

## **Institutional Environment Guideline Descriptions of National Environments – The Netherlands –**

### **The Dutch Education system: facts and figures**

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#### **Government-funded education<sup>1</sup>**

Full-time education is compulsory in the Netherlands for all children aged five to sixteen. For 17 and 18 year-olds, partial education is compulsory. Although it is not compulsory until children reach the age of 5, almost all 4-year olds in the Netherlands attended primary school. The Netherlands does not offer preschool education for children aged 2 and 3, as several neighbouring countries do. Thus, children begin their school careers at the age of four in primary education (BAO), special primary education (SBAO) or special education (SO). Of those pupils that leave primary education, special primary education (SBAO) or special education (SO) when they are approximately 12, a small number transfer to PRO (practical training) or VSO (secondary special education). Approximately 95 per cent of them enter mainstream secondary education. This main body of pupils branches into HAVO/VWO (senior general secondary education/pre-university education) and VMBO (pre-vocational secondary education). Almost all HAVO/VWO certificate holders go on - directly or indirectly – to higher professional education (HBO) and university (WO). The HBO programme lasts for four years and leads to a bachelor's degree; approx. 19 per cent of a cohort of pupils leaving primary education finally earn such a degree. At university, a bachelor's degree can be earned in three years, after which a master's degree can be earned in two years; approximately 9 per cent of students in a cohort earn a master's degree. VMBO serves as preparation for senior secondary vocational education (MBO), which can be taken at a range of levels. Almost half of a cohort of pupils eventually ends up in MBO. The minimum basic qualification is a MBO certificate obtained at level 2 or a HAVO/VWO certificate. Approx. 50 percent of students with a MBO certificate at levels 3 or 4 go on to HBO. In addition to the educational routes described above and financed via OCW<sup>2</sup>, there is also green education within VMBO, MBO, HBO and WO that is financed by the Ministry of LNV (Agriculture, Nature and Food Quality). Furthermore, there are some (semi-)commercial activities on the area of (life long) learning of teachers, post-academic education, and training programmes in industries. Figure 1 shows the structure of the education system.

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<sup>1</sup> Copied from: Key-figures 2000-2004. Education, Culture and Science in the Netherlands, Ministry of Education, Culture and Science. [http://www.minocw.nl/english/doc/2005/key\\_figures\\_2000-2004.pdf](http://www.minocw.nl/english/doc/2005/key_figures_2000-2004.pdf)

<sup>2</sup> the Dutch Ministry of Education, Culture and Science (hereafter referred to as OCW)

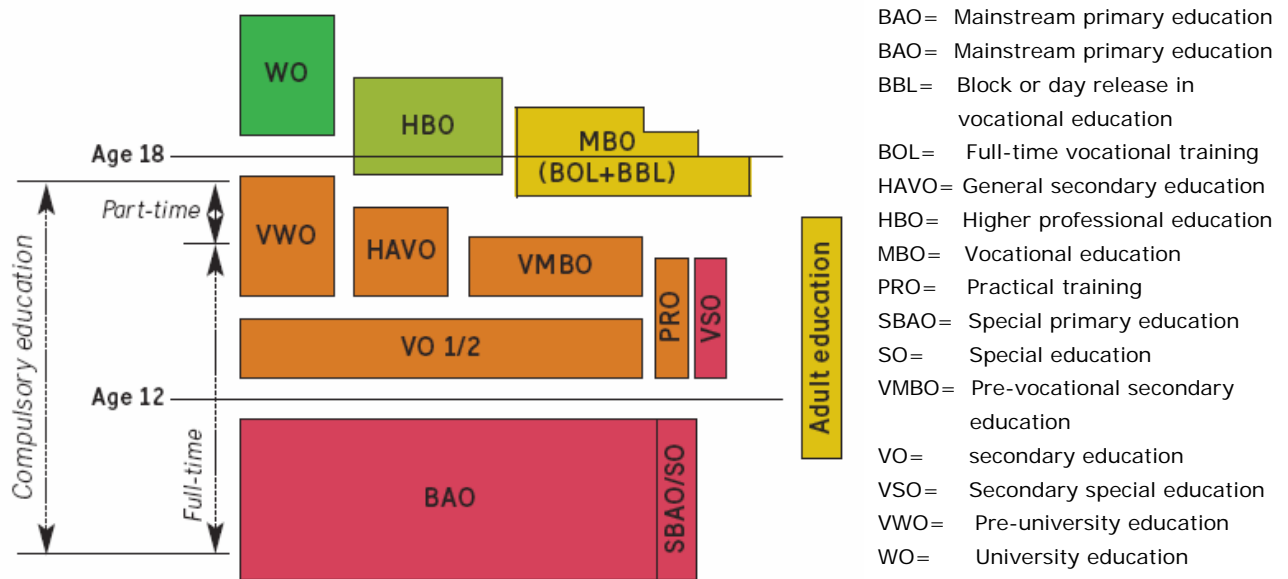


Figure 1: The Dutch education system

### Numbers in education<sup>3</sup>

The numbers of pupils/students of compulsory school age are primarily determined by demographic developments, but there are also other factors that determine the total volume of participation. Since 1998, the total number of participants in government-funded education has risen by approximately 220,000 to some 3.62 million. Primary education accounts for 46 per cent of the participants, secondary education for 26 per cent, MBO for 13 per cent, HBO for 10 per cent and university education for 5 per cent.

Trends in primary and secondary school rolls are determined mainly by the birth rate. They are, however, curbed by the decreasing migration balance. The increase in senior secondary vocational education is striking: up to and including 2002, the interest in block or day release courses (BBL) increased in particular. In 2003 and 2004, however, participation in block or day release declined under pressure from the job market, while full-time vocational training (BOL) has grown sharply.

In higher professional education, the numbers of students continue to rise. In 2002 the growth seemed to have come to a halt, but in 2003 participation rates increased sharply again in full-time courses. The growth in HBO is mainly a result of the fact that increasing numbers of HAVO and MBO certificate holders are transferring directly to higher professional education. Part-time HBO courses are not growing anymore; in 2004 a downward trend set in. The number of university students is still showing a gradual increase. The rise in entrance numbers can primarily be attributed to an increase in the number of HBO graduates transferring to WO.

In both HBO and university education, the percentage of women is higher than 50 - so on this point women's liberation has been accomplished. Ethnic minorities are still lagging behind: the proportion of non-Western immigrants in HBO and WO has grown dramatically, but this increase is keeping pace with the corresponding proportion among Dutch young people. Therefore, the ethnic minorities are hardly catching up.

<sup>3</sup> See foot-note 1.

## Higher Professional Education: system, funding and participation

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### System<sup>4</sup>

Higher education in the Netherlands is composed of higher professional education and university education. Since 1993, the higher professional education (HBO) institutions (“hogescholen”) and universities have been governed by the same legislation: the Higher Education and Research Act (WHW). This Act permits the institutions a large measure of freedom in the way they organize their teaching and other matters to meet changing demands. The HBO institutions are responsible for the programming and quality of the courses they provide. Quality control is exercised by the institutions themselves and by external experts (review committees). The Higher Education Inspectorate monitors the quality of the review committees’ work and the action taken on the basis of their conclusions and recommendations.

In 2002, the quality assurance system for the higher education sector was expanded with an accreditation system through the so-called Higher Education Accreditation Body. In order to be able to link up with international developments, the bachelor’s - master’s degree structure was introduced in the 2002/03 academic year.

Higher professional education is extremely diverse: courses lead to over 250 different qualifications for a wide range of occupations in various areas of society. There are both broad and specialist courses. There are large HBO institutions offering a wide variety of courses in many different sectors and medium-sized and small colleges offering a small assortment in one sector only. Mergers have reduced the number of HBO institutions from almost 350 in the mid-1980s to 40 in 2004.

Courses are divided into seven sectors: Education, Engineering & Technology, Health Care, Economics, Behaviour & Society, Language & Culture, and Agriculture & the Natural Environment. The last sector falls under the Ministry of Agriculture, Nature and Food Quality.

### Funding

The overall budget for higher professional education is allocated to the individual institutions on the basis of a set formula. Since 1994, HBO institutions have received a block grant, which is adjusted to reflect wage and price rises. In addition, the budget is considered each year on the basis of the latest data with regard to student numbers, in order to determine to what extent it needs to be adjusted.

Apart from the central government grant, the HBO institutions receive income from a variety of sources, including tuition fees and income from services to third parties (mainly contract teaching).

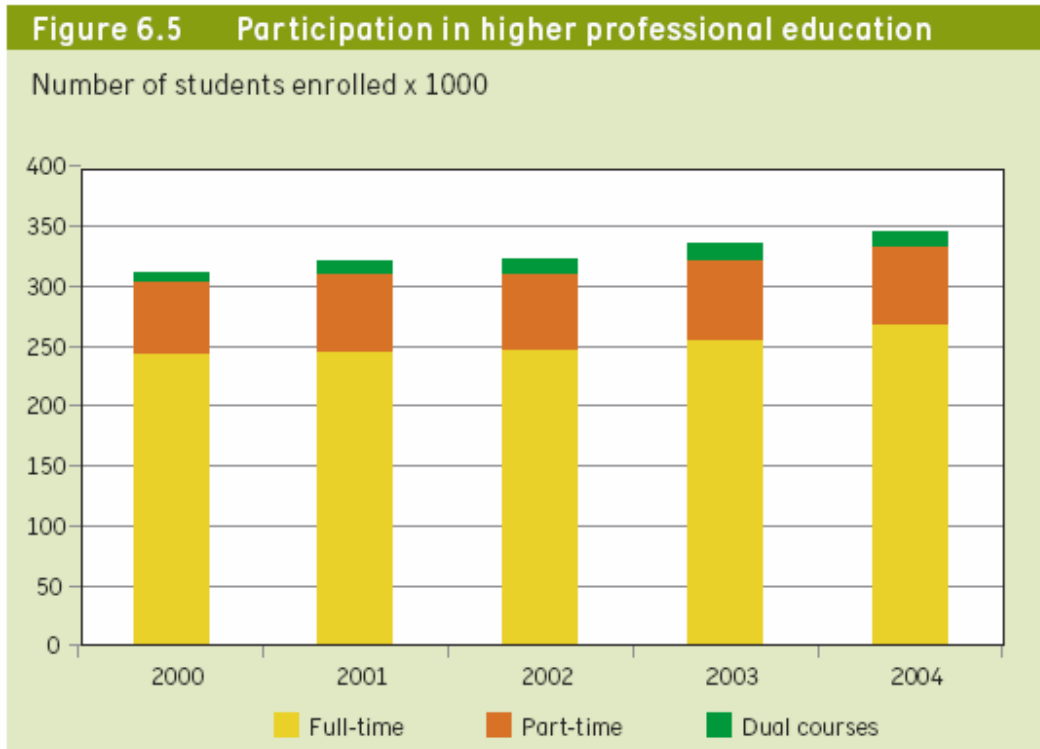
Since 1994, the central government grant has included expenditure for statutory benefits and accommodation. Over 96 per cent are paid directly to the institutions in the form of a block grant. Since 2001, the institutions have been required to use these funds to pay the statutory benefits (redundancy pay). The institutions themselves are responsible for the most effective distribution over staff, non-staff and accommodation costs. The remainder of the government grant consists of funds earmarked for specific policy objectives such as internationalization, lecturers and knowledge circles, strengthening the vocational sector and funding information and communication technology.

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<sup>4</sup> Information on higher professional education is mainly copied from [http://www.minocw.nl/english/doc/2005/key\\_figures\\_2000-2004.pdf](http://www.minocw.nl/english/doc/2005/key_figures_2000-2004.pdf), page 76 and page 80, including figure 6.5.

**Participation**

Higher professional education (HBO) continues to grow. It should be noted, however, that a different count definition is used now (one figure HO). On 1 October 2004, the number of participants totalled nearly 337,000. In absolute terms, the increase can primarily be attributed to full-time education. In part-time and dual education, the growth in student numbers even declined slightly in absolute terms.



## University Education: system, funding and enrolment

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### System<sup>5</sup>

The Higher Education and Research Act (WHW) governs a wide range of matters including the planning, funding, administration and organization of the universities. The tasks of the universities are to teach, to conduct research, to transfer knowledge and to provide services to the community.

The Netherlands has thirteen "ordinary" universities, including three technical universities and the Agricultural University in Wageningen, which is funded by the Ministry of Agriculture, Nature and Food Quality.

In order to maintain the high standard of university teaching and research, a quality assurance system is in operation. Every course is subject to periodic review and the findings are published in open reports together with recommendations for improvement.

### Funding

The national budget for the twelve universities funded by the Ministry of Education (first flow of funds, direct funding) is fixed without reference to performance indicators. The budget is only corrected in line with wage and price rises and, if necessary, adjustments are made to accommodate policy changes. In addition, each year it is decided to what extent the budget needs to be adjusted, based on the latest views with regard to trends in student numbers. The distribution of the government grant is, however, partially dependent on performance indicators, such as the number of degrees awarded, the number of first-year students and the number of doctorates obtained.

Important aspects of direct government funding are:

- the freedom of the universities to decide their own spending priorities and how resources are split between teaching and research, provided they stay within their statutory terms of reference;
- the decentralization of responsibility for accommodation: the universities must allocate part of their budgets to accommodation and infrastructure;
- the decentralization as of 1 January 1999 of the responsibility for the formation of terms of employment for university staff;
- a certain proportion of the overall central government grant to the universities is earmarked for the teaching hospitals.

The combination of funding based on performance indicators and quality assurance promotes the effectiveness of the system and provides guarantees to students and potential employers.

### Research

University research is financed via three different flows of funds. The central government grant to the universities includes a certain sum for research (direct government funding; the first flow of funds). The Netherlands Organization for Scientific Research (NWO) allocates funds on behalf of government to specific research projects (indirect government funding; the second flow of funds). Thirdly, the universities can apply for subsidies and conduct contract research outside these two main funding mechanisms. This third flow of funds consists, to a large extent, of resources from international and national government bodies and research funding from non-profit institutions. The private sector's share in the third flow of funds amounts to approximately 10 per cent. Knowledge transfer takes place in part via contract research, and in part through postgraduate education.

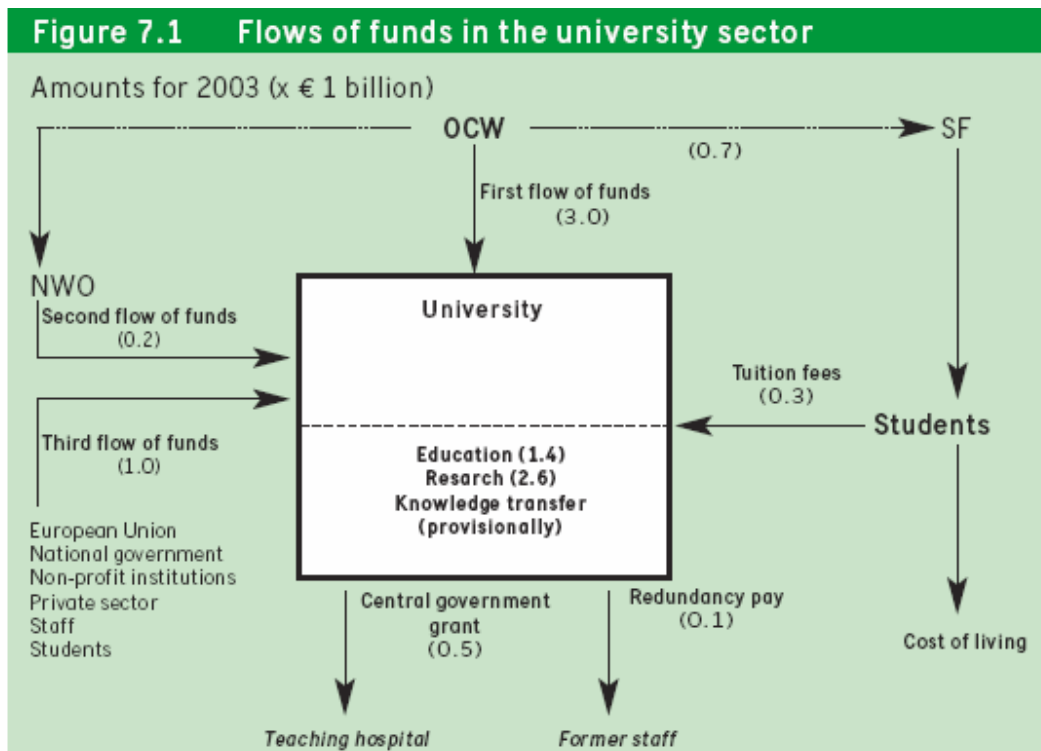
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<sup>5</sup> Information on higher professional education is mainly copied from [http://www.minocw.nl/english/doc/2005/key\\_figures\\_2000-2004.pdf](http://www.minocw.nl/english/doc/2005/key_figures_2000-2004.pdf), page 88, 92 and 93, including the various figures.

### Teaching hospitals

An exercise took place in 1996 to clarify the relationship between tasks and funding of the teaching hospitals. This resulted in a 115 million euro reduction in central government funding and a simultaneous increase in the proportion of costs met from social insurance contributions.

The distinguishing feature of the teaching hospitals is the workplace function they offer to the university medical faculties. In the workplace, the prospective doctors can experience the day-to-day practice of medicine. The teaching hospitals also work with the medical faculties to conduct research.



### Numbers enrolled

The total number of students is affected by trends in intake levels and the average duration of study. The average duration of study has been going down until the academic year 2001/02. To some extent, this can be attributed to government policy aimed at reducing course durations. Since 1999, the effect of the decline in intake up to 1996 and the reduction of the average duration of study has been balanced out by the growth in numbers entering university. Other factors contributing to the increase in enrolment numbers may have been the increase in the number of five-year courses and the changes in the student finance system, which reduced the pressure on students to graduate soon.

<b>Intake, enrolment and numbers graduating</b>					
	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
<b>A) First enrolments (x 1000)</b>					
<b>Total excluding Agriculture</b>	<b>32.6</b>	<b>35.0</b>	<b>34.7</b>	<b>36.8</b>	<b>39.5</b>
Science	2.5	2.6	2.4	2.8	3.1
Engineering & Technology	4.7	4.8	4.8	5.1	5.2
Health care	3.1	3.3	3.5	4.1	4.4
Economics	6.1	6.8	6.4	6.6	7.0
Law	4.4	4.6	4.3	4.4	4.8
Behaviour & Society	7.3	8.1	8.5	8.7	9.2
Language & Culture	4.5	4.8	4.6	5.2	5.7
University teacher training courses	[0.1]	[0.1]	[0.1]	[0.1]	[0.1]
<b>Agriculture</b>	<b>0.6</b>	<b>0.8</b>	<b>1.0</b>	<b>1.1</b>	<b>1.2</b>
<b>B) Enrolled university students, including external students (x 1000)</b>					
<b>Total excluding Agriculture</b>	<b>161.5</b>	<b>168.0</b>	<b>174.8</b>	<b>183.3</b>	<b>193.5</b>
Science	12.1	12.3	12.2	12.8	13.9
Engineering & Technology	24.1	25.0	25.5	26.2	26.4
Health care	20.3	21.1	21.8	23.4	25.3
Economics	27.4	28.9	30.0	30.7	31.7
Law	24.1	24.3	24.3	24.6	25.3
Behaviour & Society	32.0	33.7	37.3	39.9	42.6
Language & Culture	20.8	22.1	23.0	24.8	27.3
University teacher training courses	0.7	0.6	0.7	0.9	1.0
<b>Agriculture</b>	<b>3.7</b>	<b>3.8</b>	<b>4.0</b>	<b>4.4</b>	<b>4.4</b>

## ICT in Dutch education: primary, secondary, adult and vocational education & teacher training (primary school)

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### System<sup>6</sup>

The policy of the Ministry of Education, Culture and Science is focused on enhancing the quality of education. ICT can be a powerful tool in creating possibilities for the new learning - concentrated on individual capabilities and needs, independent of location and time - and in enabling educational institutions to prepare pupils and students for the labour market of tomorrow. To that end, the ministry encourages and facilitates the integration of ICT into education.

For the period 2003-2005, the policy for primary education and secondary education, the adult and vocational education sector and the teacher training programmes is described in the memorandum "Leren met ICT" [Learning with ICT]. In March 2005, the progress report "ICT in het onderwijs" [ICT in education] was submitted to the Dutch Lower House.

The guiding principle in the ICT policy is to enable schools to take responsibility. The school itself is in the best position to make decisions with respect to the use of ICT. The school has to be given the freedom to do this, both in financial terms and with regard to freedom in policy. The bulk of the available ICT budget is made available to schools via regular funding. The schools can use these funds to buy and/or replace computers, purchase software and cover other expenditures related to ICT.

Since 2004 extra funds (55 million euros) have been made available to schools in order to allow them to arrange their own Internet connection. There are also central funds available to support the schools. The main exponents are the subsidies paid to the foundations Kennisnet and ICT at School, as well as a targeted innovation incentive from the government cabinet of Balkenende II to further accelerate the integration of ICT in education.

### Funding

From 2004 on, the ICT budget provides an insight into the centralized ICT resources. In previous years, the decentralized resources (approximately 220 million euros, including the funds earmarked for the Internet facilities) were added to the funding of the various sectors of education; these resources are earmarked for the promotion of ICT education in schools.

In primary education, the total ICT grant is included separately in the outlines for the material funding, i.e., under the allowances for the learning package.

In the funding systems for secondary education and adult/vocational education, the ICT allowances are not listed separately; because of their structural nature, they are integrated into the block grant funding for each of these sectors. The ICT Education Monitor shows the effects of how these funds are spent.

The centralized resources go to specific expenditures for assistance and support to schools, including a connection to Kennisnet<sup>7</sup> [the Knowledge Network] (content development), the

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<sup>6</sup> Information on ICT in Dutch Education is mainly copied from [http://www.minocw.nl/english/doc/2005/key\\_figures\\_2000-2004.pdf](http://www.minocw.nl/english/doc/2005/key_figures_2000-2004.pdf), pages 40-41, including the figures.

<sup>7</sup> Kennisnet and ICT at School are merged since 1<sup>st</sup> February, 2006 into the new foundation called: 'Stichting Kennisnet Ict op School' [Foundation Knowledge Network ICT at School]. This new foundation focuses on: services and the protection of interests.

ICT at School foundation, centralized ICT facilities, knowledge development and innovation. In addition, some small-scale and experimental projects (Grassroots, ICT international, expertise centres, pilot projects at secondary schools) are implemented within the budget.

### Expenditure on ICT (x € 1 million)

	2000	2001	2002	2003	2004
<b>Total centralized expenditure</b>	<b>59</b>	<b>102</b>	<b>79</b>	<b>101</b>	<b>49</b>
Kennisnet and Internet connections	37	27	44	72	3
Kennisnet portal	7	26	19	19	19
BVE net € 2.042 million under Article 4.03	--	--	--	--	--
Authentication and authorization service (Entree)	--	--	--	2	--
Open Source/Open Standards	--	--	--	--	--
ICT at School	2	3	3	3	3
Availability of teaching material	--	--	--	1	2
Use of ICT as a teaching aid	--	--	--	3	--
Staff development	1	3	1	--	2
Textbooks and software	9	10	8	--	--
Centralized Internet facilities for schools/ broadband	--	--	--	--	10
Knowledge development and innovation	--	--	--	--	9
Security and filters	--	27	--	--	--
Other activities	3	6	4	1	1

### Realization figures ICT in education

	01/02	02/03	03/04	04/05	01/02	02/03	03/04	04/05
	<b>Primary education</b>				<b>Secondary education</b>			
<b>ICT investment plan (in percentages)</b>	76	83	84	86	86	90	89	84
<b>ICT skills among teachers (in percentages)</b>								
Basic skills	64	73	75	88	73	72	74	76
Teaching skills	61	67	67	71	43	42	46	47
<b>ICT infrastructure</b>								
Pupil-computer ratio	8.1	7.2	7.4	6.9	9.7	9.2	8.9	8.8
Pupil-Internet ratio	--	17.3	12.4	11.6	--	10.7	9.6	9.3
	<b>Adult and vocational education</b>				<b>Primary school teacher training</b>			
<b>ICT investment plan (in percentages)</b>	59	60	91	72	70	76	100	100
<b>ICT skills among teachers (in percentages)</b>								
Basic skills	52	56	63	67	96	83	89	86
Teaching skills	32	36	39	44	51	54	55	49
<b>ICT infrastructure</b>								
Pupil-computer ratio	7.2	7.5	6.4	5.9	6.5	8.3	8.0	11.0
Pupil-Internet ratio	--	--	6.9	5.9	--	8.3	8.0	11.0



### **The ICT Education Monitor**

Information on realization figures in the area of ICT can be found in the ICT Education Monitor. Every school year, this monitor measures the status of the integration of ICT into education. It focuses on four factors that affect the integration of ICT into education: ICT policy, infrastructure, software and the teachers' expertise. The monitor shows that the integration of ICT into education continues to make progress.

## ICT in Dutch higher education<sup>8</sup>

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### Policy

In the HOOP (Higher Education and Research Plan) 2004 the agenda is written down for higher education in the Netherlands. One of the topics is to increase the participation in higher education to 50%. This means for the Netherlands that more students from non-traditional target groups will need to participate. In other words, higher education will be confronted with a grown diversity of target groups.

This agenda is part of a broader knowledge strategy of the government cabinet focusing on the realisation of the Lisbon ambitions. The agenda can partly or more easily realised with the help of e-learning. The government has two main ambitions with respect to e-learning:

1. Use e-learning for more innovative and flexible education to anticipate on the expectations of nowadays students.
2. Use e-learning for specific strategic purposes that need special attention, like international students, students in technics and care, and the working and the work seeking population (life long learning).

### Current state of the art

The Netherlands has a good technical infrastructure and there exists enough support for teachers and students in higher education. ICT is used for the provision of information, administration, standard applications, virtual learning environments etc. The use of ICT hardly starts from an educational point of view. Most innovative project do not start from a central educational vision on education, like for example: problem based learning, competention based learning or team learning. But ICT is used to support traditional education. Furthermore, ICT is hardly used for assessment. There exists no policy with respect to new target groups and although ICT is used for administrative functions but less for the composition of individual learning paths.

In a study initiated by the European Commission and performed by the Danish consultancy PLS Ramboll Management: 'Studies in the Context of the E-Learning Initiative: Virtual Models of European Universities, we can read that 16% of all 200 universities (n=32) that cooperated in this research were marked as 'front-runners' with respect to ICT integration and e-learning. Spain and the UK have the largest proportion of cluster one universities (22% and 19%), the percentage for Finland and Italy is 13%, and for the Netherlands and Sweden 6%

([http://www.elearningeuropa.info/index.php?page=doc&doc\\_id=4969&doclng=6&men](http://www.elearningeuropa.info/index.php?page=doc&doc_id=4969&doclng=6&men)).

Furthermore, 15% of the universities is sceptical and uses hardly any ICT. Italy and Germany (29% and 23%) have relatively many sceptical universities. In the Netherlands 0% is sceptical. Most universities, like those in the Netherlands, are relatively advanced in their ICT-integration in 'campus-based' education. In other words, e-learning is not a 'normal' mode in higher education. Institutions are not focused developing more innovative and flexible education based on a specific vision on education. Furthermore, e-learning is hardly used from a strategic point of view.

### Partners involved

In higher education, the providers of education are the most important players in practising e-learning. Since 1985, collaborate all funded institutions for higher professional education and universities on ICT in higher education within the SURF<sup>9</sup> foundation. They collaborate

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<sup>8</sup> Information in this chapter is mainly based on: <http://www.minocw.nl/documenten/brief2k-2005-doc-7219b.pdf>

<sup>9</sup> SURF is the higher education and research partnership organisation for network services and information and communications technology (ICT).

systematically on: innovation, knowledge development and transformation. The most important activity is the tendering of projects (partly finance). Other activities SURF organises are: expertise networks, network tables, conferences, seminars, websites and the annual SURF education days. Next to SURF, about one third of the institutions for higher professional education and universities are organised within a consortium. Currently, three consortia exist: the Digital University (DU), E-merge and Apollo. Furthermore, various domain specific consortia exist, like Law online, Economy compact and Ellips (language education).

In 2007, SURF and the DU will merge and it is not clear yet if the other consortia will continue to collaborate since they won't receive any more money from the government. In addition, the Netherlands has an Open University (OUNL). The OUNL has an explicit task to contribute to innovation in higher education. Therefore, the OUNL participates in the various consortia like the DU.

### **Role of the government**

Institutions for higher professional education and universities are responsible for their own infrastructure and supplies as well as the arrangement of education. The role of the government is to facilitate and to stimulate. While, normal exploitation costs regarding ICT in higher education are not depending on direct financial support from the government, further developing and innovation actually is. ICT supplies in higher education as we know at the moment are realised by the institutional boards and mainly financed out of the institutions normal budget.

The SURF foundation is realised by the institutions for higher professional education and universities.

The Ministry of Education, Culture and Science (OCW) together with the Ministry of Economic affairs financed the strong national ICT-infrastructure for higher education and research: SURFnet. Furthermore, various other initiatives are financed by OCW, like supporting the SURF ICT and Education programme (€4 million per year until 2006), supporting the strategic plan 2003-2006 of the DU (€2 million in 2004 and €3 million in 2005).

Furthermore, OCW facilitates the innovation of education via the OUNL. The OUNL functions as a knowledge centre for ICT and e-learning in higher education. They have a legal innovation task for higher education and it is expected that they will spend at least €6,8 million on this task.

From 2006 on the government aims to focus their subsidy on the strategic use of e-learning.

### **National Action Plan e-Learning**

In June 2005, SURF, the DU and the other consortia agreed with the State Secretary to write an action plan e-learning that focuses on how the Dutch institutions for higher education can contribute to strengthen the international position of the Netherlands in the global knowledge society. This resulted in the National Action Plan e-Learning (NAP), co-ordinated by SURF (see: [http://www.surf.nl/download/05.4145\\_NAP\\_okt05.pdf](http://www.surf.nl/download/05.4145_NAP_okt05.pdf)). Main focus of the plan is to increase the participation in higher education to 50% (see also the first paragraph of this chapter). The NAP offers a framework for institutions for higher education for how e-learning can contribute to reach this aim. Implications for the short term (2006-2007) are that institutions for higher education can initiate projects within the programme: 'Continuous Learning Paths. Concrete details on the tender procedure will be available by the end of May, 2006.

For the long term (2007-2010) an action plan will be developed later in 2006 in which the programmes 'Life long Learning' and 'Internationalisation' will get a place.