

Project Report

Trends in Learning Structures in Higher Education

7 June 1999

Contents: Introduction (by Inge Knudsen)

Part I: "Main Trends and Issues in Higher Education Structures in Europe" (by Guy Haug)

Part II: "Information on Learning Structures in Higher Education in the EU/EEA countries" (by Jette Kirstein)

The project is undertaken by the Confederation of European Union Rectors' Conferences and the Association of European Universities (CRE) with financial support from the European Commission (agreement no. 98-01-CER-CER-0642-00).

The report is the result of the studies undertaken and expresses the points of view of the authors and not those of the European Commission, the Confederation and the CRE.

Introduction

The report on the project, *Trends in Learning Structures in Higher Education*, is hereby presented as a background paper for the Bologna Forum on 18-19 June 1999. The report comprises information on and analyses of current trends in higher education structures in the Member States of the European Union and the European Economic Area. The objective of the project has been to provide an *outline and overview of learning structures in higher education* and a *comparative analysis of the different systems embodying these structures*, thereby offering a tool to identify possible divergences and convergences in the national and institutional policies.

Background

At the Sorbonne Forum on 25 May 1998, the (then) Italian Minister, Prof. BERLINGUER, extended an invitation to fellow Ministers in charge of higher education in other countries to attend a follow-up meeting in Bologna in 1999. The Sorbonne Forum was organised in connection with the celebrations of the 800th anniversary of the University of Paris-Sorbonne, with the assistance of the French Conference of University Presidents (CPU). At this meeting the *Sorbonne Declaration* was adopted, and a "Joint Declaration on Harmonisation of the Architecture of the European Higher Education System" was signed by the four Ministers of France, Germany, Italy, and the United Kingdom. Invitations to the Bologna Forum have been forwarded from the Italian Minister, Mr. Ortensio ZECCHINO, to Minister colleagues and from the Rettore F. ROVERSI-MONACO of the University of Bologna to higher education institutions and other stakeholders in higher education throughout Europe.

As part of the preparations for the planned Bologna Forum, the Confederation of European Union Rectors' Conferences undertook, in co-operation with the Association of European Universities (CRE), a project for the European Commission (DG XXII), on *Trends in Learning Structures in Higher Education*.

The Project

The aim of the *Trends in Learning Structures in Higher Education* project has been to provide an overview of structures throughout the European Union and the European Economic Area and an outline of areas of divergence and convergence within these learning structures.

The project has been composed of three major strands: *data collection, comparative analysis* and *validation of results and revision of report*. The project has been under constant time constraint and this has implied a limitation of the countries studied, to the EU and EEA countries. Another result of the time constraints has been that the two parts of the report, the structural overview and the comparative analysis, have not been combined into one single paper. As part of the follow-up to the project after the Bologna Forum, comments from the different stakeholders will be included and a second phase of the project will involve other European countries, notably countries seeking accession to the European Union.

The preparations for the Bologna Forum were discussed at an informal meeting of the EU Ministers of Education and at a meeting of Directors-General of Higher Education and Presidents of Rectors' Conferences of the Member States of the European Union, in October

1998 during the Austrian Presidency. A Steering Committee was established to assist in the preparations of the Bologna Forum, consisting of Directors-General of Higher Education of the following countries: Austria (Chair), Germany, Finland, and Italy, with representation from the French Ministry of Education and Rectors' Conference (CPU) and from the UK. The Steering Committee has also functioned as a sounding board for the project and has provided validation of preliminary project results. The role of the Steering Committee in the follow-up process of the project is of vital importance. The Confederation and the Association of European Universities have participated in Steering Committee meetings, as have the two experts, appointed by the two organizations to undertake the data collection and comparative analyses and syntheses.

As coordinator of the project, the Confederation would like to thank the two experts, Ms. Jette KIRSTEIN and Dr. Guy HAUG for their invaluable and untiring efforts, the results of which are now available. The Confederation would also like to thank the Steering Committee members who have contributed with helpful validation and criticism. A special word of thanks is due to the organizations from whom important input has been obtained, in particular the national rectors' conference secretariats, the EURYDICE Office and the ACA Secretariat in Brussels, ESIB (the National Unions of Students in Europe) and the NARICs throughout the EU and EEA countries. The project would not have been possible without the financial support provided by the European Commission, and the Confederation would like to thank the European Commission for its financial contribution as well as for contributions to the project in the form of publications, documentation material and helpful comments.

TRENDS AND ISSUES IN LEARNING STRUCTURES IN HIGHER EDUCATION IN EUROPE: **EXECUTIVE SUMMARY**

This document is meant as a contribution to the follow up work to the Sorbonne Declaration of May 1998 which called for the harmonisation of the architecture of higher education qualification systems in Europe. Its main purposes are to map areas of convergence between these systems in Europe (mainly EU/EEA), to identify trends affecting them and to indicate ways towards greater convergence in the future.

The **survey of existing structures** shows the extreme complexity and diversity of curricular and degree structures in European countries. The Sorbonne Declaration recommended that studies should be organised in an undergraduate and a graduate cycle, but did not provide an indication of their duration. The debate that followed focussed on the alleged existence (or emergence) of a European “model” with 3 main levels of qualifications requiring 3, 5 or 8 years of study.

No significant convergence towards a 3-5-8 model was found. Whether traditional or newly introduced, bachelor-type degrees require 3 to 4 years, and many European countries without bachelors have first degrees in 4 years; there is however a high degree of convergence towards a duration of about 5 years for master-level studies; but there is no 8-year standard duration for doctoral degrees. In addition, whereas the UK, the US and most countries in the world - except in continental Europe - apply two-tier (undergraduate-postgraduate) systems, the length of studies and the degree structures vary considerably within and between these countries, and duration tends to be expressed in academic credits rather than in years.

Several important **trends affecting the structure of degrees/qualifications** in Europe could be identified. There is a strong and growing **governmental push towards shorter studies**, first aimed at reducing the real duration of studies to their official length (which is typically exceeded by 2 to 4 years in many countries), and more recently through the introduction of first degrees in countries with traditionally long curricula without an intermediate exit point. Recent reforms in Germany and Austria have introduced **new bachelors/masters curricula** on a voluntary basis alongside traditional diplomas, whereas in Italy and France existing curricula are being re-arranged in a first and postgraduate cycle. Elements of two-tier systems exist in many other European countries, and it seems that currently only a few countries in the EU/EEA do not have, or are not experimenting with two-tier curricula in at least part of their higher education system.

In countries with a binary system, the line of divide between the university and non-university sectors (and their degree structure) is become increasingly blurred. Most countries have adopted, or are adopting various types of systems for the transfer, and to a lesser extent also the accumulation of academic credits; most are compatible with the ECTS system, which is gaining ground at many institutions. There is a marked trend towards more autonomy of universities, coupled with new initiatives for quality control and evaluation in many countries.

In recent years, European higher education has been faced with **mounting challenges from abroad**. Transnational education delivered in English by foreign/overseas providers through branch campuses, franchising, or by electronic means has grown rapidly in many European countries; a whole new sector of higher education is emerging alongside traditional, national, state-regulated systems, but until now it has been largely ignored by governments as well as universities in Europe.

Four main avenues of combined **action which may foster the desired convergence and transparency in qualification structures in Europe** are being suggested.

* The gradual adoption of an ECTS-compatible credit accumulation system. This would enhance the flexibility of national/institutional systems (in particular in view of the development of lifelong learning), bring them more in line with each other and with world systems, and ease mobility both within and from outside the EU/EEA area.

* The adoption of a common, but flexible frame of reference for qualifications. A rigid, uniform model (like the 3-5-8 model) is neither desirable nor feasible in Europe. In line with the analysis of existing systems and reforms in progress, the following broad frame could serve as a common reference, while at the same time allowing for flexibility and differences in countries and subjects (length of studies are expressed not in years, but as the number of academic credits that must be successfully completed (one academic year corresponds to 60 ECTS credits):

- sub-degree level (certificate, diploma): 1 to 2 years worth of ECTS credits;
- first degree level (bachelor, honours, other first degree): no less than 3, no more than 4 years worth of ECTS credits;
- master level: about 5 years worth of ECTS credits, of which at least 12 months worth of master-level credits;
- doctoral level: variable (about 7 or 8 years in total).

The main conditions for meaningful first degrees of the bachelor/honours type are being set out. Key factors are the introduction of new curricula (instead of a sheer re-packaging of existing ones), a guaranteed level (gauged on the basis of knowledge and competencies acquired rather than time spent), real possibilities on the market labour, a clear separation from postgraduate studies, and formal accreditation. Short master programmes (12 months) present specific opportunities for intra-European mobility and international competitiveness.

* An enhanced European dimension in quality assurance, evaluation and accreditation:

- compatible quality assurance systems, especially regarding the setting of threshold standards based on learning acquired (outputs) rather than on time spent and curriculum content (inputs);
- independent evaluation leading to European quality labels in broad subject areas; the current vacuum for independent evaluation in Europe would best be filled through agencies independent from national and European authorities, and working along subject lines; they could draw on existing and future European-wide subject-based networks;
- a coordinated approach to quality standards for transnational education, which raises the question of the recognition of foreign private providers.

* Empowering Europeans to use the new learning opportunities. Compatible credit systems, understandable degree structures, increased quality assurance and an more European labour market are structural improvements which would create a whole new range of learning opportunities for all; their impact would be even greater if they were combined with measures such as short master degrees favouring new types of mobility, the further strengthening of the NARIC/ENIC network, counselling with a European dimension, and the elimination of remaining obstacles to student and teacher mobility.

The combined impact of the suggested action lines would also make European higher education more understandable and attractive to students, scholars and employers from other continents; they would enhance European competitiveness and thus help to consolidate (or in the eyes of many, to re-establish) its role and influence in the world.

Guy HAUG

TRENDS AND ISSUES IN LEARNING STRUCTURES IN HIGHER EDUCATION IN EUROPE

(Final version - revised after the Bologna meeting of 18-19 June 1999)

Guy HAUG

The main purpose of this paper is to provide information and observations on the current structure, recent trends and possible avenues for change in the architecture of higher education systems in Europe. It should be seen both as a follow up document to the Sorbonne Declaration of May 1998 and as an input to the Bologna meeting of ministers/governments and higher education representatives on 18-19 June 1999.

A survey and discussion of the architecture of higher education systems covers by definition all the various types of higher education, even though some of the topics may be more specifically relevant for the sub-system of university education. While the focus is on member countries of the European Union (EU) and the European Economic Area (EEA) the overall perspective within which trends and issues emerge in higher education is in many respects that of Europe as a whole.

Given the scope and complexity of the spectrum of issues to be covered, this report will not deal with the following items, even though they are an important and integral part of the overall architecture of higher education in Europe:

- European directives setting out specific rules for the preparation of, and access to certain regulated professions;
- structure of the curricula leading to these professions in the European Union.

Within the framework as set out above, this paper will try

- to map main areas of convergence and divergence in the structure of the various systems and sub-systems of higher education in Europe,
- to identify significant trends in Europe and the global environment which may have an effect on these structures,
- and to indicate possible ways towards greater convergence and effectiveness in the future.

I. HIGHER EDUCATION STRUCTURES: HOW CONVERGENT ARE THEY ?

*** Even more systems than countries in Europe**

One of the key conclusions coming out of the survey carried out by Jette Kirstein (cf Part II of this document: Information on Learning Structures in Higher Education in the EU/EEA Countries) as well as of other sources is that the overall picture of studies, curricula and degrees is indeed extremely complex and varied, as a consequence of major differences in such key factors as:

- type, breadth and duration of secondary education, with obvious consequences concerning age and preparation for further studies;
- the existence or not of sub-systems of higher education, their respective role and size and the relationship between them, in particular possibilities to transfer from one to the other;
- access to higher education (from open choice to various forms of selection and *numerus clausus* in all or some sectors);
- study fees (from gratuity to differential or generalised systems of tuition fee);
- organisation of studies in terms of calendar (from annual courses to block modules), choice (varying from set curricula to nearly free choice), frequency and type of examinations (continuous examinations, final exams per credit, or only block examination after several semesters of study);

- and of course, the structure, duration, number and type of degrees that can be earned.

A major conclusion is that comparisons between degrees and degree structure made within such an environment can only be meaningful within certain limits. They become irrelevant if the various factors shaping their existence in a given national system are ignored. In the pages that follow, many comparisons will nonetheless be made, always with this fundamental remark in mind, even though it will not be repeated.

Whether officially unitary or binary, the architecture of national systems can be extremely complex. Within a single country there can be up to 100 different academic qualifications and as many different curricula linked by a variety of “bridges”. It is important to point out in this respect that a potential European framework of qualifications cannot be less complicated than the most complicated of the national systems included in it.

*** No convergence towards a strict “3-5-8” model**

The Sorbonne Declaration recommends that studies should be organised in an undergraduate cycle leading to a first qualification and a graduate cycle leading to a master or doctoral degree, but it does not provide an indication on the duration of these cycles. An extensive debate has nonetheless taken place about this issue, based on the assertion in the Attali report to the French government about the existence (or emergence) of a (single) European model of higher education based on a sequence of studies and degrees of 3-5-8 years. A model strictly following this pattern does not exist.

There is little convergence towards a first degree after 3 years.

No one country in Europe has an across-the-board system of 3-year first degrees in all sectors of higher education or all disciplines.

In the UK, while most bachelor degrees indeed take 3 years to complete, there are many which take longer (typically 4 years), especially (but not only) courses involving a period of work-based learning (sandwich model) or integrated study abroad (e.g. in modern languages). Nearly all degrees can be classified as “honours” or “ordinary” degrees; the difference is neither in duration nor usually in a significantly different profile of the curriculum; honours degrees include a thesis and can only be achieved with certain grades (as opposed to a simple pass/fail system). In some fields such as engineering, there are 4-year curricula leading to a first (undergraduate) degree called a master (M.Eng). In Scotland, the first degree normally takes 4 years to complete and is usually called a bachelor degree (but in some cases, a master degree).

In Denmark and Finland where they were introduced in 1988 and 1994 respectively, bachelor courses last 3 years but do not exist in all fields. In other countries with bachelor degrees, their duration also varies between 3 and 4 years, e.g. in Ireland, Malta, Iceland, as well as in the Czech Republic and Slovakia.

Where bachelor studies are based on a credit system, students may influence the duration of their studies and finish in slightly less time than the normal duration of the curriculum, or extend their studies part-time over a much longer period. The actual length of the programme is then best expressed not in years or semesters, but in the number of credits that need to be acquired. With the development of part-time studies and lifelong learning, this is bound to become more prominent in the debate about the structure of qualifications at national and European level.

As can be seen from the tables prepared by Jette Kirstein there are numerous study programmes, both at universities and at other institutions of higher education, leading to a first degree after 4

years. This is also the case in many countries not included in the tables, e.g. in Romania and Bulgaria and for most *Licences* in Switzerland.

A very obvious phenomenon is that the duration of first degree studies (whether leading to a bachelor or not) varies significantly in many countries depending on the discipline (not mentioning medical studies which take longer everywhere), e.g. in Sweden, the Netherlands or Germany. Engineering, law or teacher training studies tend to be different from other disciplines. Even in systems where bachelor degrees have been introduced in other topics, certain curricula in engineering and technology lead straight to a master degree (e.g. in Denmark, Finland, UK).

Moreover, it should be remembered that in most countries (e.g. Austria, Denmark, Germany, Italy, France, Greece and several others) there are huge differences between the official and the real duration of studies, with many students taking up to 7 years to complete a 4 or 5-year curriculum; comparisons based on the official duration of degrees and a possible alignment of systems on this basis would be meaningless if they were not combined with measures aimed at reducing the real duration to the theoretical duration of studies.

A final but very important observation about the first step in the 3-5-8 “model” is that it fails to pay attention to the large number of higher education students enrolled in short, sub-degrees studies of 1 or 2 years at various types of institutions, e.g. IUTs at French universities, Técnico Superior in Spain or HND courses at British Colleges of Further Education. The relationship between these studies and bachelor courses should be seen as an integral part of the overall structure of higher education, especially in the perspective of the growing role for higher education in lifelong learning.

There is a high degree of convergence towards master degrees after about 5 years

Even bearing in mind the above observations on the limited value of the duration of studies as a basis for comparison, there is a high level of convergence in Europe towards a total duration of about 5 years for master level degrees; most countries and most disciplines would find it relatively easy to compare their degrees at this level, even though it may correspond either to long curricula with no intermediate point of exit, or to a sequence organised in different ways: 4 years + 1, or 3 + 2, or sometimes 2 + 3 (at French *Grandes Ecoles*).

With national systems converging towards master degrees after (approximately) 5 years of study, the adoption of a common frame of reference for qualifications should be relatively easier, including at the levels below and above that of the master.

It is also interesting to point out that in countries where long one-tier curricula are traditional (e.g. Germany, Austria, Switzerland, Italy and until recently also Sweden and Finland), governments seem to be determined to reduce the real duration of studies close to their official duration of usually about 5 years; if successful, this would of course contribute to even greater convergence between national systems after about 5 years in higher education.

There are of course exceptions to the average 5-year duration of studies until the master level, some of them very specific (e.g. graduates of Oxford or Cambridge are awarded a master degree after a set period of time, without any additional study or examination) and others of a more general nature: the French *Maîtrise* can be completed in 4 years (the view is often held that on the labour market the first “real” qualification in France is the *Maîtrise*, not the *Licence*) and, depending on their choices, British students can possibly add a one-year master programme to a 3-year bachelor course.

Where master programmes are separated from undergraduate studies, their length varies from one to two years. In the UK many taught master programmes last about 12 months, while more research-based ones tend to be longer; yet, there is no direct link between the nature of the programme (taught, research, or often a combination of both) and its duration. Many other countries have longer, 2-year programmes, both for “professional” and “research” master degrees.

There is no 8-year standard duration for doctoral studies

The comparison and recognition of doctoral studies and titles are not a problem area, at least not from the academic point of view. But there is no evidence that a Doctorate or Ph.D. normally takes 8 years: this is an area of high volatility, with actual duration varying more according to discipline than to national degree systems. A small number of countries have intermediate doctoral titles (with potentially misleading names such as *Lisenciaatti* in Finland or *M.Phil* in the UK) or have – especially in Central and Eastern Europe - a “higher doctorate” (or a “*habilitation*”) as the highest degree for an academic career.

There is, therefore, not much ground to conclude that European higher education systems are converging towards 3 main levels of qualifications earned after 3, 5 and 8 years of study. However, are there any external reasons for a move in this direction ?

* Is there an “Anglo-Saxon” or US model ?

Among the fears heard in the debate about the value of a 3-5-8 model was the possibility that Europe might just import a foreign, “Anglo-Saxon” (and mainly American) model.

What the British and the US system, as well as those of the numerous countries which took inspiration from them (in the Commonwealth, Latin America and Asia and more recently in former communist countries) all share in common is a basic structure differentiating undergraduate and (post)graduate studies. Their definition, organisation, content, respective role and size may be very different according to country and subject; the line of divide between them may be blurred and their articulation may be shifting. But the broad distinction between an undergraduate and a (post)graduate level is so widespread around the world that not also having it would make continental Europe an ever more isolated island of relative incompatibility. The Sorbonne Declaration was more than justified to promote a move in this direction.

Yet, a single “model” for the length and structure of courses and degrees does not exist and there is no established or generalised international standard. The growing diversity of British bachelor degrees and master courses has already been mentioned. What may be less well known is that the US system, which is highly structured by institutions and accreditation bodies, at the same time features a great variety of curricula, length of studies and types of degrees.

A first important comment is that while years and semesters are used to set the academic calendar and schedules, the basic academic units are credits. All courses are credit-rated, and students can accelerate their studies in several ways (“advanced placement” while they are still in secondary education, extra courses per semester, summer studies). Contrary to Europe, tuition fees are based on the number of credits taken and are not calculated on a semester or annual basis.

Over one third of all US students do not study at universities but at “community colleges” which offer a variety of short vocational courses and 2-year programmes leading to an “associate degree” in Arts, Science or Applied Science. Holders of an “associate degree” may apply for admission to further studies at universities, usually on the basis of a convention between their college and a local university in the same state. Community colleges are an essential part of the US higher education system, and omitting them in transatlantic comparisons can lead to gross misrepresentations.

There is a great variety of bachelor degrees in the US. Most are much less “professionalised” than their European counterparts and some of the most prestigious ones are those completed at independent liberal arts (or undergraduate) colleges which offer a 4-year general education curriculum in humanities and sciences. Degree holders can nonetheless enter the labour market (given different recruitment habits and currently better employment opportunities than in many European countries). Some prestigious universities may restrict admission to their postgraduate schools from their own bachelors and recruit mainly from independent colleges and other universities. Professional studies in e.g. Law or Medicine start only after the bachelor level and lead to specific degrees such as M.D. or J.D. (which are not research doctorates despite their names). Master programmes usually take 2 years to complete, and in some areas (e.g. management) the most prestigious ones are only accessible after an extended period of successful professional experience.

In addition to allowing for diversity, the US system is also changing. The problems inherent in the very flexible, “boneless” or “cafeteria” model have been recognised and most universities now offer more structured degrees based on a series of core courses and a more restricted choice of electives; comprehensive essays or examinations have been re-introduced in many curricula. The value of broadly-based, long curricula is being acknowledged in areas such as engineering, where leading universities have designed “co-terminal” programmes; these are for outstanding students and lead after 5 years to the simultaneous award of a master and bachelor degree. Another major difference to (continental) Europe is that professional titles, such as architect or engineer, are completely separate from academic studies; they are usually conferred on graduates in relevant areas by professional bodies, and only after a period of 3 to 5 years in professional life and the completion of additional requirements.

The main conclusion of these observations is that the US system has its own structure, logic, history and also its own weaknesses and difficulties. It exercises an influence on other systems in the world, including Europe, and is also influenced by features in the European system. Attempts to replicate parts of the US (or any other) system in Europe in isolation from its underlying educational and broader social infrastructure would be doomed. Europe needs to develop its own system(s) to suit its own needs - but of course not in isolation from world developments as was pointed out above.

II. MAIN TRENDS AFFECTING THE ARCHITECTURE OF QUALIFICATIONS

*** Governmental push towards shorter studies**

A major trend that can be noticed in many countries is a governmental push towards the reduction of the real duration of studies. Denmark and Austria seem to disagree about who has the “slowest” students on earth, graduating after some 7-8 years from courses that last officially only 4 or 5 years. A similar problem has long been reported from Germany, Italy (only one third of those registering for the *Laurea* complete it, of which only 11 % graduate in time), the Netherlands and France (only about one third of students completing a *Maîtrise* do so in just the planned 4 years).

Possible explanations suggested for this drift include:

- encyclopedic programmes;
- graduate unemployment;
- free education often combined with low motivation resulting from default choices for studies without any selection process at the entry;
- part time work (an argument not very convincing in itself, in the light of comparisons with the UK, the US or Ireland where most students finish on time).

Amongst the negative consequences of this phenomenon are :

- high drop-out rates, especially in the first years, as shown in surveys carried out by the OECD;
- late entry on the labour market (at the age of 28 or even 30 years), which is increasingly seen as a competitive disadvantage in the labour market, when graduates from other systems start their career at the age of 22 or 23, when obsolescence of knowledge is quicker than ever and when employers see time management as an indicator of future performance;
- lack of attractiveness for foreign students;
- unnecessarily high costs for students/families and public resources;
- undemocratic aspect of systems where the sheer length of studies may discourage in particular students from less favoured social backgrounds and constitutes a formidable obstacle for lifelong learners;
- additional difficulties to attract students to such areas as science and technology, where enrolments fell in many countries, resulting in foreseeable skill shortages in key economic sectors.

Governments in many countries have tackled this issue for more than a decade, but with increased determination in recent years. Their first efforts seem to have gone into bringing actual duration more in line with official duration, mainly through financial measures such as the limitation of the duration of grants (e.g. Germany, Netherlands, Denmark), their transformation into loans if the normal duration is exceeded by more than one year (Netherlands, Denmark), the exclusion of “late” students from the count on which state grants to institutions are based (Finland) or differential tuition fees for undergraduate and postgraduate studies (Ireland, or UK in a different way).

The attention paid by many governments in Europe to the development of a strong, competitive but shorter non-university sector, as well as the increasing shift of student enrolments towards this type of higher education, also point in the direction of shorter studies.

More recently, governments have articulated plans to reduce the theoretical duration of studies, and the attractiveness of models featuring shorter first qualifications followed by postgraduate studies for a smaller number of students has grown. The move towards bachelor and master degrees in countries where they are not traditional can also be explained in these terms.

*** A growing wave of new bachelor/master courses**

Even though the phenomenon is far from generalised, there is currently an accelerating move in favour of the introduction of bachelor degrees in systems that hitherto had mainly, or only, long curricula with no exit point before the master level.

In addition to the UK and Ireland where they are traditional, two countries introduced bachelor degrees in most subject areas a few years ago: Denmark in 1988, and Finland in stages after 1994. Both countries report that the reform was not really successful, with the vast majority of students continuing for the master degree and employers showing little interest in holders of a bachelor degree. In Denmark it was however observed that the reform led to a redistribution of students after the bachelor, according to the areas of specialisation offered by universities other than their own.

In Germany an amendment to the federal law on higher education in 1998 allowed universities and *Fachhochschulen* to set up new bachelor and master degrees. Bachelor courses may last from 6 to 8 semesters, and master courses from 2 to 4 semesters; when offered as consecutive steps in a long curriculum their aggregate duration cannot exceed a total of 10 semesters. New courses may replace traditional ones or run in parallel, but no additional public money is provided. Institutions are expected to arrange for students to finish on time. The law also provides for the introduction of a credit accumulation and transfer system. The system will be evaluated after 5 years.

A survey of the approximately 80 bachelor and master courses that were started in the autumn of 1998 shows that :

- most courses are in science and technology (while none in law and hardly any in humanities or social science, except management);
- most use English only or in various combinations with German;
- few explicitly refer to ECTS credits;
- whether offered as separate programmes or as consecutive steps of a long programme, most bachelors are in 6, and most masters in 4 semesters, with various possibilities to earn a German *Diplom* on top of the bachelor or master degree, often after an additional period of study;
- there is one rather non typical programme leading in 8 semesters to a *Fachhochschule* degree and simultaneously an American MBA.

The profiling of these new courses, the relationship they establish between traditional German *Diplom* or *Magister* and bachelor and master degrees, the response from students enrolled in new and traditional programmes, and the attitude of employers should soon provide very interesting information on the future of two-tier courses in Germany.

Austria just adopted an amendment to the law on higher education along similar lines as in Germany: introduction of bachelor courses on a voluntary basis in replacement of existing curricula, credit system, bachelors in 3-4 years, but masters in 1 year except at universities of Arts, no extra funding.

In Italy, the major reform currently in progress explicitly wants to bring the whole architecture of the Italian system in line with the emerging European higher education space. It plans a resolute move away from the traditional single degree and includes the following measures:

- across-the-board introduction of a “short” *laurea* after 3 years and a new “specialised *laurea*” after 2 more years;
- identification of 5 broad disciplinary areas, each with core curricular requirements and defined degree “classes” set by the State;
- substantial curricular autonomy for universities (for 34 % of the credits) within the confines of the common rules for each disciplinary area and degree class;
- grouping of degrees into “classes”, with minimal requirements for each class (in terms of e.g. transversal skills, non-specialist knowledge and choice allowed to students) and equal legal value for all degrees in a given “class”, irrespective of their curriculum differences and specific denomination at particular universities;
- introduction of a generalised system of credits based on ECTS;
- encouragement of self-appraisal activities and broadening of the role of external evaluation at all levels.

In France, the first-degree and master levels should be “underlined” in the existing multilayer system of national *diplômes*, but without an obligatory quality review or revamp of the underlying curricula; certain universities have nonetheless undertaken to re-design courses, and a new “*professional licence*” aimed at providing a more effective access to the labour market after theoretically only 3 years is being introduced on a voluntary basis. A new degree, the *Mastaire*, is about to be introduced for students who complete 2 years after the *Licence* or graduate from a *Grande Ecole*.

Several countries in Central/Eastern Europe have also introduced bachelor and master degrees as part of the reform of their higher education systems. Bulgaria just passed a new law implementing the principles of the Sorbonne declaration.

In many other countries, the possibility for institutions to create bachelors and/or masters exists and has been used to various extents. In Norway, international curricula taught in English exist as a separate educational line. In Sweden, national degrees are translated into English and presented as appropriate as a bachelor or a master degree. In the Netherlands universities have not made use of their legal possibility to offer bachelor courses.

After the introduction of the various reforms described above, only a few countries in the EU/EEA area seem not to have, or not to be experimenting with two-tier curricula in at least part of their higher education system (Greece, Netherlands and to a certain extent also Spain).

*** Blurring of boundaries between the university and non-university sectors**

In several countries with a binary system of higher education, the boundaries between the university and non-university sub-systems are more and more blurred as a result of a whole series of changes in the higher education landscape:

- in several countries (e.g. Belgium (Fl), the Netherlands and Denmark) students enrolled at universities are now in the minority, and in many others growth in the non-university sector is stronger;
- new laws covering the whole of higher education were passed to submit all institutions to the same rules (as in Sweden, or the new Polish law), or to create common bodies for such purposes as evaluation (e.g. Portugal) or comprehensive qualification frameworks (Scotland);
- In their international publications and dealings, German *Fachhochschulen* have been officially authorised to call themselves University of Applied Science, and Dutch *Hogescholen* to call themselves University of Professional Studies;
- through international cooperation agreements, many institutions opened for their students study possibilities that were not easily accessible at home because of regulatory restrictions (e.g. where a *Fachhochschule* student earns a British master degree which can then be used to gain access to doctoral studies at a German university);
- the possibilities have increased in most countries to transfer credits or otherwise get recognition from universities for studies completed in the non-university sector (in particular direct access to master or doctoral studies); In Italy, where a new non-university sector (the “integrated technical higher education”) is being planned as part of the reforms in progress, “bridges” to the university sector are being foreseen.
- non-university institutions have been authorised to offer full degrees (e.g. *licenciaturas* at Portuguese *Politecnicos*), masters (as planned in the Netherlands) or Ph.D. programmes (Sweden, Norway);
- in several countries, small specialised colleges have been merged into more comprehensive, bigger institutions, more able to gain visibility and to compete locally and internationally.

While some countries have confirmed their interest in keeping a binary system (e.g. Ireland), the question of its eventual transformation into a unitary system comprising different types of institutions of equal status is being debated in several others. Growing competition for students,

status and money is likely to increase pressures in this direction, with obvious consequences for the overall architecture of higher education systems and qualification frameworks.

*** Credit systems gain ground around ECTS**

A growing number of countries and institutions have adopted, or are adopting (Germany, Italy, Swiss universities) credit systems for the transfer and, to a lesser extent, for the accumulation of academic credits. Over two thirds of all EU/EEA countries apply credit systems, either introduced by a national law or by agreement between the institutions themselves. Notable exceptions are France, Austria, Belgium (Fr) and Greece.

All existing credit systems are seen as compatible with ECTS, although with some reservations in the case of Spain and Portugal where credits are based on contact hours rather than student work load as in ECTS. The new Italian system should be 100 per cent in line with ECTS and should also favour the development of credit-rated lifelong learning activities. In all systems the transfer of credits remains the responsibility of the institution to which the student applies.

As could be expected, the move towards credits goes together with a move towards a system of 2 semesters as the main organisation of the academic year. With the exception of Spain, all EU/EEA countries use semesters as their main or only system, although not always in the same way (as evidenced by e.g. the Italian “compact semesters” which correspond to an annual course condensed in one semester) or not always in a format compatible with international practice.

Efforts are being developed in several countries, notably in the UK with CATS and SCOTCATS, to work out credit accumulation and transfer systems covering academic as well as more technical or professional courses.

*** More autonomy, more evaluation**

In many countries, there has been a marked movement towards a greater autonomy of universities, and in some cases of other institutions of higher education as well. Recent laws in Austria, Italy, Finland or Poland all go in this direction, even though university autonomy still means very different things in different countries, for instance with respect to rules concerning the utilisation of state grants, staff management, the possibility or not to select students, raise tuition fees or award degrees, etc.

At the same time, this movement has been accompanied by the inception of new, more stringent or more detailed procedures for quality assurance and evaluation. In some cases, a single system of evaluation covers all sectors of higher education (e.g. in Portugal or the UK). The new Italian agency is planned to cover both research (as before) and teaching (new) and will be assisted by 5 specialised bodies for each of the broad fields of disciplines that have been identified. In Germany the new agency arranged by the KMK and attached to the HRK will accredit the new bachelor/master courses in cooperation with regional and specialised (subject-based) agencies. The Netherlands is also planning a new, independent evaluation agency.

The results of the evaluation of the teaching performance of institutions tend to be more and more taken into account for the calculation of state grants to institutions.

*** Mounting challenges from overseas**

Higher education in Europe is confronted with a new environment marked by globalisation, new communication technologies, English as a *lingua franca*, increased competition and growing commercialisation.

The most visible consequence of these trends is the rapid emergence of a whole new educational sector alongside the traditional, national, state-regulated and often free higher education in European countries:

- foreign/overseas universities increasingly recruit paying students in Europe; it has not been sufficiently noticed that in the early 1990s for the first time, the number of Europeans studying in the USA exceeded the number of American students in Europe, a trend which has been accentuated in the meantime and may well continue, as American universities increase their marketing efforts in Europe in response to the Asian and Latin American crises;
- foreign universities open branch campuses in European countries, either in their own name or via a franchising agreement with a local institution in Europe; in this type of transnational education students may sometimes earn the foreign degree without leaving their country, or they must move abroad to finish their studies and earn the degree;
- the offer of transnational distance education originating overseas increases rapidly; most is produced by established, accredited universities, but their accreditation bodies at home have in the past paid little attention to inspecting their overseas operations; purely commercial providers (like the University of Phoenix, which is in the process of opening a series of delivery points in major European cities) are now also entering the market; this whole new sector of higher education may well be booming in the years ahead, with the development of lifelong learning delivered in modules through small, private institutions in many countries in Europe.

Overall, the recent and potential growth of offshore, franchised and open transnational education has been largely ignored by universities and governments alike in Europe, or perceived as a vague threat to national higher education. Yet there must be reasons for its expansion, over and beyond the fact that these types of transnational education are usually in English. Transnational education is often based on professional marketing of a type unknown to the vast majority of (continental) European universities (including many who could build internationally on a well-known “brand name”). But at a deeper level, there may well be more unpleasant explanations, such as the unflattering opinion which many foreign students seem to have of services (accommodation, computers) and attention to student needs in Europe, or the willingness of European students to pay abroad for something they feel they do not get at home.

III. POSSIBLE WAYS INTO THE FUTURE

The purpose of this section is to identify areas for action and priorities which may foster the desired convergence and transparency in the structure of qualifications in Europe.

Four main avenues for combined action are suggested:

- a generalised European credit system;
- a common, but flexible frame of qualifications;
- an enhanced European dimension in quality assurance and evaluation;
- empowering Europeans to use the new learning opportunities in Europe.

*** ECTS also as a European credit accumulation system**

The current version of ECTS is mainly a credit transfer system which has been developed in the wake of the EU programmes for cooperation and mobility in higher education. Its additional use for the purpose of credit accumulation at higher education institutions could help to mobilise the potential in Europe for more flexibility, diversity and efficiency. It would also ease increased mobility and make European higher education more understandable to students (and employers) from elsewhere (most credit accumulation systems currently in use in the world have been adopted or adapted from the US credit system, a fact which has in no small measure contributed to the strong enrolments of students from e.g. Asian countries in the US).

Over time, the widespread use of ECTS as a European credit accumulation and transfer system could lead to the emergence of a system that:

- would be applicable to all sectors of higher education (along the lines of the British CATS and SCOTCATS models which increasingly also covers further education), even though its development may be in stages, starting with universities and near-university institutions;
- would cover all forms of learning: full or part-time as well as lifelong learning, coursework as well as independent essays, internships or previously acquired knowledge;
- would allow transfers across the whole of Europe, with recognition given for equivalent (rather than identical) learning abroad;
- would distinguish between relevant types of credits (general, specialised, master);
- would accommodate a diversity of highly structured as well as more free-choice curricula;
- would ease responsiveness to diverse student needs and changing employment profiles;
- would be compatible with a European framework of qualifications as outlined below;
- and would fully respects the autonomy of institutions (no obligation to recognise, except within the framework of freely entered exchange agreements).

Although credits are based on theoretical study times, credit systems can contribute to reducing the real duration of studies as well as the failure rate.

Even though the variety of grading systems in use in Europe is a source of difficulties within ECTS, grading should be kept and a simple pass/fail system (i.e. a system not recognising different levels of performance) should be avoided.

Given the still limited experience of most higher education teachers and administrators with credit systems in general and with ECTS in particular, the arrangement of short information and training seminars would be useful in order to dissipate misconceptions as well as fears and avoid distortions in the development of the system .

*** A common, but flexible frame of reference for qualifications**

Main articulation of a European frame of qualifications

A rigid, uniform model (like the 3-5-8 model) is neither desirable nor feasible in the European higher education environment.

Existing systems in Europe and elsewhere seem to point instead to an architecture based on 4 steps corresponding to the main entry levels into professional life or to progress steps in studies. The average duration needed to reach these steps are

about 2, between 3 and 4, about 5, about 8 years,

but (as stated in the section about credit accumulation) the length of studies should be expressed not in years, but as the number of academic credits that need to be successfully completed in order to reach the corresponding level. Hence, the main levels should be understood as follows (bearing in mind that the workload of one academic year corresponds to 60 ECTS credits):

- sub-degree level: 2 years worth of ECTS credits;
- first degree level: no less than 3, no more than 4 years worth of ECTS credits;
- master level: about 5 years in total, including 12 months worth of ECTS (master) credits;
- doctoral level: about 8 years in higher education depending on subject.

Such a frame of reference, which allows for flexibility and can accommodate the needs of particular disciplines or countries, would be nonetheless in line with the Sorbonne Declaration and the common goals and similar format of reforms in progress. It would offer the following positive features:

- inclusion of sub-degree studies into the overall frame, with enhanced possibilities of transfer of relevant credits towards further study in a global lifelong learning system;
- possibility to organise first degrees in 3 or 4 years; 4-year courses are common in many countries in Europe, are more compatible with national regulations reserving access to certain positions to holders of an academic degree, and allow for more diversified curricula in legal, scientific or technological fields that need to start with the acquisition of a broad theoretical basis. Time for practical work, research projects or a language component could in certain cases be added to degrees involving a basic 3 year-worth of ECTS credits;
- in a small number of disciplines or at a small number of institutions, longer curricula leading straight to a master degree could be accommodated;
- the average duration of first degrees may change with time, as a response to factors pushing in opposite directions; tradition, tuition-free systems, recruitment habits may temporarily or durably point towards 4-year courses; on the other hand, there are also powerful factors that may in the short or longer term rather favour 3-year degrees, including the European directive providing for the mutual recognition of qualifications requiring at least 3 years of higher education, the growing pressure to reduce public spending, increased competition for home and foreign students and the development of lifelong learning.

Another interesting aspect is that such a frame would be in line with the proposal put forward in the Dearing report for the UK, which distinguishes the following levels:

Sub-degree: Certificate
Diploma
Degree level: Bachelor
Honours
Postgraduate: Master
Ph.D.

The re-separation of first degree studies into (ordinary) bachelor and honours levels in this model provides a possible link to the 3 or 4-year first degrees mentioned earlier on. The Dearing report envisages that students pursuing broad programmes and securing the equivalent of 180 ECTS credits would be awarded a bachelor degree. Honours degrees would require a minimum number of specialist credit points (variable according to the balance between breadth and specialisation in each course), with the rate of progress depending on the amount of previous specialisation. In Scotland first degrees of the honours and master type would require the equivalent of 240 ECTS credits (normally 4 years).

With such a template for degrees/qualifications, institutions or countries could locate their own degrees at the appropriate level, thus fully respecting the authority of governments and the autonomy of institutions while at the same time using common references.

A certain alignment in vocabulary would be desirable in order to avoid obvious discrepancies (e.g. *licence* in 3 years in France and 4 years in Belgium and Switzerland) and designations that may be misleading (e.g. *licence* designating a level other than a first degree). More subtle differences (e.g. between a M.Sc. in Engineering and a M.Eng) could also be addressed in due time. The work of the British Quality Assurance Agency for Higher Education aiming at a clearer definition of degrees/qualifications could be used as a starting point for such an exercise.

Meaningful first degrees

Within the common but flexible frame of qualifications set out above, first degrees of the bachelor/honours type would be most meaningful if they could meet the following key conditions:

- if the introduction of first degrees of the bachelor/honours type does not result from a simple re-labelling or re-packaging of existing programmes, but corresponds to the development of new curricula, or to the qualitative improvement of existing courses;
- if they guarantee the acquisition of core knowledge and competencies (and thus are based on outcomes rather than on inputs such as time spent or curricula content); with the growing diversification in programme delivery and the development of part-time studies and lifelong learning, indicators such as time and years spent lose significance;
- if they open real possibilities on the European labour market, and for this purpose are broadly based and prepare students to a way of reasoning and learning, whether their main emphasis is scientific, professional or technological;
- if first degrees with such differentiated profiles are offered by universities as well as certain other higher education institutions;
- if higher education institutions are interested in the successful completion of programmes within the allowed period of time, i.e. if low dropout and failure rates are considered as important performance indicators;
- if all types of first degrees open the possibility to access postgraduate studies, but not all applicants are automatically accepted;
- if postgraduate studies in a complementary rather than identical subject area, at a different institution or in a different country and language as those of the first degree, are specifically encouraged – especially for students who spend a substantial period in professional life before starting studies towards a master degree; this would facilitate cross-fertilisation between students from different backgrounds and would contribute to the diversification of the profile of those entering the European labour market;
- if new first degrees (as well as masters) are accredited, both nationally and, as soon as possible, also by independent, disciplined-based bodies at the European level (cf infra, section on evaluation in subject areas). In most cases, new degrees will co-exist with traditional degrees and diplomas, which have been known and accredited for a long time, and their development would no doubt be impeded in case they were not formally accredited;

- if students are properly informed of what is expected or required of them, especially with a view to reducing dropouts and failures;
- if employers are encouraged to hire graduates after their first degree and are therefore properly informed of, and associated to the development and evaluation process of new curricula.

If the above conditions were favoured by authorities, it should be possible to reduce the main risks associated with the introduction of new degrees, which could be summarised as follows:

- new names without qualitative change/improvement, leading to situations where new bachelor degrees would be seen as nothing more than an intermediary step in traditional, long studies;
- even longer (rather than shorter) studies, in case sub-degree courses were downgraded, first degrees failed to open real employment possibilities, or were seen as a low-status option for those who cannot gain admission to postgraduate studies;
- more confusion and complexity resulting from the addition of new degrees to an already long and complex list of qualifications, especially if the two sets of qualifications are not clearly separated or co-exist for too long;
- reduced diversity in learning profiles, through the combined effect of an academic drift at non-university institutions and a professional one at universities.

*** The European dimension of quality assurance and evaluation in subject areas**

The introduction of new curricula and a frame of reference for qualifications would increase the need for quality assurance without boundaries and for comparative evaluation of curricula and learning in Europe.

European dimension in quality assurance

In recent years, more and more countries have introduced quality assurance agencies, either governmental or independent, either covering the whole spectrum of higher education or only part of it. The debate about what a degree should mean and what guarantees it should provide to learners and stakeholders (“graduateness”) has been first launched in Britain and has spread to other countries. It reflects the shift in focus from inputs (programmes, teaching) to outputs (knowledge and competencies, learning). While it is essential to maintain and even stimulate the diversity of learning possibilities in terms of goals, profile, content and methods, there is also a need for convergence in quality assurance standards and procedures as well as for information and data sharing on quality aspects across Europe. The appointment of experts from other European countries to the commissions of national quality assurance agencies, as well as to peer review teams visiting universities, would be easy to implement and provide information of a qualitatively different type. Independent quality assurance agencies should be increasingly encouraged to work in European networks.

Subject-based evaluation at European level

There is a pressing need to develop another type of evaluation, not based on national systems or institutions, but on subjects areas, disciplines or professions. A missing element in Europe is that institutions do not have independent European bodies to which they could turn for an evaluation of their curricula that would not be biased by national stakes.

There is a need in Europe to fill this vacuum and to create a number of agencies which:

- would include representatives from relevant higher education institutions/networks and other stakeholders, in particular from related professions;
- would be independent from national as well as European authorities;
- would set minimal (or “threshold”) standards for a discipline or range of disciplines; quality is easier to measure, and quality improvement is easier initiated, at the level of subjects than at whole institutions; standards should be based on outcomes rather than inputs;
- would award quality labels based on European standards, and not distorted by national league tables; this would correspond to a type of independent “accreditation” with no binding consequences for authorities;
- would publish the list of courses or degrees which satisfy the standards;
- would inform unsuccessful applicants of the deficiencies explaining their rejection;
- would not establish rankings or league tables.

New bodies of this type could draw on the work of existing or future European-wide discipline-based networks, from where they could also draw part of their experts. Such European networks have an important role to play and should be supported by institutions and governments in their efforts:

- to compare existing curricula and learning paths; meaningful comparison and mapping of curricula are only possible at the level of a discipline; comparative surveys of curricula would sometimes show that what is deemed impossible in one country already exists in another;
- to gather, publish and disseminate information on study possibilities in Europe in each field of specialisation (as some Thematic Networks established under the Socrates programme have already done, e.g. for the field of Physics);
- and to help determine European standards for the core knowledge and competencies which learners should acquire for entry and success in the European labour market (the debate about “graduateness” has shown that this is significantly easier and more productive on a discipline than on an institutional basis).

An example of how subject-based evaluation can be developed on a European scale is the EQUIS initiative in the area of business and management studies. EQUIS was developed independently and on a fully voluntary basis by a network of higher education institutions working in cooperation with industry. It has the following objectives:

- to provide an instrument for comparison and benchmarking;
- to promote a shared vision of quality standards in full respect of diversity;
- to accelerate quality improvement throughout Europe;
- to provide market information;
- to establish an accreditation process through the award of a European quality label; a number of leading management schools have already gone through the process and won EQUIS accreditation; other applicants have been informed of the improvements they would need to make in order to qualify.

EQUIS could be seen as an example of what could constitute the second, still under-developed pillar of evaluation and accreditation in Europe. Next to national systems dealing mainly with institutional recognition, evaluation and accreditation, independent subject-based evaluation across borders could emerge as an essential part of the European higher education landscape.

The much needed move in this direction at the European level would only benefit from the development of similar independent, subject-based accreditation agencies in the countries of Europe. There are encouraging initiatives in this direction, e.g. in Italy (where specialised agencies are planned in 5 broad subject areas) and Germany (where the new Accreditation Council for

bachelors/masters will approve independent regional agencies as well as specialised agencies, e.g. in engineering).

Quality standards for transnational education

The development of transnational education is still absent from the higher education agendas of most European countries; yet it represents a formidable and growing challenge to Europe, from two different perspectives:

- most universities and governments in Europe are very poorly prepared to compete in this new world market and most do not compete at all; a growing awareness of these developments and of the diminishing attractiveness of Europe as a destination for students and scholars from the world is an important motive underpinning the Sorbonne Declaration and reforms in countries like Germany; the development of new curricula, understandable credit systems and framework qualifications may contribute to improving the situation;

- transnational education raises a whole series of issues related to accreditation, quality control and recognition issues, both for education originating from within Europe and from non-European providers; there is an urgent need for European countries to set up criteria for the recognition of public and private foreign providers of transnational education, in order to be in a position to control quality and differentiate between legitimate education and diploma mills; action in this area is unlikely to be successful if not coordinated between European countries.

*** Empowering Europeans to use the new learning opportunities in Europe**

Credit systems, an understandable framework of qualifications, increased quality assurance with a stronger European dimension, and an increasingly more European labour market would provide a whole range of new and more flexible learning opportunities benefiting all students, whether full-time, part-time or lifelong learner, whether mobile or studying at home, whether for study, an internship or employment for graduates. Mobility would be structurally eased and could become more rewarding from a qualitative point of view.

Student mobility programmes would nonetheless need to be further developed, in order to stimulate and guide students towards these new learning opportunities; the portability of national study grants (as well as study loans), and an simpler and faster access to mobility grants would be helpful measures. The flexibility allowed by credit systems can be expected to result in a greater variety of study abroad profiles, especially for students not participating in exchange programmes during their initial studies, who could nonetheless keep their credits for the purpose of resuming studies in a different country at a later stage.

New forms of mobility for teachers and administrative staff at higher education institutions could develop if encouraged and supported by authorities - especially for the development of the European dimension of new curricula as they are designed, and for the collaborative work within subject-based networks.

A role for short master courses

As mentioned earlier, the development of short master degrees (12 months worth of credits or about 90 ECTS points), possibly taught in English by teams of teachers from different countries, seems to present interesting possibilities; students who received their bachelor degree from an institution in one country could be specifically encouraged to do their master studies at another institution in another country. This type of sequential (or vertical) mobility - as opposed to the integrated or

horizontal mobility promoted by existing programmes - could make a decisive contribution towards such important goals as:

- the consolidation of the new bachelor/master sequence;
- the provision of a good basis for credit accumulation and transfer;
- the diversification of the profile of students arriving on the labour market;
- the emergence of a new type of graduates fit for the European labour market, with degrees from two countries and extensive first-hand experience in another country than their own;
- quality improvement through comparison and internationalisation;
- making study in Europe more attractive to overseas students who currently enrol predominantly at US (though also British or Australian) universities; being internationally competitive in the postgraduate sector is particularly important, as demand is high (the proportion of foreign students at US universities is 3 times higher for postgraduate than for undergraduate studies) and future leaders (whom it would be important to attract to European universities in higher numbers) are to be found mostly at this level.

An increased role for the NARIC/ENIC network

The role of the NARIC/ENIC network of centres for the recognition of foreign degrees and studies ought to become even more important than in the past. Their cooperation in sharing data, comparing methods and procedures and disseminating information would be worth encouraging – not the least concerning transnational education. The issuing and use of the Diploma Supplement (which provides standardised information on the content, character and level of a particular qualification) and the implementation of the Lisbon convention on the recognition of foreign qualifications are other measures that would produce a fresh impetus for mobility.

Counselling with a European dimension

The survey of the first years of “tertiary education” recently carried out by the OECD, as well as an impressive number of national enquiries and reports, have shown the essential role of information and counselling, and the severe consequences that happen when students enter study courses which they have not chosen, or are confronted with requirements they did not expect or cannot meet. It has also been shown that insufficient information and family support – if not counterbalanced by some kind of psychological encouragement from professional advisors – is a major obstacle for students (both fulltime and lifelong learners) from less privileged social backgrounds.

A recent survey carried out by ESIB and its member student unions has shown that the majority of students do not think that the studies they are pursuing in their country prepare them for employability in the European labour market. This represents a challenge both for educators and for counsellors.

A European space for higher education would require additional efforts at European, national and institutional level to raise the level of information to students and ensure a better fit between expectations of institutions of higher education and their students. The same applies concerning employment or internship opportunities in other countries.

The development of this essential dimension of a European space for higher education – and employment - would involve in particular:

- an effort to produce and disseminate information of direct relevance to students and graduates eager to find out about study, internship and employment opportunities available in the whole of Europe in their particular area of specialisation; some promising steps have been taken in this direction, but there is an urgent and distinct need to generalise such efforts to all areas of specialisation and to further develop, refine and re-direct existing databases (in particular Ortelius) and publications (e.g. student guides) - which focus primarily on country systems and institutions - and to make them readily accessible on-line for students, graduates and counsellors;

- a concerted plan to train and equip student counsellors and career officers, in order to allow them to cope more fully and proactively with the new European dimension of studying and working (far beyond the promotion of E.U. programmes like ERASMUS or LEONARDO to which they have contributed).

IV. WHAT KIND OF EUROPEAN HIGHER EDUCATION SPACE ?

The European space for higher education could be built up in the years ahead around the following key attributes, which could also serve as guideline principles:

- quality: reforms concerning credit systems or degree structures cannot substitute efforts to improve and guarantee quality in curricula, teaching and learning;
- mobility: the most powerful engine for change and improvement in higher education in Europe has come, and will come from growing awareness of alternative approaches and best practice in other countries;
- diversity: measures not respecting the fundamental cultural, linguistic and educational diversity in Europe could jeopardise not only the progress already made, but the perspective of continuing convergence in the future;
- openness: European higher education can only fulfil its missions within a worldwide perspective based on competition and cooperation with other regions in the world.

Guy HAUG,
18 August 1999

SELECT REFERENCES

Vers une Université Européenne, Acts of the meeting of 24-25 May 1998 at the Sorbonne, Ministère de l'Education Nationale, de la Recherche et de la Technologie, Paris 1998.

Information on Learning Structures in Higher Education in the EU/EEA Countries, survey by J. Kirstein for the project «Trends in learning structures of higher education in the EU/EEA» based on contributions from the national rectors' conferences and NARICs, May 1999.

A Guide to Higher Education Systems and Qualifications in the EU and EEA Countries, European Commission, 1998.

Organisation of Higher Education Structures in the EU, EURYDICE, 1997.

Directory of Courses and Institutions in Higher Education for Countries which are not Members of the EU (Student Handbook), Council of Europe, 1997.

Internationalisation in the Sector of New Higher Education in Europe (17 country essays on the non-university sector), Academic Cooperation Association (ACA), May 1999.

Fachhochschulen in Europa, Bundesministerium für Bildung, Wissenschaft, Forschung und Technologie (BMB+F), Bonn 1997.

- Non-official Higher Education in the European Union (summary of country contributions), D.G. Tsaoussis, Pantheon University of Social and Political Sciences of Athens, 1998.
- Private Internationale Hochschulen, Stifterverband für die Deutsche Wissenschaft, 1998.
- Diploma supplement, Final report of the joint European Commission, Council of Europe and UNESCO/CEPES Working Party, 1998.
- Recognition of Higher Education Diplomas and Study Credit Points Across Borders, PHARE Multi-country Project, KMK Bonn, 1999 (interim documents; project still in progress)
- Redefining Tertiary Education and Thematic Review of the first years in Higher Education (together with country reports), OECD, 1998.
- Postgraduate qualifications, Consultation paper on qualifications frameworks, The Quality Assurance Agency for Higher Education, London, 1998.
- International Standard Classification of Education (ISCED), UNESCO 1997.
- Accreditation and Evaluation in Higher Education, H.-U. Erichsen, presentation at the meeting of Directors General of Higher Education and Chairpersons of Rectors' Conferences, Weimar, 1-2 March 1999.
- Accreditation and Accountability in American Higher Education, BMB+F, Bonn, 1998.
- Kredit-und Leistungspunktsysteme im internationalen Vergleich, F. Dalichow, published by BMB+F, Bonn 1997.
- Convergence and Divergence in European Education and Training Systems, A. Green, A. Wolf and T. Leney, Institute of Education, University of London, Bedford Way Papers, 1999 (especially the chapter on Higher Education and Lifelong Learning).
- L'introduction des «Bachelors» et des «Masters» en Europe continentale: unification par les objectifs ou par les durées? and other articles, B. Girod de l'Ain, U. Paris Dauphine, June 1999.
- Lessons learned from EQUIS: Strengths and Weaknesses of European Management Education, Forum 99/1, European Foundation for Management Development, EFMD, Brussels, 1999.
- Internationalisation of Engineering Education in Europe, D. Grimm, Ecole Centrale Paris, 1999.
- Research of Attitudes and Opinions of National Unions of Students on Trends in Higher Education, Survey by ESIB, Vienna, 1999.
- Higher Education in the Learning Society, The National Committee of Inquiry into Higher Education (Dearing Committee), London, 1997 (especially Report 1 on National Consultation, and Report 11 on The Development of a Framework of Qualifications: Relationship with Continental Europe).
- Autonomia Didattica nel Sistema Universitario (Martinotti report), Ministero dell'Università e della Ricerca Scientifica e Tecnologica, Rome 1997.
- Pour un modèle européen d'enseignement supérieur ("Attali report"), Paris 1998.

Harmonisation Européenne: document d'orientation, MESRT, Paris, December 1998.

Perspectives of Universities in Germany, K. Landfried and J. Lange, presentation at the meeting of Directors General of Higher Education and Chairpersons of Rectors' Conferences, Weimar, 1-2 March 1999.

Gestufte Studiengänge und –abschlüsse in den Geistes- und Sozialwissenschaften, U. Teichler, Kassel/Bonn 1998.

Avis du Conseil Interuniversitaire de la Communauté Française sur la Déclaration de la Sorbonne, CIUF, Bruxelles, May 1999.

Notes concerning the preparation of the Bologna meeting («Sorbonne Declaration»), J. Pedrosa, Aveiro, March 1999.

The author wishes to express his deep gratitude to all the persons who provided information and comments in numerous meetings and interviews, especially during his visits to the Ministries of Education and Rectors' Conferences of the French Community of Belgium, France, Greece and Portugal, as well as to the Conférence des Grandes Ecoles, the European Commission, and meetings of the Confederation of EU Rectors' Conferences, the CRE and the ENIC/NARIC network.

Special thanks are owed to the CPU in Paris for their hospitality, to the Working Group for their support, and to Stephen Adams, Andris Barblan, Bertand Girod de l'Ain, Stephen Hunt, Jette Kirstein, Inge Knudsen and Bernd Wächter for their observations and suggestions.

ANNEXE:

The Sorbonne Declaration of 25 May 1998: what it does say, what it doesn't.

A major issue concerning the planning of follow up activities to the Sorbonne Declaration is that there is widespread confusion about its content and significance. The present note tries to summarise what the Sorbonne Declaration does say and what it does not. For the sake of deeper understanding of the Declaration, the analysis and comments that follow are based not only on the actual text signed by the 4 ministers, but also on presentations and interventions made during the intensive 2-day seminar which preceded the signature.

The Sorbonne declaration immediately attracted a lot of attention but also met with a significant degree of resistance, which can be traced to the following 3 main reasons.

1. The announced aim to 'harmonise' the architecture of the European higher education system.

The term 'harmonisation' appears twice, each time in relation with structural aspects only:

- in the title, with reference to the 'architecture' of the system,
 - and in the penultimate paragraph, with reference to the 'overall framework of degrees and cycles'.
- The same observation would emerge from an analysis of the debate, where the term harmonisation appears with reference to 'the main levels, not to the content and paths leading to these levels'.

Nowhere is there a reference, or even a hint, to a harmonisation of content, curricula or methods. This is confirmed extensively by the debate preceding the adoption of the declaration, where numerous speakers (including minister Allègre and other major speakers) repeatedly stressed the need for diversity and respect for national differences. A harmonisation of content was clearly not envisaged (except in a question emanating from the floor, when an unidentified student was of the opinion that a better harmonisation of content in terms of substance and rhythm would make mobility easier: page 72 of Acts).

The final paragraph of the Declaration (which contains the actual commitment made by the signatories) explains the aims and purpose of the Declaration without using the word 'harmonisation' and without any reference to the content of studies:

- ministers commit themselves to encouraging a 'common frame of reference' (this is, interestingly, very similar to the language used in Britain by the Dearing report of 1997: sub-report 11 deals with 'The development of a framework of qualifications: relationships with continental Europe');
- the common frame of reference to be encouraged aims at 'improving external recognition and facilitating student mobility and employability'. There is no mention of a harmonisation of studies, let alone of a single, uniform 'model'. As a matter of fact it was clearly said the 'setting up of any kind of single model' was out of the question.

2. The controversial proposal for a European-wide pattern of qualifications after 3,5,8 years in higher education.

This has been maybe the strongest ground for opposition to the Declaration, even though it does not even mention the 3-5-8 scheme which is contained only in the Attali report for France.

The main confusion surrounding the Sorbonne Declaration stems from the nearly simultaneous release in May 1998, in the same city of Paris, of the Sorbonne Declaration and the Attali report. This report sets out a series of recommendations for key changes in the higher education system in France, but bears a surprising title ('For a European model of higher education') not warranted by its content – but maybe by the context in which it was chosen. This led to confusion between the two documents, which seem to be amalgamated in the mind of many players in the higher education community.

The Attali report was produced at the request of minister Allègre who in the terms of reference for the study expressed concern about the competitiveness of the French system, with particular reference to its unique dichotomy between universities and 'grandes écoles'. The report indeed focuses on these issues. It was prepared by a commission of French experts from various backgrounds. From the list of 71 people whom the commission met, only one was a foreigner.

The annexes to the report provide a rather short introduction to a few foreign systems, with surprising assertions such as the alleged similarity between French IUTs on the one hand, and German Fachhochschulen and former British polytechnics on the other. In the case of the UK, 4-year honours and Scottish degrees are not mentioned, and the role of sub-degree diplomas is ignored. The presentation of the US system mentions 4-year Bachelor's and the great many community colleges offering 2-year qualifications, but these facts seem not to have been taken into account in the recommendations. The report does not actually attempt to justify its reference to a would-be European pattern of qualifications in two stages (a first degree/qualification after 3 years, followed by post-degrees studies leading either to a Master's after altogether 5 years or a Doctorate after altogether 8 years). It seems to be based mainly on the awareness of trends and reforms announced or in progress in the UK, Italy and Germany at the time with a perceived convergence on a first degree after 3 years.

The Attali report, in spite of its title, should therefore be seen for what it is: a national report addressing national issues, within a perceived European and international context. Its pertinence and relevance for policy setting in France are clearly an issue that is totally outside of the scope of the present paper. The main aspects relevant to the debate concerning post-Sorbonne developments are two:

- the 3-5-8 ‘model’ on which its recommendations are based is far from an established common feature, even though it is important to locate and measure convergence trends in Europe;
- reactions, mainly negative ones, have affected the perception of the Sorbonne Declaration, albeit it does not even mention the 3-5-8 pattern.

What the Sorbonne Declaration does mention is the need to have first cycle degrees which are ‘internationally recognised’ as ‘an appropriate level of qualification’, and a graduate cycle ‘with a shorter master’s degree and a longer doctor’s degree’ with possibilities to transfer from one to the other’. It also says that such a two-cycle system ‘seems to emerge’ and ‘should be recognised for international comparison and equivalence’.

3. The signature of the Declaration by the ministers in charge of higher education in the 4 biggest EU countries.

Even though representatives from governmental and academic authorities from other countries were present at the Sorbonne seminar, the Declaration was signed on site by only 4 ministers. The clearest commitment they made concerns changes to be introduced in their own countries, but in its last sentences the scope of the declaration was broadened: the ‘solemn opportunity to engage in the endeavour to create a European area of higher education’ signed in Paris by 4 countries is clearly an undertaking which concerns all other countries in Europe and, where appropriate and in line with the Maastricht treaty, the European Union. This also emerged from presentations to the meeting, especially when Mr Moscovici (Deputy Minister for European Affairs in the French government) called for a comprehensive plan aimed at guaranteeing that rights related to the “Europe of knowledge” (e.g. mobility, recognition, access to labour market) can actually be exercised in practice by students, graduates and teachers and all obstacles are taken away by e.g. 2005 (in the same way as the Single Act was needed for the completion of the Internal Market a decade ago).

This is probably the reason why in the next sentence of the Declaration, which is also the concluding one, signatories ‘call on other Member States of the Union and other European countries to join (them) in this objective and on all European universities to consolidate Europe’s standing in the world’. The appeal does not explicitly mention a role for the European Union.

It has been announced by French authorities that a number of countries have in the meantime adhered to the Declaration (Denmark, the Flemish and German communities of Belgium, Switzerland, Bulgaria and Romania) or have expressed their willingness to do so (Hungary, the Czech Republic, Slovakia, Slovenia, Croatia).

It is beyond the scope of this document to analyse the political choices and diplomatic handling of the Sorbonne events and to map whatever frustration may have resulted from them. What is probably relevant and appropriate to say is that both the declaration itself and the debate underline in no ambiguous way that the Sorbonne events were seen as early steps in a gradual process: terms used include ‘engaging in an endeavour’ (Declaration), ‘envisaging virtual moves which need to be discussed in working groups (Vice-President of the French Conference of university presidents), ‘progressive’, ‘gradual’ processes (Mr Allègre and many others).

In addition to these observations, there are two other aspects of the Sorbonne Declaration which seem quite important but have attracted surprisingly little attention.

4. The challenge represented by the need for European higher education to retain (or in the mind of many speakers, to regain) its competitiveness in the world markets of knowledge production and dissemination. This essential aspect is not absent from the Declaration itself, but it was much more prominent during the debates. If read together with the proceedings of the Sorbonne seminar, the Declaration could easily be interpreted as a plea for international competitiveness. The costs associated with losing ground in the international educational markets are sketched. By the time of the Declaration, the UK had already embarked on a major effort to market its higher education to the world, fears about diminishing attractiveness was a key factor underpinning Germany's efforts to increase its compatibility with world systems, and the French ministry was about to announce the creation of a new national agency to attract to France paying students from areas other than the francophone region and Europe.

Most of the major speakers referred to the fact that Europe was losing ground in the competition with the USA, and that a more 'readable' and compatible set of qualifications was needed to counteract this trend.

Interpretations of the Sorbonne Declaration which would fail to recognise the underlying role played by concerns about Europe's future role in the world market for students, teachers and researchers would be severely short-sighted and dangerously wrong. The concern about competitiveness provided both a good deal of the impetus to act and sense of emergency expressed by politicians.

5. The labour market dimension

The Sorbonne Declaration is about 'qualifications' (knowledge and skills acquired which can be applied in the labour market) rather than academic degrees. Some aspects related to this dimension are clear (e.g. those concerning the employability of graduates or their mobility throughout the European space), while others do not show in the text although they may bear equal implications for employment in Europe: the role of world-class universities as nurseries for innovative business, the need to have alumni in key positions abroad and the role played by the educational sector in export-oriented trade in certain countries were all mentioned by ministers during the debate.

Hence the Sorbonne Declaration is not only about academic recognition or comparability per se: the *raison d'être* of the debate is intimately linked to the emergence of an ever more European and indeed international labour market.

Conclusion: what the Sorbonne Declaration is and is not.

It is an appeal to set up in stages a more coherent framework of reference for major levels of qualifications, not an attempt to limit cultural or educational diversity.

It is based on cooperation between the worlds of universities and governments, with some involvement from students and economic circles.

It deals with qualifications rather than academic titles *per se*.

It advocates the introduction and recognition of articulated undergraduate and graduate cycles, but it does not even mention the '3-5-8' degree structure found in the Attali report. Ministers who signed the Declaration have not signed an appeal for a standardised 3-5-8 'model'.

It is not the first step in a process, but rather it takes stock of changes initiated or proposed in a series of national reports completed within the previous year.

It is a plea for Europe to take up its full role in the world markets of knowledge and education.

It is not a closed initiative and can only be successful if supported by many more than the initial 4 countries.

This paper was prepared as part of the joint project “Trends in learning structures in higher education in Europe” of the Confederation of European Union Rectors’ Conferences and CRE-Association of European Universities. The opinions are those of the author.

Information on Learning Structures in Higher Education in the EU/EEA Countries

Contents

Information on Learning Structures in Higher Education in the EU/EEA countries

1. Introduction
2. National frameworks for higher education institutions and qualifications
 - 2.1. Diversification of institutions
 - 2.2. Non-official and/or international/transnational higher education
 - 2.3. National higher education qualification frameworks and structures
3. Access and admission requirements
4. Quality assurance and accreditation/recognition procedures
5. International credit transfer and recognition systems
6. Organization of the academic year
7. Tuition fee systems
8. Student support systems
9. International student and career guidance systems

Annex one: Country profiles of higher education systems

Tables:

- Table 1: Higher education systems and degree structures
Table 2: Higher education qualifications according to number of years of higher education
Table 3: Admission to higher education
Table 4: Credit transfer systems
Table 5: Organization of the academic year
Table 6: Tuition fees and student support systems for study abroad

References

This study has been based primarily on information from written sources such as the "Guide to higher education systems and qualifications in the EU and EEA countries", web page information from Eurydice and the individual countries as well as on information collected from national rectors' conferences, national NARIC offices and other sources in the spring of 1999. The interpretation of the information and its presentation are, however, solely the responsibility of the author. Unfortunately, generalisations and simplifications seem unavoidable when explaining national higher education systems in a condensed way while at the same time allowing for comparisons. I should be happy to receive remarks, corrections and supplementary information on the presentation for an improved final version.

Copenhagen, 7 June 1999,

Jette Kirstein (e-mail: jk@rks.dk) (latest revised version as of 21 July 1999)

Information on learning structures in higher education in the EU/EEA countries

1. Introduction

This study merely intends to give a fairly condensed and concentrated outline of some of the main trends of the higher education systems in the EU/EEA countries, illustrating the present institutional structures as well as national frameworks of higher education qualifications. Information will also be provided on other aspects of importance for discussions on mobility, transparency and convertibility such as credit and recognition systems, quality assurance, tuition fees and some of the more practical arrangements such as the organisational framework of the academic year and international student and career guidance possibilities. The study shows not only diversification of the systems, in many ways rooted in the national traditions of a specific country, but also some major common tendencies. Furthermore, major efforts seem to be used to, on the one hand, preserve the cultural diversity of a specific educational system and, on the other hand, promote international co-operation, mobility and European/international employability of students and the international competitiveness of European higher education institutions.

Summing up, comprehensive information on all these extensive and diversified developments can only give a glimpse of what is emerging in higher education in Europe. Furthermore, it should be noted that any comparison of higher education systems and identification of common trends can only be considered as fairly simplifying generalisations. Thus, further information has to be sought in more extensive descriptions and comparative analyses and publications on the various education systems; special reference is made to the European Commission publication “A guide to higher education systems and qualifications in the EU and EEA countries and Eurydice publications”, cf. references.

2. National frameworks for higher education institutions and qualifications

2.1. Diversification of institutions

Looking world-wide into the institutional structures of the various higher education systems, one sees a highly diversified system. But two different tendencies prevail:

- 1) A so-called *unitary* or comprehensive system where most higher education is catered for by universities or university-like institutions, offering both general academic degrees and more professionally oriented programmes of various length and level.
- 2) A so-called binary or dual system with a *traditional university sector* based more or less on the Humboldt university concept and a separate and distinct *non-university higher education sector*.

The developments towards a more comprehensive university system as well as the development of a strong non-university higher education sector have introduced a broader definition of the concept of a university distinct from the traditional continental European definition of a university as an institution with intensive co-operation and co-ordination between teaching and learning and self-contained academic progression in studies, leaving a high degree of learning to individual studies.

In *the unitary system*, the study programmes offered are often much more diversified in level, character and academic and theoretical orientation than in traditional universities in a binary system.

Many programmes are fairly professionally oriented with periods of practice. This system has so far been dominant in Anglo-American countries like the UK and USA and in a few other countries which have adopted similar higher education systems, e.g. Sweden. However, characteristics of unitary systems can also be found in a few other countries with different educational traditions as e.g. Spain and Italy.

The binary systems of some countries have so far entailed a fairly clear difference between universities offering the theoretically and research-based programmes and the non-university institutions offering high level professionally oriented programmes. However, in many countries the differences are becoming less obvious due to on the one hand a growing academic development in the non-university sector, also in the postgraduate and applied science field, and on the other hand universities' growing involvement in covering more professionally oriented activities.

The major objectives behind the establishment of professionally oriented higher education institutions parallel to the university sector seem to be very similar in most countries, viz.

- to offer more professionally oriented and vocationally/economically relevant types of education in order to meet a labour market demand for such candidates
- to cater for a growing number of higher education applicants without substantially increasing governmental expenditure for higher education
- to cater for non-traditional groups of students in a more innovative manner
- to offer primarily teaching oriented programmes with some use of applied research
- to upgrade existing vocationally oriented post-secondary education.

Germany was one of the first countries to introduce a distinct higher education sector with its own goals and mission alongside the universities - the *Fachhochschulen* - already in the 70-ies. Austria, Belgium, Finland and the Netherlands are some of the countries that have followed.

The UK, on the other hand, had a binary system until 1991 where it was partly given up and polytechnics were given the status of universities. This process was due to various developments in society and in both sectors which made the differences between universities and polytechnics more and more unclear and indistinguishable

The present trend seems to be that most countries (e.g. Austria, B (NL), B (Fr), Finland, Germany and Ireland) which have or are developing a distinct binary system want to keep it, but with a clear intention to build on the specific qualities and characteristics of each sector as well as to establish more flexibility, interlinkages and cooperation between the sectors. In a few other countries there seems to be a tendency to an even closer cooperation and integration of the two sectors. (e.g. Norway).

An OECD report on redefining tertiary education makes the same observations about a growing diversity in European higher education systems and states that it is less important whether countries have a unitary or a binary structure than that learners be provided with a diversity of learning structures, pathways and programmes sufficiently interrelated to permit ready movement between them. Furthermore, the report recommends that credit transfer systems as well as the articulation of programmes and institutions be strengthened. The latter seems to be very important allowing for fair assessment of a degree regardless of its origin from a university or a non-university institution. One of the major obstacles to recognition today is that nationally as well as internationally non-university degrees sometimes have difficulties in being recognised or getting credits if recognition is sought in relation to a university degree.

Annex I and tables 1 and 2 describe in more detail the present higher education structures in the EU/EEA countries with indication of some major developments.

2.2. Non-official and/or international/transnational higher education

Another observation concerning diversification relates to the development of more and more non-official, private or international institutions and/or qualifications including franchising arrangements and corporate providers.

The various types and forms of private and international qualifications are growing, and lack of information on the official status of an institution or qualification in the country of “origin” often makes it difficult to recognise or place them in the context of national qualifications. It seems important when discussing a common framework of qualifications to find ways to incorporate these types of qualifications. There seems to be a tendency to doubt automatically the quality of a non-official/transnational qualification because of the existence of a number of not very serious institutions. This creates difficulties and it seems important to find ways to make a differentiation and to establish quality control mechanisms.

There are few data on the number and different types of non-official educational offers in different countries as by nature they do not belong to a national system and consequently are not registered in the same way as national qualifications. The European countries have very different types of legislation concerning the establishment and recognition procedures of these institutions. However, several national as well as international initiatives seem to be under way to cope with this development and to find ways to establish some kind of international regulations or quality control.

In 1998 a study was carried out by Panthion University of Social and Political Sciences, Greece, on non-official education in Europe. The report deals with the growing evidence throughout the European Union, and southern European countries in particular, of the increasing non-formal educational provision at tertiary level and with the lack of adequate mechanisms of regulation and transparency in quality assurance and quality control as well as lack of criteria for establishing parity of the titles awarded with those of the formal higher education system in each country.

Within the framework of the Council of Europe and UNESCO/CEPES two different working parties have been established to investigate various aspects of transnational qualifications: One working party has prepared recommendations on international access qualifications, and another has been set up to deal with the issues of quality and assessment of non-official and transnational education and to propose guidelines for the recognition of qualifications granted by these types of institutions.

In the UK, which is one of the major European providers of transnational qualifications, a code of good practice and quality control procedures has been agreed upon by the higher education institutions and the national Quality Assurance Agency.

2.3. National higher education qualification frameworks and structures

Along with the growing diversification of the institutional structures of higher education a parallel development is taking place concerning diversification of the types of degrees and qualifications offered by the various educational establishments.

The traditional differentiation between the “continental European” degree structure with fairly long, academically integrated university studies (one-tier) and the “Anglo-American” degree structure with shorter first degrees and many post-graduate possibilities often based on a more module-based system (two-tier) is being blurred.

In the university sector there is a push - most clearly from the political side - for the establishment of short and medium cycle university qualifications (first degree/bachelor level).

In some countries the shorter degree types have been/are being established in/integrated into the national degree structure (as e.g. in Denmark, Finland, Italy and Portugal). In other countries a system is being/has been established alongside the traditional degree structure (as e.g. in Germany and the Netherlands).

Also in the non-university sector, continuous diversification of the qualifications offered is taking place. Many new undergraduate programmes are being established to meet new labour market needs in specific professional fields, and at the same time a great variety of postgraduate courses are being developed either as part of ordinary programmes or as programmes aimed at recurrent education activities. These may lead to national or joint and double degrees. Non-university institutions which do not have the right to offer master’s programmes in their own right may enter into co-operation with foreign institutions which have this opportunity, thus being able to offer their students international master’s programmes.

So far non-university higher education institutions do not seem to be offering doctoral degrees in their own right, but this does not always exclude non-university candidates from passing on to a doctoral programme. In some countries non-university candidates may gain access to a doctoral (PhD) programme at a university either direct (e.g. Norway and the Netherlands) or through a kind of bridging course (e.g. Austria and Germany). In Norway, a few non-university institutions are seeking the right to offer research training and to award doctoral degrees.

In general, the growing diversification is considered an asset for higher education systems both in a national and in an international context. However, a price to be paid for the increased diversification has to some extent been a lack of transparency of the qualification structure of a given country and difficulties in the mutual recognition of qualifications, due to the growing number of different levels and variations in the contents of qualifications. Therefore the increasing diversification calls for other instruments which can further understanding of and information on qualifications, e.g. credit systems such as the ECTS and the Diploma Supplement to make diplomas more transparent. Cf. section 4.

Annex I and table 2 illustrate, tentatively, the degree framework and major qualifications of the EU/EEA countries according to length and types of institutions/institutional affiliations (university/non-university). It should be noted that neither the length of qualifications nor the type of institution/institutional affiliation say much about the level of the qualification, its contents and the learning outcomes. Degree titles also vary considerably and often they do not by themselves give an explicit indication of the type and character of a specific qualification. Thus they need to be put into the national framework of qualifications to be understood. Ideally comparison of qualifications should therefore not be done according to years of study but according to learning outcomes, predefined standards of learning and acquired competencies.

3. Access and admission requirements

By and large *access* to higher education (*access* meaning general eligibility for higher education programmes) is in all countries subject to the completion of twelve to thirteen years of prior schooling. In a few countries there are slight differences in the required length of secondary education programmes giving access to respectively university and to non-university programmes (e.g. in Germany and the Netherlands). Furthermore, there are major differences in the actual requirements for being *admitted* to a programme (obtaining a study place). In some countries (e.g. Austria, Belgium, France and Germany) applicants with final secondary school qualifications have free access most university programmes, in other countries admission is fairly or highly competitive depending on, e.g., a special combination of the secondary school leaving examination subjects and whether other requirements are also being met, e.g. as to the level of the subjects studied and the grades obtained. Still, others admit students according to special national (Greece) or institutional (Finland) entrance examinations. In most countries, there is a difference in admission requirements between different types of institutions or different institutions, e.g. in France where the Grandes Ecoles are very selective, whereas there is nearly free access to university studies. Admission to the IUTs is also limited in numbers. In other countries or in specific fields in some countries special entrance examinations are needed.

Some countries have special procedures for *adult* learners wanting to be admitted to a full programme, others do not differentiate.

Countries have different procedures for admitting foreign students. EU regulations are, however, clear on this issue, stating that EU citizens should be admitted on the same conditions as national students.

Another important international instrument which most European countries have agreed upon is the Lisbon Convention from 1997 on recognition of higher education qualifications. It states that parties to the convention shall mutually recognise qualifications giving general access to higher education in the home country unless substantial differences can be shown between the general access requirements in the countries in question.

Cf. table 3 for more information on admission systems for higher education.

4. Quality assurance and accreditation/recognition procedures

Procedures for recognising higher education institutions and degrees differ to a large extent from country to country. In all countries higher education institutions are autonomous, but the degree to which the State regulates and controls the institutions and the academic activities varies. This also relates to whether there are national standards for the various qualifications and degrees awarded by higher education institutions. At one end of the spectrum one finds e.g. the UK and Flanders where there are no national regulations concerning the contents of study programmes; at the other end Spain where about one third of the subjects of each degree programme are prescribed by the State. In between one finds a number of countries where each degree may be defined by some overall standards and/or subject areas which have to be met.

A very liberal approach to the regulation of degree programmes can be considered an asset as it allows for institutional and national variations and diversity, but such differences may also create uncertainty about the actual contents and the standards of a specific qualification, even if it has a recognisable title on the paper, e.g. bachelor.

There seems to be a European-wide general trend towards giving higher education institutions more and more institutional autonomy also in matters related to the organisation of studies and the con-

tents of the programmes. State control seems to be transferred from input-oriented regulation to a more output-oriented control based on different types of quality control procedures and other mechanisms, e.g. in a number of countries funding has become partly dependent on the number of students that succeed in stead of the number of student enrolled. In others quality assessment results play a more direct role in allocation of the state funding(e.g. in the UK).

At the same time the increase in the diversification of institutions and qualifications and growing international competition also in relation to higher education seem to further a need at the level of the individual institution to improve information and documentation on the quality and standards of the institution and its qualifications both for the sake of the stakeholders, be they employers, governments or the general public, for the sake of the individual students moving from one country to another in order to study or work and having to decide on which programmes to follow and finally for the sake of international competitiveness.

These tendencies have resulted in the establishment of various external quality assurance procedures and arrangements. Apart from the quality assurance mechanisms which are in force or are developing at the institutional level, more and more countries establish external evaluation or quality assurance bodies or agencies. A study prepared by the Danish Centre for Quality Assurance and Evaluation of Higher Education and the French Comité National d'Evaluation in 1998 notes that evaluation procedures have been established at the national level in eleven EU member countries. The level and scope of the evaluation procedures vary from country to country. In a few countries the evaluation procedures include both the university and the non-university sector, others have set up separate procedures for each sector. Three countries are in the process of establishing some procedures and according to the report only the French-speaking community of Belgium, Greece and Luxembourg seems not to have introduced systematic national evaluation procedures.

In countries where there have been no national standards for qualifications so far, e.g. the UK, a national framework of qualifications is being discussed. The Dearing Report recommended that higher education institutions and the Quality Assurance Agency work together to produce a national framework for higher education qualifications in which all higher educational awards would have a consistent terminology. The academic community should develop benchmarks standards in each subject for the achievements expected at various levels of award.

Other countries, which have a well developed framework for recognition and standard control of their traditional national degrees, have had some concern in relation to the standards of international degrees (bachelor/master) awarded by their home institutions, as for instance Norway and Germany.

Norwegian universities have had the right to award master's degrees since 1991 alongside the national degrees. In 1999 the same right was given to the state colleges. New programmes must be approved by the Ministry of Education. Prerequisites for university master programmes include that they are in English, that they are part of the institution's internationalisation strategy and that the access requirement is a bachelor-level qualification. Last year the Norwegian University Council published a report in which it was noted that due to lack of national regulations concerning the contents and organisation of master studies a number of quite different qualifications had emerged - some of which have been difficult to place in the national degree structure. The University Council recommends that national standards and national co-ordination be established both in relation to quality and to quantity.

In Germany a general possibility of awarding bachelor and master degrees was introduced by the University Act in 1998, and it has also been decided to introduce an accreditation system for bachelor and master programmes and to set up an accreditation council closely linked to the German

Hochschulrektorenkonferenz in order to ensure common standards for these programmes which, so far, have not been subject to the same procedures for recognition as the traditional national degrees.

5. International credit transfer and recognition systems

Table 4 shows that a national or institutional credit system is in use in many countries, and that the ECTS system is emerging as an instrument for international credit transfer either in its own right or parallel to a national system. However, there are major differences in the actual implementation of credit systems. Not all countries use national credit systems (e.g. Austria, Denmark, Germany, Greece). In most countries with credit systems they are relatively easily used as a means of credit transfer from one programme to another or from one institution to another and/or they be used as well-developed credit accumulation system (e.g. Scotland, Sweden and also many institutions in the UK).

Relatively large national differences are also to be found in relation to recognition of prior learning and exemption from studies when changing from one institution to another. Especially, there seems to be problems in some countries to obtain any credit transfer (or only very little) when transferring from a non-university programme to a university programme. This is the case in e.g. Denmark and Greece, the reasoning of universities in both countries being that the contents, methodology and academic progression in university programmes are different from non-university programmes. In February 1999 the Danish Minister of Education proposed the introduction of a national credit system and recommended procedures which can ease the passing from one sector to the other, e.g. through bridging courses. Bridging courses are already in use in some countries, e.g. in the French-speaking community in Belgium (*Passerelles*) and in Flanders (e.g. for holders of an engineering degree from a Hogeschool to engineering studies at a university)

ECTS has facilitated international credit transfer considerably and a further development of its application is to be expected. However, there are still major problems to be overcome, e.g. differences between systems made up of modules compared to systems where studies are organised according to a philosophy of integrated studies and continuous academic progression in subsequent, obligatory courses which have to be followed over more than one semester.

Another instrument which has been developed internationally to ease transparency and international recognition of final qualifications is the *Diploma Supplement*. The purpose of the supplement is to provide sufficient independent data to improve the international transparency and fair academic and professional recognition of qualifications. It is designed to provide a description of the nature, level, context, contents and status of the studies pursued, preferably by giving information on the learning outcomes. It should be free from any value judgement and equivalence statement but provide objective information to allow the recipient to make his or her own judgement.

A third important instrument for international academic recognition and mobility is the national information centres which have been established in the contexts of the EU (the NARICs) and the Council of Europe/UNESCO (the ENICs) which can provide official information on higher education systems, the status of institutions and studies, and recognition procedures. Some of the centres also have as an obligation to provide credential assessments or recognition of foreign qualifications.

Finally, *the Lisbon convention on recognition of higher education qualifications* (1997) should also be mentioned as it establishes a new and more comprehensive legal framework and obligations for states and higher education institutions for furthering fair academic recognition and transparency of qualifications.

6. Organisation of the academic year

The organisation of the academic year is often fundamentally rooted in national, social and cultural traditions. Earlier studies have shown that these differences may to some extent create an obstacle to smooth and easy student mobility. In 1993 the former Liaison Committee (now: the Confederation) undertook a study on the organisation of the academic year in order to examine the feasibility of harmonising the academic years. The study showed a wide diversity both in relation to the start of the academic year and the organisation of studies in semesters, terms or even more modularised structures. In the majority of countries the academic year begins during the first two weeks of October, in the Scandinavian countries and the Netherlands the academic year begins much earlier. In Italy, the academic year does not start until early November (in some institutions). Examination periods and vacation periods also differ considerably. The Liaison Committee found it difficult to establish a common system due to the diversity of the existing situation and limited its recommendations to the start of the academic year: the first semester is recommended to start no later than the second week of October and the second semester should not start before 1st of February.

7. Tuition fee systems

The system of tuition fees varies, and it may have consequences for the further development of a European higher education space as it may be financially more attractive to some students to go to countries with no tuition fees than to countries with high fees. Such fees are usually not a problem for exchange students because exchanges normally include agreements on fee waivers, whereas tuition fees become a problem for regular students who decide to take a full study programme in another country. So far, there are ten countries where no tuition fees are charged for regular studies. They are Austria, Germany, Greece, Ireland, Luxembourg and the Scandinavian countries. The countries with the highest tuition fees seem to be the Netherlands and the UK. However, both in the case of these countries and countries with lower tuition fees, the means are tested and may either be reduced or the student may get full or partial support for meeting the fee requirements. Cf. table 6.

8. Student support systems

A study by the Deutsches Studentenwerk from 1997 on current developments in the educational assistance systems in Western Europe shows considerable differences between national student support systems and criteria for eligibility and capacity. The survey also shows that comparisons between the different systems are fairly complicated as it is necessary to include analyses of the actual grant and/or loan systems as well as of their interaction with family burden equalisation systems and taxation systems. When comparisons are made only of the actual amount of direct student grants, the study shows that the highest levels for support are to be found in the Scandinavian countries, Austria, Germany and the Netherlands. In all countries the support is means tested in relation to the students' own income and for relatively many countries also in relation to parental income, at least up to a certain age.

Looking at parental maintenance obligations, two distinct groups of countries can be identified: 1) Countries where parents do not have any statutory maintenance obligation for their children during higher education (e.g. the Scandinavian countries, Ireland, the Netherlands, Spain and the United Kingdom). Student support in these countries is relatively high, but is for some of the countries (Ireland, the Netherlands, Spain and the UK) either partly or fully dependent on parental income. 2) Countries in which there is a statutory maintenance obligation during a child's education including higher education (e.g. Austria, Belgium, France, Germany and Italy). In these countries parents with

children in higher education are granted an economic relief by the state, e.g. taxation relief and/or child benefits. Apart from the economic relief in relation to parents, students also have some possibilities of applying for means tested grants and/or loans.

Substantial national differences are also to be found when comparing possibilities for obtaining national student grants for study abroad. Table 6 gives a brief indication of possibilities of **national** support (not EU support) both for study periods abroad and for full degree courses. There seems to be a development towards extending the possibilities for using national grants for studies abroad, either for study periods or for full degree programmes. The Scandinavian countries, Austria, Greece and the Netherlands have introduced or are introducing educational assistance systems for national students going abroad for full degree programmes. In Flanders it is possible to receive national support for full programmes offered by recognised institutions of higher education in the Netherlands and for studies not offered at Flemish institutions. In countries where support is partly based on parental support or student support in the form of e.g. board and lodging, the same opportunities do not always exist.

9. International student and career guidance systems

Students as well as universities and employers' organisations seem to attach more and more importance to European employability of higher education candidates. National and international career guidance systems with increased focus on international career possibilities and conditions seem to be under development. The EU initiative with the EURES system (the **EUR**opean **E**mployment **S**ervices), the establishment of which was formally decided upon in 1993, seems to be the most developed system so far. The EURES is a co-operation network which bring together Public Employment Services of the countries belonging to the European Economic Area as well as other regional, national and international bodies concerned with employment issues. The main tasks of the system is to facilitate access to information and guidance on job opportunities as well as job and living conditions in other countries. The driving force behind the system are the euroadvisers. They are located in employment services of EU/EEA countries to provide information, advice and guidance for job-seekers and employers interested in the international job market. A pilot project has investigated the possibilities of extending the euroadviser system to universities, but so far this has not been possible and the pilot project has ended.

ANNEX I

Country profiles on higher education systems

1. Introduction

Tables 1 and 2 intends to give a condensed overview of the present structures of higher education systems and qualifications offered. However, in schematic overviews it is only possible to show main tendencies, whereas details, varieties and exceptions cannot be exposed. Thus the tables should be read with some caution and only considered as a somewhat simplified generalisation of present degree structures. Furthermore it should be noted that an overview according to years cannot show the differences in contents, level and learning outcome of the various qualifications, but can merely give a structural impression of existing possibilities. For further information, please refer to the accompanying brief country profiles on the present structures of higher education of each country and some of the main developments expected.

Terminology used:

Unitary higher education system: A higher education system with one main type of higher education institutions encompassing all types of study programmes leading to a variety of qualifications at different levels - e.g. diploma qualifications, undergraduate and post graduate degrees. Some may be research oriented, others more professionally oriented or of a rather general academic nature.

Binary higher education system: The binary or dual system consists of two different types of higher education institutions: Type A which is the classical university education combining higher education and research and type B presenting more professionally oriented higher education with or without a more applied research profile.

One-tier degree structure: It is a degree system which consists of only one integrated cycle of higher education leading to a degree that gives access to the doctorate. One-tier degree structures can be found both in unitary and in binary higher education systems.

Two-tier degree structure: It is a degree structure which consists of at least two stages of higher education. Each stage ends with a final award which may be used either for a professional career or for further studies. The second stage gives, in any case, access to the doctorate. This structure may be found both in unitary and binary higher education systems.

One-tier doctorate structure: A doctoral degree structure with one level of doctoral degrees. (international PhD level).

Two-tier doctorate structure: A doctoral degree structure with two different levels of doctoral degrees (an international PhD level and a higher doctorate). Access to the second doctorate is not always dependent on having the first doctorate.

2. Country profiles

Austria: Currently, higher education in Austria follows the model of a *binary one-tier system* for studies up to doctoral level. A new non-university Fachhochschulsystem began with the establishment of 10 new Fachhochschule programmes (*Fachhochschul-Studiengänge*) in 1994. By now (spring 1999), fifty programmes have been established. So far no private universities have been admitted in Austria, but a new law is in preparation which will change the situation.

The university sector: The first final degree at Austrian universities is the *Magister or Diplom-Ingenieur* which is normally awarded after at least four to five years of study, but often much more. The studies are divided into two (three) successive phases each ending with an examination (*Diplomprüfung*), and the second phase also includes the writing of a thesis (*Diplomarbeit*).

The doctoral programme requires at least two years of further study, the writing and defence of a thesis (Dissertation), and the pass of a final examination (*Rigorosum*). The Habilitation, i.e. the right to teach in a certain scientific discipline, is not an academic degree, but an additional academic qualification for which a specific procedure has to be undergone which by far exceeds the requirements for an ordinary doctoral degree.

Some universities offer a MAS (*Master of Advanced Studies*) or a MBA (*Master of Business Administration*) on the basis of courses given in German and/or English. Both programmes are at post-graduate level aiming at professional specialisation. Since 1997 the introduction of a bachelor level degree in the official degree structure has been discussed. The reasoning is to internationalise, i.e. to make Austrian degrees more compatible to other countries' degree systems and to ease mobility. A new law is in preparation which will give the universities the opportunity to introduce a two-tier degree.

Fachhochschulen: The minimum duration of a Fachhochschule programme including practical periods in enterprises and preparation for a final paper is four years. The title is the same as for university qualifications but a "(FH)" has to be added to the title. FH graduates may continue for a doctoral programme at a university provided that a number of additional exams are passed within two bridging semesters.

Belgium (Fr): Higher education up to doctoral level follows a *binary, primarily one-tier model*. Doctoral studies: A one-tier model.

The university sector: The first intermediate university degree is the *Candidat(e)* after two (in some fields three) years of study. It comprises a number of general subjects in the chosen main field of study. The *Candidat(e)* is a prerequisite for continuing in the second cycle. The second cycle takes two, three or four years. Depending on the study programme followed, students are awarded, upon completion of the second cycle, the academic degree of *Licencié, Pharmacien, Ingénieur, Maître* (in computer science, economic sciences and applied economic sciences), *Docteur en Médecine et Docteur en Médecine Vétérinaire*. The study programmes of the second cycle are more specialised than the first cycle. Most studies include the writing of a thesis. The postgraduate training programmes comprises e.g. a one-year programme *Diplôme d'Etudes Approfondies (DEA)* and the *Diplôme d'Etudes Spécialisées (DES)*. No specific training programme is required for doctoral studies, but a decree from 1994 provided the possibility for the universities to organise a preparatory training programme of at least one year – the *DEA*. Some faculties are preparing such programmes. The doctorate is formally awarded after writing of a thesis and a public defence, usually after at least four years of independent studies and research.

Hautes Ecoles: Non-university qualifications are divided into the following types: a) Short one-cycle studies of three or four years' duration (e.g. *Gradué*) and b) longer two-cycle programmes - each of normally two years' duration (*Licencié, Ingénieur*). According to the law, the long-cycle non-university studies are also called *university-level* studies. Graduates from the long type non-university programmes may under certain conditions follow doctoral programmes at universities. There is also a postgraduate possibility (of max. two years duration) from the Hautes Ecoles the *Diplôme d'Etudes Supérieures Spécialisées (DESS)* encompassing applied research studies.

Belgium (NI): Higher education prior to doctoral level follows a *binary, primarily one-tier model* but with an intermediate degree after two years. Doctoral studies: A one-tier model.

The university sector: The first *intermediate* university degree is the *Kandidaat* after two or in some fields three years of study or in a few cases the *Baccalaureus*. It comprises a number of introductory courses in the chosen subject field, methodological subjects and others.

The most common final university degree is the *Licentiaat* after two to three years of study after the *Kandidaat*. The *Licentiaat* is a more specialised degree than the *Kandidaat*. The aims of the programmes are to prepare for independent practise of science or the application of scientific knowl-

edge. Most programmes include a final thesis. Other final degrees are in civil engineering, dentistry, pharmacy, veterinary science and medicine.

Third-cycle studies comprise a doctoral programme which includes the writing of a thesis and a public defence. The studies may either be organised without any fixed study programme or according to a more structured research training programme. Some universities require participation in additional doctoral training for admission to the public defence of the doctoral thesis. A certificate is issued at the end of the training.

Hogescholen: Non-university qualifications are offered by the *hogescholen*. They are divided into two types: a) Short one-cycle studies of three years' duration (e.g. *Gegradueerde in ...*) which prepare students for specific professional skills in e.g. industry, commerce, agriculture, health and rehabilitation social work. b) The two-cycle programmes where each cycle is normally of two years' duration. After the first cycle, the title *Kandidaat in ...* is awarded. After the second cycle, the title *Licentiaat in ...* is awarded. Studies cover more or less the same sectors as one-cycle higher education. The programmes include lectures as well as practical exercises and also applied research.

Germany: Higher education follows a *binary one-tier structure* up to the doctoral level and a one-tier doctoral level model.

The university sector: Degrees from universities are the *Diplom, Magister or Staatsexamen* of four to six years' study including a thesis with a duration of a half to one year. Diplom studies are characterised by concentration on the broad range of the main subjects aiming at a specific professional field. Magister studies concentrate on two or three subjects, primarily in the arts. Staatsexamens relate to fields of regulated professions.

Until recently, doctoral degrees have primarily been awarded after independent research under the supervision of a lecturer and the defence of a thesis. The time stipulated for this award is two to four years. The organisation of the doctoral studies in graduate schools is an alternative way which is becoming more and more common. (In 1998 around 300 graduate schools – *Graduiertenkollegien* – were established). One university has introduced a PhD programme as a pilot project. As a rule, the *Habilitation* (post-doctoral lecturing qualification) is necessary in order to qualify for a professorship. The *Habilitation* gives proof of the candidate's teaching qualification, but does not constitute an academic degree as such. In a number of Länder (Federal States), the *Habilitation* entitles academic research staff to supplement doctoral titles with "*Habilitatus*" (e.g. *Dr. Med. Habil.*). Since two to three years the *Habilitation* as a prerequisite for a professorship is under discussion.

Fachhochschulen (universities of applied sciences), offer primarily professionally oriented courses in engineering, economics, social professions, administration and design. The standard study period is four years including one or two practical semesters and a *Diplom* thesis of three to six months' duration. Students are granted the title *Diplom (FH)*. Graduates from *Fachhochschulen* may, under certain conditions and eventually after extra exams, be admitted to doctoral studies.

There is a number of bachelor's/master's programmes offered in Germany by foreign institutions. The formal regulations for such arrangements have not yet been fully developed. The amended University Act of 1998 provides for the national introduction of first and second degrees leading to Bachelor's degrees (three to four years) and a following Master's degrees (one to two years) as well as an accreditation system at universities and at the *Fachhochschulen*. These degrees may be offered alongside the regular above-mentioned traditional degrees. Some institutions have already started to offer bachelor and master programmes (at present more than 190 programmes). Their introduction on a broad scale is, however, still under development.

Denmark: Higher education in Denmark is structured according to a *binary two-tier model* for studies up to doctoral level. Doctoral degrees are awarded at two levels.

The university sector: At university level the degree structure follows a so-called 3+2+3 model: The first degree in most academic fields is the *Bachelor* degree (three to three and a half years), the

second degree *Candidatus(a)* after two to two and a half years of further studies. Study programmes in medicine, pharmacy and veterinary science are exceptions from the bachelor structure, as they comprise integrated studies of five to six and a half years' duration. The PhD degree is awarded after three years of study/research after the *Candidatus*. Already at bachelor level the studies are fairly specialised in one to two subjects or a subject field and the specialisation continues at *Candidatus* level. The *Candidatus* programme includes a thesis of a half to one year's duration.

Alongside the ordinary national qualifications, more and more universities also offer Master programmes and Master degrees - some taught in Danish some in English. Some are regulated by a Ministry of Education decree, others are offered within the autonomy of the institutions. Some institutions also offer joint or double degrees in co-operation with foreign institutions. The *PhD* requirements are three years' work on a thesis, including some coursework, teaching and research co-operation. More and more research schools are being established. The Doctor degree is a higher doctorate awarded to mature researchers after major, independent and original research and a dissertation.

The non-university sector in Denmark is very diversified with many fairly small institutions offering only one or a few study programmes of two to four years' duration aiming at one professional field as e.g. teacher training, social work, nursing etc. Students receive a Diploma in the specific professional field and with the professional title "nurse", "physiotherapist".

Non-university higher education institutions are not allowed to award Danish bachelor degrees, but some of the institutions enter into co-operation with foreign higher education institutions and offer foreign bachelor or master degrees. Some of the institutions offer various post graduate diploma courses.

Proposals have been put forward by the Government to change the institutional structure, especially in the non-university sector, e.g. by merging some of the small institutions and intensifying co-operation between the non-university and the university sector. Another proposal concerns the introduction of a professional bachelor degree at the non-university level.

Spain: Higher education up to doctoral level is structured *primarily* according to a *unitary one-tier system*. There is one doctorate level. Reforms in the university system during the 70s and 80s have integrated more and more former non-university studies in the universities, and many new universities have been established to cater for a growing demand. Higher education outside universities is limited to art and music. Universities are structured in *Escuelas Universitarias (ES)*, *Escuelas Técnicas Superiores (EST)* and *Facultades (F)*. There are two types of first degrees: The *Diplomado, Ingeniero or Arquitecto Técnicos* awarded after normally two to three years in primarily professional fields of study. The *Licenciatura* is awarded usually after a consecutive two-cycle programme of normally four to five years of study. The first cycle is not a final one; it forms a basic, generalised curricular module in which the basic subjects are taught. Only the *facultades* of a university have the right to award *Licenciatura* degrees. Universities in Spain are characterised by very course-intensive programmes and many compulsory subjects. Around one third of the subjects are defined by the government and they are the same for all universities. Recent reforms include a higher degree of choice and more individual student work. The *Pasarela* systems makes it in many cases possible to pass from a first cycle qualification to a second cycle of different studies. Universities may also organise studies outside the officially regulated system - the so called *titulos propios*. These degrees do not have official status. Doctoral studies for the *Doctorado* requires three to four years.

Greece: Higher education follows a *binary one-tier* higher education system for studies up to doctoral level and a one-tier doctoral structure.

The university sector award the *Diploma* (engineering and architecture) or the *Ptychio* after studies of normally four to five years' duration. The curriculum consists of a number of compulsory and

elective subjects. In some departments a final project thesis is required. In the academic year 1997-98 a project with 30 optional study programmes was launched. The programmes are characterised by greater flexibility and the possibility of attendance at individual courses or a combination of courses. The programmes are developed in order to better meet the constantly changing needs of the labour market.

The diploma *Metaptychiakon Spoudon Exidikefsis* is a postgraduate intermediate specialisation of minimum one to two years' duration, including research and a thesis. It is required in certain subject fields before access to the doctoral programme. The *Didaktoriko* is the doctoral degree after a minimum of three years' studies, research and public defence of a thesis.

Technogika Ekpaideftika Idrymata (TEI) - the non-university higher education institutions also award qualifications called the *Ptychio* after studies of three and a half to four years' duration in specific professionally oriented fields. The possibilities of transfer from a non-university to a university course with credits are fairly limited. In co-operation with foreign universities the *TEI* may establish joint postgraduate programmes leading to master degrees.

France: Higher education before the doctoral level follows primarily a *binary two-tier system*. However, the system of higher education is characterised by the coexistence of a large number of different types of higher education institutions, each with its own admission requirements and offering a wide range of degrees.

The university sector consists of *traditional universities* including various more specialised faculties, e.g. *Instituts Universitaires de Technologie (IUT)*, *Instituts Universitaires Professionnalisés (IUP)* and others.

The general degree structure at universities encompasses a first intermediate degree of two years, the *DEUG*, and a first final degree the *Licence* after one extra year and the *Maitrise* after still another year. The *DESS* is a one-year postgraduate specialisation after the *Maitrise*. The *DEA* (*the Diplôme d'Etudes Approfondies*) is a one year programme after the *Maitrise*. It is considered as a starting point for doctoral research. The programmes include, research activities, a written final exam. and public defence of a short thesis. The establishment of graduate schools is developing.

The degrees at the *IUT* comprise a two-year final degree, the *DUT* (university diploma in technology). Admission to the *IUT* is selective as opposed to the universities. The Ministry of Education has proposed the introduction of a *professional three year Licence* allowing students to leave university after three years and find jobs at intermediate level. Within the third year of a *professional Licence*, students should have a compulsory placement. The Ministry also proposes a *master level qualification* (the *Mastaire*) after two extra years. The new degrees should not suppress but exist alongside the existing degree structure.

Other types of higher education institutions: There are various other types of institutions of higher education, such as the *grandes écoles* of management and engineering institutions. Admission to these institutions is selective and highly competitive. They offer specific types of qualifications. Most *grandes écoles* are public institutions, but there are also a number of private institutions with state recognition.

The non-university sector includes, among others, the *Sections de Techniciens Supérieurs* offering two-year advanced technical training programmes leading to the *BTS /Brevet de Technicien Supérieur*. The non-university sector also includes various institutions for health training.

Finland: Higher education follows a *binary (dual) model*.

The university sector: Between 1994 and 1996 a new *two-tier degree structure* was adopted in most university disciplines. The aims were to allow students to complete the first degree the *Kandi-daatti* in three years and the *Maisteri* after two years' extra studies and that at least 75 per cent of the students should continue to do a *Maisteri* programme after the *Kandidat* degree. The purpose of the degree reform was to establish an internationally compatible degree structure providing students

with the opportunity to combine studies across disciplinary and institutional boundaries, and the reform has given room for more flexibility in the choosing of subjects and study fields. In medicine, dentistry and veterinary science the degrees take six years of full-time study to complete. The degree is called *Lisensiaatti*. Doctoral awards are offered both in the form of an intermediate doctoral degree (in some subject fields) after two years of study or the final doctoral degree after three to four years of study and defence of a thesis. Doctoral studies are to a large extent now being organised in graduate schools.

Ammattikorkeakoulu (polytechnics): The non-university sector in Finland has undergone a major reform in the 1990s. So-called *ammattikorkeakoulu* are being formed by upgrading the specialised institutions which previously offered vocational higher education and by merging them to form new multidisciplinary institutions. The aim is to raise standards of education, to make vocational education more attractive and to improve the international compatibility of vocational education. Degree programmes are of three to four years' duration. The aim of studies is to provide and may include different specialisation lines.

Italy: Higher education is organised after a *primarily binary one-tier model* with a fairly extensive and developed university sector which to some extent resembles e.g. the Spanish structure.

The university sector: University degrees are offered at three levels according to length of study each conferring final degrees. The short degree (the *Diploma Universitario (DU)*) aims at a variety of professions such as skilled technicians. Studies integrate theory and practical training. The longer degree is the *Corsi di Laurea* (four to six years) which aims at a high academic level also including research activities. The programme also requires a thesis work of six months' to two years' duration. Holding the *Laurea* gives the right to use the title *Dottore/Dottoressa*.

Access to third level studies - the doctoral studies - is a *Laurea* or a similar degree.

There are two types of third level studies, either a specialisation (*Scuola de Specializzazione*) or the more general doctoral degree programme (*Dottorato di Ricerca*). The title is awarded after supervised research activities and defence of a thesis.

Universities may also offer *Master degree programmes*. However, even though they are adapted to the Italian educational context and needs, they are considered unofficial study opportunities and the degrees have no legal validity.

Non-university education comprises, according to the Italian terminology, all kinds of artistic education and a number of vocational education and training programmes, e.g. regional programmes and higher technical education and training programmes. A third category, physical education and sport, is being transformed from non-university to university level studies.

New university legislation is preparing a reform of the overall framework of university education and curricula. According to the proposal, the future degree structure will be as follows: Three-year first degree, and a second degree, after two more years of study, and the third level after no less than 3 years, the *Doctorate* level. Degree courses are to be unified in homogeneous disciplinary areas, indicating the educational aims and courses. The courses shall be expressed in work load credits.

Ireland: The higher education system follows a *binary two-tier system* and a one-tier doctoral level. The Minister for Education and Science has given strong policy signals which favour maintaining the binary system, considering it to be of vital interest to Ireland to have institutions to cater specifically for sub-degree studies.

The university sector: The first degree at universities is the Bachelor or primary degree which provide basic knowledge in a particular subject or field of study. The duration of primary degree courses varies according to faculty. The Bachelor of Arts (BA) requires three or four years of study, while primary degrees in medicine and dentistry take six years. The degree of Master can be obtained through course work and examinations or through research or through a combination of the two methods. The normal duration of study is from one to three years following the Bachelor de-

gree. PhD studies may follow directly after a good Bachelor degree or a Master programme. The duration is usually three to four years, and the studies include course and thesis work.

Institutes of Technology: The former Regional Technical Colleges have been redesignated Institutes of Technology. Awards from the Institutes are generally made by the National Council for Educational Awards (NCEA). These awards include the *National Certificate*, the *National Diploma*, and to a certain extent also bachelor, master and doctoral level awards. The Dublin Institute of Technology has bachelor degree awarding authority. The other Institutes provide ab initio stepped bachelor courses validated by the National Council for Educational Awards. The stepped awards generally are of the pattern: *National Certificate* + *National Diploma* + degree = *Bachelor award* (2 years + 1 year + 1 year). Many of the Institutes have gained, or are seeking, devolved awarding authority for the sub-degree levels. In March 1999 new legislation concerning the granting of further and higher education awards was published, entitled the Qualification Bill. It intends to promote quality and assist students in their choice of courses and institutions. The legislation will establish an overall National Qualification Framework for all non-university further and higher education which would replace the NCEA. The principal objective is to develop a framework for the structured development of institutions in the technological sector.

Iceland: The higher education structure follows a *binary two-tier system*.

The university sector: The university level institutions offer the following first degree programmes of three to four years' duration: the *BA*, *BS* or the *BEd*. The courses may be purely academic or more professionally oriented. All degrees require a final thesis or project work.

The University of Iceland also awards higher degrees such as the *Kandidatspróf* which is an integrated four- to six-year study in certain disciplines and the Master degrees programme of two-three years after a *BA/BS*. The University of Iceland also has the right to award doctoral degrees, both the PhD degree and the higher doctor degree.

Non-university courses are taught at a number of different educational institutions and have a prescribed duration of two to four years.

Luxembourg: Higher education in Luxembourg is basically limited to:

- a first year intermediate university course at the *Centre Universitaire de Luxembourg*;
- non-university courses of two to three years' duration at various non-university institutions in different professional fields, e.g. technology, commerce and education;
- postgraduate training at the *Institut Universitaire International de Luxembourg* as well as postgraduate courses for secondary school teachers.

Liechtenstein: Higher education courses in Liechtenstein are offered by one university-type private state-recognised institution (*Internationale Akademie für Philosophie*) and are Fachhochschule (*Fachhochschule Liechtenstein*).

The IAP offers three-cycle degree programmes in Philosophy consisting of a two-year *baccalaureate*, a two-year *Master* programme including thesis work and a *doctoral* programme of at least three years' duration.

The Fachhochschule programmes comprise four-year programmes in architecture, engineering and informatics and a few postgraduate programmes of one and a half year's duration).

The Netherlands: Higher education up to the doctorate follows a *binary one-tier model* at universities and *hogescholen*. Doctoral training also follows a one-tier model.

The university sector: The first degree at universities is the *Doctoraal* accompanied by the title *Doctorandus*, *Meester* or *Ingenieur*. The degree is awarded after usually four to five years of study

in a doctoraal programme. Programmes in medicine, veterinarian science, pharmacy and others last longer. The first year of study includes a number of courses necessary for the chosen subject area; it is concluded by a *Propedeuse* examination. Programmes integrate research and training and they also require writing of a thesis (*Scriptie*) of at least 60 pages. Universities also offer some post-graduate qualifications, e.g. a one-year teacher training programme for upper-level secondary education and HBO. All universities provide the four year research training programme leading to the *doctorate* (Dr.) award.

Since 1998 universities can also award the *Kandidaats* degree after 3 years full time study. It is to be considered as a first degree on top of which the *Doctoraal* may be awarded after one to two years of further studies. No information have been available on how many programmes of this type are being developed. The first graduates to obtain a *Kandidaats* are expected in year 2001/2002.

Hogescholen (universities of professional education) offer professionally oriented programmes (*HBO*) in all fields and award the title *Ingenieur* or *Baccalaureus (bc)* after 4 years of study. Access requirements are theoretically one year less than the requirements for universities.

According to the Higher Education and Research Act, a HBO graduate has access to research programmes leading to a PhD degree.

Many Dutch institutions, both universities and *hogescholen*, offer international degrees, especially Masters. There are no legal obstacles to do so as the Master title is a non-protected title in the Netherlands. Since 1996 the independent Dutch Validation Council validates master programmes offered at *hogescholen*. Many institutions also co-operate with British universities in offering a British recognised Master degree. Graduates with a *Doctorandus* are also allowed to use the title *Master*, and graduates from the *hogescholen* may use the title *Bachelor*.

According to the four-year plan of the Ministry of Education (HOOP2000) some of the topics related to internationalisation are more flexibility, the degree structure (bachelor/master), the Sorbonne declaration, tuition fees and quality control.

Norway: Higher education follows a *primarily binary two-tier model* before the doctorate and a *one-tier doctorate model*. The present structure was introduced in 1994 with the merger of 98 public colleges into 26 *statslige høyskoler* (state colleges) and in January 1996 with a new common act regulating both universities and colleges. The differences between the universities and the non-university sector are not as clear as in other countries which have a binary system, e.g.

- state colleges have been given the formal right to award doctor's degrees depending on individual recognition by the Ministry of Education,
- some of the degrees awarded by universities and the state colleges are similar, e.g. the *Cand. Mag.* degree. State colleges may also be given the right to award higher degrees.
- credit transfer from non-university to university programmes is fairly easy.

The university sector: The usual first degree from a university is the *Cand. Mag.* after normally four years of study (three and a half years in Maths and Natural Sciences). Studies are usually concentrated on two to three subjects including a major of at least three semesters. The programme starts with half-a-year *Philosophicum*. The second degree is the *Candidatus* degree after normally two years of further studies in one of the subjects of the *Cand. Mag.* The writing of a thesis based on independent research activities (normally of one year's duration) is a requirement for the degree. Professional university degrees in e.g. medicine, dentistry, pharmacy, psychology, theology and law require six to seven years of consecutive studies. The university colleges normally offer special professional programmes of four to six years' duration, e.g. in architecture, veterinary science, agriculture, business administration, music and physical education and sports.

There are two different doctoral pathways: A totally independent programme with no special study programme except for the thesis and the public defence (the *Dr. Philos.* degree) and a more structured research training programme over a three to four year period also including the writing of a thesis and public defence (Dr. Art., Dr. Scient etc). The two doctoral degrees have the same academic level.

Parallel to the official degree system, Norwegian universities have for the last ten years been offering master degree studies in English. State colleges have recently been granted permission to develop Master programmes in the Norwegian or English language.

A state commission has been established to make an analysis of various aspects of the higher education sector, including the degree system and make proposals for possible changes. There seems to be some interest from the side of the Ministry of Education to adapt the present system to a more an Anglo-American model.

Statslige høyskoler: (The state colleges). The majority of the shorter, non-university courses consist of an integral study period and aim at a particular profession: Candidates get a *diploma with the professional title*. Most of these programmes are of three to four years' duration. It is also possible to follow programmes which correspond to university programmes, i.e. in arts, social science, maths, natural sciences and leading to the *Cand. Mag.* degree. The *Philosophicum* is not required for the *Cand. Mag.* degree from the state colleges. *Høgskolekandidat* (studies of two to three years' duration) is a lower academic qualification - not obtainable from universities.

Portugal: Higher education follows a *primarily binary two-tier system* up to the doctoral level, and a one-tier doctoral system. Some universities are beginning to integrate non-university type institutions and qualifications.

The university sector: So far the most common first degree at universities follows after a study programme of four to six years' duration. The *Licenciatura* gives access both to postgraduate programmes and, on certain conditions, to a doctoral programme. The *Mestrado* study programme usually lasts two years and requires, apart from course-work, the writing and public defence of a thesis. The *Mestrado* gives exemption from all examinations except presentation and defence of a thesis for the degree of *Doutor* in the same specialisation. Since 1997 universities have also been allowed to offer three-year study programmes for a *Bacharelato*, and consequently more and more two-tier *Licenciatura* programmes are being recognised by the Ministry of Education both at universities and in the non-university sector.

There are no specialised courses leading to the award of the *Doutor*, but some examinations are required apart from the preparation and defence of a thesis.

Instituto Politécnico: Non-university higher education institutions in the form of polytechnics started to become introduced already in 1973. The programmes are professionally oriented. They are offered at special schools in the areas aiming at e.g. business, engineering, tourism, nursing, the paramedical field, teacher training. Courses are often related to the professional needs of the region in which they are located. The *Bacharelato* degree is awarded after a study programme of usually three years' duration. The polytechnics may also award the *Licenciatura*.

Sweden: Higher education follows a *unitary two-tier model* up to the doctoral level. There are two different doctoral degree levels.

Higher education is organised according to a modular credit basis allowing students to build up their degree or other qualifications by selecting self-contained modules. The appropriate degree is awarded after accumulation of the required number of credits in appropriate combinations and after the student has passed the required exams for each module. There is normally not one final exam for a specific degree. Study periods are not expressed in years but in credit points.

General academic degrees: There are three types of first final degrees: *The Högskoleexamen* which requires at least two years of full time study. The *Kandidatexamen* which requires at least three years of full-time study and at least one and a half years of study in the major subject including a thesis of at least ten Swedish credit points (one point – one week) The *Kandidatexamen* can be of a general academic nature or it can be of a professionally oriented degree. The *Magisterexamen* requires four years of full time study including two years of study in the major subject and a thesis work of normally half a year's full-time work (twenty credit points).

Professional degrees (medicine, teaching degrees' and engineering etc.) are organised according to a somewhat different structure. There are more than fifty professional degrees varying from four to five-and-half years' duration.

Doctoral programmes include a two-year *Licentiatexamen* in some fields and a four-year *Doktorexamen* in all academic fields. Course work and the writing and public defence of a thesis are the main components of a doctoral programme. Access requirements are at least a *Kandidatexamen* or equivalent qualifications. Up to one year of a *Magisterexamen* may count in the *Doktorexamen*.

Higher education institutions offer more and more master programmes in English both for national students and for international students, some of these master courses are just translations of the regular university courses, other of these are specially designed programmes.

United Kingdom: Higher education follows a *unitary two-tier model* up to the doctoral level. There are several doctoral level possibilities, the *PhD* being the most predominant. The former polytechnics were integrated into the university structure in 1992 and given full university status and degree-awarding power. There are no central or official regulations regarding the duration of studies in universities, and thus both the nomenclature and the structuring of qualifications may differ between universities. There are also some differences between England, Scotland and Wales.

According to the UK nomenclature, qualifications can be grouped into two major categories: undergraduate and postgraduate qualifications.

The undergraduate level includes both sub-degree qualifications and all first degree qualifications irrespective of the length of the programme:

Sub-degree qualifications include the *Higher National Diploma* (two years) and the *Higher National Certificate* (one year).

Bachelor degrees are usually awarded after a study programme of three or four years (the bachelor programmes for a degree in medicine and veterinary science last five years).

Bachelor degrees are classified according to programme requirements as well as student performance. The classification goes from an ordinary non-honours degree, a third class honours, a second class honours (with two divisions) to a first class honours.

The degree classification system is being discussed.

Courses are increasingly being offered on a modular and credit accumulation basis.

Some qualifications which are at undergraduate level, but taken by students with bachelor degrees for conversion to another subject lead to Master's degrees at present.

The postgraduate level includes a wide variety of *Master* programmes, course programmes as well as research programmes, usually of one to two years' duration, and a number of postgraduate diplomas and, finally, the doctorate programmes leading to a *PhD degree* are the most common.

There are a growing number of undergraduate degrees offered in Further Education Colleges. These include arrangements whereby all or part of the course may be taught in a FE-College with the course being validated by a university. These arrangements contribute to a considerable widening of access as FE-Colleges are local institutions. A high number of FE-Colleges offer Higher National Diplomas (HNDs) and Higher National Certificates (HNC's). There are a growing number of higher education national vocational qualifications.

One of the recommendations of the Dearing Report from 1997 was the establishment of a national framework for higher education qualifications. This is being discussed, and the Quality Assurance Agency has put forward a discussion paper on a national framework for qualifications as well as a system for assuring the standards of awards.

In recent years there has been an enormous expansion of international activities at UK universities and colleges and especially of study programmes delivered in co-operation with overseas institutions. To a certain extent there has been doubt about the standards and quality of such arrangements.

In order to assure quality, special provisions and procedures have been established on a voluntary basis to ensure that UK overseas activities meet the same standards as the study programmes at home.

Table 1: Higher education systems and degree structures

(Cf. Annex one for definitions of unitary/binary and one-tier/two-tier systems)

Country	The HE System		Degree structure at universities		Doctoral degree structure	
	Unitary	Binary	One-tier	Two-tier	One-tier	Two-tier
Austria		x	x		x (c)	
Belgium (Fr)		x	x (d)		x	
Belgium (NI)		x	x (d)		x	
Germany		x	x (e)		x (c)	
Denmark		x		x		x
Finland		x		x	x (b)	
France		x		x	x (b)(c)	
Spain	x		x		x	
Greece		x	x		x (b)	
Italy		x(a)	x		x	
Ireland		x		x	x	
Iceland		x		x		x
Liechtenstein		x		x	x	
Luxembourg		x	Not applicable	Not applicable		
The Netherlands		x (f)	x		x	
Norway		x		x	x	
Portugal		x		x	x	
Sweden	x			x	x (b)	
United Kingdom	x			x	x	

a) The higher education system is primarily a binary system, but the non-university sector is relatively small.

b) An intermediate research oriented degree is offered. In Finland and Sweden the degree is an optional choice for having a lower doctorate; it is not a prerequisite for continuing for a doctor degree. In France and Greece the “intermediate” degree is a condition for the doctoral programme.

c) Apart from the award of the doctoral degree the possibility of Habilitation exists.

- d) The degree structure of B (Fr) and B (NI) may be characterised both as a one tier or a two tier system. Most university degrees consist of two cycles and after the first cycle of two-three years the award of a *Candidat/Kandidaat* is given. The award is primarily considered as an intermediate degree as it has academic implications but no civil effects.
- e) **A possibility of a bachelor as a first degree and a master as a second degree is being introduced.**
- f) **A possibility of a three year first degree - a *Kandidaats* -is being introduced.**

Table 2: Higher education qualifications in the EU/EEA countries *)

Country/ Type of institution	Higher education qualifications before PhD/doctoral studies according to total number of years of higher education					PhD/doctoral level degrees	
	1-2 years+	3 years+	4 years+	5 years+	6/7 years+ (e)	Intermediate degrees	PhD/Doctoral degrees
Austria <i>University</i>			Magister/Magistra	Magister/Magistra Diplom-ingenieur/in	Professionally oriented qualifications (e.g. in Medicine)		Doctor
<i>Fachhochschulen</i>			<u>Magister/Magistra (FH)</u> Diplom-Ingenieur/in (FH)				
Belgium (fr) <i>University</i>	Candidat (a)	Candidat (a)	Licencié	Licencié or professionally oriented titles, e.g. pharmacien, ingénieur DEA/DESS	Professionally oriented titles (e.g. Docteur en Médecine and Docteur en Médecine Vétérinaire)		Docteur
Hautes Ecoles	Candidat (a)	Professionally oriented titles, e.g. Gradué /in	Licencié or professionally oriented titles, e.g. ingénieur	Licencié or professionally oriented titles, e.g. architecte, DESS			
Belgium (nl) <i>University</i>	Kandidaat (a) Baccalaureus (a)	Kandidaat (a)	Licentiaat	Licentiaat or a professionally oriented title, e.g. dentist, pharmacist	Professionally oriented titles (Medicine and Veterinary Sciences)	Certificate awarded after doctoral training courses	Doctor

Country/ Type of institution	Higher education qualifications before PhD/doctoral studies according to total number of years of higher education					PhD/doctoral level degrees	
	1-2 years+	3 years+	4 years+	5 years+	6/7 years+ (e)	Intermediate degrees	PhD/Doctoral degrees
<i>Hogescholen</i>	Kandidaat (a)	Professionally oriented titles, e.g. Gegradueerde in...	Licentiaat	Licentiaat or a professionally oriented title, e.g. Meester (in Fine Arts, Architecture) or civil engineer			
Germany <i>University</i>			Diplom Magister Artium Staatsexamen Bachelor b) Master b)	Diplom Magister Artium Staatsexamen Master b)	Staatsexamen		Doktor
<i>Fachhochschulen</i>		Bachelor b)	Diplom (FH) b) Bachelor b) Master b)	Diplom (FH) b) Master b)			
Denmark <i>University</i>		Bachelor		Candidatus/a	Candidatus/a (Medicine)		PhD h)
<u>Non-university institutions</u>	Professionally oriented qualifications, e.g. market economist	Professionally oriented qualifications, e.g. nurse	Professionally oriented qualifications, e.g. teacher				
Spain <u>Unitary university system</u>		Diplomado	Diplomado Licenciatura	Licenciatura or a professionally oriented title e.g. in engineering or architecture	Licenciatura (in Medicine)		Doctorado

Country/ Type of institution	Higher education qualifications before PhD/doctoral studies according to total number of years of higher education					PhD/doctoral level degrees	
	1-2 years+	3 years+	4 years+	5 years+	6/7 years+ (e)	Intermediate degrees	PhD/Doctoral degrees
Greece <i>University</i>			Diploma Ptychio	Diploma Ptychio	Diploma Ptychio (in Medicine).	Meptyhiako Diploma Eidikef-sis	Didaktoriko.
<i>Tech-nologika Ekpaideftika</i>		Diploma Ptychio	Diploma Ptychio				
France <i>University</i>	DEUG DEUST DUT	Licence Licence-professional f)	Maîtrise	DESS Titre d'ingénieur Magistrère Mastaire f) DEA	Professionally oriented qualifications (in e.g. Medicine, Dentistry and Architecture) DRT		Docteur
Grandes Ecoles and other higher education establishments d)			Diplôme des Ecoles de Management	Titre d'ingénieur diplômé			
Non-university institutions	BTS						
Finland <i>University</i>		Kandidaatti		Maisteri	Lisensiaatti (e.g. in Medicine, Dentistry and Veterinary. Science)	Lisensiaatti fg	Tohtori

Country/ Type of institution	Higher education qualifications before PhD/doctoral studies according to total number of years of higher education					PhD/doctoral level degrees	
	1-2 years+	3 years+	4 years+	5 years+	6/7 years+ (e)	Intermediate degrees	PhD/Doctoral degrees
Ammattikorkeakoulu		Professionally oriented qualifications	Professionally oriented qualifications				
Italy <i>University</i>	Diploma Universitario (DU)	Diploma Universitario (DU)	Diploma di Laurea Titles: Dottore/Dottoressa	Diploma di Laurea Titles: Dottore/Dottoressa	Diploma di Laurea (in Medicine) Titles: Dottore/Dottoressa		Dottore di Ricerca
Non-university			Diploma (in the artistic sector)				
Ireland <i>University</i>		Bachelor (general or honours)	Bachelor (honours) Master..	Bachelor (e.g. in Veterinary Science, Dentistry and Architecture) Master	Bachelor (in Medicine)		PhD
<u>Institutes of Technology</u>	National Certificate	National Diploma Bachelor	National Diploma Master...	Master			
Iceland <i>University</i>		Bachelor	Bachelor	Kandidatspróf			PhD h)
Non-university institutions		Professionally oriented qualifications	Professionally oriented qualifications	Master			
Liechtenstein <i>University</i>	Baccalaureate		Master				Doctor

Country/ Type of institution	Higher education qualifications before PhD/doctoral studies according to total number of years of higher education					PhD/doctoral level degrees	
	1-2 years+	3 years+	4 years+	5 years+	6/7 years+ (e)	Intermediate degrees	PhD/Doctoral degrees
<u>Non-university</u>			Qualifications in engineering, architecture, information				
<u>Luxembourg University</u>	A one-year intermediate qualification						
<u>Non-university</u>		Professionally oriented qualifications	Professionally oriented qualifications				
<u>The Netherlands University</u>		Kandidaats	Doctoraal Diploma. Titles: Doctorandus, Meester, Ingenieur, Master	Doctoraal Diploma. Titles: Doctorandus, Ingenieur	Professionally oriented qualifications		Doctor
<i>Hogescholen</i>			Getuigschrift Hoger Beroepsonderwijs c). <i>Titles:</i> Baccalaureus, ingeneur Bachelor				
<u>Norway University</u>			Candidatus magisterii	Candidatus/ a	Candidatus/a (e.g. in Medicine)		Dr. Philos Doctor

Country/ Type of institution	Higher education qualifications before PhD/doctoral studies according to total number of years of higher education					PhD/doctoral level degrees	
	1-2 years+	3 years+	4 years+	5 years+	6/7 years+ (e)	Intermediate degrees	PhD/Doctoral degrees
<i>Statslige høgskoler</i>	Høgskolekandidat	Høgskolekandidat Professionally oriented qualifications	Candidatus magisterii (state colleges) Professionally oriented qualifications	Candidatus/ a			
Portugal <i>University</i>		Bacharelato	Licenciatura	Licenciatura Mestrado	Licenciatura (in Medicine, Dentistry and Engineering) Mestrado		Doutor
<i>Instituto Politécnico</i>		Bacharelato	Licenciatura	Licenciatura			
Sweden <i>Unitary university system</i>	Högskoleexamen Professionally oriented qualifications	Kandidat Professionally oriented qualifications	Magister Professionally oriented qualifications	Professionally oriented qualifications	Professionally oriented titles	Licentiate g)	Doctor
United Kingdom <i>Unitary university system</i>	Various university certificates and diplomas and BTEC Higher National Certificate (HNC) and Diploma (HND)	Bachelor (O) Bachelor (Hon)	Bachelor (Hon) Master (taught)	Bachelor (in Medicine, Dentistry and Veterinary Science Master (taught or research)	Various post-graduate qualifications for professional purposes	MPhil (i)	PhD DPhil h)

*) This table should be read together with the supplementary information on each country in annex one. The aim is to indicate some of the main degree possibilities in each country. It should be noted that years of study do not in itself say much about the level and contents of the qualifications. It should also be noted that the table does not illustrate the various

possibilities of progression from one qualification stage to another. E.g. the requirements for access to doctoral level studies vary from three to five years of previous higher education. Neither has it been possible to illustrate all degree possibilities – especially not at postgraduate level.

- a) The degree is considered to be an intermediate degree
- b) Permission to establish bachelor and master programmes has been granted with the latest University Act (1998).
- c) Entrance requirements are one year less secondary schooling than for university programmes.
- d) Admission to the Grandes Ecoles is highly selective and includes preparatory classes and entrance examinations.
- e) In all countries the longer degrees of 6-7 years' duration include degrees for professional qualifications in such fields as medicine, veterinarian science and in some countries also pharmacy and others. Usually these degrees do not follow the degree structure for the more general academic degrees, e.g. there is very seldom a first intermediate degree possibility.
- f) The Ministry of Education has initiated the introduction of a three-year professional Licence and a five year Mastaire with three sections, professional, research-oriented and general as a follow-up to the Sorbonne declaration.
- g) The Licentiate is an optional degree and not a condition to obtain the Doktor degree.
- h) Apart from the PhD degree Denmark and Iceland also have a higher doctorate which is obtained after several years of independent research and a dissertation the *Doctor in...* In the UK there are also several higher doctorate possibilities.
- i) Candidates who do not hold a postgraduate research qualification are usually registered initially for the MPhil. If progress is satisfactory they may then may be transfer to a PhD programme.

Table 3: Admission to higher education

Country	Admission to higher education (a)	Numerus Clausus/Limitations in admission
Austria	Students have to meet the <i>general access requirements</i> (a recognised secondary school leaving certificate or equivalent) and <i>the special requirements for admission</i> to the chosen programme, depending upon the country of origin of the secondary school leaving certificate.	No numerus clausus for universities. Admission to Fachhochschulen is limited, and applicants have to sit for entrance exams.
Belgium (fr)	All students with a recognised secondary school leaving certificate are eligible for admission, except in a few fields with special requirement, (e.g. ingénieur civil where an entrance examination must be passed.)	No numerus clausus.
Belgium (nl)	All students with a recognised secondary school leaving certificate are eligible for admission, except in a few fields with special requirements. Entrance examinations must be passed by any student (Flemish or other) who wants to study civil engineering, civil engineering architectural, dental, and medical sciences (university degrees) or nautical sciences and fine arts (Hogescholen degrees).	No numerus clausus.
Germany	Access to universities requires an Abitur (12- 13 years of schooling) or equivalent qualifications. Access to Fachhochschulen requires a Fachhochschulreife (12 years of schooling) or equivalent qualifications. Special admission requirements for some programmes, especially in academies of music and fine arts	So far no overall numerus clausus for universities, except in certain fields. Admission to Fachhochschulen is limited in certain fields.
Denmark	Students have to meet both the <i>general access requirements</i> (a recognised secondary school leaving certificate or equivalent) and <i>the specific requirements for admission</i> to the chosen programme.	No overall numerus clausus except for a few fields (medicine, some paramedical fields and others). Institutions are free to set their own limitations, e.g. due to lack of places.
Spain	The general access requirements are a recognised secondary school leaving certificate or equivalent qualifications and the one year preparatory course (COU) or the <i>Bachillerato LOGSE</i> . Furthermore, there is an entrance exam for most studies.	There is a numerus clausus in certain fields.
Greece	The general access requirements are a recognised secondary school leaving certificate and the passing of the Panhellenic examinations.	So far admission to universities are highly selective with a numerus clausus in all fields. This will be changed according to a new reform "Education 2000" which will abolish the Panhellenic examinations and introduce another more flexible admission system.
France	The general access requirements for universities are a recognised secondary school leaving certificate. Usually there are no other admission requirements. Other types of institutions have various other admission requirements.	Universities do not apply a numerus clausus system. Other types of institutions (IUT and Grandes Ecoles) have selective or highly selective admission systems.
Finland	The general access requirements are a recognised secondary school leaving certificate or equivalent qualifications and the matriculation exam. Admission is usually based on marks in the matriculation examination/school leaving certificate and on entrance tests.	There is a numerus clausus in most fields of study.

Country	Admission to higher education (a)	Numerus Clausus/Limitations in admission
Italy	The general access requirements are a recognised secondary school leaving certificate or equivalent qualifications.	There is a numerus clausus for DU courses and for a limited number of university courses.
Ireland	The general access requirements are a recognised secondary school leaving certificate. Students very often also have to meet some special admission requirements.	There is no overall numerus clausus, but universities are allowed to select students according to their own admission standards.
Iceland	Students have to meet both the <i>general access requirements</i> (a recognised secondary school leaving certificate or equivalent) and <i>the specific requirements for admission</i> to the chosen programme.	There is a numerus clausus in certain fields.
Liechtenstein	The general access requirements are a recognised secondary school leaving certificate or equivalent qualifications.	No information
Luxembourg	The general access requirements are a recognised secondary school leaving certificate or equivalent qualifications.	No numerus clausus.
The Netherlands	The general access requirements for universities are a recognised secondary school leaving certificate (VWO - 13 years of schooling). The general access requirements for <i>the Hogeschoolen</i> (universities of professional education) are a recognised secondary school leaving certificate (HAVO - 12 years of schooling). Admission depends on meeting <i>the special requirements</i> for the chosen programme.	There is a numerus clausus in certain fields.
Norway	Students have to meet both the <i>general access requirements</i> (a recognised secondary school leaving certificate or equivalent) and <i>the specific requirements for admission</i> to the chosen programme.	There is a numerus clausus in most fields.
Portugal	The general access requirements are a recognised secondary school leaving certificate or equivalent qualifications.	There is a numerus clausus in most fields. Students have a right to be offered a study place, but not necessarily in the chosen field.
Sweden	Students have to meet both the <i>general access requirements</i> (a recognised secondary school leaving certificate or equivalent) and <i>the specific requirements for admission</i> to the chosen programme.	There is a numerus clausus in all fields. The limitations in the number of admitted students may be set by the individual institution.
United Kingdom	The general access requirements are two or more subjects passes at the advanced level or equivalent qualifications including vocational qualifications as GNVQs, NUQs and BTEC National Diplomas. Admission is determined by the fulfilment of both the general and the special course requirements.	There is a numerus clausus in certain fields, and institutions are free to set their own limitations.

- a) According to the Lisbon Convention the terms access and admission are distinct, but linked. They denote different steps in the same process towards participation in higher education. Meeting the access requirements is necessary but not always sufficient for actually gaining admission to a higher education programme (getting a study place).

When comparing access and admission requirements one also has to look into the structuring of secondary schooling which in some

countries is based on a high degree of streaming in academic and less academic tracks. These differences are only partially included in this table.

Table 4: Credit transfer systems

Country	Credit systems
Austria	No national credit system. ECTS is used by some institutions.
Belgium (fr)	No national credit system. ECTS is applied by all institutions for international co-operation and to some extent also for national students. in use at some institutions.
Belgium (nl)	A national credit transfer system is applied. It can also be used as an accumulation system. ECTS is used by some institutions.
Germany	The University Act of 1998 provides for the introduction of a credit transfer and accumulation system. ECTS is already in use at many institutions.
Denmark	So far there has been no national credit system. However, many institutions apply institutionally based credit system or use the ECTS system. In a report from February 1999 to Parliament the Minister of Education recommends the introduction of a credit transfer system based on ECTS.
Spain	A national credit system based on contact hours must be applied by all institutions. ECTS is also used at some institutions. The two systems are compatible although with some difficulties due to the differences between contact hour based and student load based systems.
Greece	No national credit system, but many institutions apply the ECTS system.
France	No national credit system, but many institutions apply the ECTS system.
Finland	A national credit transfer and credit accumulation system is applied. The system is compatible with the ECTS system. Many universities also apply the ECTS system.
Italy	So far no national credit system, but many institutions apply the ECTS system for international co-operation. A new law introduces the ECTS credit system at higher education institutions.
Ireland	In the university sector there is no uniform credit transfer system. The ECTS system is being applied in some institutions. In the non-university sector courses are structured on a credit basis which enables further access and progression.
Iceland	A national credit system, compatible with the ECTS system. Most institutions use ECTS in international co-operation.
Liechtenstein	No information
Luxembourg	No information
The Netherlands	A national credit system is applied which is compatible with the ECTS system. Many institutions also use the ECTS system.

Country	Credit systems
Norway	A national credit system compatible with the ECTS system is applied. Many universities also use the ECTS system in connection with international co-operation.
Portugal	No national credit system. Some universities are applying ECTS.
Sweden	A national credit and accumulation system is applied. ECTS is used parallel to the national system used by many institutions.
United Kingdom	In Scotland the SCOTCATS system enables easy credit transfer between institutions. In England and Wales there is so far no national credit transfer system, but a majority of institutions use a credit system based on the former CNA A point system. There are a number of credit accumulation and transfer consortia which progress the implementation of CATS in universities in England and Wales. It is expected that proposals for a national credit accumulation and transfer system in England and Wales will be adopted in the wake of a report commissioned by the Department for Education and Employment – <i>A Common Framework for Learning</i> , September 1998. The ECTS system is also applied by many institutions.

Table 5: Organization of the academic year

Country	Start of academic year	Organisation of the academic year/lecturing periods
Austria	October.	The academic year is organised after a two semester system with tuition provided from October 1 to the end of January and from March 1 to the end of June.
Belgium (fr)	September/October.	Universities may have different organisation of the academic year. a) A yearly basis with all examinations in June. b) A semester basis with some exams after each semester.
Belgium (nl)	September/October.	Universities may have different organisations of the academic year: a) A yearly basis with all examinations in June. b) A semester basis with some exams after each semester or c) A three term basis, also with some exams after each term.
Germany	September/October.	The academic calendar is based on a two semester system. There are some varieties in the calendar between to different Länder and between the universities and the non-university sector. The first semester normally runs from the start or from Mid October to Mid February and the second semester from Mid April to end of July. Examination periods after each semester.
Denmark	Mid August/First week of September.	For most programmes the academic year is divided into semesters: From September to end of January and from February to end of June. January and June are the main examination periods. A few non-university programmes are organised according to a yearly calendar with examinations at the end of each academic year.
Spain	The first/second week of October.	The academic calendar is primarily organised on a yearly basis. Some universities apply a semester system.
Greece	September 1. Tuition starts Mid September.	The academic calendar is divided into semesters. The first semester start Mid September and ends with examinations January/February. The second semester states end of February and ends Mid June also with a period of exams.
France	October 1. The start of the tuition may differ somewhat.	The academic year is organised either on a yearly basis with examinations at the end of the academic year (June) or on a semester basis with exams after each semester – usually in January and June.
Finland	August 1. Tuition usually starts Mid August or Mid	The academic year is divided into two semesters. Each ending with a period of examinations.

Country	Start of academic year	Organisation of the academic year/lecturing periods
	September.	
Italy	Until recently the academic year in Italy began November 1. Lately some faculties have divided the year into semesters and begin earlier.	The academic year may be organised in one of the following ways: - on a yearly basis, - on a compact semester basis (a) - on an ordinary semester basis. The compact semester basis is the most frequently used.
Ireland	Usually in October, but occasionally in September.	Traditionally the academic calendar has been organised according to a three term system. However, in recent years a number of universities have changed from a three term academic year to a two semester year, and the question of semesterisation is under active consideration by others.
Iceland	Beginning of September.	The academic year is organised according to a two semester system. The first semester runs from September until December. The second semester from January until May. December and May are examination periods.
Liechtenstein	End of October.	The academic year is divided into semesters. The first semester beginning no later than the end of October, the second beginning in April.
Luxembourg	Beginning of October.	Studies at the Centre Universitaire de Luxembourg is organised on a two semester basis.
The Netherlands	August/ Beginning of September.	The academic year is divided after one of the following two models: a) Two semester model. One semester from September to end of December and the second semester from January/February to July. b) A modular system. Usually consisting of five modules/blocks of about eight weeks each (two before Christmas and three after Christmas. Examinations are held at the end of each semester or block.
Norway	Mid August.	The academic year is usually divided into a two semester system. The first semester runs from Mid August to December and the second from Mid January to Mid June including examination periods. A three term system may also be applied at some institutions.
Portugal	Beginning of October.	A semester-based system is becoming the most frequently used. Examinations periods are usually January/February and June/July.

Country	Start of academic year	Organisation of the academic year/lecturing periods
Sweden	End of August	The academic year is not nationally regulated. Most institutions apply a two semester system. Courses and programmes may also start in January.
United Kingdom	End of September/Beginning of October.	The organisation of the academic year varies across institutions; the main types are term-based and semester-based. In some institutions the academic year is organised in semesters within a term-based structure. The organisation of examinations periods also varies as these are organised by the individual institutions. An increase in the number of institutions moving towards a semester-based academic year is expected.

- a) Compact-semester courses correspond to an annuality because even if concentrated in a semester, they are equivalent to an annual subject-course in terms of contact hours and workload.

Table 6: Tuition fees and student support systems for study abroad

Country	Tuition fees for regular study programmes (a)	Student support systems for studies abroad
Austria	No tuition fees for home, EU/EEA of students and certain other groups. Fees may be charged for students from countries which do not fall in one of the above categories.	Study abroad: Educational assistance may be provided for recognised study periods. Students receiving a national grant are entitled to receive educational assistance for study abroad periods up to a maximum of 20 months.
Belgium (fr)	Means-tested registration and tuition fees depending on level of study. There is also a minor fee for participation in exams. The fee for a basic year is around EURO 650.	Study abroad: In general no educational assistance for studies abroad, neither for full degree courses nor for study periods.
Belgium (nl)	Means-tested tuition fees are charged, dependent on the level of study. The total fee for a basic year is around EURO 460.	Study abroad: In general no educational assistance for studies abroad, neither for full degree courses nor for study periods.
Germany	No tuition fees, neither for home/EU nor for foreign students.	Study abroad: Educational assistance may be provided for study periods for a period of max. one or one and a half year.
Denmark	No tuition fees, neither for home/EU nor for foreign students.	Study abroad: Educational assistance may be provided for recognised courses (both study periods and full degree courses) for a period of four years. The limit is six years in the Nordic countries.
Spain	Means tested tuition fees for home/EU and foreign students.	Study abroad: No overall national educational assistance system for studies abroad.
Greece	No tuition fees for home and EU students. Students from other countries pay a fee.	No information
France	Means-tested registration fees for home/EU and for foreign students. The amount varies from EURO 100 to around EURO 230.	Study abroad: Educational assistance may be provided for recognised study periods of max. one year.
Finland	No tuition fees, neither for home/EU nor for foreign students.	Study abroad: Educational assistance may be provided for recognised courses abroad (both study periods and full degree courses).
Italy	Means tested tuition fees for home/EU and for foreign students. The amount differs dependent on the level of study.	Study abroad: No overall national educational assistance system for studies abroad.
Ireland	The tuition fee system was abolished in 1996 for first level degrees. Tuition fees are still charged for post-graduate degrees.	Studies abroad: Educational assistance may be provided for recognised full degree programmes in other EU countries. Student assistance is also possible for study peri-

Country	Tuition fees for regular study programmes (a)	Student support systems for studies abroad
		ods abroad both in other EU and other non-EU countries.
Iceland	No tuition fees, neither for home/EU nor for foreign students.	No information
Liechtenstein	No information	No information
Luxembourg	No tuition fees.	No information
The Netherlands	Means-tested tuition fees of about EURO 1200 are charged for home and EU students. Institutions are free to set different fees for foreign students.	Study abroad: Educational assistance may be provided for recognised programmes abroad – both study periods and full degree programmes.
Norway	No tuition fees, neither for home/EU nor for foreign students.	Study abroad: Educational assistance may be provided for recognised courses abroad (both study periods and full degree courses).
Portugal	Tuition fees for home/EU and foreign students. For undergraduate studies the amount is about EURO 294.	Study abroad: National students studying abroad for shorter periods keep their grants
Sweden	No tuition fees, neither for home/EU nor for foreign students.	Study abroad: Educational assistance may be provided for recognised courses abroad (both study periods and full degree courses).
United Kingdom	Fees differ for home/EU and for students from non-member countries. For full-time undergraduate studies the full tuition fee for UK and EU students is £ 1,025. The fee is means-tested and may be partially or fully met depending on income. Institutions are free to set the fees for part-time students, postgraduate studies and for students for non-EU countries.	<u>Study abroad: Educational assistance may be provided for recognised courses abroad (both study periods and full degree courses).</u>

a) Only registration and tuition fees for regular study programmes are included in the table, not mandatory fees for participation in student bodies, social care systems etc.

References

Apart from Web-based information and the information collected from National Rectors' Conferences and NARICs the following publications have been main sources of reference:

Academic Cooperation Association (ACA): Internationalisation in the sector of new higher education institutions in Europe. Country essays presented at a workshop in Bonn, May 1999.

CEPES: Studies on Higher Education: The Doctorate in the European Region compiled by Dr. Oleg Kouptsov, 1994.

Council of Europe: Evaluation of higher education diplomas in Europe. Information report prepared by the NEED Working Party set up under the auspices of the ENIC Network, 1995.

European Commission: A guide to higher education systems and qualification in the EU and EEA countries, 1998.

European Commission. Key data in the education in the European Union, 1997.

European Commission: Strategies and policies on research training in Europe, DGXII-G-6 November 1998.

Evalueringcenteret: Evaluation of European higher education - A status report, prepared for the European Commission DG XXII by the Centre for Quality Assurance and Evaluation of Higher Education, Denmark in cooperation with Comité National d'Evaluation, France, September 1998.

Deutsches Studentenwerk: Current developments in the educational assistance systems in Western Europe in connection with the family burden equalisation systems, Bonn 1999

International Association of Universities: Higher Education Policy - The Quarterly Journal of IAU: Vol 9 No 2. 1996: The changing nature of higher education in Western Europe by Ulrich Teichler.

Liaison committee of rectors conferences: Organisation of the academic year. A report and policy recommendations to the European Community, May 1993.

Norsk institutt for studier av forskning og utdanning: Doktorgrader og forskeropplæring: Internasjonale erfaringer og perspektiver. En sammenlikning av 9 OECD-land, Rapport 2/96.

Norwegian Council of Universities: Mastergrader ved norske universiteter og høyskoler- Statusrapport 1998/99.

OECD: Redefining Tertiary education, Paris 1998.

Panteion University of Social and Political Sciences: Non-official higher education in the European Union. General report by Nikos Kokosalakis, Athens 1998.

The Text Consortium: International higher education – Journal of the Text Consortium. Third issue – September 1996: European CATS - An Overview by Fritz Dalichow.

The Quality Assurance Agency for Higher Education: A Consultation Paper on Qualification Frameworks: Postgraduate Qualifications. 1998