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19

Fixed and Fuzzy Boundaries in Higher Education

A comparative study of (binary) structures in nine countries

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Introductie

Voor elk van de hogeronderwijsstelsels betrokken in dit project – Nederland, Oostenrijk, Denemarken, Duitsland, Finland, Vlaanderen, Frankrijk, Zweden en het Verenigd Koninkrijk – is in de hoofdstukken vier tot en met twaalf de stand van zaken weergegeven met betrekking tot de meest belangrijke scheidslijnen tussen sectoren en hogeronderwijs-instellingen in de nationale stelsels. In deze comparatieve analyse worden thematische vergelijkingen gemaakt. De thema's die in de landenbeschrijvingen de leidraad hebben gevormd – input, structuurkenmerken, andere systeemkenmerken, output en (recente) ontwikkelingen – zijn ook richtinggevend voor de analyse in dit hoofdstuk. Bij deze thematische vergelijkingen vormt de positie van het Nederlandse hogeronderwijsstelsel ten opzichte van de andere systemen veelal het uitgangspunt. Aan het eind van dit hoofdstuk worden de thematische elementen samengebracht om te reflecteren op de algemene positie van het Nederlandse stelsel ten opzichte van de andere stelsels.

Input

Omvang van de sectoren

Een opvallend kenmerk van het Nederlandse hoger onderwijs is, dat de sector voor het hoger beroepsonderwijs aanmerkelijk omvangrijker is dan de universitaire sector. De omvang van de sectoren is uitgedrukt in studentenaantallen per sector, figuur 1.1 geeft een overzicht van de omvang van de sectoren in de betrokken landen.

Figuur 1.1: *Verdeling van studentpopulatie naar type instelling (1996, headcount)*

	universitair	%	niet-universitair	%
Oostenrijk	231311	98%	3756	2%
Denemarken	52004	30%	123955	70%
Finland	137173	76%	44339	24%
Vlaardingen	58467	38%	94140	62%
Frankrijk	1132888	58%	834854	42%
Duitsland	1395386	76%	442018	24%
Nederland	165880	37%	278253	63%
Zweden	441069	100%		
Verenigd Koninkrijk	1392607	100%		

Ook in Vlaanderen is de 'andere' sector groter dan de universitaire, de situatie is vergelijkbaar met de Nederlandse. In Denemarken is de MVU sector (middellange opleidingen) aanmerkelijk groter dan de universitaire sector. Als we de MVU en KVU sector (korte opleidingen) samennemen, is het aandeel niet-universitair zelfs groter dan in Nederland. In alle andere landen is de universitaire sector aanmerkelijk groter dan de 'andere' sector of de 'andere' sectoren. De omvang hangt nauw samen met de breedte van het opleidingenaanbod. In stelsels met een geringe omvang van de 'andere' sector(en) is in het algemeen het opleidingenaanbod, uitgedrukt in het aantal disciplines of vakgebieden dat wordt aangeboden in de sector, ook geringer. Dit is bijvoorbeeld het geval in Oostenrijk en Finland en in iets mindere mate in Duitsland.

Toelating

In het Nederlandse hoger onderwijs bestaat er een duidelijk onderscheid met betrekking tot de toelatingscriteria tot de HBO-sector en de universitaire sector. Twee verschillende opleidingspaden in het secondair onderwijs – HAVO/MBO en VWO – bereiden respectievelijk voor op opleidingen aan de hogescholen en de universiteiten. Het onderscheid wordt enigszins onscherp door het feit dat VWO-ers op grond van hun diploma mogen instromen in het HBO en dat bezitters van een propedeutisch getuigschrift of een einddiploma van een hogeschool mogen instromen in het universitaire onderwijs.

De situatie in Duitsland komt in grote lijnen overeen met die in Nederland. De *Fachhochschulereife* stelt abituriënten in staat om in te stromen in een *Fachhochschule*, maar niet in de universiteit. Het bezit van een *Hochschulreife* betekent een algemeen toelatingsbewijs voor zowel *Fachhochschulen* als universiteiten. De systemen in Oostenrijk, Vlaanderen en Zweden hebben gemeenschappelijk dat er – in het algemeen – gelijke toelatingseisen zijn voor de verschillende sectoren in het hoger onderwijs. Een algemeen diploma van het voortgezet onderwijs geeft toegang tot verschillende vormen van hoger onderwijs. Daarmee onderscheiden deze landen zich duidelijk van Nederland. De vergelijking tussen Denemarken, Frankrijk en het Verenigd Koninkrijk aan de éne kant en Nederland aan de andere, maakt duidelijk dat er in deze drie buitenlandse stelsels in principe sprake is van universele toegang op basis van een algemene kwalificatie van het voortgezet onderwijs. Echter, in aanvulling op de algemene toelating, worden door de instellingen diverse selectiemechanismen toegepast (het *concours* in Frankrijk, *A-levels* in het Verenigd Koninkrijk). Hierdoor ontstaan statusverschillen tussen instellingen en/of sectoren. In Frankrijk en Denemarken (in beperkte mate) bestaan die verschillen voornamelijk tussen sectoren, in het Verenigd Koninkrijk gaat het om statusverschillen tussen instellingen.

Naast de kwalificerende diploma's en de selectie, worden in alle stelsels specifieke eisen gesteld aan de kandidaten – gerelateerd aan de inhoud van de te volgen opleiding in het hoger onderwijs. Elk systeem, weliswaar met enige variatie in de instrumentatie van de eisen, kent een vorm van vakkenpakket- of profieleisen zoals die ook in Nederland bestaat. Ook worden in de meeste systemen vaardigheidseisen (bijvoorbeeld op het artistiek-creatieve of fysieke vlak) gesteld met betrekking tot bepaalde opleidingen (muziek, dans, lichamelijke opvoeding).

Structuurkenmerken

Programmaduur
In het midden van de jaren tachtig is voor de Nederlandse sectoren een gelijke nominale programmaduur ingesteld voor opleidingen van de eerste fase. Sinds die tijd zijn er uitzonderingen ontstaan op deze regel. Zo kennen veel programma's in de universitaire landbouw- en techniekssector tegenwoordig een cursusduur van vijf jaar en zijn er in het HBO enkele korte opleidingen (van twee jaar). Toch blijft het beeld van een uniforme opleidingsduur in grote lijnen overeind. In het Verenigd Koninkrijk is de opleidingsduur uniform, er is geen verschil tussen de voormalige *polytechnics* en de 'oude' universiteiten. In Oostenrijk, Duitsland en Vlaanderen is duidelijk meer variatie in de opleidingsduur samenhangend met de sector of instellingstype waarin de opleiding wordt aangeboden. De variëteit in programmaduur tussen de typen instellingen is het grootst in Denemarken, Frankrijk en Zweden.

Diploma's en graden
De bestudeerde hogeronderwijsstelsels onderscheiden zich nauwelijks wat de variatie in typen diploma's en/of graden per sector betreft. De sector waar een student een opleiding heeft gevolgd kan bijna automatisch afgeleid worden van het verkregen diploma of de verworven graad. Het Verenigd Koninkrijk vormt de uitzondering op dit patroon omdat de voormalige polytechnics en universiteiten (nu alle behorend tot de universitaire sector) in naam tot identiek diploma's en graden opleiden.

Beroepsgerichte versus academisch
Het verschil tussen beroepsgerichte en academische opleidingen is in de meeste hogeronderwijssystemen slechts gradueel: geen van de systemen kent een zeer sterke samenhang tussen type opleiding en sector. In het algemeen legt de universitaire sector de nadruk op academisch gerichte opleidingen en de 'andere' sectoren leggen vaak meer het accent op beroepsgerichte opleidingen. Echter, veel instellingen in de universitaire sectoren verzorgen ook beroepsgerichte opleidingen. Daarnaast is het onderscheid tussen opleidingen die zijn gericht op onderwijs gebaseerd op wetenschappelijk onderzoek en op wetenschappelijke kennis soms moeilijk te maken. In Zweden is de situatie het meest diffuus, terwijl het Oostenrijkse systeem een voorbeeld lijkt te zijn van een vrij sterke scheiding tussen academische opleidingen (verzorgd door de universiteiten) en beroepsgerichte opleidingen (verzorgd door de *Fachhochschulen*). In Vlaanderen ligt de scheiding niet zozeer tussen de universitaire sector en de hogescholen sector, maar binnen de laatstgenoemde sector tussen opleidingen van één cyclus (beroepsgericht) en opleidingen van twee cycli (gebaseerd op wetenschappelijke kennis).

Promotierecht
Een zeer duidelijk verschil tussen de universitaire en andere sector(en) in alle bestudeerde landen bestaat ten aanzien van het aanbieden van trajecten leidend tot de doctorsgraad. Het promotierecht is in bijna alle landen voorbe-

houden aan de universitaire sector.[1] Dit betekent overigens niet altijd dat alleen kandidaten met een universitair *(Master's)* diploma worden toegelaten. In veel landen staat het traject ook open voor afgestudeerden uit andere sectoren, hoewel in de praktijk de overgrote meerderheid instroomt met een universitair diploma.

Onderzoek
Het verschil tussen sectoren in het al dan niet aanbieden van een promotietraject hangt nauw samen met het onderscheid dat in systemen wordt gehanteerd met betrekking tot het al dan niet uitvoeren van fundamenteel en/of toegepast onderzoek. In het Verenigd Koninkrijk worden de bestaande verschillen in 1992 wettelijk ongedaan gemaakt. In de praktijk bestaat er echter nog een duidelijk onderscheid tussen de voormalige *polytechnics* en de 'oude' universiteiten waar het gaat om het aandeel fundamentele onderzoek en het aantal PhD studenten. Zweden vormt de uitzondering op de monopoliepositie met betrekking tot het opleidingen van PhD studenten en het uitvoeren van fundamenteel onderzoek: enkele *university colleges* hebben recent het recht verworven om de doctorsgraad uit te reiken en fundamenteel onderzoek (sommige instituutsbreed, enkele andere binnen enkele disciplines) uit te voeren. Hoewel fundamenteel onderzoek dus voornamelijk voorbehouden is aan de universitaire sectoren, voeren de 'andere' sectoren in de bestudeerde systemen wel vaak – meestal in beperkte mate – toegepast onderzoek uit, gefinancierd uit bronnen variërend van (lokale, regionale) overheden tot het bedrijfsleven.

Intermediaire kwalificaties
Intermediaire kwalificaties bestaan nauwelijks in Nederland (ondanks de wettelijke mogelijkheid om dergelijke kwalificaties te introduceren in de universitaire sector). Een vergelijkbare situatie bestaat in Denemarken, waar de *Bachelor degree* een formele tussenkwalificatie is, maar door de studenten en ook werkgevers nauwelijks wordt gezien als kwalificatie voor de arbeidsmarkt. Zweden, het Verenigd Koninkrijk en Frankrijk (tot op zekere hoogte) kennen wel tussenkwalificaties die zowel opleiden voor een positie op de arbeidsmarkt als toegang bieden tot een vervolgtraject in het hoger onderwijs. De andere systemen kennen wel tussendiploma's, maar deze kwalificeren niet voor de arbeidsmarkt; ze geven 'slechts' aan dat een bepaald deel van het opleidingsprogramma is afgerond (bijvoorbeeld het *kandidaats* in Vlaanderen en het *Grundstudium* in Duitsland).

Samenwerking tussen sectoren
Samenwerking tussen instellingen van verschillende sectoren (bijvoorbeeld op het terrein van gezamenlijke curriculumontwikkeling, het afstemmen van doorstroom tussen opleidingen van verschillende sectoren en het gebruik maken van elkaars infrastructuur) komt relatief vaak voor in Nederland en Vlaanderen en in enige mate in Zweden. Oostenrijk en Denemarken zijn voorbeelden van hogeronderwijsstelsels waar interactie tussen de verschillende sectoren nauwelijks plaatsvindt.

[1] In de meeste landen zijn er – veelal historisch bepaalde – uitzonderingen op deze regel, bijvoorbeeld niet-universitaire kerkelijke instellingen die ook het promotierecht hebben.

Andere systeemkenmerken

Bekostiging
De universitaire sectoren worden in de betrokken hogeronderwijsstelsels in zeer belangrijke mate door de overheid bekostigd. Naast de middelen van de overheid, verwerven de universiteiten vaak middelen uit centrale onderzoeksbudgetten – die veelal worden beheerd door *research councils* – op competitieve basis. Zweden vormt een uitzondering in die zin dat ook *university colleges* mogen meedingen naar fondsen van *research councils*. In welke mate de universitaire sectoren naast overheidsfinanciering middelen uit contractactiviteiten verwerven, verschilt sterk van land tot land en instelling tot instelling.

De bekostiging van 'andere' sectoren kent meer variatie dan die van de universitaire sectoren. Een deel van de 'andere' sectoren (bijvoorbeeld in Nederland, Denemarken en Vlaanderen) wordt in zeer belangrijke mate door de overheid bekostigd. Een beperkt deel van de inkomsten wordt gefinancierd door middelen verworven uit contractactiviteiten. De recent ontstane beroepsgerichte sectoren in Oostenrijk en Finland lijken een andere mix te kennen van middelenverwerving. In deze landen dragen regionale en plaatselijke overheden ook in belangrijk mate bij aan de bekostiging van de *Fachhochschulen* en AMKs. De genoemde sectoren kennen ook vaker een private of quasi-private grondslag dan de onderwijssystemen waar de beroepssector reeds langere tijd bestaat.

Verschillen in (publieke) bekostigingssystematieken hangen onlosmakelijk samen met het al dan niet uitvoeren van fundamenteel en/of toegepast onderzoek (zie ook hierboven). De instellingen die worden geacht fundamenteel onderzoek uit te voeren (en de opleiding tot de doctorsgraad aanbieden), worden op een andere wijze bekostigd dan de instellingen die deze taak niet toebedeeld hebben gekregen.

Regelgeving
Met betrekking tot de regelgeving, kennen Nederland, Zweden en het Verenigd Koninkrijk een omvattende wet die van toepassing is op het gehele hogeronderwijsstelsel. De andere landen kennen afzonderlijke wetgeving voor de verschillende sectoren. Het Duitse systeem onderscheidt zich enigszins van de andere, omdat er zowel regelgeving bestaat op het federale niveau als op het niveau van de *Länder*. De nationale regelgeving stelt de algemene kaders en op regionaal wordt invulling aan die kaders gegevens, waardoor (vooral kleinere) verschillen tussen de *Länder* ontstaan. Welk ministerie de zeggenschap over het hoger onderwijs uitoefent, is in belangrijke mate historisch bepaald. Sommige systemen kennen een separaat ministerie voor onderwijs, in andere systemen valt het hoger onderwijs (geheel of gedeeltelijk) onder een ministerie van onderwijs en wetenschappen, onderwijs en cultuur, landbouw, en/of onderwijs en transport.

Personeel
De wijze van organisatie van het personeel in de verschillende sectoren hangt sterk samen met de eventuele uitoefening van de onderzoekfunctie. Sectoren die deze functie omvatten, kennen veelal de 'klassieke' hiërarchische opbouw van het personeelsbestand bestaande uit professoren, *associate professors*, universitaire docenten en PhDs. Voor het uitoefenen van de hogere functies wordt in de regel geëist dat de betreffende persoon de doctorsgraad heeft behaald.

De meer beroepsgerichte sectoren kennen meer variëteit in de personeelscategorieën, maar de gemeenschappelijke noemer is wel dat voor een groot deel van de staf geldt dat ze over relevante professionele ervaring dienen te beschikken.

Kwaliteitszorg
In het algemeen moet opgemerkt worden dat er grote verschillen bestaan in de aanpak van de kwaliteitszorg tussen de verschillende landen, onafhankelijk van het feit of er een nationaal systeem is ingevoerd of niet (variërend van interne kwaliteitszorg en externe evaluatie tot accreditatie). Vlaanderen en Nederland kennen vergelijkbare systemen van kwaliteitszorg en –controle in beide sectoren, maar de organisatie van de processen in de verschillende sectoren is in handen van verschillende actoren. In Frankrijk, Zweden, Denemarken (recent) en het Verenigd Koninkrijk, zijn systeembrede organisaties verantwoordelijk voor de handhaving van de kwaliteit van het hoger onderwijs. Duitsland kent geen nationaal systeem van kwaliteitszorg. Er bestaat wel een nationaal accreditatiesysteem dat vooralsnog alleen van toepassing is op de 'nieuwe' *Bachelor* en *Master* programma's. De uitvoering van de accreditering op het niveau van de *Länder* kan verschillen. In Oostenrijk is het verschil in aanpak tussen de sectoren groot. De universitaire sector kent een traditioneel systeem van interne kwaliteitszorg, terwijl voor de *Fachhochschulen* een accrediteringssysteem is ontworpen.

Output

Arbeidsmarkt
Het zal geen verbazing wekken dat de arbeidsmarktsituatie van afgestudeerden van het hoger onderwijs aanmerkelijk beter is dan die van een niet-geschoolden of laaggeschoolden. Tussen de sectoren van het hoger onderwijs in de verschillende landen zijn de verschillen soms klein (zoals op dit moment in Nederland, Duitsland en Denemarken) en soms groot (zoals in Frankrijk, waar het verschil in werkloosheidspercentages tussen universiteiten [10%] en Grandes écoles [3%] aanmerkelijk is). Over de 'waardering' van verschillende typen afgestudeerden door de arbeidsmarkt is – afgezien van enig inzicht in de startsalarissen – weinig bekend. De komst van de AMKs en *Fachhochschulen* in Finland en Oostenrijk werd positief gewaardeerd door het afnemende veld. Nu de eerste lichtingen afgestudeerden een weg naar de arbeidsmarkt hebben gevonden, blijkt men ook tevreden te zijn over de kwaliteit van de abituriënten. In de andere landen bestaat een veel diffuser beeld van de waardering op de arbeidsmarkt: er zijn vaak zeer grote verschillen tussen de disciplines en vakgebieden binnen sectoren en tussen sectoren.

Eindkwalificaties en doorstroom
De structuur van de systemen bepaalt in belangrijke mate of de behaalde diploma's en graden een eindkwalificatie betekenen voor de student. Vooral Frankrijk en Denemarken – en in mindere mate Nederland – hebben hogeronderwijsstelsels waar (tussentijdse) doorstroom naar een andere sector een veelvoorkomend verschijnsel is. In het Verenigd Koninkrijk, Finland en Oostenrijk wordt het diploma of de graad behaald binnen een bepaalde sector

veel vaker gezien als eindkwalificatie: doorstroom naar een andere sector van het stelsel komt zeer weinig voor.

Ontwikkelingen

Spanningen tussen sectoren
In het inleidende hoofdstuk werd reeds gerefereerd aan het feit dat in veel stelsels regelmatig spanningen ontstaan tussen de verschillende sectoren (zie ook Meek *et al*., 1996). Veel verklaringen voor de spanningen – en soms het uiteindelijk verdwijnen van scheidslijnen tussen sectoren – zijn terug te voeren op het idee dat de 'andere' sector pogingen doet de, veelal hogere, status te bereiken van de universitaire sector (*academic drift*). Echter, deze verklaring doet geen recht aan de dynamiek die geconstateerd kan worden in de bestudeerde hogeronderwijsstelsels. De verklaring legt een te sterk accent op het verwerven van de hogere status, terwijl er ook indicaties zijn dat universitaire sectoren enige territoriumdrift niet kan worden ontzegd (in de richting van het verzorgen van meer beroepsgerichte opleidingen, bijvoorbeeld in Nederland, het Verenigd Koninkrijk en Frankrijk). Hierbij moet wel worden opgemerkt dat de meeste universitaire sectoren van oudsher al beroepsgerichte opleidingen omvatten. De genoemde verklaring gebaseerd op *academic drift* doet ook geen recht aan de situatie in een aantal landen waar aangetoond is dat het goed mogelijk is een scheiding tussen sectoren te handhaven door middel van een gericht instrumentarium (financierings-mechanismen, regelgeving). De Finse en Oostenrijkse situatie – en de Nederlandse situatie in iets mindere mate – kunnen ter illustratie dienen van dit punt. In deze hogeronderwijsstelsels lijkt het zeer wel mogelijk duidelijk gescheiden taken en functies toe te bedelen aan afzonderlijke sectoren, zonder dat dit – vooralsnog – tot grote spanningen binnen het systeem leidt.

Bologna-declaratie
De recente ontwikkelingen in de systemen lijken vooral de reeds bestaande spanningen te versterken. In het algemeen leveren voorgestelde structuurwijzigingen, zoals de invoering van de *Bachelor/Master*-structuur, in de systemen met een duidelijke taakverdeling tussen de sectoren weinig discussie en invoeringsproblemen op. Hierbij wordt wel de kanttekening geplaatst dat, onder andere vanwege het recente karakter van de Bologna-declaratie, er in een aantal stelsels (bijvoorbeeld Vlaanderen en Frankrijk) nog weinig politieke en instellingsinitiatieven zijn genomen. In de hogeronderwijsstelsels waar toch al enige sprake van spanning tussen de sectoren is en/of de discussie over de waarde van de scheiding zo nu en dan op de bestuurlijke agenda staat (bijvoorbeeld in Nederland, Zweden en Duitsland), lijken de ontwikkelingen met betrekking de *Bachelor/Master*-structuur aangegrepen te worden als input voor de aanhoudende discussie. Voorstanders van de bestaande scheidingen zetten zich in om de verhoudingen – ook na de implementatie van de nieuwe opleidingenstructuur – te handhaven, tegenstanders stellen de bestaande scheidingen aan de kaak.

De positie van het Nederlandse hogeronderwijsstelsel

De vergelijking en analyse overziend, kan geconstateerd worden dat er zowel verschillen als overeenkomsten zijn tussen het Nederlandse hogeronderwijsstelsel en de stelsels van de andere bestudeerde landen met betrekking tot het bestaan van scheidslijnen tussen sectoren en instellingen in het hoger onderwijs. Nederland lijkt zich vooral te onderscheiden van de andere systemen waar het gaat om de gescheiden voorbereidende trajecten tot de twee sectoren van het hoger onderwijs, de geringe verschillen in de nominale opleidingsduur en de omvang van de niet-universitaire sector (aanmerkelijk groter dan in de andere bestudeerde systemen). Met betrekking tot andere structuur- en systeemkenmerken (bekostigings-systematiek, personeelsaangelegenheden, kwaliteitszorg, positie van de afgestudeerden) wijkt de Nederlandse situatie niet in sterke mate af van de situatie in de ons omringende stelsels van hoger onderwijs. In tabel 1.1 worden de belangrijkste Nederlandse stelselkenmerken vermeld en wordt aangegeven in hoeverre men deze kenmerken ook in andere landen aantreft.

***Tabel 1.1**: Nederlandse stelselkenmerken in internationaal perspectief*

	NL	A	DK	SF	F L	FR	D	S	UK
Aanzienlijke omvang 'andere' sector(en)	X		X		X				*
Toelatingspaden gescheiden	X						X		*
Uniforme programmaduur	X								*
Beroepsopleiding niet alleen in 'andere' sector(en)	X	X	X	X	X	X	X	X	*
Doctorsgraad alleen aan universiteiten	X	X	X	X	X	X	X		*
Toegepast onderzoek in 'andere' sector(en)	X	X		X	X	X	X	X	*
Geen/nauwelijks intermediaire kwalificaties	X	X	X	X	X		X		X
Samenwerking sectoren	X				X			X	*
Eén wettelijk regime	X							X	X
Sectorale kwaliteitszorg-systemen	X	X			X				*

* Deze kenmerken zijn niet van toepassing op het huidige unitaire stelsel in het Verenigd Koninkrijk.

Wanneer de mate van separatie (waarmee het bestaan van scherpe of vagere scheidingen tussen sectoren bedoeld wordt) in comparatief perspectief beoordeeld moet worden, kunnen we een onderscheid maken tussen vier groepen stelsels. Aan het éne eind van het spectrum bevinden zich de stelsels van Oostenrijk en Finland waarin zeer duidelijke scheidingen bestaan tussen de

systemen, zowel in structuurkenmerken zoals de lengte van opleidingen, het beroepsgerichte karakter van opleidingen in de 'andere' sector, als de bekostiging en de kwaliteitszorg. Met recht kunnen we deze stelsels kwalificeren als de 'nieuwe binaire stelsels'. Aan het andere eind van het spectrum kunnen landen als het Verenigd Koninkrijk en Zweden worden gepositioneerd, waar de scheidingen tussen de sectoren in belangrijke mate (wettelijk en/of in de praktijk) zijn vervaagd. Nederland vormt met Vlaanderen een groep tussen de geschetste uiteinden van het spectrum: met betrekking tot een aantal structuur- en systeemkenmerken zijn er duidelijke scheidslijnen, anderzijds is er sprake van het vervagen van sommige scheidslijnen. Van een dergelijke combinatie van duidelijke en vage(re) scheidslijnen is ook sprake in Frankrijk, Denemarken en Duitsland. Het verschil tussen Vlaanderen en Nederland aan de éne kant en de andere drie landen aan de andere kant, heeft betrekking op de afzonderlijke kenmerken waar de scherpe en minder scherpe scheidingen op van toepassing zijn. In Vlaanderen en Nederland is dat het geval voor ongeveer dezelfde stelselkenmerken. In Duitsland, Denemarken en Frankrijk gelden de scherpe en vagere scheidslijnen in belangrijke mate voor andere stelselkenmerken dan in Nederland en Vlaanderen.

2 Introduction

Jeroen Huisman & Frans Kaiser

Binary systems: the great divide?

The binary nature of the Dutch higher education system has been a subject of debates as long as it has existed. Through time, politicians, policy makers, institutional leaders and researchers have discussed the pros and cons of the partition of the system into a university sector and a *hogescholen*[2] sector (see for example Mc-Daniël, 1985; Hulshof *et al.*, 1993; Goedegebuure, 1992).

The term 'binary' emerged in the 1970s to indicate that a higher education system is divided into two sectors. At that time, the British system was often referred to as an example of the binary model. Starting at the end of the 1960s, the British higher education system consisted of, on the one hand, a relatively autonomous university sector, and on the other hand, a predominantly publicly controlled sector of higher education (polytechnics, colleges), distinct as regards control and research function. In spite of distinctions between the two British sectors, the sectors overlapped strongly in their educational functions (Teichler, 1988, p. 62).

The latter observation is important, because the notion of a binary system does not automatically imply that particular features make the sectors distinct. Often the distinction is associated a restriction of the research function to only one side of the binary divide and a distinction between academically-oriented programmes and professionally-related programmes, but this is not always the case. In addition, in some systems have distinctive admission and selection procedures and distinctive lengths of programmes in the two sectors, and other systems do not. Historical contingencies (such as the perceived need to provide relatively cheap professionally oriented programmes, as was the case in Britain and the Netherlands; or the perceived need to 'adjust' to European developments, see also below) played and still play an important role in determining the ways in which the sectors of higher education should be different.

A second observation concerns the dynamics of higher education structures. The emergence of a binary system does not imply that the distinctions will or can be maintained forever. Analyses have pointed out that governmental policies and other environmental influences, as well as organisational strategies and behaviour, have an impact on the relationships between the different sectors (binary or otherwise) of higher education systems. Notions like academic and vocational drift have, for example, been used to describe the tension between sectors and sketch developments of homogenisation or the blurring

[2] We will use the term *hogescholen* for the Dutch higher professional education institutions and *hogescholen* sector or *HBO* sector (*HBO* stands for *hoger beroepsonderwijs*) for the set of *hogescholen*.

boundaries between sectors. The formal demise of the British binary system as well as the emergence of the Australian unitary system can be seen as examples of structural dynamics. Also the development of Master's degrees at Dutch *hogescholen*, the naming of *hogescholen* in international contexts (the *hogescholen* may use the name of 'universities of professional education') can be seen as evidence of these dynamics.

Not only the blurring of boundaries is at stake. A number of governments recently created binary structures in formerly unitary systems (Finland, Austria) or upgraded 'underdeveloped' non-university sectors – e.g. through amalgamations and integration – to become more equal partners to the university sector (Norway, Hungary). In other systems, the restructuring of the higher education system (binary, unitary, or otherwise) is a serious issue on the political agenda (e.g. South Africa) (see Goedegebuure *et al.*, 1991; Meek *et al.*, 1996; File and Goedegebuure, 2000).

The Dutch policy context

A number of issues have contributed to the debate on the binary system in the Netherlands in the late 1990s. Two important elements will be discussed below. One element emerged from a development in the Dutch system itself, another is related to an international phenomenon.

For years, there have been clear examples of higher education institutions on both sides of the binary divide which have intensified co-operative activities, even in a structured way (sharing buildings, developing joint curricula, etc.). Previous Ministers put forward the idea of mergers between universities and *hogescholen* (Minister Deetman in the 1987 *Schets betreffende de toekomst van het hoger onderwijs en wetenschappelijk onderzoek* [*Tweede Kamer 19 914*]; Minister Ritzen in the first note on the draft Higher Education and Research Act, WHW), but the idea was never effectuated. The present Minister, Hermans, announced in the most recent draft of the Higher Education and Research Plan (Ministry of Education, Culture and Science, 1999), that universities and *hogescholen* would be allowed to engage in administrative mergers, provided the standards and characteristics of academic and professional education were not harmed. The recent announcement must be taken seriously for two reasons. First, the idea has hardly received opposition from the higher education field – in fact, some universities and *hogescholen* have already achieved far-reaching forms of co-operation – and, secondly, the preparations for developing the legal design have started. Although the consequences of the announcement and the implementations cannot yet be evaluated, it is clear that challenges those involved in higher education to re-open the debate on the structure of the Dutch binary system.

The second issue which has contributed to the debate on the binary system is totally different and is related to developments in Europe as a whole. Although there is no regulatory pressure to adjust higher education systems to European trends and standards (if there are such trends and standards at all), there are some indications that governments anticipate the growing importance of Europe. Several governments have indicated that structural

changes in their higher education systems have been inspired by the idea of not wanting their systems to deviate too much from European 'trends'. This argument can, for instance, be deduced from Finnish and Austrian policy documents which introduced the *Ammattikorkeakoulo* (AMKs) and *Fachhochschulen*, respectively.

Even more than the vague notion of Europeanisation, the recent Bologna declaration (1999) has emphasised the importance of structures of higher education systems, at least in the Netherlands. The Dutch Minister has supported the idea of structuring the higher education into two cycles: Bachelor and Master degrees. The Education Council (2000) has recently released its advice on the implementation of the Bachelor-Master system in Dutch higher education. Although the Education Council is of the opinion that the proposed changes will not affect the overall structure in the short run, it remains to be seen how and to what extent the introduction of the Bachelor-Master system will affect the binary system in the long run. A working group of the HBO Council (2000), for instance, stated in its advice to the HBO Council Board that given the international developments with respect to the Bachelor-Master structure and the issues of international transparency, it is appropriate to reconsider the usefulness of the binary divide.

Research questions

The explanation above has made clear that the binary situation – and more generally the structure of the higher education system – are currently hot topics of discussion in the Dutch context. At the same time, it can be concluded that the binary situation is not typically a Dutch phenomenon. In international contexts, those involved in higher education also struggle with the question of which 'model' provides an adequate structure to deal with the problems and situations that the respective higher education systems are confronted with. The examples given made clear that at different moments different answers have been given to different questions. In the 1960s and 1970s, the emergence of a new sector next to the universities was often supported by referring to the increasing costs of the university sector confronted with increasing student numbers. It was anticipated that the new sector would be able to prepare students better and more efficiently for specific professions. Present-day elements of globalisation and internationalisation possibly require other solutions regarding the structure of higher education systems.

The Dutch Ministry of Education, Culture and Science and the Advisory Council for Science and Technology Policy (*Adviesraad voor het Wetenschaps- en Technologiebeleid*, AWT) would like to be informed about the developments regarding (binary) structures in other higher education systems as a background for policy-making and forming an opinion concerning the Dutch situation.

These two organisations therefore commissioned CHEPS to map the situation and recent developments regarding (binary) structures in a number of European countries: Austria, Denmark, Finland, Flanders, France, Germany, the Netherlands, Sweden, and the United Kingdom. The objective of the pro-

ject is twofold. First, to describe analytically the state of the art with respect to (binary) structures in the systems mentioned, or more generally formulated: which structures in higher education and boundaries between current sectors or organisations exist? By taking this somewhat broader perspective and choosing a focus on boundaries, we are able to include not only 'pure' binary systems (e.g. Austria and the Netherlands), but to include also relevant situations in other higher education systems in which other boundaries between sectors or higher education organisations are operative. A second objective is to reflect on how the findings relate to the (policy) developments in Dutch higher education.

The structure of the report

Following this introductory chapter, a summary of the findings will be given in chapter two, including a comparative analysis. The state of the art and the developments in the higher education systems will then be described in more detail per country. The information given for each country will be divided into the following sections: introduction (general composition of the system), input (access, nature of inflow), structural characteristics (programme length, degrees, professional versus academic programmes, intermediate qualification, research, doctoral degrees, co-operation between sectors), other system characteristics (finance, regulations, personnel, quality management), output ('appreciation' by the labour market), developments ('tensions' between sectors, Bologna declaration) and conclusion (position of the system *vis-à-vis* the Dutch higher education system).

3 Comparative analysis

Jeroen Huisman & Frans Kaiser

Introduction

Chapters four to twelve have presented the situation with regard to the most important dividing lines between higher education sectors and higher education institutions in each of the national systems involved in the project, the Netherlands, Austria, Denmark, Germany, Finland, Flanders, France, Sweden and the United Kingdom. In this comparative analysis thematic comparisons are made. The leading themes chosen in the descriptions of each country – input, structural features, other features of the system, output and developments, recent or otherwise – have also been the guiding thread in the analysis in this chapter. Frequently it is the position of the Dutch higher education system in relation to the other systems that forms the point of departure for the thematic comparisons. At the end of the chapter the thematic elements are brought together by way of reflecting on the general position of the Dutch system in relation to the other systems.

Input

Size of the sectors

A striking feature of the Dutch higher education sector is that it is significantly larger than the university sector. Figure 1.1 gives an overview of the size of the sectors in the countries in the study expressed in terms of student numbers by sector.

Figure 1.1: *Distribution of student population by type of institution (1996, headcount)*

	university	%	non university	%
Austria	231311	98%	3756	2%
Denmark	52004	30%	123955	70%
Finland	137173	76%	44339	24%
Flanders	58467	38%	94140	62%
France	1132888	58%	834854	42%
Germany	1395386	76%	442018	24%
Netherlands	165880	37%	278253	63%
Sweden	441069	100%		
United Kingdom	1392607	100%		

In Flanders too the non-university sector is larger than the university sector and the situation is comparable with that in the Netherlands. In Denmark the MVU sector (courses of medium length) is significantly larger than the university sector. If we look at the MVU and the KVU (short courses) sector together, the share of the non-university sector is actually larger than in the Netherlands. In all other countries the university sector is considerably larger than the other sector or sectors. The size very much depends on the breadth of the courses on offer. In systems where the other sector or sectors are of a limited size, the courses on offer are, on the whole, fewer in terms of the number of disciplines or subjects available in the sector. This is for example the case in Austria and Finland and to a lesser degree in Germany.

Admission

The Dutch higher education system makes a clear distinction between those admitted to higher vocational education and those admitted to university. Two different routes in secondary education –HAVO/MBO and VWO– prepare students for training at *hogescholen* or university respectively. The distinction becomes a little more vague because those with a pre-university school diploma (VWO) are allowed to attend a *hogeschool* (providing HBO or higher vocational courses) while those with a first year certificate or a final diploma from a hogeschool may attend university.

The situation in Germany largely corresponds with that in the Netherlands. The *Fachhochschulereife* allows students to be admitted to a *Fachhochschule* but not university. A *Hochschulreife* permits students to go to both a *Fachhochschule* and a university. The systems in Austria, Flanders and Sweden all generally have the same admission requirements for the different higher education sectors. A general secondary education certificate admits students to different forms of higher education. These countries clearly differ from the Netherlands. The comparison between Denmark, France and the United Kingdom on the one hand and the Netherlands on the other makes it clear that these three foreign systems allow general admission on the basis of a general secondary school qualification. However, in addition to the general admission requirement the individual establishments apply various selection mechanisms (the *concours* in France, *A-levels* in the United Kingdom). As a result there are differences of status between establishments and/or sectors. In France and Denmark, to a limited degree, these differences mainly apply between the sectors, while in the United Kingdom the differences in status apply to the institutions.

Besides the qualifying certificates and the selection process, all the systems set specific standards of candidates relating to the content of the course to be taken in the higher education establishment. Every system, admittedly with some variation in the form of the requirements, has some kind of set subjects or standard criteria, similar to those in the Netherlands. In most systems as well skills are required, for example in the artistic, creative or physical domain in the case of music, dance or physical training courses for instance.

Structural features

Length of courses
In the mid-eighties a fixed nominal length was set in Dutch sectors for courses in the first phase. Since then exceptions have been introduced to this rule. Many university agricultural and technology courses of study currently take five years and in the higher vocational sector there are a number of short programmes lasting two years. Even so the impression of a uniform period of study or training largely remains intact. In the United Kingdom courses are of uniform length and there is no distinction between the former polytechnics and the old universities. In Austria, Germany and Flanders there is clearly more variation in the length of courses, depending on the sector or the type of institution at which the course is offered. The variation is greatest between the types of establishment in Denmark, France and Sweden.

Certificates and degrees
There is scarcely any difference in the types of certificates and/or degrees by sector among the higher education systems examined. The sector in which a student has attended a course can almost automatically be gathered from the certificate obtained or the degree. The United Kingdom is an exception to this because the former polytechnics and the universities, which are now all part of the university sector, award nominally identical certificates and degrees.

Vocational as opposed to academic
The difference between vocational and academic courses is only a gradual one in the majority of higher education systems: none of the systems has a very close correlation between type of course and sector. On the whole the university sector emphasises academically-oriented courses and the other sectors frequently place more emphasis on vocationally-oriented courses. However, many establishments in the university sector also provide vocationally-oriented courses. Moreover the distinction between courses, which are focused on teaching based on scientific research and on scientific/academic knowledge is sometimes a difficult one to make. The situation is most diffuse in Sweden, while in the Austrian system there would seem to be a fairly sharp distinction between academic courses (provided by the universities) and vocational courses (provided by the *Fachhochschulen*). In Flanders the distinction would not so much seem to be between the university sector and *hogescholen* sector, but within the latter sector between the courses comprising a single cycle (vocationally-oriented) and the courses involving two cycles (based on scientific/academic knowledge).

Doctorates
There is a very clear difference between the university and other sectors in all the countries examined with regard to the possibility of studying for a doctorate. This entitlement is the sole preserve of the university sector in practically all countries.[3] This does not incidentally always mean that the only candidates admitted are those with a university (Master's) degree. In many countries

[3] There are exceptions to this rule - often historically determined - for example non-university church institutions which are also entitled to offer training leading to a doctorate.

graduates from non-university institutions may also prepare themselves to take a doctorate although in practice the great majority do have a university degree.

Research
The difference between sectors which offer candidates the possibility of doing research for a doctorate, is closely connected with the distinction made in the systems between carrying out fundamental and/or applied research. In the United Kingdom the existing differences were abolished by law in 1992. In practice, however, there is still a clear distinction between the former polytechnics and the 'old' universities when it comes to the share of fundamental research and the number of PhD students. Sweden is the exception as regards the monopoly of courses for PhD students and carrying out fundamental research. Some university colleges recently acquired the right to award the degree of doctor and carry out fundamental research (some establishment-wide others within certain disciplines). Thus although fundamental research is primarily the preserve of the university sectors, the non-university sectors, in the systems studied, do carry out applied research, though usually to a limited degree, financed from sources such as local and regional governments and industry.

Intermediary qualifications
Intermediary qualifications barely exist in the Netherlands (despite the legal opening of introducing such qualifications in the university sector. A comparable situation exists in Denmark where the Bachelor degree is a formal intermediary qualification but which is barely regarded by students and employers as a qualification for the labour market. Sweden, the United Kingdom and France (to a certain extent) do have intermediary qualifications, training students for a position on the labour market and for admission to further training in higher education. The other systems do have intermediary diplomas, but these do not provide a qualification for the labour market. They simply indicate that a certain part of the course has been completed (for example the *kandidaats* in Flanders and the *Grundstudium* in Germany).

Cooperation between sectors
The Netherlands and Flanders (and to some degree Sweden) are examples of countries where cooperation between institutions in the different sectors, for example in the field of joint curriculum development, coordinating transfers between courses in different sectors and the use of each others infrastructure, occurs fairly frequently. Austria and Denmark are examples of higher education systems where there is barely any interaction at all between the different sectors.

Other features

Funding
The government is a major funder of the university sectors in the higher education systems examined. Besides government funds universities frequently receive donations from central research budgets, which are often managed by

research councils, on a competitive basis. Sweden is an exception in the sense that university colleges may compete for funds from research councils. The degree to which university sectors raise funds from contract activities besides government funding differs sharply from country to country and institution to institution.
The funding of non-university sectors is more varied than that of the university sectors. Some non-university sectors (for example in the Netherlands, Denmark and Flanders) are heavily funded by the government. A limited portion of revenue comes from funds raised from contract activities. The recently created vocationally-oriented sectors in Austria and Finland would seem to have a different mix when it comes to fund-raising. In these countries regional and local government make a major contribution to financing the *Fachhochschulen* and the AMKs. The said sectors also have a private or quasi-private basis more frequently than the education systems where the vocational sector has existed for a longer period.

Differences in (public) funding systems are inextricably linked with the performance or not of fundamental and/or applied research (see also above). Those institutions which are deemed to carry out fundamental research and which offer doctorates, are funded in a different way to those institutions which do not have this responsibility.

Legislation
As regards legislation the Netherlands, Sweden and the United Kingdom have comprehensive legislation which applies to the entire higher education system. The other countries have separate legislation for the different sectors. The German system is somewhat different to the rest because there is both legislation for the federal system and for the *Lander*. The national legislation provides the general framework and the details are filled in regionally so that differences between the *Lander* (often minor) do arise. Which Ministry has the say on the subject of higher education is frequently a historical question. Some systems have a separate ministry of education while in other systems higher education comes under the ministry of education and science, education and culture, agriculture, and/or education and transport, either in full or in part.

Personnel
The way staff are organised in the various sectors depends very much on whether they do any research. Sectors in which this is the case are usually structured in a classical, hierarchical manner with professors, associate professors, university lecturers and PhDs. For the senior posts potential candidates as a rule are required to have a doctorate. The more vocationally-oriented sectors have more varied personnel categories but the common denominator is that the majority of the staff are required to have relevant professional experience.

Quality assurance
On the whole major differences exist in the approach to quality care in the various countries depending on whether there is a national system or not (varying from internal quality care and external review to accreditation). Flanders and the Netherlands have similar systems of quality care and inspec-

tion in both sectors but the organisation of the processes in the different sectors is in different hands. In France, Sweden, Denmark (recently) and the United Kingdom system-wide organisations are responsible for maintaining standards in higher education. Germany does not have a national system. There is a national accreditation system but this is provisionally only applicable to the new Bachelor and Master programmes. Implementation of accreditation in the *Lander* may differ. The difference in approach between the sectors in Austria is great. The university sector has a traditional system of internal quality care while the *Fachhochschulen* are subject to an accreditation system.

Output

Labour market
It will come as no surprise to learn that the position of higher education graduates on the labour market is significantly better than that of the unskilled or semi-skilled. The differences between the higher education sectors in the various countries is sometimes minor (as is the case at the moment in the Netherlands, Germany and Denmark) and sometimes major (as in France where the difference in unemployment percentages between universities (10%) and *Grand ecoles* (3%) is striking). Little is known of the 'rating' of the different types of graduates by the labour market, apart from some insight into starting salaries. A positive rating was given in Finland and Austria to those coming from AMKs and *Fachhochschulen*. Now that the first cohorts of graduates have arrived on the labour market it would appear that employers are satisfied with the quality of the candidates. The picture in other countries is much more diffuse; there are frequently very great differences between the disciplines within sectors and between sectors.

Final qualifications and transfers
The structure of the systems determine to a significant degree whether the certificates and degrees awarded constitute a final qualification for students. France and Denmark – and to a lesser degree the Netherlands – have higher education systems where (interim) transfers to another sector are a common phenomenon. In the United Kingdom, Finland and Austria the certificate or degree awarded within a certain sector is viewed much more frequently as a final qualification. Transfer to another sector in the system occurs much less frequently.

Developments

Tensions between sectors
Reference was made in the introductory chapter to the fact that regular tensions arise between the various sectors in many systems (see also Meek *et a*l., 1996). Many of the explanations for the conflicts – and sometimes for the ultimate disappearance of dividing lines between sectors – are attributable to what is known as academic drift, i.e. the attempt of the non-university sector to achieve the much higher status of the university sector. However, this

explanation does not do justice to the dynamism observed in the higher education systems studied. The explanation places too much emphasis on the acquisition of higher status while there are also indications that university sectors too are tending to expand their territory in the direction of providing more vocationally-oriented courses, for example in the Netherlands, the United Kingdom and France. The point should be made here that the majority of university sectors have traditionally already provided vocationally-oriented courses. The explanation based on academic drift does not do justice either to the situation in a number of countries where it has been demonstrated that it is perfectly possible to maintain a distinction between the sectors by means of a specific set of instruments (financing mechanisms, legislation). The situation in Finland and Austria – and in the Netherlands to a lesser degree – illustrate this point. These higher education systems demonstrate that it is quite possible to allocate tasks and functions to individual sectors without this leading for the time being to major tensions within the system.

Bologna declaration

Recent developments in the systems would seem to be exacerbating the existing conflicts. On the whole proposed changes to the structure such as the introduction of the Bachelor/Master system, in those arrangements with a clear division of responsibilities between the sectors, gives rise to little debate and few problems. It should be added that as yet few political initiatives and initiatives on the part of the institutions have been taken in a number of systems (for example in Flanders and France) for one thing because of the recent nature of the Bologna declaration. In higher education systems where tension between the sectors already existed and where the merits of the division was a political issue from time to time (for example in the Netherlands, Sweden and Germany), the developments relating to the Bachelor/Master structure have been latched on to as material to fuel further debate. Proponents of the existing separation are making every effort to retain the distinctions, also after implementing the new structure, while opponents question the existing dividing lines.

The position of the Dutch higher education system

Looking at the comparison and analysis one can see that there are both differences and similarities between the Dutch higher education system and the systems of the other countries studied when it comes to the dividing lines between sectors and between higher educational establishments. The Netherlands differs mainly from the other systems because it has two separate preparatory routes leading to the two higher education sectors, negligible differences in the nominal duration of courses and the size of the non-university sector (considerably greater than in the other systems examined). As regards other features of the structure and the system (financing systems, personnel affairs, quality care, position of graduates) the Dutch situation does not significantly differ from that in neighbouring higher education systems. Table 1.1 shows the main features of the Dutch system and to what extent these features are to be found in other countries as well.

***Tabel 1.1**: Features of the Dutch system compared internationaly*

	NL	A	DK	SF	F L	FR	D	S	UK
Considerable size of non-university sector(s)	X		X		X				*
Separate entry routes	X						X		*
Uniform course duration	X								*
Vocational training not only in non-university sector(s)	X	X	X	X	X	X	X	X	*
Degree of doctor only in universities	X	X	X	X	X	X	X		*
Applied research in non-university sector(s)	X	X		X	X	X	X	X	*
No or barely no inter-mediate qualifications	X	X	X	X	X		X		X
Cooperation between sectors	X				X			X	*
A single legislative regime	X							X	X
Sectoral quality care systems	X	X			X				*

* These features are not applicable to the present unified system in the United Kingdom.

Comparing the degree of separation (meaning the sharp or more vague dividing lines between sectors) four systems can be defined. At one end of the spectrum are the systems in Austria and Finland where there are extremely clear dividing lines between the systems, both in terms of structural features such as the length of courses and the vocational nature of courses in the non-university sector, and in financing and quality care. These systems can justifiably be described as the new binary systems. At the other end of the spectrum are countries such as the United Kingdom and Sweden where the dividing lines between the sectors either in legislation and/or in practice have become vague. The Netherlands together with Flanders constitute a group between the two extremes. There are clearly dividing lines with regard to a number of structural and system features but there is also a blurring of some of these divisions. A combination of clear and more blurred dividing lines can also be observed in France, Denmark and Germany. The difference between Flanders and the Netherlands and these three other countries are distinctions of degree with regard to individual features. This is the case for approximately the same features of the system in Flanders and in the Netherlands. The sharp and more blurred dividing lines in Germany, Denmark and France apply to a significant degree to different features of the system than in the Netherlands and Flanders.

4 The Netherlands

Jeroen Huisman

Introduction

Looking solely at the legislation, one could claim that the Dutch higher education system has been officially known as a binary system since 1986. At that moment the higher professional education sector was taken out of secondary education and received separate legislation (HBO Act), formally becoming part of higher education. However, one could also argue that the general idea of the existence of two sectors of higher education is much older and can be traced back to the beginning of the previous century, when the Domestic Science and Technical Education Act was established in 1919. The year 1968 stands for another hallmark in the development of the sector of higher professional education: the sector was integrated with secondary education as a result of the Secondary Education Act. At present the 1993 Higher Education and Research Act (WHW) regulates the higher education system, comprising thirteen universities, the Open University and (at present) 62 *hogescholen*. Table 4.1 gives an overview of the enrolments (total number of students) per sector. Both in total number of students and number of first-years students, the hogescholen sector is larger than the university sector.

***Table 4.1**: Enrolments in Dutch higher education*

	1990	1992	1993	1994	1995	1996	1997	1998
Universities	178,690	187,942	187,958	185,215	177,620	165,880	159,457	160,304
Hogescholen	246,690	263,253	269,545	271,866	271,905	276,257	280,162	290,530

Source: CBS/CHEPS Higher Education Monitor

Input

Admission to the *hogescholen* is open to students holding a certificate of senior general secondary education (five year HAVO), secondary vocational education (MBO) or pre-university education (six year VWO). The latter route is actually a detour, but a considerable number of students enrol the *hogescholen* with a VWO certificate (about 20%). To enrol a university, the student must hold a VWO certificate or a propaedeutic (first year) certificate of a *hogeschool*. The *colloquium doctum* is an entrance examination both for the university and the *hogescholen* sector for people aged 21 and over which do not have a regular secondary education certificate.

In addition to the certificate requirements, higher education institutions may require programme-related demands. Since the recent changes in the structure of secondary education, institutions may require students to have obtained specific – nationally determined – 'profiles' in their secondary education. These profiles vary by programme and can be described as a consistent set of knowledge and skills acquired in the second tier of secondary education. In both HAVO and VWO there are four profiles: culture and society (in general preparing for programmes in the social sciences, arts, languages and culture), economy and society (preparing for economy and social sciences), nature and health (preparing for medical sciences, nursing and biology), and nature and technology (preparing for natural sciences and engineering).

Government and the higher education institutions can determine further restrictions to access. In the case of an oversupply of graduates (for instance in some professions in the health sector), government – after consulting organisations most involved – determines the maximum number of first-year students to be enrolled (*numerus fixus*). Since September 1999, the higher education institutions are allowed to apply a combination of a system of weighted lottery (based on average secondary education results) with its own selection mechanisms (e.g. tests, interviews, work experience, etc.) for programmes with a *numerus fixus*. A specific restriction concerning the access to higher education relates to the hogescholen. These higher education institutions may require in particular fields knowledge and skills in connection with the profession related to the programme (e.g. teacher training, art, physical education).

Structural characteristics

Structural differences between *hogescholen* and universities pertain to the nature of postgraduate education and the types of initial degrees offered.

Hogescholen degrees
Hogescholen offer four-year programmes (168 credit points) in economics, health, social-agogics, agriculture, education, engineering and arts. The programmes are full and/or part-time, some programmes are offered in a working-learning mode (e.g. co-operative education or so-called *duale leerwegen*). The WHW states that *hogescholen* should offer theoretical instruction and to develop the skills required for practical application in a particular profession. Students completing a four-year programme receive the qualification *baccalaureus* (bc). In case of an engineering programme, the title *ingenieur* (ing.) may be used. The students are allowed to use the Bachelor title. The average time to degree is identical to the nominal duration, with variations between disciplines (health, 3.5 years; arts, 4.5 years, 1995 data). *Hogescholen* also offer professional Master programmes – often in co-operation with higher education institutions outside the Netherlands – but these are not (yet) recognised and funded by the government.

University degrees
Universities offer four to six-year (168 to 252 credit points) full- and part-time programmes in economics, education, health, humanities, social sciences, agriculture, engineering and natural sciences. The length of programmes varies from discipline to discipline. In engineering, agriculture and natural sciences, many programmes are five years. In health a number of programmes take five or six years (dentistry, medicine, veterinary sciences, pharmacy); a first qualification is received after four years, students continue their studies (one to two years) for a professional degree. In most other disciplines, programmes take four years. The average time to degree is 5.8 years with variations by discipline (agriculture 5.2 years, humanities, 6.2 years, 1996 data). Graduates receive the qualification doctorandus (drs), in engineering the title *ingenieur* (ir) is awarded, in law student receive the title *meester* (mr). Graduates are allowed to use the title Master. The universities also offer PhD programmes, leading to the degree of *doctor* (dr).

Intermediary qualifications
Intermediary qualifications hardly exist in the Dutch higher education system. Universities have the opportunity since 1998 to offer a kind of intermediary qualification (three years of study), comparable to the *kandidaatsexamen* (a qualification abolished in 1982). For such a qualification, the title Bachelor can be used.

Professional versus academic programmes
Although the regulations make a distinction between professionally oriented and academically oriented programmes, this distinction does not fully coincide with the distinction between universities and *hogescholen*. Traditionally, many professional programmes were offered at the universities, such as medicine, pharmacy, law and teacher education. Also, the fact that *hogescholen* programmes are supposed to offer theoretical instruction makes them in this respect to a certain extent comparable to university programmes.

Co-operation between the sectors
Interactions between the two sectors have taken place regularly through time, but nowadays these interactions are much more structured than they were some decades ago. The *hogescholen* are becoming more and more 'equal-but-different' partners of the universities, and the introduction of credit points (consequently opening the possibility of credit transfer) have, amongst other things, contributed to the increase of structural interaction (Beverwijk and Huisman, 1999). Structural interaction relates, for example, to the smooth transfer of students from *hogeschool* to university or vice versa to the mutual use of the institutions' infrastructures. The change in the study finance in the late 1980s has also had an effect on the degree of interaction between the sectors. Previously, students with a *hogeschool* degree could continue their studies at a university, and still obtain study finance. With the change in study finance, students received support for many fewer years, that is the formal duration plus one extra year. This forced university study programmes that were to a considerable extent dependent on *hogeschool* graduates enrolment to develop so-called *doorstroomprogramma's*. The development of these programmes had impact on co-operation between *hogescholen* and universities in rela-

ted areas. The latest Higher Education and Research Plan (2000) – a four-yearly ministerial policy document – paves the way for mergers between universities and *hogescholen*, on the premise that each will continue to offer its 'own' type of degrees and programmes.

Other system characteristics

Finance

The universities are funded on the basis of the performance-funding model (PBM). This model is a formula-based distribution model; the total budgets for higher education are fixed beforehand. In the budgets for universities, the variables in the formula for educational activities are: number of diplomas awarded (50% of the education budget), fixed sums (37%) and number of first year students (13%). For the research part of the budget, the variables are: fixed sums, PhD dissertations and designers' certificates, research schools, top research schools and strategic allocations. The model for the *hogescholen* is also a formula-based distribution model. Here, important variables are: the number of enrolling students, the time to degree, and drop out rates. The budgets for both *hogescholen* and universities are allocated as a lump sum.

Hogescholen are allowed to perform research activities, but the size of contract research activities is relatively small. The total government budget for the *hogescholen* in 2000 is 2,728 Mfl and for the universities 5,613 Mfl. Precise data are not available, but estimated guesses lead to 8% of the budget spent on contract activities at *hogescholen* (218 Mfl) at universities this is about 15% (842 Mfl, Boezerooy, 1999). The largest part of the budget is a governmental block grant (for the universities about 75% of the budget, for *hogescholen* the proportion is higher). Two other important sources of funds are tuition fees (about 7% in the university sector, 18% in the *hogescholen* sector) and research council grants (5%, only for the universities).

Quality assurance

External quality assurance systems for teaching have been introduced in the late 1980s at the universities and in the beginning of the 1990s at the *hogescholen*. For research, such a system was introduced earlier. In the beginning of the 1980s, the conditional funding system was introduced but abolished a few years later. The two sectors have separate systems for teaching quality assurance carried out under supervision of the HBO Council and the Association of Universities in the Netherlands (VSNU). The basic principles are the same: every five years (universities) or seven years (*hogescholen*) a self-evaluation is undertaken at the programme level, followed by an external peer review (visiting committee) leading to a public report of the visiting committee. The Inspectorate for Higher Education is in charge of monitoring the quality assurance process (meta-evaluation) and the follow-up by the higher education institutions. For university research, a quality assurance system – also based on the principles of peer review and a public report – was re-introduced in 1993. At present, experiments have started in the *hogescholen* sector with a system of accreditation. In the near future, such a system will also be implemented in the university sector.

Personnel

At universities various personnel categories can be distinguished: support staff, university teachers (UD), associate professors (UHD) and full professors. The deregulation of employment conditions has lead to some leeway for the institutions to develop new categories, but universities mostly stick to the 'traditional' categories. Table 4.2 gives an overview of 1993 and 1998 data. Next to the academic staff, there are some 41,000 members of support staff (1998).

***Table 4.2**: Academic personnel at universities*

	1993	1998
Professors	2,450	2,474
Ass. Professors	2,572	2,623
University teachers	6,123	5,930
PhD candidates	6,876	5,649
Other researchers	6,079	6,597
Total	24,100	23,273

Source: 'Talent voor de toekomst' 2000

A *doctorandus* degree is required to fulfil a position at the university as a teacher or researcher. At *hogescholen*, personnel can be divided into support staff and teaching staff. Table 4.3 gives an overview of numbers of staff in recent years. A further distinction within the teaching staff can be made in: *docent A, docent B, hogeschooldocent, hogeschooldocent B, hogeschooldocent C, hogeschool-hoofddocent, lector* and other teaching staff. The categories *docent A* and *hoge-schooldocent* are the largest, 51% and 40% of the total teaching staff, respectively. The position of *lector* is an exception (HBO Council, 1998).

***Table 4.3**: Staff at hogescholen*

	1992	1995	1998
Teaching staff	13,700	13,022	13,256
Support staff	8,000	8,154	8,641

Source: HBO Council

Output

The unemployment rates for both the university and *hogescholen* graduates are low, mainly due to developments in the national and global economy. Historically, the employment perspectives for *hogescholen* graduates – shortly after graduation – have been better than the perspectives of university graduates. In recent years, however, the differences are small. It must be stressed however that there are large differences between disciplines within the two sectors (e.g. arts versus engineering in the HBO sector; humanities versus eco-

nomics in the university sector). The unemployment rate for HBO graduates (18 months after graduation) has been decreasing since 1993 and recently was about 3% (measured in 1998). The average unemployment rate for university graduates (18 months after graduation) was recently 2.7% (measured in 1999).

The returns of university education are higher than those of the HBO sector. Taking a junior secondary education diploma (MAVO) as the benchmark, university graduates in 1999 on average earn more than 60% more than holders of a MAVO diploma. HBO graduates earn on average 40% more than MAVO diploma holders. Compared with 1994, the returns have increased (Leuven and Oosterbeek, 2000). On average, an HBO graduate earns Hfl 3523,- (gross income per month, ROA, 1999). A university graduate earns Hfl 4463,-, this is the median score (ROA, 2000).

With respect to other destinations than the labour market, data are available on continuation in educational activities after graduation. About 19% of the HBO graduates continue educational activities (1998 data, ROA). At the university level, 9% continue education activities (1999 data, ROA).

Developments

Tensions between sectors

The history of the binary system in the Netherlands is characterised by tensions between the two sectors. The tensions have grown with the upgrading of the HBO sector (government-induced mergers between HBO institutions started in the beginning of the 1980s, separate legislation for HBO was passed in 1986, and the separate regulations were united into one higher education act in 1993).

The tensions are, for instance, visible in the universities' moving more into the area of professional education instead of solely stressing academic education. Many programmes emerging in the 1980s and 1990s can be classified as professionnally-oriented. Another tension is the wish of *hogescholen* to offer (recognised and government-funded) Master degrees. One potentially important recent development is the possibility to merge *hogescholen* and universities. A few higher education institutions have developed far-reaching co-operation activities, which soon can be formalised by actual mergers. To date, it is not yet clear to what extent institutions will use the opportunities available to merge. Furthermore, the impact on the long term is difficult to predict. One scenario would be that only a few institutions (the early adopters) engage in mergers, leaving the system mostly unaffected. Another scenario would be that after a first wave of mergers (similar to the merger operations in the HBO sector in the 1980s), other institutions soon will follow. It must be stressed however, that up until now, most plans for mergers have been developed involving large-size multidisciplinary *hogescholen*. Mergers between universities and small-size *hogescholen* may not be feasible.

Bologna declaration

A second recent development that might have consequences for the binary structure, is the implementation of the Bachelor/Master degree structure. The

advice of the Education Council assumes that the present binary structure can be maintained. There are, however, other views. The HBO Council (2000), for instance, argues that – given the changes in the system – the usefulness of the binary system should be reconsidered. Verkleij *et al*. (2000) maintain that the Bologna declaration has more profound consequences than the Education Council estimates. They argue for the recognition of the variations of programmes and degrees within the institutions, which must be valued and accredited on the basis of their contents (and not based on the type of institution). Consequently, they believe that the strict binary divide will disappear.

Conclusion

There are rather strong differences between the two sectors of the Dutch binary system. Three elements stand out: differences in entrance qualifications, the exclusive basic research function of the universities (including the right to award PhD degrees), and variations in the degrees awarded. In some respects there are also similarities: the length of programmes is, for instance, rather similar in both sectors (the standard is still four years). Furthermore, professionally-oriented programmes are offered on both sides of the binary divide.

5 Austria

Eric Beerkens

Introduction

The system of post-secondary education in Austria includes four types of institutions, and is divided into two sectors. The university sector includes eighteen universities, of which twelve are regular universities and six are universities of the arts. The non-university sector includes specialised programmes for applied studies: the *Fachhochschulstudien*, established in 1994-1995. Furthermore, there are the *Akademien* in the field of social work, teacher training, paramedical professions and religious education. In Austrian terms however, these *Akademien* are not part of the higher education system (Pechar, 1998).

Major reforms to the Austrian higher education system were decided upon in 1993. The most important changes relate to the organisation of the universities (*Universitätsorganisations-gesetz*, 1993) and to the setting up of a new sector of higher education. In 1993, the *Fachhochschul-Studiengesetz* (FHStG) marked the establishment of a new type of post-secondary educational institution in Austria, an important change in the Austrian higher education landscape. The first *Fachhochschule* programmes began operations in the 1994-1995 academic year, and in 2000 the 68 programmes offered encompass the fields of business and economics, tourism, engineering, telecommunications and administration. In 1998-1999 there were almost 8,000 students enrolled in these *Fachhochschulstudien,* and the number envisaged for 2005 is 21,000 (Hochschulbericht, 1999).

Input

Austrian higher education has tried, until 1993, to absorb the massification of higher education into its regular universities. The overall number of students at the universities has increased more than tenfold in the last forty years (Kellermann and Sagmeister, 2000). Although the non-university sector has expanded since 1994-1995 with the introduction of the *Fachhochschulstudien*, the university sector still accommodates the bulk of the Austrian higher education students (tables 5.1 and 5.2).

***Table 5.1**: Number of students (incl. foreign students)*

	Universities	Arts Universities	*Fachhochschulen*
1990	186,607	6,872	-
1991	194,875	6,999	-
1992	199,021	6,748	-
1993	203,991	6,648	-
1994	209,290	6,837	695
1995	213,525	6,833	1,754
1996	213,510	6,835	3,756
1997	212,247	6,893	5,769
1998	214,885	7,278	7,867

Source: CHEPS Higher Education Monitor / Statistisches Taschenbuch 1999

***Table 5.2**: New entrants (incl. foreign students)*

	Universities	Arts Universities	*Fachhochschulen*
1993	23,231	923	-
1994	23,242	928	558
1995	24,106	858	1,199
1996	22,065	835	2,204
1997	20,976	725	2,536
1998	22,889	767	2,895

Source: Statistisches Taschenbuch 1999

A *Reifeprüfung* (matriculation examination or *Matura*) obtained from a secondary higher school is required for admission to all university studies. This matriculation examination entitles its holders to enrol in university studies of their choice without any further limitations. For some study programmes, addi
tional examinations have to be taken in subjects which are relevant for the study programme in question, or applicants must demonstrate their artistic talents, practical skills, or physical aptitude in addition to the *Reifeprüfung*. Persons who are not in possession of the matriculation examination, but who are especially qualified for certain studies because of the nature of their work or in any other way, may sit for a *Studienberechtigungsprüfung* (university entrance examination) which is an entitlement to enrol in a particular course of university studies. The *Berufsreifeprüfung*, a special type of matriculation examination allowing unlimited access to university, was introduced in 1997 as a new entrance opportunity for all types of studies for persons having successfully completed professional training. In absolute figures, this type of enrolment is insignificant (Eurydice, 1999). To be admitted as a regular student at an arts university, applicants must pass an aptitude test to demonstrate their artistic talent. For some studies, additional requirements have to be met. The minimum age to become a regular student is seventeen years, and fifteen years in exceptional cases for instrumental music studies. The require-

ments of admission to *Fachhochschule* are the *Reifeprüfung*, the *Studienberechtigungsprüfung*, the *Berufsreifeprüfung* or any professional qualification in the particular field. Similar admission requirements apply to the *Akademien*.

Structural characteristics

Degrees and programmes
Graduates of study programmes at the universities are awarded the degree of *Magister* or *Diplom-Ingenieur*. *Fachhochschulen* offer *Magister FH* and *Diplom-Ingenieur FH* degrees. University studies are divided into two cycles: the *Diplomstudien* and the *Doktoratstudien*. The *Diplomstudien* are further divided into two stages: The *Erste Diplomprüfung* after two years, and the Zweite *Diplomprüfung* after another two or three years. These *Diplomstudien* require at least eight (humanities and social sciences), nine (pedagogical sciences) or ten (technical, natural and technological sciences) semesters. In reality, however, most students take a considerably longer time to complete the programmes (Hochschulbericht, 1996). Before 1997, the universities also provided short courses (*Kurzstudien*). Due to the small student numbers and the introduction of the *Fachhochschulen*, these programmes were abolished in the 1997 Act on University Studies. The arts universities offer degrees corresponding to the programme (e.g. *Akademisch Geprüfter Konzertsänger*). In response to the Bologna declaration, universities have the opportunity to offer programmes in three cycles (*Bakkalaureat – Magister/Diplom-Ingenieur – Doktorat*). Supplementary regulations were added to the University Study Act of 1997 that enables universities, on a voluntary basis, to convert the *Diplomstudien* into a two cycle course, upon application by the university and approval by the federal minister. The *Bakkalaureat* constitutes an official entrance qualification for the labour market, as opposed to the *Erste Diplomprüfung* (Schrier and Kaiser, 1998). The *Fachhochschule* programmes last seven to eight semesters. These programmes are university-level programmes which intend to convey a scientifically based professional education. As a rule, one semester is spent in practical professional training. *Fachhochschulestudien* end with the conferral of an academic degree, which is also an entitlement to take up doctoral studies at a university (although additional courses might be required).

The actual average length of studies at universities is fourteen semesters. This means that students generally exceed the prescribed minimum time of study by four or five semesters. Approximately 4.8% of all students stay within the set minimum. The actual duration of a *Fachhochschule* study course, including the time needed to finish the final assignment, is seven or eight semesters. In January 1999, the number of *Fachhochschulen* graduates was about 650 (Pratt and Hackl, 1999). With 680 entrants starting the courses in 1994, the completion rate is satisfactory, especially when compared with the universities.

Academic versus professional programmes
The relation between universities and *Fachhochschulen* is considered to be 'equal but different'. The university curricula are strongly shaped by the Humboldtian tradition. From the start of the programme, students are consi-

dered 'apprentice researchers, who are able to conduct their studies independently'. The obligations of academics *vis-à-vis* students are regarded as informal and the need for guiding and monitoring is not seen' (Pechar, 1998, p. 42). At the *Fachhochschulen* and *Akademien*, students follow a rather school-like curriculum. The difference between universities and *Fachhochschulen* is evident in the way the curricula are developed. University teachers are free to choose the contents and methods of their courses. The repertory of lecture types has remained largely unchanged in recent decades. It includes lectures, seminars, introductory seminars, exercises and practical courses. At arts universities, students are fostered individually in their artistic development by one-on-one tuition. Since the University Study Act of 1997, the responsibility for curriculum design has been decentralised. The study committees of the individual institutions now have to develop their own curriculum. In addition, hearings are required in which representatives from the labour market have the opportunity to comment on the curricula. The right of the Minister is reduced to the right to decline the proposals for curriculum changes or new curricula.

The key aspect of the FHStG is the accreditation model. This Act set up a central accreditation council – *Fachhochschulrat* – which examines proposals for programmes according to quality, adequacy of access regulations, qualifications of staff, existing infrastructure, cost estimates and a plan for evaluation and further development of the curriculum. The *Fachhochschul*e can be considered rather radical in the centralised Austrian context of the early 1990s. The *Fachhochschulrat* is set up as an autonomous board which is not subject to instructions of the Minister. It should base its decisions on 'the criteria of scholarship and the correspondence between the curriculum and professional requirements' (Austria, 1993). This model was chosen to permit a large variety of institutions to offer courses, while at the same time ensuring uniform standards (Pratt, 1993).

Relationship with the government

Another important issue in respect to structural characteristics, are the different levels of dependency on government between universities and *Fachhochschulen*. Traditionally, universities did not receive money to be spent at their own discretion. Organisational reforms in the 1990s have changed this by the introduction of a type of lump sum financing, but the bulk of the budget is still earmarked. The relationship between *Fachhochschulen* and the federal government is more distant. The *Fachhochschulen* are quasi-private institutions where public bodies join the associations or are shareholders of the companies which legally own the institutions (Pechar, 1998). Federal money is allocated in the form of enrolment-driven lump sums and the government only decides on the number of study places it funds, and on the amount of funding per student. Furthermore, the *Fachhochschulen* are partly funded by provincial governments and municipalities. The budgets of the *Akademien* are neither enrolment-driven nor are they completely disassociated from enrolments: the bulk of the funding is not elastic because personnel are mostly tenured civil servants.

One can conclude from the previous section that there is a clear institutional distinction between the universities and the *Fachhochschulen*. Although it is

possible for the universities to offer *Fachhochschulstudien*, and this was foreseen at the time of the implementation of the FHStG (Pratt, 1993: 150), so far universities have been reluctant to offer these programmes. Since the degrees issued at both institutions are considered equal, there will probably not be a high level of interaction in terms of student flows. The flow of students will be limited to graduates of the *Fachhochschulen* to the doctoral programmes of the universities.

Research
Similarly to the educational function, the distinction between universities and *Fachhochschulen* is also evident in the research function. The inseparability of teaching and research is the fundamental organisational principle of Austrian universities. According to Austrian law, scholarship and university teaching are 'free' in the sense that they are not subject to external regulations with regard to subject matter. The *Fachhochschulen* are allowed to be involved in applied research and development, but structural funding of research is not provided. In 1998, a programme to promote co-operation with companies on a competitive basis has been launched with a budget of 3.6 million Euro. The universities and their research institutions will continue to play a dominant role in publicly-funded research. For the *Fachhochschulen*, an increasing role is seen as the carriers of regional innovations and the provider of specific services.

It is not likely that there will be a high level of interaction between the universities and the *Fachhochschulen* in the near future. Both are too distinct in their orientation, cultures and governance.

Other system characteristics

Finance
As indicated above, there are considerable differences between the financing of universities and *Fachhochschulen*. These differences are evident in the sources of funding, the allocation methods and in the amount of funding received. Where university funding comes mainly from the federal government and is predominantly earmarked, *Fachhochschulen* are funded by several bodies (federal, provincial and local government and third parties) and receive lump sum funding based on enrolments.

In 1998, the average cost for each regular student was approximately 100,000 Austrian *Schillings* at universities, 280,000 at arts universities, and 94,000 at *Fachhochschulen*. The internal allocation of funds (for universities and *Fachhochschulen* together) for 1990 and 1997-1999 is given in table 5.3. This clearly shows a relative decline in personnel expenses, and an increase in material costs.

***Table 5.3**: Expenses of higher education institutions (in Billion Austrian Schillings)*

	1990		1997		1998		1999	
	in Bio.S	***in %***	*in Bio.S*	***in %***	*in Bio.S*	***in %***	*in Bio.S*	***in %***
Personnel costs	7,177	**41.1**	11,027	**37.6**	12,008	**37.6**	12,124	**36.7**
Material costs	7,748	**44.4**	14,768	**50.4**	16,138	**50.5**	16,988	**51.4**
Building costs	708	**4.1**	609	**2.1**	655	**2.1**	776	**2.3**
Research and development	1,840	**10.5**	2,915	**9.9**	3,136	**9.8**	3,157	**9.6**
Total	17,467	**100**	29,318	**100**	31,936	**100**	33,045	**100**

Source: Statistischen Taschenbuch 1998, 1999

Personnel

In Austria, there is no special initial training for university lecturers. Initial training is acquired on the job. The prerequisite for appointment as *Universitätsassistent* (university assistant) or *Vertragsassistent* (assistant lecturer under private or public law) is graduation from a university. After four years of initial, limited-term service, an assistant lecturer may enter provisional service. This presupposes his or her taking a pertinent doctoral degree and successful performance in teaching, the development of the arts, research, and the typical administrative tasks occurring at a university department. To obtain a definitive, permanent post, an assistant lecturer has to acquire the teaching qualification of an *Universitätsdozent* (associate professor) after a further six years at the latest, or prove successful service in research, teaching and administration. For appointment as a *Universitätsprofessor* (university professor), candidates need a pertinent university degree, and have to have acquired the position of associate professor (or an equivalent scientific qualification domestically or internationally) as well as prove their educational skills. Professorships at arts universities may be granted without formal qualifications.

In recent years, the established posts for scientific and non-scientific staff at universities have increased to a total of over 19,000 posts (table 5.4). With a share of 60%, scientific personnel account for the majority of university and contract assistants. The ratio of scientific to non-scientific posts was approximately 4:3 in 1998.

***Table 5.4**: Academic and non-academic personnel in Universities and Art Universities*

	Academic	Non academic	Total
1990	8,664	6,159	14,823
1991	8,913	6,514	15,427
1992	9,279	6,514	15,793
1993	9,611	7,007	16,617
1994	9,910	6,919	16,829
1995	10,654	7,338	17,992
1996	10,921	7,534	18,455
1997	11,004	7,409	18,413
1998	11,081	8,392	19,473

Source: CHEPS Higher Education Monitor

Of all university assistants 28% are women, as are 12.8% of *Universitätsdozenten* (assistant professors), and 42.6% of *Universitätsassistenten* (contract assistants). In the academic year 1998-1999, the professor/student ratio was 1:113 (national and foreign students), the (fixed-service) professor or assistant/student ratio was 1:24. The arts universities generally show a different staff structure than universities. At the arts universities, professors account for one third of the total of 1,270 scientific staff posts.

For the staff of the institutions, the *Fachhochschulen* policy implied less individual freedom than for staff in universities. The *Fachhochschulen* policy was based on the idea of corporate autonomy, rather than individual autonomy (Pratt and Hackl, 1999). The enhancement of the professional aspect of education is reflected in the regulation that half of the members of the *Fachhochschulen* have to be practitioners (the other half are academics), and that the course development teams have to include practitioners.

Fundamental versus applied research
The relation between universities and *Fachhochschulen* with respect to research has already been discussed above. The differences in research mainly reflect the differences in education. *Fachhochschule* research is applied research and funded by various sources (central government, local governments, business) where university research is mainly fundamental and funded by government. In 1992 the universities insisted on this monopoly of 'pure' research and rejected direct access of *Fachhochschulen* graduates to doctoral studies. Now, universities and the *Fachhochschulrat* jointly decide upon the additional studies needed by *Fachhochschule* graduates.

Quality assurance
There is no particular tradition of quality evaluation in Austrian universities. Before the University Organisation Act of 1993, systematic quality evaluation was limited to purely quantitative reports submitted every three years by the heads of university departments. Individual evaluation was part of the initial procedure for appointing university professors or granting the academics the status of university faculty (De Lange and Van de Maat, 1999). Under the 1993 University Organisation Act, two evaluation instruments became obligatory for continuous performance evaluation: the evaluation of lecture courses and progress reports by the department heads which include data on teaching and on research-related performance. The Ministry has not directly linked evaluations with decision-making and resource allocation. Individual universities and departments can, however, implement a direct link policy for internal decision-making and resource allocation.

Within the *Fachhochschule* sector, quality assessment is linked to the accreditation policy. The most important authority for *Fachhochschule* programmes is the *Fachhochschulrat*, consisting of sixteen members appointed by the Minister of Science and Transport. This council examines whether the proposed programmes fulfil the legal requirements and determines whether or not they will be approved for a maximum of five years. The decision of the council has to be approved by the Minister of Science and Transport. The submitted proposals have to include an internal programme evaluation. Applications for

renewal have to be accompanied by a peer review report covering fourteen different issues. If this report is negative, additional measures for improvement have to be proposed to the *Fachhochschulrat*. These will be examined by the council, leading to the approval or termination of the programme.

Output

Since the *Fachhochschule* sector in Austrian higher education is relatively new, there are no numbers available yet on the success of graduates in the labour market. Unemployment figures of universities have increased in the past decades. In 1981 there were 502 unemployed university graduates whereas in 1995 the number was 4,894 (Kellerman and Sagmeister, 2000). This figure, however, also includes graduates involved in further education, practical training and those attending military service.

With respect to the qualitative connection between university education and labour market, which was investigated in the study 'The University and its graduates' (Kellerman *et al*., 1994), graduates frequently state that their qualifications are broader than the job requirements or that the requirements were different from their qualifications. Still, the majority of graduates consider their education as useful for their personal development (80%) and as useful for their professional development (60%).

The establishment of *Fachhochschulen* was largely based on labour market demands. Employers, others outside the education system and representatives of universities supported the idea that there was a need for a new form of education that was professionally oriented and had a shorter duration. Universities have not been able to satisfy this demand (OECD, 1995). Employers recognised that they needed new types of skills that include sound theoretical knowledge and a concern with practical problems. The *Fachhochschulen* were expected to create an intermediate level between the specialised, but narrowly skilled BHS (upper-secondary technical/professional schools) graduates and the academically shaped – and relatively old – university graduates. The *Fachhochschulen* perform this function by delivering a new form of (professional) education. This is supported by the fact that applications for accreditation are required to include a study of the labour market. No systematic research has been done yet on the relation with the labour market, but one may observe that the programmes that have been accredited do offer new combinations of subjects or are geared towards new employment areas, and the graduates are well received on the labour market (Pratt and Hackl, 1999).

The matter of recognition of the *Magister FH* and *Diplom-Ingenieur FH* in relation to the university degrees is something that cannot yet be described. The first impression, however, is that, the *Fachhochschulen* degrees are highly valued, at least from the viewpoint of employers.

Fachhochschulenstudiengesetz
The major acts and regulations that have led to the current situation originate from the year 1993. In higher education, Austria had problems of high drop-out rates and long durations of study. The system was regarded as highly inefficient. In 1993, the Parliament passed the *Universitätsorganisationsgesetz* (UOG) which replaced the law of 1975. The main aim of the UOG was to increase efficiency: the universities should have greater autonomy, their structure should be divided into strategic and operative agencies and deregulation should be introduced.

The most important act with respect to the binary structure of Austrian higher education was the *Fachhochschulstudiengesetz* (FHStG). This act proposed the creation of a new non-university sector. The discussion about diversifying the system originated from the 1970s. New plans in this period failed, due to opinions that the laws governing universities already permitted diversified studies and that the existing *Akademien* were fulfilling the function of the non-university sector in other countries. The late 1980s and early 1990s proved to be a better climate for introducing the *Fachhochschulen*. This was due to geo-political factors (mainly the EU-membership and integration) and the acknowledgement that universities had to be relieved from their burden of expansion. Furthermore, the developments were compatible with the tendencies towards deregulation and decentralisation within Austrian government.

Bologna declaration
Current discussions regarding the binary system concentrate on the position of the *Akademien* within this system and on the developments within Europe (mainly the Bologna declaration). With respect to the former, one can say that the aim to reduce overlap and to create a more simple and transparent system of post-secondary education has not yet been achieved (Pratt and Hackl, 1999). The fragmentation of responsibilities between the different ministries and the provinces has hindered the incorporation of existing institutions (the *Akademien*, governed by the Ministry of Education) within the *Fachhochschulen* sector (governed by the Ministry of Science and Transport). Recently, the situation has begun to change with current initiatives aiming at including social work courses into the *Fachhochschulen*. Similar plans exist with respect to paramedical professions.

Issues related to developments in Europe concentrate upon the position of the *Fachhochschulen* within the Bologna debate and the creation of a two-tier structure within higher education in Europe (three-tier when the PhD level is included). Within the university sector there is already agreement upon the implementation of this structure. Since 1999, universities have the opportunity to offer programmes in three cycles (*Bakkalaureat – Magister/Diplom-Ingenieur – Doktorat*). Supplementary regulations which were added to the University Study Act of 1997 enable universities, on a voluntary basis, to convert the *Diplomstudien* into a two-cycle course. There has been a proposal to amend the Act on *Fachhochschulen* accordingly (conversion into a two cycle course) to prevent devaluation of *Fachhochschulen* degrees and to increase international comparability. This proposal, however, failed to secure a majority in the coalition government.

Conclusions

Although the binary system in Austria is relatively young, and is still in the process of growth to maturity, one can conclude that there are considerable differences between the *Fachhochschulen* and the universities. The most evident distinctions are related to:

- **Institutional autonomy**: the universities are state agencies, whereas the *Fachhochschulen* are independent institutions. The universities are subject to tight regulations while the federal law for *Fachhochschulen* provides a fairly open framework.
- **Teaching and learning**: the universities are shaped according to the Humboldtian tradition while at the *Fachhochschulen* students follow a school-like curriculum. Both students and academics of *Fachhochschulen* are expected to meet more explicit obligations than in universities. This also leads to a higher level of conformity between official and actual duration of study within the *Fachhochschulen* than in the universities.
- **Admissions**: there is open access to universities for all citizens who hold a *Matura*. There is no *numerus clausus* that enables institutions to reject students. *Fachhochschulen* admit students according to the available places. The more school-like teaching culture requires a better link between the number of students and the number of teachers and other resources.
- **Funding**: universities are funded almost solely by the federal government whereas the *Fachhochschulen* have a more diversified funding base. Furthermore, university funding is predominantly earmarked (although there is a tendency towards lump sum financing and no direct relation to student numbers); the federal funding of the *Fachhochschulen* is not earmarked and is enrolment-based.
- Finally, there is an obvious difference in **quality management**. The relation between quality management and accreditation is one of the key aspects of the new *Fachhochschulen*. The approval of the programmes is dependent on the system of quality management and is submitted to periodical assessment. The universities traditionally had a weak system of quality assessment. New regulations are, however, tending toward a more systematic approach.

Considering the above, one can clearly define the Austrian system as binary, although the inclusion and position of the *Akademien* remains a critical issue. These institutions, although post-secondary, are not considered to be part of higher education and are governed by another Ministry than the *Fachhochschulen* and universities. Furthermore, their graduates do not meet the entrance requirements for the doctoral programmes nor for the top category of civil service. In the late 1990s, however, initiatives have been launched to make the distinction between the *Akademien* and *Fachhochschulen* more transparent and to incorporate some Akademie programmes into the *Fachhochschulen*.

Although the *Fachhochschulen* policy is considered to be successful, the non-university sector still plays a (quantitatively) minor role in Austrian higher education. After seven years of *Fachhochschulen*, both succession rates and the valuation by the labour market seem to be positive, and the enrolment numbers show a substantial growth. The prolonged domination of universities, however, will remain in the near future, at least in numbers. The 'equal but

different' concept with respect to universities and *Fachhochschulen* in Austrian higher education will be exposed to a critical test within the Bologna discussion. Some fear a re-establishment of the universities as an elite sector with the introduction of different degree structures.

6 Denmark

Peter van der Meer

Introduction

The Danish system of higher education has long been a formally unified system. In spite of this, however, there are a number of different types of institutions, including universities, schools, colleges, and specialised institutions. The university sector consists of twelve university or university-type institutions, including seven universities, a school of pharmacy, two business schools, and a school of educational studies. The non-university sector consists of about 120 schools, colleges and specialised institutions. In 1992 a major reform of the university sector took place.

Input

Access to higher education is open for everyone holding one of the following exams: The upper secondary school leaving examination (*Studentereksamen*), the higher preparatory examination (*HF-eksamen*), the higher commercial xamination (HHX) or the higher technical examination (HTX). However, because the institutions determine the number of available study places themselves, there are normally more applicants than places. Therefore each school, university or college decides who will enter. The admission criteria are based on the average mark of the leaving examination at upper secondary level and/or work experience or other qualifications. These criteria differ between 'short', 'medium' and 'long' cycle higher education and between disciplines. Sometimes students need to have taken specific subjects at specific levels to enter 'short', 'medium' or 'long' cycle programmes. The allocation of new students over available study places is centrally co-ordinated by the *Koordinerende Tilmeldung* (KOT). Only for a limited number of study programmes is a national *numerus clausus set*, i.e. for medical and teacher programmes (Klemperer, 1999).

As in other Scandinavian countries, students pay no tuition. Danish students receive state grants as long as the students perform well. Students are allowed to have an extra period of six months of study two times without loosing their grants.

Structural characteristics

Short cycle education

'Short' cycle higher education (KVU) is offered in technical and commercial schools, specialised colleges (colleges of education, engineering, socio-educational training, etc.) and in a number of special institutions (such as commercial academies and schools of social work).

Short cycle higher education consists of a wide variety of programmes that vary in length between one and a half and two and a half years, leading to a KVU-degree. Short cycle higher programmes are provided by the technical and commercial schools (institutions that also provide upper secondary education). The majority of short-cycle programmes are professionally oriented. Completion of short cycle higher education does not automatically qualify students to be admitted to medium and long cycle higher education institutions. The main aim of short cycle programmes is to prepare people for work (Klemperer, 1999). The actual average study time of KVU programmes is two years.

Medium cycle education
'Medium' cycle higher education (MVU) is offered by specialised professionally oriented institutions. These higher education courses last three to four years, leading to an MVU-degree. Most 'medium' cycle higher education courses are offered at non-university institutions. In 1998 there were five colleges of engineering, four schools of social work, twenty-three schools for training nurses, thirteen other schools for health professionals, and around 60 colleges of education (which include thirty-two teacher training colleges and eleven state colleges of socio-educational training) in the medium cycle higher education sector. Most of these institutions are specialised in particular fields, and all of them are professionally oriented. Many of the medium cycle programmes include a period of practical work in the curriculum (Klemperer, 1999). The average time to completion for MVU degrees is just over 3 years.

University cycle education
The universities are the sole providers of what is known as 'long' cycle higher education. Long cycle degrees are 5-6 years long (*kandidat* degrees). Until 1988 universities only offered *kandidat* and postgraduate degrees. In 1988 universities gained the right to grant Bachelor's degrees, and the first of these degrees were awarded in 1991. Because these degrees are three years long, they can be seen as 'medium' cycle degrees. Although the Bachelor's degree is seen as a degree qualifying for the labour market, and is recognised as such by employers, not many students leave the universities with a Bachelor's degree to start a career in the labour market. Most students that hold a Bachelor's degree continue to study for the *kandidat*. Also, not every study programme at the universities offers this Bachelor's degree. After completing a *kandidat* degree, students may continue into a PhD programme (Klemperer, 1999, Ministry of Education, 2000a). The average time to completion is 5.5 years.

Intermediary qualification
The only intermediary qualification is the Bachelor's degree in the 'long' cycle higher education. This degree qualifies for both the labour market and the *kandidat* degree. As mentioned above, most students with a Bachelor's degree continue to study for the *kandidat*.

The Ministry of Education prescribes in broad lines the content of the programmes and protects the (academic) titles. For instance, in the year 2000, 75 programmes leading to a 'short' cycle higher education have been closed down and replaced by thirteen new programmes (Beverwijk et al., 2000; Ministry of Education, 2000b). For some occupations specific degrees are required, i.e. for

teachers, medical doctors, lawyers etc. These degrees for protected occupations are offered within both 'medium' (i.e. teachers, nurses) and 'long' (i.e. medical doctors) cycle higher education.

Table 6.1 gives an overview of the student numbers in the different programmes (KVU, MVU, LVU).

***Table 6.1**: Student numbers in Danish higher education*

	1993	1994	1995	1996	1997	1998
KVU	16,725	16,152	15,741	15,993	17,041	18,094
MVU	84,034	90,515	100,580	107,962	115,282	120,075
LVU	60,850	57,145	53,879	52,004	50,228	50,739
Total	161,609	163,812	170,200	175,959	182,551	188,908

Structural characteristics

The design of higher education is like a binary system. First of all, there is a separate law that deals with the universities. The administration and ruling of the non-universities is dealt with in other laws (Ministry of Education and Research, 1992). The reason for this is because in addition to providing education, universities perform research. The other institutions only offer education.

Secondly, there is a huge difference between the programmes offered in the university and non-university sector. Within the university sector all types of education are being provided, including disciplines like law, medicine, and the humanities, and including music and art (Ministry of Education, 2000a). The range of studies in the non-university sector is less broad, because it is directed towards a future profession, such as midwifery, social worker, teacher or engineer (Eurydice, 2000). Disciplines like law and medicine are lacking in the non-university sector, although paramedical education programmes, like midwifery, nursing and physiotherapy, are offered. The universities do not train teachers, although teachers in upper secondary education require a *kandidat* examination from the university. Teachers in primary and lower secondary education have completed teacher training at the level of 'medium' cycle higher education in specialised schools. Teachers in upper secondary education have at least a university degree and have completed six months of pedagogical training, provided by non-university institutions (Eurydice, 2000).

A further difference concerning the curriculum is that the universities should keep their teaching up to date by using results from research and that writing a thesis is a final part of 'long' cycle higher education programmes qualifying for *kandidat*. All, or almost all, 'short' and 'medium' cycle higher education programmes contain shorter or longer periods of practical training (Eurydice, 2000) and qualify for a profession.

Interaction between sectors

There is hardly any interaction between 'short', 'medium' and 'long' cycle higher education. Students who have obtained a 'short' cycle degree are not automatically entitled to enter 'medium' or 'long' cycle higher education. However, the colleges and universities providing 'medium' and 'long' cycle higher education can admit student with a 'short' cycle higher education degree. The same holds for students who have a 'medium' cycle higher education degree and want to enter 'long' cycle higher education. There is no formal system of credit transfers from 'short' to 'medium' and 'long' cycle higher education. Students with 'short' and 'medium' cycle degrees can improve their qualifications through the system of open education (*åben uddanelse*), although these degrees are not considered to be the same as the 'long' cycle degrees offered in the normal system (Klemperer, 1999).

The outflow of students in 'short', 'medium' and 'long' cycle higher education can illustrate this. Of the students in 'short' cycle programmes in 1994, 53 percent still were in 'short' cycle programmes in 1995, 39 percent (including drop outs) entered the labour market, only 5 percent entered 'medium' cycle programmes and a mere 1 percent entered 'long' cycle programmes. Of the students in 'medium' cycle programmes in 1994, 73 percent still were in 'medium' cycle higher education in 1995, 21 percent entered the labour market, while no more than 5 percent entered 'long' cycle higher education. Of the students in 'long' cycle programmes in 1994, 81 percent still were in 'long' cycle higher education in 1995, 15 percent entered the labour market, while 3 percent changed to 'medium' cycle programmes (Undervisningsministeriet, 1998).

Other system characteristics

Finance

In 1996 the institutions for higher education received DKK 4.2 billion for their educational activities. DKK 2.7 billion flowed to the universities, and DKK 1.5 billion went to the other institutions. The universities also received DKK 3.8 billion to perform research. Another DKK 2 billion was provided to the whole higher education sector to cover capital and other expenses (Undervisningsministeriet, 1998).

Higher education in Denmark is solely financed by the state. Students do not pay tuition fees. The Ministry of Education funds the schools and colleges that provide 'short' cycle and 'medium' cycle higher education through a taximeter system. The universities ('long' cycle higher education) also receive funding through a different taximeter system from the Ministry of Education. The taximeter system is an output based funding system that gives a school an amount of funding according to the number of students that have passed their exams, i.e. completed a year of study. The tariffs in the taximeter system differ between type of education, i.e. 'short', 'medium' or 'long' cycle, and vary by subject. The Ministry of Education gives these taximeter funds as a lump sum to the institutions. Besides the funds for education, the universities also receive funds for their basic research. The Ministry of Research and Information Technology provides these, either directly or through the Danish Research Councils. The major part of the funds is given as lump sum. The universities

receive on average one third of their budget through the taximeter system for their educational activities and two third of their budget for performing research (Klemperer, 1999).

Personnel
A marked difference in personnel between the universities and other institutions exist. Teachers at the schools, colleges and institutions offering 'short' and 'medium' cycle higher education should have at least a *kandidat* degree from the long cycle higher education. Because these teachers do not perform research, a PhD is not required. Within 'short' cycle higher education it is also possible to get a teaching position on the basis of a combination of education and employment. Experience in a suitable occupation can compensate for a lack of formal education. Because at universities both teaching and research are performed, the Ministry requires candidates for full-time positions in the university sector to have a qualification at the PhD level (Eurydice, 2000).

Quality assurance
A recent development has been the change in the quality assessment system for higher education. Traditionally quality was more or less guaranteed through a system of external examiners. Although the prime task of these examiners was to guard the fair treatment of students at exams, they also guarded over the content and the quality of the study programmes. Because an important part of the external examiners come form future employers, they helped to guard national standards and guard the fit between the curriculum and future occupations. The external examiners worked in all educational sectors, as well in 'short', 'medium' as in 'long' cycle higher education. With the reform in 'long' cycle higher education in 1992, the *Evalueringscenteret* was established. This organisation became responsible for quality assessments within the university sector (Ministry of Education and Research, 1992). In 1999 the activities of this institute (now called EVA), were broadened to other types of education, including 'short' and 'medium' cycle higher education. So at the moment there is no difference in methods of quality assurance and assessment between the different types of higher education.

Output

The position on the labour market after graduation differs between 'short', 'medium' and 'long' cycle higher education. Regrettably, information about wages and salaries of recent graduates is not available. However, unemployment among graduates from 'medium' cycle higher education is lowest. It grew from 2.9% in 1988 till 4.9% in 1993 and dropped till 3.1% in 1996. The unemployment among graduates from 'short' and 'long' cycle higher education was slightly higher. It varied from 4.5% in 1985 to 6.5% in 1993 and 4.5% in 1996. These unemployment figures are far below the national average and below the youth unemployment figures (OECD, 1999).

Employees with a 'short' and medium' cycle degree earn about 20% more and employees with a 'long' cycle degree earn 60% more than employees with lower secondary education (Teichler, 1999).

Developments

Higher education in Denmark has been divided into university (LVU) and non-university (KVU and MVU) education for a long time. Traditionally the universities have focused on academic teaching and research whereas the non-university institutions have focused on teaching in professional areas. Although the universities made a small movement towards the non-universities by starting to offer Bachelor's degrees in some disciplines, the distinction is still very pronounced. Only students with a Bachelor's degree are admitted to the *kandidat* examination. Few students with a Bachelor's degree enter the labour market and students with other 'medium' cycle higher education degrees have to start at the entrance level of a university study, if they wish to obtain a LVU-degree. In addition, the universities are administered under different laws than the MVU and KVU schools and colleges. This was confirmed once again by the university reform in 1992 (Ministry of Education and Research, 1992).

Recent changes

Structural change

In January 1998, the Danish Minister of Education proposed a change in the structure of the higher education system. The policy goal of the government is to reach a 50% graduation rate from tertiary education of the age cohort, and the proposed changes aim to enable the system to cope with higher enrolments. The changes involve reorganisation of the existing higher education system through mergers. The intention is to create fewer, multi-disciplinary institutions. Two major alternatives are being considered: the creation of a unified system of higher education, or (more likely) the creation of a well-defined binary system with a university sector and a non-university sector offering short cycle and medium cycle professional education. Medium cycle non-university higher education programmes would lead to Bachelor's degrees, which would primarily qualify students to enter the labour market. The government intends for the changes to take place voluntarily within the next five to seven years (Klemperer, 1999). At this moment mergers between institutions within the same region offering 'medium' cycle higher education is underway.

Bologna declaration

As a consequence of signing the Bologna declaration, the Danish Minister of Education proposed to introduce the *professionsbachelor* as a new title to be obtained in the 'medium' cycle higher education. This is part of the proposed law restructures this type of education and makes the mergers possible (Undervisningsministeriet, 2000).

Conclusion

Although the Danes see their system of higher education as one sub-system of the education sector, it can be argued, and we would agree, that this system is in fact a binary system. First of all, there is a separate law that deals with the

universities. The administration and ruling of the non-universities is dealt with in other laws. The universities and non-university institutions offer very different degrees. The universities offer 'academic' degrees, which take a long time to accomplish, while the non-universities offer shorter 'professional' degrees. Secondly, the range of studies in the university sector is much broader than in the non-university sector. Within the universities almost all disciplines can be studied. Thirdly, there is little interaction between the universities and the non-university institutions, and the graduates acquire different types of positions in the labour market. A final argument in favour of calling the Danish system a binary one concerns the differences between the sectors in terms of the qualification of staff. Whereas in universities staff require a PhD, staff of non-university institutions only need *kandidat* degrees.

Only two arguments in favour of calling the Danish system a unitary one can be mentioned. These concern the unified entrance qualifications and the unified funding system. In spite of the fact that the official entrance qualifications do not differ on paper between 'short', 'medium' and 'long' cycle higher education, in practice they do differ, due to the fact that selection criteria are set by the institutions. And although all the schools, colleges and universities are funded through the taximeter system, the tariffs in this funding system differ between sector and disciplines. In addition, the universities also receive funds for doing research.

7 Germany

Jos Koelman

Introduction

The German system of higher education is a binary system that consists of a university and a non-university sector. The institutions of higher education in these two sectors include all institutions (public and private) as defined in the higher education laws of the *Länder*. Each Land has its own ministry responsible for higher education. At the federal level the *Bundesministerium für Bildung und Forschung* is responsible for the implementation of the federal law on higher education (Hochschulrahmengesetzes, HRG). In 1998 in Germany 344 institutions of higher education existed.

University sector
The university sector includes universities, technical universities, one comprehensive university (*Gesamthochschule*), colleges of education and other institutions of similar standing (e.g. colleges of medicine, colleges of theology) and colleges of art and music. They offer 4- to 5-year programmes in academic disciplines. In general, colleges of education and colleges of medicine are part of a university.

Fachhochschulen
The non-university sector consists of *Fachhochschulen* and colleges of public administration (*Verwaltungsfachhochschulen*). *Fachhochschulen* offer highly practice-related training for occupations which require the application of scientific findings and methods of artistic ability. Above all, they offer courses in the fields of engineering, economics, social studies, agriculture and design. The study courses are shorter than in the university sector. In some *Länder*, *Fachhochschule* graduates have direct access to doctoral studies at universities. The colleges of public administration are a special type of *Fachhochschule* in which civil servants are trained for careers in the higher levels of the civil service. In table 7.1 the numbers of German institutions of higher education are presented by type.

***Table 7.1**: Number of institutions of higher education in Germany*

	Total	Univ.	Compr. univ.	Colleges of education	Colleges of theology	Coll. of art and music	FH	Verwaltungs FH
1992	318	91	1	11	19	43	125	28
1993	314	87	1	8	17	44	127	30
1994	325	88	1	6	17	46	136	31
1995	326	88	1	6	17	46	138	30
1996	335	90	1	6	16	46	146	30
1997	337	90	1	6	16	46	147	31
1998	344	92	1	6	16	46	152	31

Source: Bundesministerium für Bildung und Forschung

Table 7.2 makes clear that, compared to the Netherlands, only a small part (about one fourth) of the total student population is educated at the *Fachhochschulen*. *Fachhhochschulen* are usually much smaller than universities, of which some have grown to disproportional dimensions (e.g. LMU Munich with more than 60,000 students).

***Table 7.2**: Number of students by type of institution (x 1000)*

	Total	Participation rate (in %)[1]	Universities	Colleges of Art and Music	*Fachhochschulen*[2]
1990	1,713	19.5	1313	28	371
1991	1,776	21.1	1350	29	396
1992	1,834	22.8	1385	29	420
1993	1,867	24.5	1397	30	440
1994	1,873	26.2	1394	30	449
1995	1,858	27.2	1380	29	449
1996	1,838	27.9	1369	29	440
1997	1,824	28.6	1357	30	437
1998	1,801	28.9	1335	30	436

Source: Bundesministerium für Bildung und Forschung

Note 1: Per cent of the population between 19 and 26.

Note 2: Including *Verwaltungsfachhochschulen*.

Access to universities (and their equivalents), in principle, is open to all those who have passed the final examination of secondary education, and have been awarded the general *Abitur* (*Algemeine Hochschulreife* or *Vollabitur*) or the F*achgebundene Hochschulreife* (a specialised *Abitur*). Those holding the general *Abitur* degree have the right to study at any category of higher education institution, in whatever subject they want. Those who have aquired the specialised *Abitur* are only permitted entry into specified courses of study according to the specialisation of his/her *Abitur*. The *Algemeine Hochschulreife* and the *Fachgebundene Hochschulreife* are normally obtained at a *Gymnasium*. Night school courses at *Abendgymnasium* are available for those in employment, and there are day school courses for students with work experience at *Kollegs* which also lead to the general higher education entrance qualification. Additional opportunities (for those who want to study at a later age) to acquire the *Abitur* are offered in the form of the *Nichtschülerprüfung* and the *Begabtenprüfung*

The prerequisites for admission to a *Fachhochschule* are either the *Algemeine Hochschulreife* or the *Fachgebundene Hochschulreife* and *Fachhochschulreife*. The *Fachhochschulreife* is normally acquired at a *Fachoberschule*. It is also possible, however, to obtain the *Fachhochschulreife* through special additional courses which are offered, for instance, at *Berufsfach-schulen* and *Fachschulen*, and which lead primarily to vocational qualifications.

In principle, access to universities and *Fachhochschulen* is open to everyone who has passed the required exams (see above). Prospective students at colleges of

arts and music also have to demonstrate their artistic aptitude. The practical entrance tests for sport study programmes are another exception. Applicants for some programmes, in particular technical studies, have to meet additional requirements (e.g. subject-related practicals).

In addition to the content-related requirements, the number of places in certain fields of study is restricted. In some courses (e.g. medicine, veterinary medicine, dentistry, architecture, business management) there are nationwide quotas. This means that institutions of higher education have to accept students based on the number of student places available in the respective fields of study at the respective institutions. The number of student places is calculated on the base of national norms (student-staff ratios) according to the *Kapazitätsverordnung*. In those fields of study in which student demand exceeds regionally or nationally the number of student places available, access is regulated by a national admission office (*Zentralstelle für die Vergabe von Studienplätzen*, ZVS). The fields of studies for which access is administered by the ZVS are either declared to fall under limited admission (*numerus clauses*) or under an 'allocation system' (*Ortsverteilungsverfahren*), in which students are not sure of being placed at the institution of their first choice. In case of *numerus clausus*, *Abitur*-scores and social factors (e.g. queuing time) are taken into account.

Structural characteristics

Professional versus academic programmes

In Germany the differences between courses offered by universities on the one hand, and *Fachhochschulen* on the other hand, are quite similar to the differences between *hogescholen* and universities in the Netherlands. Compared to the universities, the courses of study and the teaching process at the *Fachhochschulen* are much more application-oriented and are geared to the demands of practical practice. The same applies to the (limited) research activities of the *Fachhochschulen*. Only universities have the traditional right to award the doctorate (*Doktorgrad*) and the post-doctoral lecturing qualification (*Habilitation*). These rights are termed *Promotionsrecht* and *Habilitationsrecht*, respectively. Graduates of *Fachhochschulen* are allowed to enter the university to apply for the *Doktorgrad* if they can find a university professor who is willing to act as a dissertation supervisor.

Higher education degrees in Germany are divided into two types (academic and professional degrees) and two levels (initial and post-initial). With regard to the initial level, courses at both universities and *Fachhochschulen* lead to the *Diplomgrad*, e.g. *Diplom-Ingenieur* (university) or *Diplom-Ingenieur FH* (*Fachhochschule*). Degrees granted by *Fachhochschulen* include the abbrevation FH. Universities, however, do not only award the *Diplom*-degree. In addition to giving the *Diplomaprüfung*, they also give the *Magisterprüfung*, which leads to the *Magistergrad*. Whereas study programmes that culminate in a *Diplom* are confined to a single subject, those that lead to a *Magister* degree (e.g. *Magister Artium, M.A.*) consist of a combination of subjects (usually one major subject and two minor subjects, or two equally weighted major subjects).

Some university courses end with a state examination (*Staatsprüfung*) instead of an academic examination (*Hochschulprüfung*). This is the case for study programmes that are being considered of particular importance to the public interest (medicine, dentistry, veterinary medicine, pharmaceutics, law, food chemistry and teacher training courses). Law students and future teachers who have past the (first) state examination (*Erste Staatsprüfung*) move on to a preparatory service (*Vorbereitungsdienst*), leading to a second state examination (*Zweite Staatsprüfung*). They must pass this second examination to qualify as a lawyer or teacher. The standards of performance on state examinations correspond to those of academic examinations. Hence, the difference between state and academic examinations is essentially of a formal nature. During state examinations, representatives of the state examination bodies act as examiners along with university professors.

At the post-initial level universities offer the *Doktorgrad* and the *Habilitation*. In addition, almost all *Fachhochschulen* and universities offer all kinds of post-graduate courses supplementary to the first degree (initial degree).

For every study programme, the examination regulations establish guidelines for the time in which the course and the corresponding examination should be completed. For most university courses this guideline period (*Regelstudienzeit*) is between four and five years (including a practical training, its length varying by discipline and institution) and for medicine six years and three months. On average, however, most students need much more time to finish their study. At the end of the eighties and the beginning of the nineties the average duration of study was about 7 years. The average duration of studies at the universities declined to 6.4 years in 1996 (see table 7.3). The actual study time by discipline at the universities is highest for the Law (11 years in 1996), followed by the Arts (7.5 years) and Psychology (7.6 years). The *Regelstudienzeit* for courses at *Fachhochschulen* is usually four years, including one or two practical semesters (*Praxissemester*) to gain practical experience. The average actual duration of studies at the *Fachhochschulen*, however, was 4.9 years in 1996 (see table 7.3). The average duration of studies by discipline varies from 3.9 years for the Social Sciences to 5.6 years for the Arts.

***Table 7.3**: Average duration of study (in years) by type of institution 1980-1996*

	1980	1985	1990	1992	1993	1994	1995	1996
Universities	6.4	6.9	7.2	7.1	6.4	6.6	6.5	6.4
Kunsthochschulen	5.7	6.2	6.3	6.5	5.5	5.6	5.8	6.2
Fachhochschulen	4.1	4.5	5.0	5.0	4.8	4.7	4.8	4.9

Source: Bundesministerium für Bildung und Forschung

Initial studies at institutions of higher education are generally divided into a first and a second stage. The first stage (*Grundstudium*) usually takes two years (universities) or three to four semester (*Fachhochschulen*) and ends with an intermediate examination (*Diplomvorprüfung*). This *Grundstudium* should,

however, not be considered an intermediate qualification. The second stage (*Hauptstudium*) ends with a final examination leading to the initial (first) degree.

Co-operation between sectors
In Germany the clear division of higher education into university and non-university sectors is reflected in the organisational separation into an academic (universities) versus professional (*Fachhochschulen*) orientation of institutions of higher education. Universities offer academically-oriented degrees whereas *Fachhochschulen* offer courses leading to professionally-oriented degrees. One exception, however, exists: the comprehensive universities (*Gesamthochschulen*). Created in the 1970s, the *Gesamthochschulen* may be considered a special type of university, which were only ever found in two Länder (Hessen and Nordrhein-Westfalen). They provide academic programmes of study, but also programmes provided by *Fachhochschulen* and so-called integrated courses which provide qualifications after three or four years. The 'experiment' with (the very few) *Gesamthochschulen* has not been very successful. Only one of them still exists (see table 7.1).

There is no structural co-operation between the two sectors. Co-operation is encouraged, but is not regulated by the state. Incidental co-operation between *Fachhochschulen* and universities, resulting from initiatives of individual professors or managers, does take place, especially in the field of teaching.

Other system characteristics

Finance
With regard to the core funding (*Grundmittel*), *Fachhochschulen* and universities are funded in the same way (see also Vossensteyn et al., 1998). German higher education is publicly funded, and institutions have to follow the budgeting and accounting laws of German public administration. These laws, although set by the individual states, are more or less similar across the country. The main restrictions derive from rules such as:

- the line item budgets (representing expenditure categories) are fixed prior to the fiscal year;
- the budget may not be spent "across" line items;
- this spending rule also applies to funding for staff. According to the *Stellenplan* funds are allocated on a position by position basis; thus, institutions cannot spend personnel funds for other purposes, even if this is deemed to be necessary and appropriate;
- funds (unspent balances) may not be transferred to the following fiscal year.

The public (basic) funding of institutions of higher education is – apart from some exceptions – not the result of using a formula for calculating budget components. The funding is based on institutional budget requests, each approved – in a process of budget negotiations – by the authorities on the basis of institutional assessments (allowances by reimbursement). The starting point is the *Stellenplan* of the last year. Therefore, the budgeting process can be

characterized as incremental and input-oriented. The amount of *Grundmittel* a university or *Fachhochschule* receives in terms of allocations is not influenced by its actual number of students.

Personnel
Teaching staff at higher education institutions can be divided up into the following groups:
- professors;
- scientific and creative arts assistants (*wissenschaftliche/künstlerische Assistenten*);
- senior assistants and senior engineers (*Oberassistenten/Oberingenieure*);
- lecturers (*Hochschuldozenten*);
- scientific and creative arts staff (*wissenschaftliche/künstlerische Mitarbeiter*);
- teaching staff for special tasks (*Lehrkräfte für besondere Aufgaben*).

Professors at *Fachhochschulen* must, as a rule, fulfil the requirement of professional experience, i.e., they must show particular achievements in the application or development of academic or scientific knowledge and methods from professional experience of at least five years, of which at least three years must have been spent outside the higher education sector. Professors at *universities* must hold an additional academic qualification, known as *Habilitation*. Professors at *Fachhochschulen* are generally expected to teach eighteen units (45 minutes) a week, whereas university professors teach eight units a week. Professors are usually appointed by the ministry responsible for science in the particular Land as civil servants with limited or unlimited tenure. The recruitment requirements for professors also apply to lecturers (*Hochschuldozenten*). Lecturers perform their tasks according to their specific terms of employment.

Scientific assistants (*wissenschaftliche Assistenten*) have to perform (some) teaching and research. The research is done in order to obtain a further academic qualification (doctorate or *Habilitation*). They are assigned to professors, under whose professional responsibility and supervision, they carry out their academic work. Assistants are appointed as civil servants or are taken on as salaried employees for a limited period (normally three years with the possibility of a three years extension). Senior assistants (*Oberassistenten*) must teach courses independently and conduct reseach. They are appointed for a four-year period. Scientific staff (*wissenschaftliche Mitarbeiter*) are civil servants or salaried employees who are responsible for teaching and research. Usually they have an unlimited tenure. In cases where it is necessary to impart mainly practical skills and knowledge, such duties can be delegated to so-called teaching staff for special tasks (*Lehrkräfte für besondere Aufgaben*).

***Table 7.4**: Staff (x 1000) at higher education institutions in Germany 1990-1996*

	1990	1991	1992	1993	1994	1995	1996	% change 1990-1996
Academic	118	120	112	111	111	111	112	-5
Non-academic	211	221	209	207	206	208	208	-2
Total	329	341	321	318	317	319	320	-3

Source: Bundesministerium für Bildung und Forschung; Wissenschaftsrat

***Table 7.5**: Percentage female staff (absolute) 1992-1996*

	1992	1993	1994	1995	1996	% change 1992-1996
Academics	22	22	22	23	23	+5
Professors	7	7	8	8	9	+29
Total staff	49	49	49	49	49	-

Source: Bundesministerium für Bildung und Forschung

Research

Universities perform nearly all of the research carried out by institutions of higher education. *Fachhochschulen*, however, do receive permanent governmental funding (*Grundmittel*) which partly may be used to conduct fundamental research. In practice, however, they only carry out some (applied) research, which is mostly supported by external sources of funding (both public and private sources). *Fachhochschulen* do not have the right to grant postgraduate degrees, but are – in contrast to The Netherlands – eligible for research funding from research societies (e.g. *Deutsche Forschungsgemeinschaft*).

The vast majority of the research undertaken in universities is financed through public sources. The main sources of support are the general university funds (mostly from the relevant *Land*), and highly selective funding (*Drittmittel*), based on excellence and competition, from the German research society (*Deutsche Forschungsgemeinschaft*, DFG).

Quality assurance

Germany does not have a national quality assessment system. Nevertheless, during the last years the idea of developing quality assessment systems has been discussed several times. In 1997 consultations on assessment systems took place in all *Länder*, as well at the interregional level. In 1995 the Conference of Rectors and Presidents of Universities and *Fachhochschulen* (*Hochschulrektorenkonferenz*, HRK) adopted a resolution "on the evaluation in the field of higher education, with particular reference to the assessment of teaching". One of the proposals in this resolution was the establishment of a national consulting and assessment agency, independent from state intervention. This agency should, amongst other things, support institutions of higher education (at their request) with setting up internal and external assessments and act as an umbrella organisation for regional associations in the field of quality assessment.

In December 1998 the *Kultusministerkonferenz* (KMK) installed an *Akkreditierungsrat* for a three-year period. The *Akkreditierungsrat* is an independent institution that accredits agencies who in turn accredit *Fachhochschule* and university programmes at the request of a *Land*. The final decision concerning the accreditation of study courses is made by the *Land*. This implies that each *Land* can determine its own evaluation procedure for the higher education study programmes offered by its institutions. At the moment, the regional agencies in the field of quality assessment (*Akkreditierungsagenturen*) (only) have the task

to advise about and to evaluate the introduction of Bachelor's and Master's programmes (see below).

Output

The purpose of *Fachhochschulen* is to offer study programmes that are closely related to professional practice. This aim is particularly served by incorporating one or two semesters of work experience (*Praxissemester*) into the courses of study. In many cases the topics of the theses (*Diplomarbeiten*) derive from problems that have arisen in practice, e.g. during the *Praxissemester*. Sometimes subject and problem definition are prepared in collaboration with industry and trade.

At universities student counseling offices help their graduates to find a job. Moreover, work placements offer an opportunity to establish contact with potential employers. In a number of study fields (especially in natural and engineering sciences) work experience during the study (four to six months, in some cases up to a year) is actually demanded. To improve the employment prospects of arts and social science graduates, some institutions have set up programmes in collaboration with employment offices to place them in industry and equip them with key skills. To improve the prospects of graduates of *colleges of art and music* some colleges have broadened the curricula in such a way that their graduates also can qualify for practical work (e.g. teaching, management in the cultural sector). Many institutions of higher education stimulate students to create their own job and to set up their own business.

Table 7.6 makes clear that the unemployment quota for persons with a higher education degree is significantly lower than for most other categories on the labour market and is much lower than the general unemployment quota for the whole labour market.

***Table 7.6**: Unemployment quota (in %) and level of education ('old' Länder)*

	University degree	Fachhoch-schule degree	Fachschule	Lehre/ Berufsschule	No diploma	Total
1975	1.2	2.8	1.5	2.8	6.1	3.9
1980	1.9	1.8	1.3	2.2	5.9	3.2
1985	4.6	4.0	2.7	6.1	14.9	8.1
1990	3.9	2.8	2.1	4.3	13.3	5.9
1991	3.5	2.5	1.9	3.9	12.8	5.4
1992	3.4	2.6	2.0	4.3	14.1	5.9
1993	4.0	3.3	2.6	5.6	17.6	7.5
1994	4.1	3.5	2.8	6.1	19.1	8.0
1995	4.0	3.4	2.9	6.2	20.0	8.2

Source: Bundesanstalt für Arbeit

Developments

Historical background

The restructuring of the higher education system in West Germany in many respects followed on from the situation existing prior to 1933. In accordance with the principle of cultural federalism, the *Länder* were initially solely responsible for higher education matters. Inter-*Länder* co-ordination then ensued in 1948 through the setting up of the Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* of the Federal Republic of Germany (*Ständige Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland*, KMK) as well as the West German Rectors' Conference (*Westdeutsche Rektorenkonferenz*, WRK) for higher education institutions. An important role relating to advisory matters was adopted by the Science Council (*Wissenschaftsrat*) formed in 1957.

Between 1965 and 1980 the structure of the higher education system changed considerably, partly through the introduction of new types of higher education institutions and partly through the merging of existing ones. With the introduction of a second type of higher education institution–the *Fachhochschulen*– the higher education sector moved towards a binary structure. In the same period, most of the technical colleges increased their range of courses to such an extent that they were transformed into technical universities.

Moreover, the strong growth in the numbers of students led to an enormous expansion of the system. Around 30 new universities were established between 1960 en 1980, plus 95 *Fachhochschulen* (not including the *Verwaltungsfachhochschulen*). The introduction and extension of the *Fachhochschulen* have contributed considerably towards the regional expansion of the higher education network in Germany.

As a result of the unification of the two German states, higher education policy in the 1990s had the central task of shaping a common higher education landscape from two systems that had developed in different directions after 1945. This was essentially carried out by means of changing the GDR system in such a way that it fits within the higher education structures that had grown in the 'old' Federal Republic of Germany.

Recent developments

At the end of the 1980s, there was a widespread belief in Germany that the higher education system was in a crisis and that there was a growing need for reform. Within the framework of the debate on higher education reform, the Ministry published a reform paper in 1997, *Hochschulen für das 21. Jahrhundert* (Higher Education Institutions for the 21st Century), in which the most important objectives of a reform policy were formulated. According to this policy paper, the German higher education system suffers under structural deficiencies which threaten its effectiveness and competitiveness. One of the goals in the paper regards the improvement of the attractiveness of German higher education at an international level (*Studienstandort Deutschland*). In this context, the possibility of introducing Bachelor's and Master's degrees should also be considered seriously. As a follow up, since a recent change (in August 1998) in the federal law on higher education (*Hochschulrahmengesetzes,* HRG),

institutions of higher education are permitted to award Bachelor's and Master's degrees (article 19, HRG).

Bologna declaration
As a result of the above-mentioned amendment to the federal law on higher education, universities and *Fachhochschulen* have started to set up new Bachelor's and Master's degrees. This experimental phase has lead to discussions about whether the Bachelor's and Master's degrees should exist in addition to the old structure or whether they should replace the old degrees. For the moment, the new degrees exist in addition to the old degrees. The university of Bochum, however, is the first and only institution in Germany to abolish the *Diplom* and will be offering only BSc and MSc degree programmes starting in the academic year 2000-2001.

A Bachelor's degree offers students a professional qualification for the labour market. A Master's programme is open to graduates of different Bachelor's programmes. In contrast to *Diplom* degrees (FH is added to the *Diplom* of *Fachhochschule graduates*), there is no formal distinction in titles granted by a university or *Fachhochschule*. Two kinds of degrees are awarded: Bachelor/Master of Arts/Science degrees for academically oriented programmes, and Bachelor/Master of Engineering degrees for vocational oriented study programmes. All of the courses which are funded by the German government must be accredited. In February 2000 the Association of Universities and Other Higher Education in Germany (the *Hochschulrektorenkonferenz*, HRK) made proposals to implement the assessment procedures.

Numerous German institutions of higher education offer international degree courses (see e.g. DAAD, 2000). The range of study opportunities covers undergraduate, graduate and postgraduate courses. The predominant or exclusive language of instruction, at least in the first semesters, is English.

Conclusion

One of the major distinguishing features of German higher education in the last three decades has been the establishment of two separate sectors, a more research-oriented university sector and a more vocationally-oriented non-university sector. Consequently, between 1965 and 1980 the German higher education system clearly moved towards a *binary structure*. Despite the introduction of Bachelor's and Master's degrees, there are no relevant signals that the differences between these two sectors will become smaller in the near future. There is no process going on in which the upgrading and lengthening of courses in the vocational higher education sector will lead to degrees similar to those in the university sector. Nor, in general, is there a tendency to create one unitary higher education sector, as e.g. was the case in the United Kingdom.

The German binary higher education system, like the binary system in the Netherlands, can be regarded as a 'pure' one. In both higher education systems only universities have the right to award doctoral degrees, and in both systems nearly all of the research in the higher education sector is carried out

by the university sector. A difference between the two countries regards the proportions of the two subsystems. In the Netherlands the non-university sector, measured in student numbers, is significant larger than the university sector, whereas in Germany only one fourth of the total student population studies at *Fachhochschulen*.

8 Finland

Jasmin Beverwijk

Introduction

With the introduction of the AMKs (*Ammattikorkeakoulut*) in 1990, the landscape of the Finnish higher education sector has changed immensely. The transformation of the vocational sector started in the 1980s when highly specialised study lines were combined into more comprehensive basic programmes. Despite this effort to broaden the curricula, the structure of vocational education, including the so-called higher vocational education, was considered to be too rigid and inflexible both with regard to individual needs and the demands of the changing world of work. This inflexibility was aggravated by the fact that education in different fields was given in specialised institutions.

In the early nineties, it was felt that the vocational education sector needed to change again, this time more drastically. In addition, this time there were more arguments for the desired reform from the side of the higher education sector. The Finnish system of vocational education was characterised by a very wide selection of vocational diplomas of varying lengths and levels. Until 1990, the system of vocational education included all vocationally oriented education including higher education. This meant that higher vocational education, which in many countries would be classified as belonging to the higher professional sector, was regarded as vocational education in Finland. The fact that it was placed somewhere between secondary and higher education made the Finnish system difficult to place in the international perspective. Another factor leading to the AMKs reform was the need for a new way to deal with the constant growth in the demand for higher education, which was earlier channelled through an expansion of the university system. The purpose of the changes was to create a new and attractive educational route especially for the students who had completed the matriculation examination and at the same time 'save' the universities from the masses. In other words, the aim was to raise the level of higher vocational education to the tertiary level. AMKs were supposed to offer programmes that would be more professionally and practically oriented than those of the academic universities and which would respond to the changing demands for qualifications in working life alongside academic university education. During those days, the labour market indicated that there was a need for a highly trained expert work force. In this sense, the AMKs were supposed to provide a competitive alternative for highly educated young people to gain a degree and qualify them for the highly-trained work force (Beverwijk and Schrier, 1999). Nowadays Finnish higher vocational education can be compared with what is generally called higher professional education.

The AMKs were created gradually during the 1990s. As mentioned in the previous section, the AMKs have evolved from the former vocational institutions, which provided the highest level of vocational education. In a way, the

reform has divided the Finnish vocational education and training system into two: vocational institutions, which provide secondary education and training, and AMKs, which provide professional higher education (Ministry of Education, 2000).

Nowadays due to the reforms, the AMKs form a professional higher education sector, which operates alongside the university sector. There are 29 AMKs and 20 universities. The universities are run by the state, while AMKs are either locally or privately run. In the latter case, local authorities have founded private companies to run an AMK. Because of the regional nature, most of the publicly owned polytechnics are run by municipal federations (Ministry of Education, 1998, p. 73). Under the AMK Act, it is possible to establish state-run AMKs, but at present there is no foreseeable need for this (Ministry of Education, 2000).

Input

In the following table one can see that the number of students attending AMKs has grown enormously. The percentage of students studying at the AMK has grown from 5% to 29%, whereas the percentage of students studying at the universities has decreased. In 1997 there were 2.4 times more students studying at universities than at AMKs.

***Table 8.1**: Total number and percentages of students studying at AMKs and Universities*

	1992	1993	1994	1995	1996	1997
AMK	6,884	14,225	23,601	31,072	44,339	58,590
Universities	122,227	126,123	128,167	135,107	138,173	142,818
Percentage						
AMK	5%	10%	16%	19%	24%	29%
Universities	95%	90%	84%	81%	76%	71%

Source: Higher education Monitor, 1999

Students apply for entry to AMKs after general or vocational upper secondary education. The requirement is a Finnish matriculation certificate, i.e. an upper secondary school leaving certificate, a basic vocational qualification, or an equivalent international or foreign qualification. The AMKs determine their own entry requirements and select their students. The selection is based on the student's school achievement, work experience and often also an entrance test.

Universities have higher entry requirements than AMKs. Students are required to have either a polytechnic degree, a higher vocational diploma, a post-secondary level vocational qualification or a minimum of three years' vocational qualification, or to have completed the Open University studies required by the university. Anyone considered by the university to have suffi-

cient knowledge and skills may also be admitted. Universities select their own students, and there is a lot of competition for places. All fields apply *numerus clauses*, in which entrance examinations are a key element. Universities offer openings for about one third of qualified school leavers. Applicants educated abroad may be admitted if they are eligible for university studies in the country concerned. The universities, their faculties or departments, make the selection. They can be ranked on the basis of 1) marks in the matriculation examination and in the school-leaving certificate, plus entrance tests, 2) on the basis of entrance tests only or 3) on the basis of marks in the matriculation examination and in the school-leaving certificate (Ministry of Education, 2000).

Structural characteristics

Degrees and programmes

AMKs and universities are two totally different systems with different types of degrees and programmes lengths.

The length of AMK degree programmes is governed by the legislation. All programmes require a minimum of three and a maximum of four years of full-time studies. The AMK Decree defines the length in more detail as 120 to 160 credits. For two degrees (for midwives and sea captains), however, 180 credits are required. In practice, there are no 120-credit programmes. The term 'credit' refers to approximately 40 hours of work: the study load for an academic year is 40 credits. A student may study for one year longer than the duration defined for the degree programme. In practice, the average study duration to finish the degree is four years. After successfully finishing the degree programme, students receive an AMK degree with a reference to the field of specialisation, e.g. AMK degree in administration and trade (Ministry of Education, 2000).

As a rule, Finnish AMKs comprise several disciplines or fields. As the AMKs are regional by nature, their provision is based on the needs of local business and industry. In general, the AMKs seek to offer education in nearly all relevant fields (e.g. from primary production to business and administration, and from engineering to social welfare, health, and culture). Each polytechnic degree programme is defined as a course of studies which concentrates on a given area of professional expertise. Degree programmes may be further divided into specialisation lines. Degree programmes consist of basic studies, professional studies, optional studies, on-the-job training, and a diploma work. In basic studies, students learn the elements of their professional fields. The degree programmes also include communication and language studies. The professional studies go deeper into the main areas, practices and applications in the field, and familiarise the student with theoretical or artistic fundamentals. The compulsory on-the-job training period is a minimum of 20 credits. Apart from acquainting students with their professions and future jobs, it offers them an opportunity to combine their degree work with hands-on job experience, to work independently, and to apply their theoretical knowledge in practice (Ministry of Education, 2000).

The degree system of the Finnish universities was overhauled in the 1990s with a view to international equivalence, larger freedom of choice, and com-

prehensive degrees allowing flexible combinations of study modules from different fields and establishments. Under the previous system, most studies that led to Master's and Bachelor's degrees existed in only a few fields of study. In the new degree system, it is possible to study for a Bachelor's or Master's degree in twenty different fields of study. The Bachelor's degree (120 credits) can be taken in three years and the Master's (160 credits) in four years. However, students are allowed to do their master study in five years. Although the Master's degree should be finished in five years, the average duration of a Master's studies is 6.5 years. Graduates can go on to study for a postgraduate degree: a licentiate or a doctorate. In most fields, students can take an optional licentiate's degree before going on to a doctorate. Professional postgraduate degrees, i.e. specialist degrees, are awarded in medicine, dentistry and veterinary medicine. Outside the degree system, specialist training is given through extensive continuing education programmes for which the university awards a diploma or certificate. The degree reform is still in progress, and up to the end of the reform process universities will also award the old types of degrees. Due to this the degree structure can vary from one university to the next (Ministry of Education, 2000).

Studies in a subject (or a degree programme) are usually classified as basic, intermediate or advanced. A lower (Bachelor's) degree consists of basic and intermediate studies in the major subject, including a Bachelor's thesis, studies in one or more minor subjects, and language studies. For the higher (Master's) degree, students must complete an advanced study module and prepare a Master's thesis in addition to completing the Bachelor's syllabus (or in addition to basic and subject studies in a degree programme). Contrary to the AMKs, practical training is not required in every degree. Some degrees require compulsory practical training; for others it is optional (Ministry of Education, 2000).

The AMKs provide education of high quality to fulfil the labour needs formally met by vocational higher education (college level and higher level). Students that graduate from AMKs and students graduating from universities get different jobs. Graduates from AMKs end up in somewhat lower positions (status, salary, etc.) than university graduates. For example, students graduating from AMKs can get jobs such as midwives and nursing but they cannot become a doctor because this job requires a university degree (Ahola, 2000).

Co-operation between sectors

The Finnish Ministry of Education encourages universities and AMKs with the same specialisation to co-operate, i.e. in the design of study modules, the development and maintenance of international relations and through the use of each others equipment. They emphasise, however, that they should function independently of each other. They argue that both universities and AMKs must be 100% self-sufficient in producing their own degrees (Beverwijk and Huisman, 1999). In other words, each of the institutions must offer their own version of the programmes, and no joint degrees are offered. Students with a polytechnic diploma can continue studying at the university. These students start studying in the first year at the Bachelor level.

Other system characteristics

Finance
Finnish AMKs, which are either municipal or private, are financed nearly 100% by the government and the local authority. AMKs also seek to acquire external funding, mainly from continuing education services and R&D. Universities, on the other hand, are 70% funded by the state. The rest of their funding they acquire through external funding such as business and international funding.

All higher education students, thus both AMK students and university students, initially receive student aid for the duration of 55 months (4.5 years). Regarding tuition fees, no tuition fees are charged for AMK programmes and Bachelor's and Master's programmes in universities (Vossensteyn, 1997, p. 34).

Personnel
The AMKs have two categories of teachers: principal lecturers, for whom the requirement is a postgraduate (licentiate or doctorate) degree, and lecturers, who must have a Master's degree. Both categories of teachers must have a minimum of three years of work experience. There is no information available about the minimum requirement for lecturers at the university.

Research
Both AMKs and universities conduct research, legitimised by government. However, in order to be able to conduct research at the university, the student is required to have a Master degree. Scientific postgraduate education, in particular, is closely linked with the research work performed at universities and research institutions. The AMKs are not allowed to conduct the same type of research conducted by universities. The 'research' in AMKs is mainly local research and development activities in connection with local firms and other social partners. It's not basic research in the same meaning as in the universities. In this sense, emphasis on research will most probably be different, i.e. in universities the focus is more on fundamental issues versus the AMKs that focus more on practical issues (Beverwijk and Schrier, 1999). In contrast to universities, AMKs do not receive any research funding from the government. However, they can apply for the same research funds as universities, e.g. at the EU level (Ahola, 2000). In other words, the emphasis and type of research of AMKs and universities differs to a large extent.

In contrast to universities, AMKs are required to be evaluated according to national standards. Universities can apply to be evaluated, and may indicate themselves how they want to be evaluated.

AMKs have been evaluated since their establishment in the early 1990s. Uniform evaluations were introduced in 1995, when the temporary AMKs began to apply for accreditation. The aspects evaluated include the business idea, the relevance and need of the degree programmes, strength areas, teachers' level of education, education-industry relations, co-operation with universities and other educational establishments, regional educational and service function, international co-operation, self-evaluation mechanisms, and the learning and work environment (Ministry of Education, 1998). The procedure includes a self-evaluation report and an on-site evaluation by the Accreditation Sub-committee. Whenever AMKs offer new study programmes,

the Accreditation Sub-committee is involved in the evaluation of these new programmes. The self-evaluation framework for accreditation is set out in the relevant legislation and covers both quantitative and qualitative data and the following criteria. FINHEEC's (Finnish Higher Education Council) Accreditation Sub-committee conducts assessment of the self-evaluation report and on-site evaluations. The ultimate decision on the content of the evaluation report submitted to the Ministry rests with FINHEEC (Beverwijk and Schrier, 1999).

The present pattern of evaluation efforts at universities is a diverse, multi-faceted one which has not uniformly influenced all institutions in Finland. This means that the evaluation objects and methods vary from university to university. In implementing their institutional evaluations, universities have emphasised different things; e.g. one has laid special emphasis on the evaluation of teaching, one university on strategies, and the three universities in eastern Finland have concentrated on their regional role and one on administration. The Council sees no reason to impose a unified model on all university evaluation at this stage. The universities volunteer or apply to be evaluated. The approach and the schedule are always agreed between FINHEEC and the university concerned (Beverwijk and Schrier, 1999).

Output

The Bachelor's degrees offered at universities are intermediate qualifications in the Finnish Higher Education System. The reason for this is because the Bachelor's degree qualifies students for the labour market. In the AMK sector there is no formal intermediate qualification (Schrier and Kaiser, 1999).

Developments and conclusions

AMK reform
The divide in the Finnish higher education landscape started in 1990 and was not related to the discussion of the Bachelor/Master structures. In a way, the AMK reform divided the Finnish vocational education and training system into two parts: vocational institutions, which provide secondary education and training, and AMKs, which provide professional higher education. With the introduction of the AMKs, the higher education sector also got a clear division. Although the AMKs could be identified as the professional higher education sector, they do not offer Bachelor's and Master's degrees.

Bologna declaration
The influence of the Bachelor/Master discussion can be seen in the reform that took place at the university in 1990. At that time, both government and the higher education institutions in Finland agreed upon the introduction of a two-cycle model at the universities. The aim was to introduce a flexible and internationally compatible programmes which was considered fairly important for the Finnish government and higher education institutions since the country was relatively isolated from Europe (Van der Wende, 1999). In addi-

tion, within the new structure universities hope to increase the output of students. This degree reform is now almost fully implemented.

AMKs should, in sum, be seen as an alternative to universities, and not as subcontractors for lower academic degrees, i.e. as a path to university studies (OECD, 1995, p. 114). The focus on the idea of an alternative to universities has kept the binary divide between AMKs and universities alive. Considerable differences continue to exist in terms of size of the institutions and the sector (despite the impressive growth), the degrees offered and the research function.

9 Flanders

Oscar van Heffen

Introduction

The higher education system in Flanders comprises 8 universities and 29 non-university higher education institutions (colleges of higher education: *hogescholen*). Furthermore, there is a Royal Military Academy and a Protestant Theological Faculty in Brussels. Although higher education in Flanders is divided into university education and non-university education, it is questionable whether the Flemish system is a genuine example of the binary model.

Universities
The universities offer two-cycle education with the possibility of a third, doctorate's cycle.
- First cycle (*kandidaats*): a candidate's degree is obtained after a basic training of 2 to 3 years.
- Second cycle (*licentiaat*): a Master's degree is awarded after an advanced training of 2 to 3 years, and even longer in some fields (or the degree of civil engineer, physician, etc).
- Doctorate's cycle: a doctoral degree can only be obtained by publicly defending a doctoral thesis (at least two years after obtaining a licentiate's degree, or a two-cycle non-university higher education diploma in commercial sciences or commercial engineering).

Colleges
Colleges offer one-cycle and two-cycle education. Courses of one-cycle (3 years) have a strictly vocational nature, whereas two-cycle courses are based on scientific knowledge and prepare for executive tasks of a highly scientific and technical character:
- First cycle (*kandidaats*): a degree is obtained after a basic training of 2 years.
- Second cycle *(licentiaat*): a degree is obtained after an advanced training of 2 to 3 years.

In 1994 a governmental degree on higher education stipulated that two-cycle non-university education is on an academic level (Ministerie van de Vlaamse gemeenschap, 1994). Contrary to graduates of one-cycle colleges who get the degree *gegradueerde*, graduates of the two-cycle colleges obtain the terminal degree of *licentiaat*. Furthermore, it is ordained that the non-university course in commercial science (*handelswetenschappen*) has the same status as the university course in applied economy *(toegepaste economie*). So, in a way, the structure of the Flemish system of higher education is tripartite. This triple structure is reflected in the organisation of the Flemish Education Council (VLOR) which was established by the government of Flanders in 1990. The VLOR is compromised of a general and a number of individual councils (elementary education, secondary education, higher education and adult education). The council of

higher education incorporates departments for college education of one-cycle, college education of two-cycles, and university education.

Input

Traditionally in Flanders, and previously in all of Belgium, access to higher education is open for everyone who possesses a secondary education diploma. An exception is made for students who have had a secondary vocational training. These students have to take additional courses (one school year) in order to gain access to universities or colleges. In addition to that there are other exceptions to the open access principle.

An entrance exam is required for a number of university and college programmes. For university programmes, an entrance exam is required in civil engineering and engineering-architecture, and in medicine and dentistry.[4] For college courses, an artistic entrance exam is required for audio-visual and visual arts, music, dramatic arts, and an aptitude test is required for nautical science.

Besides these limitations to open access, the Belgian federal government decided that the number of physiotherapists who will get permission to practice will be limited to 270 in 2003, 2004 and 2005. But, as yet, the Flemish government has not limited the intake of first-year students, for instance by establishing a *numerus clausus* for the physiotherapy programme.

Although the entrance exams limit the free choice of students to a certain extent, the access to higher education is quite open in Flanders. It is interesting to note, however, that this freedom of choice leads to an enrolment per discipline which does not contrast with enrolment patterns in other European countries.

In addition to the secondary school-leaving certificate, the following qualifications give entrance to universities and colleges. Certified students of one-cycle non-university education and students who have passed the examinations of the first cycle of a two-cycle course can obtain the university *kandidaats* degree after passing a specific training programme equivalent to at least one year of full-time study. Holders of a college candidate-degree in commercial science or a candidate-engineer in commercial economics (*kandidaat-handelsingenieur*) can move directly to the university degree courses of the second cycle in the field of (applied) economics. Furthermore, there are general rules regarding the transfer of the holders of a final certificate of the two-cycle higher education to university degree courses (bridging courses).

Two-cycle colleges grant access to holders of qualifications of the first cycle of a related basic education of academic level or to holders of qualifications of the first cycle of a related academic education.

Table 9.1 gives an overview of the student numbers in the Flemish higher education system.

4 If a candidate fails, the number of resits is unlimited.

***Table 9.1**: Student numbers at universities and hogescholen*

	1984	1986	1988	1990	1992	1994	1996
Universities	49,476	48,535	48,806	49,303	52,691	55,237	58,467
Hogescholen	69,402	74,759	79,721	82,149	84,858	90,531	94,140

Structural characteristics

Degrees, programmes and cycles

University education usually consists of two cycles. The first cycle which lasts two years (for most courses) is a basic training with introductory courses related to the chosen field of study, methodological subjects and a number of auxiliary sciences. The main focus is on formal theory to provide students with basic theoretical knowledge. Starting in the second year, however, there are already a number of more specific options to prepare students for the next level of studies. Successful completion of the first cycle leads to the title of *kandidaat*.[5] With regard to the duration of the first cycle there are a few exceptions: medicine, theology and veterinary science take three years. The second (university) cycle lasting between two and three years (for most courses), provides more in-depth and specialised scientific training. Students have a lot of leeway in the selection of their courses and much priority is given to indivi dual and group work (seminars). Examinations are held at the end of the second cycle and students have to submit a thesis on a subject central to their area of study. After a successful completion of the second cycle students obtain the (usually terminal) degree of *licentiaat*, although several courses lead to titles like 'Commercial Engineer', 'Physician' (medical practitioner), 'Veterinarian', 'Dentist', 'Pharmacist', 'Civil Engineer', 'Civil Engineer-Architect' or 'Bio-Engineer'. Concerning the duration of the second cycle there is one exception: the course in medicine takes four years.

The doctorate is the highest degree of specialisation at the academic level. Obtaining this degree takes at least two years of additional study, but in reality normally three to four years of study are required. The degree is based on original research leading to the presentation of a doctoral thesis. Most institutions also require participation in an additional doctoral programme covering a number of courses, seminars, and congresses relating to the chosen specialisation. Successful completion leads to the degree of doctor. In addition to students with a university degree, the following students have access to the doctorate cycles of universities: students of two-cycle colleges with a degree in commercial science and students who have obtained the degree of engineer in commercial economics, students with a degree of graduate engineer-polytechnician (a licentiate granted by the Royal Military Academy) and students with a diploma of a foreign university or other institution of higher education, if the university board accepts its equivalence. Sometimes, holders of such a diploma need to pass an entrance examination *(doctum colloquium*).

[5] In the fields of philosophy, ethics, theology, Roman-Catholic religious studies and Canon Law, qualifications and this level are referred to as *baccalaurus*.

Non-university higher education is divided in two-cycle courses on an academic level and one-cycle courses with a strict vocational character.

The first cycle of two-cycle courses lasts two years and leads to the degree of *kandidaat*, whereas the second cycle lasts two or three years. The final degrees, awarded after a successful completion of the second cycle, are *licentiaat* and professional titles like 'commercial engineer' or 'industrial engineer'. Two-cycle education at college-level is directed towards the application of sciences, independent thinking and the development of creativity. The aim of these programs is to prepare students for executive tasks of a highly scientific and technical character.

One-cycle courses take three years and lead to degree of *gegradueerde*. The courses comprise theoretical lessons, practical lessons, fieldwork and apprenticeships. The aim of one-cycle higher education is to teach students professional skills.

Intermediary qualifications

The Flemish higher education system lacks intermediate qualifications, although within universities and two-cycle colleges the degree of candidate is awarded after the first cycle. These diplomas are no more than an indication of the successful completion of a fixed number of courses required to enter the second cycle. They are not recognised as qualifications on the labour market (Schrier and Kaiser, 1998).

Academic versus professional programmes

In Flanders the higher education sector is divided into academic and professional programmes. This division, however, is not a cleavage between university and college education, but a division between two-cycle and one-cycle college education. The Flemish legislation considers two-cycle courses as academic and one-cycle courses as vocational. Before 1994 one-cycle and two-cycle non-university higher education were offered in separate institutions, the so-called non-university education of the short type (*hoger onderwijs korte type*; HOKT) and non-university education of the long type (*hoger onderwijs lang type*; HOLT). Over 135 HOKT and 26 HOLT institutions existed. As a result of the introduction of a new funding model in 1994 these institutions had to merge. Nowadays, HOKT and HOLT programmes are mostly offered in one institution under the name of one-cycle and two-cycle higher education. The more than 160 colleges which existed previously have merged into 29 institutions.

Nevertheless, a clear distinction between two-cycle higher education and university education remains. Universities provide education based on basic scientific research, whereas two-cycle colleges provide education based on scientific knowledge. Furthermore, there is a difference between universities and colleges with regard to the influence of socio-economic organisations on the initial education program. At request of the Minister of Education, the Flemish Education Council (VLOR) co-ordinates the definition of 'professional profiles' and accompanying 'educational profiles' which should form the foundation for the curricula of the colleges. The definition of these profiles is decided in consultation with representatives of socio-economic organisations (The Social-Economic Council of Flanders). A similar procedure for universities is considered unnecessary.

Co-operation between sectors
Universities and two-cycle colleges are entitled to enter into an agreement with regard to the joint organisation of educational activities, research and social services (scientific services to society). Two-cycle colleges have the competence to conduct applied scientific research, preferably in co-operation with a Flemish or foreign university. As mentioned earlier, transfers between the three types of higher education are possible (see above).

Other system characteristics

Research
Colleges do not have the competence to conduct basic scientific research, as universities have. As mentioned before, colleges with two-cycle courses have some tasks with regard to research and social service. They are allowed to conduct applied scientific research, preferably in co-operation with a university.

Personnel
Teaching posts at colleges are categorised into three groups (Ministerie van de Vlaamse Gemeenschap, 1994):
- practical lecturer (*praktijklector*), senior practical lecturer (*hoofdpraktijklector*), lecturer (*lector*) and senior lecturer (*hoofdlector*).
- auxiliary staff: assistant (*assistent*), doctoral assistant (*doctor-assistent*) and instructor (*werkleider*).
- assistant professor (*docent*), associate professor (*hoofddocent*), professor (*hoogleraar*) and full professor (*gewoon hoogleraar*).

The positions of the first group and the second group are solely related to one-cycle courses and two-cycle courses respectively. The third group of positions may be related to both types of courses. The duties of (senior) practical lecturers and (senior) lecturers are to provide education and study guidance, but can also include project-based scientific research, provision of social services and administrative tasks. The auxiliary staff supports assistant professors, associate professors, professors, and full professors of two-cycle courses by carrying out their tasks, viz. education, study guidance and research. In addition to this, the duties of professors also include social services. Assistants are allowed to devote at least half of their time to prepare their doctoral thesis. The minimal legal requirements for teaching posts at colleges are:
- practical lecturer and senior practical lecture: a diploma of one-cycle college education.
- lecturer and senior lecturer: a diploma of two-cycle higher education (college or university).
- assistant and instructor: a diploma of two-cycle higher education (college or university).
- doctoral assistant: a doctoral degree.

- assistant professor, associate professor, professor, and full professor: a doctoral degree.[6]

An appointment as full professor at a college is only possible when the college involved co-operates with a Flemish university in the disciplinary field concerned. Furthermore, the decree on colleges contains requirements with regard to seniority (i.e. appointments are based on work experiences within certain posts).

Teaching posts at universities are categorised into two groups (Ministerie van de Vlaamse gemeenschap, 1991):

- independent academic staff (*zelfstandig academisch personeel*): assistant professor (*docent*), associate professor (*hoofddocent*), professor (*hoogleraar*), full professor (*gewoon hoogleraar*) and extra ordinary professor (*buitengewoon hoogleraar*).
- auxiliary academic staff: assistant (*assistent*) and doctoral assistant (*doctor-assistent*)

The duties of the independent academic staff are to carry out scientific research, to provide education and to provide social services. The auxiliary academic staff has the task to support the independent academic staff. Assistants are entitled to devote at least half of their time to prepare their doctoral thesis, but universities have the option to appoint practical assistants or practical lectures whose only task is to provide education.

The minimal legal requirements for teaching posts at universities are:

- independent academic staff and doctoral assistants: a doctoral degree.[7]
- assistants: a diploma of a university (licentiate).
- practical assistant or practical lecturers: a diploma of two-cycle colleges education

Furthermore, the university board has the legal obligation to determine additional requirements for the position of associate professors, professors, full professors and extraordinary professors.

Quality assurance

The Flemish Decrees on the universities (Ministerie van de Vlaamse gemeenschap, 1991) and the colleges (Ministerie van de Vlaamse gemeenschap, 1994) call for a dual system of quality assurance. First, universities and colleges themselves are responsible for internal and external quality management. Every university or college has to monitor the quality of its educational and research activities continuously and on its own initiative. At least once every five years the educational activities related to one-cycle courses have to be assessed in co-operation with institutions from home and abroad. Largely this

[6] Additional requirements apply for a number of courses, for instance relevant professional experience (six years) for an appointment as assistant professor, associate professor, professor or full professor in audio-visual and visual arts, music, dramatic arts, architecture and product design.

[7] In exceptional cases (extraordinarily scientific achievements or specific skills) the university board can deviate from this requirement.

arrangement also applies to the education programmes and research of academic level (two-cycle colleges and universities), except that the cycle of evaluation is not five but eight years. Secondly, the governmental authorities monitor and supervise the management of quality by universities and colleges. At regular intervals, the government examines the operation of external and internal management and monitors how universities and colleges have implemented the quality assessment outcomes in their policies. Furthermore, the government may appoint a committee of independent specialists who conduct a comparative examination into the quality of courses and the research activities of universities.

Most of the colleges quickly established a service department for quality assessment, but there is hardly a systematic form of internal and external evaluation in the non-university higher education sector (www.klasse.be). To this very day the Flemish government is not able to monitor the activities of colleges as formulated in the degree, because sufficient data for evaluations are not available (Verhoeven and Elchardus, 2000). For the one-cycle courses, however, the traditional manner of assessment by the governmental Inspectorate of Higher Education was maintained until 1999. Recently, the Flemish minister of education asked the college sector to develop a framework for external quality control based on the quality assurance system in the university sector (Vanderpoorten, 1999).

The Flemish Inter-University Council (VLIR), acting as an intermediate, co-ordinating institution for quality assurance, has developed a framework for internal and external quality control at the eight universities, in co-operation with the Dutch Association of Universities. Between 1992 and 1996 sixteen disciplines were reviewed by visiting committees. Analysis of visiting committee reports shows, first, that the committees generally are very pleased with the quality of self-assessment at the universities. In most cases, however, these self-assessments seem to be one-time operations that cease after the site visit has taken place. Secondly, the reviews show that internal quality management has not been developed systematically in all faculties. In 1998 an (international) audit committee which performed a meta-evaluation of the system of quality assessment of the Flemish universities concluded that more co-operation between universities is essential for the functioning of the framework for quality control (Auditcommissie Kwaliteitszorg, 1998).

Output

The labour market positions of graduates of universities and colleges is very good in Flanders. A study conducted by the department of education (Ministerie van de Vlaamse Gemeenschap, 1998) shows that in the age group 20 to 24 years old, 95% of graduates with college degrees (*Gegradueerde* or *Licentiaat*) and 95% of graduates with a university degrees (*Licentiaat*) have found a job. In the age group 25 to 29 years old, even more than 95% of all graduates have regular or casual jobs.

Table 9.2 contains the average gross annual salary per educational level for Belgium, Brussels, Flanders and Wallonia in 1995 (www.belgium.fgov.be). The table reflects the strong labor market position of graduates of universities

and colleges. Holding a higher education degree pays off, certainly in the case of a university or a two-cycle college diploma.

***Table 9.2**: Average gross annual salary per educational level (in EURO; 1995)*

	Belgium	Brussels	Flanders	Wallonia
Educational level				
None or primary education	21,060	21,456	20,976	21,096
Lower secondary education	21,024	23,352	20,568	21,252
Higher secondary education (general)	23,988	26,304	22,824	23,592
Higher secondary education (vocational/technical)	22,596	24,768	22,824	22,596
Non-university higher education (one-cycle, max. 3 yrs.)	28,116	29,100	27,564	28,656
University education or two-cycle college education (at least 4 yrs.)	39,696	41,856	38,292	39,264

Developments

1994 reform

Since 1968 non-university higher education is no longer tightly linked to technical secondary education, but is part of the higher education sector. Non-university higher education used to be organised in two different forms: schools with short courses (three years) and schools with long courses (two cycles of at least two years). As mentioned earlier, after the reform of 1994 the short and the long courses are mostly offered in one institution under the name of one-cycle and two-cycle higher education. The more than 160 colleges which existed previously have merged into 29 institutions.

1989 constitutional reform

The constitutional reform of 1989 transformed Belgium into a federation. Since that time, the responsibility for Flemish education haas been vested in the hands of the Flemish government. Traditionally, education in Flanders is organised in different networks (*netten*). Before the constitutional reform, the actual way universities and colleges were treated, differed greatly for free (private) and state universities and colleges.

Before the 1990s, state education was the direct responsibility of the (national) Minister of Education, who was the organising body of state education. Higher education institutions were therefore directly influenced by current features of the political system: higher education institutions were unstable due to linguistic troubles and were financially restricted because of the increasing public debt. Moreover, the strong centralism (everything was decided 'in Brussels') caused a strong bureaucratisation (Van Heffen *et al.*, 1999).

The free universities were relatively autonomous. According to Verhoeven (1982, p. 131) this can be explained by, on the one hand, the fact that university education has always been seen as necessarily autonomous and organised by private initiative, on the other hand because it was entirely clear that interventions could trigger off irreconcilable conflicts. The government was reluctant to regulate, and preferred to leave the delicate ideological and linguistic equi-

librium in the university sector in peace. Free colleges also had more autonomy than state colleges, but they did not possess the same freedom to manoeuvre as their counterparts in the university sector because the regulation on college education was more rigorous.

With the Decree on universities of 1991 and the Decree on colleges of 1994, the Flemish government took an important step towards far-reaching autonomy. The Flemish governmental agreement of 17 June 1995 speaks of a radical enlargement of the autonomy and the responsibility for the whole education sector. The decrees only impose formal requirements (length of the course, division in cycles, possibilities to abridge the course duration and so on); the content of education (the course programme) can be decided by the institutions themselves.

Nowadays, three educational networks are distinguished:

- Community education: this is the education organised by the organising body *Het Gemeenschapsonderwijs* (Community Education) on behalf of the Flemish Community. The Constitution forces Community Education to be neutral; this means that the religious, philosophical or ideological conviction of parents and pupils must be respected. Examples are the University of Gent and the College of Gent.
- Subsidised official education: includes provincial education organised by provincial authorities and municipal education set up by municipal authorities; a school of this network can be denominational or not. Examples are the Plantijn-College of the province of Antwerp (only one-cycle programmes) and the Provincial College of Limburg at Hasselt (one- and two-cycle programmes).
- Subsidised private education: this is education provided by private initia tive, a private person or a private organisation. It includes denominational (mainly Catholic), non-denominational private education and independent schools that apply specific instructional methods. Examples are Catholic University of Leuven and the Economic College Sint-Aloysius at Brussels (only two-cycle courses) (www.ond.vlaanderen.be).

The networks are free to develop their own curricula and schedules, provided they are approved by the Flemish Minister of Education, and are free to choose their instructional methods.

Recent developments

Rationalisation

Generally, the Flemish government strives for more transparency and rationality of the programme supply in the higher education system. The previous administration (Christian-democrats and social-democrats) appointed special government commissioners who had to develop plans for the optimisation of university and colleges education. These commissioners (Dillemans and Martens) had to finish their plans in agreement with the higher education sector within five years (Van Den Bossche, 1995-1996, 1998). The present government (liberals, moderate Flemish nationalists, social democrats and environmentalists) goes about it in a different way and tries to influence the sector more directly (for instance new mergers of colleges and a new funding

system are announced). According to the Flemish Education Council (VLOR), the new government is not fully aware of the necessity of co-operation between the authorities and the field of education (www.klasse.be). Recently, a comment of the Flemish Prime Minister with regard to a possible dissolution of the networks (*netten*) caused much commotion. It looks as if the government has the intention to replace the segmented, neo-corporatist higher education system by a more uniform framework.

Bologna declaration

The Bologna declaration, which was also signed by the government of Flanders, is no subject of fierce public and political debate. It is expected that before 2010, the degrees of *kandidaat* and *licentiaat* will be replaced by the degrees of Bachelor and Master respectively. Consequently this will blur the borders between two-cycle non-university higher education and university education even more. But how 'Bologna' will affect the one-cycle programmes is not yet clear.

10 France

Frans Kaiser

Introduction

The French higher education system consists broadly of four groups of institutions (HEIs).

Universities
The first group is made up of the universities. The universities have a scientific, cultural and professional character. In addition to the departments (which are the core elements of the university) other institutes can attach themselves to the university. There are three types of such attached teaching institutes: the *instituts universitaires de technologie* (IUT; created in 1966, they offer short professional courses), the *instituts universitaires de formation des maîtres* (IUFM; created in 1989, they provide teacher training), and the *instituts universitaires professionnalisés* (IUP; created in 1991, offering specialised professional courses in close co-operation with industry).

Grandes écoles
The institutes for higher learning, better known as *Grandes Écoles*, are the second group of HEIs. The public *Grandes Écoles* comprise a diverse set of institutions. These comprise the *Grandes Écoles scientifiques* (like the *l'école centrale des Arts et Manufactures*, *l'école centrale de Lyon, l'école nationale supérieure des Arts et Industries textiles, l'école nationale supérieure d'Arts et Métiers*, etc.), the *four écoles normales supérieures* (ENS), fourteen grands établissements (including institutions for social science and physics), public engineering schools, military schools, the national administration school, agricultural schools, veterinary schools, art schools, and architecture institutes. All of these institutions are perceived to provide high standard teaching and training. The private *Grandes Écoles* are engineering schools, institutions on business and commerce, and catholic institutions, recognised by the minister.

Secondary level institutions
The third group of HEIs is formed by the classes at secondary level institutions (*Lycées*). Two types of programmes are offered that are considered to be higher education programmes. These special classes are the *Sections de Technicien Supérieur* (STS) and the *Classes Préparatoires aux Grandes Écoles* (CPGE).

The STS are professionally oriented classes located at the *Lycées*, providing two year courses. There are two main categories of courses: courses in the secondary sector (industry related) and the courses in the tertiary sector (service and business related).

The CPGE provide the preparatory training that is required to participate in the entrance competition for the *Grandes Écoles*. There are three types of CPGE:

1) *les classes préparatoires économiques et commerciales*, preparing for the schools for commerce and business and the ENS.

2) *les classes préparatoires littéraires*, that prepare for the ENS, the schools for commerce and business and the instituts d'études politiques;
3) *les classes préparatoires scientifiques*, that prepare for the engineering schools, the ENS and the veterinary schools.

Other schools and institutions
The fourth group of HEIs is formed by a number of schools for paramedical and social professions and a number of other schools, all professionally oriented.

Input

The following table (table 10.1) gives an overview of student numbers in the respective types of higher education institutions.

***Table 10.1**: Student numbers by type of institution (1995-1998)*

	1995	1996	1997	1998
Universities*	1338,328	1315,892	1285,181	1262,631
IUT	102,953	108,398	112,641	114,302
STS	225,233	230,346	233,139	234,300
CPGE	76,030	78,343	78,764	77,084
Ecoles d'ingenieurs	75,640	76,841	79,098	82,954
other GE	134,902	126,299	127,110	134,342
IUFM	84,245	83,935	81,305	79,811
Paramedical and social schools	85,572	85,345	83,112	82,747
Other	15,843	18,347	19,793	18,714
Total	2138,746	2123,746	2100,143	2086,885

	1995	1996	1997	1998
Universities	62.6%	62.0%	61.2%	60.5%
IUT	4.8%	5.1%	5.4%	5.5%
STS	10.5%	10.8%	11.1%	11.2%
CPGE	3.6%	3.7%	3.8%	3.7%
Ecoles d'ingenieurs	3.5%	3.6%	3.8%	4.0%
other GE	6.3%	5.9%	6.1%	6.4%
IUFM	3.9%	4.0%	3.9%	3.8%
Paramedical and social schools	4.0%	4.0%	4.0%	4.0%
Other	0.7%	0.9%	0.9%	0.9%

Source: Repères et références statistiques, Édition 1999
* The (relatively small) number of students enrolled in IUP are included in the university enrolments

Every French school-leaver holding a *baccalauréat* has, in principle, access to the DEUG programmes of the universities. Access can also be granted to holders of a special certificate (the *diplôme d'accès aux études universitaires*, DAEU). This diploma was created in 1994 and is awarded after completion of a one-year programme.

Once a student has completed one or two years of the DEUG-programme (s)he may continue in other, specific programmes like the MST, MSG and MIAGE, or the programmes offered by the IUP. Access to those programmes is, however, very selective.

Access to two types of institutes attached to the universities, i.e. the IUT, and the IUFM, is selective, based on selection on a variety of achievements and an interview with the candidates.

The access to the *Grandes Écoles* is highly competitive. Selection is based on a high-level entrance exam (*concours*). Most students prepare for that exam at the CPGE.

In France, all students, except those receiving a study grant, have to pay a small registration fee. The amount to pay depends on the type of programme and the type of institution one is enrolled in. The Ministry of Education determines the level of the fees charged at public higher education institutions. At private HEIs the tuition fees are set by the institutions.

Students at public HEIs and private state-recognised HEIs are eligible for student support. In addition to the direct student support, French families with studying children benefit from child allowances and tax deductions. Parents are financially responsible for their children until the age of 18. In addition, parents can benefit from child allowances and tax reductions if their children are under the age of 26 and are following (higher) education.

Structural characteristics

Types of programmes

In the descriptions of the French higher education system a frequently used distinction is the distinction between short and long programmes. The duration of the programme is determined by the number of years a new *Baccalauréat* holder formally needs to obtain a degree that enables him or her to enter the labour market.

The short programmes comprise:

- the two-year programmes at the STS leading to the *Brevet de Technicien Supérieur* (BTS),
- the two-year programmes at the IUT leading to the *Diplôme Universitaire de Technologie* (DUT),
- the one-year programme offered at IUT's and STS leading to the *Diplôme national de technologie spécialisée* (DNTS). This programme follows on the two-year course of IUT or STS and is provided in alternation by the school and industry.
- the two-year programmes offered at the CPGE (no formal degree is delivered),
- the two-year professional programmes at the first cycle of universities leading to the *Diplôme d'études universitaires en sciences et techniques* (DEUST)

Long programmes are provided by universities, *Grandes Écoles* and other schools. Since most of the French qualification structure can be characterised as sequential, most long programmes consist of a number of short building blocks.

The basic building block at universities is the DEUG (bacc+2). This diploma, awarded upon completion of the first two years (first cycle) is not considered as a degree that qualifies one for entry to the labour market. The first degrees that are considered to be final qualifications are the second cycle programmes *Licence* (bacc+3) and the *Maîtrise* (bacc+4). In addition, there is a one-year programme leading to the *Licence professionelle*. Access to this new programme, created in 1999, is open to bacc+2 degree holders (DEUG, DEUST, DUT, BTS) and for people with certified work-experience. This professional degree is conceived and organised in close co-operation with professional organisations in order to ensure a good position on the labour market. The second cycle is also comprised of a number of professional two-year *Maîtrise* programmes building on the DEUG: the MST, MSG, and the MIAGE.

The third cycle comprises a one-year specialisation course (DESS; bacc+5), a one year preparatory course for the doctoral programmes (DEA; bacc+5), the doctorate programme and a one year research training course for graduates on the engineering schools and the IUP (DRT).

The new *Mastaire* degree (created in 1999) is available for students who hold a higher education degree on a bacc+5 level.

Teacher training programmes at the IUFM take one or two years, starting from a *licence* degree. The IUPs offer three-year programmes for those students who have successfully completed at least one year of higher education.

The programmes *Grandes Écoles* provide differ in length, depending on the type of programme and the way the preparatory path is organised.[8]

There is one formal intermediate qualification: the *licence* (3 year, or bacc+3). It is a second cycle university diploma. With a *licence* students can enter the labour market or they can go on with the *maîtrise* (bacc+4). About two thirds of *licence* graduates continue their study and obtain a *maîtrise* degree (Paul and Murdoch, 1998).
The short-cycle programmes provided by IUT and STS are designed to lead to final qualifications: graduates are supposed to enter the labour market. However, a significant number of graduates follow a different path. A growing part of the graduates of IUT continued their study either in the second or first cycle of university programmes, or at *Grandes Écoles* or other educational institutions (1980: 25%; 1984: 38%; 1988: 51%; 1992: 46%; 1996: 67%) (Cahuzac and Plassard, 1997). Among the graduates of STS a similar tendency can be seen: more and more graduates continue their study in order to secure a competitive position on the labour market (1980: 16%; 1984:25%; 1988:30%; 1996: 39%) (Goedegebuure *et al*., 1995, p. 7-12; Cahuzac and Plassard, 1997).

[8] Some *Grandes écoles* have integrated the two-year preparatory programmes into their main programme.

Academic versus professional programmes
It is impossible to make a clear institutional divide between a purely academic sector and a purely professional sector in the French higher education system. This is due to the fact that universities, which provide most of the academic programmes, offer a growing number of professionally oriented programmes as well. At all three cycles of the university programmes, special programmes were created to train the professionals demanded by the labour market.

The breadth of the educational programmes differs between the various types of programmes offered. The general programmes offered at universities have the broadest scope, whereas the specific university programmes and the programmes at the other higher education institutions are much more narrowly focused. Universities are still the only institutions that have the right to award a doctorate.

Co-operation between sectors
In theory there are numerous opportunities for interaction between the sectors. For access to most of the selective programmes there is an open competition. As mentioned before, there are a substantial number of STS and IUT graduates who continue their study at the universities. These same degree holders may also compete for access to the programmes at the *Grandes Écoles* (as may the DEUG and *Licence* holders of the universities). However, the chances for these 'migrants' to succeed in entering the *Grandes Écoles* are rather slim.

Other structural characteristics

Finance
For the majority of French public higher education institutions, the S.AN.RE.MO model is used to allocate staff and financial resources to the institutions. In 1999, the allocation model was applied to 228 institutions (81 universities, *7 Instituts d'Etudes Politiques*, 102 IUT and 28 engineering schools). The base for calculating the resources is the number of students enrolled. All programmes are categorised in a grid that serves as a weighting device. The level and type of programme determines the weight. In order to determine the number of staff an institution is theoretically entitled to, enrolment is weighted according to that grid. This means there is no difference between the types of public higher education institutions regarding the funding mechanism. The STS and CPGE are funded according to the secondary education mechanisms.

Personnel
Permanent or tenured teaching staff comprises two types of personnel: teachers with higher education status and teachers with secondary education status. The teachers with higher education status (*enseignants-chercheurs*) comprise professors (*professeurs des universités*) and lecturers (*maîtres de conférences*). Secondary education teachers were first recruited when IUTs were created in 1966. From 1986 their number grew steadily. There are two types of secondary teachers: *professeurs agrégés* and *professeurs certifiés*.

In addition to the tenured teaching staff, there is a range of types of full-time and part-time staff on contract:

- Associate or visiting staff (*personnel associé ou invité*). Universities are allowed to use vacant positions to recruit full time associate professors or lecturers on three-year contracts. Visiting professors usually are foreign academics invited for a few months by universities. Associate and visiting staff have the same duties and rights as tenured staff.
- Temporary assistants (*Attaché temporaire d'enseignement et de recherche*, ATER). They are recruited among advanced students who are close to the completion of their PhD or just have completed it. The contract is for one year and can be renewed twice and sometimes for a fourth year. They can be appointed to fill temporarily vacant positions of tenured staff.
- Instructors (*Moniteur*). They are recruited by the university among graduate students awarded a research grant to give a small amount of teaching (60 hours per year) to first- and second-year students.
- Foreign language assistants.
- University hospital staff (medical staff).
- Part-time staff employed on an hourly basis (*Chargés d'enseignement vacataires* and *agents temporaires vacataires*). *Chargés* ought to have a full-time employment outside university; *agents* are graduate students. This category of staff accounts for a substantial share of teaching. Institutions get part of their recurrent funding to hire part time staff when permanent staff allocated to them does not cover the whole of their teaching needs. In newly created or fast growing institutions the use of these *vacataires* is very high.

Figure 10.1: *Academic staff by rank and type of institution, 1997-1998*

	university	IUT	ENSI	other	**total**
Professeur	27%	10%	34%	13%	23%
Maître de conférence	40%	43%	47%	29%	39%
Assistant	2%	4%	1%		2%
Medical staff	6%				5%
ATER & Moniteur	14%				13%
Other	10%	43%	18%	58%	17%

Source: Note d'Information

Note: The category 'other' comprises the secondary education teachers. This category is extreme large in IUT and 'other', which is dominated by IUFM

Research
In the past decades, engineering schools have paid little attention to research (and its role in the development of curricula) and international relations. The French government views this situation as problematic. There is an effort to bring engineering schools and universities closer together. In the development of the new *Mastaire* this idea has been discussed. In addition, there are currently a limited number of experiments in which universities and engineering schools co-operate in a new organisational structure: *Centres Polytechniques Universitaires* (MENRT, 1999a, 1999b).
Research institutes outside the HEIs mentioned above perform most part of the R&D. The remainder of the R&D effort is almost completely located at the universities and engineering schools related to universities. The role of the other HEIs in R&D is relatively small. The limited role of R&D in *Grandes Écoles* is seen as a threat to the quality of these institutions.

The strong growth of enrolment in higher education in the late 1980s and early 1990s was the main reason for the Minister of Education to launch the plan U2000 in 1990. The goal of this plan was to invest in the higher education infrastructure and to accommodate the wave of new students. Although U2000 is generally considered to be a success, there are two omissions in the plan: the limited attention paid to research and the lack of measures focused on the situation in the Paris region. In the new action programme (U3M), budgets are allocated to enhance the research function at new universities and to base the allocation of research funds more on local and regional needs.

Quality assurance
The national agency responsible for quality assurance (the CNE) uses the same procedures for all public Higher Education Institutions when examining the quality of teaching at the institution.

Output

Unemployment among graduates is relatively high and is subject to strong fluctuations. Three years after graduation, unemployment among DUT and BTS holders is significantly lower then among *Licence* and *Maîtrise* holders. Unemployment is lowest among graduates with a third cycle diploma (tables 10.2 and 10.3).

The unemployment situation through time shows a particular pattern. The number of unemployed is relatively high after one year, after which it decreases over time. The pattern for DEUG, DUT, and BTS-holders shows a high level of unemployment after one and two years. Around 75% of the graduates with a known destination have a job or have continued their study (*Bilan-formation-emploi*, except for holders of paramedical or social degrees who have a very high employment rate). The level of the jobs differs according the level of the degree.[9]

9 In Le Monde de L'Éducation, no 271 a dossier is devoted to the changes in the value of diplomas. This dossier still has to be evaluated.

***Table 10.2**: Unemployment rate three/five years after graduation by type of degree*

	After 5 years	After 3 years				
	1996	1987	1991	1994	1997	1999
DUT/BTS	10.0%	5.7%	4.6%	13.5%	9.1%	11%
Paramedical	2.1%					
DEUG	10.5%					
Licence/Maîtrise	8.3%	5.4%	6.1%	11.8%	12.2%	13%
DEA/DESS/Doctorat	7.1%	6.1%	5.7%	10.2%	9.7%	8%
IUP						6%
Grandes Écoles	5.0%	3.0%	2.5%	7.9%	5.8%	3%
Total higher education	7.8%					10%
Overall	15.9%					

Source: Note d'information 97.09 (after 5 years), Bref nr. 134 and 156 (after 3 years)

***Table 10.3**: Level of unemployment by level of educational attainment*

	1993	1994	1995	1996	1997	1998	1999	2000
Bacc	10.0%	11%	10%	10.4%	11.4%	11.0%	10.7%	8.9%
Bacc+2	7%	8%	7%	7.5%	8.2%	7.5%	7.1%	5.3%
2nd & 3rd cycle	6%	6%	7%	7.4%	7.3%	6.8%	6.3%	5.7%
Overall	11%	12%	12%	12.1%	12.3%	11.8%	11.8%	10.0%

Source: INSEE première

Developments

Historical background

Grandes écoles were created in the 18th century to train and educate officers and engineers to high standards for civil service. In the 19th century, the number of *Grandes École*s grew and diversified into the fields of industry and commerce. Except at the *Ecole normale supérieure*, a strict separation between science and the arts was observed.

The universities of the *Ancient Régime* were abolished by the French revolution. In 1808, Napoleon did not restore them but created under the name of *université* a system for educating teachers. Only since 1885 have universities been created as places for giving specific teaching to students. Classes were defined according to what teaching diplomas were taught. However, the new type of university, created in 1896 was not a real university. These 15 universities were collections of five faculties (the same in all universities) with a university council with no power and a president appointed by the central government. These universities struggled with their role in higher education. The *Grandes écoles* already provided the training of the elites in a efficient and prestigious way. Universities were not only in competition with these institutions but also with the already existing renowned research institutes. This 'struggle' continued throughout the years and intensified in the 1960s when

the massification of higher education started. The need to reform the higher educational system was re-formulated by the student movement of 1968 and resulted in Edgar Faure's framework law of 1968, which remains the basis of university organisation today.

After World War II the development of short technical and professional courses started. In the 1950s the STS were created as special classes at the *Lycées*. In 1966, the IUTs were created as institutes attached to the universities.

The various professional programmes at universities and attached institutes are relatively new: the IUT in 1966, the DEUST, MST, MIAGE and MSG in the mid 1970s, the Magisère in the 1980s, the IUFM in 1989, the IUP in 1991, and the *Licence professionelle* and the Mastaire in 1999.

Recent developments

Bologna declaration

As co-signer of the Declaration of the Sorbonne and the Bologna declaration, France has expressed a clear interest in the construction of a European dimension in higher education. The French higher education system is already a diversified system in which degrees may be obtained after three (the *Licence* and some extended programmes at IUT and STS) and five years of education (the DESS, DEA, degrees at the IUFM, certain *Grandes Écoles*, and at the IUP). However, to create the transparency that is so crucial for the European dimension, two new degrees have been created, specially geared to the needs of international study.

The *Licence professionelle*, the first new degree, is a one-year programme. Access to this programme is open to bacc+2 degree holders (DEUG, DEUST, DUT, BTS) and for people with certified work-experience. This professional degree is conceived and organised in close co-operation with professional organisations in order to ensure a good position on the labour market. The programme comprises a 12 to 16 week period of practical work and its curriculum should incorporate innovative pedagogical methods and students responsibilities. This national degree may also be used to substitute local degrees at the bacc+3 level that were developed to enhance the entrance to the labour market of DUT holders.

The *Mastaire* 'regroups' existing programmes leading to the level bacc+5. It is not a new programme as such. The title *Mastaire* may be awarded to degree-holders of DESS, DEA and engineering-school programmes. *Mastaire*-programmes should comprise a period abroad for study or practical work. The *Mastaire* is offered not only at universities but also in the *Grandes Écoles* under the authority of the Ministry of Education. The latter is quite unique and opens up opportunities for co-operation between these two types of institutions.

The *Mastaire* and the *Licence Professionelle* programmes will receive their first students in the year 2000.

The Minister of Education plans to double enrolment in DESS before 2004 and to introduce professional elements in the DEA. In addition, he has accepted the demands of the student unions to loosen the very severe selection for the *Mastaire* programmes. These plans will lead to a *Mastaire* that is a substan-

tial part of the system and is truly comparable to of European Master's degrees (Le Monde, 22 June 1999).
In contrast to most of the other programmes, engineering programmes are not subject to a central curriculum or *maquette*. The *commission des titres d'ingenieur* is the '*gardien de la doctrine*'. Because of this, a large variety of engineering programmes have developed, offered at a large number of relatively small institutions. There are substantial differences in status between these institutions. In addition to the problems of transparency and efficiency that this situation has lead to, the engineering schools have paid to little attention to research (and its role in the development of curricula) and international relations.

There are a number of efforts to solve the problems mentioned above. The major stream in these efforts is to bring engineering schools and universities closer together. In the development of the new *Mastaire* this idea has been discussed. In addition, there are currently a limited number of experiments in which universities and engineering schools co-operate in a new organisational structure: *Centres Polytechniques Universitaires* (MENRT, 1999, 1999b).

Conclusion

The French higher education system is a complicated system and therefore difficult to characterise in binary terms. The traditional divide between the universities on the one hand, and the *Grandes Écoles* on the other, is blurred by the expansion of the short courses located at *Lycées* or at universities, the rise of specialised, professional programmes at universities, and the pressures on *Grandes Écoles* to respond more to the needs of society. However, such diversity cannot be found in regulations regarding staffing and funding. The latter is partly due to the centralised government that used to steer higher education.

11 Sweden

Anne Klemperer

Introduction

The Swedish system of higher education has been formally a unified system since the higher education reforms of 1977. In spite of being a unified system, there are a number of different types of institutions, including universities, university colleges, and specialised institutions. The university sector consists of twelve universities and three specialised institutions of higher education. In total there are more than 45 different institutions (the total number has been dropping because a number of health science institutions have been merged with other institutions). The private sector consists of twelve institutions: one university, one specialised institution, one university college and one smaller non-university institutions.

In 1977 a major reform of higher education unified the system. In 1993 a second major reform of the higher education sector was undertaken. The 1993 reforms introduced a system of credits and standardised degrees. The Ministry of Education and Science is responsible for making policy for the whole higher education sector.

Input

Around a third of the total number of students in Sweden study at university colleges (defined here as including arts colleges and colleges of health). This percentage has remained fairly stable over the past 15 years (see table 11.1).

Table 11.1: *Number of students studying at universities and university colleges 1987-1998*

	1987	1988	1990	1992	1994	1995	1996	1997	1998
Universities	129,655	129,351	137,386	160,652	177,422	186,485	193,744	198,863	238,591
University colleges*	56,914	60,187	68,103	85,802	98,491	106,737	114,162	121,072	83,831
Percentage									
Universities	69%	68%	67%	65%	64%	64%	63%	62%	74%
University colleges*	31%	32%	33%	35%	36%	36%	37%	38%	26%

Source: Higher Education Monitor 2000

* includes university colleges, arts colleges and colleges of health

Upper secondary school lasts three years. Both vocational and academic tracks exist (there are around 16 altogether), but all of them qualify for higher education.

Entrance to all higher education programmes requires either: 1) completion of upper secondary school (or the equivalent: adult secondary school, folk high school, foreign secondary school), or 2) having reached the age of 25 and having four years of work experience, and having a high enough score on the Swedish Scholastic Aptitude Test (SSAT). In addition, all entrants must have proficiency in Swedish and English corresponding to the end level of upper secondary school. The two different ways of gaining entrance to higher education were formerly two separate quota systems, but since 1991 upper secondary school graduates can also gain admission by taking the SSAT. This change to the regulations was made in order to increase the number of entrants coming directly from upper secondary school, as the government felt that the competition for graduates of upper secondary school had become too fierce. There are no differences between types of institutions concerning the national admissions criteria.

In addition to these general requirements, students must meet specific requirements which vary by programme. For professional degrees (see below) there are standardised requirements which are determined by the National Agency for Higher Education. Specific requirements for all other types of programmes are determined by the individual institutions.

Since 1993 institutions have had the right to select students themselves, using the national qualification standards, and specific selection criteria determined by the institutions themselves.

Tuition is not charged at Swedish institutions of higher education. Students at the undergraduate level (considered to include Master's degrees in Sweden) receive grants from the state. Postgraduate studies must be financed through outside sources or through the university's research funds (Klemperer, 1999).

Structural characteristics

Types and levels of degrees

Higher education degrees in Sweden are divided into two types (general and professional degrees) and two levels (initial and post-initial). There are three types of general degrees (Diploma, two years; Bachelor's, three years; and Master's, four years) and a variety of professional degrees (1 to 5 1/2 years), all of which are considered to be initial degrees in Sweden. Professional degrees are more professionally oriented and are the only type of degrees available in some subject areas (such as engineering and medicine). Around half of the students are enrolled in professional programmes and about half are enrolled in general degree programmes. There are two types of post-initial degrees: licentiate (two years) and doctoral (four years) degrees.

There are only a few differences between universities and university colleges with regard to the types of initial degrees offered. Both types of institutions award Diplomas and Bachelor's degrees, and universities and some university

colleges award Master's degrees. A new type of more professionally-oriented Master's degree (as opposed to the current academically-oriented degrees which prepare students for postgraduate studies) was proposed in 1999 by the National Agency for Higher Education (see also below).

As explained, there are few differences between the sectors in terms of types of initial degrees that are awarded. In addition, the official (Swedish) translations of both university college and university degree titles into English use the term 'University (Diploma/Bachelor's/etc.)' (Zanotti and Dickey, 1995). There are, however, distinctions between the sectors at the postgraduate level, as university colleges generally do not have the right to award postgraduate degrees (licentiate and doctoral degrees). A few university colleges have recently gained this right (see current trends section). It must be stressed that the distinction between the sectors is not totally clear-cut, as there are cases in which postgraduate students may be registered (and carry out most of the work) at university colleges and obtain their degrees from a co-operating university (National Agency for Higher Education, 1996).

One may consider Diploma and Bachelor's degrees as intermediary qualifications, as students generally have the possibility of continuing their education upon completion of these degrees (although they must be accepted into higher level programmes). The degree to which a qualification is considered an intermediary step, however, depends on the field. For example, in social sciences and law the Diploma degree can be considered an intermediary qualification, but in other fields these degrees may be considered final qualifications. Similarly, depending on the field, in some cases the Master's degree may be considered an initial degree (if shorter programmes do not exist in that field). In order to examine to what an extent the different degrees actually function as intermediate qualifications, one must first examine the destinations of graduates of these programmes. Unfortunately, this information is currently not available (Schrier and Kaiser, 1998; Zanotti and Dickey, 1995).

Professional versus academic programmes

In many other countries the division of higher education into university and non-university sectors is based on an academic versus professional orientation of the institutions. This distinction is not made in Sweden. Universities offer both academically and professionally-oriented degrees. Furthermore, university colleges have started to offer Master's degrees (which mainly lead to postdoctoral education at this point) and some co-operate with universities in offering postgraduate education.

Many programmes that are 'professionally'-oriented (for example hotel and restaurant degrees) are offered by universities, and a wide range of degrees in various fields are offered both at university colleges and universities, including teacher training, library science, and nursing. Some initial degrees, however, such as in law, medicine and dentistry, are only offered at institutions in the university sector (Zanotti and Dickey, 1995). The general lack of distinction along academic/professional lines may in part be due to the Higher Education Act of 1977 which aimed to create more equality between the different types of institutions and promoted co-operation (Klemperer, 1999). In

addition, this legislation stressed the necessity for all initial higher education programmes (in all types of institutions) to have links with working life (Fritzell, 1998).

There are no clear-cut distinctions between universities and university colleges with regard to programmes that include a period of practical work or the length of this period. At the national level, only teaching and medical programmes are required to include a practical period of work. For programmes in other subjects, institutions may decide for themselves whether or not to include a practical period. Many programmes (both general and professional) require students to complete a practical period, but there are no statistics available on this (Boezerooy *et al*., 1998).

Research function

Traditionally there was a division between the two higher education sectors in terms of the research function. The research function was traditionally limited to universities and specialised institutions with permanent research funding. With the recent granting of university status to three university colleges and the right to receive research funds for particular disciplines to two other university colleges, it can be said that in this respect there has been a blurring of the sectors.

In terms of the breadth of educational programme offerings there is also no clear-cut distinction between universities and university colleges. Many university colleges are much smaller institutions than universities, and many (but not all) traditionally specialised in particular fields of study. However, there has been a trend toward merging some of the single-discipline institutions (such as many of the former health colleges) with either other university colleges or with universities (National Agency for Higher Education, 1999a). In addition, there are some specialised institutions (such as the Karolinska Institute and the Stockholm Institute of Education) which are considered to be part of the university sector, due to the fact that they receive permanent research funding and grant postgraduate degrees.

Co-operation between the sectors

There is co-operation between the sectors in terms of both the research and teaching functions. Co-operation between the different types of institutions in terms of teaching is encouraged, but not regulated, by the state. There is a long history of co-operative arrangements between individual institutions. As was mentioned above, legislation passed in 1977 encouraged co-operation. One example of co-operation is in terms of (some) engineering programmes where the first two years of the programme may be taken at a univeristy college and the final part at a university. In some cases the majority of the work will be done at a university college and the degree certificate will be issued by a university. In the case of medical education, it is possible to transfer from a university health college into a regular medical programme at a university. Students wishing to continue their studies at a university must take a year of bridging courses and practical experience before they will be admitted. The total duration of the education taken on this track is around 6 years, as opposed to 5.5 years if the whole course is completed at a university (Zanotti and Dickey, 1995).

Higher education institutions set their own admissions requirements, and therefore there is no national framework regulating transfers between different types of institutions. There are examples of particular Master's programmes that will accept graduates with Bachelor's degrees from both universities and university colleges. It is important to point out, however, that this varies greatly from field to field, and that some Master's degrees are considered 'first degrees' in the sense that there are no Bachelor's degrees offered in some fields, and in these cases the Master's degree is a continuous 4-year degree (some initial professional degrees are even longer).

Other system characteristics

Finance
There are no differences between universities and university colleges in terms of how teaching funds are awarded. Since 1993 institutional grants have been based on three-year contracts between the Ministry of Education and Science and the institutions. The teaching portion of these contracts is based largely on the number of active students (determined on the basis of the number of study credits achieved), and the number of degrees which are awarded. The government sets the maximum sum which will be awarded.

There are differences between universities and university colleges in terms of basic research funding. Only two university colleges have the right to grant postgraduate degrees (in particular fields) and to receive permanent research funding. This is a recent development (since 1999). The rest of the university colleges do not receive permanent funding for research, and must rely on attracting external funding in order to be able to carry out research.

A higher percentage of the teaching staff at universities has earned a PhD than teaching staff of the university colleges. There are, however, no national statistics published about this.

As mentioned above, except for a few institutions, university colleges do not receive permanent funding for research and do not have the right to grant postgraduate degrees. All university colleges do, however, carry out some research, which is supported by external sources of funding (both public and private sources). University colleges have the right to apply for public research funding (such as from the research councils) along with universities and other research institutes. Certainly the universities receive a greater percentage of this funding than do the university colleges.

Quality assurance
The National Agency for Higher Education is responsible for carrying out a quality audit of all of the higher education institutions once every three years. In addition to these institutional audits, the National Agency for Higher Education is also responsible for making quality assessments of particular disciplines (both teaching and research). Because in many cases similar programmes are offered at universities, university colleges and specialised institutions, these disciplinary assessments cover all of the institutions which are active in a

given field. Up to now there is not a unified approach to quality assessment work – a variety of methods and designs of quality systems are being used. The audit processes seek to examine education and research in relationship to the particular context and circumstances of each individual institution (Swedish Ministry of Education and Science, 1992; National Agency for Higher Education, 2000).

Output

No recent information on labour market placements of graduates is available; however, a study of graduate destinations was undertaken in 1997. On the basis of this study it is possible to conclude that the majority (72-74%) of graduates with degrees of three years or longer entered the labour market. A much smaller percentage (18-19%) continued their studies or combined working with continuing studies. Unfortunately on the basis of this study it is not possible to distinguish between graduates with Bachelor's and with Master's degrees, nor between degrees granted by university colleges or universities (Statistics Sweden, 1997).

Developments

Historical background
Some of the institutions that later became university colleges were founded as specialised institutions for natural sciences at the end of the nineteenth century (Eurydice, 2000). During the second half of the 1960s some universities established branches in other regions of Sweden, and some of these eventually became university colleges. Many other university colleges were founded during the expansion of the higher education sector following the 1977 reforms. The main reason for founding these institutions was in order to expand the geographic accessibility to higher education. During the same period, the university college sector of higher education grew through the inclusion of many institutions which were formally not part of the higher education sector, such as in the areas of teacher training and nursing education (National Agency for Higher Education, 1999). Four new university colleges were founded in the 1980s and early 1990s (Fritzell, 1998).

The latest major reforms of the system (1993) – apart from the recent 'upgrading' of some university colleges, discussed above – introduced a system of credits and standard degrees. It is not known to what a degree these changes have led to an increase in students transferring from one type of institution into another, but the increased transparency should make more mobility possible within the higher education system.

Recent developments

Interesting recent developments have included the granting (1999) of university status to three university colleges and the granting of special status to two

university colleges allowing them to grant postgraduate degrees in particular fields, and to receive permanent research funding (National Agency for Higher Education, 1999). It can be said that these developments (in particular the latter) point to a certain blurring of the borders between the sectors.

Bologna declaration

Bachelor's degrees have traditionally existed at Swedish universities. More recent developments have involved Master's degrees. One of the reasons for introducing the Master's degree (in 1993) was to make the study programmes more compatible with Norwegian and Danish traditional initial degree programmes (which were somewhat longer than traditional Swedish degrees, Schrier and Kaiser, 1998).

A recent (1999) report released by the National Agency for Higher Education describes the Master's degree as having a rather unclear status in Sweden. One of the reasons for this is that these degrees primarily serve to prepare students for postgraduate studies, but at the same time they are not always required for entrance into these programmes. In some cases students may be granted admission to postgraduate programmes with Bachelor's degrees. Students claim that the Master's degree lacks a clear status in the labour market, although they recognise its usefulness in international contexts. The National Agency reports that various higher education institutions have expressed interest in introducing a new type of diversified Master's degree which would aim to be more relevant for the labour market (National Agency for Higher Education, 1999b).

In 1999 the National Agency for Higher Education proposed that a new type of Master's degree should be developed. This Master's degree should be more professionally-oriented, as opposed to the current degrees which are largely academically-oriented and mostly aim to prepare students for postgraduate studies. The National Agency proposes that these new degrees should open up possibilities for professionally active people who have previously taken a first degree. In addition, the new degrees should offer opportunities for foreign students to study in Sweden. (National Agency for Higher Education, 1999c)

Conclusion

In comparison with the Dutch situation, it is clear that there are not as many distinctions between different types of higher education institutions in the Swedish system. Although different types of institutions exist within higher education, the differences between them are not as great as in many other systems. As was mentioned, traditionally the main distinction between universities and university colleges was the research function and the right to grant postgraduate degrees (these were the domain of universities). In recent years, however, there have been some blurring of these differences, as some university colleges have started receiving permanent funding for research and have gained the right to grant postgraduate degrees. It must be mentioned, however, that co-operation between different types of institutions has been a characteristic of the system for a long time. In addition, an interesting recent development has been the granting of university status to a few university colleges.

12 United Kingdom

Henno Theisens

Introduction

After the Second World War until the early 1960s the English Higher Education system was dominated by the traditional universities, of which there were at that time 24. The University Governing Council (UGC) that always had a formidable force protecting the autonomy of the universities was still strong, but the influence of the state was growing constantly. Then during the early 1960s important changes occurred. The Robbins committee made far-reaching proposals for changes in the higher education system. The proposals of the Robbins committee meant the end of the system of autonomous, elite universities that had existed in the centuries before. Most importantly, growth, both in the university sector and in other types of advanced learning, was stimulated (Fulton, 1991; Scott, 1995). In the 1970s the developments started off by the Robbins committee were taken further. The polytechnics grew in importance and the department of Education and Science decided that national co-ordination was necessary to control the system. The polytechnics had until then been locally governed schools, but at that time started to move to the national level, co-ordinated by the National Advisory Board (NAB). Then after 1981, as a consequence of budget cuts, the UGC lost its credibility as an advocate for university interests. The position of the UGC became very weak because of its obvious inability to protect the universities from the sudden and major financial cuts. At the end of 1980s both the NAB and the UGC were abolished. They were replaced by the University Funding Council (UFC) and the Polytechnic and College Funding Council (PCFC). For the universities this meant a definite loss of autonomy, for the polytechnics and colleges it represented full nationalisation and greater operational freedom. The two systems were finally merged into one system of 97 institutions in 1992. The Further and Higher Education Act of 1992 allowed all higher education institutions in England and Wales which satisfied prescribed criteria to apply for permission to include the word ‘university’ in their titles. All polytechnics did so. The UFC and PCFC were replaced by councils with a responsibility for the Higher Education system within their regions (England, Scotland and Wales).

Although the two systems have merged, this does not mean that chartered universities (the universities that were labelled university before 1992) and former polytechnics have become completely similar. On a formal level there is one system, but looking at what actually happens in the universities there are still considerable differences.

Input

Although there is nowadays no formal distinction between the types of higher education institutions, the following table (table 12.1) gives some insight in the size of the sector(s) before and after 1992.

***Table 12.1**: Student numbers in polytechnics and universities 1988-1996*

	1988	1990	1992	1994	1995	1996
Universities	285,372	316,664	375,587	1,231,988	1,308,765	1,392,607
Polytechnics	430,628	625,720	779,333			

In the English system, universities are allowed to select their students. Although there are minimum standards prescribed by the government, in practice, because of the competition for places, most institutions require levels of qualifications considerably above the minimum. These requirements may be expressed in the number of passes or in the grades to be obtained. Alternative qualifications, including qualifications in vocational education, are becoming increasingly acceptable. In order to better accommodate the increasing range of possible qualifications at this level, a UK-wide university admissions framework will be introduced in 2002. Most institutions also welcome applications from mature candidates who have had appropriate experience but may lack formal qualifications.

There is a wide variety in the rigorousness of the selection. This variety is not just binary, in the sense that chartered universities are much more selective that former polytechnics, there is also a lot of variety within the group of chartered universities and former polytechnics. Also within universities there are different degrees of selectivity among departments. However, when looking at the Times league table (Time Higher Education supplement) it becomes clear that, on average, former polytechnics have lower entrance requirements than chartered universities. All former polytechnics score in lowest 50% with regard to their entrance requirements. In addition to their lower entrance requirements, many polytechnics offer a preparatory year-long course for people that do not meet the entrance requirements. Recently there have been discussions that the more prestigious universities are not taking in enough students who have working experience instead of A-levels.

Structural characteristics

Programmes and degrees

The length of programmes in former polytechnics and chartered universities is uniform (undergraduate education lasts three years and graduate education is one year long for a Master's and three years long for a PhD degree). Both types of universities are allowed to offer undergraduate and graduate courses. Universities are free to decide on the names of their degrees. The most common degrees are Bachelor of Arts (BA) and Bachelor of Science (BSc). There is more diversity in the Master's titles. There is a wide variety, including the Master of Arts (MA), Master of Science (MSc), Master of Business

Administration (MBA), Master of Education (MEd), Master of Social Work (MSW), Master of Musical Arts (AMusM), Master of Medical Sciences (MMedSci) and the Master of Philosophy (MPhil). The degree awarded for a doctoral course is normally that of Doctor of Philosophy (PhD or, at a few universities, DPhil), regardless of the field of study of the research, except for a few specialised fields as in the case of the degree of Doctor of Musical Arts, AMusD (Eurydice, 1999).

Although chartered universities and former polytechnics have rights to offer all these courses, there are still differences. On the whole, polytechnics tend to be more aimed at professional courses and chartered universities more at academic courses. The chartered universities offer more Master's and doctoral courses than do the polytechnics. There are, however, some factors that make polytechnics and chartered universities similar. In the first place, there is a professional drift in universities. Compared to the Netherlands, there are a growing number of courses offered at chartered universities that are not strictly academic but prepare for professions. In the second place, with the merging of the two systems, polytechnics gained the right to offer Master's and PhD programmes, and these degrees are more aimed at academic achievement than the traditional courses offered at polytechnics. Finally, the stringent divide between what is professional and what is academic has loosened. Academic skills have become a necessity in many professional jobs. All this has led to "a considerable confusion about the meaning of qualifications awarded by UK higher education institutions. Though half of UK employers recruit employees with HEQs (Higher Education Qualifications) and half of those responsible have qualifications themselves, only a third feel they have a reasonable understanding of HEQs." (Report into UK employers' understanding of qualifications awarded by HE institutions, 2000)

Other system characteristics

Finance and personnel

Since the unification of the Higher Education system in the UK, both chartered universities and polytechnics have been financed for research and teaching. The research in the former polytechnics has grown, but only marginally. This is partly due to the fact that the employees of the polytechnics were formerly only teaching staff and that research was only a very limited (if at all) part of their job, i.e. many employees have little experience in research. These starting problems are worsened by the English funding system for research in which past quality has important implications for the level of funding an institute receives. The former polytechnics are therefore caught in a vicious circle. There are no resources (money, personnel) to do excellent research and because there is no excellent research, there is no money available to gain these resources. Former polytechnics that attempt to start research usually try to establish themselves in small niches in which they invest money. On the whole, this makes the former polytechnics still mostly teaching institutions, albeit with sometimes some small research institutes attached to them. The chartered universities have a long tradition as institutions which combine research and teaching.

Minimum qualifications for teachers at universities are similar for all universities, i.e. there is no formal binary divide here. It is true, however, that before 1992 there were important and significant differences between personnel at polytechnics and chartered universities. In 1992 Halsey (1992) showed that "42% of the university teachers secured a first class honours degree from their first institution of higher education, compared with 16% of the polytechnic staff, and while 69% of those teaching at universities hold a doctorate, the percentage among the polytechnic staff is only 32." Clearly eight years is not enough to equalise the entire Higher Education sector. Furthermore, this process has been slowed down by the differences in status–the older universities are perceived as more interesting places to work for teachers and researchers holding a doctorate.

Quality assurance

Concerning quality evaluation, higher education institutions are required to undertake institutional self-assessment in each subject offered. This self-assessment is intended to inform the preparation and conduct of the assessment visit made as part of the national-level review of performance at institutional and programme levels. The self-assessment should include an evaluation of the quality of the student learning experience and student achievement, measured against the aims and objectives that the 'subject provider' (which normally equates to a department or a faculty within the institution) sets for the education of its students in that subject. In these self-evaluations, chartered universities and former polytechnics can use their own criteria, which allows for a diverse system of universities including an informal binary divide.

On top of this self-evaluation, there are a number of bodies engaged in the evaluation of higher education. The Quality Assurance Agency, which is an independent body funded by subscriptions from universities and colleges of higher education, carries out subject reviews and institutional audits under contract to the Higher Education Funding Council for England (HEFCE) and the Higher Education Funding Council for Wales (HEFCW). In Northern Ireland, the agency responsible for the evaluation of quality in higher education teaching and research is the Department of Higher and Further Education, Training and Employment (DHFETE), advised by the Northern Ireland Higher Education Council and the QAA. Initial teacher training is inspected in England by OFSTED, in Wales by Estyn, and in Northern Ireland by the Education and Training Inspectorate (ETI). The funding councils and DHFETE periodically conduct a research assessment exercise to judge the quality of research (Eurydice, 1999). These judgements are based on generalised academic standards "Judgements are made on the academic standards in each subject under scrutiny. (□) These judgements focus on whether intended learning outcomes are appropriate and whether the outcomes achieved are consistent with the intentions" (QAA, 2000). These generalised standards may be a drive for former polytechnics to develop in the direction of the chartered universities.

Regarding the outcomes of these quality evaluations it becomes very clear that there are still clear differences between former polytechnics and chartered universities. In the Times league table, the best scoring former polytechnic (Oxford Brooks) is ranked 52 of the 97 universities presented in the table. In

other words the best 50% of universities are all chartered universities. The low scores are mostly due to very low scores on the quality evaluation of research at these institutions. On teaching most polytechnics score average.

Output

Employer satisfaction with the students that finish either chartered universities or former polytechnics is difficult to measure, and since 1992 there have been no real studies that compare chartered universities and former polytechnics. Harvey and Knight (1997) conclude, "in general employers express satisfaction with the graduates they have recruited."

Notwithstanding these results, the government has engaged in several schemes to make Higher Education more sensitive to the needs of industry. Since 1987 there is the Enterprise in Higher Education programme with the explicit objective to encourage the qualities of enterprise amongst those seeking for higher education qualifications (MSC, 1987). More recently the DfEE and the Department of Trade and Industry (DTI) launched the 'Higher Education Reach-out to Business and the Community Fund' in June 1999. This scheme seeks to encourage higher education institutions in England and Northern Ireland to respond to the needs of business and to contribute to economic growth and competitiveness, whilst improving opportunities for graduate employment, through innovative proposals. Separate measures exist in Wales and Scotland.

In conclusion, although there is no direct information on the satisfaction of employers concerning chartered universities and former polytechnics, there is a clear indication that government wants universities to teach more skills and knowledge that is useful for industry. Since these policies are aimed at both types of universities this is yet another push towards uniformity.

Recent developments

Dearing report

An important macro-development that may lead to more uniformity in the English Higher Education system is that following a recommendation by the Dearing Report, the QAA is currently developing a National Qualifications Framework for Higher Education in the United Kingdom. This framework will allow for the establishment of a common currency for credit accumulation and transfer in the sector. The development of such a common framework for credit transfer and accumulation in the entire system of Higher Education (including all institutions) may be an extra push towards uniformity of the system.

As for recent European developments, the Bologna declaration will presumably have no impact on the English Higher Education system. The English system already conforms with the system proposed in this declaration.

Conclusion

Since 1992 the Higher Education system in the UK is no longer binary. Formally there is no division between polytechnics and chartered universities. However, there are still many indications that there remains an informal binary system. Former polytechnics are less rigorous in their selection of students, they are much less engaged in research and they all score in the bottom 50% of the times Higher education league-table. It is so far unclear how the system will develop, but there seem to be forces that work against the informal binary divide. In the first place, the universities are all evaluated by the same standards. As these evaluations have repercussions for the funding of the institutions, one might expect growing conformity to these standards. Secondly, since 1987 the English government has attempted to increase the responsiveness of universities to the demands of industry. This means that the chartered universities are experiencing a push towards more professional skills and knowledge in the curriculum, and this may make them more similar to the former polytechnics. Finally the recent developments of a credit transfer and accumulation system may demand more uniformity among all Higher Education institutions.

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