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REPORT

Implementation of the Bologna Degree Structure in the European Higher Education Area

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List of Abbreviations

BFUG	Bologna Follow-up Group
DGES	General Directorate of Higher Education
ECTS	European Credit Transfer and Accumulation System
EHEA	European Higher Education Area
ENQA	European Association for Quality Assurance in Higher Education
ESG	Standards and Guidelines for Quality Assurance in the European Higher Education
EU	European Union
EUA	European University Association
EURASHE	European Association of Institutions in Higher Education
FQ-EHEA	Framework of Qualifications for the European Higher Education Area
HBO	Hoger Beroepsonderwijs (University of Applied Sciences)
IMF	International Monetary Fund
NARIC	National Academic Recognition Information Centres in the European Union
NQF	National Qualifications Framework
OECD	Organisation for Economic Co-operation and Development
QA	Quality Assurance
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNESCO-CEPES **UNESCO**	European Centre for Higher Education UNICE Union of Industrial and Employers' Confederations of Europe (later to become Business Europe)

Overview of the three-cycle structure

The main objective of the Bologna process since its creation in 1999 was the establishment of the European Higher Education Area (EHEA) to ensure more comparable, compatible and coherent higher education systems in Europe and beyond. Part of the reforms was the harmonisation of degree structures that should make mobility of students from one country to another easier. As stated by a 2010 report, systems with long first-cycle degree often had their first degrees located at Master's level, while at the same time systems with two cycles tended to view these degrees as being at Bachelor's level (Westerheijden et al. 2010a). This inconsistency posed a great challenge to European mobility of students, hence the necessity to initiate a non-binding intergovernmental process that could lead to the harmonisation of the degree structure was seen by many countries as beneficial. Besides its importance for mobility, the three-cycle model was also sought to support employability of students, since they could enter the labour market at an earlier stage. Additionally, the Trends I report (1999) states that a greater transparency and trust among higher education systems was needed if Europe's global attractiveness and competitiveness were to improve.

Table 1 - Two-cycle type degree structures before the implementation of the Bologna Process (1999)

Degree structure	Countries	Number of countries
Two-cycle type degree structure existing before 1999	Albania, Armenia, Bosnia and Herzegovina, Bulgaria, Cyprus, Czech Republic[1], Denmark, France, Georgia, Greece, Holy See, Iceland, Ireland, Latvia, Lithuania, Malta, Moldova, Montenegro, Norway, Poland, Portugal [2], Russia[3], Serbia, Slovakia, Slovenia, Spain[4], Turkey, UK-E/W/NI, UK-Scotland, Ukraine.	30
Two-cycle type degree structure not existing before 1999	Andorra, Austria, Azerbaijan, Belgium-Fl, Belgium-Fr, Croatia, Estonia, Finland, Germany, Hungary, Italy, Lichtenstein, Luxemburg, The Netherlands, Romania, Sweden, Switzerland, FYROM.	18

Source: Westerheijden et al. 2010a

The gradual convergence (or harmonisation) of national higher education systems towards a common degree structure (starting from 1999[5]) was initially based on two cycles (an

[1] Two-cycle structure existed in parallel with the traditional long one-cycle programmes but was not mainstreamed before Bologna.
[2] Two-cycle structure existed in the polytechnic sector.
[3] Two-cycle structure was introduced in 1992 alongside the long cycles, implementation was and is voluntary.
[4] Two-cycle structure existed, but about half the students followed integrated programmes.
[5] In addition to the four higher education Ministers (Italy, France, the United Kingdom and Germany) who initiated the process in 1998 in Sorbonne, the other countries that signed the Bologna Declaration in 1999 were: Austria, Belgium, Bulgaria, Czech Republic, Estonia, Denmark, Finland, Hungary, Ireland,

undergraduate and a graduate level), and later, during the Berlin and Bergen ministerial meetings (2003 and 2005 respectively) expanded to include a third cycle, namely doctoral education. The three cycles also included the so-called "short-cycle" as part of undergraduate education, but common standards were not formulated in this respect (Westerheijden et al. 2010a). Student progress, or vertical mobility, has been tied to the successful completion of the previous level of studies.

There are several misconceptions about the Bologna reforms. First, degree titles, such as the term 'Master' or 'Bachelor' were not explicitly specified by any official Bologna Process document[6] (Westerheijden et al. 2010a). Moreover, the adoption of the term "Bachelor" for the first cycle of studies still creates controversy in some countries as it is often misleading[7]. Secondly, there was neither a single model of degree structure, such as the 3+2 model, ever detailed as a mandatory form of application. The only information on this option was given by the Trends I report (1999), which showed that there is a potential for convergence of European higher education systems to two-cycles (Bachelor-Master) of a duration of three-four years and one-two years respectively with a pre-degree level existing in some countries (Trends I, 1999). As argued by Guy Neave (2003), the *collateral lectures* of the Sorbonne declaration (1998) put forward the French structure as the model of organisation. Nevertheless, the four higher education ministers (Italy, France, the United Kingdom and Germany) do not mention any numbers concerning the length of the degrees, only the expression *cycles*, as the French higher education system is organised in three cycles. Third, degree lengths were specified only in Bergen (2005) and merely state that first cycle qualifications should last a 'minimum of three years', while Master degrees should range between 60-120 ECTS credits (Eurodyce 2010). Therefore, in most cases when examining national degree structures we have to refer to typical or most frequent cases. However, it is very difficult to define what counts as a typical model, which is also visible in various contradictory information we obtained from different country reports.

- First cycle qualifications typically include 180 or 240 ECTS credits. (Short-cycle qualifications - within or linked to the first cycle typically include 90 or 120 ECTS credits).
- Second cycle qualifications typically include between 90 and 120 ECTS credits, with a minimum of 60 ECTS credits at the level of the second cycle.
- The use of ECTS in the third cycle varies. In some countries and institutions, ECTS is not used for the third cycle, in others it is applied only to some/all educational components (e.g. taught course units), whereas in others it is allocated to the whole degree programme.

Progress towards a common degree structures has been facilitated by a number of other measures, such as the introduction of the European Credit Transfer and Accumulation System

Latvia, Luxembourg, Lithuania, Malta, Lithuania, Iceland, Norway, Greece, Poland, Portugal, Spain, the Netherlands, Romania, Sweden, Slovenia, Slovakia and Switzerland.

[6] Although the term 'Master' does appear in the Bologna Declaration, but only as a reference.

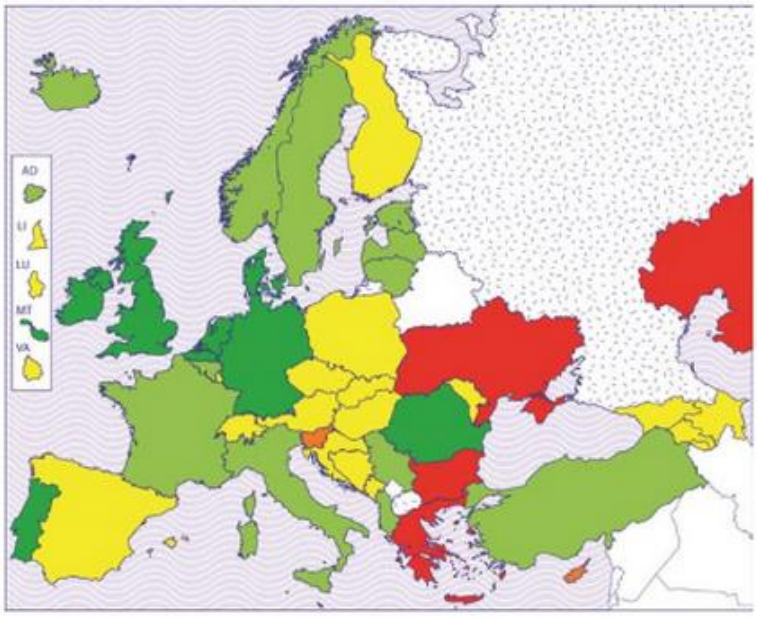
[7] Cf. the case studies section, namely the Portuguese case, for more details on this.

(ECTS), the adoption of Diploma Supplement (DS), and the establishment of national qualification frameworks in line with the qualification framework of the EHEA (QF-EHEA). These 'tools' have been introduced mainly to foster transparency and mutual recognition (EACEA 2012, p31). As shown by a recent study, the convergence of the three-cycle degree system was not the most prominent, but the adoption of the diploma supplement, followed by the introduction of ECTS (Vögtle, 2014). Nearly all countries (43) use ECTS or are in transition towards it (like Spain and Turkey). A few exceptions use ECTS-compatible systems, like Latvia, Lithuania, Sweden, and the UK-E/W/NI and Scotland (Westerheijden et al. 2010a).

At the moment, the degree structure includes the concept of qualification frameworks with an emphasis on learning outcomes. In 2005, during the Bergen ministerial meeting, the QF-EHEA was adopted. At the same time the ministers committed to the development of national qualifications frameworks (NQF) as a tool for describing clearly the differences between qualifications at all levels (cycles) of education. NQF's would mirror the guidelines set forth by QF-EHEA, that is, they should refer to the three-cycle structure and use generic descriptors based on learning outcomes, competences and credits (EACEA, 2012). The three-cycle system in Europe correspond to the cycles 1, 2, and 3 as specified by the QF-EHEA, and also correspond to qualifications at ISCED levels 6, 7, 8.

The Dublin Descriptors offer generic statements of typical expectations of achievements and abilities associated with awards that represent the end of each of the cycles (Cf. Appendix 1). The descriptors are phrased in terms of competence levels, not learning outcomes, and they enable to distinguish in a broad and general manner between the different cycles. A level descriptor includes the following five components: knowledge and understanding; applying knowledge and understanding; making judgements; communication; lifelong learning skills.

Figure 1 - Implementation status of NQF's in Europe (2010/2011)



	2012 Report*	2009 Report**
	10	6
	13	6
	18	21
	2	6
	4	9

Data not available

* *Source:* BFUG questionnaire, 2011.

** *Source*: Rauhvargers, Deane & Pauwels, 2009.

Scorecard categories

- Step 10: The Framework has self-certified its compatibility with the Qualifications Framework for the European for Higher Education Area
- Steps 7-9:
  - 9. Qualifications have been included in the NQF
  - 8. Study programmes have been re-designed on the basis of the learning outcomes included in the NQF
  - 7. Implementation of the NQF has started with agreement on the roles and responsibilities of higher education institutions, quality assurance agency(ies) and other bodies
- Steps 5-6:
  - 6. The NQF has been adopted in legislation or in other high level policy fora
  - 5. Consultation / national discussion has taken place and the design of the NQF has been agreed by stakeholders
- Step 4: The level structure, level descriptors (learning outcomes), and credit ranges have been agreed
- Step 3-1:
  - 3. The process of developing the NQF has been set up, with stakeholders identified and committee(s) established
  - 2. The purpose(s) of the NQF have been agreed and outlined
  - 1. Decision to start developing the NQF has been taken by the national body responsible for higher education and/or the minister

Source: EACEA 2012

Criticism of the Bologna degree structure

There is still some criticism concerning the value and applicability of the three-cycle degree structure. Most of the criticism concerns the employability of graduates, especially those finishing Bachelor studies. One of the key purposes of introducing the three-cycle system across Europe was to develop first cycle qualifications that will be accepted by the labour market (as stated by the Bologna Declaration). However, Master degrees remain more accepted in the labour market then Bachelor degrees. This is also the case in the public sectors, which seldom adjusted its career structures to the new three-cycle model, as well, as in the case of some strictly regulated professions where there is no role for holders of Bachelor qualifications. Furthermore, due to Bachelor degrees being shorter, distrust has been expressed over their academic content and adequacy, and whether they can actually develop the competencies needed by the labour market. There is a fear that the employability of graduates will be reduced, when compared to graduates of the longer cycle (Cardoso et al. 2006: 1).

Some countries are also quite reluctant to adopt the Bachelor as the minimum requirement to labour market entry. This happens for example in Finland, a country where there is a huge investment in education and in R&D and even before the implementation of the Bologna process, the Master degree was the requirement to access most professions. Therefore, there is a general feeling that if graduates enter the labour market with only a Bachelor degree, instead of a Bachelor + Master, the country is regressing in its efforts to qualify more and better citizens.

There is also rising criticism about the way individual institutions implemented the new degree structure. The majority of institutions in Europe (97%) have revisited their curricula to fit the new degree structures (Sursock and Smidt, 2010). In this regard, the most challenging aspect of the three cycle structure for the majority of institutions has been the introduction (or reform) of the first cycle, especially in countries where the first degree was very long. In some cases, the change has not led to meaningful curricular renewal, but rather to the reduction of the duration of a particular programme or compressing the same amount of learning into a tighter timeframe (Sursock and Smidt, 2010). Such implementation measures can create a too high workload for Bachelor students and in turn decrease completion rates or even pose a barrier towards mobility and internship periods.

At least in Portugal, it was reported that the reorganisation of the degree programmes led to “internal conflicts” and discussions among academics on the value of the subject they teach. Curriculum revisions, which are necessary parts of the reorganisation, require that the workload of each subjects/course is expressed in ECTS, and their sum corresponds to the degrees expected final credit point. Therefore, academics had to rethink the way they teach and what to teach, which brought up divergent views about the importance of each subject/course.

The relevance of the three-cycle structure is also questioned by professions that traditionally have favoured long, integrated training programmes, like architecture, dentistry,

engineering, medicine, pharmacy, law and veterinary studies (Trends VI). These fields find it increasingly difficult (or even not appropriate) to elaborate learning outcomes and offer qualifications on two different levels.

Another common concern focuses on vertical and horizontal mobility of students. Bad implementation of the three-cycle structure, with obstacles to go from Bachelor to Master level is pointed out by respondents in Spain and the Netherlands (Education International, 2012). This is often related to a binary differentiation between "academic" and "professional" programmes leading to a requirement that holders of professional first-cycle degrees are required to follow bridging programmes. As reported in Eurydice (2012: 37), in several countries, there may be no second-cycle programmes that provide direct continuation of some or all professional first-cycle programmes. Thus, while there may be theoretical access to second-cycle programmes, in practice, students are faced with additional requirements to gain admission to the second cycle. It seems that there is still a clear difference between theoretical access and actual admission, and "therefore a new discussion of the issue of access and admission might be needed to clarify whether the additional measures for admission to the second cycle should be seen as instruments to widen access or as obstacles to admission" (2012: 37).

According to this same report, in countries with binary higher education systems such as Belgium, Denmark and the Netherlands, bridging courses or examinations are seen as widening access to further studies. Here, the learning outcomes of the professional first-cycle degrees may not be suitable for a second-cycle programmes and thus a bridging system opens a learning path for those students. In approximately half of the countries some applicants holding a first-cycle degree from another higher education institution or in a different field of studies may be required to demonstrate previous work experience. In more than a quarter of countries, HEIs may require work experience for entering particular programmes. For example, in Estonia and Finland work experience is required for admission to Master's programmes at professional HEIs (polytechnics; *ammattikorkeakoulut)*.

Imlementation status of the degree structure

Today, the three-cycle model is widely adopted in European higher education. According to the most recent Trends[8] report 95% of institutions have implemented the new Bologna degree structure (this represents a significant rise since 2003 when the number of institutions having in place a two cycle structure was 53%) (Sursock and Smidt, 2010). Convergence was the strongest during 2004 and 2008 (Vögtle, 2014). However, there are still programmes outside the Bologna structure and they mainly exist in regulated professions, although not only (Rauhvargers and Crosier 2012). In these cases the combined length of the first and second cycle is usually chosen according to the requirements of the particular professions. As a result, in Belgium, Bulgaria, Denmark, Finland, Iceland, Luxembourg, the Netherlands, Ukraine and the United Kingdom, some second-cycle programmes are longer than

[8] Trends reports are published by the European University Association.

usual - up to 180 ECTS credits mainly in medicine, dentistry, pharmacy, veterinary medicine, architecture, law or theology (Eurydice, 2012). Thus, they could be described as integrated study programmes with a 3+3 formula.

Figure 2- Implementation of the Bologna cycles in 2003 (Trends VI)

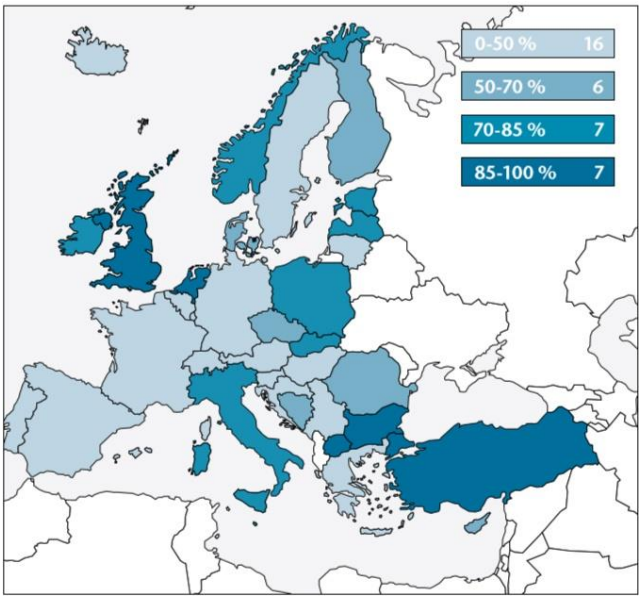


Figure 3 - Implementation of the Bologna cycles in 2007 (Trends VI)

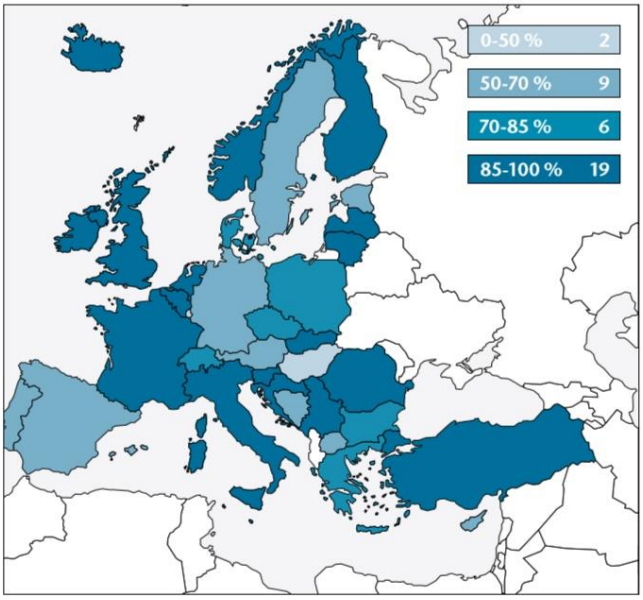
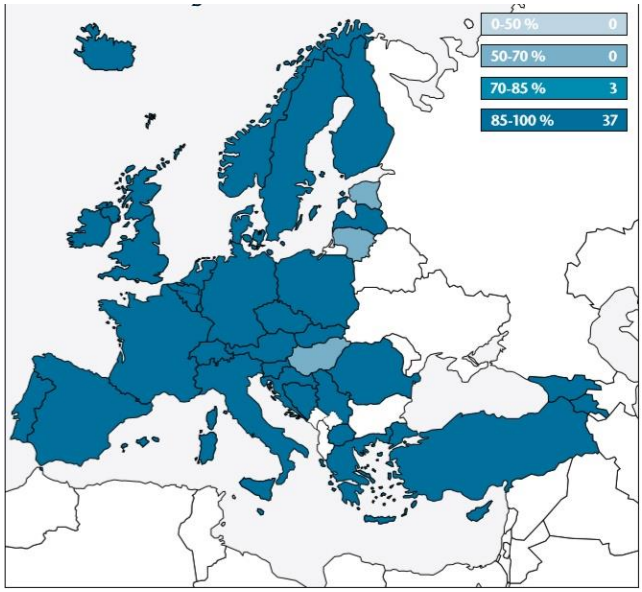


Figure 4 - Implementation of the Bologna cycles in 2010 (Trends VI)



While the two-tier structure is widely adopted its form remains very diverse. The implementation of the degree structure took a different road in almost all participating countries, which is largely related to the differences in their starting positions (e.g. the degree structure that existed before), the different organisational structures of their system (i.e. binary; unitary and/or integrated higher education systems), and their educational traditions, culture and history. Thus, at the moment there is a larger diversity of degrees and degree titles than before Bologna, in some cases because of the continued coexistence of old and new structures (Sursock and Smidt, 2010).

Distribution of programmes with different length

According to data from 2010 (see table 2) 20 higher education systems allow various combinations and do not enforce a single format. In practice the most commonly adopted model (in 19 higher education systems) is a first degree of 180 credits and a second degree of 120 credits, that is 3+2 format. However, in these systems other combinations are often legally possible. Five countries mainly use 240+120 credits, totalling six years of full-time study up to the Master's level, and two more systems have unique dominant models, respectively 180+90 credits and 240+60 credits (Westerheijden et al. 2010a).

Table 2 - Two cycle structure models adopted across higher education systems

Models	Countries	Number of countries
180+120	Andorra, Austria, Croatia, Czech Republic [9], Denmark, Estonia, Finland, France, Germany[8], Hungary, Holy See, Iceland, Italy, Liechtenstein, Norway, Poland[8], Portugal,	19

[9] Legally, various combinations are possible in these systems

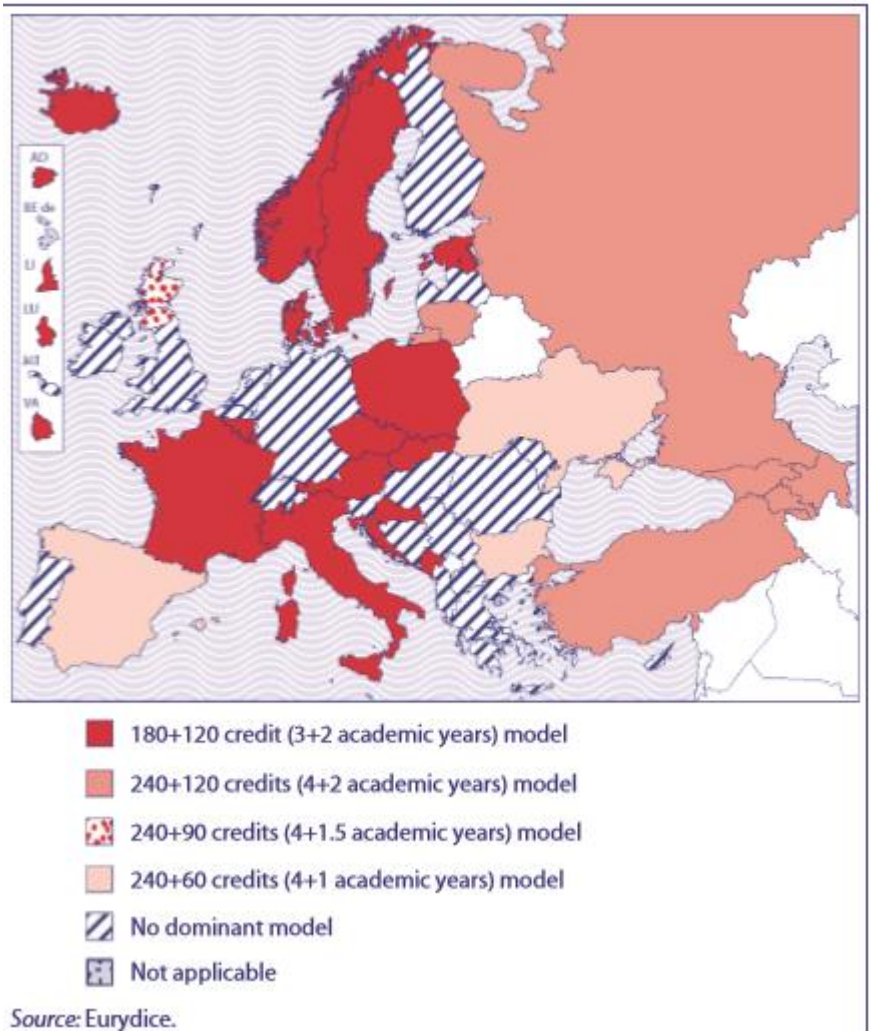
	Slovakia, Slovenia[8]	
240+120	Armenia, Georgia, Lithuania, Russia, Turkey	5
240+60	Bulgaria	1
240+90	UK-Scotland	1
Various combinations	Albania, Belgium-Fl, Belgium-Fr, Bosnia and Herzegovina, Cyprus, Greece, Ireland, Latvia, Luxemburg, Malta, Moldova, Montenegro, The Netherlands, Romania, Serbia, Spain, Sweden, Switzerland, FYROM, UK-E/W/NI	20

Source: (Westerheijden et al. 2010). Data missing for Azerbaijan and Ukraine

As visible in the table, adopting the structure (i.e. a two-tier system) was more common than adopting the format (i.e. number of years). Countries which had already a two-tire system with 4+1 format, like UK and Greece mainly kept their systems. However, almost all countries that newly introduced the two-tire system implemented the 3+2 format (Vögtle, 2014). The only exception is probably Ireland, which switched most, but not all, programmes from a 4+1 to a 3+2 format. What does not become visible from this table is that there are systems like the Netherlands and the UK-England/Wales/Northern Ireland, where a total of four years of full-time study to the Master's level (180+60/90 credits) is common (Westerheijden et al. 2010a).

A slightly different picture is offered by the Eurodyce (2010) report published in the same year. According to the report, Sweden has a dominant 3+2 model, Finland has no dominant model, and neither do Germany, Hungary, Portugal or Slovenia. At the same time the 4+1 model appears as the dominant one in Spain and Ukraine. Taken into account these inconsistencies, we can conclude that a typical model of degree structures is even less common then what is assumed by various reports. Where there is variation in programme structures, responsibility for their duration rests largely with the institutions and study fields concerned (Eurodyce, 2010).

Figure 5 - Dominant degree models adopted across higher education systems

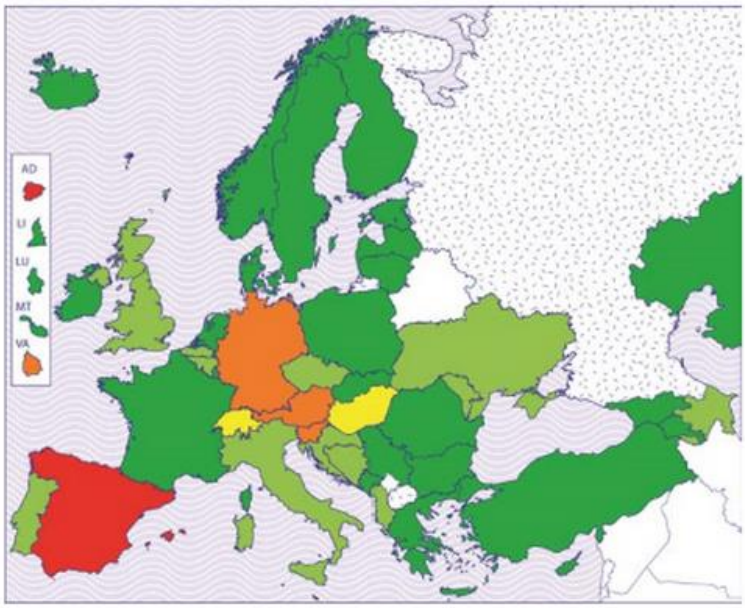


Source: Eurydice.

Distribution of student number per cycles

A more precise picture about the most dominant degree structure might emerge when looking at the percentage of students studying according to the new model. However, this data is much less sensitive towards variations in the status of implementation, i.e. whether students are currently in transition towards a new model or not.

Figure 6 - Stage of implementation of first and second cycle (2010/2012)



	2012 Report*	2009 Report**
	26	31
	13	10
	2	3
	4	3
	2	1

* *Sources:* Eurostat and BFUG questionnaire, 2011.
** *Source:* Rauhvargers, Deane & Pauwels, 2009.

Scorecard categories

- A t least 90 % of all ([37]) students are enrolled in a two-cycle degree system that is in accordance with the Bologna principles
- 70-89 % of all students are enrolled in a two-cycle degree system that is in accordance with the Bologna principles
- 50-69 % of all students are enrolled in a two-cycle degree system that is in accordance with the Bologna principles
- 25-49 % of all students are enrolled in a two-cycle degree system that is in accordance with the Bologna principles
- less than 25 % students are enrolled in a two-cycle degree system that is in accordance with the Bologna principles
  OR
  Legislation for a degree system in accordance with the Bologna principles has been adopted and is awaiting implementation

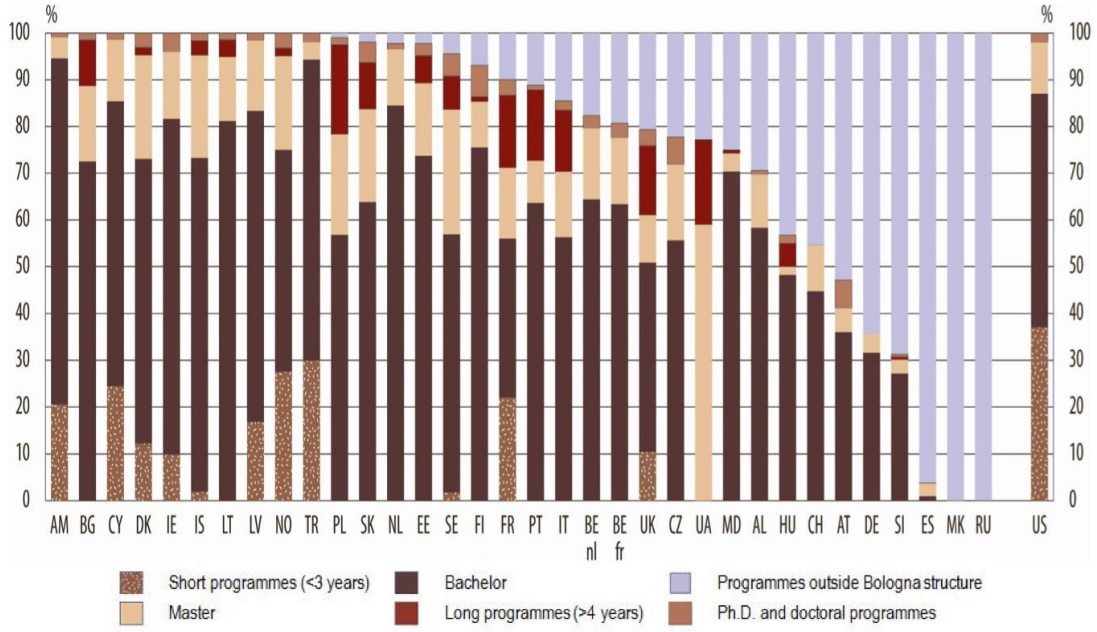
Notes: The indicator is defined as the share of students studying in the programmes belonging to the Bologna model (in %).

Eurostat data is reflecting the situation in 2009/10. Where Eurostat data was not available scores were estimated from results of the BFUG survey.

Source: EACEA 2012

The EACEA report examined whether students are enrolled in a two-cycle degree system and concluded that in just over half of the countries, the share of students studying in programmes corresponding to the Bologna two-cycle system is more than 90%. In another quarter of the countries this share is between 70-89% (EACEA 2012, p34). Thus, there are only 4 larger countries where still less than 50% of students study according to the Bologna two-cycle model, namely in Austria (47%), Germany (36%), Slovenia (31%) and Spain (4%).

Graphic 1 - Percentage of students enrolled in programmes following the Bologna three-cycles structure, by cycle, 2008/2009



Source: Rauhvargers and Crosier 2012: 4

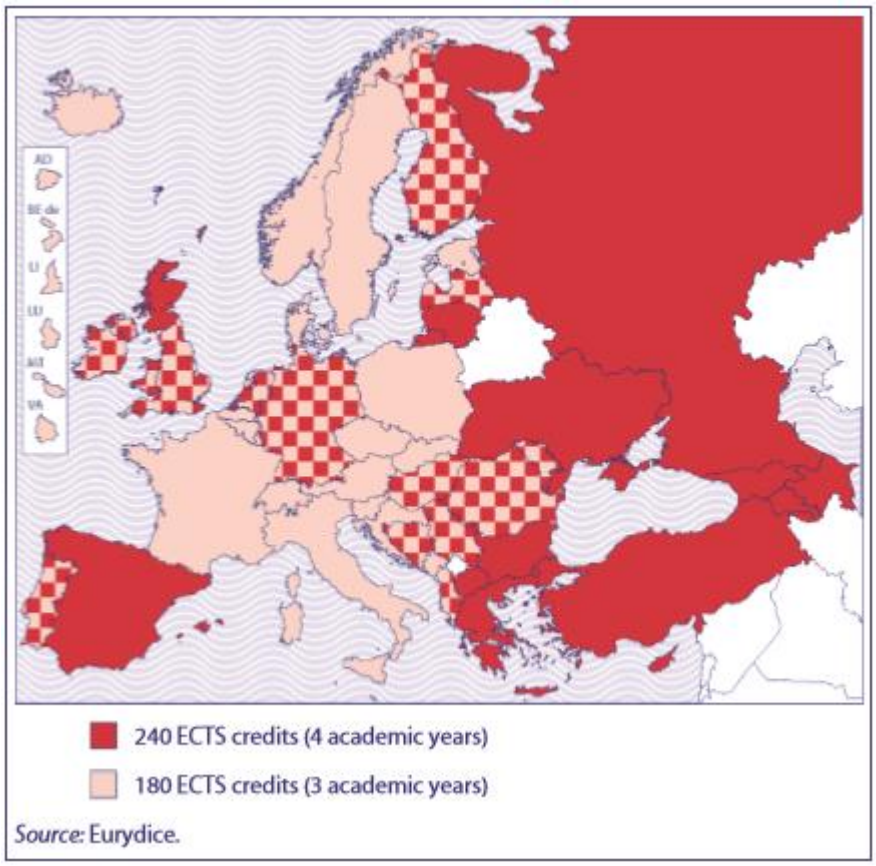
The report by Rauhvargers and Crosier (2012) offers a more detailed overview of student enrolments, although it aggregated older data (2008/2009). Based on the graph, we can observe a larger distribution of student enrolments across a wider type of degrees. Only 10 out of the 34 higher education systems had all students enrolled in programmes following the Bologna three-cycle structure.

Short-cycle programmes were reported from 11 countries, with enrolments representing between 2% (in Iceland and Sweden) and 30% (in Turkey) of total student numbers. The most common length of short-cycle programmes is 120 ECTS credits (two years) (EACEA 2012). In the majority of countries (about three quarters) there are also long programmes covering the first two cycles. The percentage of students enrolled in these types of programmes ranged from 1% in Finland and Moldova to 19% in Poland.

Bachelor

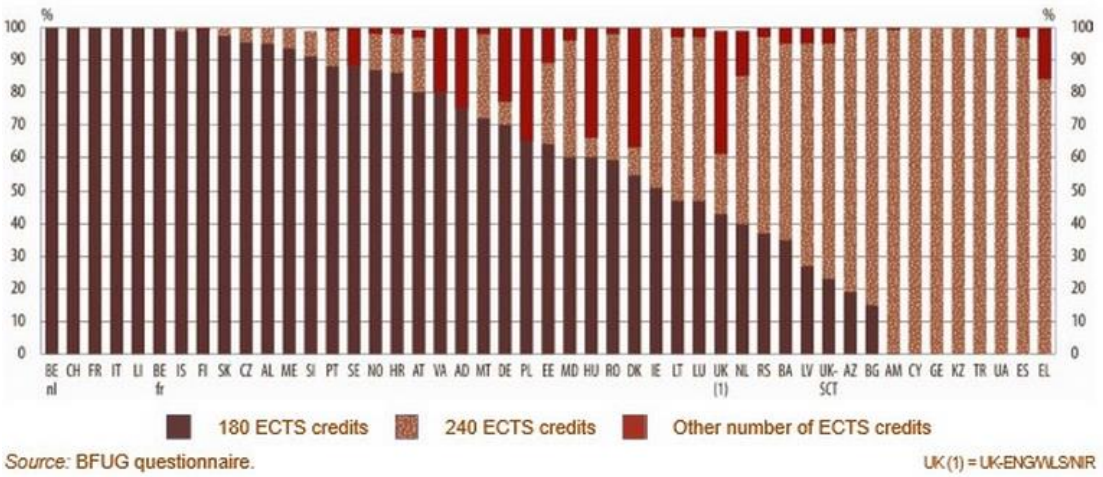
Figure 7 shows that the structure of Bachelor programmes can be differentiated into two main models: 180 ECTS credits in 24 higher education systems (up by 5 since the Lueven ministerial meeting) and 240 ECTS credits in 13 higher education systems (down by 2 since the Lueven ministerial meeting). In the remaining systems no single model dominates, but institutions and programmes draw upon both.

Figure 7 - Duration for the most common Bachelor programmes (2009/2010)



We get a more detailed picture by looking at the share of Bachelor programmes with different length (Graphic 2). The chart confirms that there is no single model of first-cycle programmes in the EHEA and that most countries have a combination of 180 ECTS and 240 ECTS or another duration in the first cycle. An exclusive 180 ECTS Bachelor model exists only in the Flemish Community of Belgium, France, Italy, Liechtenstein and Switzerland. Finland also shows a strong predominance of the 180 ECTS model, but in the professional higher education system longer programmes are the dominant model (which is not included in the report). A unique 240 ECTS model is found in Armenia, Cyprus, Georgia, Kazakhstan, Turkey and Ukraine, and is prevailing in more than 75 % of programmes in Azerbaijan, Bosnia and Herzegovina, Bulgaria, Greece, Spain and Latvia. The Netherlands should also be added to this group, because while the share of programmes of 240 ECTS programmes is around 45%, the share of students in this model is 70%.

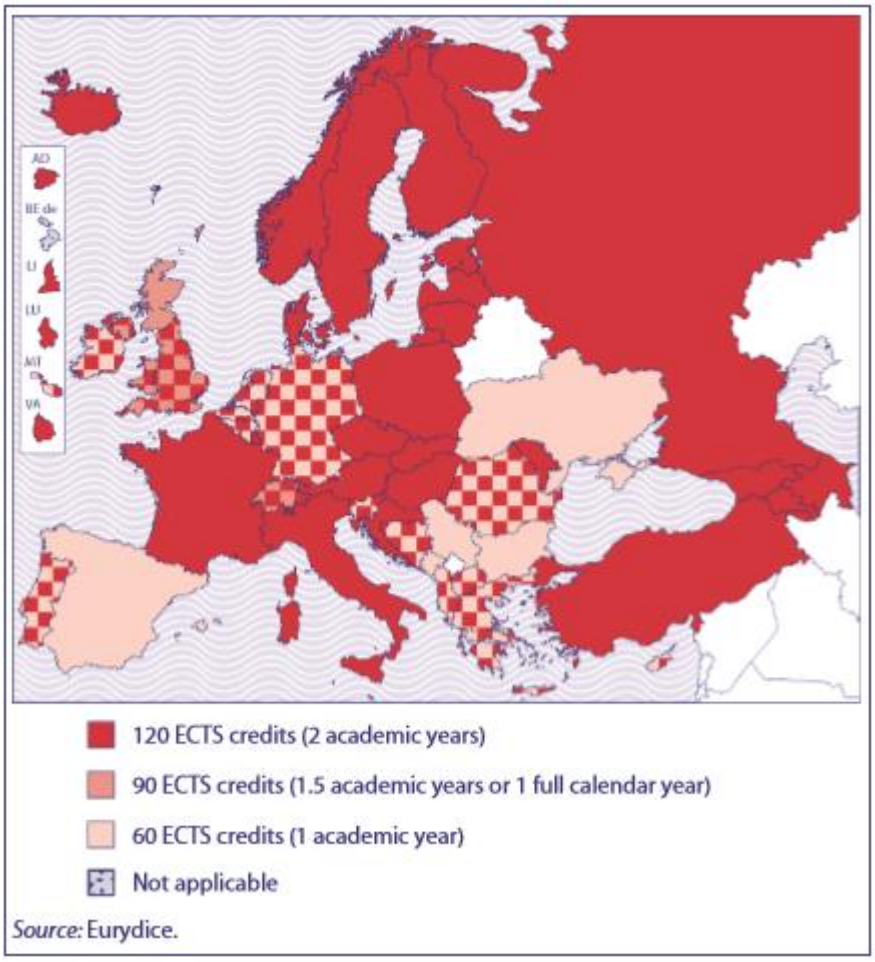
Graphic 2 - Share of Bachelor programmes with different durations (2010/2011)



Master

At the Master level (Figure 8) in 26 Bologna countries, the 120 ECTS credits model is most common (up by 3 since the Lueven ministerial meeting). However, many countries also offer Master programmes of a different length, like in Bulgaria, Serbia and Ukraine (60 ECTS). This is also the case for Montenegro, although the 60 ECTS Master is commonly followed by a 60 ECTS specialist second-cycle qualification. Switzerland and the United Kingdom fall between these groups as most of their Master degrees are assigned 90 ECTS. In the remaining countries, a mix of different lengths is offered with no dominant model emerging (Eurodyce 2010).

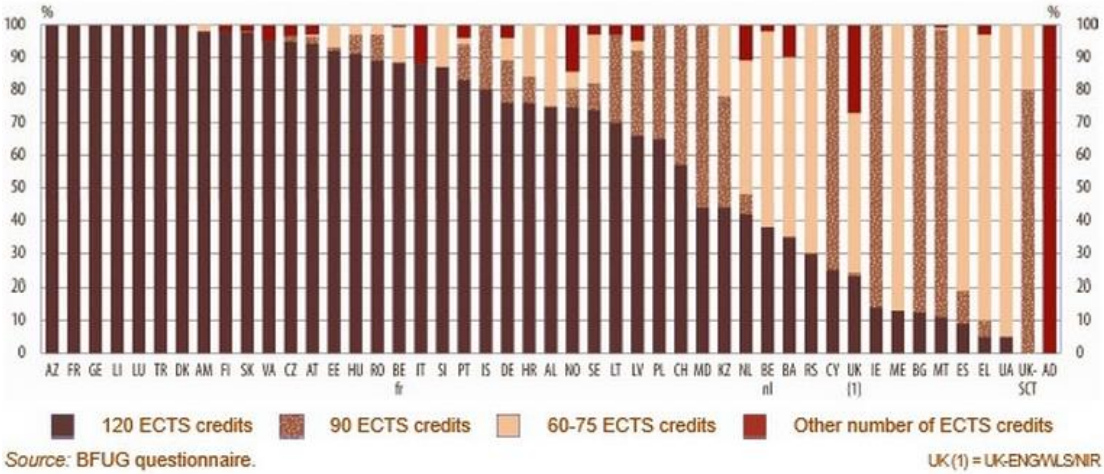
Figure 8 - Duration for the most common Master programmes (2009/2010)



Source: Eurydice 2010

A slightly different picture is offered by the Bologna Process Implementation Report (Eurydice 2010) that looks at the share of Master programmes with different length (Graphic 3). First, it reaffirms that the 120 ECTS model is by far the most widespread, being present in 42 higher education systems. It is the sole model in Albania, Armenia, Azerbaijan, France, Georgia, Liechtenstein, Luxembourg and Turkey, and is used in more than 75% programmes in a further 18 systems. The 60-75 ECTS model is present in 27 countries and dominates in eight systems. The 90 ECTS model is less widespread, but it is still present in 21 systems. In 17 higher education systems, there are also programmes with a workload other than 60-75, 90 or 120 ECTS credits. However, with the exception of Andorra, these programmes do not exceed 10% of provision.

Graphic 3 - Share of Master programmes with different durations (2010/2011)



A study conducted by EUA has revealed that institutions exercise much more innovation with regards to the Master degrees than Bachelor degrees, and found several different types of the former (not considering their duration) (Sursock and Smidt, 2010).

- *Academic Master*: used in binary systems to distinguish the university-based programmes from the Professional Master awarded by non-university HEIs
- *Consecutive or Continuation Master*: a Master undertaken immediately following, or very soon, after a Bachelor qualification in the same discipline
- *Conversion Master*: a Master undertaken in a discipline other than that studied in the preceding Bachelor
- *Joint Master*: a Master delivered by two or more HEIs awarding a single of multiple diplomas
- *Lifelong Master*: used in some systems to designate second cycle provision delivered quite separately from the Consecutive Master
- *Professional Master*: used in binary systems to distinguish the Master awarded by non-university HEIs from the university-based Master

Doctorates

The changes brought to Doctoral education have been less pronounced during the Bologna reforms. In the past few years they have mostly focused on the need to embed Doctoral programmes at institutional level by:

- Creating structures, such as Doctoral/ research or graduate schools, in order to provide a dynamic research environment and create reliable quality standards for supervision and support.

- Introducing more taught courses and training elements to broaden the perspectives and competence profile of Doctoral candidates, including e.g. transferable skills provision, in some cases with credits attached, and without losing the strong role of the mentor.

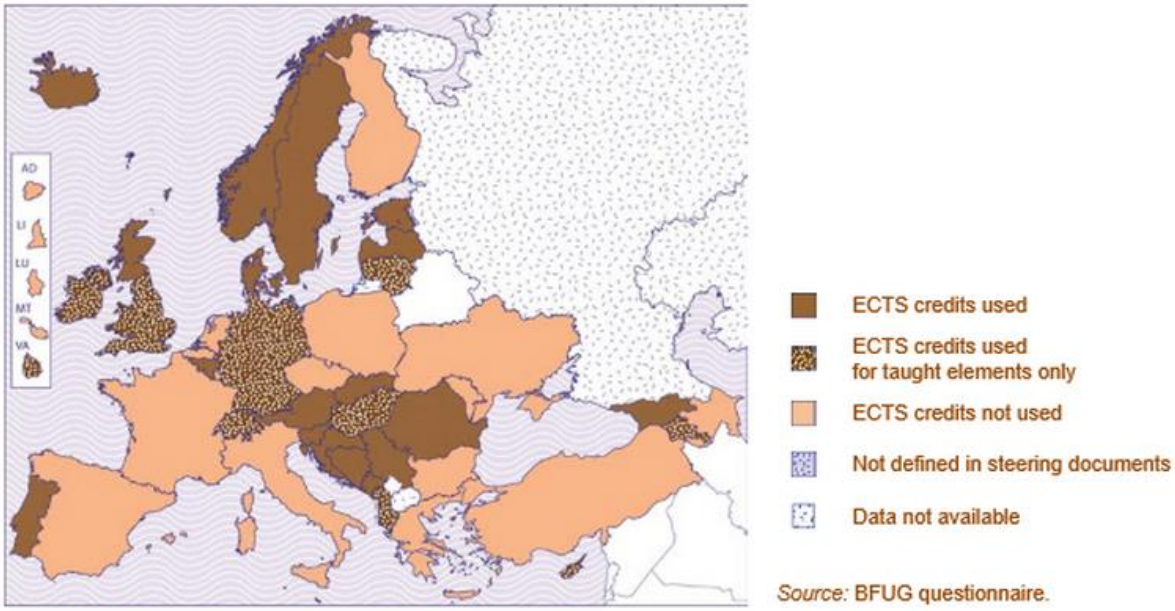
Table 3 - Duration of the doctoral programmes

Number of years	Countries	Number of countries
3 years	Austria, Belgium-Fl, Belgium-Fr, Bulgaria, Croatia, Denmark, France, Georgia, Greece, Hungary, Italy, Moldova, Montenegro, Norway, Romania, Slovenia	16
3-4 years	Bosnia and Herzegovina, Czech Republic, Ireland, Latvia, Poland, Portugal, Slovakia, UK-E/W/NI, UK-Scotland	9
4 years	Armenia, Estonia, Finland, The Netherlands, Sweden, Turkey	6
3-5 years	Albania, Germany, Iceland, Malta, Serbia, Switzerland	6
Other	Cyprus (3-8 years), Holy See (2-4 years), Lithuania (2-6 years), Russia (3+3 years), Spain (4-5 years), FYROM (min 2 years)	6

In most countries doctoral education is characterised as a mixture of structured programmes and traditional supervision-based independent research. Although, there are several countries where doctoral education is fully structured or where the traditional model dominates. Also, four countries (UK-E/W/NI, Ireland, Finland, and Portugal) make no attempt to define or regulate the length of doctoral studies, but the actual duration is estimated to be between three and four years.

Also the use of ECTS in doctoral studies has grown over time. Currently, 18 systems apply ECTS for the whole doctoral studies (see Figure 9) and another 10 systems for taught courses only. 18 other countries do not require ECTS to be used in doctoral education.

Figure 9 - Use of ECTS credits in doctoral programmes (2010/2011)

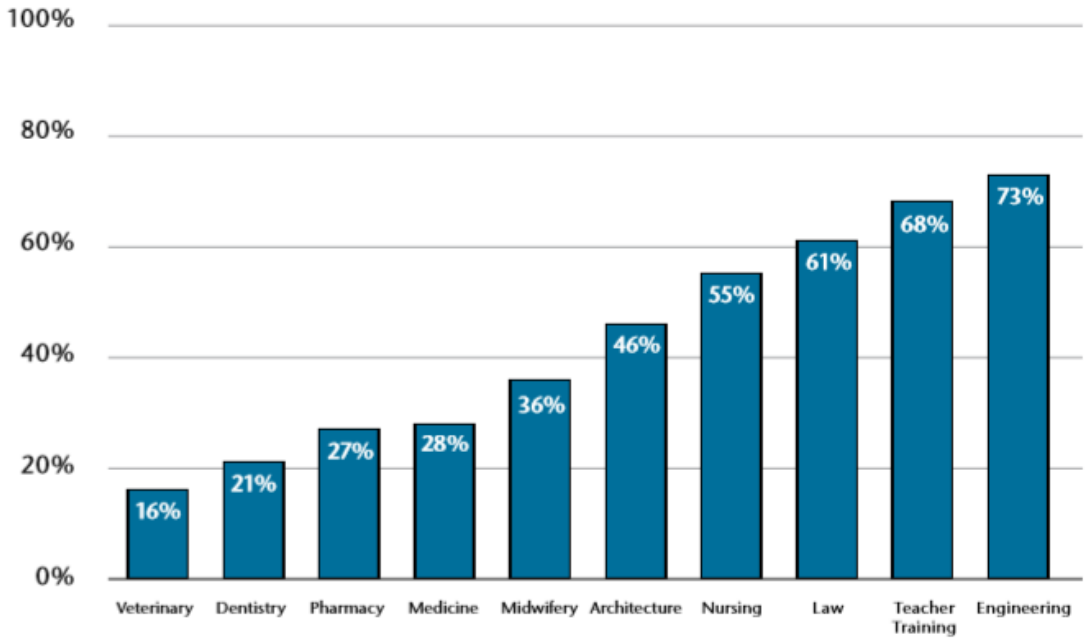


Exceptions from the Bologna degree structure

At the moment it seems as the new three-cycle degree structure is theoretically fully in place across all signatory countries of the Bologna agreement. However, in some countries, several study programs are exempt from the new degree structure. These fields usually have integrated long programmes which prepare for regulated professions and for which the EU directive 2005/36/EC (38) and/or national legislation requires five-six years of studies. Thus, in some countries professional fields such as medicine, dentistry, pharmacy, architecture and veterinary medicine and to a lesser extent engineering, law, theology, psychology, teacher training remain outside the Bologna degree structure (Sursock and Smidt, 2010, EACEA 2012). Only Armenia, the French Community of Belgium, Cyprus, Liechtenstein, and Sweden have every student studying in a three-cycle structures with no fields exempted (Westerheijden et al. 2010a).

Results of a survey conducted by EUA show the disciplines that are the least inclined to be taught according to the Bachelor/Master structure.

Graphic 4 - Percentage of professional fields that have adopted the two-tier model (N=831)



The responses to the Trends 2010 institutional questionnaire indicated that a majority of the institutions offering degrees in the fields of Dentistry, Medicine, Pharmacy and Veterinary Medicine do not currently apply the two-tier model. On the other hand, professional disciplines which are more likely to be offered according to a two-tier structure are: engineering, law, teacher training, and nursing (Sursock and Smidt, 2010). Professions often have strict regulations concerning the requirements for labour market entry, which contribute to the continuation of long cycles. Typically, these are integrated/long programmes (300-360 ECTS) leading either to a Bachelor or Master degree and which, in some countries, can still be better characterised by duration in years rather than credits. 31 higher education systems confirm the existence of such integrated/long programmes. They typically involve 1-8% of the student population (EACEA 2012). A more detailed overview of the fields of studies exempt from applying the two-tier model by countries is offered below.

Table 4 - Disciplinary fields excluded from the two-cycle structure

Study field	*Countries*	*Number of countries*
Medicine	Albania, Austria, Bosnia and Herzegovina, Croatia, Czech Republic, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Lithuania, Malta, Moldova, Montenegro, Norway, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Turkey, 'the Former Yugoslav Republic of Macedonia', UK-E/W/NI, UK-Scotland, Ukraine	31
Dentistry	Albania, Austria, Bosnia and Herzegovina, Croatia, Czech Republic, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Lithuania, Malta, Montenegro, Moldova, Norway, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, 'the Former Yugoslav Republic of Macedonia', Turkey, UK- E/W/NI, UK-Scotland, Ukraine	29
Veterinary studies	Albania, Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Germany, Hungary, Italy, Lithuania, Moldova, Norway, Poland, Romania, Serbia, Slovakia, Slovenia, Spain, 'the Former Yugoslav Republic of Macedonia', Turkey, UK-E/W/NI, UK-Scotland, Ukraine	24
Pharmacy	Albania, Bosnia and Herzegovina, Croatia, Estonia, France, Germany, Hungary, Italy, Malta, Moldova, Montenegro, Norway, Poland, Romania, Serbia, Slovakia, Slovenia, Spain, Turkey, 'the Former Yugoslav Republic of Macedonia'.	20
Architecture	Bulgaria, Estonia, Hungary, Italy, Malta, Moldova, Norway, Romania, Slovenia, Spain	10
Law	Bulgaria, Germany, Hungary, Italy, Poland	5
Engineering	Bulgaria, Czech Republic, Estonia, Greece, Slovakia (some programmes)	5
Theology	Germany, Slovakia, Slovenia, Croatia, Holy See	5
Teacher education	Croatia, Czech Republic (for primary and partly secondary school teachers), Estonia, Germany (in transition in some *Länder*), Luxembourg (for secondary school teachers)	5
Arts	Croatia, Greece, Hungary (crafts, design, performing arts, film), Poland (acting)	4
Psychology	Poland, Norway	2
Accountancy	Malta	1
Agriculture	Greece	1
Fish sciences	Norway	1
Pedagogics	Italy	1

Note: [1] Portugal: in integrated Master's programmes, a first-cycle degree may be awarded upon request.
Source: Eurydice (2007) checked by national experts.

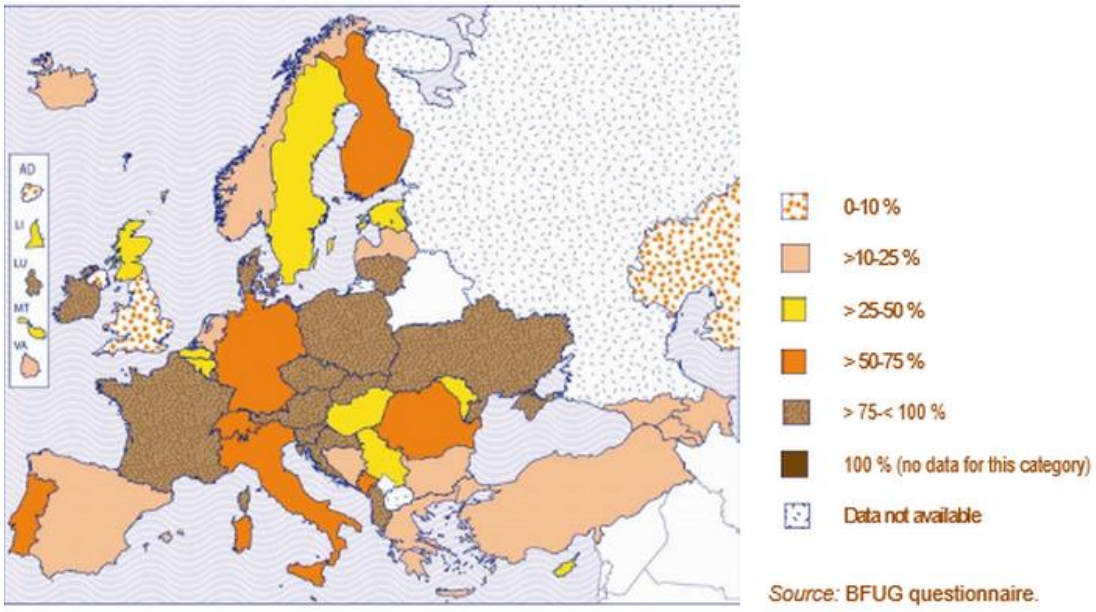
Table 4 reaffirms EUA's study and shows that the exceptions are concentrated in the medical field with medicine (31), dentistry (29), veterinary studies (24), and pharmacy (20) following different models in large numbers of countries. On the other hand, there are some strictly regulated professions that show more flexibility towards the two-tier model, e.g. architecture (10), law (5), engineering (5), theology (5), arts (4) and teacher education (4) (Westerheijden et al. 2010a). However, there is no common rule applying for all these professions across countries. Interestingly, while medicine is excluded from the common form of two-cycle structures in the UK and Ireland, where these structures have a long tradition,

Switzerland and the Netherlands have developed forms of undergraduate and graduate study programmes in medicine (see Probst, de Weert and Witte, 2008, Eurodyce 2012).

Mobility between cycles

The shares of first-cycle degrees holders that actually continue their studies in the second cycle differ greatly from country to country (see Figure 10). While in the majority of countries either 10-24% or 25-50% continue their studies in the second cycle, in 13 systems the share is between 75-100%. The Czech Republic reports that this tendency has gone too far with almost every student going on to the second cycle. At the other end of the spectrum, Andorra, Kazakhstan and the United Kingdom (England, Wales and Northern Ireland) report that 0-10% of the students continue in the second cycle.

Figure 10 - Share of first-cycle students continuing studies in a second-cycle programme after graduation (within two years) (2010/2011)



The estimated share of second cycle graduates who go on to studies in the third cycle is in the interval of 5-15%. The smallest shares are 0.8 % in Malta and 3% in Ukraine, and the highest shares reach over 20% (Moldova, Serbia and Switzerland) and even over 30% in the cases of Austria and France.

In the vast majority of countries, all first-cycle programmes theoretically give access to the second cycle. Yet, in some countries, there are either some (less than 25%) first-cycle qualifications that do not give access to the second cycle (Albania, Sweden and Ukraine) or some second-cycle qualifications that do not give access to the third cycle (Austria, Cyprus, Iceland, Montenegro, Malta and Serbia) (EACEA 2012). These barriers to vertical mobility are usually related to a binary differentiation between "academic" and "professional" programmes whereby

students from the latter programmes often have to take additional courses or exams in order to continue their studies in academic programmes.

Vertical mobility within binary higher education systems with a two-tier degree structure highlight the fact that several countries have problems in linking vocationally-oriented programmes to their Bologna model. The most common problem articulated is that many vocational and professional qualifications are offered in short-cycle programmes that require less than 180 ECTS (Eurodyce 2010). There are, however, a number of countries that can be said to have successfully integrated their professional programmes into the Bologna structures. In Denmark, for example, all vocational programmes (of 120 ECTS duration) are part of the first cycle (as short-cycle programmes). Other countries, such as Latvia and Hungary, have integrated their professional higher education programmes into the Bologna three-cycle structure (regard it as bachelor degree with 180 ECTS) and allow their graduates access to academically-oriented second-cycle programmes (Eurodyce 2010).

Case studies

Portugal

When analysing changes that have been happening in the last decade in the Portuguese higher education system and institutions, attention must be paid in the temporal proximity of the events taking place in the system. It is thus challenging to assess where change comes from, and, to a certain extent, it is even difficult to separate change coming from the Bologna process and changes coming from the implementation of the new legal framework for HEIs, Law 62/2007 of 10th September (RJIES), as this was implemented also in 2007 (Kauko and Diogo 2011).

The structure of the Portuguese higher education system

The Portuguese higher education system is a binary one, composed by both universities and polytechnics. At the present there are 40 public institutions and 94 private institutions (General Directorate of Higher Education, DGES 2012). The education system is regulated by the Education System Act of 1986 (Law 46/86). Over the years, amendments to it resulted in significant changes in the system, for example, the vocational and private subsectors were given autonomy and the degree system was redefined, adopting the three study-cycles model according to the Bologna process (respectively Law 115/97 and Law 49/05).

As for other continental higher education systems, the most complex challenge for Portugal in implementing a 'platform' of comparable degrees, was the transition from a binary system, which offered two different first cycle degrees - the *bacharel*, awarded by the polytechnics and the *licenciatura*, which until 1997 was a prerogative of universities - to a still binary system, which confers a common first cycle degree for both subsystems. This means that a two-tier degree structure already existed in both subsystems, although the one in universities was longer than the one in the polytechnics.

In the traditional (i.e. previous) system, polytechnics conferred the *bacharelato* degree after 3 years of study – usually shorter, technical professional higher education programmes, in areas usually excluded from university education. This could be followed by an additional period of up to two years leading to a degree of *licenciatura*, with the same legal value as a *licenciatura* conferred by the universities. Therefore, one can say that, even before Bologna, the Portuguese polytechnics already had a 3+2 structure, only for the undergraduate cycle, and they were not allowed to confer postgraduate degrees. This was indeed a very delicate issue, because, if not properly managed, these changes could threaten the organizational binary structure of the system. In fact, this was not only threatening to Portuguese higher education system, but to most of other binary higher education systems since they strongly contribute to increase academic drift in the polytechnic subsystem (Veiga and Amaral 2009). This is also supported by the trend of overlapping both functions and curricula of the degrees, providing that both academic and professionally oriented HEIs offer Bachelor and Master programmes.

Universities used to offer 4 or 5 years *licenciaturas*, i.e. Bachelors – 1st cycle degrees, 2 years Masters (2nd cycle degrees) and doctoral degrees that could take 4 years minimum to complete. *Licenciaturas* were 6 years length for Medicine, Pharmacy and Theology; and 7 years duration for military engineering. Bologna compressed all these years of study, and this is still not quite well accepted by the Portuguese society, especially for those who employ the "new" Bologna graduates as well as the students themselves who *distrust*, as mentioned above, the competencies and knowledge transmitted in shorter 3 years programmes.

The rational for implementing the Bologna degree reform

As explained in the following section, implementing the Bologna process in Portugal was a lengthy affair. In addition to the official aims and reasons stated in the Bologna Declaration and subsequent communiqués, Portugal decided to shorten its traditional degree structure to the general 3+2 model.

Following the lines of the Lisbon Strategy (2000), it underwent through major changes to transform its higher education system into a competitive one in a global society. However, this was not done without harsh criticism and with what Alberto Amaral (2005) called of hidden agenda, moved by economic imperatives. Thus, the main objective it is not anymore to increase mobility within Europe but rather to increase mobility of non-European students and researchers to Europe. In parallel, the concept of "employability" gains a different importance. "Employability" differs from the concept of "employment" – as it transfers and/or replaces the responsibility of the state to individuals (i.e. recently graduates)… However, a question remains: who is going to pay this "employability" (Amaral 2005)? Thus, the Portuguese government saw in this massive reduction of the 1st cycles' degree length an opportunity to finance fewer years at the Bachelor level while simultaneously collect tuition fees in the Master level. Bearing in mind the difficult economic situation of the country, it is not hard to imagine that most students continue to the following cycle of studies after finishing their 3 years Bachelors. This happens for several reasons: they cannot find a job with a 3 years Bachelor, not only because employers (still) suspect of the shortening Bologna training, but also due to the economic crisis. Also, the academic literature (both in Portugal and in Finland) reports that most of them do not feel prepared or confident to enter to the labour market at such early age.

Policy implementation

Starting officially in the academic year of 2006/07, the implementation of the Bologna process in Portugal was, from the beginning, a long and controversial process. Since 1995, there have been seven different Ministers in charge of HE in Portugal, who conditioned the stability of the system. Adjusting the legal framework to the Bologna declaration required a change of the Education System Act passed by Parliament, which defined the type and length of degrees each HEI could award (Veiga et al. 2005, p. 95).

This only happened in 2005 when a new government came into office with a clear parliamentary majority and was able to amend the law. Law 49/2005 from the 30th of August introduced decisive changes in the Education System Act (Law 46(86), namely the adoption of the Bologna model composed of 3 cycles of studies and the transition from a traditional teaching paradigm to a student-learning paradigm. During the period before passing the Law 49/2005 there were several discussions regarding the interpretation and implementation of the Bologna objectives by different stakeholders. On the one hand, the government passed legislation to introduce the ECTS system and the compulsory use of the Diploma Supplement, and appointed specialized task forces to work on the implementation of the law (Veiga et al. 2005, p. 95). On the other hand, in the absence of legislation or guidance from a superior level, Portuguese HEIs, being aware of international trends and developments performed by their European counterparts that had already implemented the Bologna process, became quite desperate due to delays in governmental regulation. As a result, they decided to follow trends set externally with varying success, depending on the level of institutional autonomy and willingness of the staff and proposed several ways to reorganise the system (Diogo 2009). At the same time, HEIs immediately attempted to implement the new system, considering that the Bologna-followers would have an advantage over the Bologna-laggards in the competition for students (Veiga and Amaral 2009, p. 58). This fact is seen by researchers as a key factor for the validity of their judgment that the implementation process "corresponds to implementation 'in form' rather than 'in substance', thus softening tensions between the European and the national and local levels" (*ibidem*, p. 57).

The implementation of the Bologna process gained new momentum after the government passed the Decree-Law (DL) 74/2006 (of 24th March), creating the necessary legal framework to adapt the old study programmes according to the Bologna degree structure. The government opened a call for HEIs to submit their proposals for adapting former degrees to the new degree structure. However, this was done within a period of only two weeks, which is considered to be one of the most nonsensical aspects in the way the process was executed. Furthermore, when the legislation was passed, the Ministry only approved the proposals that were in line with the patterns it believed to be more appropriate, without taking into account institutions' proposals. At the institutional level, this meant frustration, once institutions felt their efforts during the preparation time were not valued (Diogo 2009; 2014a). The fact is that HEIs did not have the time to organise aspects related with programmes' syllabus because there was a hellish bureaucracy. There was the need to answer to the DGES, which in turn did not know how to handle this as it was inundated with thousands of processes. There were too many programmes (courses) for the few available evaluation committees or experts to analyse the processes. In this way, most of HEIs waited, as usual, for the central power to decide. However, and even if the government usually takes a long time to decide, there was an initial target for 2010, and also a commitment and a change of governments (in 2005), creating the *need* and the urgency to rush/speed up the process. The following table depicts the number of proposals submitted and approved to the DGES in both types of subsectors, public and private,

universities and polytechnics.

Figure 11 - Bologna-type degrees approved by the Ministry

		Number of proposals				
		Presented		Accepted		
Type of institution	Type of degree	Adequacy	New	Adequacy	New	Total
Public universities	1st cycle	427	111	410	100	510
	Integrated master	113	10	82	9	91
	2nd cycle	547	814	511	758	1,269
	3rd cycle	245	329	188	310	498
Public polytechnics	1st cycle	450	285	425	141	566
	2nd cycle	2	615	0	316	316
Private institutions	1st cycle	515	495	460	233	693
	Integrated master	35	22	25	0	25
	2nd cycle	130	961	122	355	474
	3rd cycle	17	121	17	16	33
Army and police	1st cycle	22	0	22	0	22
	Integrated master	21	0	21	0	21
Total						4,518

Source: Veiga and Amaral (2012, p. 277).

As referred by the authors, by the end of 2009, the degree programmes approved were amounted to 4,870. "At public universities, Master's programmes – in all, some 1,269 – far outstripped first cycle degree programmes, which numbered 510. In all likelihood, a reflection of the legal restriction on the number of adapted first cycles, a restriction that did not apply to second and third cycles. However, the distribution between second cycle and first cycle degree programmes was inverted for public polytechnics (316/566) and the private sector (474/693). For public polytechnics, the low number of second cycles was probably an outcome of new legislation, which strengthened the link between polytechnics and labour market and raised the qualifications level required of their teaching staff" (*ibidem*).

In sum, despite the level of autonomy Portuguese universities have, there was a lack of institutional initiative compounded by fears and longings when it came to take action on the implementation process. Previous research shows that this was not a smooth process, and it happened much from the outside to the inside (Diogo 2014a). Figure 12 exemplifies the new degree structure for both universities and polytechnic institutes.

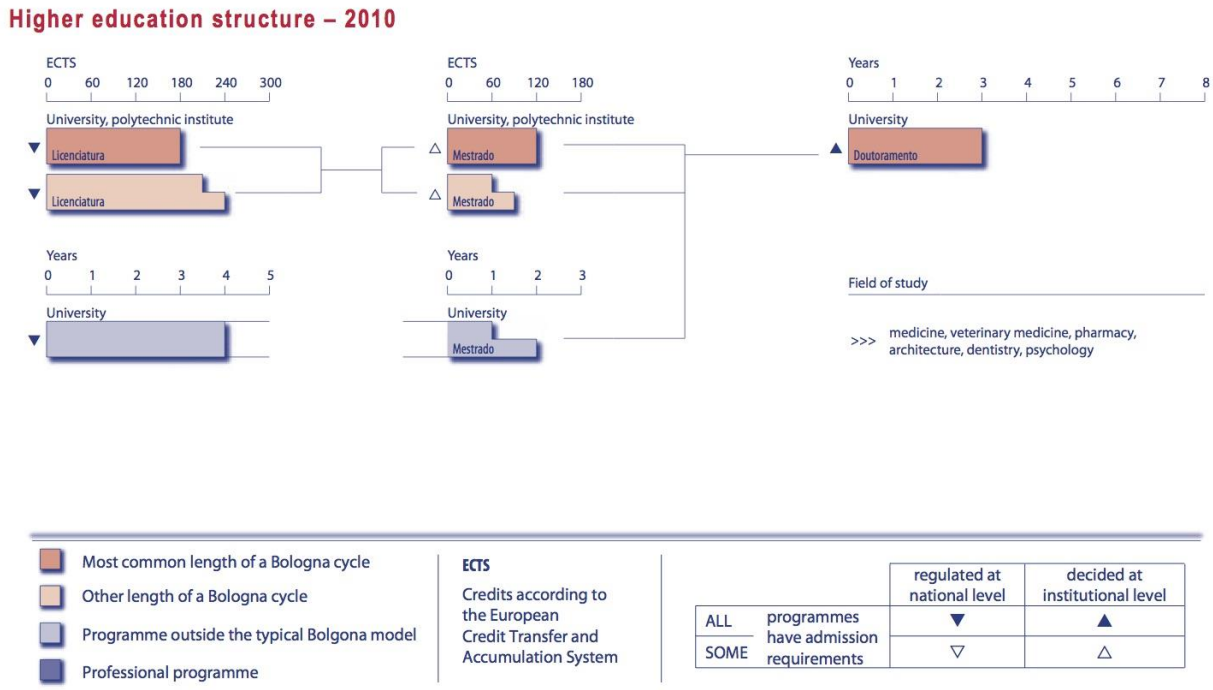
Doctoral Education

Structured doctoral programmes in line with the generic descriptors already existed before the implementation of the Bologna Process. Decree-Law No. 74/2006, of 24 March, integrated the existing structured doctoral programmes in the three-cycle degree system. It also approved rules on joint degrees.

In 2007-2008, 3,1% of higher education students were following a structured doctoral programme (11.344). The full time doctoral study programmes have a normal length of 3 to 4 years.

An increasing number of doctoral study programmes include taught courses, with the remaining including only independent research under the supervision of a professor appointed by the university. Doctoral studies integrate interdisciplinary training and the development of transferable skills, but it is very variable (BFUG 2012 Portugal).

Figure 12- The new degree structure formally implemented in the Portuguese higher education system, 2010



Source: Eurydice report (2010, p. 124).

Simultaneously, and also due to the uncertainty climate regarding the question of the operationalization of the binary system, one could observe from the polytechnic subsector, attempts to redefine their academic functions, thus becoming more similar to universities. Indeed, as Amaral (2003) concluded from the results of a national public inquiry run for the Portuguese Ministry of Higher Education, and after a number of seminars and meetings with the heads of HEIs and professors, it was even proposed that the distinguishing factors between the two subsystems should not exist. This distinction should rather be based on each institution's strategy and on its scientific and technological capacity. Thus, the dominant discourses proclaimed that both subsectors should be transformed into a single system. Within this unitary system, the distinguishing characteristics of HEIs would be their ability to provide training more focused on the transmission and creation of knowledge (regardless of its practical or theoretical character) or on their more vocational orientation. Nevertheless, when confronted with the hypothesis of breaking the current organisation of the system, this restructuration was seen as a mistake comparable to what happened in the 1970s, when the industrial and commercial schools were abolished (Gonçalves et al. 2003). Other suggestions on the length of studies and the type of degrees that HEIs could award were made, leading to the conclusion that it was difficult to reach consensus among all types of institutions with respect to the implementation of the Bologna system.

Veiga and Amaral (2009: 57) explain that, at a time when considerable academic drift was perceived in the polytechnic subsystem, it was necessary to carefully analyse the compatibility of the binary system with the two-tier degree framework, because the binary structure was endangered. Nevertheless, as the authors refer, "... when the legislation was finally passed it became clear that the government had aimed to preserve, or even reinforce, the binary system. This Ministerial decision was strongly influenced by the 2005 OECD recommendations, which attested that the system should consolidate and strengthen its binary nature. Thus, differently from what happened in other countries, the legislation defining the implementation of the Bologna process in Portugal was used by the government as a *coercive* tool to separate the two subsystems, rather than contributing to the blurring of their boundaries.

Table 5 provides an overview of the Portuguese system and key information on the main facts of the implementation of the Bologna process in the country.

Table 5 – Overview of the Portuguese higher education system and key facts after the implementation of the Bologna process

Number of students in higher education 2008/09	373 002
Most common starting age for 1st cycle students	17-18 years
Main categories of students monitored as part of social dimension policy	– Adults (non-traditional students) – Students from lower income families
Number of recognised higher education institutions	136
Quality Assurance Agency membership of the European Association for Quality Assurance in Higher Education (ENQA)	No
Name of Quality Assurance Agency membership of the European Quality Assurance Register (EQAR)	No
Other National Quality Assurance Agency	*Agência de Avaliação e Acreditação do Ensino Superior* (Higher Education Evaluation and Accreditation Agency)
Lisbon Recognition Convention	
Ratification	15 October 2001
Entry into force	01 December 2001

Regulation of the Recognition of Prior Learning	– Law 49/2005 – Decree Law 74/2006 – Decree Law 64/2006 – Decree law 88/2006
Status of Recognition of Prior Learning	Permitted, but not a right
National Qualifications Framework	Under development
Credit system in place	ECTS
Diploma Supplement	Issued to all students in the vast majority of study programmes, free of charge and in the language of instruction and/or English
National mobility benchmarks and/or targets	Double the number of Erasmus scholarships
Priority regions for attracting students	All countries/regions are of equal priority.

Source: Eurydice report (2010, p. 125).

Conclusion and outlook

Whether one look only at data from the European Commission, the results seem to bear out the idea that Bologna was progressing as the Ministry hoped. Indeed, it was difficult to find reports that recognised problems with the Bologna reforms (Veiga and Amaral 2012). However, following the Trends V report (Crosier et al. 2007), Portuguese higher education system found problems in the articulation between cycles and the flow of students between polytechnics and universities. "Other problems related to a certain lack of coherence between different types of Masters programmes under development and particular problems with integrated Masters' courses" (Veiga and Amaral 2012: 279). Also as noted by the authors, and in the same report, there are still employability problems due to the lack of broad debate on the matter between institutions, authorities, employers and the general public. "In Portugal, the absence of dialogue

gave rise to an apparent paradox between a reform that should have been marked by the responsiveness of higher education to societal demands on the one hand and to the demands of the labour market needs on the other, faced with the apparent difficulty (or unwillingness) of universities to put on first cycles seen as directly relevant to the labour market" (*ibidem*, p. 279). Portuguese HEIs saw Bologna as a window of opportunity to introduce pedagogic and curricular reforms without harnessing reform to mobility and employability. In addition to the degree reform that caused much confusion and frustration, the change towards a student-centred learning paradigm still remains to be completely fulfilled.

In Portugal, the Decree-Law 74/2006 that launched the Bologna process created just such a hierarchy, based on study duration, on the qualification level of academic staff and on the type of degrees universities and polytechnics award (Veiga and Amaral 2012, p. 280). In Portugal, it was reported a lack of flexibility in norms and regulations, a lack of preparation in academic services, lack of funding to accompany the reform, plus a degree of incoherence in institutional policies added further to the difficulties (*ibidem*). Some HEIs also reported low levels of student participation in such decision as the assigning of credits to courses as well as a lack of coordination between study cycles. Implementation and outcomes vary according to the roles different system and institutional level actors have and according to the field of study/discipline they represent. During the reorganisation of curricula in Portuguese HEIs, it could be noticed that there was competition among academics which aimed at maintaining traditional concepts of their disciplines in order to ensure the continuity of their jobs and to make the new Bologna Bachelors similar to the old ones in order to facilitate adaption. In parallel, one could also observe how professional associations represented the interests of their professions by adapting their statutes to maintain and/or upgrade the necessary requirements for the practice of different professions. Most professional associations in Portugal required a *licenciatura* degree (which used to last 4 or 5 years) to access the Orders (i.e. professional associations)[10].

Finland

Finland has a binary higher education system with both academically (14) and professionally oriented institutions (24), also know as *Ammattikorkeakoulut* (AMK)[11] (Finnish Ministry of Education and Culture, Opetus ja Kulttuuriministeriö – OKM 2013).

The ideal of equal educational opportunities for all citizens regardless of their gender, socio-economic status or location was one of the structuring principles of the development of

[10] Most professional associations in Portugal required a *licenciatura* degree, which used to last 4 or 5 years (before the implementation of the Bologna process) to access the Orders (i.e. professional associations). To maintain the demand level prior to the Bologna process, these bodies had to reduce the requirements to access the Order or to make amendments in their statutes, replacing the *licenciatura* degree by the Master degree. As the great majority of professional bodies believed that the minimum requirements should be maintained, it was necessary to find a commitment between the old and the new models. This is why most of (liberal) professions require the Master degree to access the Professional Order and consequently to practice the profession.

[11] Finnish polytechnics call themselves in English Universities of Applied Sciences. However, Finnish legislation and the Ministry still refer to them as professional oriented institutions (i.e. polytechnics). This is a discussion that goes beyond the scope of this report.

Finnish HE from the 1960s to present day. Finnish society has a very positive attitude towards education which has been considered important throughout the Finnish history. Universities and university degrees still retain a high social prestige in Finland (Välimaa 2001), while in Portugal, the value of a university degree has depreciated (Almeida and Vieira 2012, p. 155).

Although not always easy and/or uncomplicated, the implementation of the Bologna process in Finland was smoother than in Portugal. This is the general assumption taken from the literature review (Välimaa et al. 2007; OKM 2013; Diogo 2014; 2015). One of the possible reasons explaining this different experience relates to cultural aspects, namely due to the fact of looking at political changes through a perspective of continuity and evolution, rather than revolution.

Another possible explanation relates to the previous reforms that the Finnish higher education system has been through in the 1970s and 1990s. In this way, although there have been important changes introduced by the Bologna process, generally speaking, its degree of novelty/reform is not perceived as high as in Portugal. It is also a fact that both countries put different emphasis in the changes imposed by the Bologna process. For example, a central aspect of the 1999 Declaration that was (and still is) given more attention in Portuguese higher education than in the Finnish panorama was "(…) the transition from a passive education paradigm based on the acquisition of knowledge to a model based on the development of competences, both generic - instrumental, interpersonal and systemic - and specifically associated with the training area, where experimental and project components play an important role" (Decree-Law 74/2006: 2243). This different emphasis placed in this aspect of the Declaration should be understood at the light of different national teaching and learning traditions, as well as different students' profiles. Furthermore, as Välimaa et al. (2007, p.48) refer, among the objectives stated in Prague (2001) and Berlin (2003) Communiqués, only two of the original national policy concerns - the two-cycle system of degrees and the mobility of students - have remained on the national political agenda of the Bologna process. In fact, initially, and as it happened with most of the signatory countries, the priority with the establishment of the Bologna process in Finland was the adoption of the new two-tier degree structure, as well as the changes in the content and structure of curricula. This adoption of the new degrees' system has been facilitated by previous reforms in the system.

The structure of the Dutch higher education system

Between 1994 and 1997 it was reintroduced a new degree structure to most of the university fields of study, based on two main cycles: a three-year 1st cycle university degree (*kandidaatin tutkinto*) - the lower academic degree, and a higher 2nd cycle university degree (*maisterin tutkinto*) - the higher academic degree, which takes another two years to complete after the lower academic (1st cycle) degree (Universities Act 645/1997; Knutell 2002). The revision of degree programmes was made based on evaluations carried out by universities and the Council for Higher Education (Knutell 2002). The aims of this revision was to reduce graduation times and make degrees more broad, flexible and internationally comparable (Eurydice 2000: 466-468; Knutell 2002). It should be noticed that before the implementation of the Bologna process, Bachelor level degrees were not compulsory, and the majority of students went directly to the Master degree (FMEC 2013). As explained by Knutell (2002), due to the special nature of the Finnish labour market, degree students in most fields of study pursue a

Master's degree. The Master degree was (and still is) the minimum required degree to access most of professions in Finland, e.g. public sector posts.

The rational for implementing the Bologna degree reform

The excessive graduation time to complete studies has been one of the traditional concerns of Finnish higher education, particularly in universities (Välimaa et al. 2007: 46). Thus, it was believed that by reducing the length of degrees, each student would easily complete their degrees and leave HEIs. In fact, this has been a problem that "has been around forever" despite efforts to shorten the time for Finnish students complete their studies. However, in practice this did not happen yet, a fact that denotes one of the flaws in implementing the Bologna process in Finnish higher education, as it did not encourage students to take (only) the Bachelor's degree.

In addition to the prolongation of studies, other problems could be identified in Finnish higher education, namely the high dropout rate from higher education and the transition from higher education to work. Dropping out higher education has been considered a problem both at the system and at the individual levels (Välimaa et al. 2007: 46). The authors explain that this is a question of selection for higher education, as well as the social reproduction of society through education. Again, it was assumed that if students would have better chances to get a higher education degree, Bologna would then decrease the number of dropouts.

The transition from higher education to the world of work was another problem in the Finnish system. The new two-tier degree structure would make it easier to move from HEIs to the working life (Välimaa et al. 2007). Again, this is an aspect interrelated with the prolongation of studies and with the employability of university students holding "only" a Bachelor degree. Finnish system level interviewees acknowledged that this problem is not solved yet.

Mobility

It was also believed that the new degree structure, combined with the modularisation of studies and comparable degrees, would enhance the objectives of lifelong learning as well as to increase mobility of Finnish students. Traditionally, the mobility among Finnish students has been lower when compared to other (32) countries (Eurodata 2006).

Only recently, the number of Finnish students going abroad for a short-term mobility programme and/or for doing a whole degree has been increasing (Eurodata 2006; CIMO 2013). The main reason explaining low mobility of Finnish students relates to their age. Finnish students enter a HEI at an older age then their European colleagues and, as mentioned above, they tend to take longer to complete their studies. Many of them have already established emotional and professional relationships, making harder/more difficult to go abroad. As this pattern is changing, mobility is increasing. However, other factors need to be taken into account when analysing this subject. The Eurostudent 2005 report refers that students of engineering are less likely to complete a study-related period abroad than students of humanities and arts disciplines (2005: 151). Factors as foreign language skills have also a strong influence on the

international mobility of students, as well as supporting funding mechanisms and parents' educational background.

Policy implementation

As Välimaa et al. (2007) explain, faced with HEIs' resistance towards the idea of Bologna, the Finnish Ministry of Education and Culture (FMEC) promoted the process as the solution for the problems of Finnish (and European) higher education. Interesting is that, initially, the first reaction to the Bologna process was very negative in Finland. At the Ministry level it was even though that to not go on with the process, considering the reaction of HEIs (Diogo 2015). However, the situation, or the atmosphere within the higher education community changed: universities wanted to be among the first in implementing the Bologna declaration, and this has happened quite quickly after signing the Bologna declaration.

Although there is some variation in the degree of enthusiasm to describe the acceptance of the Bologna process in the country, there was a general consensus among system level interviewees, that despite initial negative reactions to it, there was a "positive" evolution regarding the way Bologna was perceived. In fact, the fast speed and *smooth* manner of implementing the process in Finland is also due to the way the process was conducted by the Ministry and with the willingness of Finnish HEIs in implementing the Bologna reform as well as every *European move* related/advised by the EU. The connection between Finnish higher education and European higher education was alive during the first momentum of the process (Välimaa et al. 2007, p. 47).

The new degree structure was implemented in all study fields in August 2005 and divided the former Master's level undergraduate degree programmes into separate Bachelor's and Master's degrees, i.e. the 1st cycle ending with the award of a Bachelor degree that is supposed to be relevant to European labour markets, and the 2nd cycle consisting of Masters degrees. There are two exceptions of this model, medicine and dentistry, which will keep a one-tier structure[12] (Hörkkö 2004). The national credit allocation and accumulation system in universities was replaced by a system based on the principles of the ECTS, namely a comprehensive analysis of the syllabus. The introduction of the concept of a standardised study week in the 1970s as a unit to measure the hours that students need for their studies (Välimaa 2005) simplified the implementation of ECTS.

Doctoral Education

Doctoral education is governed by national regulations which are prepared by the Ministry of Education and Culture. The central legislation concerning doctoral education consists of the Universities Act (558/2009) and the Government Decree on University Degrees (794/2004). In addition, the Ministry of Education and Culture governs the activities of

[12] It should be mentioned that this one-tier structure includes the degree of licenciate (*lisensiaatti*), i.e., in order to exercise the profession one needs to have the *license* to do it. As such, this degree corresponds to 6 years of study, at least, and, in this sense is above the Master's degree. It was an exception before the Bologna process (as Finnish students are required to have a Master's degree to exercise the majority of professions) and it continued like this after the implementation of the process.

universities and their doctoral education through several national guidelines. In practice, the Ministry of Education and Culture directs universities through performance agreements, the related indicator monitoring and feedback.

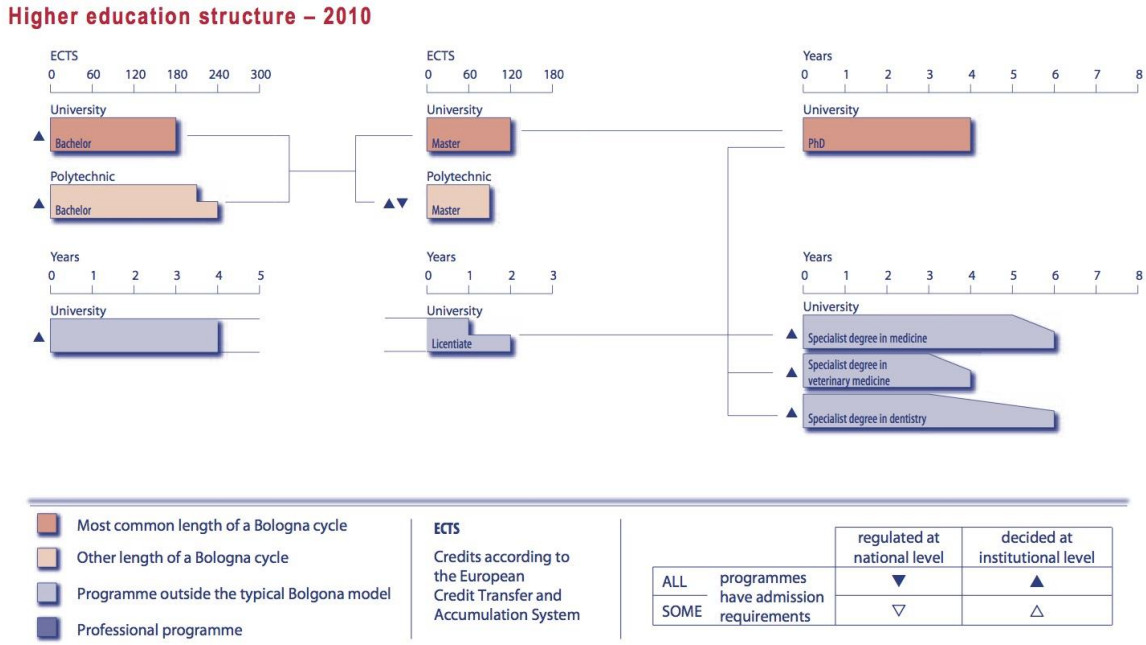
The existing doctoral degree education structures can be divided to: 1) Individual mentoring and taught courses; 2) doctoral programmes including taught courses, and 3) doctoral research schools for PhD students.

The graduate school system was established in 1995. The objectives of the graduate school reform included shortening the time it takes doctoral students to write their thesis, increase supervision and thought courses, and to enhance international cooperation. The duties of the doctoral programmes include the provision of systematic, high-grade, supervised and appropriately scheduled doctoral education. The education must offer students qualifications for both the position of researcher and other demanding expert positions.

Applications for a graduate school are made through the Academy of Finland, and they are approved by the Ministry of Education and Culture. The Ministry of Education and Culture allocates the research education resources set by the Academy of Finland to the universities, while operating appropriations are granted directly by the Academy of Finland. The total number of such doctoral programme positions in Finland (as of 1 January 2010) is 1600. Since the beginning of 2010 Finland has had 112 nationally funded doctoral programmes.

Some universities may use ECTS credits for describing the work load and requirement in some modules of 3rd cycle programmes. The legislation does not regulate 3rd cycle by ECTS credits (BFUG 2012 Finland).

Figure 13 - The new degree structure formally implemented in the Finnish higher education system, 2010



Source: Eurydice report (2010, p. 86).

To sum up, the challenges of adapting the Bologna process into the Finnish higher education reality were threefold: to make changes in national legislation, to change both the content and structure of curricula and to create national and institutional systems of accreditation (Välimaa et al. 2007, p. 48).

The Bologna process allowed reflections about the importance, content and purpose of the 1st cycle of studies. This was quite important for the system and Finnish society as the universities' Bachelor degree is considered "useless" or of few value without the Master degree. The traditional degree system, and more specifically the problem of the "useless" of the Bachelor degree, is connected with the lack of national and international mobility. As aforementioned, Finnish students still tend to spend many years at the university before entering the labour market. Bologna has not yet fulfilled this national purpose of reducing the prolongation of study times in Finnish universities.

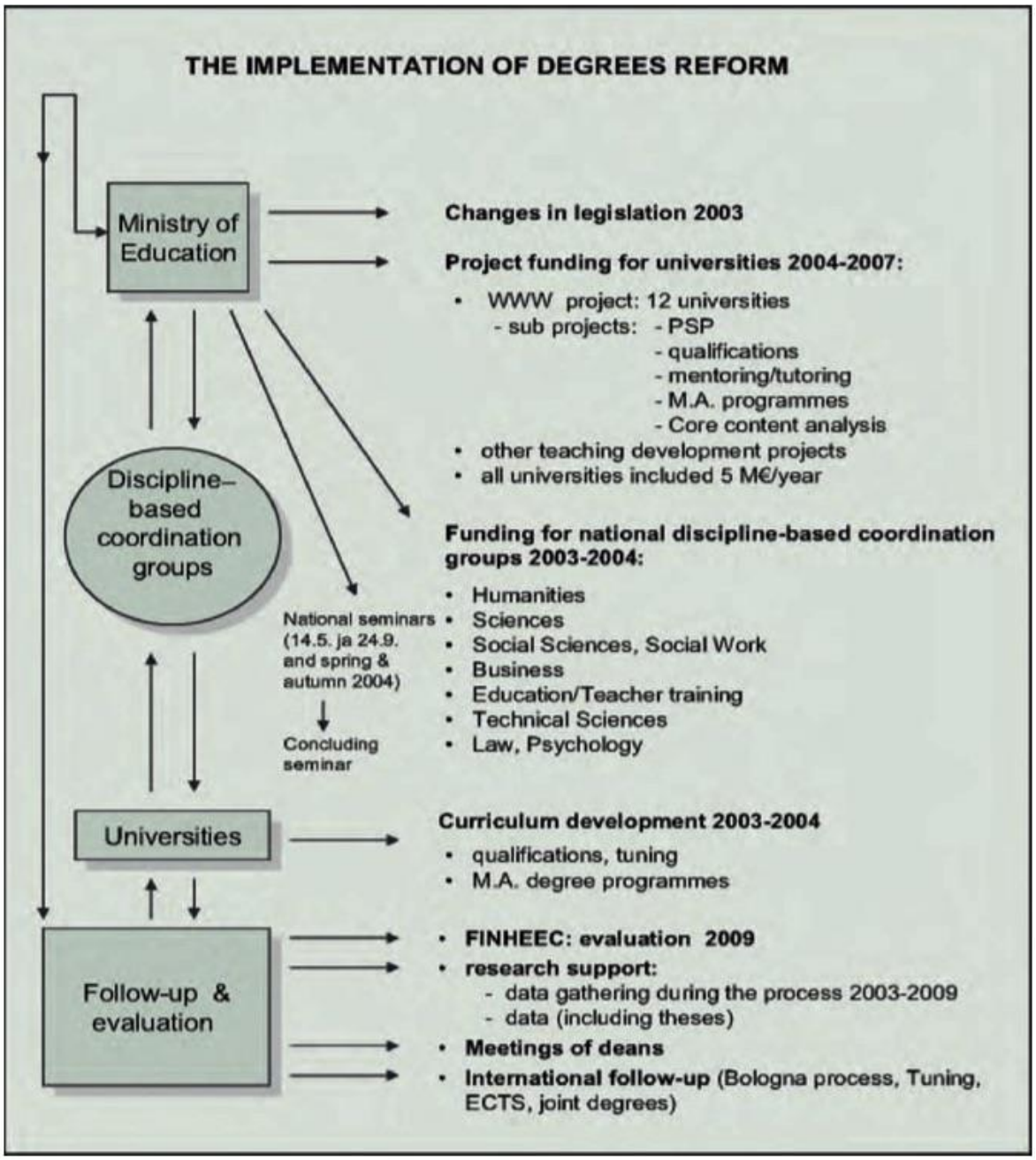
At this stage, two important aspects should be remembered. One relates to the international and national context where the Bologna process was implemented. The second, interlinked with this context, refers to the way the process was nationally organised and implemented. Finland joined the EU in 1995 and in 1999 had its first EU presidency, a fact that coincided with the signing of the pan-European Bologna Declaration. This proximity of events created a kind of *EU fever*, stimulating the Europeanisation of Finnish higher education. The expression "EU fever" is purposely used here with the intention of describing Finnish enthusiastic discourse on the importance and idea(l)s of joining the EU for the higher education context (Diogo 2015). This enthusiasm should be framed alongside with the political past of the country as well as the importance of external politics for the sector. These events created the perception that signing

and implementing the Bologna agenda would be a step forward in confirming the Finnish presence in the EU.

It is difficult to say with certainty whether it was this international environment/ external influence that inspired Finnish political leaders to organise the implementation process differently. The traditional way of policy-making in Finland, i.e., the common approach to establish change in the system is to associate the intended reform to a common national goal, which is implemented through experiments carried out in one or more HEIs (e.g. the establishment of the polytechnic subsystem in the mid-1990s). All experiments are then supported by follow-up studies (Välimaa et al. 2007). Nevertheless, implementing Bologna required a new political design, mostly because, as it has an international character, there could not be experiments at this level. Furthermore, the FMEC had already had a past experience, in the 1970s, of reformulating the degree system that did not granted the acceptance and/or sympathy the academic community.

The implementation of the Bologna process in Finland was thus based on three main methods: national committees nominated to prepare changes in legislation, national seminars on the Bologna process, and national coordination groups to make national curricula plans for each discipline (Välimaa et al. 2007: 48). We can say that the first two methods – national groups to prepare amendments in the legislation and national seminars about the process – did not differ much from the Portuguese procedures regarding the homologous situation. Nevertheless, it was this last method, the national discipline-based coordination groups, who made the national organisation of curricula for each discipline, which seems to have won public sympathy. Furthermore, whereas the "Finnish Ministry of Education has directed earmarked funding for nationwide field specific projects to facilitate the transfer to the new degree structure and promote universities' cooperation in implementing the reform" (Hörkkö 2004), Portuguese political coordinators, academics and administrative staff worked in a "voluntary" basis for the new organisation of the system. Figure 14 summarises the organisation and implementation of the new degree reform in Finnish higher education system.

Figure 14 - The implementation plan for the reform of university degrees in Finland



Source: FMEC 2014 (*in* Välimaa et al. 2007).

The implementation process of the Bologna declaration also enabled to perceive differences in institutions' internal dynamics and establish a correlation between their willingness to change, institutional autonomy and their leadership and governance models. Finnish interviewees referred that when universities are strongly centralised (e.g.: the University of Helsinki), and although there were national coordinator groups for each study field, these institutions made "their own" implementation process. On the other end of the spectrum, when institutions have more loosely steering procedures, faculties and departments ended up following the coordination groups' recommendations. As such, different results among groups were pointed out: some went further in their reforms, looking at the process as windows of opportunity to enhance additional objectives besides those demanded by the

Bologna declaration, but in other disciplinary fields only minimum efforts were made. It was also referred that, some disciplinary areas are easier to adapt (Physics) and rethink than others (Languages) - e.g. soft sciences vs. applied sciences (Diogo 2015).

Such as it has happened in Portugal, in Finland, the Bologna process was extremely important for the polytechnic subsystem. In the Finnish case, this importance is also spontaneously/naturally connected with the *EU fever*, i.e. European trends and belonging to the EU were crucial to the creation and development of AMKs.

Table 6 provides an overview of the Finnish system and key information on the main facts of the implementation of the Bologna process in the country.

Table 6 – Overview of the Finnish higher education system and key facts on the implementation of the Bologna process

Number of students in higher education 2008/09	291 547
Most common starting age for 1st cycle students	20-24 years
Main categories of students monitored as part of social dimension policy	No monitoring
Number of recognised higher education institutions	42
Quality Assurance Agency membership of the European Association for Quality Assurance in Higher Education (ENQA)	FINHEEC – Finnish Higher Education Evaluation Council http://www.finheec.fi
Name of Quality Assurance Agency membership of the European Quality Assurance Register (EQAR)	No
Other National Quality Assurance Agency	No
Lisbon Recognition Convention	
Ratification	21 January 2004
Entry into force	01 March 2004

Regulation of the Recognition of Prior Learning	Polytechnics decree 2003/352 and Universities act 2009/558
Status of Recognition of Prior Learning	Legal right
National Qualifications Framework	Under development
Credit system in place	ECTS
Diploma Supplement	Issued to all students, automatically and free of charge and solely in English
National mobility benchmarks and/or targets	6 % and 8 % of university and polytechnic students respectively to have had a mobility period abroad by 2015; 7 % of degree students from outside Finland by 2015; 20 % of students in PhD programmes from outside Finland by 2015.
Priority regions for attracting students	All countries/regions are of equal priority.

Source: Eurydice report (2010, p. 87).

Conclusion and outlook

Easily put, the degree reform of the Finnish higher education systems sponsored by the Bologna spirit aimed at solve several problems related with the length of the study cycles and with the long time Finnish students spend in universities. Nevertheless, the increasing competition in the labour market perceived by students leads to the feeling that they should acquire the maximum possible skills in order to be better equipped to compete both in national as well as international labour markets. In parallel, a different perspective clearly comes out in Finnish society: it would not be normal or even desirable that after having achieved a tradition in which most students reach a certain level of education (i.e. the average level of graduates is the Master degree) to step back to the Bachelor degree. As the system expands and becomes universal, it is expectable that the average level of education of a society is enhanced and not decreased. Moreover, one needs to bear in mind the role that education has in Finland and the attitude Finns have towards education and research. In this sense, the Bologna process does not comply with Nordic model of higher education. Furthermore, it completely contradicts the aims of the Lisbon strategy as well

as the EU discourse of enhancing life quality through a knowledge society. By other words, regardless of supranational policy, and international influences, the Finnish case shows that nation-states' traditions and cultures have been quite strong in the development of higher education policies. Additionally, or as consequence, at the level of the basic units, training is still thought and organised with this tradition in mind, i.e. the Bachelor degree is planned in continuation/alongside with the Master degree (Välimaa et al. 2007).

Netherlands

The structure of the Dutch higher education system

The Netherlands has a binary higher education system with both academically (14) and professionally oriented institutions (42), also known as "Hoger Beroepsonderwijs" (HBO). One of the main distinction between the two types of institutions is the fact that research is part of the mission of universities and they are publicly funded for it, while HBO's are not (Witte, 2006). There are also both public (56) and private institutions (7) that offer recognized and accredited study programmes (Stocktaking report, 2012). Within the university sector 9 institutions are comprehensive universities offering programmes in a wide range of disciplines, 3 provide mainly technical and engineering programmes, 1 is specialised in agriculture, and 1 Open University (Westerheijden et al., 2010b). A specificity of the Dutch higher education system is that most of the students study at HBO's, about 65%, while in universities only 35% (Huisman and Kaiser, 2001). HBO's also offer part-time study programmes[13] and short-cycle prgrammes (120 ECTS). Both types are designed for student in employment, by giving opportunities to them to obtain a higher degree. Experiments with short-cycle programmes have begun in 2006–2007 (Westerheijden et al., 2010b).

The rational for implementing the Bologna degree reform

Internationalisation was an important ambition of the Dutch higher education system for a long time. Dutch universities sought to become more attractive for foreign students, and students and graduates looked for possibilities to acquire international experience. The introduction of the Bologna three-cycle structure, especially with undergraduate and graduate degrees, was seen as one of the means to this end, since it was more compatible with other larger higher education systems. For example, previous university degrees were often not recognised at master level in the Anglo-Saxon world but as Bachelor degrees (Witte, 2006). In addition, the Bologna process was expected to tackle some of the national problems, like high drop-out rates. In this sense, a Bachelor degree was seen as being more attainable, at least for those students who struggled to finish long degree programmes. Secondly, the Bologna process was expected to increase the differentiation between institutions and study programmes (especially on the master level) and thereby creating more opportunities for students to obtain a degree in line with their preferences (Westerheijden et al., 2010b).

Policy implementation

[13] Part-time programmes account for about 20% of the total number of enrolled students at HBOs.

The Netherlands was among the first group of countries that signed the Bologna agreement in 1999 and also one of the first to implement the two-tier degree structure. In 2002 the national parliament approved the reform and enabled institutions to grant Bachelor and Master degrees from the academic year 2002/3 onwards. The implementation of the new degree structure took place rather smoothly and legislation was relatively uncomplicated. The process was characterised by a high degree of consensus orientation before putting the reforms into the higher education law. The most important stakeholders were regularly consulted by the Ministry (e.g. Association of Universities in the Netherlands - VSNU, the Association of Universities of Applied Sciences - HBO-raad, student representatives from the Dutch National Students Association - ISO and LSVb (Witte, 2006).

Based on several consultations a shared agenda with preconditions was defined (Witte, 2006):

- The degree reform should be achieved while maintaining the existing binary divide between universities and HBO.
- The reform process should seek equivalences between the traditional HBO diploma and the professional Bachelor degree, and the traditional university degree and the Master degree.
- The university Bachelor degree should be seen as a point for choice and mobility rather than as an exit point for university studies (requested by the student unions).
- The right of each student to continue after a university Bachelor at least with one Master without selection procedures (requested by the student unions).

Moving to the Bologna structure

Before Bologna, the Dutch higher education system was organized on the basis of one-tier structure, meaning that most university programmes lasted for four-year. In 1996, average time to degree was actually 5.8 years (Huisman and Kaiser, 2001). In the case of some fields, like engineering and sciences, the official duration or the programmes was five years. Following the introduction of the two-tier structure, previous university degrees were deemed equivalent to a Master degree (Westerheijden et al., 2010b). Degrees from the HBO sector were equated with a Bachelor degree. Although both academic and vocational programmes lasted for 4 years, their different treatment was justified by the different length of required prior secondary education to enroll in them. Entry requirement to academic programmes was 6 years of secondary education and 5 years for vocational programmes. This meant that in practice university entrants would usually be 18 and HBO entrants 17 years old (Witte, 2006). Thus, the Netherlands has successfully managed to transform its previous degree programmes into a two-tier model, while maintaining the binary division. University programes that previously lasted 4 years usually adopted the 3+1 model, while 5 year programmes adopted the 3+2 model. Professional fields, such as medicine, have also successfully transformed their study programmes into a Bachelor-Master structure. These programmes are structured on a three years' Bachelors programme followed by a three years' Master programme (Westerheijden et al., 2010b).

Most common form of degree structure after the reform

By 2007 all previous degree programmes have been restructured according to the two-tier model. On the Bachelor level the most common study programmes are four year long (240 ECTS) and amount to about 45% of all programmes. Three year programmes (180 ECTS) amount to about 40%, with the remaining 14% being offered with a different credit number (Stocktaking report, 2012). Since all the study programmes follow the two-tier structure there are no long cycle programmes outside the 180-240 credit range. Concerning the second cycle (Master) degrees one year programmes (60-75 ECTS) and the two year programmes (120 ECTS) are almost equally represented with 41% in the first case and 42% in the latter case. 6% of the programmes are 1,5 years long (90 ECTS) and about 11% have a different credit range.

When looking at student numbers, about 71% are enrolled in 4 year Bachelor programmes and 28% in 3 year Bachelor programmes. Only 1% of students is enrolled in Bachelor programmes with a different credit range. At the Master level, the majority of students (62%) study in one year programmes (60-75 ECTS), 28% in two year programmes (120 ECTS), 3% in programmes of 90 ECTS, and 7% in programmes with a different credit range (Stocktaking report 2012). For a more comprehensive overview see tables 7 and 8 below.

Table 7 - Representation of different types of Bachelor programmes in the system

Bachelor	**% of programmes**	**% of enrolled students in these programmes**
180 ECTS	40%	28%
240 ECTS	45%	71%
Other	14%	1%

Table 8 - Representation of different types of Master programmes in the system

Master	**% of programmes**	**% of enrolled students in these programmes**
60-75 ECTS	41%	62%
90 ECTS	6%	3%
120 ECTS	42%	28%
Other	11%	7%

Initially, the number of Master programmes was lower than the number of specialisations available in the previous model, but in 2008/09 there were already about 600 Bachelor programmes and 1,600 Master programmes. Student enrolment in Master programmes also increased substantially over the years from 4,800 in 2002, to 23,300 students in 2008/9 (Westerheijden et al., 2010b). The fact that four year Bachelor programmes dominate in the Dutch higher education system is related to vocational institutions whose previous 4 year programmes were automatically equated with the new Bachelor programmes at 240 ECTS.

While HBO's were eligible to establish Master programmes, contrary to the universities, these were funded only in certain 'priority' areas. They are concentrated in fields such as fine arts, health, and teacher training. Consequently, student numbers in HBO Master programmes are relatively low, and account only for 3% (12.000) of the total student numbers studying at these institutions (Westerheijden et al., 2010b).

Types of Master programmes

There are three different types of Master programmes in the Netherlands. The first ones are 'consecutive' Masters, which were established due to the legal requirement that every university Bachelor programme should be connected to at least one Master programme in which those Bachelor graduates can enroll without additional entrance requirements (Westerheijden et al., 2010b). Such Master programmes have been established in all universities for all Bachelor programmes usually with 60 ECTS. Secondly, there are the so called 'research' Masters that are based on separate accreditation criteria and are two-year (120 ECTS) long. The third type of Master programmes are the 'prestige' Masters. They are very selective graduate programmes, attracting talented students from everywhere, which universities can set up on their own initiative to profile themselves. These distinctive programmes contributed to more diversity in the university system, a strategy much supported by the universities themselves (Westerheijden et al., 2010b).

Doctoral education

Considering the third cycle there is a diversity of programmes. While the dominant form is still the traditional model (supervision-based doctoral education) in which case ECTS are rarely used, structured doctoral programmes are more and more common (Stocktaking report, 2012). The average length of doctoral education is about 5 years, however, this is not regulated on a national level.

Vertical mobility

According to national legislation, all students enrolled in any of the Bachelor programmes have access to Master studies. In reality about 10-25% of graduates actually continue their studies on the Master level (Stocktaking report, 2012). Students finishing a Bachelor programme at the university can be admitted directly to a consecutive Master programme if it matches their previous field of study. If that is not the case, the student might be required to attend a pre-Master programme to make up for the missing theoretical knowledge. The pre-Master tracks also facilitate the transition of HBO students to academic Master programmes. However, students have also the possibility to take several courses during their Bachelor studies to become directly admissible to the Master programme after their graduation (Westerheijden et al., 2010b).

Table 9 - Students with a HBO Bachelor degree continuing in a university Master programme

	2005	**2006**	**2007**
Total entrants in	14,434	18,762	20,888

university Master programmes			
Number of entrants with HBO Bachelor	3,969	4,616	5,087
%	27.5%	24.6%	24.4%

Source: 1cH2007 (VSNU). Table taken from Westerheijden et al., 2010b

Internationalisation and mobility

Since the introduction of the Bologna degree structure the number of international students in the Netherlands has consistently increased to about 70,000 in 2007/08 (about 8.7% of all Dutch students), which is higher than the EU average (7.2%). Out of this number about 2/3 of foreign students came for a diploma (mostly for a Bachelor) and about 1/3 participated in different mobility programmes. Outbound mobility is lower since only about 13,000 Dutch students registered for a diploma at a foreign higher education institution and 28,000 in mobility programmes (5,900 of the latter group took part in the Erasmus or Leonardo programmes) (Westerheijden et al., 2010b).

Table 10 - Foreign student enrollments in Dutch University Master programmes

	2005	**2006**	**2007**
Total number for foreign students	27,645	41,176	51,795
Foreign nationality with foreign previous education	4,614	5,736	7,040
%	16.7%	13.9%	13.6%

Source: 1cH2007 (VSNU). Table taken from Westerheijden et al., 2010b

Table 11 - Destination of Dutch Bachelor graduates

Year acquired Bachelor	**Total**	**Master at same university**	**Master at another university**	**Master not in Dutch university**
2002/03	1,994	92%	1%	6%
2003/04	5,575	87%	3%	9%
2004/05	12,820	86%	5%	9%
2005/06	19,182	85%	5%	10%
2006/07	22,123	78%	5%	17%

Source: 1cH2007 (VSNU). Table taken from Westerheijden et al., 2010b

As the last table shows, most students continue to a Master programme at the same university where they obtained their Bachelor degree. However, there is a visible downward trend since the introduction of the two-tier structure from 92% in 2002/3 to 78% in 2006/7.

There is also a visible growth of graduates who continue their Master studies abroad (Westerheijden et al., 2010b).

Tuition fees and student aid

All students entering at Bachelor or Master programme have to pay fees (regardless of their origin). Tuition fees are determined nationally, except for non-EU citisens, in which case institutions can determine themselves the amount of tuition. There are also specific grants and scholarships available for students, both merit and need based ones. The general criteria are that recipients of the scholarship have to be Dutch nationals and be under 30 years of age when enrolling in an accredited study programme (Stocktaking report, 2012). About 70% of all enrolled students at the Bachelor level receive some form of a scholarship and about 65% on the Master level. Students are also eligible to receive student loans to cover cost of living or the tuition fee. This amount can't be higher than a maximum of 5x the legally set tuition fees (presently 5x1.672 EUR = 8.360 EUR per year). About 25% of all students on any of the study cycles takes out student loans (Stocktaking report, 2012). Tax-benefits are also offered for families whose children are enrolled in a Bachelor or Master programme but are not eligible for grants.

Conclusion and outlook

Although the Netherlands had a binary higher education system in place with a one-tier degree structure, the transition to the Bologna three-cycle model was carried out considerably easy. The 4 and 5 year programmes at universities were split respectively in a 3+1 or 3+2 structure. For the HBO sector there were essentially no major changes, as the study duration in the old and new structure remained the same. Besides the rather simple splitting and renaming of existing programmes, the Bologna reforms evoked important curricular innovations by revising the content of their programmes. The initial idea was to offer broad, multi-disciplinary Bachelor programmes to be followed by more differentiated and specialised Master programmes. However, the breadth of the Bachelors was harder to accomplish and broad Bachelors remained a small part of the offer. In the vocational sector the main change included a stronger 'work-field orientation' within the curricula. For both, academic and vocational institutions, the goal is to go ahead with the formal separation between the two cycles and to set clear admission criteria and selection procedures.

Conclusions

The different dynamics in the higher education systems of the EHEA countries confirm what Scott (2012) referred about Bologna: a dynamic and open process with the capacity to transcend its original objectives. As such, it is difficult to distinguish between research on Bologna topics and research on (European) higher education more broadly (2012: 2). Furthermore, one must remember that the Bologna framework entails a complex network of actors and levels of action, and its implementation and consequences may be the result of a large number of different factors whose effects can prove difficult to isolate and interpret. One

should keep in mind that some of these visible changes might come from shifts in funding mechanisms, and not necessarily from the Bologna process itself (Diogo 2014a).

The data shows that the Bologna degree structure is highly adaptable, although the predominance of the Anglo-Saxon model of 3 + (1,5) 2 + doctoral studies is clear. Implementing this model has proved to be challenging in higher education systems which used to have 4/5/6 years Bachelors and in those systems with a binary organisation, such as the ones analysed here. Finland is a country where one finds contradictory opinions regarding the usefulness of the Bachelor's degree as a certificate for labour market. This divergence is connected, on the one hand, with the employability of students having Bachelor's degree and, on the other hand, with the skills and expertise the Finnish labour market and society require. On the other hand, the Netherlands has transformed its one-tier system rather smoothly without major difficulties in the implementation process.

Easily put, there is still the need for greater dialogue, involving governments, institutions and social partners, and employers. In parallel it is also reported the need to increase the employability of graduates with Bachelor qualifications, including in appropriate posts within the public service. Aims, such as the shift in the teaching-learning paradigm and to increase mobility are still debatable. More time and research needs to be taken to assess how far mobility has *de facto* increased and how the learning paradigm is being institutionalised. What seems to be common in every signatory country of the Bologna declaration, although not mentioned here, is the huge administrative and bureaucratic workload involved in the preparation and implementation of the Bologna process at the institutional level. This has fallen greatly on the shoulders of administrative staff, whose role is often forgotten.

The case-studies' analysis acknowledged the *instrumentalisation* of the Bologna process for multiple purposes. Portugal, Finland and the Netherlands are examples of countries where Bologna has been working as a lever to promote change (both at the system and institutional levels) and as an instrument for Europeanisation of higher education. For example, at the institutional level, strongly centralised HEIs took ownership of the implementation process, while in more loosely steered institutions, faculties and departments ended up following the coordination groups' recommendations. As such, different results among groups were pointed out: some went further in their reforms, looking at the process as windows of opportunity to enhance additional objectives apart from those demanded by the Bologna declaration, but in other disciplinary fields only minimal efforts were made. This is why it is important to compare data at the supranational and intuitional levels as there seems to be a *mismatch* between levels of analysis. More time would be needed to compare institutional reports.

HEIs behaviour should also be analysed according to the degree of autonomy each type of institution holds. The preceding analysis showed that although the signatory countries have used a culturally determined "common grammar" (Magalhães et al. 2013) and common policy tools (soft law) for implementing the Bologna process, national realities and circumstances are still stronger than the European aim of convergence. Nevertheless, considering heterogeneity as one of the main assets of European higher education, many researcher and policymakers see national commitments as one of the strengths for institutionalising the EHEA. In fact, and taking

into account the present environment of economic difficulties, it seems to be of paramount importance to increase cooperation and communication among HEIs as well as between national governments. Institutional autonomy continues to be the core tool to attain common targets, both nationally and internationally. Undoubtedly, Bologna opened the door for change and dialogue; it is about time to make the best of it (Diogo 2014a).

Appendixes

Appendix 1 - Dublin Descriptors

Qualification (within or linked to the first cycle)*	**First Cycle**	**Second Cycle**	**Third Cycle**
Qualifications that signify completion of the **higher education short cycle (within or linked to the first cycle)** *are awarded to students who:* • have demonstrated knowledge and understanding in a field of study that builds upon general secondary education and is typically at a level supported by advanced textbooks; such knowledge provides an underpinning for a field of work or vocation, personal development, and further studies to complete the first cycle; • can apply their knowledge and understanding in occupational contexts; • have the ability to identify and use data to formulate responses to well-defined concrete and abstract problems; • can communicate about their understanding, skills and activities, with peers, supervisors and clients; • have the learning skills to undertake further studies with some autonomy.	*Qualifications that signify completion of* **the first cycle** *are awarded to students who:* • have demonstrated knowledge and understanding in a field of study that builds upon their general secondary education, and is typically at a level that, whilst supported by advanced textbooks, includes some aspects that will be informed by knowledge of the forefront of their field of study; • can apply their knowledge and understanding in a manner that indicates a professional approach to their work or vocation, and have competences typically demonstrated through devising and sustaining arguments and solving problems within their field of study; • have the ability to gather and interpret relevant data (usually within their field of study) to inform judgments that include reflection on relevant social, scientific or ethical issues; • can communicate information, ideas, problems and solutions to	*Qualifications that signify completion of* **the second cycle** *are awarded to students who:* • have demonstrated knowledge and understanding that is founded upon and extends and/or enhances that typically associated with the first cycle, and that provides a basis or opportunity for originality in developing and/or applying ideas, often within a research context; • can apply their knowledge and understanding, and problem solving abilities in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study; • have the ability to integrate knowledge and handle complexity, and formulate judgments with incomplete or limited information, but that include reflecting on social and ethical responsibilities linked to the application of their knowledge and	*Qualifications that signify completion of* **the third cycle** *are awarded to students who:* • have demonstrated a systematic understanding of a field of study and Mastery of the skills and methods of research associated with that field; • have demonstrated the ability to conceive, design, implement and adapt a substantial process of research with scholarly integrity; • have made a contribution through original research that extends the frontier of knowledge by developing a substantial body of work, some of which merits national or international refereed publication; • are capable of critical analysis, evaluation and synthesis of new and complex ideas; • can communicate with their peers, the larger scholarly community and with society in general about their areas of expertise; • can be expected to be able to promote, within

	both specialist and non-specialist audiences; • have developed those learning skills that are necessary for them to continue to undertake further study with a high degree o	judgments; • can communicate their conclusions, and the knowledge and rationale underpinning these, to specialist and non-specialist audiences clearly and unambiguously; • have the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous.	academic and professional contexts, technological, social or cultural advancement in a knowledge based society.
Approximately 120 ECTS credits	Typically include 180-24-ECTS credits	Normally carry 90-120 ECTS credits – minimum of 60 ECTS credits at the second cycle level	Credits not specified

* This is not formally part of the Bologna Framework – In adopting the Bologna Framework, Ministers agreed that the Framework would include, within national contexts, the possibility of intermediate qualifications.

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