

The changing nature and role of vocational education and training in Europe

VET in higher education: Country Case Studies

AO/DSI/JP/Changing_Role_of_Vet/009/15

Case study focusing on The Netherlands

prepared for CEDEFOP – European Centre for the Development of Vocational Training

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The changing nature and role of vocational education and training – overall aims

The purpose of the Changing nature and role of VET-project is to improve our understanding of how VET is changing in the countries belonging to the European Union (as well as Iceland and Norway). Over a three-year period (2016-18) the project will analyse how vocationally oriented education and training has changed in the past two decades (1995-2015) and based on these results investigate the main challenges and opportunities facing the sector today and in the future. Work is divided into six separate but interlinked themes:

- (a) the changing definition and conceptualisation of VET;
- (b) the external drivers influencing VET developments;
- (c) the role of traditional VET at upper secondary level;
- (d) VET from a lifelong learning perspective;
- (e) the role of VET at higher education levels;
- (f) scenarios outlining alternative development paths for European VET in the 21st century.

The study takes as its starting point that vocationally oriented education and training is something more than the traditional VET delivered at upper secondary level (in the form of school-based education or training, apprenticeships, or combinations of these). Due to the requirements of lifelong learning, we are able to observe diversification of VET with new institutions and stakeholders involved. We also see an expansion of VET to higher education areas, partly through reform of existing institutions, partly through the emergence of new institutions. This has been caused by factors internal to the education and training system as well as by external pressures linked to demographic, technological and economic changes.

This particular case study, together with 9 other case studies, provides input to theme (b) of the project ('The external drivers influencing VET developments').

Table of contents

1. Introduction.....	1
2. VET at higher levels	2
3. Change processes during the last 20 years - educational system perspective.....	7
4. Impact on content and delivery of qualifications and programmes - the epistemological or pedagogical perspective.....	21
7. Current debates and future perspectives	29
8. Overview	32
9. Sources of information.....	33

Case study template

Country: the Netherlands

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Title of the case study: Universities of Applied Sciences and the quest for an own profile and quality within higher education

1. Introduction

After the 1993 Comprehensive Higher Education and Research Act (Dutch abbreviation: WHW: Wet op het Hogeronderwijs en Wetenschap) and the introduction of the Bachelor-Master degree structure, Universities of Applied Sciences (UAS) developed as a self-standing education sector, i.e. one that is different from the VET sector and the University sector. This structural change required a substantial investment in improving the quality and developing the profile of the UAS as a place where practice-oriented research and education come together.

In order to ensure both the duality of UAS as a go-between between research and practice and a bridge between society and academia, students were required to develop a wide skillset, including strong research skills.

However, since 2010, after the recommendations by the Commissie Veerman, UAS differentiated through specialization (higher education institutions, being autonomous were stimulated to focus on what they are good at and not all doing everything). By reducing the amount of degrees offered and duplication thereof, there would be increased clarity for students. In addition, it would be easier for higher education institutions to collaborate with the labour market and bring forth well-equipped students that can fulfil the market demand with their skill-sets. Simultaneously, practice-based education and market tailored education can lead to increased placement chances for graduates. With this improved collaboration of labour market demand and education supply also lifelong learning programmes have become an agenda point for UAS.

Yet, in certain sectors, such as in engineering, the market has driven professionals to be more versatile. Hence, there has also been a recent trend in ensuring that students receive a sufficiently broad basis as generalist throughout their education, in addition to their specialization.

Overall, there is a strong focus on the education of transversal skill creation in addition to a specialization in order to meet the demands of the labour market. Similarly, the introduction of Associate (Ad) degrees (qualification at NLQF/EQF level 5), which offers a 'bridge' between the mbo (vocational schools) and hbo (UAS), can be seen on the one hand as academic drift to support upstream of mbo students. On the other hand, it also corresponds with a vocational drift, by which specialization requested by the labour market is ensured. Due to the autonomy of the UAS, the extent to which the 'drifts' take place are both school and programme dependent.

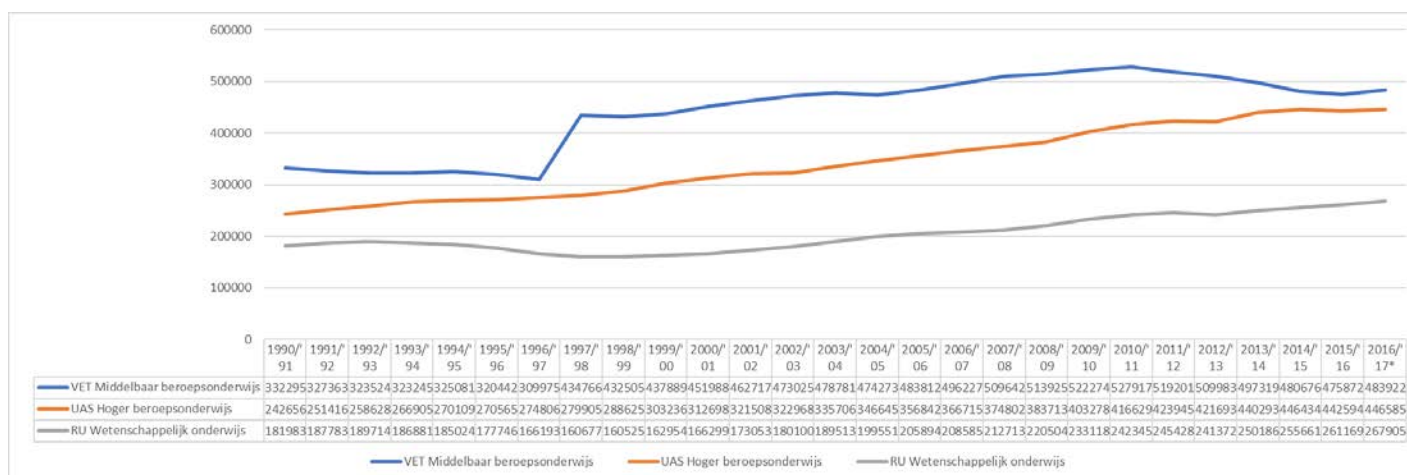
The introduction of the Ad degree touches as a bridge also upon a sensitive topic concerning the tension between accessibility, quality, and academic performance in the UAS. This discussion exists both between the bridge of mbo to hbo, as well as hbo to universities.

Hence, during the last 20 years both an academic and vocational drift can be observed related to VET at higher levels while these concepts are not exactly capturing the key developments related to UAS in the Netherlands. This relates more to improved profiling and improved quality of programmes and differentiating. This is a still ongoing process.

2. VET at higher levels

The Netherlands has two main types of higher education. The Research Universities (RU: Wetenschappelijk onderwijs, WO) focus on the independent practice of research-oriented work in an academic setting. Their aim is to train students in academic study and research although many programmes also have a practical component (see later when discussing vocational drift). The Universities of applied sciences (hogerberoepsonderwijsinstellingen, hbo; hogescholen) are more practically oriented, preparing students directly for specific professions. There are 14 Research Universities ⁽¹⁾, 37 Universities of applied sciences and various privately funded universities. To have an idea about the size of the sectors in comparison with the upper secondary VET sector, the following figure present an overview of the development of student numbers in VET, UAS and RU.

Figure 1 Overview student numbers in VET, UAS and RU



Source: CBS Statline, Onderwijsinstellingen; grootte, soort, levensbeschouwelijke grondslag (13 October 2017)

In the Netherlands, the three-tiers of the Bologna process are applied. The higher education institutions began introducing the three-cycle structure (bachelor, master, doctorate) already in 2002 and currently all study programmes are organized in this manner. The figure below provides an overview of the education system reflecting also the Bologna structure.

¹ Excluding the Theological Universities

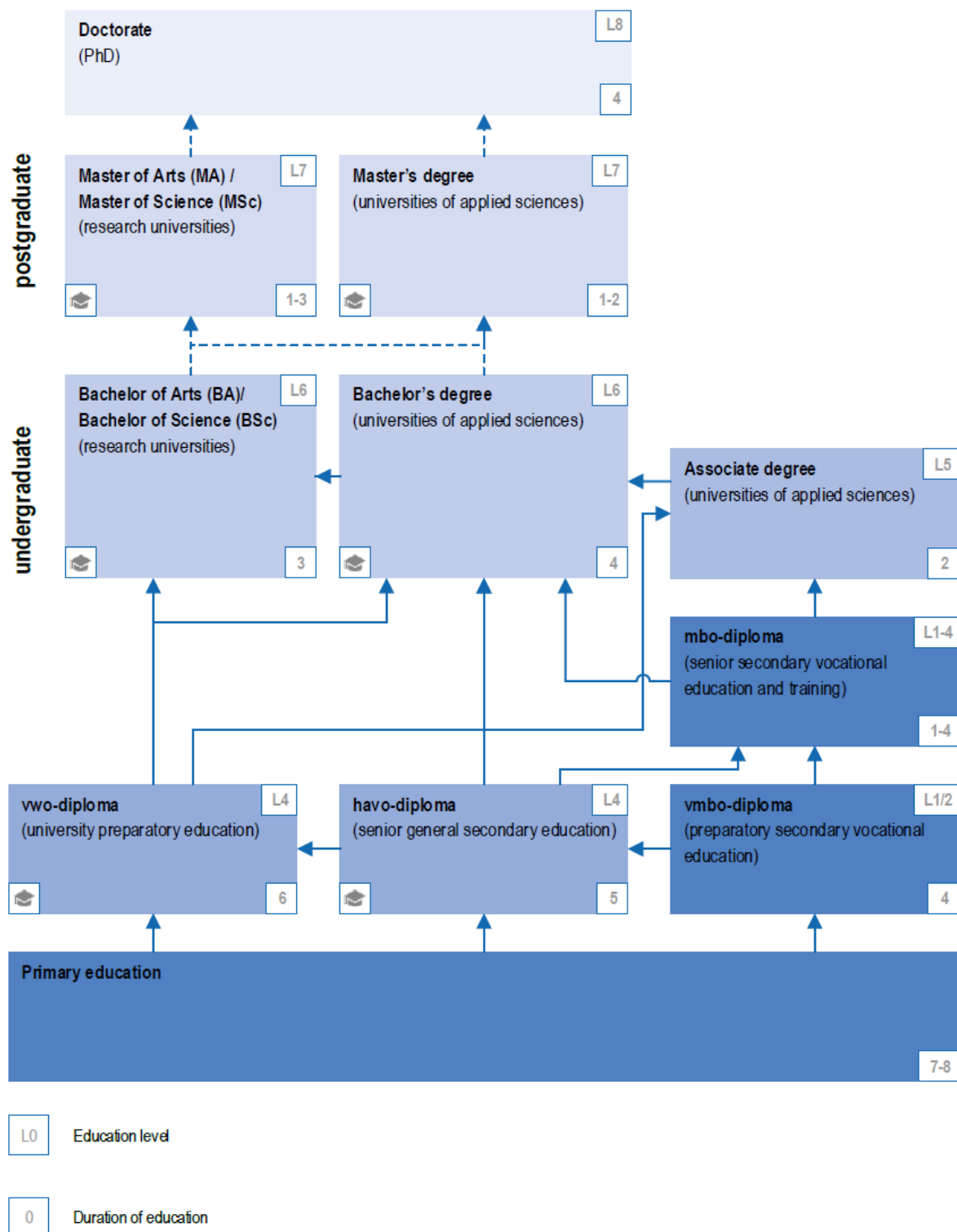


Figure 2 **schematic overview of the Dutch education system**

Source: EP/Nuffic (2015), *Education system The Netherlands*

In the Netherlands, at EQF level 5-8 there are a number of qualification types awarded that have a vocational orientation. Within the higher education system, the **Universities of Applied Sciences** (hbo/hogeschool) provide vocationally oriented qualifications types.

The programmes the Universities of applied sciences offer concern:

- **Associate Degrees:** The associate degree is a two-year (120 ECTS) programme at a University of applied science, which is part of a hbo bachelor programme (from 1 January 2018 onwards it will be considered a self-standing qualification) ⁽²⁾. The level is between senior secondary vocational education on qualification level 4 (NLQF/EQF level 4) and hbo bachelor. Associate degree programmes are primarily oriented to students with a diploma of senior secondary vocational education at qualification level 4 or to people who have some years of working experience. After finishing the programme, they are eligible to enter the bachelor programme the associate degree is a part of. To enter an associate degree programme, a havo (upper secondary education) diploma or a senior secondary vocational education diploma at qualification level 4 is required.
- **Bachelor degree:** The Bachelor degree is awarded both by Research Universities (wo) and Universities of Applied Sciences (hbo). An hbo bachelor's programme requires the completion of 240 credits (4 years), and graduates obtain a degree indicating the field of study (for example, Bachelor of Engineering, B. Eng., or Bachelor of Nursing, B. Nursing).³ Usually in the third year, students perform a mandatory internship approximately 9 months to gain practical experience. On the basis of this internship, they complete a thesis or final project. A diploma of senior general secondary education (havo) or pre-university education (vwo) is required for admission to hbo, in some cases with additional requirements regarding specific subjects. A diploma of senior secondary vocational education (mbo) at qualification level 4 also gives access to the hbo Bachelor.
- **Master degree:** An hbo master's programme requires the completion of 60 to 120 credits and graduates obtain a degree indicating the field of study (for example, Master of Social Work, MSW).⁴
- **PhDs:** At the moment, only universities can offer PhD programmes and trajectories. There are UAS that have PhDs, but these work under supervision of the universities.

Although the orientation is clear, there is not a strict distinction between the Research Universities and the Universities of applied sciences in relation to the academic and professional orientation. There are many programmes at Research Universities that have a very specific professional orientation. This for instance in relation to Lawyers, medical doctors, veterinarians, dentists.

² Ministerie van OCW (2017), Wet invoering associate degree-opleiding (accepted 3-10-2017: <https://wetgevingskalender.overheid.nl/Regeling/WGK007231>)

³ A wo bachelor's programme requires the completion of 180 credits (3 years) and graduates obtain the degree Bachelor of Arts or Bachelor of Science (BA/BSc), depending on the discipline.

⁴ Institutions (mostly Universities) offer wo master's programmes that in most cases require the completion of 60 or 120 credits (1 or 2 years). Some programmes require 90 (1,5 years) or more than 120 credits. Graduates obtain the degree of Master of Arts or Master of Science (MA/MSc). The old title (pre-2002) appropriate to the discipline in question (drs., mr., ir.) may still be used.

In total around two-third of the students in higher education study at a University of applied Sciences. The table below provides an overview of the student numbers per qualification type.

Table 1: Student numbers per qualification type at Universities of Applied Sciences

	2012	2013	2014	2015	2016
MASTER	11131	11628	11988	12129	11992
AD	4688	5661	6023	6215	7066
BACHELOR	411551	428542	433092	429029	432572
TOTAL	427370	445831	451103	447373	451630

Source: *Onderwijs in Cijfers*: <https://www.onderwijsincijfers.nl/kengetallen/hoger-beroepsonderwijs/deelnemers-hbo>

The following table provides an overview of the distribution of students enrolled in programmes related to the different economic sectors in the UAS. Economy is by far the largest sector (both Bachelor and Ad). The master programmes are mainly offered in education (teacher education).

Table 2: UAS student numbers per qualification type and sector

		2012	2013	2014	2015	2016
Master	agro and food	61	68	73	75	76
	Engineering/beta			20	32	71
	economy			20	63	69
	health	1,095	1,065	1,050	1,081	1,299
	art	2,166	2,316	2,569	2,667	2,877
	education	6,789	7,057	7,209	7,160	6,611
	social studies	1,020	1,122	1,047	1,051	989
Master total		11,131	11,628	11,988	12,129	11,992
Ad	agro and food	280	243	224	263	304
	Engineering/beta	507	600	727	749	905
	economy	3,013	3,873	4,127	4,242	4,593
	health	506	418	315	281	292
	art	50	72	96	131	147
	education	196	218	237	247	299
	social studies	136	237	297	302	526
Ad total		4,688	5,661	6,023	6,215	7,066
Bachelor	agro and food	9,277	9,775	10,243	10,690	11,270
	Engineering/beta	73,009	77,601	81,503	84,107	87,943
	economy	166,873	172,745	173,410	169,875	169,689
	health	39,784	43,226	43,293	44,429	45,692
	art	18,103	17,837	17,390	17,017	16,954
	education	51,470	52,518	52,551	49,987	50,067
	social studies	53,035	54,840	54,702	52,924	50,957
Bachelor total		411,551	428,542	433,092	429,029	432,572
Total		427,370	445,831	451,103	447,373	451,630

Source: *Onderwijs in Cijfers*: <https://www.onderwijsincijfers.nl/kengetallen/hogerberoepsonderwijs/deelnemers-hbo>

Besides these regulated qualifications, there are five **non-regulated qualifications** levelled at NLQF level 5; 12 at level 6 and 1 at level 7. These qualifications are **professional/vocational oriented qualifications** offered by private providers or by branch/sector organisations. Examples are 'Anesthetics nurse' (Anesthesiemedewerker) offered by CZO at level 6, Consultant Payroll Services & Benefits (CPB) offered by Heering Consultancy Opleidingen BV at level 5 and Social Studies offered by The Institute for Social Sciences and the Humanities – Iran Academia at level 7. ⁽⁵⁾ These type of non-regulated qualifications (there are many more, however not levelled in the NLQF) have a long history and sometimes are well-known in specific sectors. As these qualifications are not regulated, there is no record of how many qualifications exist (outside those levelled) and how many holders of qualifications there are.

⁵ <http://www.nlqf.nl/register>

3. Change processes during the last 20 years - educational system perspective

3.1. Change processes and their impact on the system

General introduction: policy developments related to HE

Maassen and Stensaker (2011)⁶ argue that the Dutch higher education can historically be characterised as belonging to the continental (German) university tradition, implying rather tight state-control over the inputs of the system (institutions, curricula, resources, students, staff). This changed dramatically after 1985, based on the so-called 'Hoger Onderwijs: Autonomie en Kwaliteit' White Paper (Higher Education: Autonomy and Quality, HOAK)⁽⁷⁾. In the 1970s student numbers increased rapidly. At the end of 1970s the student drop-out rates were high and the average study-duration was long compared to other countries. Furthermore, academic staff appointed during the sharp increase of student numbers in the 1970s lacked the quality to confront the challenges and institutional governance was weak.

By the mid-1980s there was general agreement in the field of higher education that the further implementation of these reforms needed a new underlying political vision on the relationship between higher education and the state, a vision that would function as a framework for the implementation of the reforms. The HOAK White Paper (1985) presented such a vision and it has had a major influence on the development of Dutch higher education over the last 25 years⁽⁸⁾. The HOAK paper presented a steering approach that is characterised by 'government steering at a distance'⁽⁹⁾. The HOAK steering approach aimed at stimulating the levels of quality and differentiation in the Dutch higher education system, as well as its responsiveness to societal needs. Its starting point was that as a consequence of the growing complexity of higher education, the sector could not be controlled and steered in detail anymore by the Ministry of Education and Science. Strengthening institutional autonomy was seen as a major element in improving the functioning of the system. In addition, **HOAK stimulated the universities and HBO institutions to develop a more direct relationship with their environments, partly to compensate for the cuts in**

⁽⁶⁾ Peter Maassen, Eli Moen & Bjørn Stensaker (2011). Reforming higher education in the Netherlands and Norway: the role of the state and national modes of governance, *Policy Studies*, 32:5, 479-495, DOI: 10.1080/01442872.2011.566721

⁽⁷⁾ Peter Maassen, Eli Moen & Bjørn Stensaker (2011). Reforming higher education in the Netherlands and Norway: the role of the state and national modes of governance, *Policy Studies*, 32:5, 479-495, DOI: 10.1080/01442872.2011.566721

⁽⁸⁾ Jongbloed, B., Maassen, P., and Neave, G. (1999, eds.). *From the eye of the storm. Higher education's changing institution*. Dordrecht: Kluwer Academic Publishers.

⁽⁹⁾ Maassen, P. and van Vught, F.A. (1989, eds.). *Dutch higher education in transition. Policy issues in higher education in the Netherlands*. Culemborg: LEMMA; Teichler, U., 1989. *Government and curriculum innovation in the Netherlands*. In: F.A. van Vught, ed. *Governmental strategies and innovation in higher education*. London: Jessica Kingsley, 168-211; de Boer, H., 2002. *Trust, the essence of governance?* In: A. Amaral, G. Jones and B. Karseth, eds. *Governing higher education: national perspectives on institutional governance*. Dordrecht: Kluwer Academic Publishers, 43-61.

governmental budget for higher education, partly to respond more directly to the needs of society.

The HOAK White Paper provided for eight years a kind of developmental framework for Dutch higher education. Its main principles formed the basis for the **1993 Comprehensive Higher Education and Research Act** (Dutch abbreviation: WHW: Wet op het Hogeronderwijs en Wetenschap), which formalised the 'HOAK' and with it, the governance relationship between government and the higher education institutions. This Act had a major impact on the hbo sector; needed more than a decade to fully adjust to the new framework, developing its own profile, character and quality.

The Bologna process meant the next major reform in the Dutch higher education landscape. From 2002 onwards, all higher education programmes were aligned with the three-cycle approach. This however maintained the distinction between the research and professional orientation in the higher education system, both offering bachelor and master programmes and degrees.

Universities of applied science and the re-introduction of lectorates

The historical roots of 'hogescholen' extend back many decades and even centuries ⁽¹⁰⁾, but as a part of tertiary education their history dates to the 1960s, when colleges for higher professional education were brought under the same legal framework as universities ⁽¹¹⁾. In 1986, they were legally acknowledged as a higher education subsector besides the university sector. This was further formalised in the 1993 Comprehensive Higher Education and Research Act (Dutch abbreviation: WHW: Wet op het Hogeronderwijs en Wetenschap). Their main task, in contrast with the universities is to offer theoretical and practical training with an explicit professional orientation. Since 2001, transferring and developing knowledge has been a second important task. Their primary focus has traditionally been on regional and local needs, although several 'hogescholen' or Universities of Applied Sciences (UAS) ⁽¹²⁾ also operate nationally and internationally.

The history of the 'hogescholen' in the last decades is characterised by:

- Considerable growth in student numbers: student numbers grew from 181,100 in 1975 to more than 450,000 in 2016.
- A reduction in the number of institutions: from 375 in 1983 to 37 in 2016.
- Increased maturity as a well-recognised, valuable and full part of the higher education sector, as indicated by enhanced institutional autonomy.

⁽¹⁰⁾ Ad van Bommel mentions 1682 as the start of the first art academy (which would be UAS now). An important year is 1963 and the introduction of the Law on secondary education. The education what would be referred to now as UAS is brought under government financing. See Van Bommel, Ad (2006). Hogescholen en hbo in historisch perspectief.

⁽¹¹⁾ de Weert, Egbert; Leijnse, Frans; Kyvik, Svein; Lepori, Benedetto (2010). Practice-Oriented Research: The Extended Function of Dutch Universities of Applied Sciences; in: The Research Mission of Higher Education Institutions outside the University Sector: striving for differentiation, 199 - 217

⁽¹²⁾ The usage of 'University of Applied Science' (UAS) dates back to around 2006/07.

Within the Universities of applied science, since 2000 there is a clear indication of **academic drift**. As explained by Harry de Boer (2016) ⁽¹³⁾, around the turn of the millennium, the question of whether or not the Dutch knowledge infrastructure was adequately equipped to meet the growing demand for knowledge and innovation was increasingly answered negatively. In addressing this issue, strengthening the research focus of the UAS sector, largely absent at the time, was seen as important. Moreover, at the same time, questions started to arise about the type of graduates produced and the qualifications of teaching staff. It was felt that new modes of teaching by staff with a stronger research orientation should be considered if UAS were to produce modern professionals. To address these issues, several instruments have been introduced since 2000, including the introduction of new staff positions at UAS and the introduction of greater public funding for practice-oriented research. In 2001, this led to the introduction of new staff positions, the 'lectorates'. Such a lectorate is coordinated by a 'lector', a new position sometimes referred to as a 'UAS professor' (but without the right to supervise doctoral degrees). In fact, the position of lector existed at universities until the early 1980s. A university lector was almost equal in rank to a university professor (including the right to supervise doctoral degrees). After 1980 the post of lector was abolished at the universities. The 'hogescholen' did not have the position of lector until 2001, but the position fitted in well with the purpose of establishing a highly ranked UAS position without using the title of professor.

As concluded by Harry de Boer (2016), in the fifteen years since the first steps were taken the research function of UAS has obtained a structural and indispensable position in Dutch higher education. In this respect, the structural reform has been successful, as it has changed the Dutch higher education landscape. Given the results and progress made through the implemented initiatives, it is plausible that they have positively contributed to the innovative capacity of the Netherlands, although conclusive evidence to underpin this assumption is not yet available. ⁽¹⁴⁾ The funding that was paired with the reform period of 2001-2015 has been channelled towards 'Practice Oriented Research' and to the creation of 'Centers of Expertise' (in 2010). Again, here is a focus on a practical aspect of the UAS. ⁽¹⁵⁾

Although it is tempting to see the introduction of lectorates as evidence for academic drift; it should not be interpreted as such: the purpose of the lectorates is explicitly to renew educational programmes in the light of the needs of the labour market and society and to stimulate knowledge circulation from and to the economy and society. The interest in research is explicitly not an academic one, but a practical one: the research is practice

⁽¹³⁾ European Commission (2016). The Netherlands – Strengthening research in Universities of Applied Sciences; One of twelve case studies produced as part of the project on Structural Reform in Higher Education (EAC-2014-0474)

⁽¹⁴⁾ European Commission (2016). The Netherlands – Strengthening research in Universities of Applied Sciences; One of twelve case studies produced as part of the project on Structural Reform in Higher Education (EAC-2014-0474), p. 13.

⁽¹⁵⁾ European Commission (2016). The Netherlands – Strengthening research in Universities of Applied Sciences; One of twelve case studies produced as part of the project on Structural Reform in Higher Education (EAC-2014-0474).

oriented. It needs to be seen as a key element in the profiling of the UAS and improvement of quality in providing practically-oriented higher education programmes.

Universities of applied science and the introduction of the Associate degree

In 2006, the Dutch Higher Education sector introduced the Associate degree (Ad). The programme was first offered through 15 pilots in order to test the new degree form. Nevertheless, the value of the degree was immediately recognized by the Nederlands-Vlaamse Accreditatieorganisatie (NVAO: The Accreditation Organisation of the Netherlands and Flanders) ⁽¹⁶⁾.

This degree programme has a double agenda: First, to improve the transition between the VET programmes at NQF/EQF level 4 and the HBO / UAS degrees; second, to encourage and enable Life Long Learning, reaching out to working adults. The Ad also aims to respond to a market request, in which employers have indicated a need for more specialized employees with an inter-levelled qualification. Consequently, more UAS and (privately-funded) higher education institutions started to offer Ad programmes. ⁽¹⁷⁾

The introduction of the Associate degree is interpreted as a sign of **vocational drift**, making higher education better attuned to the needs of students and the labour market and to allow direct application of the learning outcomes in the labour market (even combining learning and working). It is however also interpreted as a sign of **academic drift** as it increases the possibilities of VET students (at level 4) to continue their learning pathway towards higher education degrees and even academic degrees.

Research Universities and vocational drift?

Diversification and specialization has been a key-theme in the higher education landscape in the past 15-years, this has also been applied to Research Universities. Although the UAS have been at the heart of the Dutch connection between practice and research, there has also been a call for preparing research students better for the job-market. This has been expressed in the Socio-Economic Council (SER: Social Economische Raad) advice for more trainee- and internships. Similarly, the stricter selection of its students can be interpreted as both an academic drift of differentiation, as well as ensuring better vocational interfacing.

Role of non-regulated qualifications and private providers

The non-regulated qualifications and the private providers are not covered by legal frameworks to the same extent as the publicly funded education providers and regulated qualifications. There can be sector-specific regulations and requirements in place (for instance in healthcare sector). Non-regulated qualifications and private providers tend to respond directly to the labour market and plays a prominent role for lifelong learning. In 2016, around 1,6 million students between the ages of 25 and 65 registered in a course. Of these

⁽¹⁶⁾ See: <https://www.nvao.com/about-nvao>

⁽¹⁷⁾ Imandt, M. et al. (2015). klaar voor de groei, In opdracht van ministerie van Onderwijs, Cultuur en Wetenschap , SEO-rapport nr. 2015-67, p.15.

registrations circa 84% registered with a non-regulated/private provider. ⁽¹⁸⁾ This role of the private providers in offering courses to adults is also seen in the growth of in-company and on-the-job training (Bedrijfsopleiding en-training) that grew from around 90% of the private market in 2010 to 93% in 2014. ⁽¹⁹⁾ Non-regulated and private providers offer short, goal-oriented and targeted degrees. ⁽²⁰⁾ Degrees offered by non-regulated and private providers may or may not include an academic component. These degrees are typically flexible in methodology and challenged to combine innovative and effective structures in their course work. ⁽²¹⁾ In recent years the 'combined' educational methodology has steadily increased. ⁽²²⁾ Typical for this form of education is that it is based on modules and courses can be started at any point of the year. ⁽²³⁾

Impact

The binary model of higher education requires the different institutions and their qualifications to formulate a clear identity character. In addition, the higher education is asked to differentiate. This relates to the structure of the higher education system; the character/profile of the institutions; and, finally, the programmes offered. ⁽²⁴⁾

The introduction of the Comprehensive Higher Education and Research Act (WHW) in 1993 prepared the way for a better quality practice-oriented higher education. This was however developed gradually, through providing more autonomy to the hbo-institutions and establishing lectorates to stimulate the practical-oriented research function and its connection to the education programmes. With the position of the UAS getting stronger over time, developing a stronger profile of the hbo-Bachelor, at the side of the Universities the wo-Bachelor profile is further challenged: if it is not a practically-oriented Bachelor (like the hbo-Bachelor) and not an academic 'full' programme (like the Master), what is the self-standing value of the wo-Bachelor programme?

The change process in the last 20 years is not simply be characterised by either an academic drift or a vocational drift. The best way to characterise the development of

⁽¹⁸⁾ CBS 2016. Statline

⁽¹⁹⁾ SEO (2015). Marktmonitor private opleiders van beroepsopleidingen en trainingen: Eindrapport. SEO in opdracht van NRTTO. SEO-rapport nr. 2015-14 ISBN 978-90-6733-773-1, Amsterdam. p. 3. The market share of Research University courses among private providers decreased from 1% to just of half a per cent between 2010 and 2014.

⁽²⁰⁾ NRTTO: <http://www.nrto.nl/themas-en-dossiers/versterken-inzetbaarheid-mobiliteit/>

⁽²¹⁾ NRTTO: <http://www.nrto.nl/themas-en-dossiers/versterken-inzetbaarheid-mobiliteit/>

⁽²²⁾ SEO (2015). Marktmonitor private opleiders van beroepsopleidingen en trainingen: Eindrapport. SEO in opdracht van NRTTO. SEO-rapport nr. 2015-14 ISBN 978-90-6733-773-1, Amsterdam. p. 1.

⁽²³⁾ NRTTO: <http://www.nrto.nl/themas-en-dossiers/versterken-inzetbaarheid-mobiliteit/>

⁽²⁴⁾ Advies van de Commissie Veerman: Toekomstbestendig Hoger Onderwijs Stelsel (2010). Differentiëren in drievoud: http://www.nvao.net/page/downloads/Rapport_Differenti%C3%A9ren_in_drievoud_commissie-Veerman.pdf

practically/professionally oriented higher education is that through the development of its own profile it increased the quality and visibility of institutions and programmes.

3.2 Changes related to characteristics of 'VET at higher levels'

3.2.1 Changes related to governance and institutional structures of 'VET at higher levels'

Governance structures and QA

The programmes of the **UAS** are governed in the same way as all higher education programmes. They fall under the **1993 Comprehensive Higher Education and Research Act** (Dutch abbreviation: WHW). This act increased the autonomy of all higher education institutes. In addition, the quality assurance is also the same for the entire higher education system. The Accreditation Organisation of the Netherlands and Flanders (NVAO) is legally responsible to accredit programmes. NVAO assesses the internal quality assurance pursued by universities (Research Universities and universities of applied sciences), and the quality of the programmes they provide. ⁽²⁵⁾

Within the NVAO procedures in the last decade more emphasis is placed on providing evidence on the labour market need when starting a new education programme by a higher education institute (toets nieuwe opleidingen and macrodoelmatigheidsbesluit ⁽²⁶⁾). The labour market relevance of higher education programmes is controlled by the Commissie Doelmatigheid Hoger Onderwijs (CDHO) ⁽²⁷⁾. This putting more emphasis on the labour market relevance can be seen as an indication of vocational drift within the entire higher education system as more value is attached to obtaining knowledge, skills and competences that are relevant directly in professional fields.

Non-regulated programmes that are characterised as VET at higher (EQF) levels, offered outside the formal higher education (so no associate degrees, bachelors and masters) have their own governance and quality assurance arrangements. There is not a uniform system for quality assurance for non-regulated qualifications. The NRTO (Dutch council for training and education: Nederlandse Raad voor Training en Opleiding) has an own quality label that is used by private providers being member of the NRTO. ⁽²⁸⁾ The quality label covers aspects related to transparency in programmes and learning outcomes, clear communication, consumer protection, qualified staff, quality procedures and continuous quality improvement. ⁽²⁹⁾

⁽²⁵⁾ <https://www.nvao.com/quality-assurance-systems/netherlands>

⁽²⁶⁾ <https://www.nvao.net/beoordelingsproceduresnederland/toets-nieuwe-opleiding-nederland>

⁽²⁷⁾ <https://www.cdho.nl/>

⁽²⁸⁾ http://www.nrto.nl/partnerorganisaties/kwaliteitslabels_en_keurmerken/keurmerk/

⁽²⁹⁾ https://www.nrto.nl/partnerorganisaties/kwaliteitslabels_en_keurmerken/keurmerk/kwaliteitseisen-nrto-keurmerk/

Role of labour market stakeholders/companies

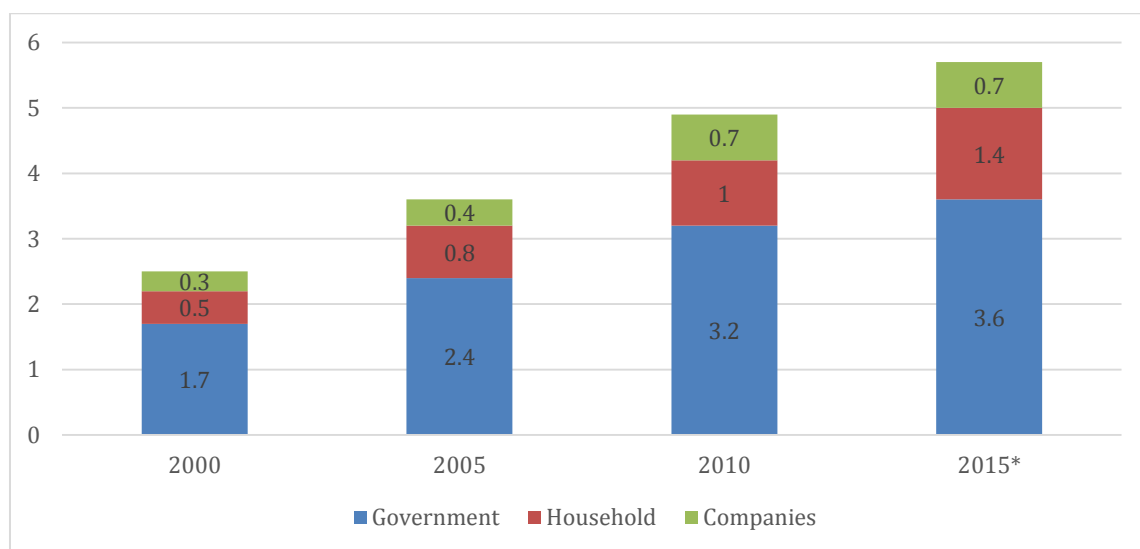
Within the **UAS**, companies and labour market stakeholders do not have a formal role in the design and delivery of curricula. The UAS are autonomous in developing and designing their programmes. For getting accreditation for a new programme however, the UAS, similar to the universities, needs to evidence that there is a labour market need and that employers desire graduates in this area. Another aspect is that UAS programmes include internships and through this, the UAS and employers are regularly in contact. In the university-sector, there is less emphasis on the work-practice, however it is growing. Finally, as already indicated, the introduction of the lectorates and knowledge circles brought employers close to the UAS in knowledge development and exchange. In general, there is a trend towards more involvement of labour market stakeholders in higher education, especially in the UAS.

The **non-regulated programmes** are often provided by branch or sector organisations and hence are characterised by a close involvement of employers.

Funding sources

The **UAS** receives State funding, household (students) contribute, and finally companies contribute. The distribution is indicated in the figure below.

Figure 3 **Overview of funding of UAS (in MEuro)**



Source: CBS statline:

<https://www.onderwijsin cijfers.nl/kengetallen/hoger-beroepsonderwijs/financien-hbo/totale-uitgaven>

The total expenditure on UAS is nearly 6 billion Euro. Households are responsible for 25%. This money is mainly spent on college fees and books. Companies provide funding for mentoring of interns and they pay for contract research conducted by the UAS. The government is by far the main contributor, responsible for 63% of the funding. This concerns direct funding to the UAS and study financing for students. ⁽³⁰⁾ The percentage of

⁽³⁰⁾ <https://www.onderwijsin cijfers.nl/kengetallen/hoger-beroepsonderwijs/financien-hbo/totale-uitgaven>

government funding decreased over the years (68 -63%) while household and company funding increased slightly between 2000 and 2015, especially between 2010 and 2015 when household funding increased from 20 to 25%. In the same period, the company funding decreased from 14 to 12% (2010-2015), probably as a result of the economic crisis.

Non-regulated programmes are not funded by the government but solely by the participants and employers. The total turn-over of private providers is estimated at 3.4 Billion Euro in 2015, this however is not exclusively calculated for the higher levels (5-8). The turnover increased from 3.2 MEuro in 2010 to 3.4 MEuro in 2014. ⁽³¹⁾

Key providers

There are 37 **Universities of applied sciences** (20 are multi-sectoral; 17 mono-sectoral), covering in total 7 economic sectors. They employ 29,350 teachers/professors (docenten). Besides that, more than 600 lectors (practical research-oriented professors) and 4,500 researchers and PhDs are related to study-groups (lectoraten). ⁽³²⁾ VET providers (mbo) can only provide programmes up to level 4 but can cooperate with UAS to offer Associate Degrees.

The **non-regulated qualifications** are professional/vocational oriented qualifications offered by private providers or by branch/sector organisations.

In 2013, **Ad programmes** became officially part of the educational system. Since 2006, when the programme was still in its pilot phase, till date 199 programmes have been registered. ⁽³³⁾ Although the Ad is offered by at least 20 different institutions, both private and publicly sponsored, the biggest 5 providers host over 50% of the students that attend an Ad. ⁽³⁴⁾

Concluding remarks

All in all, there are no significant changes noticeable related to characteristics of 'VET at higher levels' concerning its governance, funding and main providers. The structure related to professional education and training at higher levels is well developed with a strong position of the UAS in the overall higher education sector and a private sector that is only limited governed at all.

3.2.2 Changes related to the target groups of 'VET at higher levels'

Main target group and access requirements

UAS Bachelors

⁽³¹⁾ SEO (2015), Marktmonitor private opleiders van beroepsopleidingen en trainingen

⁽³²⁾ Vereniging Hogescholen (2017), Hbo in vogelvlucht

⁽³³⁾ <https://www.studiekeuze123.nl/opleidingen>

⁽³⁴⁾ SEO (2015), Klaar voor de groei, In opdracht van ministerie van Onderwijs, Cultuur en Wetenschap , SEO-rapport nr. 2015-67, p.4.

The UAS in the Netherlands have witnessed an overall steady growth in the past 20 years. In the academic year 1990-91, 242,656 students were registered at UAS. This number reached 446,638 in 2016-17 (Bron: Centraal Bureau voor de Statistiek). In the period of 2012 to 2016, roughly 45% of the annual approximate 10,000 new applications hold a havo degree ⁽³⁵⁾. Remarkably, despite the overall growth, part-time participation has decreased in past years. ⁽³⁶⁾

Table 3: Overview student numbers in UAS broken down in full-time and part-time studies.

Period	Total	Full-Time	Part-Time
2000/'01	312,7	252,8	59,9
2001/'02	321,5	256,3	65,2
2002/'03	323,0	258,2	64,8
2003/'04	335,7	268,8	66,9
2004/'05	346,6	280,8	65,9
2005/'06	356,8	292,8	64,0
2006/'07	366,7	304,7	62,0
2007/'08	374,8	313,5	61,3
2008/'09	383,7	322,0	61,7
2009/'10	403,3	339,3	64,0
2010/'11	416,6	352,4	64,3
2011/'12	423,9	363,4	60,6
2012/'13	421,7	368,5	53,2
2013/'14	440,3	389,4	50,9
2014/'15	446,4	398,9	47,5
2015/'16*	442,6	396,6	46,0

Source: CBS Statline. All numbers are x 1000.

Historically, till 1980s women formed less than 50% of the UAS (with 37% of the students being women in 1950-1951). From 1980 onwards, the UAS tend to host around 51-52% women (CBS statline), though more women tend to obtain the degree: Within the group of mbo-students who attend the UAS, men and students with a non-western background tend to drop out more often ⁽³⁷⁾. Nevertheless, it can be observed for the last 5 years, that around a third of the bachelor graduates has a non-Western background. ⁽³⁸⁾ The figure below provides an overview of the total number of students in UAS and the distribution of men and women from 1950 to 2015.

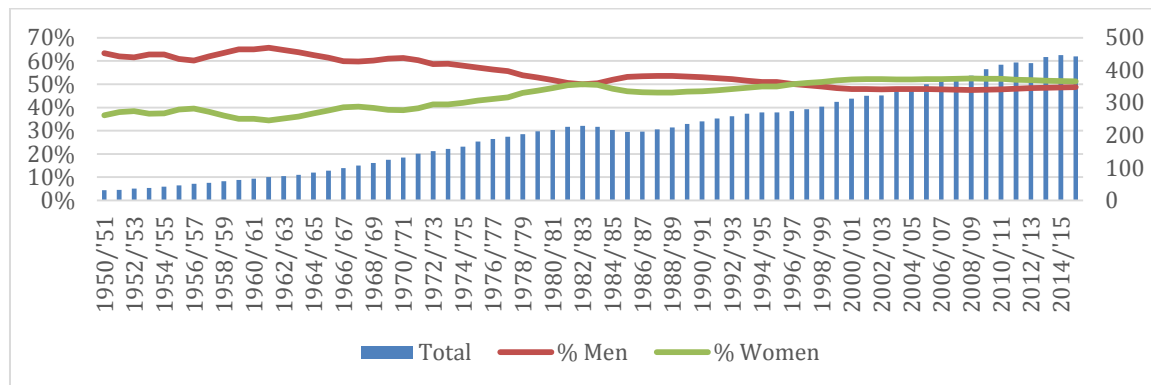
⁽³⁵⁾ Vereniging Hogescholen (2017), Hbo in vogelvlucht

(³⁶) CBS, 2017: <http://statline.cbs.nl/Statweb/publication/?DM=SLNL&PA=37220&D1=92&D2=0&D3=100-115&VW=T>, <http://statline.cbs.nl/Statweb/publication/?DM=SLNL&PA=37220&D1=93,109&D2=0&D3=100-115&VW=T>

⁽³⁷⁾ Vereniging Hogescholen (2017), Hbo in vogelvlucht

⁽³⁸⁾ <https://www.onderwijsincijfers.nl/kengetallen/hoger-beroepsopleiding/deelnemers-hbo>

Figure 4 Total number of students in UAS and the distribution of men and women from 1950 to 2015



Source: CBS: Onderwijsstatistiek

Students in the new Associate Degree programmes

The number of students who attend these Associate degree programmes has been growing, with the exception of a dip in 2014-2015. It is expected that the numbers will grow in the coming years.

The purpose of the Ad is to better serve the demand on the labour market and offer specialized courses to fill the specialized knowledge gap between mbo and hbo. In line with this aim, most of the incoming students hold a mbo degree (70%)⁽³⁹⁾ and they have either recently finished a mbo-degree (ca. 31%) or are already part of the workforce (25%).⁽⁴⁰⁾ However, the group enrolling from the workforce has decreased in the past few years, while those entering directly after finishing a degree in higher education has increased. Around 31% enter the Ad from a different higher education background.⁽⁴¹⁾

Applicants are required to have a mbo-4, havo or vwo degree. Nevertheless, applicants who are 21-years-old or older and who do not meet this minimum requirement, can be admitted via an alternative admission path ('toelatingsonderzoek'), based on the degree provider.⁽⁴²⁾

While the Ad programmes are suitable for adult and working learners, the main core of its participants tends to be younger students in the age class of 18-24. The average student age of 26,7 when starting the programme⁽⁴³⁾. Similar to the overall development seen in the

⁽³⁹⁾ SEO (2015), Klaar voor de groei, In opdracht van ministerie van Onderwijs, Cultuur en Wetenschap, SEO-rapport nr. 2015-67, p.vii.

⁽⁴⁰⁾ <https://www.onderwijsincijfers.nl/kengetallen/hoger-beroepsonderwijs/deelnemers-hbo/deelnemers-associate-degree>; 2015. klaar voor de groei, In opdracht van ministerie van Onderwijs, Cultuur en Wetenschap, SEO-rapport nr. 2015-67, p.viii.

⁽⁴¹⁾ SEO (2015), Klaar voor de groei, In opdracht van ministerie van Onderwijs, Cultuur en Wetenschap, SEO-rapport nr. 2015-67, p.viii.

⁽⁴²⁾ <http://www.deassociatedegree.nl/veelgestelde-vragen/over-associate-degree/>

⁽⁴³⁾ SEO (2015), Klaar voor de groei, In opdracht van ministerie van Onderwijs, Cultuur en Wetenschap, SEO-rapport nr. 2015-67, p.vii.

UAS, also the Ad programmes have awarded increasingly more degrees to women than to men; this is especially the case in the last two years. Regardless, slightly more men (51%) are enrolled than women. ⁽⁴⁴⁾ Around 80% of the students who enter an Ad programme are of 'indigenous' origin ('autochtone afkomst'). This is slightly lower than in most related bachelor programmes, where this number is approximately 72%. ⁽⁴⁵⁾

While at the start of its lifecycle the Ad programmes tended to be more often accomplished as part-time degrees (in 2010-11 of the total 1,053 degrees, 495 were awarded as part-time degrees), quickly this trend was overthrown. In 2015-16 around two-thirds of degrees are completed as fulltime programmes ⁽⁴⁶⁾. Although part-time studies are possible, not all Ad degrees are offered as a part-time programme. ⁽⁴⁷⁾ The number of part-time achieved degrees remains to be higher among Ad programmes than Bachelor degrees, which are mostly completed as full-time degrees. ⁽⁴⁸⁾

Among the most common motivations for students to enrol in the Ad programme have been the short duration of the programme (2-years) and the fact that they can afterwards continue with a hbo Bachelor degree. ⁽⁴⁹⁾ Many students who are enrolled in an Ad programme have also indicated that they have considered enrolment in a hbo-bachelor programme. ⁽⁵⁰⁾

Compared to the data on transition between mbo and hbo bachelors ⁽⁵¹⁾, the Associate degree in general attracts more mbo-students compared to the Bachelor. The Associate degree, it can be argued, in that sense lowers the threshold for mbo-students to continue further learning at higher education.

⁽⁴⁴⁾ SEO (2015), Klaar voor de groei, In opdracht van ministerie van Onderwijs, Cultuur en Wetenschap , SEO-rapport nr. 2015-67, p.7.

⁽⁴⁵⁾ SEO (2015), Klaar voor de groei, In opdracht van ministerie van Onderwijs, Cultuur en Wetenschap , SEO-rapport nr. 2015-67, p.26.

⁽⁴⁶⁾ CBS, 5-9-2017: Statline

⁽⁴⁷⁾ <http://www.deassociatedegree.nl/veelgestelde-vragen/over-associate-degree/>.

⁽⁴⁸⁾ SEO (2015), Klaar voor de groei. In opdracht van ministerie van Onderwijs, Cultuur en Wetenschap , SEO-rapport nr. 2015-67, p.28.

⁽⁴⁹⁾ SEO (2015), Klaar voor de groei. In opdracht van ministerie van Onderwijs, Cultuur en Wetenschap , SEO-rapport nr. 2015-67, p.8-9.

⁽⁵⁰⁾ SEO (2015), Klaar voor de groei. In opdracht van ministerie van Onderwijs, Cultuur en Wetenschap , SEO-rapport nr. 2015-67, p.9.

⁽⁵¹⁾ See Bron-bestanden, DUO onderwijsdata, calculations ecbo, see: Mulder, J., Cuppen, J., Aalders, P. (2016), *Mbo-studenten die uitvallen op het hbo: wie zijn ze en waar vallen zij uit? Analyse van studentenstromen over periode 2005-2015.*

Identity of students

In the UAS, students are considered students and not employees. Of course, students may work besides or during their course. Yet, in relation to the degree provider, their status as student does not change.

3.2.3 Changes related to the main purposes and functions of ‘VET at higher levels’

Main destination of graduates

Most of the **UAS graduates** find a job within one year of graduation. In 2015, 77% of the full-time students found a job that was suited to their educational level. This number indicates a slow growth in job placement numbers for UAS graduates after a dip, due to the crisis, between 2007 to 2013, in which the job placements decreased from 83% to 76%. ⁽⁵²⁾ In 2014, the number of UAS graduates who found a job in the first year was 74%. ⁽⁵³⁾ This is higher compared to the job placement numbers for universities, being 69% in 2014. ⁽⁵⁴⁾ A small percentage of graduates are enrolled on a welfare programme for social security. In 2014, 5% of the graduates were registered for governmental income supplement (‘uitkering’). ⁽⁵⁵⁾ The destination of graduates varies also related to the type of degree and specialization. Especially graduates of Associate degree programmes show higher employment rates compared to bachelor and master programme graduates. ⁽⁵⁶⁾ Recent graduates do not always find a fitting job to their educational level. Yet, the number of students who do find a befitting job has increased over time; in 2016 around 80% of graduates were employed on the level of their degree qualifications. ⁽⁵⁷⁾

The degrees offered by the UAS (Ad, Bachelor and Master) also provide possibilities for further studies. On the basis of the Ad, the graduates can enrol in a hbo-Bachelor programme; the hbo Bachelor degree allows enrolling in a hbo-master programme, wo-Bachelor and wo-Master programme. The wo-Bachelor and wo-Master programmes can however set additional requirements (such as an additional preparatory year) to increase the

⁽⁵²⁾ <https://www.onderwijsincijfers.nl/kengetallen/hoger-beroepsonderwijs/aansluiting-onderwijs-arbeidsmarkt>

⁽⁵³⁾ Vereniging Hogescholen (2017), Hbo vogelvlucht

(⁵⁴) <https://www.onderwijsincijfers.nl/kengetallen/wetenschappelijk-onderwijs/aansluiting-wo-arbeidsmarkt>

⁽⁵⁵⁾ <https://www.onderwijsincijfers.nl/kengetallen/hoger-beroepsonderwijs/aansluiting-onderwijs-arbeidsmarkt>

⁽⁵⁶⁾ <https://www.onderwijsincijfers.nl/kengetallen/hoger-beroepsonderwijs/aansluiting-onderwijs-arbeidsmarkt>. It should be considered that the Associate degree is also designed to be combined in addition to employment and to further the careers of employed staff.

⁽⁵⁷⁾ <https://www.onderwijsincijfers.nl/kengetallen/hoger-beroepsonderwijs/aansluiting-onderwijs-arbeidsmarkt>; Researchcentrum voor Onderwijs en Arbeidsmarkt (ROA). 2016. De arbeidsmarkt naar opleiding en beroep tot 2020. ROA-R-2015/6. ISBN: 978-90-5321-543-2. Available on: <https://www.cdho.nl/assets/uploads/2016/08/ROA-tot-2020.pdf>

academically-oriented knowledge, skills and competences. Institutional data from Rotterdam Academy (Hogeschool van Rotterdam, the largest provider of Ads), concerning the transition towards the Bachelor shows that on average (2014-2016) 28 percent of the Ad graduates continue further learning in the Bachelor. ⁽⁵⁸⁾

Occupational status of graduates

The titles for graduated students from **UAS** differ from universities and they have changed over the past few years. In line with the Bologna process UAS graduates' titles changed in 2002 from bc. for a four-year baccalaureus or ingenieur (ing.) to Bachelor (B). Since 2014, schools may also add 'of Arts' or 'of Science' after approval from the NVAO. The title may also have the full discipline added to the title.

Both the title for Associate Degree (Ad) and the hbo-master (M) did not exist before 2002. Similarly to the bachelor, also the hbo-master can be followed by 'of Arts' or 'of Science' depending on the judgement given for a course by the NVAO. ⁽⁵⁹⁾

Before the addition of the title 'of Arts' and 'of Science' the UAS were respected in the Dutch market itself, but undervalued in the international market. ⁽⁶⁰⁾ This potential addition is supposed to ensure proper evaluation of the hbo degree, while also keeping a clear distinction in the binary system. The variation brought to the titles than also ensures distinction from but close similarity to the Research University titles, as well as a valued position of market titles (such as the Ad title).

Within the labour market the hbo Bachelor is considered as a fully accomplished degree; unlike the Bachelor of Arts and Bachelor of Science at Research University level, which are considered fully finished when also obtaining a Masters degree. ⁽⁶¹⁾

The shift in titling can both be considered as academic and professional drift. The equation to the Research Universities has also led to a higher profile of the UAS. However, it is mostly to ensure that the Dutch UAS can cooperate and compete within the internationalized educational framework. Again, the developments can better be interpreted as that the UAS sector is becoming more mature, developing a stronger own profile and developing an own approach to quality in offering practice-oriented higher education programmes at levels 5 to 7 (and in the future probably 8).

⁽⁵⁸⁾ Institutional data from Rotterdam Academy

⁽⁵⁹⁾ <https://www.rijksoverheid.nl/onderwerpen/hoger-onderwijs/vraag-en-antwoord/welke-titel-mag-ik-voeren-als-ik-ben-afgestudeerd-of-gepromoveerd>.

⁽⁶⁰⁾ Commissie Veerman: Toekomstbestendig Hoger Onderwijs Stelsel (2010). Differentiëren in drievoud, p. 46:

[http://www.nvao.net/page/downloads/Rapport_Differenti_ren_in_drievoud_commissie-Veerman.pdf](http://www.nvao.net/page/downloads/Rapport_Differenti%C3%A9ren_in_drievoud_commissie-Veerman.pdf)

⁽⁶¹⁾ Enders, J. De Boer, H.F. and Westerheijden D.F. (2011). Reform of Higher Education in Europe. Sense Publishers, Rotterdam.

3.2.4 Changes related to the perception of 'VET at higher levels'

A key distinction that impacts the parity of esteem in the education system in the Netherlands is the distinction between havo and vwo. The Havo prepares for a practical-oriented higher education programme (hbo-Bachelor); while the vwo prepares for an academically-oriented programme (wo-Bachelor). The vwo is perceived as having a higher status and hence enrolling in a Research University is also seen as having a higher status compared to the UAS.

This being said, the introduction of the BA-MA structure and the emancipation of the UAS has strengthened the profile of the hbo-Bachelor. At the same time, the split between wo-Bachelor and wo-Master has resulted in a weak position of the wo-Bachelor. This degree is not regarded as having a self-standing value: it does not provide a good entry-point in the labour market and only is of value when the graduate also completes its master programme.

There are thoughts going in the direction that the value of wo-Bachelor will in the future even further diminish and related to that, that Research universities will become smaller and more selective. ⁽⁶²⁾

⁽⁶²⁾ Bert de Zwaan (2017). Haalt de Universiteit 2040? Een Europees perspectief op wereldwijde kansen en bedreigingen, p. 210-211.

4. Impact on content and delivery of qualifications and programmes - the epistemological or pedagogical perspective

4.1 Changes in relation to content and profile

Content or profile

On the one hand, **UAS** differentiate themselves from Research Universities by their practical oriented profile. On the other, UAS have been working towards including a research component, be-it that this research does not have an academic orientation, but an applied research orientation whereby the research has direct implications and applicability for the occupational field. What this means in practical terms is defined by the Commission 'Practice-oriented research in the UAS' ⁽⁶³⁾. This code of conduct highlights the professional and societal interest in the conducted research. The Research Universities, in the design of the programme despite introducing professional-oriented elements, still mainly depart from the academic subject content perspective.

By adopting the Bachelor/Master divide, in structure, UAS and Research Universities have grown closely together, including an overlap of research topics. Nevertheless, there remain gaps in skills levels between Bachelors offered by UAS and Research Universities: Research Universities introduce bridging programmes for Bachelors from UAS who would like to enrol in Research University master programmes.

In search of creating a transferable skillset for students, both Research Universities and UAS have come to adopt similar strategies of group work, writing exercises, presentation skills, and connections to the labour market – be it through research or through internships. The transversal skill set has been an important factor in trying to ensure job placements for graduating students.

Some have warned against the excess of academic structures in the UAS, especially by implementing the thesis as requirement for every UAS student. ⁽⁶⁴⁾ However, the thesis also forms a work-practice to show the ability to execute practice-oriented analyses self-management, writing skills, and presentation skills. While the format is academic, and perhaps not directly useful for every student, the skills developed, when done properly, can be of an advantage for students when entering the job market and researching practical issues in their job.

At first sight, it seems that the UAS are moving towards a more academic approach, while the Research Universities are moving to include also a more 'practical' approach, answering to demand of an increasingly changeable labour market. Rather than academic or vocational, both entities seek to implement transferable skills that can be applied either in an academic or in a professional setting. Due to this format and the restructuring of Bachelor – Master

⁽⁶³⁾ Commissie Gedragscode Praktijkgericht Onderzoek in het hbo (2010). Gedragscode praktijkgericht onderzoek voor het hbo. Gedragscode voor het voorbereiden en uitvoeren van praktijkgericht onderzoek binnen het Hoger Beroepsonderwijs in Nederland.

⁽⁶⁴⁾ <http://www.hogeronderwijs.nu/2015/11/hva-docent-hbo-scriptie-is-te-academisch-geworden/>

systems, there is a general feeling that UAS are not so much becoming more academic, but that they improved their profile in conducting practical-oriented research.

Learning outcomes and orientation

Over the years, as already indicated, the practical-research component is strengthened within the UAS programmes. The UAS remain to be professionally oriented, but they are strengthened by the addition of a practical research component. UAS seek to educate how to apply transversal and research skills in a practical environment – as is seen for example in the hbo-nursing degree. Professional knowledge is still a key factor of the training. Depending on the discipline and school, the focus may somewhat shift. In all this, the programmes of the UAS are first and foremost higher education programmes (at level 5-7) and hence include broader skills sets than VET programmes (at level 2-4) including communication, team work, entrepreneurship, responsibility etc.

4.2 Changes in relation to the delivery

The pedagogical/didactical approach

In the 1990s, **hbo-institutes** were still working with nationally determined curricula and the institutes had neither the autonomy, nor the capacity to critically reflect on these curricula and to improve them. The **1993 Comprehensive Higher Education and Research Act** (Dutch abbreviation: WHW: Wet op het Hogeronderwijs en Wetenschap) provided the framework for more autonomy at institutional level to develop curricula, but it still took more than a decade to come to educational programmes of sufficient quality.

The programmes at UAS are competence-based. This means that the programmes are directed at bringing the students to be competent in their practical work when they graduate. The programmes therefore contain theoretical components and practical components. In most programmes there is a lot of attention towards group work and work-practice (simulated work environments and internships).

The Bachelor programmes at Research Universities are more focused on the theoretical component but also here, there is a shift towards a stronger focus on work practice. The Socio-Economic Council (SER: Social Economische Raad) has recently called for more internships as part of the programmes at Research Universities. ⁽⁶⁵⁾

The **private providers' programmes (being regulated higher education programmes)** are mostly theory-based, but might include assignments in simulated work environments or discussing case studies that adult learners bring from their own work experience.

Learning environments

The learning environment in professional or practical-oriented education programmes at higher levels has seen a considerable shift in the last 20 years. This however not so much

⁽⁶⁵⁾ SER (2015). "Leren in het hoger onderwijs van de toekomst: Advies over de Strategische Agenda Hoger Onderwijs 2015 – 2025." Uitgebracht aan de Minister van Onderwijs, Cultuur En Wetenschap, Nr.6 - Oktober 2015. p. 40.

towards integrating the work place as a learning environment, but in embracing the digital learning environment as supporting classroom education and group work. There is however a tendency in the hbo-Bachelor and wo-Bachelor to increase learning at the work place.

Teacher-student relationship and background of teachers

Over the last 20 years a major shift is noticeable concerning the quality and background of teachers. As already indicated, in the 1990s the programmes at the **hbo institutes** were centrally developed and institutes lacked the capacity to critically develop own programmes despite that the legal framework provided the possibility. From that period, a key priority was to improve the quality culture at the institutes and improve the quality of teachers. In the first decade of the millennium the quality of teachers was assessed as problematic and leading to a 'professional vacuum', whereby teachers – as professionals – were considered as not having the professional space to act as professionals, meaning that they were top-down controlled by management. ⁽⁶⁶⁾

Several strategic documents emphasise the importance to improve the quality of teachers in UAS, such as 'Action plan: Learning-Power of the Netherlands (Actieplan: LeerKracht van Nederland⁶⁷); The Highest Good (Het Hoogste Goed) ⁽⁶⁸⁾; and the Strategic Agenda Higher Education and Science 2011 (Strategische Agenda Hoger Onderwijs, Onderzoek en Wetenschap) ⁽⁶⁹⁾ and the Strategic Agenda Higher Education and Science 2015 ⁽⁷⁰⁾. The objective was to have 70% of the teachers at UAS holding a master degree in 2014; and 10% holding a PhD degree. In 2011, 66.2% of teachers at UAS had a master degree ⁽⁷¹⁾ and in 2009 7.7% a PhD degree (no up to date data is available whether this benchmark is reached).

The NRTO code of conduct, a quality label for their members (private education and training providers) includes a requirement of employing knowledgeable teachers, trainers and staff. There is no indication of the required qualification level. ⁽⁷²⁾

⁽⁶⁶⁾ See: Brouwer, O. (2008). Gevraagd: zelfsturende docenten. In: Gansewinkel, H., L. Römken & W. Spee (2008). Complexiteit. Hoera! Kansen en krachten in het hedendaagse onderwijs. Arnhem, Interstudie NDO, pp 119-120. Cited from: WRR (2011), Sectorstudie toezicht hoger onderwijs

⁽⁶⁷⁾ Ministerie van OCW (2007). Actieplan: LeerKracht van Nederland

⁽⁶⁸⁾ Ministerie van OCW (2008), Het Hoogste Goed: Strategische agenda voor het hoger onderwijs-, onderzoek- en wetenschapsbeleid en Kennis in Kaart

⁽⁶⁹⁾ Ministerie van OCW (2011). Strategische Agenda Hoger Onderwijs, Onderzoek en Wetenschap. Kwaliteit in verscheidenheid.

⁽⁷⁰⁾ Ministerie van OCW (2015), De waarde(n) van weten: Strategische Agenda Hoger Onderwijs en Onderzoek 2015-2025

⁽⁷¹⁾ See Ministerie van OCW (2013), Trends in Beeld 2013: Zicht op Onderwijs, Cultuur en Wetenschap

⁽⁷²⁾ https://www.nrto.nl/partnerorganisaties/kwaliteitslabels_en_keurmerken/keurmerk/kwaliteitseisen-nrto-keurmerk/

5. The context of change: rationale and drivers for change or persistence

The main driver for change in **higher education** is the 1993 **Comprehensive Higher Education and Research Act** (Dutch abbreviation: WHW: Wet op het Hogeronderwijs en Wetenschap) and the introduction of the Bachelor-Master degree structure. These processes set the scene for developing the UAS as a self-standing education sector, which is different from the VET sector and the University sector. In order to get there, in the last 20 years a major investment had to be made in improving the quality and developing the profile of the UAS as a place where practice-oriented research and education come together.

The related drivers are the increased autonomy of higher education institutes, the Bologna process and the alignment of UAS programmes with the labour market needs. Concerning the later, this includes that people need to be educated to be competent professionals; be able to work together and take responsibility. In addition, it means that graduates are able to conduct practice-oriented research to solve problems encountered during work.

The change process related to the UAS in the last 20 years is perceived as needed. The quality of the programmes was not considered good and there were a number of scandals in 2011 (⁷³) related to quality and diploma-fraud that can be regarded as symptoms of the system focussing on accommodating the high inflow of students and less on ensuring the quality. Critical remarks are however also placed related to the growth of the UAS sector and 'copying' the Research Universities in willing to offer masters and PhD programmes as well. A specific element in this is the name-change – in English – towards Universities of Applied Science; and the name change from 'HBO-raad' (HBO-council) to 'Vereniging Hogescholen' (Association of 'hogescholen') in 2013. In the VET sector, the association is called 'MBO-raad' (VET-council), in the University sector, the association is called 'Vereniging van Samenwerkende Nederlandse Universiteiten' (Association of cooperating Dutch Universities).

(⁷³) See for instance: <https://www.volkskrant.nl/binnenland/hbo-affaire~a1882371/> ; <https://www.beteronderwijsnederland.nl/blogs/2011/04/onderwijsinspectie-39-procent-van-studenten-inholland-kreeg-onterecht-diploma/>

6. Zooming in on nursing and engineering

Please reflect on the particular situation in the nursing and engineering areas: Which main change processes (in relation to 'academic drift', 'vocational drift', expansion of VET at higher levels outside higher education') can be observed in this area? What are the specificities and differences compared to other areas?

Nursing

The hbo Nursing ('verpleegkundige') degree underwent a large change. The change followed a general discussion concerning titles and job functions and responsibilities, including questions on how professionals can utilize their skills and be better equipped in influencing preventative care. ⁽⁷⁴⁾

While the mbo and hbo schools both offer nursing degrees, till recent, there was no clear distinction in their job description. ⁽⁷⁵⁾ This also led to a lack of utilizing the different skills and competences nurses bring to their work environment. ⁽⁷⁶⁾ This change has been all encompassing and has effected degree qualifications, job positions and work titles.

On 28 January 2015 a new degree qualification for 'Bachelor of Nursing' (hbo) was presented. The new curriculum, which was implemented in September 2016, included the following changes ⁽⁷⁷⁾:

- The new profile has a focus on generalization;
- There is a focus on the critical analysis and research skills of nurses; using an evidence-based practice approach and reflective outlook to innovation and improvement;
- Institutions cooperate with regional care facilities. The educational offer will be placed within a regional context;
- Elective coursework is restricted to 30 ECTS.
- It is a dynamic profile that can be adapted for market demands. ⁽⁷⁸⁾

⁽⁷⁴⁾ Nivel (2015). Competenties in een veranderende gezondheidszorg Ervaringen van verpleegkundigen, verzorgenden, begeleiders en Praktijkondersteuners

⁽⁷⁵⁾ <https://www.nursing.nl/nvz-presenteert-functieprofielen-mbo-en-hboverpleegkundige/>.

⁽⁷⁶⁾ Nivel (2015). Competenties in een veranderende gezondheidszorg Ervaringen van verpleegkundigen, verzorgenden, begeleiders en Praktijkondersteuners

⁽⁷⁷⁾ <https://www.nursing.nl/opleidingsprofiel-hbo-v-er-komt-geen-nieuw-niveau-bij-1708011w/>; <https://www.nursing.nl/niveau-6-feiten-en-fabels/>. The new degree is NLQF/VET 6, which is the equivalent of a former system in which the level was marked 5, based on the 1996 accreditation and classification system

⁽⁷⁸⁾ <https://www.nursing.nl/hbo-verpleegkundige-wordt-niveau-6-1692955w/>

The Ad programme 'Management in Caretaking' will bridge the gap between the mbo nursing (level 4) and hbo nursing (level 6) degrees, despite not being a nursing degree itself. ⁽⁷⁹⁾

To ensure that these new curricula are also applied in practice, new titles for nurses were introduced in 2016, alongside with new job profiles. While the mbo-nurse's (now 'basisverpleegkundige') role did not change, the hbo-verpleegkundige (now 'Regieverpleegkundige') will have a more managing role within the team, using evidenced-based practice and strong analytical thinking. The hbo-nurse will take the lead in cases of unforeseen scenarios and problems, using their skillset. In addition, the 'verzorgende IG (individuele gezondheidszorg)' (Caretaker individual health care) is a broader professional profile, which can be both on hbo or mbo level. ⁽⁸⁰⁾

The changes in the nursing degree are a clear demonstration of how market demand as well as educational policy shifts have re-shaped the educational sphere for nursing degrees. The degrees at hbo level include an emphasis on practical use, but also move towards an academic drift by encouraging research skills and publications. Simultaneously, the Ad expanded the VET by filling the level 5 gap with a management degree.

Engineering

Engineering ('ingenieurschap') has been part of the technical studies at Universities of Applied Sciences as well as at upper secondary vocational schools.

In the past years there have been several thorough changes to create a better connection between the educational institutions and the labour market. This connection is both sought in terms of student influx and placements (quantity) as well as in terms of meeting market demands in labour skills (quality).

As the continuous shortage of technicians and engineers at the job market could not be sustained by attracting foreign technicians and engineers, both in the mbo as well as the hbo changes were made to attract more students and ensure support of working technicians and engineers. At the Universities of Applied Sciences, the 'Sprint Programme' (Sprint Programma) sought to increase the influx of students in technical degrees at Universities of Applied Sciences by 15%. The programme, which ran from 2004 to 2010, focussed on modernizing the educational programme and increasing relations between the UAS and upper secondary general education schools, upper secondary vocational schools, and the business industry.

Although the programme achieved this 15% increase, it became evident in 2006 that this growth was not sufficient to cover the gap between market demand and newly graduated engineers. Hence, in 2009 a committee was appointed to prepare a new investment plan for the technical sector within the UAS. This commission's advice to ensure specialization of UAS by differentiation in their course offering was underlined in 2010 in the Commission Veerman report ⁽⁸¹⁾ in which it was concluded that both for student-market (informing

⁽⁷⁹⁾ <https://www.nursing.nl/opleidingsprofiel-hbo-v-er-komt-geen-nieuw-niveau-bij-1708011w/>.

⁽⁸⁰⁾ <https://www.venvn.nl/Berichten/ID/1020793/Eindelijk-onderscheid-tussen-verpleegkundige-mbo-en-hbo>; <https://www.nursing.nl/nvz-presenteert-functieprofielen-mbo-en-hboverpleegkundige/>;

⁽⁸¹⁾ as described in 'Toekomstbestendig Hoger Onderwijs Stelsel'

students about their choices for an educational programme) and the job market (what is needed on the labour market) require a better formulated profile.⁸² The underlying idea is that educational specialization will lead to better quality of education and a wider variety of clear choices in the educational programme offering.

In 2011, the association of higher educational institutions (Vereniging Hogescholen) assigned a commission, headed by Martin van Pernis, to survey the future demands made to the technical and engineering departments. The survey reached the following 4 conclusions:

1. The professional profile of an engineer needs to be enriched. There are amounting expectations of engineers for which they are currently not prepared in their education.
2. The shortage of Dutch engineers increases.
3. Knowledge changes quickly and has a quick turnover; educational institutions and private businesses need to cooperate more closely. In order to do so, there needs to be more clarity among educational institutions (i.e. fewer institutional course offering with clear specializations). Moreover, educational institutions must offer a broader educational basis. The labour market must be consulted and included to draw up the required learning competences.
4. At an international level, the education of technical teachers and trainers is relatively low.⁽⁸³⁾

The van Pernis commission's conclusions and recommendations were presented by the Topsector (priority-sector) in the 'Masterplan Bèta and Technology' (titled: From 4 to 10) and presented to the Ministry of Education, Culture and Science.⁽⁸⁴⁾ The plan was well received by the Ministry in 2012.⁽⁸⁵⁾ The idea of establishing 'Centers of Expertise' was included in the 'Sector Investment Plan' for the Universities of Applied Sciences for 2011-2016 by the Ministry of Education, Culture and Science⁽⁸⁶⁾ as well as a focus on placements and traineeships, improved transition and cooperation between different educational institutions, and closer collaboration between the education and labour sectors.⁽⁸⁷⁾

To battle the shortage of qualitative strong technical professionals on the market and to encourage a fast-growing influx of students in technical programmes educational institutions, employers, sectors and regions, as well as the State bundled their efforts together in the 'Techniekpact.' This pact seeks to create quicker and effective change to:

1. Attract students to technical education;
2. Ensure placements in the technical sector after graduation;
3. Ensure longevity of technical professionals in the market.

⁽⁸²⁾ Hoger Onderwijs Groep (No date), Samen bouwen en ruimte geven aan de toekomst, p.19

⁽⁸³⁾ Hoger Onderwijs Groep (No date), Samen bouwen en ruimte geven aan de toekomst, p.19-20.

⁽⁸⁴⁾ Hoger Onderwijs Groep (No date), Samen bouwen en ruimte geven aan de toekomst, p.21.

⁽⁸⁵⁾ Ministerie van EZ (2012), Kabinetsreactie op het Masterplan Bèta en Technologie: 'Naar 4 op de 10; meer technologietalent voor Nederland'

⁽⁸⁶⁾ Hoger Onderwijs Groep (No date), Samen bouwen en ruimte geven aan de toekomst, p.19

⁽⁸⁷⁾ Kabinetsreactie op het Masterplan Bèta en Technologie: 'Naar 4 op de 10; meer technologietalent voor Nederland'

While this led to 22 action points that concerned the larger market (including both (v)mbo and hbo schools), five UAS-specific agreements were reached:

1. The State will invest € 100 mln. for co-funding collaborative investments between the UAS and the labour market;
2. Hindrances between private and public collaborations will be removed;
3. The number of Bachelor degree programmes for Technical studies (i.e. Engineering) will be reduced from 65 to approximately 25 degree programmes. These degrees will be clustered into six domains. The UAS will coordinate the educational offering among themselves.
4. Companies in the sector will make 1,000 grants and funds available for students of excellence at the UAS.
5. UAS and the social partners in the technical sectors will cooperate to improve 'lifelong learning' and to coordinate the educational demands and supply. ⁽⁸⁸⁾

The effects of these action points have been seen in the decrease of course offerings, by which the 65 different Bachelor degree programmes have been reduced to 36 in 2016. ⁽⁸⁹⁾

These renewed Bachelor degrees also acquired a new form in which a broader basic education was offered, before students can choose for a further specialisation in the professional sector. In addition to the European Network for Accreditation of Engineering Education and the NVAO accreditation, in which the Dublin criteria are included, the HBO Committee also added four additional end qualifications requirements to be reflected in the UAS programmes:

- a. Solid theoretical basis
- b. Research skills that add to the professional development
- c. Professional craftsmanship
- d. Ethical and societal orientation in line with the professional responsibilities. ⁽⁹⁰⁾

In addition to these requirements, each educational institution can create its own portfolio with different focal points, in cooperation with the labour market, to give direction to research and education. ⁽⁹¹⁾

In 2014, the Ministry approved the committee for higher technical education's (HTNO) request to form such new Bachelor degrees. Per September 2015 the new, broader Bachelor degree programmes have been in place, to which each institution adds a specialization. In addition to the core competencies of UAS sector-wide, i.e. research, collaboration and communication, and management, UAS institutions are then free to and responsible for adding and defining their own competencies, but within a singular framework. ⁽⁹²⁾

⁽⁸⁸⁾ Hoger Onderwijs Groep (nd.). Samen bouwen en ruimte geven aan de toekomst, p. 21-23.

⁽⁸⁹⁾ HTNO Roadmap 2016, p.3.

⁽⁹⁰⁾ HBO-raad (2009). Kwaliteit als opdracht. Den Haag: HBO-raad, as described in Samen bouwen en ruimte geven aan de toekomst, p. 32.

⁽⁹¹⁾ Hoger Onderwijs Groep (nd.). Samen bouwen en ruimte geven aan de toekomst, p. 24.

⁽⁹²⁾ Hoger Onderwijs Groep (nd.). Samen bouwen en ruimte geven aan de toekomst, p. 32-49.

In comparison to 2006, there are less programmes; courses offer a broader preparation for the labour market; and competences in each course are clearly defined and harmonized, using one system for organization and comparison.

The changes seem to indeed have created a better transition to the labour market for newly graduated students. Since 2013, unemployment among newly graduated students from bachelor programmes offered at UAS has decreased from 7,3% in 2013, 6,5% in 2014, and 5,5% in 2015 to 4,6% in 2016. This decline is seen among full-time, part-time and dual students. According to the HBO Monitor graduates also found employment fitting to the qualification obtained (in 2014, 74% of graduates found a position on hbo level within 18 months after graduation, in 2016 this was 80%). This indicates that the new Bachelor programmes correspond well with the labour market demands. ⁽⁹³⁾

While the above may indicate a vocational shift, in terms of better transition to the labour market, the duality of the HBO maintains to be a strong hold. The 'Centres of Expertise' include a budget specialized for research in collaboration with private and public stakeholders. ⁽⁹⁴⁾ Moreover, research has been mentioned as central point of the key end qualifications defined for the UAS sector-wide. The dual position of the UAS is also maintained in the HTNO Roadmap 2025. However, there is an added focus on lifelong learning, which can be both interpreted as vocational and academic drift. Additionally, there is a focus on the position of starting professionals and the social position of engineers; students are sought to be versatile and interdisciplinary equipped, encouraging transversal skills and job-specific skills. Holders of a Bachelor degree are then open to different add-ons that befit the education of engineers. The level of academic drift and vocational drift is then also dependent on the Bachelor degree and on the individual UAS.

7. Current debates and future perspectives

Please describe main current debates and any trends that can be observed or expectations related to future developments of 'VET at higher levels' (and specifically in the nursing and engineering areas) and provide evidence underpinning trends or expectations.

Current debates

The key reference document for the future development of higher education in general remains the Commissie Veerman report ⁽⁹⁵⁾ which indicates that higher education institutions should specify and differentiate, while focusing on quality. This 'advice' still informs the developments at national level and at institutional level. Gradually the higher education sector becomes more differentiated, meaning that institutes (both UAS and Research

⁽⁹³⁾ <http://www.hbo-engineering.nl/nieuws/arbeidsmarktpositie-hboer-steeds-beter>

⁽⁹⁴⁾ Kabinetsreactie op het Masterplan Bèta en Technologie: 'Naar 4 op de 10; meer technologietalent voor Nederland'

⁽⁹⁵⁾ Commissie Veerman: Toekomstbestendig Hoger Onderwijs Stelsel (2010). Differentiëren in drievoud: http://www.nvao.net/page/downloads/Rapport_Differenti_ren_in_drievoud_commissie-Veerman.pdf

Universities) seek their own unique profile in terms of organisation, orientation, programmes offered, research conducted and network enrolled in. This is also seen in the Nursing and Engineering areas.

In addition to the need for specialization and differentiation, the Nursing and Engineering sectors also indicate a development in the broadening of the degrees by a focus on transversal skills: a trend driven by the labour market. As mentioned in the Commission van Pernis' report, modern day professionals are required to also show an entrepreneurial strength, international orientation, holistic and integral approach, and social capabilities, in addition to theoretic knowledge. ⁽⁹⁶⁾

The current debates concerning higher education relate to making higher education in general more flexible and accessible for non-traditional students and to increase the role of higher education institutes (mainly UAS) in lifelong learning. This includes experimentation with the part-time higher education pathway, flexibilization in paying college fees, experimentation in demand-side funding and applying a more modular approach to higher education programmes. Currently on all those topics experiments are being conducted which should inform future policy development.

Another current topic of discussions is the further development of the Ad and the increased cooperation between UAS and VET colleges in jointly offering those programmes and supporting smooth transition from VET to higher education.

An existing issue related to the hbo-Bachelor is the experienced tension between accessibility, quality, and academic performance (coined as the 'trilemma' of professional higher education) ⁽⁹⁷⁾. The trade-offs between these three goals are most manifest among the universities of applied sciences that have a highly diverse student population.

On-going developments in the technical industry also demand further consolidation and cooperation between UAS and the labour market stakeholders. Moreover, there is a focus on further encouraging flexibility through interdisciplinary add-ons in the educational profiles on top of a solid basic knowledge (covering broader professional profiles). This is sought in the direction of professional collaborations, as well as cross learning between institutions and modular learning. ⁽⁹⁸⁾

Trends related to future developments

A future development could be the introduction of PhDs in UAS. The scope of programmes offered by UAS were already broadened as currently UAS can offer Master programmes as well. This will probably expand towards the PhD programmes as well in particular practice-oriented subjects (such as the arts and teacher education).

The future development of non-regulated qualifications offered by private providers is unclear. It can be that their role becomes larger as their visibility will increase with the further implementation of the NLQF; but it can also be the case that due to the experiments with

⁽⁹⁶⁾ S Samen bouwen en ruimte geven aan de toekomst, p. 19.

⁽⁹⁷⁾ Higher Education and Research Review Committee (RCHOO) (2016). System report 2016, p. 21.

⁽⁹⁸⁾ HTNO Roadmap 2025, 2016.

regard flexibilization of regulated qualifications and publicly-funded higher education institutions, the private ones will have stronger competition.

Another long-term development could be that the binary structure, in which the degree-types (bachelor and master) are offered with a professional and an academic orientation, which forms the cornerstone of the Dutch higher education system will gradually erode. With the UAS becoming more mature (offering professional masters and PhDs), and the precarious position of the wo-Bachelor, it could be that the double orientation within the Bachelor (hbo and wo) will gradually disappear and that Research Universities will become more selective and specialised ⁽⁹⁹⁾. The recent SER report indicates that the binary structure is under threat, but that it still contributes to the visibility and transparency of the Dutch higher education system and its programmes. ⁽¹⁰⁰⁾

⁽⁹⁹⁾ See for instance: Bert de Zwaan (2017). Haalt de Universiteit 2040? Een Europees perspectief op wereldwijde kansen en bedreigingen, p. 210-211.

⁽¹⁰⁰⁾ SER (2015). Leren in het hoger onderwijs van de toekomst Advies over de Strategische Agenda Hoger Onderwijs 2015 - 2025

8. Overview

This table should provide an overview of what types of changes due to ‘academic or vocational drift’ or ‘expansion of VET at higher levels (outside higher education)’ can actually be observed in the country.

Please indicate the main processes and phenomena identified during the last 20 years in the table below – referring to the direction of change, the object of change, the context of change (or target area of change), the key processes observed and the results of these processes as well as their time frame and indicate the sections in which they are presented! Examples of key processes/results are presented in table 1 of the guidance note.

Table 1 **Overview**

Direction of change	Object of change	Context/target area	Key processes observed / results	Timeframe	Section
Academic drift	Higher Education	professionally-oriented HE			
		traditional (or academic) HE programmes			
	VET (outside HE)	VET transformed to HE			
		VET offered at higher levels outside HE			
Vocational drift	Higher Education	professionally oriented HE			
		traditional (or academic) HE programmes			
Expansion of VET at higher levels (outside HE)	VET at higher levels (or ‘higher VET’) offered outside HE				

Please note: Table not completed because terms/concepts do not really apply!

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