

Recognition of Bologna Master's Degrees in Europe

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Contents

Executive Summary	4
Introduction / Chronology	5
1. Germany	7
1.1 Historical Background.....	7
1.2 Types of Master's degree	8
1.3 Entry.....	9
1.4 Content.....	9
1.5 Structure.....	10
1.6 Output (including Professional Rights).....	10
1.7 Accreditation.....	11
2. Italy	13
2.1 Historical Background.....	13
2.2 Types of Master's degree	14
2.3 Entry.....	14
2.4 Content.....	14
2.5 Structure.....	15
2.6 Output (including professional rights).....	16
2.7 Accreditation.....	16
3. Spain.....	17
3.1 Historical Background.....	17
3.2 Types of Master's degree	17
3.3 Entry.....	18
3.4 Content and Structure	18
3.5 Output (including professional rights).....	19
3.6 Accreditation.....	19
4. United Kingdom.....	21
4.1 Historical Background.....	21
4.2 Types of Master's degree	21
4.3 Content.....	22
4.4 Structure.....	24
4.5 Output (including professional rights).....	25
4.6 Accreditation.....	25
Conclusion	26
Bibliography	28

Executive Summary

The purpose of this report is to critically evaluate newly introduced Master's degrees in Germany, Italy and Spain and compare these with the provision in the UK. In order to compare these awards it is necessary to analyse their nature, entry level, content, structure and output (both professional and academic). This has been done on a country-by-country basis.

Despite the fact that certain recognition problems continue to occur in Bologna signatory countries, this report demonstrates that thanks to the flexible approach to the new degrees that has been undertaken in each HE system, second cycle awards in each country can be considered essentially equivalent. Indeed discussions focusing on duration and volume continue to create obstacles to mobility, countering the key objective of the Bologna Process.

In order to gather the necessary information, extensive liaison has taken place with the ENIC-NARIC offices in the appropriate countries. Study visits to each of the countries have also taken place to ensure the most accurate and up-to-date information has been included. Further information has been gathered from other national as well as pan-European sources.

Introduction / Chronology

The origins of the Bologna Process date back to May 1998, when the Ministers of four major European countries; France, Germany, Italy and the UK, signed the Sorbonne Declaration. The aim of this declaration was to harmonise the architecture of European Higher Education (HE) systems to create an internationally recognised two-tier structure. It also advocated the use of a common credit system such as the European Credit Transfer System (ECTS), to increase transparency of qualifications.

Thus with the way paved for a European Higher Education Area, the Bologna Declaration of June 1999 was a logical step forward, being signed by Ministers from 29 European countries. They agreed on important joint objectives for the development of a coherent and cohesive European Higher Education Area by 2010. The basic objectives of this declaration were the same as those stipulated in the Sorbonne Declaration, although worded slightly differently. Indeed the Ministers agreed to achieve these objectives through the following goals:

- Adopt a system of easily readable and comparable degrees – including implementing the Diploma Supplement
- Adopt a system essentially based on two cycles – undergraduate and graduate
- Establish a system of credits – such as ECTS
- Promote mobility
- Promote European co-operation in quality assurance
- Promote the European dimension in higher education

It is also important to note within the context of this report is that while two cycles of study are stipulated, their duration is not fixed:

“Access to the second cycle shall require successful completion of first cycle studies, lasting a minimum of three years.” (The Bologna Declaration of 19 June 1999)

Thus it is clear from this early stage that it was not the aim of the declaration to impose a rigid ‘3+2’ or ‘4+1’ framework on the education systems of the signatory countries.

Three further objectives were added in the Prague Ministerial Communiqué of May 2001 to those already cited:

- Focus on lifelong learning
- Inclusion of higher education institutions and students
- Promotion of the attractiveness of the European Higher Education Area

The next major event in the development of the Bologna Process occurred at the Helsinki Conference of 2002. The outcome of the Conference was a specified range of ECTS points for a first cycle (Bachelor) degree – 180 to 240, which

translates as three to four years full-time study. As many countries were transferring from a traditionally long first cycle, the possibility of continuing to offer a four-year first degree was an attractive one.

A second Helsinki Conference, held a year later in March 2003, concentrated on the second cycle (Master's) awards that form part of the Process. By this point a common trend had emerged in many European systems, which has come to be known as '3+2', where the Bachelor degree lasts three years and the Master's consequently must last two, resulting in a cumulative total of five years or 300 ECTS points. Despite the popularity of this approach, however, it is important to underline that this structure was not specified in the conclusions and recommendations of this (or any other) Conference. Indeed of the recommendations that were put forward, emphasis was placed on the fact that:

“[Bachelor and] Master's programmes should be described on the basis of content, quality and learning outcomes, not only according to duration of programmes or other formal characteristics.” (Recommendation number 4, Conference on Master-level Degrees, Helsinki, Finland, March 14-15 2003)

Moreover the recommendation relating to ECTS points states:

“While Master's degree programmes normally carry 90-120 ECTS credits, the minimum requirements should amount to 60 ECTS credits at Master's level. As the length and the content of Bachelor degrees vary, there is a need to have similar flexibility at the Master's level.” (Recommendation number 7)

Ministers responsible for higher education from 33 European countries met in Berlin in 2003 to review the progress achieved and to set priorities and new objectives for the coming years, with a view to hastening the realisation of the European Higher Education Area. The resulting Berlin Communiqué stipulated that “First and second cycle degrees should have different orientations and various profiles in order to accommodate a diversity of individual, academic and labour market needs.”

It is clear therefore that a degree of flexibility is required with reference to the varying HE systems that have agreed to take part in the Bologna process. In this report these differences will be examined, concentrating on the implementation of second cycle (Master's) degrees.

1. Germany

1.1 Historical Background

Traditionally the German HE system operated a two-tier system. The first tier, or cycle, is known as the *Diplom* or *Magister* and the second the *Promotion* (doctoral studies). The *Diplom* provides a qualification for a particular profession and is obtained at *Hochschulen* (universities) or other institutions of HE. The majority of programmes are offered in social or economic sciences, natural and engineering sciences. The *Magister* can be obtained at universities and equivalent institutions of HE or *Musik/Kunsthochschulen* (colleges of art and music) and is usually specialised in an arts subject, consisting of two equally weighted majors or one major and two minors. Both of these awards should typically last four to five years although it is common for students to take longer than this. Holders of the *Diplom* or *Magister* have access to employment opportunities at the *höherer Dienst* (highest level of the German civil service).

A *Diplom (FH)* can be obtained from a *Fachhochschule* (University of Applied Sciences) but is not viewed at the same level as the university *Diplom*. This award usually lasts four years, which includes a compulsory internship period. Consequently it does not offer the same professional rights as the university award. Indeed holders of a *Diplom (FH)* have access to employment at the *gehobene Dienst* (lower level of the civil service). Equally a *Diplom (BA)* is obtained from a *Berufsakademie* (Professional Academy), which is also tertiary education but again not at a comparable level to university studies in Germany.

Another HE award is the *Staatsprüfung* (state examination), which is taken following a course of studies in certain subjects such as medicine, veterinary medicine, dentistry, teaching and law. Two state examinations must be taken (*Erste* and *Zweite*) in order to practice the particular profession. These awards differ to university qualifications in that they are administered by exam committees which have representatives of the state exam offices for the *Land* (state) in question, as well as professors from the HEI. The length of time required to complete both state examinations is typically longer than for the *Diplom*.

Germany began thinking about national education reforms in June 1996, before the creation of the Bologna process. They were keen to enhance their international compatibility and encourage more international students to study in Germany. In July 1997 they introduced a credit point/modular system into their HEIs. In August 1998 the Federal Government brought in the Amendment Framework Law on HE that introduced the Bachelor-Master system as an option available to the student alongside the traditional two-tier system. This parallel structure is still in place, but the latter system is gradually being phased out.

In March 1999 the KMK (Ständige Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland) issued structural standards for Bachelor and Master's degrees. These standards have since been updated with the most recent edition being 2005. Following the introduction of the Bachelor-Master's system and the relevant structural standards, the German Minister of Education, Science, Research and Culture of the *Land* of Schleswig-Holstein and the Parliamentary State Secretary signed the Bologna Declaration in June 1999. It would therefore be fair to say that Germany had in fact implemented a large proportion of the HE reform before it had been introduced across Europe.

It is worth noting however, that no national qualifications framework was in place in the old HE system. Study programmes were only described in terms of their content, entry requirements and length. Since the introduction of the Bachelor-Master's system, a national qualifications framework for HE awards has been drawn up. This now describes Bachelor, Master's and Doctoral degrees in terms of their learning outcomes (knowledge and understanding, knowledge development), as well as entry requirements, duration and professional/academic outcomes upon completion. In short it is a move from an input-oriented to an output-oriented system, which in turn should encourage transparency of the education system.

1.2 Types of Master's degree

Three types of Master's degree now exist in Germany; consecutive, non-consecutive, and a course providing further education. The consecutive Master's degree follows on from a Bachelor degree in the same subject area and therefore deepens knowledge in this particular field. The non-consecutive Master's degree is in a different field to that of the Bachelor degree and allows the student to develop their multidisciplinary knowledge. The courses providing further education include a period of work experience as well as contact teaching time.

Master's degree profiles also exist. They are divided into "strongly application oriented" courses and "strongly research oriented" courses. This differentiation in types of courses adheres to the agreement laid down in the Berlin Communiqué mentioned above, where different profiles of degrees are required "to accommodate the diversity of individual, academic and labour market needs." (2003)

The designation of academic titles is also regulated. Consecutive programmes may only result in the titles Master's of Science/Arts/Engineering/Laws. Non-consecutive and further education programmes may result in different titles, eg. MBA.

1.3 Entry

The entry requirement for a Master's degree is a first higher education degree (Bachelor or equivalent) which qualifies the holder for a profession, plus any further requirements as stipulated by the university, such as a relevant degree, certain grade, proficiency in English as proved by an examination.

1.4 Content

The Master's degree in Germany is described as a "further higher education degree [which] provides an advanced qualification for a profession." (The Education System in the Federal Republic of Germany, KMK, 2004)

The new National Qualifications Framework defines what is expected of a Master's degree graduate, based upon the learning outcomes (knowledge & understanding, proficiency) of the qualification as well as a description of the competences and skills a graduate should have at his/her disposal. It also describes the formal aspects of a given academic level in terms of scope of work, ECTS points, admission criteria, designation of the final award and formal rights. It is not subject specific however, as these descriptions are developed by the universities independently.

The expected outcomes are categorised into two broad fields; *Wissen und Verstehen* (knowledge and understanding) and *Können – Wissenerschliessung* (proficiency – knowledge development). Within the former category graduates are expected to broaden the proven knowledge and understanding that they acquired during their Bachelor degree. This can then form the basis for the development and/or application of their own ideas. Graduates should possess broad, detailed and critical understanding of the developments and ideas in one or more specific areas.

The latter category encompasses the core and communicative competences that the student is expected to acquire during their Master's degree course. They should be able to apply their knowledge and understanding as well as their problem solving skills in new and unfamiliar situations. They should also acquire the following:

Core¹ competences:

- Be able to integrate knowledge and apply it to complex situations
- Reach scientifically founded decisions/conclusions based on imperfect or incomplete information, factoring in social, scientific and ethical

¹ While the literal translation of the German *systemisch* in this instance would be systemic, this does not really reflect the meaning in English.

insight/considerations, which arise from the utilisation/application of their knowledge and decisions.

- Be able to independently acquire new knowledge and competence
- Undertake an extensive independent research project or a practical based project

Communicative competences:

- Be able to communicate the current status of his or her research and applications, together with the relevant conclusions and underlying reasons and present that to both subject experts and lay people, in a clear precise way.
- Be able to share information, ideas, problems and solutions on a scientific level with subject specialists and lay people.
- Take responsibility in team working situations.

1.5 Structure

Despite the introduction of a national qualifications framework for HE, the duration of Master's degrees is still explicitly specified. It is known in German as the *Regelstudienzeit* (defined study length). The duration may be 1, 1.5 or 2 years (60, 90 or 120 ECTS points respectively), but the total of the first and second cycle degrees must be at least 300 ECTS points. For consecutive programmes the maximum duration is five years. Indeed 63.1% of all Master's degrees offered are two years in length (and 77.4% of all Bachelor degrees are three years in length), which confirms that the Germans are leaning towards a 3+2 structure.

The Bachelor-Master system is completely independent from the traditional *Diplom-Promotion* one. Therefore the option of a Bachelor degree as an exit point from a *Diplom* is out of the question. Equally upon completion of the *Diplom* a Master's degree cannot be awarded.

With reference to the courses, they are modular in nature and each module is worth a certain number of ECTS points. The student must complete twelve modules, including a Master's thesis, for a two-year programme in order to be awarded the Master's degree. The Master's thesis is usually completed in the final semester rather than, as is often the case in the UK, being undertaken throughout the duration of the course.

1.6 Output (including Professional Rights)

In terms of academic progression, a Master's degree is usually a prerequisite for doctoral studies, although in exceptional cases it is possible to progress directly from a Bachelor degree.

In professional terms, holders of a Master's degree have access to the *höherer Dienst*, as was the case for holders of the traditional *Diplom* or *Magister*. Additionally holders of a Master's degree from a *Fachhochschule* (University of Applied Sciences) can now access employment in the higher tier of the civil service. In practical terms this means that there is no difference between the Master's degrees from different types of HEI.

It is interesting to note however, that discussions are still taking place to determine whether the regulated professions, which require the *Erste und Zweite Staatsprüfungen* (First and Second State Examinations) for entry, can adopt the Bachelor-Master system.

The LL.M. (Master of Laws) does not currently allow access to the law professions despite being a second cycle degree. Individuals wishing to pursue a career in law must have successfully passed the *Zweite Staatsprüfung* (Second State Examination). This situation is currently being dealt with by the Ministry of Law and may change.

Teaching is likely to become an exception as currently there is no nationally defined *Regelstudienzeit* (defined study length), in other words teaching degrees differ in length from *Land to Land*. There is talk that the Bachelor degree would be sufficient for teaching at *Grund-, Real- and Hauptschulen* (primary and lower secondary schools) and the Master's degree for other types (upper secondary for example), but this is yet to be agreed. It has also been proposed that the *Vorbereitungsdienst* (teacher training period) for the former category could be incorporated into the Master's degree, but again there is no agreement on this. The *Länder* of Bayern and Saarland have not changed their teaching degrees at all, preferring to maintain the *Erste and Zweite Staatsprüfungen* system.

1.7 Accreditation

All Master's (and Bachelor) degrees must be accredited. Accreditation is undertaken by six individual agencies, which have a mark of quality from the *Akkreditierungsrat* (National Accreditation Board):

- Zentrale Evaluations- und Akkreditierungsagentur Hannover (Central Evaluation and Accreditation Agency Hannover, [ZEVA](#))
- Foundation for International Business Administration Accreditation ([FIBAA](#))
- Akkreditierungsagentur für Studiengänge der Ingenieurwissenschaften, der Informatik, der Naturwissenschaften und der Mathematik (Accreditation Agency for Study Programs in Engineering, Informatics, Natural Sciences and Mathematics, [ASIIN](#))

- Akkreditierungs-, Zertifizierungs- und Qualitätssicherungs-Institut (Accreditation, Certification and Quality Assurance Institute, [ACQUIN](#))
- Akkreditierungsagentur für Studiengänge im Bereich Heilpädagogik, Pflege, Gesundheit und Soziale Arbeit e.V. (Accreditation Agency for Study Programmes in Special Education, Care, Health Sciences and Social Work, [AHPGS](#))
- Agentur für Qualitätssicherung durch Akkreditierung von Studiengängen (Agency for Quality Assurance by Accreditation of Study Programmes, [AQAS](#))

These agencies assess programmes according to teaching standards, relevance to a profession and the standards drawn up by the KMK. As of summer semester 2006, 630 Master's degrees, (335 from *Hochschulen*, 4 from *Kunst- und Musik Hochschulen*, 291 from *Fachhochschulen*) programmes were accredited, but there is a severe backlog of 1147 courses still to be accredited. Reaccreditation must take place every 5 years. The KMK hopes that the reaccreditation process will become more efficient as the agencies become more accustomed to the process.

The accreditation process of Master's degrees is now able to determine whether a Master's (FH) allows access to the *höherer Dienst*, previously this was denied to FH graduates. This came into force on 1 January 2003 following a Resolution by the *Akkreditierungsrat*.

2. Italy

2.1 Historical Background

The Italian HE system has moved from one three-cycle structure to another. Before the adoption of the Bologna awards Italian students typically undertook highly academic and lengthy degrees, which had no specific professional outcomes. As was the case in Germany, the advanced age of graduates was of some concern to the authorities as individuals were often not entering the labour market until their late 20s or early 30s.

Traditionally the first cycle was known as the *Diploma Universitario*, a three-year award that provided both an academic and professionally-oriented education. This qualification gave access to employed positions in private or public organisations or allowed the holder to practise the corresponding regulated profession in Italy. In academic terms it also allowed access to the second cycle of HE, known as the *Diploma di Laurea*.

The *Laurea* was very academic in nature, characterised by in-depth theoretical learning. While it did not involve specific professional training, holders of this award were able to enter the highest managerial positions, practice their corresponding regulated profession (once they have passed the *Esame di Stato* in that field) or enter the Civil Service as an officer. Legally this award was supposed to last 4-6 years when taken in its integrated form, however it was common for students to take at least two years longer to complete the course. Assessment was by written examination each year and the defence of a dissertation *viva voce*. Graduates of the *Laurea* gain the title *Dottore*.

Holders of the *Laurea* were eligible to continue their studies at the third level which culminates in the *Dottore di Ricerca* (not to be confused with the *Dottore di Laurea*). The objective of this cycle was (and still is) to train postgraduates to carry out independent advanced research. Holders of this award are likely to pursue a career in academia or in a research capacity for a commercial company.

It was also possible for holders of the *Laurea* to undertake a different third-cycle award, which is more professionally oriented – the *Diploma di Specializzazione*. While it is comprised of some theoretical and research work (including a dissertation), its main aim was to train postgraduates for highly-qualified, specialised professions such as dentistry, human medicine and surgery or veterinary medicine. As a result it also included a period of work experience.

Having signed the Bologna Declaration in June 1999, the new Bachelor-Master system came into force in November of the same year. The first cycle award is known as the *Laurea* (and still confers the title of *Dottore* on the graduate) and

the second the *Laurea Specialistica*. In practice the old-style awards continue to run alongside the new awards as students are still in the process of completing the traditional *Laurea*.

During the academic year 2005-06, 144081 students were enrolled on LS courses. However 343983 students were still enrolled in the old style (*vecchio ordinamento*) courses. (Source: MIUR-URST Ufficio di Statistica)

2.2 Types of Master's degree

In the context of the Bologna Process the second cycle, or Master's, degree is known in Italy as the *Laurea Specialistica* (LS). The LS can be taken following the *Laurea*, or other equivalent qualification and is expected to last two years. Alternatively students may gain admission on to an integrated LS course (*ciclo unico*) with a secondary school leaving certificate, which has a duration of five years. This award combines the content of the *Laurea* and LS but results in only the LS being awarded.

At the second cycle however, the *Master Universitario di Primo Livello* (First Level University Master's degree – MU1) also exists. Despite the slightly confusing title, this award does not constitute a Bologna-style second cycle award as it is predominantly professionally-oriented and provides no access to further studies.

For the sake of clarity it is important to note that the *Master Universitario di Secondo Livello* (Second Level Master's degree – MU2) is also not a Master's degree in the context of the Bologna process. Indeed a Master's-level qualification is required for admission onto the MU2 course and this is therefore considered a third cycle qualification.

2.3 Entry

Access on to a LS course is dependent on the student holding a *Laurea*, or a comparable overseas degree, in a related subject. Admission is open in that the courses do not operate a *numerus clausus* policy, but in some cases an entrance test is established to control student numbers and quality.

2.4 Content

The LS degrees are divided into *classi* (classes or types), which have been determined by the *Ministero dell'Università e della Ricerca* (Ministry of Higher Education and Research). 109 classes have been identified, each of which falls

within one of the five main subject areas that cover all university education in Italy. The five main, or 'great', subject areas are as follows:

- Health
- Humanities
- Sciences
- Social studies
- Technology

The *Ministero* has drawn up learning outcomes for each of the classes into which it has divided the LS courses. Unlike a national qualifications framework, these outcomes are for the most part subject-specific, indicating the competences and knowledge expected of graduates in their particular discipline. Details of relevant research projects, methods of study (such as laboratory work, seminars, etc) as well as typical professional progression pathways are also included in the guidelines.

2.5 Structure

By law each LS course must include six different types of subject courses that relate to the nature of their respective teaching/learning activities:

1. Basic education in one or more study fields
2. Subject-specific for a given *Laurea*
3. Similar/complementary subject fields
4. Electives
5. Preparatory for the final examination
6. Complementary skills (foreign languages, IT, work experience)

The LS must have a duration of two years in Italy, to which 120 *Crediti Formativi Universitari* (CFU – the Italian credit point system, which equates to ECTS points) are assigned. In a similar vein to the German system, a total of 300 CFU are required in order to be awarded the LS. As the *Laurea* is a three-year degree in Italy, this has led to an automatic two-year duration for the LS. Indeed even the Italian Ministry of Higher Education and Research refers to the new system as '3+2'.

It is important to note however, that there is a difference between the legal and actual duration of HE courses in Italy. The legal duration of a course is specified by the *Ministero*, but in practice it has long been common for students to take at least two extra years than the number specified to complete their course. A reason for this phenomenon could be that students are not obliged to take a certain number of exams each year.

Taking both *Laurea* and LS degrees into account, in 2003 an average of 30.3 CFU was gained per student in Italian universities. (Source: MIUR – DG Studi e programmazione, 2003). As the expected total per year is 60 CFU, it is clear that students are not completing their degrees in the stipulated time, thus undermining the notion of defining a degree by its length.

2.6 Output (including professional rights)

The LS is a pre-requisite for entry onto a *Dottore di Ricerca* (PhD), *Master's Universitario di Secondo Livello* (Second Level University Master's Degree) or *Diploma di Specializzazione di Secondo Livello* (Second Level Specialisation Diploma) course.

Holders of the LS may access the same occupational sectors as those available to *Laurea* graduates, although the former are invested with greater responsibilities and may progress to higher managerial positions. The professional capacities in which they may work are:

- Employed positions in private or public commercial/industrial undertakings
- Posts within the civil service at level VIII (*dirigenti* - managers), with the opportunity to progress to the position of director-general (*Direttore Generale*)
- Corresponding regulated professions, following successful passing of the relevant State examinations which confer the appropriate professional license and rights
- Corresponding regulated professions in those EU member states where similar professions exist (after obtaining professional recognition under the relevant EC Directives).

In short, holders of the LS have the same professional rights as holders of the old style *Laurea* degree.

2.7 Accreditation

There is no accreditation or quality assurance agency in Italy. However each university issues a rectoral decree relating to the teaching organisation and structure of its degree courses. This decree must in turn be approved by the Ministry.

3. Spain

3.1 Historical Background

As Spain has been relatively slow compared to Germany and Italy in implementing the Bologna Reforms, its traditional three-cycle system continues to be offered at all HEIs. However the academic year 2006-07 has seen the introduction of a Bachelor-Master structure.

The first cycle (*primer ciclo*) of HE lasts for three years and leads to the award of the *Diplomado*. Completion of this cycle also gives access to the second cycle. There are four branches of education during the first cycle: experimental and health science, humanities, social and legal science, technical education. The university schools (*Escuelas Universitarias*) only offer study at the first cycle level. Therefore a *Diplomado* from this type of institution is a terminal qualification, and a bridging qualification is needed before progressing to the second cycle. The same is also true of the *Arquitecto Técnico* and *Ingeniero Técnico* qualifications (from *Escuelas de Arquitectura Técnica* and *Escuelas de Ingeniero Técnico* respectively).

The second, or specialisation, cycle (*segundo ciclo/ciclo de especialización*) lasts a further two years and leads to the qualification of *Licenciado* or a professional title such as *Ingeniero* (Title of Engineer) or *Arquitecto* (Title of Architect). Some higher education courses start during the second cycle or combine the first and second cycle (known as dual cycle courses) and consist of the same four branches as mentioned above.

Entry into the third and final cycle (*Tercer Ciclo, Ciclo de Especialización para la Investigación y Docencia*) is via the *Licenciado* or professional title. Study lasts for two years (with examinations), after which a third year is completed in order that the student may conduct additional research. The resulting thesis must be defended in front of a tribunal, before the *Título de Doctorado* is awarded.

The framework for the new Master's degrees offered from 1st October, 2006 in Spain is laid out in the Royal decree 56/2005. The aim of the legislative framework is to promote flexibility in the content of the Master's and Doctor awards by not providing direct guidance on the format of the awards. It also aims to promote inter-departmental and inter-university collaboration as well as links with foreign universities. It is further acknowledged that these changes in legislation will increase the amount of general autonomy that universities have.

3.2 Types of Master's degree

The Bologna-style Master's degree is to be known as the *Máster* in Spanish, allowing it to be easily understood in both a national and international context.

Prior to the establishment of Bologna Master's programmes, Spanish universities only offered Master's degree courses known as *titulos propios* (own titles). These degrees will continue to be offered alongside the official *Máster* degrees. As these awards do not have to conform to national legislation they are more flexible in their design. In many cases they are designed in conjunction with local employers or industry to train employees and thus answer market demands for both the country and region.

Spanish universities also offer professional training courses at a postgraduate level. These do not have official recognition but are widely accepted by employers.

3.3 Entry

The law states that access to official postgraduate study is limited to those who have completed studies leading to a *Título de Grado* or other first cycle degree. Exceptionally students may also be admitted if they have completed at least 180 ECTS points that include the same content as a first cycle degree but who have not completed a qualification.

Access for foreign students to postgraduate study can be gained through having their first degree *homologado*² to the equivalent level within the Spanish system or by applying directly to a university who would consider their award equivalent to the level of the Spanish first degree. The second route does not provide official *homologación* in Spain.

For some Master's degrees a specific first degree is required. For others there are more general entrance requirements, such as a degree in sciences or humanities.

3.4 Content and Structure

As the Master's degree has very recently been introduced to the Spanish HE system, less information on the content and structure is available. Equally as there have been no graduates as yet, statistical information cannot be provided.

Master's degrees must be composed of a minimum of 60 ECTS and a maximum of 120 ECTS. The precise number of credits allocated to a particular course is the responsibility of the individual university. Master's degrees involve advanced

² *Homologación* is a process whereby a foreign qualification is compared to a national level within the Spanish education system.

study of a specialised or multidisciplinary nature, leading to an academic or professional specialisation. Equally a Master's level course may aim to promote an introduction to research work.

The content is varied in terms of the subjects and specialisations offered at this level. Master's degrees are offered in a full range of subjects, from the science, arts and humanities disciplines.

From a survey of courses offered at the *Universidad de Alcalá* during the study visit to Spain, it does appear that most courses contain a large taught element which is supplemented by smaller research elements. Indeed it is not compulsory to include a thesis element in a Master's degree, although it is generally the case that the course contains some element of extended research work.

There are a number of discernable streams of Master's degrees in Spain. Some are professionally-oriented and therefore designed to provide more advanced skills for the workplace. Others are more academically-oriented, where more emphasis is placed on research skills and academic progression. There is no official distinction between the two types of degrees and all are recognised at the same level, irrespective of the number of credits awarded. The streams are known as 'áreas' and are divided into, in the case of the *Universidad de Alcalá*, scientific, economic & business, education, humanities and international relations, law, environmental studies, healthcare and technical.

Each university has the right to design its own programmes of postgraduate study according to the criteria and academic requirements laid out in the Royal decree 56/2005. They should also be approved by the Governing Council of the university. It is not possible for one university to offer two or more programmes whose objectives and content overlap considerably.

The Spanish Government can establish its own general directives and special entry requirements for study programmes leading to the official title of *Máster*, where the award allows particular access to regulated professional activities or professions.

3.5 Output (including professional rights)

Access to doctoral studies requires the completion of at least 60 ECTS points or the completion of a Master's degree. It is therefore theoretically possible to enter doctoral studies without having completed a previous qualification in its entirety.

3.6 Accreditation

Once implemented, Master's programmes will be evaluated by the *Agencia Nacional de Evaluación de la Calidad y Acreditación* (National Agency for

Quality Assurance and Accreditation) together with the Autonomous Communities³ and the universities themselves. Criteria for evaluation will be set out by the Ministry of Education and Science, who will also be the final arbiters in issues over quality.

Master's degree courses must also receive approval from the Autonomous Community and the Ministry of Education and Science before they can be offered. The latter publishes the list of official courses in its *Boletín Oficial del Estado*.

³ Spain is divided into fifty provinces, which in turn are grouped in to seventeen Autonomous Communities. The Autonomous Communities have regulatory powers and govern the administration of the education system within their regions.

4. United Kingdom

4.1 Historical Background

Radical changes in HE structure or terminology have not been necessary in the UK following the signing of the Bologna Declaration, given that the new degrees are based on what has traditionally been termed the 'Anglo-Saxon' model. Indeed the prior existence of a Bachelor-Master's system in the UK has created to some extent a willingness to engage in other aspects of the Bologna Process, such as the introduction of the Diploma Supplement.

In terms of qualifications available at the two cycles (undergraduate and graduate) England, Wales and Northern Ireland have retained the three-year Bachelor degree. Some four year programmes do exist in subjects where a year in industry or in a foreign country is required, but this fourth year does not usually carry any further academic standing or credit. Scotland continues to offer a three-year Ordinary degree and a four-year Honours degree as standard. Master's degrees UK-wide are typically twelve months in length and require a good Honours degree for entry.

It is key to note however, that while a standard duration does exist, UK degrees are not ultimately defined by length. Qualifications in the UK are expressed in terms of their learning outcomes, rather than content, volume or duration. As credit systems, such as ECTS, effectively represent the volume and level of learning, many UK universities do not feel that they can accurately represent the outcomes of their awards, particularly those that are not modular in structure. This does pose problems in terms of transparency across Europe, therefore efforts are being made through the UK Europe Unit to emphasise the importance of the role that the Diploma Supplement can play in this area.

4.2 Types of Master's degree

Several types of Master's degree exist in the UK, namely Taught Master's, Research Master's, Master of Engineering (and other integrated Master's degrees), Master of Research, Master of Business Administration, Master of Philosophy.

The Taught Master's course comprises taught modules and an extensive dissertation. The taught modules are designed to enable students to learn theory, practical techniques and apply these, ensuring progression through the course. The dissertation draws on, and deepens the understanding of the taught modules. Taught Master's degrees are expected to be completed within one year of full-time study or two years of part-time study. Some universities use a credit system to structure the degree programmes. Master's degrees in the UK are

made up of 180 credits (equivalent to 90 ECTS). The dissertation generally counts for 60 credits.

Students of the Research Master's are expected to have already established a thesis topic when commencing the course. In contrast to the Taught Master's, this award is gained almost solely through research and is comparable in its nature to the PhD. Consequently the dissertation is considerably longer than that required for the Taught course, comprising of up to 40,000 words compared with the 20,000 stipulated for the taught course.

Integrated Master's degrees, such as the Master in Engineering, provide an extended and enhanced programme of study that is designed for high achievers. The period of study is equivalent to at least four years of academic learning (five years in Scotland) and the programme of study is both broader and deeper than a corresponding Bachelor of Engineering (BEng) Honours degree.

MEng programmes are usually designed as preparation for professional practice and have an increased emphasis on industrial relevance. Project work within an MEng programme would include both an individual research / design project and a more wide-ranging group project with greater industrial involvement. MPharm programmes include a year of work experience, but are strongly vocationally-oriented from the beginning.

The Master of Research (MRes) is a postgraduate degree with an approximate 50-60% research element. It enables students to develop generic research knowledge and skills whilst pursuing a subject-based research project. It serves as a qualification in its own right and as a preparation for higher level research (PhD). It is a modular programme, including both taught and research components. The programme is a 12 months full-time study or 24 months part-time. The difference between this award and the Research Master's is that the MRes studies the theory and methodology of research across several disciplines whereas the Research Master's is based on the in-depth study of a particular subject.

The Master of Philosophy (MPhil) is a longer research-based course, which often requires higher entry qualifications. Typically the MPhil will last two years full-time and may lead to a PhD. The student learns advanced research techniques, leading to an extended dissertation.

4.3 Content

The content of individual Master's degrees will naturally vary according to the type and specialisation of the course. While content is not prescribed at a governmental level, HEIs must be able to demonstrate that their Master's degrees secure academic and intellectual progression. This progression is

defined through learning outcomes for each level of qualification. Indeed it is this learning outcomes approach that underpins the Framework of Higher Education Qualifications in the UK.

The Quality Assurance Agency for Higher Education (QAA) is responsible for developing a set of national, common reference points called the academic infrastructure. This includes national frameworks for higher education qualifications, subject benchmark statements and programme specifications. The QAA introduced national higher education qualifications frameworks (one for England, Wales and Northern Ireland, and one for Scotland) in 2001. The frameworks provide clear descriptions of the different qualifications awarded by higher education institutions in the UK. Subject benchmark statements for degree subjects describe what can be expected of graduates in terms of intellectual skills, mastery of knowledge and conceptual understanding. Programme specifications are quality-related descriptions of programmes of study in each institution. These include their intended learning outcomes, methods of assessment, teaching and learning strategies, and ways by which learning is supported.

This is how the Quality Assurance Agency has set the benchmark for Master's degrees at UK universities.

Master's degrees are awarded to students who have demonstrated:

- i A systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their academic discipline, field of study, or area of professional practice
- ii A comprehensive understanding of techniques applicable to their own research or advanced scholarship
- iii Originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in the discipline
- iv Conceptual understanding that enables the student:
 - to evaluate critically current research and advanced scholarship in the discipline
 - to evaluate methodologies and develop critiques of them and, where appropriate, to propose new hypotheses

Typically, holders of the qualification will be able to:

a Deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate their conclusions clearly to specialist and non-specialist audiences

b Demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level

c Continue to advance their knowledge and understanding, and to develop new skills to a high level

and will have:

d The qualities and transferable skills necessary for employment requiring:

- the exercise of initiative and personal responsibility
- decision-making in complex and unpredictable situations
- independent learning ability required for continuing professional development (Source: Qualification Descriptors, The framework for higher education qualifications in England, Wales and Northern Ireland - January 2001, QAA)

4.4 Structure

As universities in the UK are autonomous institutions, they are able to make decisions regarding the content, structure and title of the awards that they offer. Consequently one cannot talk of a set structure for a Master's degree, or any other HE award.

The design of academic programmes has to make some assumptions about the amount of learning that is likely to be necessary to achieve the intended outcomes. In some cases this will be expressed in terms of study time, for example a number of academic years or number of terms/semesters. In other cases this will be expressed through credit rating.

Some universities use a credit system to structure their degree programmes. Master's degrees in the UK are made up of 180 credits. The dissertation generally counts for 60 credits. One UK credit is roughly equivalent to half an ECTS point. Few universities only use ECTS to express the content and duration of their courses.

Taught degrees are more likely to be modular in nature, involving lectures, seminars and group work, whereas research-based awards are structured more like PhD studies, focusing on independent study with little contact time other than with the dissertation supervisor.

4.5 Output (including professional rights)

Holders of a Master's degree in the UK are eligible for entry to doctoral programmes, at institutional discretion.

In contrast with the German and Italian systems, a UK Master's degree does not provide access to specific levels of employment, such as the higher levels of the civil service.

4.6 Accreditation

While individual higher education institutions in the UK are responsible for ensuring that appropriate standards are being achieved and a good quality education is being offered, the Quality Assurance Agency for Higher Education (QAA) is responsible for maintaining the standards of higher education qualifications. It also aims to inform and encourage continuous improvement in the management of the quality of higher education. This is done by working with higher education institutions to define academic standards and quality, then reviewing and publishing the resulting findings relating to these standards.

The QAA has developed two frameworks for higher education qualifications, one for England, Wales and Northern Ireland and one for Scotland. These frameworks aim to promote a clearer understanding of the achievements and attributes represented by the main qualification titles, such as Bachelor degree with Honours, or Master's degree.

It has also developed subject benchmark statements, which outline expectations about the standards of degrees in a range of subject areas and allows access to the programme specifications which each institution provides about the programmes it offers.

Conclusion

In the years following the signing of the Bologna Declaration, the level of implementation of the new two-cycle structure have varied from country to country. Germany introduced a Bachelor-Master structure even before the Bologna Declaration was signed; Italy brought in the system shortly after this point and Spain has introduced the Master's degree in the academic year 2006-07. It seems clear though that following many positive steps at both ministerial and institutional levels all the countries will have the requisite structure in place to be able to establish the European Higher Education Area.

As we have seen however, different countries have taken alternative approaches to the two-cycle structure, particularly to the Master's degree. Indeed some countries define their second cycle awards through duration and content, whereas others focus on the learning outcomes expected from graduates. Germany and Italy fall in to the former category, using duration leading to outcome as a defining feature of their second level courses, whereas the UK has adopted a purely outcome-based approach. While neither of these approaches is intrinsically wrong, it is important that all are recognised for their own value. To not recognise any would not only counteract the spirit of the Bologna Process but would ultimately be to its detriment.

The introduction of the so-called Dublin Descriptors, to which all these Master's degrees adhere is a further confirmation that the learning outcomes of these awards are essentially equivalent. Recognition problems appear to arise when the methodology for comparing qualifications at the national level is not solely (or even for the most part) based upon learning outcomes. When the predominant determinant of acceptance is duration or similarity of content, as is increasingly occurring, new barriers to mobility are being established. This often occurs under the veil of 'substantial differences'.

It has been noted in this study that the featured continental nations have been keen to establish flexibility within the HE system when undertaking these new reforms. This is being achieved through de-regulatory content (Spain), recognizing all HE routes as equivalent (Germany) and establishing new qualification routes for different user groups to open participation and increase completion rates (Italy). It is hoped, therefore, that UK Master's – which are after all internationally renowned and a widely-emulated model of practice – will be recognised across Europe and that duration and content will not become over-riding issues. This is especially pertinent given the fact that UK stakeholders have overcome cynicism relating to the equivalence of learning outcomes resulting from continental Master's degrees.

However possibly the most important and encouraging development that has arisen from the introduction of these new degrees is the increased transparency

of qualifications which will strengthen the position of not just European universities but the European HE sector on an international scale.

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