



Education and Culture DG

**CURRICULAR REFORM
PART ONE**

**The extent and impact of higher education
curricular reform across Europe**

**Final report to the Directorate-General for Education
and Culture of the European Commission**

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Part One: Comparative Analysis and Executive Summary



Center for
Higher Education
Policy Studies



Centrum für
Hochschulentwicklung



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This report does not reflect the views of the European Commission. The interpretations and opinions
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Center for Higher Education Policy Studies (CHEPS)
University of Twente
P.O. Box 217
7500 AE Enschede
The Netherlands

T +31 – 53 – 489 3263
F +31 – 53 – 434 0392
W www.utwente.nl/cheps
E j.m.file@utwente.nl

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STRUCTURE OF THE REPORT

The report is divided into four parts, each of which is submitted as
a separate volume

Part One

Comparative Analysis and Executive Summary

Part Two

**Summaries of national reports on curriculum reform
in 32 European countries**

Part Three

Five case studies on curriculum reform

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Curriculum Reform Survey Results

Curriculum reform project team

Project leaders

Prof. Jürgen Enders	CHEPS
Jon File	CHEPS

Senior Experts

Prof. Marijk van der Wende	CHEPS
Marc Durando	EUN partnership, Brussels

Senior Advisors

Prof. Patrick Clancy	University College Dublin
Prof. Vlasta Vizek Vidović	University of Zagreb
Dr. Don Westerheijden	CHEPS

Research Team

Research co-ordinator	
Prof. Jeroen Huisman	University of Bath

Researchers	
Dr. Per Olaf Aamodt	NIFU-STEP
Margarita Jeliaskova	CHEPS
Egbert de Weert	CHEPS
Dr. Johanna Witte	CHE

National correspondents

ESMU/HUMANE Network Coordinators

Nadine Burquel	ESMU
Ruth Walther	ESMU

Austria	Prof. Dr. Ada Pellert and Dr. Eva Cendon, Donau-Universität Krems
---------	---

Belgium (VL)	Prof. Luc Francois, Universiteit Gent
--------------	---------------------------------------

Belgium (French Community)	Prof. Anne-Marie Kumps, Université Catholique de Louvain
----------------------------	--

Bulgaria	Prof. Marko Todorov, University of Rousse
----------	---

Croatia	Prof. Ivan Vickovic and Prof. Vlasta Vizek Vidovic, University of Zagreb
---------	--

Cyprus	Andreas Christofides, University of Cyprus
--------	--

Czech Republic	Helena Šebková, Centre for Higher Education Studies
Denmark	Bente Kristensen, Copenhagen Business School
Estonia	Aune Valk, University of Tartu
Finland	Dr. Liisa Savunen and Hanna Manner, Finnish council of university rectors
France	Yves Chaimbault, Université des Sciences et Technologies de Lille 1
Germany	Dr. Peter Zervakis, Hochschulrektorenkonferenz
Greece	Antigoni Papadimitriou, Aristotle University Foteini Asderaki, Ministry of Education and Religious Affairs
Hungary	Prof. György Bazsa, University of Debrecen
Iceland	Prof. Jón Torfi Jónasson, University of Iceland
Ireland	Dr. Ellen Hazelkorn, Dublin Institute of Technology
Italy	Dr. Pasquale Mastrodomenico, Cristina Conti and Barbara Rosetta, Università degli Studi del Piemonte Orientale "Amedeo Avogadro" Lara Gadda, Polytechnic of Milan
Latvia	Ojārs Judrups, University of Latvia
Liechtenstein	Christoph Jenny, Ministry of Education Marion Steffens, Hochschule Liechtenstein
Lithuania	Prof. Birutė Pociūtė, Vilnius University
Luxembourg	Prof. Lucien Kerger, Université du Luxembourg
Malta	Prof. Peter Mayo, University of Malta
Netherlands	Christiaan van den Berg, Association of Universities in the Netherlands
Norway	Bjørn Berg, Norwegian Association for Researchers
Poland	Barbara Godlewska-Bujok, Warsaw University
Portugal	Dr. Luísa Cerdeira and José Tomás Vargues Patrocínio, Universidade de Lisboa
Romania	Prof. Adrian Miroiu, National School of Political Studies and Public Administration
Slovakia	Jozef Jurkovic, Ministry of Education
Slovenia	Dusa Marjetic, Ministry of Education, Science and Technology
Spain	Dr. Maria J. Vieira, Universidad de León
Sweden	John Fürstenbach, Royal University College of Music in Stockholm

Turkey	Prof. Cem Alptekin, Bogazici University
United Kingdom	Prof. Ray Land, University of Strathclyde

Research and Administrative Support

Maya van de Berg	CHEPS
Jarno Deen	CHEPS
Marc Kaulisch	CHEPS
Andrea Kottmann	CHEPS
Aleksandra Kovaç	CHEPS
Carole Probst	CHEPS
Christoph Affeld	CHE
Gösta Gabriel	CHE
Simone Schröder	CHE
Tone Carlsten	NIFU-STEP
Nils Henrik Solum	NIFU-STEP
Francoise Bollard	CNE
Marlies Golbach	CHEPS
Gillian Luisman	CHEPS
Karin van der Tuin	CHEPS
Tanja Ologe	CHE

On-line survey management

Paul Greim	Interface, Kassel
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The extent and impact of higher education curriculum reform across Europe¹

1. Introduction²

This report details the findings from a study commissioned by the Directorate-General for Education and Culture of the European Commission (2006 – 1394/001 001 S02-081 AWB). Its major objective was *to gain more insight into curriculum reform developments at the level of five selected study areas – so far under-researched – to evaluate progress made and to try to discover “what works”*. The five study areas were medicine, law, engineering, teacher training and history. The general objective was translated into four research questions:

- What is the general national picture regarding curricular reform, notably with respect to the five study areas and what evidence is available on their impact?
- What is the state of the art of reform in the five study areas at the level of the higher education institutions?
- What are – according to respondents at the level of the programmes in the five study areas – the impacts of the reforms?
- What are references of good performance in terms of the impacts?

To answer these questions, the research team used three interrelated tools. First, national reports were written by (national) correspondents to paint a picture of curriculum reform in the five study areas within their national contexts. Second, a questionnaire was developed and sent around to deans and directors of studies in the five areas of study to gather their views and perceptions of the reform. Third, for each of the five areas of study – based on the available information – a case of a good or interesting practice was selected.

The project has been coordinated by the Center for Higher Education Policy Studies (CHEPS), University of Twente, the Netherlands and carried out by a consortium consisting of two sister research centres that together with CHEPS are members of HEDDA – the European association of research centres with expertise in higher education research: the CHE Centre for Higher Education Development in Germany, and NIFU STEP in Norway. The fourth partner in our consortium is the European Centre for Strategic Management in Universities (ESMU) that brings with it not only expertise in higher education management and European policy developments but also two extensive European networks – HUMANE and DEAN.

The structure of the report is as follows. The next chapter (chapter 2) puts the research project and question in the current political context and address methodological issues that are intertwined with the commissioned project. The third chapter details the general national state of the art regarding curricular reform along the dimensions: two-cycle structure, competence-based learning, flexible learning paths, recognition and mobility. The data stem from the reports written by national correspondents. The fourth chapter details the findings for the five fields of study. First, some general survey findings are presented, followed by in-depth descriptions by field of study. In these descriptions we make use of data from the reports of national correspondents and from the case studies. Chapter five summarises the findings and formulates the conclusions and points for discussion.

¹ This part of the report was written by Jeroen Huisman and Johanna Witte

² An Executive Summary can be found on pages 56-60

We thank the many national correspondents that provided helpful insights in the situation in their countries, the institutional contact persons that helped us gathering names of potential respondents, the respondents themselves and the experts that gave us valuable advice in the various stages of the research project.

2. Background

2.1. *The European context*

European higher education is no stranger to change; for the better part of two decades the sector has been included in the much broader Western and Eastern European reforms. Since the late-1990s though the rate of change has accelerated to unprecedented levels, largely on the shoulders of three key developments: the Sorbonne and Bologna Declarations (1998, 1999), whose objectives are to make study programmes more compatible across European systems and the Lisbon Strategy (2000), including its 2005 restart *New Lisbon partnership for growth and jobs*, which seeks to reform the continent's still fragmented systems into a more powerful and more integrated, knowledge-based economy. Subsequent communications from European policymakers have only strengthened the belief that higher education institutions will be crucial to Europe's future well-being and, in effect, the lynchpin that bind these major processes and strategies together.

It was the Sorbonne Declaration of 1998 that first signalled major European countries' (France, Germany, Italy and the UK) preference for a more compatible and comparable set of European higher education systems over the longstanding perspective that Europe's diversity was its strongest asset. In Bologna one year later, 25 other European countries joined the original four. At each biannual ministerial follow-up conference since, more countries have joined the fray and by 2005 the total number of countries reached 45.

The Bologna Process aimed to establish a European "higher education area" by 2010, and while undersigning countries originally interpreted the Declaration in their own ways, the process rapidly achieved a degree of unregulated homogeneity. Focusing at first on reforming degree programmes into the two-cycle 'Bachelor-Master' structure, soon concerns about comparability pushed quality assurance and accreditation and degree recognition firmly into the mix as the Berlin communiqué (2003) attests to. Bologna's perspective broadened in Berlin with the inclusion of the third phase (PhD) and did so again in Bergen (2005) through the explicit mentioning of "the importance of higher education in further enhancing research and the importance of research in underpinning higher education for the economic and cultural development of our societies and for social cohesion". By 2005, Bologna's reach had finally crossed the Lisbon Strategy's threshold, at least for the 25-member European Union.

In March 2000 the European Union committed itself in Lisbon to the ambitious objective of becoming "the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion." European policymakers' intentions took on a more concrete form in 2003 when the more recognizable goal of raising EU-countries' investments in R&D to 3% of GDP was outlined in Barcelona. However, in stark contrast to Bologna's rapid adoption, several years of lagging progress forced policymakers to essentially restart the process by refocusing knowledge and innovation for growth and an increasing role for higher education in strengthening the three poles of its knowledge triangle: education, research and innovation.

2.2. *The project rationale and objective*

The current project seeks to better understand the state of the art with respect to curriculum reform in five areas of study – particularly focusing on two-cycle³ structures, competence-based learning, flexibility of learning paths, mobility and recognition – and to indicate potential ways in which such reforms may shape issues like access, graduation, employability, mobility, quality and cost effectiveness. It is unquestioned that the Bologna and Lisbon processes have accelerated national, institutional and sub-institutional debates on the suitability of current higher education curricula. The widespread move to the two-cycle structure has also, in many cases, triggered substantial adjustments to curricula contents. As a result, the curricular landscape of European higher education is witnessing a level of change never seen before. But we are less well informed about the actual outcomes and impacts of these reform processes. This makes monitoring these developments and indicating good practices even more important, particularly with an eye to the ambitious goal to ‘make European universities a world reference’ by 2010.

2.3. *Methodological issues*

Whereas the need for monitoring developments is unchallenged, there are some caveats that must be mentioned upfront. The caveats actually are all related to the issue of connecting causes and effects.

- It has to be kept in mind that the Bologna and Lisbon processes are steered by developing agendas, and rightly so for this fits the nature of the issues at stake and the overall philosophy of those involved (Open Method of Coordination). During the bi-annual Bologna conferences, issues are added to the agenda. For instance, the debate on the third cycle started in the context of the 2003 Berlin Meeting. The issue of competences in relation to qualification frameworks (and students using their qualifications across Europe) was raised at the 2001 Prague Meeting. Other issues are deemed less prominent through time and, additionally, the meaning of some of the core issues changed over time. Competences again is a case in point: where the initial emphasis in 2001 was on overarching frameworks for qualifications and degrees, the 2003 Berlin Meeting addressed the issue at the curriculum level as well, speaking about qualifications in terms of workload, level, learning outcomes, competencies and profile. Also the issue of credits was addressed differently through time. On the one hand it is understood as a rather technical tool to measure student workload (and make study loads transparent), on the other as an element in a system to support credit *transfer*. A final example relates to new links between issues that were already on the agenda: e.g. the current stress to dovetail the research/innovation and higher education agendas. The idea of developing agendas goes as well for the “old” and “new” Lisbon strategy: although they unmistakably are addressing the same themes, there are gradual differences. As such, both drivers of change – Lisbon and Bologna – are to some extent moving targets.
- National governments, higher education institutions and other stakeholders have their own interpretation of the issues at stake. Witte (2006) shows how such interpretations – and stakeholders’ perspectives, their power positions and their interactions – dynamically interact and lead to particular national answers to supranational challenges in particular national contexts.
- In these answers, not only the supranational Bologna and Lisbon challenges are addressed; specific domestic problems find their way to the political agenda as well, whether these relate to e.g. widening access to higher education, reducing the costs of higher education, the introduction of market mechanisms or even encompassing national reform agendas, largely independent from Bologna and Lisbon processes. In addition, other supranational developments, such as globalisation, have an independent effect on national agendas as well. Consequently, solutions and impacts are answers both to supranational, national and regional challenges.
- From the national reports we could deduce that national correspondents were also “struggling” with the conceptual issues set out above. Despite the research template that has been used to guide the national correspondents (see part two), it was impossible to avoid that correspondents

³ We are aware of the current discourse on three-cycle structures (including the doctoral phase), but stick in the context of this research project to the pre-Berlin terminology of two cycles.

may have emphasised certain aspects of curriculum reform in their countries and neglected others. Additionally, when a national respondent reports that e.g. mobility increased considerably, this does not tell us how his/her observation relates to developments in other countries. A true comparison – i.e. measuring with the same yardstick across countries and institutions – was therefore hindered considerably.

- An issue of a different nature does not relate to causes and effects as such, but more to the timeliness of the investigation. Again emphasising the need to monitor developments and potential impact, it must be stressed that in many systems and at many higher education institutions change is only recent or still ongoing. As a result, impacts are yet difficult to measure. To some extent this has impacted the research team's search for good practices in each of the areas of study, reason to qualify some of the case studies as "interesting" cases.

As a consequence, the research team found it difficult to look for and to find actual clear-cut evidence for cause (Bologna and Lisbon processes) and effect (impact on access, graduation rates, etc.) relations. Nevertheless, the methodology applied – building information and evidence on the basis of three sources – gives at least a state of the art picture of the developments. The fact that the findings from the three sources mostly pointed in similar directions supports our contention that the methodology has been worthwhile. In addition, the report has been able to build its argument around very recent inputs to the debate. Moreover, if we shift the emphasis from detecting causes and effects to sharing views and practices, the findings of this study fully fit such an approach: the study yields much information and points for discussion at national, institutional and disciplinary levels.

3. Comparative analysis of country reports: national reform contexts

3.1. Introduction

This chapter brings together the most relevant information from the national reports. In part two, the summaries of the individual national reports are presented in a uniform template. The first section briefly summarises the general state of the art in the countries regarding the progress in meeting the Bologna objectives, organised around the following themes: the two-cycle degree structure, competence-based learning, flexible learning paths, recognition and mobility.

The Eurydice report *Focus on the structure of higher education in Europe* (Eurydice, 2005) presents the state of the art in the year 2004/05. We partly take this stocktaking exercise as a point of departure to picture the most recent developments – bearing in mind that the set of countries in our project is smaller than that of the Eurydice report.

3.2. Two-cycle degree structure

The Eurydice report mentions that all signatory countries have implemented general regulations regarding the two-cycle degree structure, apart from Andorra, the German-speaking Community of Belgium, Hungary, Portugal, Romania, Spain and Sweden (except in a few courses). The implementation of regulations does not imply however that the structure currently is in place for all programmes. In the Netherlands e.g., all programmes are according to the two cycle structure (but see medicine below). In other countries, like Germany and Austria, changes are implemented. As of March 2006, German higher education institutions offered 36.3% according to the new structure (this was 8% in 2004/05). In Austria, in 2004/05, 28.6% of university degree programmes were transferred into the two-cycle structure. *Fachhochschulen* had transferred 52% of their degree programmes in the two-cycle structure in 2005/06. In Croatia, there is considerable confusion about the implementation: a number of regulative and practical problems have not (yet) been tackled. It should also be mentioned that implementation can be "uneven" between different sectors. France is a case in point: the universities are gradually implementing the new cycle structure, whereas *grandes écoles* are largely untouched by the reforms.

Since the publication of the Eurydice report, some noteworthy developments took place in five countries that not yet had regulations in place. In Spain, modifications to the law and royal decrees (2005 regulating graduate and postgraduate studies) have been proposed, but governmental regulation to lead the reform is still in progress. Most universities are however already adapting existing degrees to the European Higher Education Area. In Hungary, a new Act on Higher Education was accepted in 2005 completing the shift towards a two-cycle structure (implementation from 2006 on). In Romania, new regulations have been accepted by Parliament (Law no. 288/2004), enabling the transformation of the degree structure into a two-cycle system. The changes have been implemented as of 2005/2006. The Swedish Parliament passed a new law on higher education in May 2006, followed by a new higher education ordinance this summer. It envisages the introduction of a two-cycle structure as from fall 2007. In Portugal a new law has been accepted in 2006. Anticipating these changes, many Portuguese institutions (about 40% of the programmes) have adjusted to the new degree structure. Finally it is worthwhile to mention that some countries (e.g. Iceland in 2006) already had regulations in place to deal with the two-cycle structure but have recently adjusted the laws.

3.3. Competence-based learning

The topic of competence-based learning has been dealt with in previous reports in a less structured and comprehensive way than the issue of two cycles. This relates to considerable confusion on the concept of competence-based learning and – related to the former assertion – the linkage of competences to various elements of the Bologna process. Following Adam (2006) we see competences as descriptions of learning outcomes in terms of the student's acquired knowledge, skills and/or attitudes. And here the confusion already arises, for the Berlin communiqué distinguishes between competences and learning outcomes: the intention was to define “qualifications in terms of workload, level, learning outcomes, competencies and profile”. Again following Adam (2006), the presumed relevance of competence-based learning relates to at least three levels: the institutional/local, national and international level. At the institutional level, competences – when applied appropriately – contribute to a better understanding of what is expected (both by teacher and students). The link with transparency from the professions' and employers' perspective is obvious as well. At the national level, competences can be seen as the building blocks of a national qualifications framework. Additionally they can play a role in quality assurance procedures. At the international level one can think of the European qualifications framework (e.g. Dublin descriptors, the eight reference levels of the EQF proposal, September 2006). The linkages to the different levels indicate that competence-based learning relates to various aspects of the Bologna process, notably credit (transfer) systems and qualification frameworks. A credit (transfer) system can be interpreted as an instrument to “quantify” the student workload to make comparisons of the students' activities across institutions easier. Actually, this was the way it was initially perceived in the context of the Erasmus/Socrates programme. But a credit (transfer) system can also be conceived of as a stepping stone to qualify learning outcomes/competences. That is, the student workload is formulated in objectives of the course, and outcomes specified in learning outcomes and/or competences to be acquired. The latter implies a link to attempt to redefine curricula in terms of competences in line with national qualifications frameworks and the European qualification framework. In this context, ECTS can appropriately be in place to facilitate credit accumulation across national borders.

Regarding ECTS, all countries have a credit system in place and the current situation is not that different from what has been reported by Eurydice (2005). Most of the higher education systems adhere to the ECTS model (60 credit points per study year), some have still their “own” national credit system in place (Flanders, Lithuania), some others are about to move to the ECTS model (Latvia, Estonia, Spain). In England, different credit systems exist next to each other. In some systems, ECTS or similar credit transfer systems are implemented gradually, such as in Bulgaria. Cyprus must be mentioned as a particular case: ECTS has been implemented at the university, but national regulations are not yet in place. It is important to note that – like has been mentioned in the Eurydice 2005 report – credit systems are mainly used for transfer and to a much lesser extent for credit accumulation. The Danish report is one of the few explicitly addressing transfer and accumulation.

Many countries are changing the existing or implementing new regulations regarding (national) qualification frameworks. This has several dimensions: a few countries take the work in progress regarding the European qualifications framework (EQF) as a point of departure to develop a national framework. A few other countries try to dovetail existing national frameworks with the EQF. A point of discussion in some countries is whether to take the Dublin descriptors or the emerging EQF as a point of departure (e.g. Czech Republic, see also the EUA's December 2005 position on the Development of a European Qualifications Framework for Lifelong Learning). Only a few systems are, so far, very actively engaged in qualifications frameworks and rephrasing curricula in terms of competences. Germany has adopted a national qualification framework in 2005, and it is part of compulsory modularisation to define learning outcomes in terms of competencies for each module, but implementation is still ongoing. In Italy, higher education institutions have redefined their curricula in terms of competencies in line with the requirements of the national qualification framework. In the UK, learning outcomes, profiles and competences are part of Higher Education Qualification Frameworks for each of the educational systems. England, Wales and Northern Ireland have developed framework and Scotland has introduced a credit and qualifications framework. The Quality Assurance Agency requires institutions to make transparent the skills, knowledge and other attributes that the students will attain through successful participation in the programme. At the government level, organisations work together to ensure the compatibility of the national framework with Bologna developments. In Luxembourg a large part of curricula has been defined in terms of competences. In Austria, the regulations prescribe that each curriculum needs to have a qualification profile in which employability is especially taken into account: the implementation, however, ranges from a total reconstruction of curricula to "re-labelling". There are also differences between universities and *Fachhochschulen* (the latter have a more elaborate approach to competence-based learning). There is however not yet a national qualification framework in place. In Denmark, a national qualification framework was published in January 2003, the level of implementation differs from institution to institution. In Ireland, the National Qualifications Authority has determined that there are three general strands of learning outcomes that will be used in setting standards (knowledge, know-how and skill, and competence), geared towards synchronising the national qualifications framework with the European. In the Netherlands, particularly the *hogescholen* have been working for more than a decade now on profiles of and competences in (clusters) of study programmes, and some *hogescholen* are working with student portfolios. It is not yet clear how these will fit the supranational developments regarding EQF. In Lithuania, study programmes are revised and redefined in terms of competences, although there is not yet a national qualifications framework. In Hungary, curricula are redefined in terms of competencies (wherever possible in line with NQF and EQF). In Latvia, a national qualifications framework is developed by the Ministry, but it is not binding. In Belgium (French Community), university programmes are all redefined in competences, but there are no explicit links to a national qualifications framework. In the Flemish community – like in the Netherlands – talking in competencies is predating Bologna, but there is no legal obligation to introduce competencies for each programme.

Most other countries show some noteworthy developments, but in these countries there are no clear signs yet of either a full development of an NQF (in line with EQF) or the full implementation of a qualification framework. Examples of developments are the launch of a "European convergence programme" by the national agency for quality assessment and accreditation (ANECA) in Spain leading to a white paper on the design of first degrees in line with the EQF. In Malta, a number of disciplines work with student portfolios. In Romania, the National Agency for University Qualifications and Partnership (established in 2005) has the task to prepare a national qualifications framework together with the Ministry of Labour. In Norway, there is an ongoing process to develop a national qualification framework and in Finland this debate has recently started. In Estonia, higher education standards are developed since 2000, but these are at a very general level. There is a working group established at the Ministry that tries to align the national developments and the EQF. Also in Greece a working group on a national qualification framework has been established. A similar situation emerges in Bulgaria, where programmes have to follow state educational standards, but the concept of competencies is underused. Also in the Czech Republic, accreditation mechanisms force the programmes to explicitly address graduate profiles and the links between these profiles and knowledge to be acquired and skills to be developed in the programmes. But also here there are no

links yet to a national or European qualification framework. In Slovakia there are descriptions at the disciplinary level, but not yet an official national qualifications framework. In France, the implementation of the licence-master-doctorate system goes hand in hand with the consequent implementation of modularisation, ECTS as an accumulation system and the move to a semester system. In Poland, steps have been taken at the national level to work on competences by requiring the inclusion of educational profiles of graduates in degree programmes. In some countries, the change towards competence-based curricula is mostly a matter for individual institutions and disciplines (e.g. Turkey, Greece).

3.4. *Flexible learning paths*

By flexible learning paths, we refer to either an increase in the diversity of teaching modes; an increase of the number of entry and exit points; the permeability between vocational and higher education or between different parts of the higher education system, the promotion of excellence tracks (or more generally providing a variety of curricular options for different target groups); modularisation; and the validation of prior learning.

Most of the actions – either by governments or higher education institutions – are stepping stones towards more flexibility across the board. Some governments are actively promoting diversity of teaching methods. The Spanish government for instance (but also Spanish higher education institutions themselves) work with pilot projects and training activities. In Iceland there is an emphasis on enhancing distance learning. In countries like Latvia, diversity has increased, because programmes have been developed for people with prior professional education or work experience. In Hungary, too, there is more flexibility/diversity; the number of exit points has increased. The development of excellence tracks has been supported, but this has not yet materialised. Also, graduates from vocational programmes can validate 30 credits if they enrol in Bachelor programmes. At the same time, access to the second cycle is limited through state regulation (35% of places government-funded with reduced fees for students). In Italy, the diversity of teaching methods, the number of entry and exit points, and the flexibility of courses chosen has increased. Also, new excellence tracks have been introduced. In Denmark, the 2004 OECD report has triggered attention to quality in general and modes of teaching in particular, excellence tracks have recently been developed (at one of the universities) and validation of prior learning elsewhere in the higher education system is possible (sometimes additional bridging programmes are required). In Austria, the validation of prior learning is possible, but it is dealt with in vary different ways across the levels of higher education. The German report mentions that validation is not very much developed. Whereas in Sweden, the validation of prior learning has been an issue in the past five to ten years, new regulations are not expected to change current practice. In Portugal, there is a specific policy geared towards people over 23, allowing them to enter higher education on the basis of their professional experience and knowledge as well as their overall capacity to pursue the programme. In Finland, the 2003 OECD review report pointed at the dilemma of the lack of mobility from polytechnics to universities, there are developments towards more regional cooperation between institutions from both sectors. In Luxembourg, the validation of professional experience is possible (national regulation), but it is not yet implemented in the university. There is an interesting example of validation of vocational training for those enrolling in engineering programmes. In general, in this country the diversity of teaching modes has increased. In Belgium (Flanders) there are possibilities of validation of prior learning within associations between universities and *hogescholen*. Bachelor programmes offer more opportunities for specialisation than before, particularly geared towards the preparation for certain Masters programmes. In Estonia, there is more flexibility as the consequence of large groups of new students (adult, part-time). Higher education institutions in this country are (since 2004) supposed to develop procedures for registering previous studies and work experience. In the Netherlands, most universities have a major/minor structure with a semester system. There is also a “duty” for universities to admit students to its Masters if they graduate from a similar Bachelor programme at the same institution. There are also possibilities to transfer from a *hogeschool* Bachelor to the university Masters programme, but in most cases students have to take up bridging courses. Similar procedures are in place in Belgium (French Community): sometimes graduates from non-university institutions

can move on – without delay – to a Masters programme at a university. Also students having completed a first year at a university can enter a second year at a non-university institution. These procedures were in place before the Bologna process, but the opportunities to switch have increased. In Germany, Bachelor degrees from universities and *Fachhochschulen* formally convey the same entitlements and universities are not allowed to discriminate against Bachelor graduates from *Fachhochschulen* when it comes to entry to Masters programmes. However it has yet to be seen how practices are adapted. In France, there are serious attempts to improve student orientation in the first years to reduce the high failure rates; more flexibility, recognition of prior learning and experience (*validation des acquis professionnels, validation des acquis de l'expérience*, 2002 decree), and modularisation are seen as key instruments to solve this problem.

In other countries there is some casual implementation of more flexibility (e.g. Turkey, Slovenia). In Cyprus, there is some flexibility regarding the transfer from the first to second cycle (at another institution), the access to Master level is (however) limited. In Romania, there is only limited credit transfer possible (in the case of credits earned in a foreign country). Some country reports explicitly mention that the validation of prior learning is not (yet) possible, e.g. Slovakia. The Croatian report mentions problems of recognition for students that have partly studied in the old structure, but would like to continue in the new two cycle structure. The Bulgarian report mentions that flexibility is still rather limited. Modularisation is not a widespread phenomenon (Hungary, Lithuania), but the Luxembourg, Croatian, German, Austrian and Irish reports mention progress in this area. In some of these countries, the expectation is that modularisation will increase student flexibility.

3.5. Recognition

Recognition issues pertain to the diploma supplement, improving consumer information and communication on studying in higher education and the recognition of study abroad. Recognition of prior learning or experience has been addressed above. Regarding study abroad, many countries have the regulatory mechanisms in place, but actual implementation and practices at the student level differ considerably (see e.g. Germany, Iceland). In Austria, there is a legal guarantee of academic recognition of study abroad. Most country reports detail that individual higher education institutions (or departments) deal with this issue, often in cooperation with national centres (NARICs).

Most countries now have regulations in place regarding the diploma supplement, the UK being an exception, as here the implementation of the diploma supplement is left at the discretion of institutions. In France, the regulation of the diploma supplement is on its way. In Italy, the regulation is in place, but only a few universities apply it fully. In Cyprus, there is a system in place at the university, but there are no national regulations yet. There are some different modes across the countries: either automatically, on request or after payment (see also Eurydice, 2005), but the data indicate that most countries are moving towards the “automatic” mode, implying that students will receive the diploma supplement in their national language (sometimes also in English or another language) anyway without additional costs. There are only few countries that do not yet have a system for diploma supplements in place, e.g. in Greece, the issuing is left to individual departments.

In the Czech report there is explicit mention that information on studying in higher education has been improved through websites and publications for national and international students. In Luxembourg there is a similar initiative to launch a website (2006). Also the Belgian (Flanders) report mentions that there is more attention to information for students to cope with a potentially confusing transition situation. In Lithuania, higher education institutions work closely together to better guide students to the “right” programme. On the other hand, some reports mention problems of students coming to terms with the changes in the structures and contents of curricula (e.g. Croatia). There are some hints in the national reports that the introduction of ECTS has eased recognition.

3.6. *Mobility*

By mobility we refer to student, graduate and staff mobility. The set-up of this study does not allow to distinguish clearly between mobility in the context of European programmes (exchange through Erasmus), general mobility and mobility within Europe and across continents.

Almost all countries report that mobility is still high on the agenda, be it for different reasons. Some countries worry about the lack of mobility (e.g. Spain, Croatia, Denmark) or about an imbalanced situation (more outflow than inflow: Turkey, Latvia, Bulgaria; mobility too much focused on French-speaking countries: France). Also, other elements of the higher education fabric (such as the state funding mechanism that forces students to finish in time in Lithuania) seem to limit mobility. Some countries mention the lack of programmes in another language than the home language or the general need to strengthen teaching in English (Turkey, Bulgaria, Denmark). Some countries have taken concrete steps to improve mobility. E.g. Slovakia has developed a new scholarship programme (2005) aiming at increased academic mobility. Also in the Czech Republic, Romania and Austria there is additional state support available for mobile students. Luxembourg has realised a 100% portability of student grants and loans and has agreed upon compulsory mobility at the Bachelor level in University Act; this is still to be implemented. In the Netherlands, similar regulation as in Luxembourg regarding international portability of student support is currently being prepared. In Germany, Hungary and Austria, student grants and loans are partly portably, too. This is also the case in a number of other countries, but it is not particularly emphasised by the correspondents. In Ireland, the higher education authority is seeking to substantially increase mobility under Socrates and to utilise other EU dimensions to encourage the international agreements.

As has been indicated, quantitative support for mobility patterns was difficult to find (see Kelo et al. [2006] for an attempt to picture mobility patterns for European countries). If we take Erasmus mobility as a proxy for general mobility (acknowledging that mobility in many countries encompasses much more than exchange through European programmes), the following findings are noteworthy (European Commission, 2006). We focus on student mobility, patterns regarding teacher mobility are generally similar to the trends in student mobility:

- In 2004/05, almost 0.8% of students of EUR18 were mobile through Erasmus, although percentages differ considerably from country to country (from 0.3% in the UK to 3.3% in Liechtenstein)
- Across the EUR18 taken together, Erasmus mobility is steadily growing. In most individual countries, Erasmus mobility has also been on the increase in the past four years (UK decreasing and Sweden, Denmark, Ireland rather stable, being exceptions).
- In a range of countries there are clear mismatches between incoming and outgoing students: the UK, Sweden, Ireland, Spain, Denmark and the Netherlands being examples of more incoming than outgoing students; Greece, Germany, Italy and France being examples of more outgoing than incoming students.

There are a few indications that mobility (outside Erasmus) has increased as a consequence of the Bologna process. The Netherlands may be a case in point, where the change to the Bachelor-Master structure in combination with the offering of English-taught Masters programmes has acted as a catalyst: mobility increased considerably and currently about 25% of the students enrolling at the Masters level come from outside the Netherlands. At the same time, some country reports mention that the new structure – consisting of two shorter programmes – makes it more difficult for students to actually plan to take up courses in another country. Other reports point at other factors that possibly decrease or increase mobility. The Flemish report mentions that the government focus on research output indicators and linkages with funding make it more difficult for teaching staff to be mobile. The Slovenian report argues that the move towards lump sum funding will possibly have a positive impact on student mobility.

3.7. *In summary*

Most of the 32 countries have in general the “hardware” in place. By this we refer to the general structural regulations and conditions regarding a two-cycle degree structure, regulations regarding the diploma supplement and a credit transfer system. Behind this general picture however, we find a huge variety of mechanisms and procedures as well as great diversity in terms of implementation.

The picture regarding the “software” and particular curriculum and discipline-level issues is much different. Here we see interesting and important initiatives at both the institutional and system level (by governments, buffer organisations and quality assurance organisations), but many of these initiatives only touch upon elements of the phenomena of recognition, competence-based learning, flexibility and mobility. And, importantly, the level of implementation is only partial for initiatives at the system level. Implementation at the level of individual institutions ranges from full conceptual development and implementation (but this is seldom the case) to fragmented experiments and pilots.

4. The fields of study

The subsequent sections deal with the state of the art in the five fields of study: medicine, teacher training, law, engineering and history. The first section (section 4.1) deals with some general quantitative data regarding the state of the art (from the survey). We give an overall picture across the five fields of study because the response rates for a few of the fields were relatively low. This presentation is along the elements: two-cycle structure, competence-based learning, flexible learning paths, recognition and mobility. Here also attention will be paid to the perceptions of the respondents regarding the desirability of these elements, the likelihood of realisation of the elements in the near or more distant future, potential drivers/hindrances in the realisation and the (potential) impact of the reform elements on access, graduation, employability, mobility, quality and cost-effectiveness.

Second, we pay more in-depth attention to each of the five fields of study (sections 4.2 to 4.6). The general qualitative developments in the fields are depicted, approached from different angles: the information from the national reports, the case studies and supra-national documentation. Again, the five elements mentioned above are used to organise the findings.

4.1. *General findings from the survey: state of the art*

4.1.1. *Processing the survey and response rate*

In the period before and shortly after the summer break we approached Erasmus/Socrates coordinators to provide us with names of deans and directors of study (or persons with similar functions in the respective systems) in the five areas of study. The EU database with coordinators was however far from accurate – in light of the objective of the project: quite a number of coordinators in the database actually represented institutions that were not relevant for our study. Furthermore, a number of details of correspondents were not accurate (e.g. people changed position; misspellings in names/addresses). A logistical issue – addressing coordinators close or in their holidays or during the busiest period of the year – had negative impact on the rate and speed of response by the coordinators. However, the survey was launched in September 2006 and as soon as new names and addresses of potential respondents became available, they were sent an e-mail with the invitation to participate in the survey. The database was closed mid-January. In total we received 481 responses from 211 deans and 247 directors of study (23 unknown). The numbers of responses by discipline were: 48 (medicine), 47 (law), 106 (teacher training), 205 (engineering), 47 (history) and 28 unknown. 28 of the 32 countries were represented, there were no responses from Bulgaria, Cyprus, Iceland and Liechtenstein. There was a fair spread among types of higher education institutions: both academically and professionally oriented institutions, both specialised and comprehensive institutions and institutions of a range of sizes were represented in the sample.

4.1.2. *Two-cycle degree structure*

53%⁴ of the respondents indicated that the two-cycle structure had been fully implemented in their field of study, 36% indicated that this was the case for part of the programmes and 12% indicated that it was not the case. Of those reporting that their fields of study were not yet (fully) adjusted to the two-cycle structure, 52% indicated that this would happen in 2007 or 2008. At the same time, 39% of this group indicated that the two cycles would not be implemented (36%) or only implemented after 2010 (3%). Thus, across all correspondents, in total 18% are of the opinion that curricula in their fields of study are not organised according to the two-cycle structure and that this will not change before 2010.

Almost two-thirds (62%) of the respondents indicate that curricula had already fully been adjusted to the two-cycle structure, 31% indicated that this was the case for a part of the programmes and 7% indicated “not at all”. Of those indicating otherwise than full adjustments, two-thirds (67%) indicated that this would happen in 2007 or 2008. Here the overall picture consequently is that 13% think that curricula are not adjusted and will not be adjusted before 2010.

Regarding the function of the Bachelor degree, the views differ considerably. Although the majority of respondents think that this first degree is a point for orientation and further specialisation in the same institution (37%), 31% think that its function is to lead to employment, 16% think that it is a point for orientation and further specialisation at another institution and 13% think that the main function is that it leads to a formal degree. When asked what the Bachelor degree’s function should be, 32% answered it should be a point for orientation and further specialisation in the same institution, 25% indicated that it should be a point for orientation and further specialisation at other institutions, 29% answer that it should lead to employment and 9% think that the main function should be to only lead to a formal degree. The views on “what is” and “what should be” do not differ that much. The largest discrepancies regarding “what is” and “what should be” is regarding the issue whether it is/should be a point of orientation and further specialisation at other higher education institutions (respectively 16% “is” and 25% “should”). Clearly, the respondents would like to see a more mobility across higher education institutions when students move on from the Bachelor to the Master.

69% of the respondents agree or strongly agree with the statement that a system of two cycles is adequate for structuring studies in their fields of study and 13% disagree or strongly disagree. There are – according to the respondents no main hindrances to achieve the two-cycle structure. When asked about drivers or hindrances, the following pattern emerges. Taking the modus answers as a point of reference, none of the factors are seen as hindrances. Government, legislation and regulation (modus 28%) and central institutional management (modus 34%) were seen as strong drivers. Increasing competition (modus 31%), academics at the respondents’ institutions (modus 29%), the adoption of Bologna-type degrees at other higher education institutions (modus 34%) and European policies (modus 40%) are seen as drivers.

4.1.3. *Competence-based learning*

40% of the respondents indicate that curricula in their fields of study are fully modularised, 52% maintain that this is the case for part of the programmes and 8% indicate that this is not at all the case. Of those indicating that the curricula are not fully modularised, 43% think change will come about in the coming 18 months and 26% indicate that no changes are expected. Across all respondents, 16% therefore are of the opinion that curricula are not modularised and that no changes are expected at all. 38% of the respondents indicate that curricula in their fields of study are fully defined in terms of competences and/or learning outcomes, 59% indicate that this is the case for part of the programmes in their fields of study, only 3% indicate that this is not at all the case. Of those not answering “fully”, 49% think that change will occur in the coming 18 months. A smaller percentage (12%) indicates that change is not expected. Overall, 7% of the respondents answered that curricula are not defined in terms of competences and/or learning outcomes and do not think that change will occur at all.

A large majority (73%) maintains that all curricula are defined in terms of ECTS, 18% indicate that this is the case for a part of the curricula in their fields of study and 8% answers that this is not the case. Of

⁴ Percentages indicate the share of the respondents that actually responded to the question. That is, missing values are excluded.

those indicating that this is not (yet) the case for all curricula, 55% expect change in the coming 18 months and 16% do not expect changes. Therefore, overall only 4% answered that curricula are not defined in terms of ECTS and do not expect any change at all

Overall, three quarters (76%) of the respondents agree or strongly agree with the statement that the principles of competence-based learning are desirable/useful and only 2% disagree or strongly disagree.

When asked about factors that drive or hinder the idea of competence-based learning, the respondents mostly addressed drivers. Central institutional management (modus 36%), academics within the institution (modus 28%), academics in the area of study (modus 27%), employers in the area of study (modus 29%), increasing competition (modus 31%), adoption of competence-based learning at other higher education institutions (modus 34%) and European policies (modus 34%) were all considered drivers.

4.1.4. Flexibility

20% of the respondents answered that programmes to a large extent offer considerable flexibility for students and 75% of the respondents thought this was to a considerable or some extent the case. Only 4% indicated that this was not at all the case. Of the 80% not indicating "to a large extent", 35% think change will take place in the coming 18 months, but also 32% think no change will take place. Overall, 26% expect do not think that there is a large extent of flexibility and think – at the same time – that change will not take place.

Also 74% of the respondents think that to some or a considerable extent a variety of teaching modes is offered for different target groups. 16% think that this is to a large extent the case and 11% think it is not at all the case. Of those who did not indicate the category "to a large extent" (total 84%), about 31% expect change in the coming 18 months, but 24% do not expect change at all. So, overall 20% are not fully convinced of large flexibility and do not expect any changes.

53% of the respondents think that to some extent students can validate relevant prior educational/professional experiences, 19% indicate that this is not at all the case. Of the 86% not indicating "to a large extent", 43% do not expect any changes in the future. Across all correspondents therefore the percentage of those that are less optimistic about the current practices of validation, 37% do not expect change.

52% think that to some extent various entry and exit points are offered to the students, 18% indicated that this is not at all the case. Of the 89% not indicating "to a large extent", 44% do not expect any changes. Across all respondents, the percentage that are less optimistic about the extent of the use of various entry and exit points, 39% do not expect changes.

Overall, 65% agree or strongly agree with the statement that the existence of flexible learning paths for students is desirable, only 7% disagree or strongly disagree. Also here, respondents tend to think more in terms of drivers than of hindrances. The main drivers of flexibility are: government legislation/regulation (modus 26%), central institutional management (modus 35%), academics at the institution (modus 23%, but also a slight hindrance, modus 22%), increasing competition (modus 37%), adoption of flexible learning paths at other higher education institutions (modus 40%) and European policies (modus 34%).

4.1.5. Recognition

According to 56% of the respondents, diploma supplements are handed out to graduates, 20% indicate that this is the case for some or most of the students. 24% indicate that this is not at all the case. Of the 44% indicating that this is not or not always the case, 48% expect change in the coming 18 months and 25% do not expect any change. This brings the percentage of those that think that diploma supplements are not (yet) handed out to all and – at the same time – do not think this will change to 11%.

In the view of 45% of the respondents, the recognition of student achievements from other national institutions works well, 51% indicate that this works to some or a considerable extent. Only 4% inform us that this is not the case. Of those not indicating "fully", 28% think change will happen in the

coming 18 months and about 34% do not expect changes at all. This implies that 19% are under the impression that it is not fully working and do not expect changes.

When it comes to recognition of achievements at foreign institutions, 26% indicates “fully” and 68% indicates that this is to some extent or a considerable extent the case. Only 6% mentions that this is not working well. Of those not indicating “fully” (74%), 26% expect changes in the coming 18 months, 32% do not expect changes at all. Consequently, overall 24% do not see recognition fully working and expect no change.

Overall, 77% of respondents agree or strongly agree with the statement that the improvement of issues of recognition is desirable, and 3% disagrees or strongly disagrees. When discussing the drivers and hindrances for issues of recognition, the majority of respondents are inclined to point at drivers. Government, regulation and legislation (modus 28%), central institutional management (modus 36%), increasing competition (modus 33%), adoption of measures at other higher education institutions (modus 36%), and European policies (modus 38%) are seen as drivers.

4.1.6. Mobility

17% thinks that national student mobility works fully and 64% thinks that national student mobility works well to some extent or to a considerable extent. Of the respondents, 19% thinks it does not work well. Of the 83% not answering “fully”, 41% expect changes until 2010, but 39% do not expect changes. Of all respondents therefore 26% thinks that it does not work well fully and they do – at the same time – not expect change at all. 61% agree or strongly agree that high national student mobility is desirable and only 8% disagrees or strongly disagrees with this statement.

About 19% of the respondents answer that international student mobility works well fully. 70% indicate that international student mobility works well to some or a considerable extent. 11% informs us that it does not work well. Of the 89% indicating that international mobility is not working well fully, about 48% expect change in the period until 2010 and 23% do not expect change. The percentage of those disagreeing with fully working international student mobility and – at the same time – not expecting any change is 19%. 84% agree or strongly agree with the statement that high international graduate mobility is desirable. Only 1% disagrees or strongly disagrees.

A small percentage (7%) indicates that international teaching staff mobility works well fully and 69% thinks that international teaching staff mobility works well (to some extent or a considerable extent). 24% indicates that it does not work well. Of the 93% not answering “fully”, 50% expect changes until 2010, but 32% do not expect changes at all. Therefore 30% thinks it does not work fully and – at the same time – do not expect any change. 86% agree or strongly agree that high national staff mobility is desirable.

Again, the respondents do not see that many hindrances to mobility in general. As drivers for mobility are seen: government/legislation/regulation (modus 23%), central institutional management (modus 31%), academics at the home institution (modus 31%), academics in the area of study (modus 34%), increasing competition (modus 35%), increasing mobility at other higher education institutions (modus 38%), and European policies (modus 40%).

4.1.7. Overall assessment of the current situation

The respondents were asked to assess the current overall situation in their field of study at their institution. 55% agree or strongly agree that the current situation at their institution and area of study is in line with the Bologna expectations. 42% agree or strongly agree with the statement that considerable (further) change will take place, but 20% indicate that they disagree or strongly disagree with the statement. 55% agree or strongly agree with the expectation that considerable (further) change will take place until 2010, 15% disagree or strongly disagree with this statement. About 45% agree or strongly agree with the statement that the current situation in their country is in line with the Bologna expectations and 16% disagree or strongly disagree with this statement. Also 61% of the respondents (36% agree, 25% strongly agree) with the statement that the consequences of the Bologna process are desirable and 10% disagree or strongly disagree with that statement.

4.1.8. Impact

Regarding the impact, the following views were expressed. 42% agree or strongly agree that there will be an impact on access and 13% disagrees or strongly disagrees. 43% takes position between these two categories. 32% strongly agrees or agrees with a belief in impacts on the graduation rates, 16% disagree or strongly disagrees and again a fair percentage takes a middle position (43% mildly agrees or mildly disagrees). 33% agrees or strongly agrees with an impact on employability, 12% disagrees or strongly disagrees. A further 49% mildly agrees or mildly disagrees. Regarding general mobility, 48% believes in a positive impact (strongly agree or agree), 11% disagrees or strongly disagrees. A large amount of respondents (37%) takes a middle position by indicating “mildly disagree” or “mildly agree”. About 39% agrees or strongly agrees with the statement that the quality of education will increase. 38% mildly agree or mildly disagree with this statement and 17% disagree or strongly disagree with the statement. Finally, regarding the expectation on the impact on cost-effectiveness, 25% agree or strongly agree with the impact on cost-effectiveness, whereas 20% disagree or strongly disagree with this statement. 42% are somewhere in between considerable agreement and disagreement: these respondents indicate mild agreement or mild disagreement.

4.1.9. Summary overall findings of the survey

The following tables summarise the findings across the five elements of the reform agenda. Table 4.1 gives an overview of the endorsement for the five elements.

Table 4.1: Percentage of respondents endorsing elements of the reform agenda

	Disagree/ strongly disagree	Mildly agree/ mildly disagree	Agree/ strongly agree	Do not know	
International staff mobility	0	12	86	1	N=409
International graduate mobility	0	12	85	2	N=406
Recognition	3	17	77	3	N=407
Competence-based learning	2	18	76	3	N=416
Two cycles	13	16	69	2	N=432
Flexibility	9	24	65	2	N=411
National mobility	8	31	61	1	N=408

Table 4.2 summarises in order of importance the drivers for the reform agenda. It makes clear that not only actors (governments, professions, academics) play a role, but factors (competition and developments at other institutions) are significantly important as well. Whereas this may prompt the conclusion that respondents follow the reform agenda as a defensive strategy, the endorsement of the reform agenda (previous table) indicates otherwise.

Table 4.2: Percentage driver or strong driver for change of the reform agenda (strongest driver per element of reform agenda in bold)

	Two cycles	Competencies	Flexibility	Recognition	Mobility	Overall
Government	56%	43%	37%	48%	39%	45%
Institutional management	66%	62%	49%	57%	56%	58%
Academics home institution	37%	39%	30%	40%	43%	38%
Academics in field of study	38%	44%	31%	39%	48%	40%

	Two cycles	Competencies	Flexibility	Recognition	Mobility	Overall
Professional organisations	28%	41%	27%	29%	28%	31%
Employers	23%	45%	31%	33%	30%	32%
Increasing competition	47%	49%	49%	50%	52%	49%
Developments at other higher education institutions	57%	52%	52%	56%	56%	55%
European policies	69%	55%	46%	65%	71%	61%

The most important drivers – according to the respondents across the five fields of study – are European policies, institutional management and developments at other higher education institutions (with respect to the relevant element of the reform agenda). Professional organisations and employers are considered – relatively – of less importance. However, the drivers are considered of unequal importance across the elements of the reform agenda.

Whereas overall there seems to be considerable optimism regarding the realisation (either already realised or soon) of elements of the reform agenda, the respondents are to some extent sceptical. The following table (table 4.3) details in rank order the reluctance – in the eyes of the respondents – of the realisation by 2010.

Table 4.3: Realisation of the elements of the reform agenda

Element of reform agenda	Specification	Realised	To some or considerable extent	Not fully or not to a large extent realised and no realisation by or after 2010
Two cycles	Degree structure	53% (fully)	36%	18%
	Curricula adjusted	62% (fully)	31%	13%
Competence-based learning	Modularisation	40% (fully)	52%	16%
	Defined in terms of competences	38% (fully)	59%	7%
Flexibility	ECTS	73% (for all)	18%	4%
	Large flexibility to students	20% (large extent)	75%	26%
	Variety of teaching modes	16% (large extent)	74%	20%
	Validation of prior experience	14% (large extent)	67%	37%
Recognition	Variety of entry and exit points	11% (large extent)	71%	39%
	Diploma supplement	56% (for all)	20%	11%
	Achievements at other national institutions	45% (fully)	51%	19%
	Achievements from foreign institutions	26% (fully)	68%	24%

Element of reform agenda	Specification	Realised	To some or considerable extent	Not fully or not to a large extent realised and no realisation by or after 2010
Mobility	National student mobility	17% (fully)	64%	26%
	International student mobility	19% (fully)	70%	19%
	International graduate mobility	12% (fully)	71%	25%
	Teaching staff mobility	7% (fully)	69%	30%

The table highlights three developments. First, there is considerable progress in the full (or to a large extent) realisation of elements of the reform agenda, notably ECTS, diploma supplements, curricula adjusted and the two-cycle structure. Second, there is also considerable change abound regarding these elements, given the high percentages in the “to some extent and to a large extent” category. If we would take the two-third realisation as a benchmark, in nine of the sixteen specifications of elements of reform the situation is satisfactory. Third, at the same time some bottlenecks can be seen in a number of reform areas. Considerable percentages of respondents do not see considerable change taking place AND these respondents – at the same time – do not see change come about before 2010 or at all, particularly in the area of flexibility (variety of entry and exit points, recognition of prior learning) and mobility (national student mobility, international graduate mobility and teaching staff mobility).

Table 4.4 gives an overview regarding the overall impact of the reform agenda. Here it is clear that there is overall endorsement of the statements expecting impact of the reforms (25-48%), although the respondents are relatively sceptical about impacts in the area of reaching cost-effectiveness. At the same time, the support is not overtly convincing given the large percentages of respondents (39-49% across the elements of the reform) that either mildly agree or mildly disagree with the statements. In addition, a not to neglect percentage simply does not see positive impacts at all or indicate that they do not know (if we take the two categories together: 15-33%).

Table 4.4: Expected impact of the reforms

	Disagree/ strongly disagree	Mildly agree/ mildly disagree	Agree/ strongly agree	Do not know	
Access	13	39	42	7	N=312
Graduation rates	16	43	32	8	N=313
Employability	12	49	33	7	N=313
General mobility	11	37	48	4	N=314
Quality of education	17	38	39	6	N=312
Cost-effectiveness	20	42	25	13	N=312

4.2. *Medicine*

Regarding the involvement of Medical studies in the Bologna process, a nuanced picture emerges. On the one hand, the implementation of two-cycle degrees in medical education is – at least to date – considered inappropriate by the medical associations in most European countries. On the other hand, the relevant international medical organisations approve of most objectives of the Bologna process and emphasise that some of these objectives are also part of the reform programs in medical studies all over Europe (WFME & AMEE 2005). The discipline does engage in elements of European cooperation such as ECTS, the promotion of mobility, recognition, and quality assurance initiatives. There is a

strong interest at the disciplinary and institutional levels to learn from experiences elsewhere. The medical community is well-networked at the European level and has recently begun to engage in the Bologna process in a broader sense through networks such as the Thematic Network on Medical Education in Europe (MEDINE) funded by the DG EAC (www.bris.ac.uk/medine/). Overall, based on a survey of 236 medical schools in 19 European countries (Nippert, forthcoming), the World Federation for Medical Education (WFME) and the Association for Medical Education in Europe (AMEE) conclude that overall “the reactions to the actions within the Bologna process are evenly distributed between support and rejection” (WFME & AMEE 2005: 3).

4.2.1. *Two-cycle degree structure*

As documented in a joint “Statement on the Bologna process and medical education” WFME and AMEE released in February 2005, there is a broad consensus in the medical community that “the introduction of the two-cycle structure is problematic and could even be harmful to medical education and its quality, to the medical schools, the students and the profession, and in the last resort to the health care system and its patients” (WFME & AMEE 2005: 2). Both organisations recommend to keep the common long, integrated, one-tier structure or to establish the first cycle only as the first part of the medical programme, without a special vocational use. A study by the European Medical Association (EMA, 2005) on “the implementation of the Bologna process in medical education” lists several reasons against the implementation of the two cycle system. One of them is that most of the recent study reforms in medical education all over Europe aim at the combination of basic sciences and clinical sciences. There is an ongoing discussion on how to integrate clinical sciences into the curriculum without neglecting the necessary theoretical foundations. A first-cycle degree is generally considered to make this even more problematic, especially since there are medical subjects that need to be taught for more than three years. Another reason is that fields of employability for Bachelor graduates have not yet fully developed. Since there are no bridges to other subjects so far, most academic and professional associations in the medical field do not see a need for a Bachelor degree.

Also, the EU directive (No. 93/16/EEC Art 23 par. 2) about the recognition of medical degrees and qualifications in Europe is seen as in tension with the Bologna process and its main features like ECTS and two-cycle degree structures (EMA 2005: 31). Among others, it stipulates that medical programmes in the EU consist of 5,500 hours or six years of full-time education. In almost all countries, integrated curricula are therefore maintained, most of them encompassing 360 ECTS (i.e. 6 years). Additional postgraduate (i.e. after the Masters degree) specialisation is needed before a graduate can take up employment as a doctor. All country reports mention that the EU directives are followed.

Nevertheless, there are at least two European countries where medical education has moved to the two-cycle system: Denmark and Switzerland (see case study in part three). Also the Netherlands are currently in the change process. In order to meet the requirements of medical studies (including those of the EU directive), the workload of these programmes differs from other fields of study. Instead of the common 90-120 ECTS for a Masters programme, it amounts to 180 or even 240 ECTS (3-4 years fulltime) credits for a Masters programme, resulting in 360–420 ECTS (6-7 years fulltime) for the Bachelor and Masters degree in combination (Reichert & Tauch 2005: 13).

In Denmark, a 3+3 structure is followed which has already been introduced in 1993, long before the Bologna process. It was modified in 2000, but the integrated curriculum has been maintained, which means that the value of the Bachelor degree is questionable. In practice, it does not even function as a mobility point for changing universities within Denmark. In the Netherlands, the transition of medical education to the two-cycle structure is currently ongoing. Almost half of the universities have introduced a Bachelor-Master structure for medicine, equally following a 3+3 year structure. The University of Utrecht was the first to develop the idea and have implemented the structure as from 2003. Three or four other universities followed. As in Denmark, the Bachelor does, however, not qualify for the labour market. In Italy, the degree in Medicine and Surgery follows the traditional integrated 6-year model (5 years in Dentistry). However the healthcare professions, such as nursing and assistant dentistry follow a 3+2 structure. Similarly, the Austrian universities offer Bachelor and Masters programmes in the medical field besides their traditional *Diplom* programmes. For example,

the Medical University Graz offers a Bachelor study programme in Nursing Sciences (*Pflegewissenschaften*), the Medical University of Vienna has a Masters programme in Medical Informatics (*Medizinische Informatik*), the University of Veterinary Medicine Vienna offers a Bachelor-Masters programme in Biomedicine & Biotechnology and a Masters programme in Equine Sciences. Programmes related to medicine (as e.g. biomedicine, health and nursing management, physiotherapy, logopedics) are mainly offered by Austrian *Fachhochschulen* in the Bachelor-Masters structure. In the Czech Republic, there are ideas to develop an undergraduate (science) programme in medicine. In the Flemish part of Belgium, a Bachelor degree in medicine exists; it does however not qualify for the labour market.

Many countries have tiered degree structures in medical education with several cycles, often structured around the non-clinical and clinical parts of education and training, however these are not Bologna-type tiered systems. For example, the traditional French degree structure in medicine follows a 2+4-structure, followed by doctoral studies. The degree after a total of 6 years is however not considered a Masters degree as it is not integrated into the French Bologna framework (LMD). In the UK where the two-cycle degree structure is traditional for most subjects, medical education follows an integrated curriculum: the normal pattern of medical degree study in the UK is five years full-time academic study followed by one year as a Pre-Registration House Officer (known as PRHO). After this, medics are then fully registered to practice. The interesting aspect in terms of cycles is that on completion of the academic period of study UK medics graduate with two first-cycle degrees simultaneously: a Bachelor of Medicine (M.B) and a Bachelor of Surgery (Ch.B), hence their post-nominal designation M.B.Ch.B. A recent innovation has been to offer a slightly condensed 4 year medical degree as a second first-cycle degree to more mature students who have already gained a first-cycle degree in another subject. UK medics tend not to follow a second-cycle medical degree (except in some quite specialised areas such as Medical Ethics, or areas such as an M.Sc. in Medical Education), but some go on to undertake a third-cycle professional doctorate, the M.D. (Doctor of Medicine) which tends to be taken in one to two years, a much shorter period than for a conventional Ph.D. This has led the authors of the Trends IV report to conclude that “it is difficult to see how this model in its present form could be integrated as a *second* cycle qualification to the overarching European higher education qualifications framework” (Reichert & Tauch, 2005: 16). A similar model is followed in Spain, where the deans of the faculties of medicine agree about an integrated Masters programme of six years (and a total of 360 ECTS credits). Thereafter, a graduate and a postgraduate degree can be obtained simultaneously.

It remains to be seen if the special requirements and features of medical studies will allow a common solution within the Bologna process across Europe. The Swiss example renders hopeful in this respect. While not being part of the European Union, Swiss medical education has used the Bologna process as an opportunity to move to a two-cycle degree structure with a Bachelor degree that offers opportunities in the labour market. They opted for a 3+2 model with an additional mandatory year (clinical electives) for those students who want to work as physicians. After 3 years or 180 credits, the Bachelor degree is awarded, after another 2 years or 120 credits a Masters in clinical medicine is awarded. Students preparing for the medical profession then undergo another year of clinical training to prepare for the Swiss state examination (*Staatsexamen*). The ongoing discussion in Switzerland shows that it is possible to find solutions to the question “what to do with Bachelor graduates in medicine”. The Bachelor degree opens up new possibilities of employment in health-related professions. It is clear that Bachelor degree holders are not allowed to work as physicians, but many other possibilities have already been identified. The introduction of this degree is also seen as a chance for those who otherwise would quit their studies without a valid degree, and thus as a way to decrease the drop-out rate in medical education. An important conclusion, underlined by the actors in the field, is that it is feasible to implement the requirements of the Bologna process in medical education. Contrary to the general view that these requirements are inapplicable to medical education, within two years the medical faculties in Switzerland have been able to propose and start the implementation of a model that fulfils the requirements of the Bologna process and the corresponding curriculum reforms and, at the same time, meets the European directives and the federal legislation regarding medical education (see part three for the full case study).

4.2.2. *Competence-based learning*

In a number of countries, medical curricula are reformulated in terms of competences and appropriate processes in place to implement these (e.g. Belgium – Flanders). Again, the Swiss case is a prime example. Already prior to the Bologna process, competence-based learning was introduced by the Swiss Catalogue of Learning Objectives for Undergraduate Medical Training (www.smifk.ch), which is currently reviewed to fit the Bologna requirements. The UK is another strong case: Medical degrees in British universities are described in terms of a set of competence statements laid down by the professional body for medicine which is the General Medical Council (GMC). The clinical competence statements are assessed in practice whilst medical students are on placements in clinical settings. In Turkey, the Turkish Health Council, associated with the Interuniversity Council, has formulated a set of national qualifications (competences) in medicine. Similarly, in Bulgaria, the curricula comply with the Ministry of Health's standards and are largely conforming to the national qualification framework that has been harmonised to the European framework. Another noteworthy development is the introduction of problem-based, case-based learning and/or thematic restructuring of curricula in this field (e.g. Denmark, Austria and Germany). It is noteworthy that in a number of countries, curriculum developments take place which are unrelated to the Bologna process, but are aimed at following international standards in general and making national curricula more compatible with each other (Austria).

4.2.3. *Flexible learning paths*

In most countries, the flexibility of medical education is rather limited. Only a few courses in the programmes throughout Europe are optional. Many country reports explicitly refer to the lack of flexibility (e.g. Estonia, Poland, Malta and Romania). But there are notable exceptions. In the UK, a recent innovation has been to offer a slightly condensed 4-year medical degree as a second first-cycle degree to more mature students who have already gained a first cycle degree in another subject (e.g. at St George's Hospital Medical School in London). In some specialised areas such as Medical Ethics, or areas such as an M.Sc. in Medical Education, students can also follow second-cycle Masters degrees on top of their full medical education. The same applies in Germany: in addition to the traditional integrated medical education, some universities offer specialised Masters in areas such as Public Health or Tropical Medicine. In Ireland, a 2006 report has recommended to bring about more diversity in teaching modes and working and learning with other health professions. The Austrian report mentions an actual increase in flexibility, i.e. new teaching modes. There are some signals across the countries that there are debates and actions to make the graduate cycle more open to students that not necessarily have finalised a medicine undergraduate degree. For sure, in many countries mechanisms are in place to allow foreign medicine students to enter national programmes, and on an individual basis students from other – but related programmes – were admitted to the medicine programmes (without necessarily starting in the first year). But, the change seems to be that some countries are making structural arrangements for the transition to the second cycle of medicine programmes. Such is the case in e.g. Belgium, where “other” students can enter the Masters phase after a Bachelor in a related health programme. Dependent on the nature of the health programme, the student needs to absolve bridging courses before entering a Masters programme in medicine.

In this field too, the Swiss example shows an interesting way ahead. The transition to the two-cycle degree structure has been used to increase the flexibility of learning paths: It allows students to choose among different majors and Masters programmes. The individual choices are documented in a diploma supplement, and study load is calculated corresponding to the ECTS system. The introduction of majors and specialised Masters programmes allows the medical faculties to focus on their areas of expertise, to become competence centres in these areas and to build a strong profile in research and teaching. With the new system, medical education has no longer one clearly defined type of “output”. Students can tailor their own education according to their interests and needs. Medical education does no longer automatically lead to the profession of a medical practitioner, but opens also ways to other professions in the broader area of health. The Masters degree can also be used to specialise in research instead of preparing to become a medical doctor. However, it is estimated that a

huge majority of students will opt for the physician track, which after five years of study plus one year of clinical electives gives access to the federal examination, the entrance ticket to the medical profession and mandatory further education.

4.2.4. *Recognition and mobility*

The recognition of foreign degrees in medical education is regulated by the above-mentioned EU directive, supporting mobility (after graduation) among the member states. Nevertheless, the EMA (2005) reports that student mobility in medical education is currently one of the lowest and differs from country to country. Going abroad is easier in the clinical than in the theoretical teaching periods (EMA, 2005: 43), and the choice of country is often based on linguistic affinities (EMA, 2005: 42). Staff mobility is impeded by the fact that most teachers are employed not only at the medical school linked to a university but also at a hospital centre linked to the national health system. This is one reason why mobility is largely confined to universities within the same higher education system. Presently there is only little occasion for international exchange (EMA, 2005: 42). Moreover, graduate mobility is not unproblematic in this field if it is unbalanced, due to the high costs associated with offering medical education.

A small number of national reports mention that the interest in student mobility is increasing. This is particularly the case for countries that rather recently joined the Erasmus/Socrates programme. In some countries the need for more mobility is stressed in national (evaluation) reports, such as in Ireland. Whereas mobility patterns generally are on the increase, it is difficult to come to terms with the relative developments at the disciplinary level. Data reveal that the share of Erasmus medicine students of the total number of Erasmus students – measured in terms of study periods – increased from 3.7% (1995/96) to 5.2% (2003/04) (European Commission, 2006). It is not clear however, which percentage of medicine students across Europe are mobile through the Erasmus programme.

4.2.5. *Impact*

Overall, Bologna-related reforms in medical education have been rather limited across the countries. Apart from some change in the area of competences, regarding debates on more flexibility in the transfer from undergraduate to graduate education, and some signs of increasing mobility, not many general reform trends could be identified. Consequently, the impacts of the reforms are yet limited. In some countries where change took place (e.g. increasing access to medical programmes in Ireland; more interest in mobility in Flanders; abolition of the *numerus clausus* in Malta), this was unrelated to the Bologna process. These general patterns make the Swiss case look even more outstanding and interesting, it is definitely a noteworthy model for other countries to learn from, even if implementation is still ongoing and effects can only be estimated to date in Switzerland as well. Another country where change of degree structure is currently taking place in the context of the Bologna process is the Netherlands.

4.3. *Law*

In law education, national contexts are overwhelmingly dominant, and nation states are the major employers of graduates. Examination requirements and through them, curricular structures and contents are mostly concentrated on national frameworks, and hardly take into account the European context so far. European mobility of law students and graduates has been, up to this point, low and confined to niches such as European law. The development of a European area for legal education will depend foremost on a growing European space of professional practice in law.

That having said, there is an emerging interest in international exchange. The European Law Faculties Association (ELFA, www.elfa-afde.org/) that represents nearly half of the law faculties of European countries, welcomes the objectives of the Bologna process, “namely a general concern about the quality, transparency and mobility in European (legal) education, an increase in competitiveness of European institutions of higher education in a globalising world, the achievement of greater

compatibility and comparability of systems of higher education, a reduction of student drop-up rates in law faculties, and an orientation of university degrees also towards needs of the changing labour market, whilst always maintaining high standards in academic education“ (ELFA, 2002).

Even in countries where the final examinations are supervised by the state, modularisation and ECTS are introduced, and there is an ongoing process of changing curricula in many countries. Nevertheless, schemes of grading and assessment in the study of law vary considerably among European jurisdictions and some countries still seem to have greater reservation toward the Bologna process than others.

Besides ELFA, another relevant European network in the field of law is the European Law Students' Association (ELSA), an international, independent, non-political, non-profit organisation. It comprises more than 30,000 students and graduates from more than 200 universities in 35 countries across Europe (www.elsa.org/index.asp). ELSA provides a network to enhance cultural diversity, exchange, mutual respect, political commitment, internationalization and employability. However it has not yet issued any position papers on the Bologna process or provided information on curricular change in this context. A Bologna- oriented activity within ELSA Seminars and Conference-Programme was a European Law Studies Conference on “Future of Legal Studies According to the Sorbonne-Bologna Process” on 18- 26 October 2003 in Budva Montenegro.

4.3.1. *Two-cycle degree structure*

Similar to medical education, a major issue in the field of law is the question whether the two-cycle degree structure is suitable to accommodate the specific needs and demands of professional education and training. ELFA makes the point that “the Bologna (...) model (...) has the advantage of a certain simplicity and transparency but is not completely compatible with the needs and conditions of professional education and training, e.g. in law. ELFA urges the responsible persons engaged in the process of implementing the Bologna Declaration to devote more attention to the specific needs and standards of professional education” (ELFA, 2002: 2). ELFA also highlights that there are already regulations like the EC directives 89/48/EEC and 98/5/EC concerning the mutual recognition of degrees and free establishment of lawyers in the European countries, which have to be taken into account in curricular reforms. Further harmonisation efforts should “help to avoid distortions of competition in the exercise of the legal professions which are now provoked by different requirements and different length of study and training in law” (ELFA, 2002: 2).

What has to be taken into account in this respect is that the distribution of the tasks of university education and professional training varies enormously across Europe. Only in a few countries such as Germany, Austria, and Spain, professional training is integrated into university education (Hirte & Mock, 2005). In most other countries, professional training is organised completely independent from university education, and in some countries such as in the UK and Ireland, it does not even presuppose a university degree (see case study in part three). These different structures are relevant because when it comes to adopting the two-cycle degree structure, a key question is which minimum degree is required to qualify for professional training to become e.g. a judge, solicitor or barrister. In most countries this currently is a Masters level degree; the UK and Ireland are exceptions in this regard.

Against this background, ELFA put forward a proposal how the two-cycle degree structure could be used to foster the development of a true European higher education area in law. The idea is to commonly have a Bachelor degree of three to four years focusing on national law, and qualifying for entry into professional training for the various legal professions in the same country. The Masters degree could then be used to either qualify in a second national legal context and to acquire the entry conditions professional training in that second country, or to be educated more broadly in European and international law. In the latter case, the Masters degree would not give immediate entry to professional training in a second country, which would remain subject to the provisions made in the respective EU directives. Of course many more options for combinations of Bachelor and Masters degrees are thinkable, resulting in a “breathing” and flexible system (ELFA, 2002). However, considering that entry into professional legal training currently requires the completion of a Masters

level degree in most countries and that in some countries, education and professional training are closely intertwined, the ELFA proposal cannot be taken for granted as a consensus in the European community of legal educators (see Hirte & Mock, 2005).

Regarding the implementation of Bologna-type two-cycle degree structures, very different patterns emerge across the thirty-two countries. In a number of countries, the two-cycle structure is in place in all law programmes. This is the case in the United Kingdom and Ireland, but also in e.g. Belgium, Croatia, Denmark, Estonia, France, Greece, Iceland, Portugal, Malta, the Netherlands, Slovakia, and in Luxembourg (where only a Bachelor degree can be obtained, though). However the significance of the two-cycle degree structure varies a lot depending on at which level professional training enters the picture and which role it plays in relation to university education.

In European perspective, the UK and Ireland are special cases (for more information see part three). First, because in these countries the two-cycle degree structure has since long been established also in the area of law. Second, because the Bachelor degree qualifies for access to professional training (strictly speaking no university training is needed at all as there are other routes into the profession as well). Third, because professional training has a significant weight in the overall education of lawyers and includes considerable amounts of coursework, it assumes part of the tasks performed by university education in other countries. Fourth, because of the great flexibility of these systems.

In Ireland, professional training (2.8 years to qualify as a solicitor and two years to qualify as a barrister) is organised by the Law Society of Ireland and Society of King's Inns, respectively. Entry depends on a separate examination designed by these bodies. While the most common prior path is to graduate from a three (or sometimes four) years Bachelor degree in law (LL.B., Bachelor of Law) or a B.C.L. (Bachelor of Civil Law), students from a wide range of different backgrounds qualify if they pass the exam, including graduates from institutes of technology and colleges, graduates from universities with interdisciplinary degrees, and students with a non-law background, for which a range of conversion routes exist. In principle also candidates without any higher education degree can take part in the examinations, although they have to pass additional tests to demonstrate their general level of knowledge and competence. While professional training is generally considered to offer the best carrier prospects, Bachelor graduates can opt for other carriers in the labour market such as in public and civil service, financial services (banking, insurance), social services, human rights education and human resources. The Masters degree (LL.M.) does not play an important role in this model because it is not needed as a prerequisite for applying for professional training, and its duration is only one year.

In Greece, a 4+2 model is followed in law with the Bachelor degree qualifying for entry into professional training. In the Netherlands, Belgium, France, and Italy, legal education has been converted to the two-cycle model as part of the Bologna reforms, but entry into professional training has not been adjusted. Consequently, in the Netherlands, still four years of study are needed to qualify. Similar in Belgium: A 3+2-model has been implemented but the completion of 5 years is the necessary prerequisite for starting training as an advocate. In France, the minimum degree level has remained the former *Maîtrise* after four years of higher education after the first year of the new two-year *Master* degrees. In Italy, legal education has been adapted to the Bologna structure in 1999 already, yielding a three-year *laurea di primo livello*, followed by a two-year *laurea specialista*. However, entry into training for the regulated professions such as judge, advocate or notary requires completion of the second degree. This means that the entry level has even increased as compared to before, when four years were sufficient. Moreover this new degree structure has not been implemented across the board and is currently being revised. Effective from the academic year 2006/07, law programmes will again be integrated five-year programmes leading directly to the Masters level. In Luxembourg, only the first part of legal education can be followed, yielding a Bachelor degree. The pursuit of studies is ensured through cooperation agreements with France and Belgium, before graduates return to undergo professional training in Luxembourg.⁵

⁵ Besides the national reforms, this section is also based on Hirte & Mock (2005) who provide a lucid overview of Bologna reforms in legal education on behalf of the German disciplinary education of law (*Deutscher Juristen-Fakultätentag*).

In Croatia, a 4+1 model has been introduced in law following the ELFA recommendations, but the first degree does not formally qualify for employment. In Estonia, a 3+2 model has been implemented, the Bachelor degree is meant to prepare for work in positions requiring basic knowledge of law. In Denmark, a 3+2 structure in law exists already since 1992. In all these countries, Bachelor graduates of law are of course free to enter the labour market and seek employment, but it remains to be seen which opportunities they have and how the existence of university graduates in law at this level impacts upon other professionals (e.g. from the vocational training system) who previously filled such positions.

In a few further countries, there is agreement that the two-cycle structure should be realised in the short term (Spain). A number of country reports depict a situation in which two-cycle structures and integrated curricula currently coexist, such as Lithuania and Latvia. Finally, quite a few countries report that the field of law is exempted from the two-cycle structure. Examples are Austria, Bulgaria, Croatia, the Czech Republic, Germany, Hungary, Italy, Norway, Poland, and Sweden. In these countries, this is often based on the arguments from disciplinary and professional associations that a Masters level degree is needed anyway to qualify for professional training e.g. as an advocate (Austria, with law programmes of currently 4.5 years), or that professional training is integrated into the second phase of law education, such as in Germany where a 4.5 +2-structure is followed. In Bulgaria, discussions on introducing a Bachelor degree in law are currently ongoing.

4.3.2. *Competence-based learning*

The use of competence-based learning in law is hardly mentioned in the national reports, i.e. there are not many signals that the situation in the field of law is different from the overall national situation. It looks as if legal skills are mainly acquired by studying substantive elements of law, assuming that these skills will be developed more or less implicitly. In countries like Germany with a state examination at the end of law studies, there are structural barriers against moving to a modularised system and ECTS.

An exception to this general picture is Croatia, where law curricula are currently being redefined following the competence-based approach in accordance with ELFA to meet the requirements of the European qualifications framework. In Denmark, a reform of law programmes is planned focusing more on competencies. In Malta two thirds of law curricula are defined as core competences.

Other exceptions are again the UK and Ireland, where law degrees are couched in terms of learning outcomes – the term ‘competencies’ is less common for academic programmes. This does not necessarily imply that the substantive content has changed, but there is overall more emphasis on what students should be able to demonstrate in terms of learning outcomes upon completion of their courses. In Ireland, these learning outcomes are embedded in a nation-wide framework of qualifications which has been articulated with the Framework for Qualifications of the European Higher Education Area. According to the Irish qualifications framework, there are three general strands of learning outcomes that are used in setting standards (knowledge, know-how and skill, and competence) and a number of sub-strands, including knowledge, breadth, kind, know-how and skill, range, selectivity, competence, context, role, learning to learn, and insight. Higher education institutions have specified these in terms of detailed subject-specific lists of outcomes, or are in the process of developing them. Moreover, most universities have adopted various learning methods which aim to enhance the practical legal skills of students (see case study part three).

4.3.3. *Flexible learning paths*

Across the countries studied, flexibility of learning paths in law education seems rather limited, although students have considerable leeway to choose their specialisation in the later phase of the programmes. The German report mentions an increase in the possibilities to specialise, and signals adjustments of curricula in order to cater for lifelong learners. In Austrian law education too, the

possibility to concentrate on and specialise in different subjects has recently been increased. The University of Linz offers a multi-media based programme in law in a blended-learning approach, and several *Fachhochschulen* have started to offer Bachelor programmes in fields like e.g. business law.

In France, there is a wide range of paths to study law at different levels and with different orientation, including two-year training in technological institutes (IUTs), programmes in Professional University Institutes (IUP), and specialised professional or research Masters. Special professionalised programmes and “exit points” to the labour market include the *licence professionnelle* in law after three years, and at the end of the fifth year, the professional *master*. The downside of this diversity is that programmes are considered too scattered; current reforms are therefore geared at clarifying the study landscape, moving to a more integrated approach, as well as a better articulation between university degrees and professional entry.

Quite a number of Central and Eastern European countries report that the leeway for students to compose their own curriculum is limited (e.g. Bulgaria). Country reports hardly mention increased flexibility regarding the inflow to Masters programmes from other disciplines. Belgium (Flanders) is an exception in this regard, as are the UK and Ireland (see below). In Flanders particular bridging courses have been developed for students from other disciplinary backgrounds wanting to do a Masters degree in law, and recognition practice is quite flexible if they have prior achievements in this field. In the Netherlands there is an increasing inflow to Masters programmes from graduates of *hogescholen* through bridging courses. Malta also reports that the two-cycle structure allows for more flexible inflow into the second cycle. Some country reports, such as the Latvian one, explicitly mention that this form of flexibility has not increased in the course of Bologna reforms.

As has been mentioned under ‘two-cycle degree structure’ the UK and Irish systems stand out for a higher degree of flexibility in several regards. A major point is that it is possible for students with a non-legal background to get access to legal professional training, as well as to a Masters degree in law. Postgraduate (LL.B.) programmes, designed to provide a legal education to graduates in disciplines other than law, gain more popularity. Legal education is offered at a range of higher education institutions – universities, institutes of technology, and colleges – at different levels, with multiple transition routes between them which are facilitated by the national qualifications framework. This framework also seeks to facilitate modular approaches and structures, and multiple access points to programmes, including entry to multi-year programmes at different stages and the possibility of programmes having more than one entry point in the year. It will also facilitate learner-earners and learners interrupting their studies, who may also earn credit for the learning outcomes already achieved. Several institutions have sought to modularise their law programmes in order to facilitate more flexible and greater interdisciplinary education and student choice of subjects and degree combinations. These measures are meant to encourage transferability, comparability and transparency within the broad sector, and underpin greater efficiency within the sector. Many higher education institutions offer interdisciplinary and combined degrees such as Law and Business, Law and Accounting, Corporate law or Law as part of a general arts degree. These are predominantly four-year programmes.

The Irish national framework of qualifications also provides principles and guidelines in relation to the recognition of prior learning achievements and the use of ECTS credits to facilitate access, transfer and progression. ECTS is increasingly used by law faculties. The development of policy initiatives to facilitate the inclusion of the full range of awards arising from formal, non-formal and informal learning and the availability of alternative routes to meeting entry requirements are all actively under consideration. In 2005, a Recognition Implementation Group has been established at national level comprising the major stakeholders. All these measures render the system highly flexible by international standards, and geared towards openness more than towards the formation of an elite.

4.3.4. Recognition

The EC directives 89/48/EEC and 98/5/EC concerning the mutual recognition of degrees and free establishment of lawyers in European countries are important milestones of European recognition in

this area of study. Mutual recognition of degrees is also a reason why in some countries, law faculties award already a Masters degree (LL.M.) – as an additional qualification on top of traditional degree structure –

to their graduates. In some countries, law education has been modularised and defined in terms of ECTS (e.g. Austria, Bulgaria, Croatia, France), but the different nationally-related contents of law curricula in Europe nevertheless imply very limited scope for recognition of study achievements from other countries.

In Ireland, the Qualified Lawyers Transfer Test (QLTT) enables lawyers qualified in certain countries outside Ireland, to qualify as solicitors in this jurisdiction. All EU countries are covered by the QLTT regulations. Yet there seems to be a lack of coordination of common European developments so far and ELFA recognises the necessity of common European minimum standards of academic and professional training for graduating respectively accessing legal professions (ELFA, 2002).

4.3.5. *Mobility*

While European mobility of law students and graduates has so far been rather low and confined to niches such as European law, student mobility is to some extent on the increase. This is related to the general increase in mobility in many countries, partly due to access to the Erasmus/Socrates programme. Also, there are many initiatives at institutional level fostering student mobility through joint programmes. For example, the University of Innsbruck has an integrated *Diplom* programme with the University of Padua that provides the possibility for students to study Austrian and Italian law.

In Ireland, the University of Cork, offers a four year B.C.L (international) degree where students spend an academic year at any of the partner universities in the US or Europe. There are also four-year combined law degrees where law is combined with German, French or Irish, including cultural studies in the respective jurisdictions. They include a student placement at a French respectively German speaking university in the third year. Postgraduate programmes in European and Comparative Law have a strong international orientation and aim at introducing students to the comparative study of the legal systems of the European Union, individual member states (particularly UK, Germany and France). Also in the field of legal research, law schools participate in international programmes, such as on human rights.

ELFA (2002) wants to support the better coordination and implementation of ECTS across legal faculties in Europe. But also problems regarding mobility are mentioned, such as the language problem in Turkey, limiting the amount of incoming foreign students. The share of Erasmus law students in the total number of Erasmus students – measured in terms of study periods – increased from 6.7% (1995/96) to 7.1% (2003/04) (European Commission, 2006). It is not clear however, which percentage of law students across Europe are mobile through the Erasmus programme.

4.3.6. *Impact*

Regarding impacts, not much information is available. Not only has change been limited – and consequently impact can be considered limited as well – those reports which mention impacts of curricular reform, often highlight that these impacts cannot be traced back immediately to the Bologna process. This holds also for the Irish reforms which have been largely driven by domestic considerations. Nevertheless Bologna has played a role in terms of being beneficial or furthering the process of curriculum reforms or even as a catalyst in some countries.

In those countries that have newly introduced a two-cycle degree structure in law, an impact is of course the existence of a new entry point into the labour market after mostly three years – even if entry into the regulated legal professions is precluded for these graduates. However it remains to be seen how many of these graduates choose to enter the labour market, what opportunities they find, and which crowding out effect this has upon other labour market participants. In Flanders the labour market acceptance of Bachelor graduates in law is explicitly mentioned as problematic, while in

France the *licence professionnelle* in law has explicitly been designed as a labour market oriented Bachelor level degree. The Austrian report mentions improved access for non-traditional students in law through evening courses, but in the traditional degree structure. In several countries, access to law programmes is limited and controlled by the state (e.g. Bulgaria).

On cost-effectiveness, some countries report curriculum reforms which increase costs per student such as teaching in smaller groups and increased teacher-student ratios (e.g. Croatia). Whether these will result in an increase or decrease of cost-effectiveness will depend on the effect of these measures on aspects like drop-out and time to degree. Latvia reports an increase in cost-effectiveness of studies as a result of curricular reforms which reduced contact hours and increased independent work.

4.4. *Engineering*

Engineering is by far the largest among the field fields of study covered in this project, ranging from traditional programmes such as electrical engineering, mechanical engineering, applied physics, civil engineering and chemical technology to more recent programmes such as computing science and information technology. Cross- or interdisciplinary programmes such as business engineering, biotechnology and environmental sustainability also play an important role.

The engineering community has traditionally been internationally oriented, and is strongly networked at European level. The good disciplinary exchange and strong consensus orientation at the national level translates into well-functioning international networks. At European level, there are two disciplinary societies, the Conference of European Schools for Advanced Engineering Education and Research (CESAER) and the European Society for Engineering Education (SEFI). While CESAER unites about "50 leading European universities and schools specialised in engineering education and research", SEFI is broader in scope and encompasses "480 members amongst which are 250 European universities and institutions of higher education from 38 countries" (CESAER & SEFI, 2003:1). There also is a European-level professional organisation, FEANI (the European Federation of National Engineering Associations), uniting national engineering associations from 26 European countries (www.feani.org/).

All three associations strongly support the idea of creating a European Higher Education Area and both participate actively in the debate about the Bologna Process. In a joint communication, CESAER and SEFI (2003) appreciate the idea to facilitate international exchange by introduction of easily readable and comparable degrees, a wider use of the ECTS system and student as well as staff mobility. At the same time, regarding the move to a two-cycle structure, they highlight that the specifics of engineering education make it necessary to maintain the possibility of an integrated route to the Masters level, and that the university Bachelor degree in engineering should "be regarded as a pivot-point rather than a normal finishing point" (CESAER and SEFI, 2003: 3). These difficulties are strongly related to the traditional existence in Europe of two main forms of engineering education: shorter, more application-oriented programmes often provided by non-university higher education institutions and longer, more research-oriented programmes provided by universities and often leading directly to the Masters level. While the European associations welcome the new possibilities for attracting international students through free-standing 1-to-2-year Masters programmes (ibid: 4), they are concerned that sufficient graduates should be educated up to the Masters level to maintain the strong research and development capacity of European engineering (ibid: 3). So the reforms must not be used for short-sighted cost-cutting measures resulting in a decrease of the quality and competencies of graduates, which would do harm to European competitiveness and run counter to the Lisbon agenda.

FEANI's position is very similar: The association strongly supports the introduction of ECTS as a means to promote mobility, a competence-based approach to quality assurance and European standards and the development of lifelong-learning. They also support the move to a two-cycle degree structure in principle, but demand for the possibility of an integrated route to be maintained. FEANI is also strongly involved in European quality assurance, for example through the development of

European Standards for the accreditation of engineering programmes (www.feani.org/EUR_ACE/reports_accrstand.htm).

So the general picture in this discipline is overall similar to that in medicine and law: There is generally strong support of the Bologna process, but there are some difficulties with the particular aspect of the two-cycle structure.

4.4.1. Two-cycle degree structure

According to the national reports, most countries have moved to the two-cycle structure in engineering, although in most cases these reforms have not fundamentally changed the existing parallel structures of shorter more application-oriented engineering programmes often leading to Bachelor level degrees and of longer integrated more research-oriented programmes ultimately aiming at Masters level degrees. Where the latter have made the transition to the two-cycle structure, this has often remained a formal move which did not have a real impact on the curriculum. This also means that the labour-market relevance of the first degree from universities remains limited in practice, which could however change depending on supply and demand dynamics and the behaviour of graduates and employers.

The German case study (see part three) is exemplary for a country that makes strong political efforts to establish also the new Bachelor degree from universities as “qualifying for the labour market”. This requires considerable curricular restructuring of features that are currently regarded as counting among the particular strengths of German engineering education at universities, such as the two initial years of thorough training in mathematic and scientific foundations, and obligatory practical experience of about a semester. The German engineering disciplines make great efforts to maintain these features *and* achieve labour-market relevance of the first degree at the same time by paying more attention to transferable and generic skills, by allowing for earlier specialisation, and by including a Bachelor thesis which is often linked to the practical period. At German *Fachhochschulen*, the traditional four-year degrees are currently shortened to 3.5-year Bachelor degrees, which requires compromises regarding the traditional extensive inbuilt practical experience. Disciplinary associations make strong efforts to maintain the traditional qualification level by more efficient curricular structuring. It is too early to judge what effect these changes will have upon the qualification of graduates, but it is clear that a well-developed culture of dialogue and consensus-building in the disciplines geared towards ensuring quality of programmes and qualification levels counts among the very strong points of German engineering.

There is no uniformity within or across the countries regarding the length of the cycles. In Croatia, the majority of engineering programmes have adopted the 3+2-model, but some follow the 3.5 + 1.5 model. In the Czech Republic, all engineering studies were structured along the Bologna lines, and this often involved curricular reforms. In Poland, the first cycle is 3.5 to four years and the second cycle two to 2.5 years. In Latvia, university engineering follows the 3+2 model and professional education a 4+1.5 or 4.5+1 model. In Bulgaria, four-year first-cycle programmes are in place, second-cycle programmes are at least one year. In Romania, a 3+1.5 or 2-year model is followed in engineering. In Hungary, the field of engineering was one of the pioneers of the Bologna process, Bachelor degrees last three to four and Masters degrees two years. In Malta, a 4+1 structure is in place, currently the move towards a 3+2 structure is discussed. In Cyprus, Bachelor programmes in engineering take four years. In Cyprus and Turkey a 4+2 model is followed. In Germany, the 3.5+1.5 model is most popular at *Fachhochschulen*. In university engineering both 3+2 and 3.5+1.5 coexist, depending on the exact discipline. In Italy, where engineering is only taught at universities, the 3+2 model has been implemented in engineering and about 20% of Bachelor graduates in the field enter the labour market. In Belgium too, a two-cycle degree structure in engineering is in place, non-university higher education institutions can offer Masters programmes in cooperation with universities. The situation is similar in the Netherlands, where the 3+2 model is followed in university engineering education but with the Bachelor mainly functioning as a mobility point. *Hogeschole*n offer 4-year Bachelor degrees, and increasingly enter transition agreements with universities for access of their graduates to Masters programmes. Danish engineering education has made the transition

formally in 2004. Reference is made to engineering programmes which have a 3+2 structure. In Norway the 3+2 structure is in place for a longer time.

Some countries are moving gradually towards the two-cycle structure. In Spain a first degree lasting 4 years has been proposed and Masters which are mainly modifications of previous doctoral programmes. In Portugal general directives regarding the two-cycle structure apply to engineering as well, but seem to be happy with a dual system in which both a two-cycle structure and an integrated Masters programme coexist. Similarly in England, both the 3+1 structure and 4-year integrated Masters degrees are in place. In Ireland, the first-cycle degree in engineering is traditionally four years in duration, leading to an Honours degree. Besides, non-university higher education institutions offer three-year Bachelor degrees which gives access to Masters degrees through bridging courses only. However, the professional body (Engineering Ireland) is in favour of five-year integrated programmes leading directly to the Masters level and has recently approved accreditation criteria for that (allowing for 3+2, 4+1 and integrated 5 years programmes).

A few countries have not moved to the two-cycle structure in engineering. The French engineering schools, most of which belong to the *grandes écoles* sector, have so far largely maintained their traditional 2+3 structure (two years of preparatory classes followed by an integrated three-year programme leading directly towards the Masters level). They are however entitled to grant the new *grade de master* for their unchanged long-one cycle programmes (subject to certain accreditation criteria). In addition, they are entitled to grant the *diplôme national de master* for two-year Master programmes if they submit them to state quality control. Up to 2004, this remained largely confined to engineering programmes for foreigners (Duby commission). *Grandes écoles* also continue to grant the *Mastère spécialisé*, a highly specialised and applied, one-year postgraduate qualification at level *bac + 6* for mature students. In Estonia, only one programme has adopted the two cycles (three + two years) and in Sweden there is a discussion whether structural change should be brought about in engineering. In Austria, engineering is not formally exempted from the two-cycle degree structure, but there is quite some reluctance to implement it in engineering, which is partly due to strong attachment to the traditional degree title *Diplomingenieur*.

Apart from all the nuances indicated in the text above, the current situation regarding engineering at university can broadly be summarised in the following overview (table 4.5).

Table 4.5: Two-cycle structures in the European countries

Structure	Country
3+2	Croatia, Czech Republic, Latvia, Romania, Germany (and 3.5+1.5), Hungary, Italy, Belgium, Netherlands, Norway, Denmark, Iceland
4+1	Bulgaria, Malta
4+2	Turkey, Cyprus, Poland, Lithuania
Varying 3/4 + 1/2	Slovakia, Slovenia
Two-cycle + undivided	UK, Ireland, Portugal
Moving to 2 cycle	Spain
No 2-cycle	France, Estonia, Sweden, Austria, Finland, Greece

In countries with engineering in the polytechnics sector 3-4 years Bachelor programmes are most common. This diversity of degree structures is generally supported by CESAER and SEFI (2005a) who, while accepting that the 3+2 model has also become a standard in engineering, propose to consider integrated 5 years curricula as well as 4+2 or 4+1 models, in order to reflect the need of more than one type of engineering degrees in Europe.

4.4.2. Competence-based learning

As engineering education is geared towards training for a profession, the acquisition of competencies has always been part of the curriculum. This makes it relatively easy for engineers to make these

competencies explicit as part of the move to ECTS and modularisation. The European professional association FEANI (2003) welcomes a competence-based approach, which it favours over determining quality “by duration of degree or total number of credits.” The reason is that it sees the competence-based approach as “flexible to accept different educational systems and different types of engineers”. Similarly, CESAER (2005) “supports the intention to base study programmes on well-defined learning outcomes”, stressing the responsibility of universities to define them.

In many countries, competencies in engineering education are described or recently revised in line with national qualification frameworks or independently from such frameworks (Poland, Turkey, Ireland, the Netherlands, Croatia, Malta and the UK). However, in some countries where national frameworks are in place, institutions only to a limited extent explicitly focus on competences in their engineering curricula.

The current version of the European Qualifications Framework is criticised by CESAER (2005b) for not allowing sufficiently to distinguish between different profiles of engineering education, such as the more application-oriented and the more research-oriented type.

4.4.3. *Flexible learning paths*

In general, the reports mention that engineering curricula already gave considerable leeway for students to select courses and specialisations. This situation has not changed with the move to the two-cycle structure. Where there is an increase in choice (e.g. Malta), this seems not so much to be the consequence of Bologna, but more of a broadening of the offer. There are some signs, however, that progress is made regarding more flexibility in those countries where choice was limited, although much is still “work in progress” (Turkey). Italy is one of the few countries where the report explicitly mentions excellence tracks in engineering. Another example is Germany, where it is now possible for excellent Bachelor graduates from universities – and formally also from *Fachhochschulen* – to be directly admitted to doctoral studies.

There are hardly explicit references to increased flexibility for entrance to the second cycle from related first-cycle programmes. It seems to imply that the situation is not much different from the pre-Bologna situation. However, in Flanders – because of the association between *hogescholen* and universities – there seem to be more opportunities than before to move from Bachelor to Masters programmes from *hogescholen* to universities. The same holds for the Netherlands where several universities and *hogescholen* have entered cooperation agreements, and universities are creating bridging courses for graduates from *hogescholen*. In Germany, such more formal transition routes are also planned, but to date arrangements are made based on individual assessment. In Ireland, there is explicit national attention to more diversity in teaching and learning modes in all fields of study including engineering through active promotion by the National Qualifications Authority of Ireland.

Generally little reference has been made to the flexibility of Bachelor degrees to continue with a Masters programme in another engineering discipline. It can be expected that in countries where the Bologna reform has led to a broadening of Bachelor programmes, this would make it easier for students to make such a switch. CESAER and SEFI (2005: 2) demand that “first-cycle degrees should be a gateway to a wide choice of second cycle programmes. The receiving institutions have the freedom to define criteria and procedures for the selection of students for the second level degree courses.”

4.4.4. *Recognition*

Regarding recognition, most national reports mention that ECTS, modularisation and diploma supplements have been introduced. Evidence from the German case study does however suggest that these formal improvements do not necessarily help much to improve international recognition in practice as the real issue on which recognition depends is quality and content. In this regard, longstanding co-operation in bilateral agreements and networks, and the reputation of some national system’s engineering education – such as the German one – seem to be more helpful and decisive. The

national report from Iceland makes a similar point. Furthermore, the German case study shows that the comparatively easy recognition of study achievements among higher education institutions of the same institutional type within Germany has depended crucially on the close dialogue of academics (and professionals) in the relevant disciplinary (and professional) associations, where a national consensus on the contents and standards of engineering education could be achieved discipline by discipline. This suggests that to achieve the same on a European scale, the European disciplinary dialogue in associations like CESAER and SEFI will be crucial. The FEANI initiative to develop European accreditation standards for engineering is an important step in this regard (www.feani.org/EUR_ACE/reports_accrstand.htm).

A recognition issue in international context is constituted by the fact that in most continental European countries (e.g. Germany, France), the protected engineering title is conveyed by higher education institutions upon graduation from HE, while in the UK it is conveyed by professional associations, who in turn accredit universities to offer programmes leading to professional recognition, or offer training programmes to obtain it later ("Chartered Engineer"). It will not be trivial to achieve comparability between these systems.

Nevertheless, under the European mobility directive, engineers are already now entitled to recognition to work in another EU member state under the Directive if their professional qualifications (education and professional experience) enable them to work in their home EU member state. For UK engineers this means being either a registered Chartered Engineer (CEng), Incorporated Engineer (IEng) or Engineering Technician (EngTech). Directive 89/48/EEC is the first General Systems Directive for the recognition of higher education diplomas awarded on completion of professional education and training of at least three years' duration. This Directive is applicable to Chartered and Incorporated Engineers. It also gives further details of the Engineering Technicians - Directive 92/51/EEC which is the second General Systems Directive for the recognition of professional education and training of at least one year's duration, which is not covered in Directive 89/48/EEC. Directive 92/51/EEC is supplemental to Directive 89/48/EEC. Engineering Technicians are covered by this Directive.

4.4.5. *Mobility*

Several national reports mention efforts to increase international student mobility, graduate mobility or the mobility of teaching staff, and the existence of joint degree programmes (e.g. Croatia, France, Latvia). ECTS and modularisation again play an important role in this. The Bulgarian report explicitly mentions that mobility in engineering has increased as a consequence of the implementation of ECTS. Several reports mention obligatory or optional periods abroad as common in engineering education (e.g. Austria, Denmark, Iceland). Some countries mention that student mobility in engineering is above average (e.g. Bulgaria, German case study), others the contrary (Estonia). High graduate mobility of engineers is highlighted in the Polish report. EU data (European Commission, 2006) indicate that the share of Erasmus engineering (and technology) students of the total number of Erasmus students – measured in terms of study periods – increased from 7.5% (1995/96) to 10.5% (2003/04). It cannot be revealed from the existing data which percentage of the engineering students across Europe are mobile through the Erasmus programme.

4.4.6. *Impacts*

Most impacts mentioned in the national reports are phrased in terms of expectations, if at all. For example, the Austrian report states that the increase of interdisciplinary and specialised programmes in the course of the transition to the Bachelor and Masters programmes could lead to changes in access. Another important change in the area of access will relate to access regulations upon entry to the Masters level. However it is too early to identify European-wide trends on selectivity.

Some countries mention efforts to improve student counselling and supervision, which might have a positive impact on graduation rates (e.g. Croatia, Flanders, Germany). While all countries grapple with the concept of employability of Bachelor graduates from university engineering, it is too early to identify general trends. Some countries mention that these degrees are not designed to lead to

employment (e.g. Finland, Flanders, the Netherlands), in others they are (e.g. Croatia, Germany, Denmark). In Denmark uncertainty is expressed how the labour market will react to the university Bachelor degree.

Overall, the employment opportunities of engineering graduates seem to depend at least as on the market situation in the particular country as on the degree structure. The same holds, by the way, for the selectivity upon access to the Bachelor level.

In some countries there is concern - also expressed by the two European associations CESAER and SFI (see above) - that the new degree structure can be a threat to the aim of producing a sufficient number of graduates at the Masters level engineers. In e.g. Germany and the Netherlands it is stressed that in order to achieve the Lisbon objectives, the number of Masters (and Doctoral) level engineers should increase rather than decrease.

Many countries are reforming their quality assurance systems in the course of the Bologna process, which also has an impact upon engineering. In this context, international co-operation in quality assurance increases also in engineering. For example, the German accreditation agency for engineering ASIIN has achieved provisional membership status in the Washington Accord. Several Turkish engineering faculties make efforts to obtain ABET accreditation.

For the sector of professional higher education (polytechnics in various countries) the Bologna process has been an incentive to strengthen its (international) profile and to develop research-based Masters degrees (e.g. Belgium, Germany, The Netherlands, Finland). This constitutes new challenges for the sector and for establishing partnerships with universities regarding research collaboration and student mobility between the two sectors.

Many reports subscribe to the expectation that student mobility will increase in the coming years. The German case study yields a different picture: Here the general expectation from academics is that vertical mobility (between Bachelor and Masters degree) will increase, but that horizontal mobility (within a degree programme) will at best stay constant. Due to the increased time pressure in the Bachelor and Masters programmes as compared to the long integrated programmes, institutions will need to enter co-operation agreements to ensure that students can stay abroad without losing time.

As for cost-effectiveness, the German case study yields that the transition to the Bachelor-Masters structure comes with a tendency to increase resources spent per student through better teacher-student ratios, better supervision etc. The net effect on cost-effectiveness depends on whether this will "pay off" in terms of reduced drop-out and shorter time to degree. A similar picture emerges from other national reports such as e.g. Lithuania. The Latvian report mentions that the reforms have already increased cost-effectiveness by reducing contact hours and increasing independent student work.

4.5. *Teacher training*

In all European countries, the structure of teacher training is strongly bound and shaped by national context and history. The state as main employer of graduates tends to have a strong influence on the structure and content of teacher training, and the related requirements generally tend to lower the flexibility of provision in this field. The programmes cater mainly for national labour markets.

The situation regarding curricular reform in teacher training is much more complex than for the fields of law and medicine. Three factors complicate the situation in this field. First, there are – in all countries – different types of programmes for preparing teachers for the different levels of the educational structure: pre-school, primary school, secondary education, with all kinds of national variations. Second, programmes are offered by different types of institutions: universities, non-university institutions and specialised teacher training colleges. Third, teacher training programmes preparing for a single or two schools subjects – particularly at the university level – are logically intertwined with related disciplinary programmes (i.e. languages, mathematics, biology, economics,

etc.). This connection to the discipline is realised in very different ways, largely dependent on structural features of the national educational system.

As for the representation of the field at a European level, the situation is similar to history in that it is so far quite poorly developed. So the main discussion and consensus-building on a European scale took place within the Tuning project, which included a branch on teacher education besides a branch on education sciences in general (Tuning, 2006a). There is a European Teacher Education Network (ETEN, www.eten-online.org/), but it provides no evidence of work it has done on the Bologna process online. The TNTEE (Thematic Network on Teacher Education in Europe, <http://tntee.umu.se/index.html>) provided differentiated but at the same time unsystematic and selective information on teacher education systems in the European Union at the end of the 1990s. It also assessed deficiencies and positive trends of teacher education, particularly within the SIGMA-project, but there is no information on the Bologna process and it looks as if the project has been completed as no recent updates could be found.

A relatively new Teacher network was founded in 2004 in the framework of the ERASMUS – TNPP (www.educ.umu.se/ten-10/). Called TEN-10, it stands for ‘Teacher Education Network towards 2010’, an EU-initiative to enhance cooperation for Teacher Education as “crucial linkage between school performance and HE” (TEN-10, 2006). It is closely linked to the Bologna Process and the Lisbon Process to enhance capacities of reforms in TE, particularly facing the diversity in national teacher education systems. Furthermore, the European Commission Directorate of Education and Culture has launched a project “Education and Training 2010: Diverse Systems, Shared Goals” in the light of the Lisbon strategy. It contains a work programmes on “Improving the Education of Teachers and Trainers”, first results of which have been published in 2004.

From these findings it can be concluded that there are to date no “representative” mouthpiece of the profession or assessment giving overall information on curriculum reforms in Europe. Apparently the systems are so divergent and specific that co-operation is still on its way to develop a far-reaching effect on the European systems, and to come to common conclusions concerning teacher education curricula in Europe. So the whole European movement in teacher education seems to expand, but at an almost embryo-state of development. Most statements that can be found boil down to the message that Bologna reforms in teacher education are important and have taken roots in Europe but are not necessarily being monitored systematically or co-ordinated to any significant extent.

4.5.1. Two-cycle degree structure

Against this background, adapting these particular national patterns to fit the Bologna expectations constitutes a particular challenge, and is not unequivocally seen as desirable in the community. There is also a lot of confusion about how teacher training can be adequately adapted to this structure given the tensions between academic and professional demands upon teachers and the requirements coming from the state as employer and institution responsible institution for quality assurance.

Some teacher education programmes are offered only at the level of the first cycle, and as such are only to a limited extent involved in the structural debate on the cycles. In other countries, teaching degrees are offered only at the postgraduate level, not necessarily implying a Masters degree however. In line with the latter, some countries simply have structures in place (either with 3 year or 4 year programmes) without having adjusted (yet) to the Bologna expectations or only partially, e.g. for primary education but not for secondary education (Denmark, Norway, Portugal, Austria, Sweden). In Turkey, most teachers need a Masters-level degree to teach, in the Czech Republic a Master degree is required for primary education and in the United Kingdom quite often a postgraduate diploma suffices (also in Malta). The variety of these models has considerable impact on inclusion (or not) of teacher training in the two-cycle structure. In Belgium (Flanders), teacher training to become a (pre-)primary or lower secondary teacher is organised as a professionally-oriented Bachelor. However, teacher training for upper secondary school teacher and the postmaster teacher programmes have so far been excluded from the two-cycle debate, but a new decree – if accepted – will create new conditions and increase the cooperation between all stakeholders in this process.

The above, however, not necessarily implies that the variety of patterns constitutes a problem. The Tuning – Education summary document (Tuning, 2006a) e.g. depicts a similar picture as we do, but argues that all different structures can be brought under the umbrella of the two-cycle structure.

The country reports reveal that most countries are still trying to come to terms with dovetailing teacher training with the two-cycle structure. In some countries (Turkey) the integrated structure is maintained. State examinations take place at the end of the five-year programme before graduates are admitted to the teaching profession. Regarding the integration of disciplines and teacher training, two models can be discerned. The first model (e.g. Ireland) clearly separates the disciplinary training and preparation for the teaching profession (didactics, pedagogy, etc.). The second model (e.g. Latvia) allows students in Bachelor programmes to select teacher training-related modules which qualify the students for the teaching profession. A few countries (e.g. England, Lithuania) have both systems in force: the consecutive and integrative model, sometimes also differentiated by level of schooling: For (pre-)primary and lower secondary education, more often a 3 to 4-year Bachelor degree with integrated didactics and pedagogy suffices (e.g. Cyprus, Iceland, Ireland, England, Italy). This is not normally the case for upper secondary teaching, where Masters-level education is generally needed to qualify. But there are countries where a Masters-level qualification is needed for primary education as well (e.g. Czech Republic, Estonia, Germany), or where a four-year Bachelor degree is sufficient across the boards (e.g. Denmark).

Presumably the most far-fetched integration of all teacher training programmes can be found in Luxembourg. There is a four-year degree programme in Educational Sciences, providing qualifications for teaching in preschool, primary education, preparatory classes of the technical secondary school, and in institutions for children with special needs. Also in the Netherlands, the programmes (in the university sector) are adjusted to the two-cycle structure: Students either enter a two-year Masters after a particular Bachelor programme or do a second (teacher training-oriented) Masters of one year after absolving another Masters. In Germany, where – at least on an experimental basis – many teacher-training programmes have been adjusted to the two-cycle structure, a particular challenge is constituted by the fact that secondary education teachers need to qualify in two subjects. It proves difficult to qualify for both subjects at an adequate level in two years time. Therefore, often the second subject is taught at Masters level together with didactic and pedagogical training, implying that in fact the two cycles remain closely integrated and even national student mobility is hardly possible.

A special case is France where the professional training part of teacher education is organised by the state separately from university education and requires passing a competitive examination with a limited number of places. Those who are admitted are then paid in the course of their training and are guaranteed a job if they succeed. In Germany, too, there is two-year professional training on top of a Masters-level degree (*Referendariat*) with a modest state payment, but there is no employment guarantee afterwards.

4.5.2. *Competence-based learning*

Several national reports mention the issue of competencies. The Irish Teaching Council is about to review the standards of competences required for the practice of teaching based on a very elaborate set of recommendations. The Dutch report mentions that qualifications for all levels of teacher training are described and implemented. The Bulgarian report stresses that the qualifications for teacher training comply with the national and the European qualification framework covering the different areas. Also, much attention is paid to skills for working with children, also through field work in schools. Similar in Croatia, where competencies have been defined in accordance with the national qualifications framework. In Iceland, curricula are currently being rewritten to reflect the notion of learning outcomes. In Italy, too, the degree-structure reform has gone hand in hand with more attention to competencies in the curriculum. In Germany, only a few teacher training programmes are

yet explicitly competence-based, and an agreed national set of competencies is still missing. In France, it is criticised that admission to professional practical training through competitive exams is solely based on academic criteria, not on teaching competencies.

4.5.3. *Flexible learning paths*

A lack of flexibility seems to be an issue in many countries due to the tight state regulations on this sector. The Bulgarian report for example mentions that the profiles of the degree courses to which students are admitted have a narrow scope so choice is limited. In Croatia there is also no flexibility apart from a few electives. In Germany, a Bachelor degree in teacher education has to be “polyvalent” i.e. qualifying for other labour market options, but in reality this proves hard to implement. An exception is Estonia where current teachers are retrained and many adults take up teacher training. Another good example of flexibility is the English case study (see part three) where multiple opportunities exist – including for mature professionals with a relevant first degree – to become teachers, the most common one being a Postgraduate Certificate of Education (PGCE). In Ireland, too, as in all other fields of studies flexibility is generally strong and further on the increase.

4.5.4. *Recognition and mobility*

Recognition issues and mobility are not or hardly mentioned in the country reports. In Bulgaria, growing mobility with Russia and other countries from the former Soviet Union is mentioned. ECTS and the Diploma supplement have been implemented in many countries (e.g. Bulgaria, Croatia, Germany) or are currently being implemented (e.g. Iceland, Italy). In Germany, recognition procedures were already in place before the Bologna reform, but the current practice is criticised for its restrictiveness. The great variety of models currently developed in Germany to adjust teacher training to the two-cycle structure severely threatens mobility of students and graduates within Germany among the 16 *Länder*. The low degree of international student mobility in teacher education is explicitly mentioned in a range of country reports (e.g. Germany). The share of Erasmus education and teacher training students of the total number of Erasmus students – measured in terms of study periods – decreased from 3.6% (1995/96) to 3.2% (2003/04). It cannot be revealed from the existing data which percentage of the education and teacher training students across Europe are mobile through the Erasmus programme.

4.5.5. *Impact*

Sparse information is available regarding the impact, which is partly due to the lack of reform or the early stages of the reforms, but also due to the rather complex structures in place in the various countries. In some countries, there is an expectation that access will be widened (e.g. Austria), but in most countries access to teaching programmes and the profession depends more on national regulations (e.g. entry exams, *numerus clausus*) than on the degree structure. The close ties with the state as an employer can be a strength and a weakness when it comes to employability. The Bulgarian report mentions good coordination of teacher education with the school system’s needs as a strong point. On the other hand this dependence on the state as an employer can lead to erratic demand-and-supply cycles that are hard to manage. Here the two-cycle system has some potential for reacting more swiftly, as the English case study shows. In some countries like e.g. the Czech Republic, teachers have very good labour market opportunities outside of schools. Generally it can be said that countries with a flexible two-cycle structure like the English one are potentially more cost-effective, as they can educate teachers with previous experience in other fields in a shorter period of time if the demand situation requires so. International mobility will probably remain a weak point in teacher education even with the implementation of a two-cycle structure, as qualification requirements are so much dependent on national context. However a two-cycle structure with postgraduate teacher training and an outcome oriented approach to quality assurance such as the Qualified Teacher Status (QTS) in England allows at least theoretically for access of candidates from other countries into the profession, and the English case supports that this actually happens.

4.6. History

Whereas this section mainly deals with the classical programme of history (and its specialisations), sometimes the situation described also relates to kindred programmes such as archaeology, prehistory and history of arts. In many countries, history is taught in a major/minor structure allowing for different combinations. It is often related to teacher education as teaching is one of the professional opportunities for history graduates. History as a subject is in most countries taught at universities only, the non-university sector hardly plays a role in this subject and the relationship of different institutional types is therefore not an issue.

History is “the odd one out” among the five subjects to be included in this project in that the links between the academic subject and a particular professional field outside of academia are the least clear. Other than for the four other fields of study, in most countries that make the transition to the two-cycle degree structure, history is in no way exempted from the general structural reform. Including the field of study in the project is interesting for three main reasons:

1. as an example for reform in the “mainstream” subjects that fall under general national policy formulation and legislation on two-cycle degree structures.
2. as a subject for which the content is shaped to a particularly high degree by national culture and context, and to see to what degree the Bologna and Lisbon processes are used to strengthen the “European dimension” of the curriculum, as called for in the Bologna declaration.
3. to evaluate how a rather conservative and traditional discipline deals with the pressure to take into account “employability” in the curriculum, to design short first cycles with potential relevance for the labour market, to move to a competency-based curriculum, and to implement instruments like ECTS and modularisation

Compared to medicine, law, and engineering, history is less well-networked at European level, and there is no European disciplinary association in the field which could function as mouthpiece. Given the nature of the field, a professional organisation does not exist either. So the main disciplinary dialogue at European level takes place within the Tuning project, where history is one of the disciplines included.

Within the European context, the subject of history has always merited a particular status in terms of fostering European peace and stability. The Bologna declaration made specific reference to the then contemporary discord in South Eastern Europe. Another relevant European organisations in the field is therefore CLIOHnet (Creating Links and Innovative Overviews to Enhance Historical Perspective in European Culture), an Erasmus Thematic Network composed of 58 partners engaged in a variety of activities all of which aim at increasing the presence of a critical comparative historical perspective in European culture, not only academic culture. CLIOHnet functions as a promoter for “Bologna-friendly” history teaching that aims to set disciplinary standards in Europe affiliated with Tuning. CLIOH’s teaching-learning approaches promote all dimensions of curricular reforms, e.g. employability of Bachelor graduates, European qualification framework and diversity of teaching modes. CLIOHnet’s members are history departments of mostly universities in almost 40 European countries. They join the different activities of CLIOHnet to different degree. The related CLIOH Group (Refounding Europe: Creating Links and Overviews for a New History Agenda) “consists of 38 institutions, engaged in creating teaching materials, models and modules, to provide resources for the partner institutions themselves and for others who are interested for teaching/learning about history in today’s Europe” (CLIOH, 2006). CLIOH’s proponents believe “that a critically founded supranational view of history – the ways in which it is conceptualised, learned and studied – constitutes one of the most important arms against racism, xenophobia and civil conflict. History constitutes one of the key fields in which international understanding can be ensured - or negated - and cohesive citizenship can be guaranteed - or shattered” (<http://www.clio.net>).

Another relevant network is ISHA (<http://www.isha-international.org>), an academic association run by student organisations for the history discipline. While this is an active academic network that promotes cross-border academic exchange of history students, it did not voice any positions or

contributions to political questions. Members are the history students associations at university departments; between one or four universities per country. Seventeen countries are linked to the association either through full members or affiliated observers.

4.6.1. *Two-cycle degree structure*

Among the five fields in this study, history moved most explicitly to the two-cycle structure. In none of the countries that introduce a two-cycle structure in the context of the Bologna process, history programme have been exempted from general national legislation. All country reports indicate that the discipline has already established the two-cycle structure or is about to implement such a structure, such as in Spain. The length of the first and the second cycle varies across countries. Most countries have opted for a 3+2 structure (e.g. Austria, Estonia, France, Germany, Italy, Latvia, Norway, Portugal, Romania). In the Netherlands and Belgium (Flanders), a 3+1 structure is implemented, and such a structure was already in place in Malta and in England, Wales, and Northern Ireland. In Scotland a 4+1 model is traditional. Bulgaria has also opted for a 4+1 model in history, but is currently discussing to move to a 3+2 or 3.5+1.5 model. In Cyprus, the Bachelor in History takes 4 years, the same is planned in Spain. In Turkey a 4+2 model has been adopted in history education. In many countries, implementation of the two-cycle structure in history is still ongoing (e.g. in Austria, Germany). While the Bachelor degree is defined as qualifying for the labour market in some countries (e.g. Germany, in France this holds for the *licence professionnelle*), this is not the case in others (e.g. Croatia, Finland, see case study in part three).

4.6.2. *Competence-based learning*

In many countries, history curricula have been reformulated in terms of competences (e.g. Poland, Croatia, Denmark, Latvia, Lithuania, Romania). The Danish report explicitly mentions that the definition of competences has been experienced as a valuable exercise which has increased the transparency of skills and knowledge acquired. In many countries, ECTS has been introduced in history and programmes have been modularised (e.g. France). The Tuning project has been inspirational in the reform projects in some countries (e.g. Iceland, Ireland), although not yet fully implemented in Ireland. Although the Tuning project has hardly been mentioned in other country reports, from other sources we know that some progress has been made (Tuning, 2006b). The fact that the picture is very varied across countries is echoed by the Tuning summary document for history: “of all the subject areas involved in Tuning, history has turned out to present the most varied picture in the different countries represented” (Tuning, 2006b: 1). It may explain why Tuning has not been mentioned explicitly in many of the countries.

History education conveys many generic competencies that are job-market relevant and valued by employers. According to the Tuning project, history studies prepare graduates for employment in “any service or communications related field: civil service, local, regional administration, personnel management, journalism, international organisations, tourism, administration and valorisation of the cultural patrimony in its various manifestations including archives, museums, libraries” (Tuning, 2006b: 2). According to a recent report from Carvelho (2006) undertaken in relation to the Tuning project, a high percentage of history graduates reported that they were employed in work not directly related to their degree. Nevertheless, most of them were highly satisfied with their learning experience. Employers of history graduates highly rated (and noted high achievement in) their capacity for analysis and synthesis, their basic general knowledge, their ability to gather and integrate data from a variety of sources, and their ability to place events and processes in time. However both graduates and employers gave a low rating for importance (and achievement) to second language acquisition and international aspects of history (Carvelho, 2006).

Some country reports explicitly mention the idea of “Europe” as a catalyst for developing programmes addressing this issue from a historical (or interdisciplinary) perspective. In Luxembourg, e.g. a Master programme in European contemporary history focuses on the origins, foundations and identities in Europe.

4.6.3. Flexibility of learning paths

In most countries, flexibility of learning paths increased in the course of the transition to the two-cycle structure. In France for example, students now often get a broad introduction in humanities and social sciences before they specialise in history. In Bulgaria, students get a broad introduction in history before they specialise on a sub-field. In Iceland, flexibility has increased in that fewer obligatory courses are set in history programmes. Also, it is now possible to enter a Masters programme in history with a Bachelor degree in another subject, if a few history courses are completed. In Latvia, Bachelor graduates from all humanities subjects can enrol in Masters programmes in history. The Bulgarian report mentions that in recent years, a diversity of teaching and education methods were implemented to enable the students to acquire knowledge and skills. The Austrian report notes a tendency towards more flexibility through the possibility for students to concentrate on and specialise in different subjects. In Estonia, history can be studied via distance education. The British report, highlights that a wide number of history courses are offered in a part-time mode, that recognition of prior experience is promoted and that a lack of formal qualifications should not be seen as preventing university entry in the UK. The German report mentions that the diversity of teaching modes has increased. At the same time, it states that curricular choice for students is more limited than in the traditional structure, as the number of compulsory courses tends to increase in the new degree structure. In Italy, the introduction of the two-cycle structure increased the level of specialisation of history programmes although this is not perceived to be in line with market requirements.

4.6.4. Recognition and mobility

Very little is said in the national reports on recognition practices and mobility patterns in history, indicating the picture does not divert significantly from the general national picture in this regard. Mobility patterns for history over time are difficult to find. The Erasmus database does not single out history as a subject area.

4.6.5. Impacts

It is too early to evaluate the impacts of these reforms. However some efforts and trends can be highlighted and a general assessment of the situation regarding certain impact indicators can be provided. In France, there are efforts to increase access to history education through new specialised tracks (*parcours*) within programmes and grants provided by a national student support body, the CROUS.

The labour market situation of history graduates varies significantly across countries, from difficult (e.g. Bulgaria) to excellent (e.g. Czech Republic, Latvia, Lithuania). Regarding mobility, in France there are indications that student mobility between universities (at the level of the first and second degree) might be impeded by the increased diversity of programmes induced by the curricular reforms.

It is too early to judge the effect of the Bologna reforms on the quality of history education. In France, there are strong efforts to restructure and reform programmes at undergraduate level, and to base Masters programmes on real research capacity and link them more strongly to research activity, which is also checked in the state accreditation process (*habilitation*). Regarding cost-effectiveness, the picture is split. In France, history studies might become more expensive as so far, many students entered the labour market after four years of university education, with the former *maîtrise*. Under the new degree structure, these students might continue up to the Masters level (5 years) and thus stay longer at universities than before. In Finland, increased focus on student counselling and teaching quality, as well as new reporting routines of the quality assurance system may lead to increased workload for academic staff. However, if the efforts to improve study progress succeed, this may improve cost-effectiveness in the system (see case study in part three). In Denmark too, there are signs that the Bologna reforms will significantly reduce drop-out rates and shorten study duration, as indicated by the experience with the first cohort. This would then also increase cost-effectiveness.

5. Summary, conclusions and reflections

This chapter brings together the summary of the findings, the conclusions that can be derived from the findings and some points for discussion.

5.1. Summary

Bringing back to mind the major objective of the research project – *to gain more insight into curriculum reform developments at the level of five selected study areas – so far under-researched – to evaluate progress made and to try to discover “what works”* – we address the four research questions below:

- *What is the general national picture regarding curricular reform, notably with respect to the five study areas and what evidence is available on their impact?*

The national reports detailed the state of the art regarding the two-cycle structure, competence-based learning, flexible learning paths, recognition and mobility. The comparison of the national reports (chapter 3) made clear that many of the structural arrangements – two cycles, diploma supplement, ECTS – involved in the Bologna process are in place in the 32 countries at the national level. This does not tell the full story regarding the actual implementation. This varies from full implementation at all higher education institutions to implementation in one sector and to gradual implementation at all institutions.

The concept of competence-based learning is much less developed than two-cycle structures, diploma supplements and ECTS. This relates to some conceptual confusion: in some countries the concept is linked to the national-level issues (qualification frameworks, quality assurance), in others it links to the supranational level (European qualifications framework) and again in others it relates to the micro-level: defining learning outcomes or competencies at the curriculum level, with clear linkages to transparency to students and employers. But it relates also to practice: partly as a consequence of the conceptual confusion, different elements of competence-based learning are addressed in day-to-day practices and as such a complex if not confusing picture around actual use and implementation emerges. Indeed, in some countries national qualification frameworks are in place, in some others all curricula are defined in terms of competencies (without a guiding national framework) and again in other countries defining (general) learning outcomes is part of national quality assurance procedures. Also in some contexts competencies are understood as key skills or transferable and generic competencies which have to be added to the curriculum, yet in others the entire curricula are redefined in terms of competencies. Talking about competencies is often related to a paradigm shift towards outcome-orientation. Overall, however, in most of the countries the idea of partial if not fragmented development and implementation is dominant.

Regarding mobility and flexible learning paths, many policies are developed in most of the countries or the issue is on the agenda of the higher education institutions independent of governmental policies. The difference between mobility and flexibility is that regarding the former, the national reports are less outspoken about increases in mobility (with the exception of CEE countries), but the ERASMUS/SOCRATES data indicate that exchange mobility is on the rise. Where reports were silent on mobility increases, the reports detail a concrete increase or highly probable increase of flexibility of learning paths. However, when looking behind the general pattern, some elements of flexibility are less developed (e.g. the validation of prior learning in other higher education sectors) than others (variety of teaching modes, more choice for students). Regarding mobility it should be highlighted that with curricular diversity increasing as part of the general move in Europe towards more institutional autonomy and profile, not only international mobility but also national mobility is an issue. Clearly there is a tension between the policy goals of diversity/autonomy and comparability/permeability which is being dealt with differently in different contexts.

Recognition is again a broad field ranging from recognition of degrees and professional qualifications over recognition of prior learning from other national higher education institutions or outside to recognition of study periods abroad. Regarding recognition of periods abroad, most higher education systems have regulations in place, but the actual implementation is in hands of the individual institutions and often, individual academics. In some countries, explicit attention is paid to increasing the information base for potential students.

At the disciplinary level, the national reports indicate that overall in the five disciplines, there is broad support for the Bologna process, particularly for the goals to build a European higher education area, to increase student mobility, to improve recognition, make joint efforts to strengthen the quality of education further, and engage in a dialogue on curricular contents and standards. Various activities are already running in all these areas. The major difficulty is with the two-cycle degree structure and in particular with the requirement to have a Bachelor-level degree relevant to the labour market.

In medical education, this is related to the fact that medical education in most countries is geared towards educating medical doctors at a qualification level at least equivalent to a Masters level (requiring six years of full-time education following EU regulation). Education in health professions at lower qualification levels such as nursing or physiotherapy is mostly organised separately. Establishing a Bachelor degree in medicine would thus require not only a profound restructuring of university curricula but also a new ordering of the entire labour market in the medical field, and of the relationship between education for medical doctors and other health professions. As the Swiss case study shows (see below and in part three), there is scope for such a reform, but it is not trivial at all.

Similarly in law, entry requirements for professional training in regulated legal professions (e.g. judge, advocate) are currently set at Masters-level in most countries, exceptions being the UK and Ireland. This means that labour market opportunities for Bachelor graduates in law would need to be found in areas outside of these professions.

In engineering, there is in most countries already an application-oriented Bachelor-level qualification offered by non-university higher education serving labour market demand for graduates at this level. The challenge is to establish a two-cycle degree structure in the university sector with a sensible qualification profile for a Bachelor graduate from universities, and to rebalance the functions and roles of university versus non-university engineering education. While the engineering disciplines and professions as a well-networked and active community are dealing with the challenge, it has to be taken into account that the demands for this restructuring did neither come from the engineering disciplines nor from the side of professional associations. There is a widespread view in the community that an integrated route to the Masters-level should be maintained in university engineering, and that the number of graduates trained up to that level should not be compromised.

In teacher training, there is such a diversity of degree structures and training routes that it is difficult to assess the situation in a nutshell. However one challenge relates to the establishment of a labour market relevant Bachelor degree in secondary school teaching. For primary teachers the entry qualification into professional practice (or training) is often set at Bachelor level. However for secondary school teaching, integrated routes to the Masters level have often been common. While the two-cycle structure has potential for creating a "breathing" system with permeability from other fields into the teaching profession through postgraduate training, the challenge is how to distribute pedagogical and subject knowledge across the two cycles and what labour market options to open for a Bachelor level graduate who has prepared for secondary education.

In history, some countries do not have a problem with a labour market relevant Bachelor degree, others have. This seems to indicate that it has more to do with perceptions than with intrinsic problems of reaching a labour market relevant qualification in history at this level. Overall, the labour market opportunities of graduates in history are much better as one would maybe assume given the academic nature of the subject. This is because in the course of academic education, strong generic competencies are developed that are valued in the labour market. Among the five fields of study, history is definitely the least problematic with respect to the two-cycle structure.

Regarding the impact (on access, graduation rates, employment, mobility, quality of education and cost-effectiveness) at the disciplinary level, the national reports gave some insights, but different reasons were put forward to be cautious about clear impacts. A first obvious reason is that the changes are too recent to be able to find impacts at all: in many countries changes have been brought only a few years ago or even less and since implementation is ongoing, definite findings are not available. A second reason is that not always the link between cause and effect was clear: to argue that the reform agenda would increase the quality of education, one would need quite a number of assumptions and additional arguments to make that specific case. Third, intervening variables and unintended outcomes blurred the potential relationship even more. An example of an intervening variable: If countries maintain a *numerus fixus* for a certain field, most attempts to increase access are in vain. An example of unintended outcomes: some reports mentioned that the newly structured curricula were rather demanding (due to the shortening of programmes), limiting the opportunities for international mobility (without seriously losing time). Another one: sometimes the move to a two-cycle structure has increased study time to the Masters level from 4 (or 4.5) to 5 years, which does not necessarily improve cost-effectiveness. Finally, not all of the impacts are unambiguously positive. For example while increasing access to HE in general is undisputedly a widely-shared aim, whether access in a particular field of study, such as e.g. history or medicine should be increased clearly depends on the concrete demand and supply situation in this field.

- *What is the state of the art of reform in the five study areas at the level of the higher education institutions?*

Because of the low participation rates of respondents from medicine, law and history and the overrepresentation of engineering, we took the results together. The survey results inform us that a very large share of the respondents endorses the elements of the reform agenda: 61-86% agree or strongly agree with elements like mobility, recognition, flexibility. Most endorsement is found for international staff mobility, international graduate mobility and recognition issues. Noteworthy, however, is the 13% of the respondents that disagree or strongly disagree with the two-cycle structure and the – relatively – smaller amount of endorsement for national student mobility and flexible learning paths.

The most important drivers – according to the respondents across the five fields of study – are European policies, institutional management, and developments at other higher education institutions (with respect to the relevant element of the reform agenda). Professional organisations and employers are considered – relatively – as less important.

Regarding the full realisation of the elements of the reform process, the data point in two different directions. First, there is considerable progress in the full (or to a large extent) realisation of elements of the reform agenda, notably ECTS, diploma supplements, adjustment of curricula and the two-cycle structure. Second, there is also considerable change around regarding these elements, given the high percentages in the “to some extent and to a large extent” category. Third, at the same time some bottlenecks can be seen in a number of reform areas. Considerable percentages of respondents do not see considerable change taking place AND these respondents – at the same time – do not see change come about before 2010 or at all. This is particularly the case for flexibility (variety of entry and exit points, recognition of prior learning) and mobility (national student mobility and teaching staff mobility). This shows, among others, that measures like the implementation of ECTS, diploma supplements, and a two-cycle degree structure do not necessarily translate one-to-one into increased flexibility and mobility. Improving on these aspects needs separate, careful attention tailored to the specific disciplinary context (for a detailed analysis of the survey results, see chapter 4).

- *What are – according to respondents at the level of the programmes in the five study areas – the impacts of the reforms?*

There is overall endorsement of the statements on expecting impact of the reforms (25-48% agree or strongly agree), but respondents are relatively sceptical about impacts in the area of cost-effectiveness. A similar ambiguity is visible as regards the questions on full realisation of the reform agenda. Large percentages of respondents (39-49% across the elements of the reform) either mildly agree or mildly disagree with the statements regarding impact. In addition, a not to neglect percentage simply does not see positive impacts at all or indicate that they do not know (if we take the two categories together: 15-33%). So overall a very mixed picture emerges, which might also be due to the fact that the reforms are in many cases simply too recent to form even clear expectations on impacts. For a detailed analysis of the survey results, see chapter 4).

- *What are references of good performance in terms of the impacts?*

The findings regarding the impact foreshadow to some extent our struggle with finding clear-cut examples of good performance. But the way the reform is dealt with in medicine in Switzerland, how engineering reform is tackled in Germany, how curricula in law are organised in Ireland and teacher training in England are clear cases of good performances – albeit not along all dimensions. The case of history in Finland does to a lesser extent stand out as good performance, but can be seen as an example of interesting practice. Overall we would hold that good performance should not only be measured in terms of the pre-defined impacts, but also along a range of other dimensions that emerge from the specifics of the cases.

Medicine in Switzerland is a good example of how medical education can be adjusted to a two-cycle degree structure in a positive and productive way. It clearly an outstanding example in European context, because very few other countries have a Bachelor-Master structure in medicine at all and none is known to us that would have made serious efforts to establish the Bachelor degree as a qualification that opens up opportunities in the labour market, as have the medical educators in Switzerland. While not being a member of the European Union, the country has engaged very actively in the Bologna process. A solution has been found for medical education that follows the relevant EU directives, with the demands of the Bologna process and with national regulation on professional entry through a 3+2 or 3+3 model. The reform has been used to increase student choice and the flexibility of learning paths, to differentiate different tracks such as research and medical practice, and to raise the profile of different medical schools. While it is too early to assess impact, the reform is expected to have a positive effect on graduation rates (as students previously dropping out could now leave with a Bachelor degree), on employment opportunities (widening the range of possibilities), on mobility within Switzerland (through a common degree framework and a catalogue of learning outcomes) and on quality (through new teaching and learning modes and the introduction of accreditation (see part three for the full case study).

Law in Ireland stands out for high flexibility on a number of dimensions: law and law-related degrees can be acquired at a range of institutional types, including universities, institutes of technology, and colleges. There are many transition routes between these programmes. Training for the most common legal professions in Ireland – solicitor and barrister – is organised by the professions independent from university training. This also implies that there are multiple ways to qualify for entry into professional training, and that a university degree is not even strictly needed. Access from non-legal backgrounds is also possible through a range of conversion programmes and transition routes. Overall this renders the field quite open. In terms of the impacts, the way the system is set up has a favourable effect on access through the variety of routes into the profession. At the same time, this makes the system quite cost-effective as drop-out is reduced. A positive effect on quality can be expected from the fact that Ireland has been the first country to agree on a national qualifications framework tuned with the EQF. Also in the field of law, learning outcomes are defined in line with this framework. Finally, while employment prospects are generally regarded to be more positive for those having undergone professional training, there are many established options for law graduates entering the labour market directly. It should however be stressed that as entry to legal training is commonly after the Bachelor degree, this model cannot be transferred one-to-one to other national contexts. By presenting Ireland we do not mean to say that the entry level into legal professional

training could and should be lowered to Bachelor-level in other European countries, we are just presenting a possibility. Also, as Masters degrees play only a subordinate role in the system, Ireland is maybe not even a typical example of a “two-cycle” structure (see part three for the full case study).

Engineering education in Germany is an example of a traditionally strong set of disciplines actively engaging in a process of adjustment that neither they nor the relevant employers or professional organisations have initiated or called for. In Germany, the challenge is to adjust a system with a tradition of parallel university education leading directly up to the Masters level and education at *Fachhochschulen* leading to a level between Bachelor and Masters level to a common two-cycle structure. At the same time, it has been politically imposed that also the university Bachelor degree has to qualify for a profession. A key factor contributing to the strength of German engineering education are the close ties within the disciplinary communities (mechanical and process engineering, electronic engineering and information technology etc.) who have always aimed for a national consensus on core curricula and standards, and are now working hard to translate this strength into the new structure, while allowing more room for innovation and diversity than before. A lesson to be learned from the German case is that for a similar ease of recognition and mobility to be achieved at a European level as was traditionally the case within one discipline in Germany, a strengthening of disciplinary European dialogue is needed. The German case study is a good example of what kind of curricular structuring it involved in university engineering if the demands to achieve labour-market relevance at Bachelor level are taken seriously. It is also an interesting example for the opportunities for non-university higher education institutions in the new degree structure. As for the impacts, it is too early to say what effect the restructuring of curricula will have upon the quality of graduates. It becomes clear that there is no one-dimensional link between introducing a two-cycle degree structure and increasing access, mobility, or cost-effectiveness. The German case study thus highlights the need to look for more complex approaches to achieving the politically desired ends, that take into account the specifics of each field of study (see part three for the full case study).

Similar to law in Ireland, the main strength of the way teacher training in England is organised is the flexibility of the system. There are many opportunities to get into the teaching profession. The quality of teachers is not ensured via a monolithic entry route, but by means of the Qualified Teacher Status (QTS). The two-cycle degree structure makes an important contribution to this flexibility, as it allows candidates to enter the teaching profession as mature professionals from other fields as long as they have a relevant first degree. Another strong point is the strong partnerships between universities and schools ensuring an important role for the integration of practice-based learning with academic reflection. Flexibility not only applies to the possibility for postgraduate teacher training, but also to the many ways in which this training itself can be organised depending on the prior experience and competencies of the candidate. While the distinction might seem marginal from a continental European perspective, it should be stressed that postgraduate teacher training in England does not lead to a Masters degree but to a Postgraduate Certificate of Education (PGCE), which is a professional qualification. As for the impacts, the described features make the system strong on access, employability and cost-effectiveness (see part three for the full case study).

History education in Finland is an example of a field and country where the reform of degree structures has not been in the centre of attention, and reforms have instead focused on improving the teaching and learning side of curricula within the set structure. While the 3+2-structure has been in place already prior to the Bologna process in Finland, students usually continued up to the Masters level and the government made no efforts to change that. Under the slogan “M.A. in five years” the reforms have concentrated on reducing drop-out and shortening time to completion of studies. Towards this end, a range of innovative measures have been adopted including contracts between students and teachers, enhancing study guidance, planning and follow-up, and the inclusion of work-placements in history education. These reforms are expected to improve graduation rates and cost-effectiveness, but it is too early to assess the impacts (see part three for the full case study).

5.2. Conclusions

Trying to make sense of the wealth of information without paying too much attention to the detail and avoiding the presentation of sweeping statements, we come to the following conclusions. In doing this we stay as close as possible to the main objective of the research project: *to gain more insight into curriculum reform developments at the level of five selected study areas – so far under-researched – to evaluate progress made and to try to discover “what works”*.

- A considerable amount of curriculum reform can be observed in the past years, both in general at the system level and in the five fields of study addressed in this research project: no-one involved is inactive. Curriculum reform is driven by issues on the Bologna agenda, but also by particular domestic issues and by national interpretations of the shared European agenda. The Lisbon agenda has not yet emerged as a particular driver of curriculum reforms.
- The good news is that fields of study that initially resisted reform (particularly medicine, teacher training, engineering and law) now more or less accept the reform agenda, although the various elements of this agenda are appreciated differently. Noteworthy is the endorsement of the aim to improve international and national mobility and the continuing difficulty with developing a labour market relevant Bachelor degree experienced by universities in more or less all fields of study (in history the picture varies, and in teacher training some countries offer primary education at Bachelor level).
- The more confusing news is that each country and each field of study – and as a logical consequence each (department in a) higher education institution – is at a different position in the reform process. Certain aspects of the reform agenda are interpreted and implemented in very different ways depending on local needs and different starting points. For example, a wide range of two-cycle degree structures has emerged, ranging from 3+1 through 3+2 to 4+1, 4+2, 3.5+1.5 etc.
- Therefore, more as a sideline as it was not a core question in this project, reforms do not necessarily render systems more similar, although similar issues pertain.
- The current position of a particular field of study (in a particular higher education institution) is clearly linked to the various drivers of change (ranging from governments to European policies to academics) and the particular agendas of the drivers.
- This makes it difficult to speak of clear-cut progress, but it is fair to say that the fields of study (are beginning to) pick up several elements (or not) of the reform process and that they combine these elements in a way that makes sense to them in their specific national and disciplinary context.
- Closely connected to the previous point is a considerable hesitation or ambiguity among the players in the fields of study as to whether all elements will be fully accomplished by 2010 or at all.
- This makes it very difficult to say much about the impacts of the reform. Apart from *a priori* remarks about methodological problems (too soon to tell, spurious cause-effect relations, intermediating variables), it follows from the above that each particular solution chosen will have particular impacts and that patterns will be difficult to discern.
- This is also reflected in the views on impact by respondents of the survey as well as in the case studies and national reports. There is considerable uncertainty about the impact of the reform.
- Moreover, several cause-effect relations do not work simply and clear-cut in the direction they are generally assumed to work. A striking example is the fact that introducing a two-cycle degree structure, modularisation and ECTS does not necessarily increase mobility *per se*.
- At the same time, it could not escape our attention that many of the reform elements are pursued because of their intrinsic or immediate relevance. That is, competence-based learning is pursued genuinely from a belief, for example, that this will increase transparency for students and employers and will support attempts to make learning paths more flexible.
- And, the five case studies show – notwithstanding our reservations about specific national, historical, disciplinary and institutional contexts – that change can be brought about (or examples can be found of practices that fit the Bologna process) and that those involved are relatively optimistic about impacts.

5.3. Reflection

Before we come to some reflections of what can be learned from this project in terms of the five fields of study, we would like to highlight some methodological lessons from our perspective.

- The nature of the reform process makes it – in our view – very difficult to draw conclusions based on evidence-based assessments, certainly if a broad set of issues needs to be addressed in a limited amount of time.
- Either the scope of assessment needs to be limited or the period to carry out such assessments should be much longer.
- At the same time, there is much scope and potential for in-depth small-scale studies in close cooperation with the disciplines, with particular types of higher education institutions or with particular regions that address parts of the Bologna process, provided that such studies go beyond mere descriptions and case presentations.
- This is crucial as the developments in all disciplines need to be understood in their national and respective policy contexts, which means that much can be learned from well-contextualised in-depth analysis of particular cases in a comparative perspective.
- We see the value of this type of report and those suggested above particularly in the light of the dissemination of information. Our study shows that there are many roads leading to Rome (or Bologna or Lisbon). The value is not so much in the presentation of clear-cut answers to complex problems, but in informing the necessary debate on the steps to be taken.

Regarding the five fields of study covered in this project and their involvement in the Bologna process, we would like to highlight the following issues based on this research:

- Clearly the two-cycle structure has not been “invented” in some of the five disciplines, which are organised differently even in those countries where a Bachelor-Masters structure is common in other fields (e.g. the integrated medical education across the UK, the PGCE in teacher education instead of the Masters in England, the important role of professional training instead of the Masters degrees in law education in Ireland, and the integrated four-year Masters that are common in engineering in England). A closer look towards the United States would, by the way, yield again another picture. Here, many of the academic professions such as law and medicine are taught in postgraduate education, based on a more generalist Bachelor.
- There is a need to understand the two-cycle structure as a “breathing” system and flexible template adjusted to various local and disciplinary demands and needs, not as a rigid regulation.
- This does not mean that nothing can be gained from implementing a Bachelor-Masters system in these fields of study as well, but one should not be dogmatic about the two-cycle structure as an end in itself. Instead one should keep in mind the ultimate aims of the Bologna and Lisbon processes such as increasing mobility and recognition, raising the quality of European higher education and contributing to competitiveness. These goals might also be achieved by other means. ECTS, modularisation, diploma supplement, mobility programmes, engagement in quality assurance initiatives etc. can all be, and are, pursued independently of a change in degree structures.
- Certainly in medicine, engineering, teacher training and law, employers and professional organisations – and the state itself as an employer – need to be closely engaged in the reform debate. While this engagement should have started much earlier, it is never too late. The role of the state as an employer is not trivial. Although the Bologna and Lisbon processes have been agreed by national governments, this does not necessarily mean that those parts of national government in charge of law and medicine as employers (such as ministries of the interior or ministries of health) are aware of the implications or ready to adjust.
- The role of professional organisations is of major importance because in many countries, current entry levels into the (regulated) professions following from studies in these fields are set at the Masters-level or beyond (e.g. in law, university engineering, secondary teaching, medicine). A labour market relevant Bachelor degree therefore can not be implemented without close dialogue with the professions.

- Often, labour market opportunities for Bachelor graduates therefore will remain confined to fields other than the regulated professions (medical doctor, solicitor, judge, chartered engineer, etc.). In these non-regulated fields, graduates will compete with candidates from other sectors of the education system (mainly vocational) who have previously occupied the niche of supplying the holders of three-year qualifications to the labour market. Therefore, the net effects on labour markets are hard to assess, but they are definitely not without friction and adjustment costs. Establishing Bachelor degrees can nevertheless be beneficial in the long run if seen in light of the general need to increase the share of the labour force with an academic background, and with a view to further increasing access to these fields in the future. It should however not lead to a decreasing number of Masters level graduates (or beyond) in those fields where such graduates are clearly important for the competitiveness of European economies (e.g. engineering, secondary school teaching).
- It should be understood that establishing a Bachelor-level degree in fields of study that previously had integrated long curricula leading straight to the Masters level involves non-trivial curriculum reform, not just a formal cut somewhere in the middle of the programme. These curriculum reforms are seen by many in the disciplines as involving a lack of coherence and “efficiency” when measured against the aim to educate students directly to the Masters level. This is because curricula geared towards this end are built differently, often involving strong foundations in mathematics and sciences, or general knowledge and methodology, in the first years which are not geared to immediate application in a professional context. To achieve labour-market relevance of the first degree, curricular content needs to be reshuffled and become more applied at an earlier stage, while some theoretical foundations move “upwards” into the graduate phase. On the other hand, a gain is achieved in that learning paths become more flexible, students have more scope for inter-disciplinary orientation, permeability to and from the labour market increases, and the structures are better suited to accommodating lifelong learning. These two aims – educating those who go directly to the Masters level or beyond most efficiently versus increasing the flexibility of the system need to be balanced and individual solutions need to be found on a discipline by discipline basis.
- We should also keep a clear mind about what the two-cycle structure actually brings for fields that are to date not very engaged in international mobility of students or graduates. In teacher training and law for example where curricular contents are to a large extent determined by different national contexts, even with a two-cycle structure in place it is probably not realistic in the short term to expect significant percentages of students or graduates being internationally mobile. Therefore, other advantages of the two-cycle structure come to the fore such as increasing the flexibility of learning paths nationally, enhancing student options for inter-disciplinary orientation or a change of fields after the Bachelor, improving the permeability between higher education and the labour market, and improving the scope for accommodating lifelong learning needs. The multifaceted nature of the goals that can be achieved by a two-cycle structure should be acknowledged and policies geared towards specific ends pursued.
- The approach to realising the Bologna and Lisbon goals should not become too bureaucratic or mechanistic, and we should continue to pay attention to the importance of the quality of the content of teaching and research in the respective fields of study and countries as a factor at least as important for international recognition and competitiveness as any structural changes.
- The disciplinary associations emerge from this study as important forums for reform dialogue and consensus-building. Improvements in degree recognition depend crucially on agreements in these forums on common core curricula and standards. This holds at the national as well as at the European level. Improvement in this area therefore will require intensified development and involvement of European-level disciplinary networks and a shared subject-specific understanding of learning outcomes and standards across Europe.

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6. Executive Summary

6.1. *Background and objectives of the study*

The report details findings from a study commissioned by the European Commission, DG Education and Culture (2006 1394/001 001 S02-081 AWB). The study envisaged to *gain more insight into curriculum reform developments at the level of five selected study areas – so far under-researched – to evaluate progress made and to try to discover “what works”*. The five study areas were medicine, law, engineering, teacher training and history. The five reform elements that were studied in depth were: two-cycle structures, competence-based learning, flexibility of learning paths, mobility, and recognition. In terms of impacts, the study focused on the following six elements: access, graduation, employability, mobility, quality and cost-effectiveness:

The objective was further operationalised by posing the following four questions:

- What is the general national picture regarding curricular reform, notably with respect to the five study areas and what evidence is available on their impact?
- What is the state of the art of reform in the five study areas at the level of the higher education institutions?
- What are – according to respondents at the level of the programmes in the five study areas – the impacts of the reforms?
- What are references of good performance in terms of the impacts?

The project was carried out in the period June – December 2006 by the Center for Higher Education Policy Studies (CHEPS), University of Twente, the Netherlands (coordinator); CHE Centre for Higher Education Development, Germany; NIFU-STEP, Norway; and the European Centre for Strategic Management in Universities (ESMU), Belgium.

6.2. *Methodology*

To answer the research questions, a combination of methods and approaches has been used:

- a comparative analysis of national curriculum reform reports of the 32 countries involved, with particular attention to the five study areas;
- a survey across deans and directors of study (or persons having comparable positions) to picture the *state of the art* of reforms in the five study areas at the level of the higher education institutions in the 32 countries;
- the same survey was used to gather *views* of the respondents regarding the impacts of the reforms in the five study areas;
- a description and analysis of five examples of “good performance” across the five study areas.

6.3. *Findings from the analysis national curriculum reform reports*

The national reports detailed the state of the art regarding the two-cycle structure, competence-based learning, flexible learning paths, recognition and mobility.

At the general comparative level, bearing in mind that not much clear-cut evidence (from research) was available, the findings indicate:

- structural arrangements (two cycles, diploma supplement, ECTS) are in place in the 32 countries at the national level;

- actual implementation, however, varies from full implementation at all higher education institutions to implementation in sectors of the higher education systems and gradual implementation at higher education institutions;
- competence-based learning is – relatively – much less developed than the structural arrangements mentioned above, leading to a picture of partial if not fragmented development and implementation. This picture is due to some conceptual confusion around the topic of competence-based learning and the fact that different aspects of the concept are addressed at the national and institutional levels;
- the national reports indicate that mobility policies are being developed in most of the countries. Not all countries are clear about increases in mobility (many Central and Eastern Europe countries point out, however, that mobility is increasing), but the general pattern emerging from ERASMUS/SOCRATES data indicates that mobility is on the rise;
- also flexible learning paths policies are in place or the issue is on the agenda in many of the countries. Some elements of flexibility (validation of prior learning in other higher education sectors) are less developed than others (variety of teaching modes, more choice for students);
- the topic of recognition encompasses a broad range of policies from recognition of degrees, of prior learning to recognition of study abroad. Regarding the latter, most systems have regulations in place, but actually giving shape to these regulations is often in the hands of individual institutions or academics.

More specifically, regarding the five areas of study:

- broad support was found for the Bologna process, particularly regarding the goals to build a European higher education area, to increase student mobility, to improve recognition, to make joint efforts to strengthen the quality of education, and to engage in a dialogue on curriculum contents and standards;
- the major problems relate to the two-cycle degree structure, particularly to have a Bachelor-level degree that is relevant to the labour market;
- with respect to medical education, the difficulty is that the two-cycle structure would require not only a profound restructuring of curricula, but also a new ordering of the labour market in the medical field;
- similarly in law, entry requirements for professions and for professional training in regulated legal professions are set at the Masters level in most countries (except UK and Ireland);
- the challenge for many (university) engineering programmes is to develop a sensible qualification profile for Bachelor graduates and to rebalance the functions and roles of university versus non-university engineering education. The challenge is taken up, but there is a widespread view that an integrated route to the Master level should be maintained and that the number of graduates trained at that level should not be compromised;
- the situation in the area of teacher training is – relatively – much more diverse across the countries, making it difficult to unambiguously assess the situation. A major challenge is to develop Bachelor level degrees for secondary school teaching and to balance the distribution of pedagogical and subject knowledge across the two cycles;
- history is definitely the least problematic with respect to the two-cycle structure. Nevertheless some countries do have a problem with a labour market relevant Bachelor degree.

6.4. Findings from the survey among deans and directors of study

In total, 481 persons responded to the invitation to participate in the web-based survey (48 for medicine, 47 for law, 106 for teacher training, 205 for engineering, 47 for history, and 28 unknown). Respondents came from all countries (except Bulgaria, Cyprus, Iceland and Liechtenstein), with a fair spread among types of higher education institutions.

The survey indicates that:

- a very large share of the respondents endorses the elements of the reform agenda: 61-86% agree or strongly agree with elements like mobility, recognition and flexibility. Most endorsement is found for international staff mobility, international graduate mobility and recognition issues. Noteworthy is that 13% of the respondents disagree or strongly disagree with the two-cycle structure and that there is relatively a lower level of endorsement for national student mobility and flexible learning paths;
- the most important drivers for change are: European policies, institutional management and developments at other higher education institutions (with respect to the relevant elements of the reform agenda). Professional organisations and employers are considered – relatively – as less important drivers;
- regarding the full realisation of the reform agenda, data point in two directions: there is considerable progress regarding ECTS, diploma supplements, adjustment of curricula and the two-cycle structure. But, at the same time, bottlenecks are visible regarding flexibility (variety of entry and exist points, recognition of prior learning) and mobility (national student mobility and teaching staff mobility);
- there is overall endorsement of the statements on expecting impact of the reforms. 25-48% of the respondents agrees or strongly agrees. Respondents are relatively sceptical about impacts in the area of cost-effectiveness. Additionally, a fair percentage (15-33% across the elements of impact) does not see positive impacts at all or indicate that they do not know.

6.5. Findings regarding cases of good performance

There are some limitations to the attempts to find and report on good performance. These limitations relate to the limited time-frame to find such practices, the complexity and relative newness of the reform process, and the fact that not necessarily all examples of good performance “score” on all dimensions.

Despite these limitations:

- the case of medicine in Switzerland is a good example of adjusting medical education to a two- cycle degree structure (3+2 or 3+3 model). The reform has been used to increase student choice and the flexibility of learning paths, to differentiate different tracks (research and medical practice), and to raise the profile of the different medical schools. It is too early to speak of concrete impacts, but the reform is expected to have a positive effect on graduation rates, employment opportunities, mobility within Switzerland, and on quality;
- the case of law in Ireland stands out for high flexibility regarding acquiring a law or law-related degree at a range of institutional types, the existence of many transition routes between these programmes, and access to law programmes from non-legal educational backgrounds. Consequently, there are positive impacts in terms of access (various routes), cost-effectiveness (limited amount of drop-out) and quality (qualification framework tuned with EQF);
- regarding engineering, a strong case could be found in Germany. A key factor contributing to the strength of German engineering education is the existence of close ties

within the disciplinary communities who have always aimed for a national consensus on core curricula and standards. The case also exemplifies the opportunities for non-university engineering institutions in the new degree structure. The case illustrates that change is possible even if the change is not asked for by the main players. It is, however, too early to say what impacts the reform will have;

- flexibility is the keyword in teacher training in England. There are many opportunities to get into the teaching profession, there are strong partnerships between higher education institutions and schools, and there is considerable flexibility regarding the organisation of the training. These features make the system strong in terms of access, employability and cost-effectiveness;
- the case of history in Finland is probably more an interesting case than an evident case of good performance. The case shows that the Bologna reform has been taken up by the government to reduce drop-out and the shortening the time to degree. Innovative elements of the change in the field of history are: contracts between teachers and students, enhancing study guidance, and the inclusion of work-placements.

6.6. Conclusions

The findings of the study allow for the following conclusions, with the caveat that the nature of the reform process (complexity of reform; considerably variety across systems, sectors and higher education institutions; limited timeframe for data-gathering and analysis; difficulties in finding “causal” links) made it difficult to draw evidence-based assessments:

- a considerable amount of curriculum reform can be observed in the past years, both in general at the system level and in the five fields of study addressed in this research project: no-one is inactive. Curriculum reform is driven by issues on the Bologna agenda, but also by particular domestic issues and by national interpretations of the shared European agenda. The Lisbon agenda has not yet emerged as a particular driver of curriculum reforms;
- fields that initially resisted reform (particularly medicine, teacher training, engineering and law) now more or less accept the reform agenda, although the various elements of this agenda are appreciated differently. Noteworthy is the endorsement of the aim to improve international and national mobility and the continuing difficulty with developing a labour market relevant Bachelor degree experienced by universities in more or less all fields of study (in history the picture varies, and in teacher training some countries offer primary education at Bachelor level);
- the more confusing news is that each country and each field of study – and as a logical consequence each (department in a) higher education institution – is at a different position in the reform process. Certain aspects of the reform agenda are interpreted and implemented in very different ways depending on local needs and different starting points. For example, a wide range of two-cycle degree structures has emerged, ranging from 3+1 through 3+2 to 4+1, 4+2, 3.5 +1.5 etc;
- the findings make it difficult to speak of clear-cut progress, but it is fair to say that the fields of study (are beginning to) pick up several elements (or not) of the reform process and that they combine these elements in a way that makes sense to them in their specific national and disciplinary context;
- closely connected to the previous point is a considerable hesitance or ambiguity among the players in the fields of study as to whether all elements will be fully accomplished by 2010 or at all;
- this makes it very difficult to say much about the impacts of the reform. It follows from the above that each particular solution chosen will have particular impacts and that patterns will be difficult to discern;

- at the same time, it is clear that many of the reform elements are pursued because of their intrinsic or immediate relevance. That is, competence-based learning is pursued genuinely from a belief, for example, that this will increase transparency for students and employers and will support attempts to make learning paths more flexible;
- and, the five case studies show – notwithstanding our reservations about specific national, historical, disciplinary and institutional contexts – that change can be brought about (or examples can be found of practices that fit the Bologna process) and that those involved are relatively optimistic about impacts.