and ISCED (3.2).

3.1 SOI 2003

SOI 2003 is a revision of the earlier versions SOI 1978 and 1998 (Centraal Bureau voor de Statistiek, 2005/06). Although SOI 2003 tries to take the ISCED-97 into account, its main priority is to properly reflect the specific characteristics of the Dutch educational system. Therefore, the classifications differ in some respects. The categories are the following:

SOI 1: Pre-school education

- First and second grade of primary education (age 5–7)
- Special education for pre-schoolers with potential development problems ('IOBK')

SOI 2: Primary education

- Grades 3 to 8 of primary education (age 7–12)
- Special primary education
- Courses at primary education level

SOI 3: Secondary education, first phase

- Middle (3.2): VMBO level 1 and MBO level 1 (Assistant training)
- High (3.3): VMBO levels 2–4, (former) MAVO, and year 1–3 of HAVO and VWO

SOI 4: Secondary education, second phase

- Low (4.1): MBO level 2 (Basic vocational training)
- Middle (4.2): Year 4–5 of HAVO, and MBO level 3 (Professional training)
- High (4.3): Year 4–6 of VWO, MBO level 4 (Middle management or specialist training), and
- Propaedeutic year (first year) of HBO or WO

SOI 5: Higher education, first phase (programmes that require a degree at level 4.3 or a HAVO degree)

- Low (5.1): Short Hbo
- Middle (5.2): HBO bachelor
- High (5.3): WO bachelor

SOI 6: Higher education, second phase

- HBO and WO master

SOI 7: Higher education, third phase

- PhD tracks
- Tracks at post-doc(toral) research institutes (after successful completion of PhD track)
- Other post-doctoral tracks at WO level, such as accountancy, pharmacy, and medical tracks

3.2 The ISCED-97

This section provides an overview of the current ISCED-classification for the Netherlands.

ISCED 0: Pre-primary education

- Grades 1 & 2 of Primary school (age 4–6)

ISCED 1: Primary Education

- Grades 3 to 8 of primary school (age 6–12)

In the Netherlands, primary education is divided into two stages. Years 1 to 4 are called lower primary school (substructure) and years 5 to 8 upper primary school (superstructure). However, since the transition from second grade to third grade is marked by the biggest change in how instruction is organised, both ISCED and SOI divide primary education into grades 1–2 (ISCED 0/SOI 1) and grades 3–8 (ISCED 1/SOI 2). Not only do the number of teaching hours per week increase from 22 dur-

ing the first two grades to 25 during the last six grades (Eurydice, 2005b), but also does grade 3 mark the beginning of a structured education in writing, reading, and mathematics.

ISCED 2: Lower secondary education

- 2C: Level 1 MBO; secondary vocational education (age 16–17)
- 2B: VMBO; Pre-vocational secondary education (age 12–16)
- 2A: First 3 years of HAVO; senior general sec. education (age 12–15); first 3 years of VWO; Pre-university education (age 12–15)

When the ISCED-97 was implemented, VMBO did not yet exist in the Netherlands in its current form. After all, it was not until 1998 that the former MAVO and VBO got merged into the new VMBO. However, since VMBO was established out of MAVO and VBO, the ISCED-97 codification of MAVO and VBO into level 2B can be replaced by VMBO.

MBO level 1 (2C) is intended for those who dropped out of school at ISCED levels 2A or B and are therefore not able to enter one of the higher levels of education. It is designed to directly prepare students for entering the labour market (a so-called ‘terminal programme’). All four levels of VMBO provide access to MBO levels 2 and 3 (ISCED 3C) and are therefore all situated at ISCED level 2B. VMBO can be seen as a preparation for further education and does not lead to a labour-market relevant qualification (Eurydice, 2005b). Last, pupils attending the first three years of HAVO or VWO are capable of continuing their studies at the last two years of HAVO or the last three years of VWO. Moreover, it is possible for them to directly enter MBO level 4. Like VMBO, the first years of HAVO and VWO can be seen as a preparation for further education and do not lead to a labour-market relevant qualification. Therefore, the first three years of HAVO and VWO are coded as ISCED level 2A.

ISCED 3: Upper secondary education

- 3C: MBO Level 2 and 3; secondary vocational education (age 16–17/18/19)
- 3B: none
- 3A:
 - Year 4 and 5 HAVO; senior general sec. education (age 15–17)
 - Year 4–6 VWO; Pre-university education (age 15–18)
- Level 4 MBO (Middle management training); secondary vocational education (age 16–20)

The second phase of secondary education is aimed at specialization within a certain field of knowledge. Therefore, upper secondary education can be seen as a first step towards the acquisition of a specific profession.

Level 2 and 3 of MBO are classified into ISCED level 3C since they either allow direct entry into the labour market, or allow continuance of the studies at other ISCED 3 or 4 levels. Category 3B is supposed to contain studies that are required for admis-

sion to level 5B education. However, since the requirements for short HBO (5B) are the same as for HBO (5A, see below), programmes that would fit into 3B are already categorised as 3A. The programmes at level 3A (Years 4 and 5 of HAVO, years 4 to 6 of VWO, and level 4 MBO) provide access to ISCED level 5A first degree programmes, which are WO- and HBO-bachelor. However, in this respect the current categorization of both HAVO and level 4 MBO into level 3A seems problematic, because MBO level 4 and HAVO only provide access to HBO bachelor's programmes, and not to WO bachelor's programmes (see section 4 for discussion).

ISCED 4: Post-secondary non-tertiary education

- 4C: Level 4 MBO (Specialist training); secondary vocational education (age 19/20–20/21/22)
- 4B: none
- 4A: Extra courses as preparation for HBO (or WO) education, MBO-plus

ISCED 4 is a small category in the Netherlands that consists of short educational programmes intended to make a connection between two types of education when required qualifications are insufficient. Extra courses as preparation for HBO (or WO) education and MBO-plus education allow entry into level 5A: WO- and HBO-bachelor (first degree programmes). In practice, most people who attend MBO-plus education will enter the labour market, so it would be classified as 4C. However, completion of MBO-plus also gives access to level 5A education (HBO), so it is classified as 4A. However, the classification of MBO-plus into ISCED level 4A seems problematic with regard to entrance into WO bachelor's programmes (see section 4 for discussion). Programmes that prepare for 5B are almost unknown in the Netherlands. Therefore, ISCED 4B is an empty category. Level 4 of MBO specialists prepares students for direct entry into the labour market and is therefore classified at level 4C.

ISCED 5: First stage of tertiary education

- 5B:
 - 2 or 3 year HBO; Higher professional education (age 17–19/20)
 - Dutch Associate Degree
- 5A:
 - HBO bachelor (age 17–21)
 - WO bachelor; university education (age 18–21)
 - WO master; university education (age 21–22)

Educational levels in category 5A are largely theoretical based and allow entry into advanced research programmes or professions with high skill requirements (UNESCO, 2006). If successfully completed, they provide access to ISCED level 6 (PhD). Although both WO-bachelor and -master are mainly theoretically focussed, a WO-bachelor's degree is not a sufficient qualification for entering ISCED level 6 (only a WO-master's degree is). The same goes for completion of HBO bachelor.

Moreover, although it also transfers theoretical knowledge to its students, it is much more practically oriented than the university programmes. Whereas the majority of university programmes in the Netherlands do not offer internships, HBO-students are generally obliged to conduct internships. Therefore, HBO programmes are much closer linked to the labour market than university programmes (Eurydice, 2005b).

Programmes at ISCED level 5B are more practically oriented than programmes at level 5A. They prepare students to enter a particular occupation and after completing them, students cannot directly enter ISCED level 6 (PhD). The ISCED-97 classifies the two- or three-year HBO programmes and the Dutch associate Degree as belonging to this level.

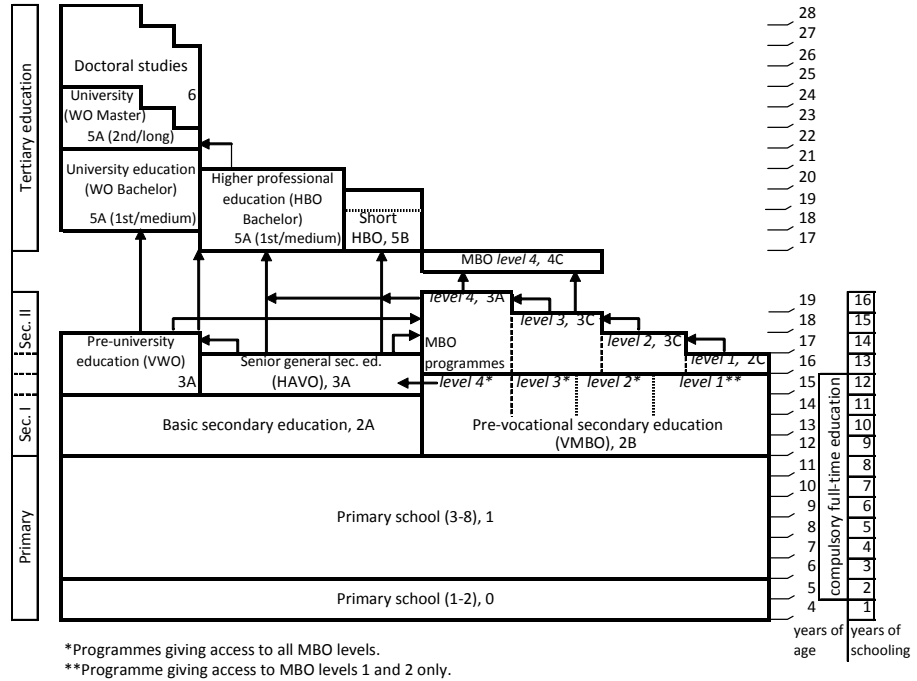
ISCED 6: Second stage of tertiary education

- *WO promotie-onderzoek*; doctoral studies, PhD

Programmes at ISCED level 6 are devoted to the performance of original research (UNESCO, 2006). Application for a PhD programme is only possible with a WO-master's degree and is mostly combined with an appointment at a university. PhD students receive their doctoral degree after successfully defending their dissertation.

Figure 1 graphically displays the structure of the current Dutch educational system and the corresponding ISCED-97 labels. Due to the fact that the Dutch Associate Degree (5B) has not yet been fully implemented in the Netherlands, it is not displayed in figure 1. However, its location is comparable to the short HBO programmes'.

Figure 1. The educational system of the Netherlands



3.3 Comparison of SOI 2003 and ISCED-97

The Dutch Research Centre of Education and Labour market (ROA, *researchcentrum voor onderwijs en arbeidsmarkt*) has created, in cooperation with DANS (Data Archiving and Networked Services), a database for a more adequate comparison of several national and international educational classification systems, such as SOI 2003 and ISCED-97. Besides educational level, the database takes into account fields of education in recoding programmes into SOI 2003 or ISCED-97 levels.

Table 1 provides the conversion of SOI 2003 categories into ISCED-97 categories, according to the ROA-database. The first column contains the SOI 2003 classification as presented in section 3.1, and the second column shows to what ISCED-97 level the different SOI 2003 level can be converted. The database that provides the complete overview, can be downloaded free of charge from the website of DANS.

As mentioned before and as can be seen in table 1, the Dutch classification system SOI 2003 and the international ISCED-97 categorization differ in some respects. For instance, whereas the ISCED-97 does not distinguish HAVO (years 4–5) from VWO (years 4–6), SOI 2003 does: HAVO is part of SOI 4.2, and VWO of SOI 4.3. Moreover,

Table 1. The conversion of SOI 2003 categories into ISCED-97 categories, based on the ROA-database

SOI 2003	ISCED-97	
1	Primary education (1–2)	0
	Special pre-primary education	0
2	Primary education (3–8)	1
	Special primary education	1
	Courses at primary education level	1
3.2	VMBO level 1	2B
	MBO level 1 ³	2C
3.3	VMBO levels 2–4	2B
	(former) MAVO	2B
	HAVO (1–3)	2A
	VWO (1–3)	2A
4.1	MBO level 2	3C
4.2	HAVO (4–5)	3A
	MBO level 3	3C
4.3	VWO (4–6)	3A
	MBO level 4 (Middle management training)	3A
	MBO level 4 (Specialist training)	4C
	Propaedeutic year HBO or WO	5A
5.1	Short HBO	5B
5.2	HBO-bachelor	5A (1 st /medium)
5.3	WO-bachelor	5A (1 st /medium)
6	HBO- and WO-master	5A (2 nd /long)
7	PhD tracks	6
	Post-doc tracks (at research universities)	6
	Post-doc tracks (other)	6

unlike the ISCED-97, SOI 2003 classifies HBO-bachelor, WO-bachelor, and WO-master into three distinct categories (that is SOI 5.2, SOI 5.3, and SOI 6), whereas the ISCED-97 only allows a distinction when including the rarely used subcategories of first and second or medium and long degrees. The grouping of WO bachelor and WO master into one category (5A) does not only seem to be problematic for the Netherlands. After all, with the implementation of the bachelor-master structure in 2002, it does not seem to be justified to group WO bachelor and WO master together in all countries that have implemented the structure (see section 4.5). Be-

³ The ROA-database refers to programmes at MBO level 1 as 'as', at level 2 as 'bb', at level 3 as 'vk', at level 4 (middle management training) as 'mk', and at level 4 (specialist training) as 'sp'.

cause of its mere national focus, SOI 2003 is better able to take into account all specifics of the Dutch educational system.

A critical note that has to be made with regard to the DANS database, is the categorization of the propaedeutic year of HBO and WO into ISCED 5A. Since this propaedeutic year does not convey any 'real' qualification, it does not seem to be justified to classify it as belonging to ISCED 5A.

4 Shortcomings and problems of the ISCED-97 in the Netherlands

Because of its focus on international comparability, the ISCED-97 does not always adequately reflect the specifics of the Dutch educational system. This section will provide an overview of the shortcomings of the application of the ISCED-97 to the Dutch educational system. In general, it can be stated that placing the largest emphasis on either the content of the programmes or the connections between the different levels leads to different recommendations for the Netherlands.

4.1 ISCED 0 and 1

As explained in section 3.2, ISCED classifies grades 1 and 2 of primary school as pre-primary education. This decision seems to be justified for two reasons. First, the third grade marks the beginning of systematic studies characteristic of primary education, e.g. reading, writing and mathematics. Second, before the first two grades of primary school, there is no other official form of pre-primary education. That is, although there are some programmes designed to educate mainly poor children and children of ethnic minorities before primary school, these programmes do not exist on a large scale. So, although labelling grades 1 and 2 of primary school as 'pre-primary' seems to be the right decision to make, it has to be mentioned that Dutch pre-primary education is not 'fully' pre-primary as defined by ISCED. After all, participation in the first two grades of primary school is already compulsory. According to ISCED, official pre-primary education should not be compulsory yet.

4.2 ISCED 2B

In the ISCED-97 classification, all four levels of VMBO are situated at ISCED level 2B. This classification is based on the merge of MAVO and VBO (into VMBO), which both belonged to ISCED level 2B. However, with the emergence of VMBO, it does not seem to be appropriate to classify all four VMBO levels as belonging to level 2B: although pupils who have successfully finished VMBO level 4 (that is, the theoretical programme) are qualified to enter Levels 2 and 3 of MBO (ISCED level 3C), they

are also qualified to enter level 3A. That is, VMBO pupils who have successfully completed the theoretical programme can transfer to both the fourth year of HAVO (provided that their examination subjects included mathematics and either French or German) and the fourth level of MBO (Eurydice, 2005a). *Therefore, it might make more sense to classify VMBO level 4 (also called 'VMBO-t') into ISCED level 2A.*

4.3 ISCED 3A

As described in section 3.2, the programmes at level 3A (years 4 and 5 of HAVO, years 4 to 6 of VWO, and level 4 MBO) provide access to ISCED level 5A, that is WO- and HBO-bachelor (first degree programmes). However, both MBO level 4 and HAVO only provide access to HBO-bachelor's programmes, and not to WO-bachelor's programmes. Therefore, HAVO and MBO level 4 cannot be regarded as 'fully' belonging to ISCED level 3A. With regard to the upcoming proposition to distinguish HBO bachelor from WO bachelor in replacing HBO bachelor into ISCED 5B (see 4.5), *it might be sensible to reclassify both MBO level 4 and HAVO into ISCED level 3B (now an empty category for the Netherlands),* because programmes at level 3B are designed to provide access to programmes at ISCED level 5B. In doing so, a better fit would also be created between the 'new' level 3A programmes (VWO) and level 5A (WO bachelor, first degree programme). Moreover, the proposition to move vmbo-t into level 2A would still hold: Since programmes at level 2A allow access to level 3B, the reclassification would indicate the opportunity to move from vmbo-t (2A) to MBO level 4 or HAVO (3B).

4.4 ISCED 4

Again, following the above line of argument, the classification of MBO-plus into ISCED level 4A seems problematic with regard to entrance into WO-bachelor's programmes. So, if HBO bachelor would indeed become part of ISCED 5B, *this would plead for a reclassification of MBO-plus into level 4B (now an empty category for the Netherlands).*

4.5 ISCED 5

As mentioned before, the Dutch system of higher education is binary with a division between the practically oriented HBO, and theoretically oriented WO. However, this division is not adequately reflected in the ISCED-97. Therefore, it is questionable whether ISCED level 5 properly reflects the Dutch binary system of higher education.

First, there are some problems concerning HBO. As discussed before, ISCED does not differentiate between HBO and WO education. The current ISCED classification seems to be mainly based on duration of a programme and seems to neglect the distinctive character of both types of education. The ISCED-97 only classifies short HBO-education with a duration of 2 to 3 years as 5B. However, since all HBO-education is more practically oriented than WO-education, it might be more logical to group HBO-bachelor into level 5B as well. So, not only would the reclassification of HBO bachelor into level 5B (in combination with the other afore proposed adaptations) improve the connections between the different levels, it also seems to make more sense in light of the distinct nature of education (practical versus theoretical). However, the reclassification of HBO into level 5B is problematic in some respects. First, other countries that have programmes comparable to HBO (e.g. Germany's *Fachhochschule*) also regard these programmes as belonging to level 5A. Recoding them into 5B would in some countries cause a rather heterogeneous composition of level 5B (e.g., Germany). Therefore, an additional ISCED level 5C might be worth considering. This level 5C could encompass the 'old' level 5B programmes, short HBO and the Dutch Associate Degree, and then, HBO bachelor would be classified into level 5B. The programmes in level 5A would be WO bachelor (first degree) and WO master (second degree).

Moreover, since the division between bachelor and master education is very important in Dutch and most European educational systems nowadays (two cycles/phases since the implementation of the BA/MA structure in 2002), it is important for ISCED to reflect this distinction. Although ISCED groups WO bachelor and WO master education together into level 5A, it nevertheless takes into account the difference in labelling WO bachelor as a first degree's programme and WO master as a second degree's programme. For successful application of ISCED, the use of these sub-categories is absolutely necessary.

4.6 The ISCED-97 revised

As discussed in this section, the current application of ISCED to the Dutch educational system is problematic in some respects. In reclassifying some of the programmes, the application of ISCED could be improved. Table 2 presents both the current and the proposed ISCED application for the Netherlands.

Table 2. An overview of the current and the proposed ISCED classification for the Netherlands

ISCED level	Current ISCED classification	Proposed ISCED classification
0		Grades 1 & 2 of primary school
1		Grades 3 to 8 of primary school
2C		Level 1 MBO
2B	VMBO (levels 1–4)	VMBO (levels 1–3)
2A		HAVO (1–3) VWO (1–3) VMBO (level 4, 'vmbo-t')
3C		MBO (levels 2–3)
3B		HAVO (4–5) MBO (level 4, middle management)
3A		VWO (4–6)
	HAVO (4–5)	
	MBO (level 4, middle management)	
4C		MBO (level 4, specialist training)
4B		MBO-plus
4A		Courses as preparation for HBO (or WO)
	MBO-plus	
5C (new)		Short HBO Dutch Associate Degree HBO bachelor
5B	Short HBO	
	Dutch Associate Degree	
5A	HBO bachelor	
		WO bachelor (first degree)
		WO master (second degree)
6		Doctoral studies

5 Educational distribution of the Dutch population

Numerous national and cross-national surveys provide information on the educational attainment of the Dutch population. Three of these surveys are the Dutch Labour Force Surveys (EBB, Enquête Beroepsbevolking), the European Social Surveys (ESS), and the European Labour Force Surveys (EU-LFS).

The EBB surveys have been annually carried out by CBS (Dutch Statistics) since 1987 and are the successors of the earlier bi-annual Labour Force Surveys (AKT) that started in 1973. The aim of the EBB surveys is to provide information on the relationship between individual characteristics (such as educational attainment) and the position on the labour market. EBB data can be retrieved from StatLine, which is the database of CBS. The ESS surveys are designed to research the relationships between Europe's changing institutions and the attitudes, beliefs, and

behavioural patterns of its diverse populations. ESS data can be retrieved from Norwegian Social Science Data Services (NSD). Lastly, EU-LFS is a large household sample survey providing quarterly results on labour participation of people aged 15 and over as well as on persons outside the labour force. The EU-LFS surveys are partly based on the Dutch EBB surveys. Its data collection covers the years 1983 to 2005 and can be retrieved from Eurostat. So, whereas EBB is a national survey, EU-LFS and ESS are cross-national surveys. This section will use data from all three surveys to provide an overview of the educational distribution of the Dutch population (see the literature overview for references of the databases).

Table 3 provides an overview of the highest level of education completed for the 25–64 years old working population in 2004 in the Netherlands, according to EU-LFS data. This educational distribution is linked to the categorization of educational levels into ISCED-97.

Table 3. Percentage of people between the age of 25 and 64 that belong to a certain ISCED level

ISCED-97 level	EU-LFS
0 (Not completed primary education)	7.22
1 (Primary education)	
2C (MBO level 1)	
2B (VMBO)	21.58
2A (HAVO 1–3; VWO 1–3)	
3C (MBO levels 2 & 3)	16.32
3A (HAVO 4–5; VWO 4–6; MBO level 4 middle management)	21.82
4C (MBO level 4 specialist training)	3.85
4A (MBO-plus)	0.03
5B (Short HBO; Dutch Associate Degree)	2.32
5A (HBO bachelor; WO bachelor; WO master)	26.37
6 (PhD)	0.48

Source: EUFLS 2004, Q4.

As can be seen from the table, based on the EU-LFS data, more than a quarter of the Dutch working population has at most lower secondary (ISCED 2) qualifications. Unfortunately, EU-LFS data do not provide information on ISCED levels 2A, 2B, and 2C separately. Moreover, since it is very difficult to determine what share of the population has merely finished the first two grades of primary education (which in practice equals the share of the population that completed less than primary education), EU-LFS data for the Netherlands are presented for ISCED levels 0 and 1 together. In other words, since the Dutch educational system does not officially offer

pre-primary education (see section 4.1 for discussion), education that belongs into ISCED category 0 is difficult to assign as such.

Moreover, almost 40 per cent of all people between the age of 25 and 64 have a degree from upper secondary education (ISCED 3). Of these 40 per cent approximately 22 per cent of the Dutch between the age of 25 and 64 have a HAVO, VWO, or MBO level 4 (Middle management training) degree. Although it is nice that EU-LFS data differentiate between level 3A and level 3C programmes, the data do not allow a further distinction within these categories. Actually, this is often seen in Dutch surveys as well. For example, the EBB surveys (to be discussed later in this section) also do not differentiate between HAVO and VWO education. However, a more detailed distinction is very important with regard to the propositions made in the previous section (that is, to determine the construct validity in a next step).

ISCED 4 is a rather small category in the Netherlands: Approximately 4 per cent finished post-secondary non-tertiary education, with the majority belonging to MBO level 4 (Specialist training) education.

Finally, the remaining 30 per cent has successfully finished an education at the first or second stage of tertiary education. Whereas 26 per cent of these people either have a HBO or a WO (bachelor's or master's) degree (ISCED 5A), only 2 per cent has finished short HBO or the Dutch Associate Degree (ISCED 5B). According to Moens (2005), this small number can be explained by the fact that in comparison to other European countries, the Dutch educational system offers relatively few of these short tertiary programmes. If the Dutch educational system would allow for more short HBO programmes, the percentage of Dutch people with a higher education degree (that is, tertiary education) would most likely increase. After all, people that drop out of regular HBO education (5A) would then be able to switch to short HBO and in doing so would still be qualified as higher educated. Moreover, people with a MBO level 4 qualification might be stimulated to obtain a short HBO degree instead of directly entering the labour market. Again, the data do not differentiate between programmes within ISCED level 5A. To adequately determine the construct validity in a next step, separate data for HBO bachelor and WO bachelor and master are necessary.

Table 4 displays the distribution of people between the age of 25 and 64 by educational attainment in the Netherlands, according to ESS cumulative round 1 and 2. It shows the educational distribution for two different ways of categorizing educational attainment, that is SOI 2003 and ISCED-97 (both using simplified versions though, i.e. not using most of the sub-categories). As extensively discussed in section 4, especially the ISCED categorization into levels 5 and 6 (that is, tertiary education) is problematic. Whereas SOI distinguishes between HBO bachelor, WO bachelor, and WO master, ISCED groups all three educational levels into ISCED 5A. Since the national categories used in the ESS do not distinguish WO bachelor from WO master either, however, table 4 is merely able to distinguish HBO from WO

education for SOI. In distinguishing the percentage of people between the age of 25 and 64 with an HBO degree from the percentage of people with a WO degree, the SOI categorization provides more detailed information on the distribution of higher education attainment. Moreover, as can be seen in the table, ISCED discriminates MBO-plus (ISCED 4) from upper secondary education (ISCED 3) where SOI regards MBO-plus as part of upper secondary education.

Table 4. Distribution of adults (aged 25–64) by educational attainment in the Netherlands (in per cent)

	National variable	SOI	ISCED
1 Not completed primary school	0.5	0.5 (1)	0.5 (0)
2 Primary school or first stage of basic education	5.0	5.0 (2)	5.0 (1)
3 Lower secondary school, technical training (LBO)	17.7		
4 Lower secondary school, theoretical training (MULO, MAVO)	12.6	30.3 (3)	30.3 (2)
5 Short upper secondary professional education (KMBO, ⁴ VHBO)	1.6		
6 Upper secondary professional education (MBO)	19.9	36.6 (4)	29.7 (3)
8 Higher secondary school (MMS, HAVO)	4.5		
9 Pre-scientific secondary school (HBS, VWO)	3.7		
7 Post secondary, non-tertiary education (MBO-plus)	6.9		6.9 (4)
10 Tertiary professional education (HBO)	18.8	18.8 (5.2)	
11 Tertiary scientific education, university	7.2	8.4 (5.3 & 6)	27.2 (5)
12 Tertiary post-scientific education (teachers, doctors)	1.2		
13 Second stage of tertiary education, Ph.D. education	0.5	0.5 (7)	0.5 (6)

Note: Corresponding SOI/ISCED level in brackets.

Source: ESS cumulative round 1 and 2; highest level of education (edlvnl).

As becomes clear from analyzing table 3, there are some problems with regard to the way educational levels are measured in the ESS as well. Although ESS data provide very detailed information on the distribution of educational attainment (13 distinct categories), this detailed information does not always adequately fit the ISCED (and SOI) categorization. For example, ESS does not differentiate between the different MBO levels (except for MBO-plus), although that distinction would be quite important for proper recoding into the ISCED-97. Moreover, in future surveys it would be informative to differentiate between the different levels of VMBO. If, as proposed in section 4.2, VMBO level 4 is to be differentiated from the lower three

⁴ KMBO is a former type of secondary vocational education that is comparable to MBO level 1.

levels, it would be sensible to take this distinction into account in the ESS questionnaires. If ESS would take these different levels into account, it would allow recoding educational levels into ISCED in a more detailed way. That is, categorization into the second digit (A,B or C) would be possible. Moreover, although ESS distinguishes HBO education from university education, it does not distinguish WO-bachelor (first degree) from WO-master (second degree). Short HBO-programmes are also not reflected. On the other hand, ESS makes distinctions (e.g. differentiating HAVO from VWO) that are not (yet) reflected in ISCED.

Like table 4, table 5 also presents the educational distribution of Dutch people between the age of 25 and 64 recoded into SOI 2003 and ISCED-97. However, table 4 is based on data from the EBB survey 2004. EBB uses other educational levels than ESS.

Table 5. Distribution of adults (aged 25–64) by educational attainment in the Netherlands (in per cent)

	Most detailed	SOI	ISCED
Primary education	8.1	8.1 (1 & 2)	8.1 (0 & 1)
MAVO	7.3		
LBO	14.7	22.0 (3)	22.0 (2)
HAVO/VWO	7.9		
MBO	32.5	40.4 (4)	40.4 (3 & 4)
HBO	18.6	18.6 (5.2)	
WO	9.9	9.9 (5.3 & 6 & 7)	28.5 (5 & 6)

Note: Corresponding SOI/ISCED level in brackets.

Source: EBB 2004.

First, in comparing tables 3 to 5, it can be concluded that the educational distribution differs for the EU-LFS, ESS, and EBB data. For instance, whereas according to the ESS data 5.5 per cent of the people between 25 and 64 years old have only finished primary education, this percentage is 8.1 according to the EBB data. According to EU-LFS, this percentage is 7.2. Moreover, whereas according to EBB, 22 per cent of the people have a MAVO or LBO degree, this percentage is 30.3 according to ESS.

Next, as could be seen from table 3 as well, the SOI categorization provides a more detailed recoding of educational levels with regard to HBO and WO education than ISCED. Whereas ISCED is only able to show that 28.5 per cent of all adults between the age of 25 and 64 have completed tertiary education, SOI provides information on HBO and WO attainment separately. So, once more, it seems to be the case that

SOI seems to be better able to reflect the educational distribution of the Dutch population than ISCED.

However, as mentioned before, there are some problems on the side of the EBB measurement of educational level as well. As was the case with ESS, EBB does not differentiate between different MBO levels. Again, this distinction should be reflected for proper recoding into ISCED.

In sum, next to shortcomings of the ISCED-97 classification of Dutch educational levels (section 4), surveys measuring educational level should also contribute more to successful implementation of the ISCED-97 in the Netherlands. In that respect, surveys such as ESS and EBB should differentiate between different levels of VMBO and MBO. Moreover, they should take into account the difference between WO-bachelor and WO-master (5A first and second degrees). In doing so, a more detailed recoding into ISCED levels would be possible. That is, educational levels could be better recoded into the second ISCED digits (A,B, and C) as well, allowing for a classification that more adequately reflects the Dutch educational system.

This chapter has provided a description of the criterion validity of the current application of the ISCED-97 to the Dutch educational system. After providing a detailed overview of the current recoding of educational levels into ISCED, this chapter has identified shortcomings of the application of the ISCED-97 for the Netherlands. Based on these shortcomings, this chapter has aimed to propose some changes in the application of ISCED to the Dutch educational system.

References

- Boezerooy, P. (2003). *Higher education in the Netherlands* (country report CHEPS Higher Education Monitor), Enschede: CHEPS.
- Boezerooy, P./Huisman, J. (2000). *From Secondary to Tertiary Education in the Netherlands*, Enschede: CHEPS.
- Citogroep (2007). Eindtoets Basisonderwijs 2007: Toelichting Leerlingrapport. Primair onderwijs | Leerling- en onderwijsvolgsysteem.
Available from
http://www.citogroep.nl/po/lovs/eb/eb_eindtoets/Cito_EB07_toelichtingLeerlingrapport.pdf (last access 7 November 2007).
- Eurydice (2005a). *Het onderwijssysteem in Nederland 2005*, Den Haag: Ministerie van Onderwijs, Cultuur en Wetenschap.
- Eurydice (2005b). National summary sheets on education systems in Europe and ongoing reforms, 2005 Edition, Eurydice.
- Herweijer, L./Vogels, R. (2004). *Ouders over opvoeding en onderwijs*, 's Gravenhage: Sociaal en Cultureel Planbureau.
- Ministerie van Onderwijs, Cultuur en Wetenschap (2007a). Primair onderwijs, The Hague: Ministerie van Onderwijs, Cultuur en Wetenschap.

Available from <http://www.minocw.nl/onderwijs/393/index.html> (last access 7 November 2007).

Ministerie van Onderwijs, Cultuur en Wetenschap (2007b). WEB 4: Termen en definities, The Hague: Ministerie van Onderwijs, Cultuur en Wetenschap.

Available from <http://www.minocw.nl/documenten/web4termen.pdf> (last access 7 November 2007).

Ministerie van Onderwijs, Cultuur en Wetenschap (2007c). Overzicht besluiten en aanvragen voor bekostigde hbo-masteropleidingen, The Hague: Ministerie van Onderwijs, Cultuur en Wetenschap.

Available from <http://www.minocw.nl/documenten/36482a.pdf> (last access 7 November 2007).

Ministerie van Onderwijs, Cultuur en Wetenschap (2007d). Without title, The Hague: Ministerie van Onderwijs, Cultuur en Wetenschap.

Available from

<http://www.minocw.nl/documenten/antwoordkamervragenontwerpbegroting2004.pdf> (last access 7 November 2007).

Moens, M. B. (2005). *Heeft Nederland wel zo weinig hoger opgeleiden? Associate degree vult gaten in onderwijssysteem*, Voorburg/Heerlen: Centraal Bureau voor de Statistiek.

Nederlands Jeugd Instituut (2007). *Ontwikkelingsstimulering*, Utrecht: Nederlands Jeugd Instituut.

Available from <http://www.ontwikkelingsstimulering.nl/smartsite.dws?id=10184> (last access 7 November 2007).

Nuffic (2004), *The education system in the Netherlands*, The Hague: Nederlandse Organisatie voor internationale samenwerking in het hoger onderwijs.

Prick, L. (2006). *Drammen, dreigen, draaien. Hoe het onderwijs twintig jaar lang vernieuwd werd*, Amsterdam: Mets & Schilt.

Centraal Bureau voor de Statistiek (2005/06). *Standaard Onderwijsindeling 2003*, Voorburg/Heerlen: Centraal Bureau voor de Statistiek.

UNESCO (2006). *International Standard Classification of Education 1997*, Paris: United Nations Educational, Scientific and Cultural Organization.

Web/Data sources:

DANS database: <http://easy.dans.knaw.nl/dms>

EBB: <http://statline.cbs.nl>

ESS: <http://ess.nsd.uib.no>, <http://www.europeansocialsurvey.org>