The Bologna Process and the Transformation of European Higher Education

Ted Dodds, University of British Columbia and ECAR
Richard N. Katz, ECAR

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The Bologna Process and the Transformation of European Higher Education
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Preface

The EDUCAUSE Center for Applied Research (ECAR) produces research to promote effective decisions regarding the selection, operation, management, socialization, and use of information technologies in higher education. ECAR research includes

- research bulletins—timely and topical analyses of key information technology (IT) issues;
- research studies—in-depth applied research on complex and consequential topics, technologies, and practices, generally relying on quantitative analysis of survey data and on interviews with key practitioners;
- roadmaps—summary reports designed to provide executive readers with easy-to-read but analytically rich guidance on essential areas of IT investment;
- case studies—designed to describe effective IT management and institutional management practices and to draw from such descriptions lessons that are transportable across higher education environments; and
- occasional papers—studies of an intermediate length on specialized topics or topics of emerging interest, often integrating lighter-weight survey techniques with ethnographic research, reviews of the literature, and other research techniques.

ECAR Internationalization Effort

In July 2007, ECAR initiated a major effort to extend its research understanding of IT practices outside North America. Among ECAR’s 475 subscribers are more than 90 institutions that operate outside the United States. ECAR leadership concluded that changes of substantial importance are under way in universities and colleges in the developed and emerging world economies, and that there is an opportunity to expand both the international relevance of ECAR work and potentially its readership and market. These conclusions led to the creation of a plan of work that included

- a major survey research initiative designed to gain a deep understanding of IT security, identity management, and other practices outside North America;
- a series of planned meetings with university IT leaders in France, England, the Netherlands, Scandinavia, Ireland, and Australasia; and
- a series of case studies highlighting effective practices at specific institutions in Europe, Australasia, and elsewhere.

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Literature Review

For this case study, a broad review of the literature regarding the European Union (EU), the Bologna Declaration and implementation process, and subsequent higher education communiqués was conducted. ECAR Fellow Shannon Smith performed additional literature review and updating.

Interviews

The case study authors interviewed senior leaders of EUNIS (European University Information Systems) at that organization’s annual meeting in Grenoble, France, and former EUNIS president Yves Epelboin at his office at the Pierre et Marie Curie University in Paris on the impact of the Bologna process on European IT management. In addition to meetings in France, we participated in many gatherings across a range of European countries. We met with the Executive Committee of the University Colleges and Information Systems Association (UCISA) in the United Kingdom; senior officials at Trinity College Dublin and University College Dublin in Ireland; a group of two dozen IT leaders in Scandinavia during a three-day summit in Oslo, Norway; numerous individuals at the University of Porto in Portugal; and more. We held discussions with colleagues—individually and in groups large and small, formally and informally—where the Bologna Declaration, which is discussed in detail in the next section, was a specific topic or an influencing factor.

Introduction

Higher education in Europe is undergoing transformative change. For generations, European universities have existed in an environment shaped by incompatible national systems of education. That legacy is giving way to the creation of a new European Higher Education Area (EHEA), whose attributes parallel those that have made the European Union a global economic powerhouse. If the goals underlying these changes are successfully achieved, the EHEA could alter the worldwide educational landscape and present a powerful new competitive challenge to the global leadership position of North American universities within the next decade.

The Bologna Declaration (also referred to as the Bologna process, or simply “Bologna”) is a comprehensive roadmap to guide the sweeping changes now under way in European higher education that are necessary to create the EHEA. The declaration sets out an ambitious agenda leading to a greater level of harmonization in pan-European degree structures, academic outcomes, quality assurance, and, perhaps most importantly, increased mobility for students and academic staff. This process is based on cooperation between the ministries of higher education, the higher education institutions themselves, and the students of the 46 countries that have signed on to become part of the EHEA.

Issued in 1999 on the eve of the new millennium, the Bologna Declaration contained specific objectives and a timetable for achieving them by 2010. The Bologna process is championed by national ministers of education and implemented through voluntary changes by university leadership. Concurrent with these reforms, the European Commission (EC)—a key policy arm of the EU—is driving economic, market-based, and European integration objectives that include but are not limited to higher education. The EC sees higher education as a key strategic element in realizing its goal of establishing Europe as the world’s most competitive and dynamic knowledge economy by 2010.

Another force for change exists in the numerous national reform initiatives launched in France, Germany, Portugal, and other European countries. Many of these national plans call for greater institutional autonomy,
increased private funding sources for universities, and more diversity in academic programs and institutional profiles. The goal in all cases is to improve the employment prospects of graduates, promote global competitiveness of universities, and achieve a world-leading level of research excellence.

21st-Century Europe—Economics and Higher Education

To understand the Bologna Declaration, it is helpful to consider the nature of 21st-century Europe in a political, economic, and cultural context. The European Union is a multinational political body comprising 27 member states. It was founded in 1993 as the successor to the six-member European Economic Commission (EEC), which was first created in 1957. This was little more than a decade following the second of two world wars that left many of Europe’s great cities badly damaged and its economy near ruin. The years following the establishment and development of the European Union have coincided with a prolonged period of prosperity, growth, and—considering Europe’s turbulent history—relative peace within the continent. The EU operates as a single market. Its combined GDP of $13.03 trillion in 2006 ranks a very close second to that of the United States, at $13.13 trillion. The size of the EU’s GDP is all the more impressive considering its complexity. In addition to the current member states, the union comprises three candidate countries that have applied for membership, an assortment of languages and dialects, and a wide array of cultural traditions and diversity that stem from centuries of changing borders, conquests, and internal conflicts. Today, more than half of all member nations share a common currency—the Euro—and harmonized trade policies. Passport control and customs checks between member nations have largely been eliminated. A set of treaties and legislation, known as the Four Freedoms, seeks to ensure and protect the free flow of goods, services, capital, and people within the EU market. Mobility in the key areas of economics and trade anticipates the need for mobility in the realm of ideas and knowledge, critical factors for success in the 21st-century knowledge economy. These specific aspects of mobility are at the heart of the Bologna Declaration.

Although there can be little doubt that the political and economic framework of the EU has had positive effects on the wealth and living standards of most member nations, Europe’s future is not without challenges. First, significant changes have occurred in the international competitive landscape. Innovative, high-quality, lower-cost producers of goods and services, notably in India and Asia, are exerting pressure on Europe much as they are in North America and elsewhere. Second, the workforce is aging due to low fertility rates, increased life expectancy, and the “graying” of the baby boomer generation. As early as 2010, deaths will begin to outnumber births, a trend that is only partially offset by net immigration. Europe’s current population of approximately 493 million is expected to decline to approximately 450 million by 2050. This will translate to a drop in the working-age population of 16%, whereas the population ages 65 and older will increase by 77%.

Finally, the global financial crisis has had a major impact on the EU economy. According to the EU Statistical Office of the European Communities (Eurostat), the EU euro area—the 16 nations that have adopted the common euro as their sole legal tender—had a seasonally adjusted unemployment rate of 8.0% in December 2008, compared with 7.2% in December 2007. The entire EU27 unemployment rate was 9.4% in June 2009, versus 7.5% in June 2008. The lowest unemployment rates were recorded in the Netherlands and Austria, and the highest in Spain and
Europe and Higher Education: Entwined Histories

Modern universities as we know them were born in Europe, dating back to the 12th century. At that time, Paris and Bologna already had well-established universities, each with a different primary focus. The university in Paris was oriented toward theology, whereas Bologna’s emphasis was on law. University enrollment in the Middle Ages included students from other countries or nation-states; this was particularly true at the University of Bologna. Even at this early stage, institution-based differences in academic governance were emerging: The curriculum at Bologna was shaped largely by its students, whereas a system organized by instructors had emerged at the University of Paris. These and of course many other differences persist to this day. Oxford University—also dating from the 12th century—continues to operate largely under collegiate self-governance developed at the institution’s inception. Many elements of modern university tradition, leadership, and governance can in fact be traced directly to roots put down in medieval Europe.

The history of Europe in the intervening 900 years is filled with the rise and fall of city-states, nations, and empires. A succession of wars, invasions, shifting international allegiances, and a multitude of national revolutions has shaped the current political landscape. The dynamism of the continent was perhaps never greater than in the first half of the 20th century, when two world wars were fought on European soil, leading to the controversial—and in certain cases, ultimately unstable—redrawing of borders. Even today we see vocal separatist movements in Scotland and the Basque region of Spain, and irreconcilable differences between the Flemish and Walloon people of Belgium could cause that country to split in two. Should this happen, it would be a sad irony in light of Brussels’ position as the administrative headquarters of the EU.
of the European Union since the inception of the EEC more than half a century ago. Notwithstanding ongoing social and economic turbulence, great European universities have endured and prospered. Largely stable national governments on the continent have developed and continue to maintain their own unique legislative frameworks governing higher education. Educational systems in some European countries—including France, Germany, Portugal, and Hungary—have evolved to be highly centralized at the ministerial level, with tight government regulation covering broad areas of academic governance and decision making. Other countries, such as England and Belgium, have maintained relatively decentralized education systems. Universities across Europe issue different credentials that reflect vastly different requirements, measures, and outcomes. A degree program might take five or six years to complete in one nation but only three years in another. These differences reflect, in part, international variations in university preparation at the secondary school level.

The practice of segmenting the academic calendar into semesters or of marking student academic progress via course credits, seat time, or other input or assessment indicators also varies widely within Europe. These differences make it difficult to compare educational outcomes, leading to the creation of undesirable barriers that are antithetical to the “borderless” characteristics of modern Europe, particularly with regard to labor mobility.

**Prelude to Bologna**

Prior to the broader reforms envisioned in Bologna, efforts to foster collaboration among the continent’s universities were inherently intra-Europe rather than global in nature. These earlier initiatives were largely subservient to the national systems of education within member countries, which held the power to determine the extent of change and the implementation of proposed schemes for collaboration. One of the successful international initiatives of that era was the Erasmus program, created in 1987 and still operating today as a means of improving the mobility of individual students and academic staff. Named after the Dutch philosopher, theologian, and humanist Erasmus of Rotterdam (1465–1536), the program has given more than 1.5 million European university students the opportunity to live and study in a foreign land for a period of 3 to 12 months. It is hoped that total will reach 3 million by 2012. By almost any measure, Erasmus is a successful program. However, by design, its scope and impact are on large numbers of individual students and academic staff, and not on the underlying structures, policies, and outcomes of higher education.

In 1991, the European Commission issued a Memorandum on Higher Education in the European Community, noting changes in the population and labor market and arguing in favor of a stronger European dimension in higher education planning and functioning than existed at the time. Several aspects of the memorandum—including its perspective that the EC should play the role of catalyst and facilitator of cooperative action, together with the document’s underlying rationale tying economics to higher education—were viewed negatively by the European university community. Consequently, little meaningful change resulted from the memorandum. It would be nearly a decade before the EC, largely unfamiliar with and unused to the dynamics of higher education, would attempt another major policy-based initiative involving universities.

By the late 1990s, education ministers of the EU member nations envisioned a “Europe of Knowledge” as an important factor in social and human growth. They wished to give their citizens the competencies required to face the new millennium and to foster shared values that reinforced the meaning
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The importance of educational cooperation in strengthening peaceful democratic societies was becoming paramount. These social, cultural, and economic values were reflected in a document known as the Sorbonne Declaration, signed in May 1998 by the ministers responsible for higher education in four EU countries (France, Germany, Italy, and the United Kingdom). This declaration described the creation of a European Higher Education Area as a way of promoting the mobility and employability of citizens and for the continent’s overall development. Viewed as a noteworthy antecedent to Bologna, the Sorbonne Declaration included an explicit call to action to create the EHEA:

We call on other Member States of the Union and other European countries to join us in this objective and on all European Universities to consolidate Europe’s standing in the world through continuously improved and updated education for its citizens.

Overview of the Bologna Process

On June 19, 1999, one year after the Sorbonne Declaration, the national ministers of education from 29 countries signed and jointly issued the Bologna Declaration with the ambition of establishing “a more complete and far-reaching Europe, in particular building upon and strengthening its intellectual, cultural, social and scientific and technological dimensions” by implementing consistent voluntary reforms in national systems of higher education. The Bologna text reflects, endorses, and strengthens the Sorbonne principles in important ways, yet it is far more than a political statement. Bologna constitutes an action plan for change. It has a clearly defined goal: to create a European Area for Higher Education that will enhance the employability and mobility of people and knowledge, and to improve the international competitiveness of European universities. It has a deadline: The EHEA is to be completed by 2010. It contains a set of specific objectives: the creation of a common framework of comparable academic degrees, the introduction of undergraduate and postgraduate levels in all countries, compatible credit systems including lifelong learning activities, and the reduction or elimination of obstacles to mobility.

The signatory countries established a governance and follow-up structure to facilitate and coordinate the action needed to ensure Bologna’s goals are met. This included the creation of a standing consultative group with representatives of all signatories, and a short-term “follow-up” group comprising those countries that would successively hold the EU presidency from the time of the declaration through to the next ministerial meeting scheduled for Prague in 2001 (thereby ensuring visibility and attention in the critical early stages of the process). Bologna became a standing agenda item on meetings of EU education ministers, who formally review progress every two years. Each of these meetings has produced an affirming policy announcement, a review of current progress, and an updated action and priority plan. In their most recent meeting, called “Bologna + 10,” held in Leuven/Louvain-la-Neuve (Belgium), the ministers observed that not all of the objectives set out by the process have been completely achieved and that “the full and proper implementation of these objectives at European, national, and institutional levels will require increased
momentum and commitment beyond 2010.” There are currently 46 signatories to the Bologna Declaration, including many countries that are not even in the enlarged EU, such as the Balkan countries and some states of the former Soviet Union. In an article in The Economist, Jean-Marc Rapp, president of the European University Association, observed that even though the Bologna Declaration is neither an intergovernmental treaty nor an EU law, the eastern European countries that joined Bologna in 1999 can be credited for some of its success: “Their governments were itching to reform communist-era universities and delighted to have a template for it—and their students were wild to travel.”

Each member nation has committed itself to a process of voluntary reform of its own domestic higher education system in order to create a greater level of pan-European convergence as envisioned for the EHEA. Importantly, the language of Bologna is nonbinding; the intent of the declaration is described as convergence, not standardization or uniformity. Even though the direction is toward compatibility and comparability of academic credentials across the EHEA, Bologna does not attempt to prescribe or standardize national or institution-level curricula. However, the declaration does explicitly recognize the need for common solutions to problems shared by most EU universities. These include the employability of graduates, skill shortages in key areas, relatively weak performance at the world level, and increasing competition from private and transnational organizations. The important academic principles of autonomy and diversity remain paramount and, taken together with the nonbinding language of Bologna, may be helping reduce resistance to the proposed changes.

Shortly after the education ministers made the Bologna Declaration, the Confederation of EU Rectors’ Conferences and the Association of European Universities (CRE) issued what they called “an explanation” of Bologna that contained each group’s own analysis and frame of reference on the declaration. Overall, the rectors and the CRE appear to be well aligned with the broad goals of Bologna toward reforming European higher education. They emphasize that the commitments to those reforms are freely taken and not imposed on national governments or institutions. However, they also point out that the Bologna process constitutes the “mainstream of change,” which could be construed as peer pressure on institutions that might otherwise be reluctant to make the appropriate plans and implement the required reforms. Although their document explains the Bologna Declaration, rather than explicitly endorsing it, the tone of the CRE analysis is generally quite positive.

The process is not without its detractors. The European Students’ Union (ESU), an umbrella organization of 49 national unions of students from 38 countries and more than 11 million students, represents and promotes the educational, social, economic, and cultural interests of students at the Bologna Follow-up Group. In its report on the 2009 “Bologna + 10” ministerial meeting, “Bologna with Student Eyes, 2009,” ESU voiced its deep dissatisfaction with the lack of progress of many aspects of the process:

In [our 2007 report], ESU summarized (sic) the situation with Bologna Process implementation as one of an “à la carte” menu that member countries were using to hand-pick the reforms and action lines they wanted to work on, and turning a blind eye to the rest. The situation in 2009 remains much the same, with the most commonly overlooked action line relating to the social dimension, the one element preventing the whole Process from being revealed as little more than a hollow skeleton of structural reforms.
Some activist organizations have claimed the process is a capitalist plot using the current financial crisis as an excuse to privatize and “commoditize” education. They protested in Leuven at the ministerial conference, and students have taken to the streets in France, Italy, Spain, and Greece.

Nevertheless, participating nations advocate having the European higher education system become attractive worldwide. This is an important goal in light of the relatively poor and declining performance of the more than 2,000 European universities, as shown by many global rankings. In the recent past, the performance of EU universities, with the notable exception of the United Kingdom, has not lived up to the caliber of their economic achievements: As Table 1 shows, only four EU universities outside the United Kingdom are in the top 50 of the 2008 Academic Ranking of World Universities (ARWU) published by the Institute of Higher Education, Shanghai Jiao Tong University (IHE-SJTU). The United States far outstrips the continent as the preferred destination of graduate students, potentially leading to a long-term “brain drain” as talented young Europeans establish careers in the United States.

### Bologna: Specific Objectives

The accord lays out a brief but ambitious set of objectives to be achieved by 2010:

*Adoption of a system of easily readable and comparable degrees.*

This represents one of the most significant steps in improving employability of Europeans and advancing the global competitiveness of European higher education. The international Diploma Supplement (DS) is an important tool to assist in the transparent recognition of academic and professional qualifications, including degrees, diplomas, and certificates. Graduates can use the DS as a convenient means of describing to a foreign institution the “nature, level, context, content and status of the studies that were successfully completed by the individual named on the original qualification to which this supplement is appended.” By providing a common template of qualifications, the Diploma Supplement helps to promote student mobility. It also provides ready answers to common information requests, resulting in reduced administrative work and, presumably, speedier and more accurate decision making.

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<tr>
<th>Nation</th>
<th>Number of Universities in ARWU Top 50</th>
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<tr>
<td>Denmark*</td>
<td>1</td>
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<tr>
<td>France*</td>
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<tr>
<td>Netherlands*</td>
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<td>United Kingdom*</td>
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<td>Canada</td>
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<tr>
<td>Switzerland</td>
<td>1</td>
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<td>United States</td>
<td>36</td>
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*EU member nation
Adoption of a system essentially based on two main cycles, undergraduate and graduate.

This objective goes directly to the change from the traditional shaping of academic credentials according to individual national systems of higher education toward a common framework for all member countries. Many of these national systems did not use a “two-cycle” structure in their academic credentialing prior to Bologna. As mentioned earlier, the duration of programs varied, with first degrees taking anywhere from three to six years, depending on the national system. The changes required for each institution to move to the new structure can be enormous, potentially requiring a complete overhaul of curricula. The change management processes employed by member nations and individual universities vary widely, as does the sense of urgency about introducing these structural changes.

The term “cycles” refers to the major elements of degree programs commonly used in North America. At the 2005 Bergen conference of national ministers of education, Bologna expanded its mandate to include the third cycle, analogous to doctoral/PhD-level programs.

Establishment of a system of credits, as in the ECTS system.

The European Credit Transfer and Accumulation System (ECTS) was created in 1989 as part of the Erasmus program to facilitate interinstitution student mobility. The ECTS is considered to be a student-centric credit transfer system in part because it reports the student workload required to achieve specified learning outcomes in an academic program. Under Bologna, the system of credits may include competencies acquired outside the higher education context, provided these competencies are recognized within the receiving university.

Promotion of mobility by overcoming obstacles to the effective exercise of free movement.

This objective makes clear that Bologna’s mobility goal is intended to include staff (academic and administrative) as well as students. There is explicit encouragement for institutions to recognize and reward staff time spent in other European institutions to conduct research, teach, and provide training. For students, the removal of obstacles refers to the provision of opportunities for training and exchange, and improved student services to facilitate the exchange process. Allowing student financial aid to flow across borders and reducing or eliminating additional fees or tuition for visiting students from within the EU will do much to help implement this objective. In addition, universities are expected to develop and implement action plans to improve student services, create flexible learning pathways, and ensure equal access opportunities.

Promotion of European cooperation in quality assurance.

As the number of Bologna signatories has grown, from 29 in 1999 to 46 today, the importance of quality assurance (QA) has risen. Tremendous variations are seen across these national-level systems of education, encompassing languages, cultures, relative wealth, and social traditions. In the absence of strong QA measures, these variations could undermine the other criteria used to assess academic outcomes, promote mobility, and improve European competitiveness. Much has been done to encourage sharing of good practice for QA across institutions and to develop comparable criteria and methodologies. Both the Netherlands and Belgium had well-developed national systems of quality assessment at the time of Bologna’s signing. The two countries therefore collaborated on policy development in this area. A recently announced European Register of Quality
Assurance Agencies is designed to foster transparency when evaluating the courses and programs of Bologna’s member states. The register is intended to further strengthen the importance of QA throughout the Bologna process.

Promotion of the necessary European dimensions in higher education.

This objective links to all others in its focus on ensuring a uniquely European approach to higher education reform while maintaining a broader outlook on global competitiveness. There are several examples of “made in Europe” mechanisms to ensure the success of Bologna. Among them are the Dublin descriptors, which are generic descriptors for each degree cycle based on learning outcomes and competencies, and a multiphase pilot project called “Tuning Educational Structures in Europe,” which addresses the readable and comparable degrees, the adoption of a system based on two cycles, and the establishment of a system of credits.

Although not explicitly mentioned in the text of the Bologna Declaration, over time the notion of a student-centric, rather than teacher-focused, perspective on learning has evolved. Academic credentials are to be based on learning outcomes and measures of student competencies. For many national education systems in Europe, these are new and different approaches to the means of measuring student progress and the granting of degrees.

Creating the EHEA: A Status Report

Ministers of education from countries participating in the Bologna process meet every two years to assess developments and progress, outline steps for improvement, and consider transnational priorities post-Bologna. At the conclusion of their most recent meeting in Leuven/Louvain-la-Neuve in April 2009, the ministers issued a stocktaking report summarizing their assessment of the current state of progress and their vision for the future, given the proximity of the 2010 deadline. According to the report, the stocktaking indicators were designed to confirm whether the original 2010 goals of the Bologna process were being achieved. Noting that this report was “substantially more demanding” than the 2005 and 2007 stocktaking reviews because of the looming deadline, the overall picture of progress was not as optimistic as in the two previous reports. Despite the less-than-positive comparison to previous years, there were encouraging signs. “The collective and voluntary intergovernmental approach has worked well in defining the shared vision of a European Higher Education Area and in encouraging a significant programme of reforms at institutional, national and European levels.”

Positive signs cited include the creation of effective tools—to enable countries to implement wide-ranging changes in their higher education systems — and a stocktaking process that promotes collaborative peer-reported self-evaluation. This stocktaking has been an effective catalyst for action at the national level by enabling countries to benchmark their progress and to set concrete targets for each two-year period.

Two significant factors were cited as having slowed the pace of progress. First, new action lines and activities had been added over the years, including a “change of paradigm” shift toward outcomes-based qualifications frameworks. The second impediment to progress was that countries had started the reform process at different times, depending on when they joined the process.

Concluding that not all the goals of the Bologna process will be achieved by 2010, the report summarizes the main determinations of the 2009 stocktaking, with the ministers agreeing about several areas of activity.
Mobility

Bologna seeks to increase the mobility of staff, students, and graduates in order to create opportunities for personal and professional development, boost international cooperation among individuals and institutions, enhance the quality of higher education and research, and give real substance to the European dimension.

The 2009 stocktaking report stated quite frankly that although mobility is one of the core goals of the Bologna process, “many obstacles to large-scale mobility still exist and therefore a lot of work remains to be done to make mobility the rule in the European Higher Education Area.” While progress has been made, the obstacles exist in areas such as immigration (which is largely outside the hands of education ministers), financial incentives, and pension arrangements. The ministers pledged to work with their own governments and with one another to address these ongoing challenges.

Degree Structure

Bologna will move institutions toward what is known as a three-cycle degree system, analogous to the undergraduate–master’s–doctoral progression found in many jurisdictions worldwide. Previously, each nation maintained its own structure for degrees and academic progress.

The Leuven/Louvain-la-Neuve communiqué found that achieving the first and second cycles of the degree system throughout the EHEA is only a question of time, but the actual proportion of students studying in the three-cycle system is still relatively low, so considerable work remains in many of the countries in order to remove barriers to access and progression between degree programs.

Recognition of Qualifications

Recognition of the qualifications and formal results from other institutions and various types of informal learning is a key component of the EHEA. Detailed specifications for recognition were described by the Council of Europe/UNESCO Convention, known as the Lisbon Recognition Convention (LRC).

Although compliance in national legislation with the LRC seems to be widespread, there is no coherent approach to recognition of qualifications within the EHEA. Interpretations of the LRC principles, recognition procedures, and terminology differ widely among countries. Though the ECTS has been declared part of the process since 1999, it is still not fully implemented due to two main challenges: measuring credits in terms of student workload, and linking them with learning outcomes.

Qualifications Frameworks

Bologna will rely on two types of qualifications frameworks, viewed as central elements in promoting European higher education globally:

- a single overarching framework for qualifications of the EHEA, and
- nation-level structures that are evolving over time and are intended to be certified against the EHEA.

The goal is to achieve comparability and transparency within the EHEA. The frameworks are also meant to help institutions develop academic programs based on learning outcomes and credit, as well as to facilitate recognition of all forms of prior learning (formal and informal).

The 2009 report revealed that much more effort is required in this area. Since 2007, the ministers have begun reaching out to other European organizations with experience in developing national qualifications frameworks (NQFs), and some progress has been made; six countries have already completed the self-certification of their NQFs. However, the ministers concluded that the 2010 deadline for completing the implementation of NQFs for higher education was too ambitious.
Lifelong Learning

A small number of countries have put in place quite advanced systems for recognition of prior learning, but most countries have no process at all, and there has been almost no progress since 2007. A more systematic process for recognition of prior learning will require “a change of culture” in higher education institutions as well as credits linked to learning outcomes and appropriate methods for assessing them.

Quality Assurance

The meeting of the education ministers held in Bergen, Norway, in 2005 led to the adoption of standards and guidelines for quality assurance in the EHEA. This group endorsed the notion that responsibility for quality rests with the higher education institutions themselves, not with government. These ministers agreed that external quality assessment, in particular, has improved and that institutions are sharing good practice to promote continued quality improvement in the EHEA.

In addition, a register of European higher education QA agencies has been established to give stakeholders, including the general public, access to trustworthy information sources regarding quality. The register will itself be subject to review to evaluate its effectiveness.

The 2009 meeting noted that all countries have introduced external QA systems and that nearly all publish assessment results and carry out follow-up measures, but only 15 countries have organized assessment of their QA agencies. Clearly, there is a long way to go before it can be proven that all countries are working according to the European standards and guidelines established for EHEA.

Reaffirming Commitment

Concluding that a dynamic and high-achieving EHEA will help the whole region meet future challenges and adapt to the rapidly changing global economic, political, social, and technological environment, the report called on all stakeholders to reaffirm their full commitment to the goals of the Bologna process to create the EHEA. The following ultimate, concrete goals to be achieved in the short term were recommended in the stocktaking report:

- Include all fields of study in the Bologna degree structure and promote greater awareness of the relevance of the degrees for both employment and access to the next cycle.
- Implement a qualifications framework that includes all higher education qualifications.
- Work toward achieving coherence in describing all higher education programs by using learning outcomes to enhance the transparency of qualifications and to facilitate the full implementation of ECTS and the Diploma Supplement.
- Ensure that the three parts of the European standards and guidelines—covering internal QA, external QA, and the functioning of QA agencies—are fully implemented.
- Engage fully in developing and implementing coherent and transparent practices for the recognition of higher education qualifications so that a qualification has the same value throughout the EHEA.
- Make lifelong learning a genuine reality for all citizens in the EHEA by encouraging higher education to fulfill its public responsibility by enabling learners of all ages to participate in relevant programs, by enhancing the use of flexible learning paths, and by facilitating recognition of prior learning.
- Promote greater mobility for students within and between cycles, exploiting fully the potential offered by the
three-cycle system, using ECTS, and increasing the supports for students studying abroad.
- Collect and develop sound data and indicators to measure progress on the social dimension and on mobility.

Other Themes in European Higher Education

In addition to the many elements involved in developing the EHEA, two other significant themes that are driving change in European higher education include a research framework for doctoral candidates and the need to reduce social inequities.

Doctoral Candidates

Aligning the EHEA with the tenets of another EU initiative—the European Research Area (ERA)—has become an important objective for the Bologna ministers. The ERA is not part of the Bologna process. It has goals analogous to those of the EHEA, within the research domain. Institutions remain responsible for developing doctoral programs, appropriate career paths, and opportunities for doctoral candidates and early-stage researchers. It is not clear how much leverage the Bologna process will have in this important area, but the ERA 2008 initiatives report emphasized “the need to accelerate progress and to amplify the initiatives designed to strengthen the attractiveness of the European higher education area, of research and of scientific careers, as well as to strive to strengthen the links between the fields concerned by coordinating the Lisbon strategy with the Bologna process around the doctorate and the modernisation of higher education; NOTES also, in this context, the crucial importance of innovation and, consequently, the need for enhanced collaboration between the worlds of academic research and industry.”

Social Dimension of Higher Education

Bologna envisions a strong role for higher education in reducing social inequalities, because education maximizes each individual’s potential for personal development and his or her ability to contribute to a sustainable and democratic knowledge-based society. While recognizing the diversity of the European population as both a strength and a challenge, the education ministers at their meeting in Bergen in 2005 agreed on the goal of creating conditions for students to “complete their studies without obstacles related to their social and economic background.” In 2009, the ministers noted that while almost all countries have taken some action to enhance participative equity, only a minority has set up systems for measuring progress on the issue, and national approaches are not yet integrated with the other aspects of the Bologna process directly tied to the social dimension of higher education.

The 2009 Ministers Meeting: “Bologna + 10”

At the “Bologna + 10” meeting, the issues of mobility and the social dimension remained key priorities. After noting that not all of the 2010 objectives will have been reached by all participating countries, the ministers agreed that the Bologna process should continue beyond 2010 so that its implementation can be finalized. They set several goals for the next 10 years, including an ambitious mobility target:
- At least 20% of those graduating in 2020 in the countries of the EHEA will have been physically mobile.
- All curricula will be designed in such a way that they integrate mobility opportunities in the structure of the program and the number of joint programs will have been increased.
- The framework conditions will be such that the granting of visas and work
permits as well as the portability of grants will be made easier.

- Mobility policies must thus bring together initiatives of this kind with a range of practical measures running from recognition through financing to receiving students at host institutions, and they must devise different formulas for mobility that seek to include students who have family and work obligations.

- As far as mobility of early-stage researchers and staff is concerned, framework conditions will be established to simplify application processes for immigration into the EHEA as well as within and to guarantee social security and adequate pension rights to the mobile staff.

The Bologna process will liaise with those relevant policy areas that are outside higher education and will seek the advice and support of experts and policy makers from the fields of social security and immigration.

As for the social dimension, the ministers agreed that equitable access into successful progress and completion of higher education for the whole spectrum of the population in their various walks of life and age groups call for a learning environment of great quality geared to the needs of a diverse student body. While a coherent strategy for lifelong learning will be devised, improved and enhanced data collection will help monitor progress in the social dimension. The student body within higher education should reflect the diversity of Europe's populations and significant progress should be made within each participating country over the next decade. Therefore each country should set up monitoring systems and define measurable targets.

The ministers endorsed the current organizational structure and process of creating the EHEA as being fit for its purpose and agreed that in the future the Bologna process will be cochaired by the country holding the EU presidency and a non-EU country.

### Other Higher Education Issues and Reforms in Europe

At the same time as the Bologna Declaration has spurred the European higher education community to plan and implement major voluntary changes to their national systems, some national governments are moving ahead with their own reform agendas for higher education. Broadly speaking, these national-level reforms are separate from, though largely complementary to, the objectives of the Bologna Declaration. However, the sense of urgency for change will inevitably increase when both national reforms and the Bologna process are brought to bear simultaneously. The EC also remains vocal about changes it views as crucial to its goal of establishing Europe as the world’s most competitive and dynamic knowledge economy. Among the key issues in these discussions are greater institutional autonomy, increased excellence, increased diversity, greater rates of participation, and improved efficiency. Different countries are approaching these issues in different ways, but the issues are common to the higher education agendas of all nations.

Traditionally, European universities have received a high proportion of their revenues from government sources. Along with these revenues has come a significant degree of government regulation and control of university affairs. In Portugal, this power has extended as far as direct control of the institution-level faculty promotion and tenure process. These decisions have routinely been made by external nation-level committees with little opportunity for decanal influence in the outcomes. This highlights the strict limitations on university human resource management practices that many academic leaders hope will vanish. In many nations, and certainly within the EC, there is now a thrust toward greater institutional autonomy, giving universities much greater independence in their own governance and management.
The high degree of government regulation is increasingly seen as an inhibitor to institutional excellence.

Reduced government regulation, however, is generally linked to a shift in the balance of institutional revenue; decreased reliance on public sources requires increased private funding. In nations such as France and Germany, this shift in balance is often at odds with the traditional view of higher education as a public good. In France, proposed educational reforms resulted in student strikes stemming from the belief among student unions that reduced state funding, increased private funding, and institutional autonomy could lead to greatly reduced access for the poor. Conversely, most university leaders we spoke to are in favor of greater autonomy as a means to effect needed change and exercise greater direct influence over management decisions, including hiring and promotion of academic staff.

Several countries—notably the United Kingdom, Sweden, Finland, and the Netherlands—have formulated explicit targets for participation in higher education. These nations and others see higher rates of university participation as a step toward improving national competitiveness. To increase domestic participation, however, a greater level of educational diversity is frequently required. This means a broader variety of programs and institutional profiles, both nationally and across the EU. The EC in particular has been critical of the “uniformity of provision” that has characterized higher education. In a strategic move toward diversity, the EU budget for 2007–2013 envisions the creation of a European Institute of Technology (EIT) to become a European equivalent of MIT. The purpose of the EIT is “to reinforce Europe’s capacity to transform education and research results into business opportunities.”

In Germany, where university tuition was free until 2005, an extensive competition known as the “Excellence Initiative” was launched with the aim of improving that country’s research performance and the global competitiveness of German universities. The initiative was developed as a response to perceived underperformance of German universities. With little differentiation of mission among institutions of higher education, all universities were essentially considered equal in the scope of their teaching and research areas, and faculty salaries and working conditions were also roughly equal. More than 80 public universities in Germany were authorized to award doctoral degrees.

According to Daniel Fallon, an expert on the German Excellence Initiative, “Relative to the size of its economy, the number [of universities] at this level is untenably large [and] unsupportable at a high level of quality.” He further pointed out that no German university appears among leading universities worldwide in commonly consulted international rankings. In 2004, the minister for higher education proposed that the government simply select and support six universities to be Germany’s top institutions of higher learning, and in less than 18 months, key stakeholders had come to an agreement to undertake a process called the “Excellence Initiative,” 75% financed by the federal government and 25% by the states. Slated to be available until 2012, the federal and state governments budgeted €2.3 billion over five years.

Conducted by the German Research Foundation (DFG) together with the German Council of Science and Humanities (WR), the Excellence Initiative provided more than 30 universities with funding for the establishment of research schools for young scientists and PhD candidates, as well as the creation of “Clusters of Excellence,” connecting universities with leading German research institutes and businesses. In addition, nine “Universities of Excellence” were funded to promote top-level university research. The intention was to create a small number of elite institutions to compete with the world’s best. The notion
of institutions competing with one another in a bid to become one of the few chosen for massive new funding is entirely new to a national system in which all universities have been publicly viewed as roughly equivalent and in which a degree from one is considered as good as a degree from another. This attitude exemplifies at a national level the EC’s frustration with the uniformity of European higher education.

Operational efficiencies are visible in many forms. Sweden and Denmark provide examples of two or more universities merging. In 2006, Denmark announced a major restructuring of its higher education system, encompassing 21 of the country’s 12 universities and 15 governmental research institutes. The University of Copenhagen will merge with two institutions—the Danish University of Pharmaceutical Sciences and the Royal Veterinary and Agricultural University—to become Scandinavia’s largest university in terms of the number of researchers. There is also a rise in the prevalence and breadth of shared services—including but not limited to IT-related services—in Scandinavian universities. The University of Helsinki has begun selling IT services to smaller local institutions and now has a queue of external stakeholders who are interested in buying efficient services ranging from campus e-mail to data centers.

**Focus on France**

Although many European national governments are tackling higher education reform, few changes are as bold or as visible as those now under way in France. There, education is part of a recent government pledge to bolster France’s economy, work ethic, and diplomatic standing. In late June 2007, newly elected French President Nicolas Sarkozy introduced legislation aimed at reforming the country’s universities. While the Bologna process provided an external context and catalyst for change, Sarkozy’s plans were specific to his national challenges and include measures that are quite outside and farther reaching than the convergence agenda of Bologna.

France has three broad groups of higher education institutions: universities, grandes écoles, and institutions of technological education. In 2001, France ranked seventh among 17 nations in having 36.8% of age-eligible citizens attending one of these institution types. However, only 24.6% of those of eligible age were found to have completed their first degree, well below the comparable rates in Australia (36.3%), the United Kingdom (37.5%), or the United States (33.2%). The university system is open to any recipient of the French baccalaureate, and relatively low graduation rates are often linked to the absence of tuition fees, combined with the inability of institutions to choose students on the basis of merit and the inability of students to attend a university outside their home region.

Compared with universities, the French grandes écoles are smaller, more focused, and better funded. Their admissions process is very selective and, hence, they have much lower rates of attrition. Although the grandes écoles account for fewer than 5% of the 1.5 million university students in the country, they receive 30% of the national higher education budget. The prevailing view within France is that graduates of the grandes écoles will enjoy better employment prospects and opportunities for advancement than their university counterparts.

The technological institutes offer three-year diplomas with a focus on preparing their students to work in technical fields upon graduation. The institutes are selective in admissions and have little attrition. Although graduates of the institutes do not have the mobility of their peers in the grandes écoles, they enjoy good employment prospects upon graduation.

Under the new legislation, enacted on August 10, 2007, and championed by higher
education minister Valérie Pécresse, universities will have greater autonomy in several strategic areas, including finance, human resources, and property management:

- The power of university presidents will increase due, in part, to expanded term mandates. Under prior legislation these were limited to a single five-year term that could not be further renewed for the next five years. Presidents were elected by three separate bodies including the Conseil d’Administration (akin to a North American board of trustees or board of governors), the Scientific Council (which deals with scientific research), and the Council for Studies and University Life (which oversees teaching and learning, and student life). The new law allows for up to two four-year mandates, elected solely by the Conseil d’Administration.
- University presidents will be able to offer differential compensation for the recruitment and retention of top research talent.
- The faculty hiring process will be streamlined to enable job offers to occur more quickly.
- Institutions will own and manage their property and buildings (and will share in a capital fund of €5 billion over the next five years in order to do so).
- Governing boards will be reduced in size from 60 members to between 20 and 30, with some of the reduction coming from fewer student representatives.

At this writing, even with these reforms, university tuition will continue to be free and universities will remain unable to select the undergraduate students they wish to enroll. The second half of 2007 was marked by student strikes over their concerns that increased autonomy for French universities will disenfranchise the poor and reduce access.

Observations and Impressions

It was a fascinating and genuinely memorable experience to spend a concentrated period of time in Europe during the summer and fall of 2007. As hoped, we learned a lot about the forces shaping higher education and gained firsthand knowledge of the situation by discussing with colleagues their on-the-ground take on the Bologna Declaration. Much of the content of our personal observations and impressions of the reforms in European higher education are shaped by these direct—sometimes passionate—discussions. As we have noted, during our stay, higher education reforms were announced in France and Portugal, two nations we had the privilege of visiting and where we conducted interviews and a case study. In addition to benefiting from formal interviews, we learned a great deal from informal discussions with individuals and groups, representing both academic and IT leaders. We even witnessed firsthand the impact of national reforms when student strikes broke out in Paris in reaction to the planned changes to French universities.

We found widespread variations in the levels of engagement—even interest—in the Bologna process among colleagues across Europe. Some individuals were very well informed and engaged in the Bologna process, while others were not. Those people who were well engaged had definite opinions about the benefits and drawbacks of Bologna and had direct personal experience with the implementation process at their home institutions.

This certainly describes our IT colleagues at the University of Porto—in particular, Lígia Ribeiro and Gabriel David—both senior members of an institutional team charged with implementing many Bologna-related changes in the context of a university with clear, concrete goals. Their assessment of Bologna was that it has two levels that have very different degrees of implementation
They described the first level as containing a well-engineered set of simple definitions that are changing the way academic programs are organized and how the university relates to students. There are changes to grading schemes and credits, with a shift in emphasis from faculty teaching hours to student workload. And there are new and evolving tools like the Diploma Supplement that explain the details of different study programs and national context in useful ways.

The second level of Bologna—the change in pedagogy—is, according to them, much less well defined, more indirect, and not as widely accepted as the reforms just mentioned. Bologna anticipates and encourages new approaches to pedagogy in line with its student-centered principles. Examples of new teaching and learning modes are increasing in number, but in our observation they remain individual examples resulting from passionate early adopters rather than from widespread organized programs of change.

While the national ministers of education and the EC are quite naturally focused on the metrics of success related to delivering the EHEA, they do not appear to be placing similar emphasis on changing the learning process. Perhaps that is wise; maybe these reforms are best left to the institutions themselves. Yet it is a bit surprising to note that the London communiqué issued after the May 2007 ministerial meeting did not include either of the terms pedagogy or teaching, and it mentions learning mainly in the context of providing flexible pathways to higher education for lifelong learners. As challenging as Bologna’s structural and process changes may be, pedagogical reform is certain to be much more difficult, and we believe it remains largely a future consideration.

Although the Bologna reforms are consistent and intended to bring transparency and convergence to European universities, the implementation of those reforms is uneven and inconsistent. There are wide variations in implementation among nations and in particular across institutions. There is a level of tension—perhaps understandable—between the drive for harmonization and the desire for diversity. The Netherlands replaced its existing long first-cycle degree program with the new two-cycle system, whereas Germany installed the new system in parallel with its established program. Consequently, early enrollment in two-cycle degree programs occurred much more quickly in the Netherlands than in Germany, although that difference is shrinking with the passage of time. Different countries may exclude different groups of academic subjects, have different timetables for implementation, and so forth. These national differences largely reflect the wide variation in change-readiness and disparities in established traditional systems prior to Bologna. In short, there is no single recipe or formula to follow in implementing the Bologna Declaration.

During our 2007 visit, we observed major differences in implementation planning among universities in any given country. These variations are manifest in significant dissimilarities in the sense of urgency related to Bologna and its “visibility” in the institutional context and priorities. In addition to the great sense of urgency we found at the University of Porto, a similar drive toward institution-wide rapid implementation of the new structures and protocols was evident at University College Dublin (UCD). There, Philip Nolan, deputy president and vice president for academic affairs, has brought about a stunning transformation from “the old Oxford model” to a highly modular, outcomes-based curriculum that is consistent with the objectives of Bologna. He accomplished this swift change in a surprisingly top-down fashion using a still-evolving made-in-UCD academic framework. By contrast, discussions with IT leaders elsewhere in Ireland and in several other countries portrayed a different perspective on the importance of Bologna to certain
institutions. In these meetings, we heard a higher degree of skepticism regarding the impact and sustainability of the Bologna changes. We might go as far as to say that some institutions did not seem to be taking it seriously, or at least that was the impression we formed from discussions with some IT leaders.

One consistent set of indicators of the differing senses of urgency and importance around Bologna consisted of institutional profile, academic reputation, and international ranking. The University of Porto and UCD have in common their respective ambitions to improve and enhance institutional reputation, increase research excellence, and raise their overall ranking in relation to their national and global peer groups. Porto has an explicit goal to be among the top 100 EU institutions by 2011. In both institutions, the sense of urgency related to Bologna is extremely high. They are well advanced in implementation and are generally ahead of the progress made by other universities in the same countries. Our sense is that these “up and coming” institutions view Bologna as both a threat and an opportunity, as a consequence of the increased mobility resulting from the new reforms. Institutions that do not have world-leading ranking and reputations may well perceive the increase in student mobility as likely to cause more students to leave their institution than transfer to it. By making internal changes, streamlining and modernizing their academic programs, and, in the case of Porto, using information systems to enable data-driven decision making, the more responsive universities are preparing themselves to take advantage of mobility as an opportunity to help achieve institutional goals and aspirations. And although no university is entirely immune to the Bologna reforms, those with advanced rankings and reputations—generally speaking—seemed to be allocating fewer resources and less energy to the change process.

Leadership is another factor in the implementation and institutional impact of Bologna. Strong, visible, quietly charismatic leadership characterizes Jose Marques dos Santos, Rector of the University of Porto, and Nolan of UCD, both of whom have personally invested in the transformation process within their universities. Dos Santos at Porto has built a senior team of academic and administrative staff, integrated information systems into the mainstream of decision making, and fostered an environment of candor and transparency that facilitates change. Nolan, as noted earlier, has developed an academic framework and other mechanisms to support the university’s internal reforms. In both of these instances and some others, we saw Bologna used effectively as a driver for institutional change even when those changes were not necessarily required by Bologna itself. It can be difficult for any leader to drive widespread cultural changes to the status quo. The isolated and closed national systems of higher education in Europe tended to reinforce rather than disrupt the status quo. Dynamic leaders therefore are using Bologna as something of a straw man representing a common threat to the future of an institution, thereby creating a sense of urgency for many types of change, not only those relating to Bologna.

When we arrived in Europe at the start of the summer of 2007, we had tremendous interest in the state of higher education and related developments and issues in IT. As we concluded our European “oeuvre,” we were left with an even greater desire to follow up on and understand how the massive reforms associated with the Bologna Declaration will ultimately come about. The target year of 2010 is not far off; the ministers have already acknowledged that the target will be missed, and they have committed to continuing the process for 10 more years. Establishment of the EHEA, incomplete and imperfect though it may be at the outset, will usher in a new era of global competitiveness among
The Bologna Process

universities in Europe and around the world. Ideally (and we are both optimists), this will result in widespread benefits for all of our students, improve teaching and learning, and create opportunities for IT professionals to contribute directly to the strategic goals of our universities. These are exciting times with the promise of greater excitement and even greater challenges to come.

Further Reading


Endnotes

5. Ibid.

Citation for This Work
