

Bologna Process: The Italian Experience

Luigi Buglione

The goal of a European Higher Education Space started few years ago, starting from Paris and passing for the 1998 Bologna declaration, till the meeting of Bergen in 2005. This process, taking into account four main key issues (Three-cycle Structure; European Credit Transfer and Accumulation System; Diploma Supplement; Quality Assurance), is in course of implementation in a growing number of European countries but with several differences, due to cultural and historical reasons. This paper presents the Italian situation in the light of current laws and regulations and proposes results based upon the Bologna Scorecard gathered last year in Bergen and shows possible improvement points for the next few years.

Keywords: Bologna Process, ECTS, European Higher Education, MIUR (Italian Ministry of Education, Universities and Research), Three-cycle Structure.

1 Introduction

The objective of the Bologna Process resides in the promotion of a greater coherence and compatibility in the European Higher Education and in the enhancement of its transparency and attractiveness at the international level. Increasingly its strategy has been reviewed in order to place a greater emphasis on the creation of new jobs and on growth where higher education – and therefore universities – clearly plays a central role.

In particular, it must be noted that the Bologna Process is something dynamic and has evolved through five fundamental steps¹:

- Paris-La Sorbonne (May 25, 1998), on the harmonization of the architecture of the European Higher Education System

- Bologna (June 19, 1999), on the Declaration on the European Higher Education Space

- Prague (May 19, 2001), on the assessment of the progress already achieved and the identification of the fundamental principles that should drive the Bologna Process in the years ahead

- Berlin (September 18-19, 2003), with the addition of 7 new signatory States, established the intermediate priorities to be achieved by 2005

- Bergen (May 19-20, 2005), on the assessment of progress achieved and on the implementation of the priority goals established by the Berlin conference in 2003.

As stated in a recent Eurydice report [14], there are four main key issues to consider:

- Three-cycle Structure
- The European Credit Transfer and Accumulation System (ECTS)
- The Diploma Supplement
- Quality Assurance

Thus, the current situation in Italy, with normative references will be presented briefly as follows.

2 Three-cycle Structure

The Ministers of Education of the signatory countries to the Bologna Declaration agreed on the need to establish a model for higher education structured into two cycles (*Bachelor* and *Master*) in order to consolidate the *European Higher Education Area* (EHEA) by 2010. The two-cycle structure is currently adopted in all the study addresses, at the ICSED 5A level (theory-oriented academic programs), which allows direct access to doctoral programs, as the third-cycle of the higher education [15].

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¹ The documents for those meetings can be downloaded at <http://www.bologna-bergen2005.no/EN/MAIN_DOC/MAIN1.HTM>

As for the large number of signatory countries of the Bologna Declaration (Italy with doctorates having a theoretical minimum duration of three years) the research training (theoretical courses), both the mandatory and the optional part, is an integral part of doctoral programs and it is integrated into the individual research, with a counter-trend against most of the northern and eastern European countries.

Research doctorates are regulated by Ministerial Decree (MIUR²) no.224/99 (30/04/1999) [4]. Article 5 says that "*it is possible to grant access to research doctorates without limitation of age and citizenship to those people holding a Laurea or corresponding academic title achieved in a foreign country, previously recognized by academic authorities, also within the boundaries of inter-university agreements for cooperation and mobility*".

Laurea Specialistica courses are regulated by the Ministerial Decree dated November 11, 2000 [7], which lists 104 possible categories of courses. Informatics is treated in particular in two categories: #23 (Informatics) and #35 (Informatics Engineering).

Qualifying training goals for class #23 (*Informatics*) are:

- To have a solid knowledge both of fundamentals and applicative aspects in the different sectors of Informatics;

- To have a deep knowledge of the scientific research method and to comprehend and use techniques involving discrete and continuous mathematics, applied mathematics and physics, which can support Informatics and its applications;

- To have a deep knowledge of the principles, frameworks and usage of Informatics systems;

- To know fundamentals, techniques and projecting and building methods for Informatics Systems, both at the base and application level;

- To have knowledge of several sectors of applicability;

- To deploy elements of management and professional culture;

- To be able to use fluently in written and oral form, a European Union language other than Italian, referring also to technical terms;

- To be able to work in an autonomous manner, also assuming the responsibility for projects and organizations.

Credits (in Italy the acronym used is **CFU**- Crediti Formativi Universitari) are subdivided among the base training activities (30 CFUs), subjects strictly related to the course (83 CFUs), integrative ones (30 CFUs), chosen by the student (15 CFUs), for the final exam (25 CFUs) and others more (15 CFUs), for a total of 198 CFUs.

Qualifying training goals for class #35 (*Informatics Engineering*) are:

- To have a deep understanding of theoretical-scientific issues of mathematics and other foundation subjects and be able to use that knowledge for interpreting and describing complex engineering problems or problems needing an interdisciplinary approach.

- To have a deep understanding of the theoretical-scientific issues of engineering, both from a general and specific way, in particular referring to those in the Informatics Engineering field, being able to identify, formulate and solve also in an innovative manner complex engineering problems or problems needing an interdisciplinary approach.

- To be able to create, plan, project and manage complex and/or innovative systems, processes and services;

- To be able to implement and manage experiments having a high level of complexity;

- To have contextual knowledge and cross-knowledge capabilities;

- To have knowledge in the organizational management and professional ethics fields;

- To be able to fluently use in written and oral form another European Union language other than Italian, referring also to technical terms;

Credits are subdivided among the base training activities (50 CFUs), subjects strictly related to the course (70 CFUs), integrative ones (30 CFUs), chosen by the student (15 CFUs), for the final exam (15 CFUs) and others more (18 CFUs), for a total of 198 CFUs.

3 The European Credit Transfer and Accumulation System (ECTS)

This system, born in 1989 within the European Union and voluntarily adopted by a large number of European institutions in order to make easier the recognition of study periods abroad, became with the Bologna Declaration one of the central elements of the integration process.

No standard definitions exist for credit transfer and credit accumulation. In the report from Phase 1 of the *TUNING* project [17], the difference between the two is explained as follows: "*ECTS was originally tested and perfected as a transfer system in order to make it possible for Universities in different European countries to describe the amount of academic work necessary to complete each of their course units and hence to facilitate recognition of students' work performed abroad.... Credits were allocated, for the purpose of transparency in description, to each assessed (i.e. marked or graded) activity on the basis of a judgement as to the proportion it represented of the complete year's workload. Hence credits were allocated on a relative basis.... In several countries ECTS or analogous national systems are used as official accumulation systems. This means that entire courses of study leading to recognised qualifications are described using ECTS credits. The basis for allocation of credits is the official length of the study programme: for example the total workload necessary to obtain a first cycle degree lasting officially three or four years is expressed as 180 or 240 credits. The single course units which must be taken to obtain the degree each can be described in terms*

² MIUR (Ministero dell'Istruzione, Università e Ricerca <www.miur.it>), previously called MURST (Ministero dell'Università e della Ricerca Scientifica e Tecnologica <www.mur.st.it>)

of workload and hence of credits. Credits are only obtained when the course unit or other activity has been successfully completed and assessed (i.e. marked or graded)... When ECTS or analogous credit systems become official, credits receive **absolute** and no longer relative value. That is to say, credits are no longer calculated on an ad hoc proportional basis, but on the basis of officially recognised criteria. We should note that national credit accumulation systems based on ECTS principles allow not only national transfer, evaluation and recognition of work performed but also international transfer...".

In Italy the national credit system is compatible with ECTS system and considers both the transfer and the accumulation of CFUs.

In normative terms, art.4 of the Ministerial Decree dated August 4, 2000 [6] says that "For each laurea degree course the university teaching regulations determine the number of credits to be assigned to each formative activity" (subsection 1), and that "university teaching regulations establish the number of credits to be assigned to the scientific sectors listed in the disciplinary groups not previously established in the annex (to that decree)" (subsection 2). Art.5 of the Ministerial Decree no.509/99 [5] says that "A credit is equal to 25 hours of work per student; by new ministerial decrees it will be possible to motivate increasing or decreasing variations of such number of hours for single classes, within a 20% limit" and that "the average amount of learning work run in a year by a full-time student is established to be 60 credits". Art.7 establishes that the number of credits needed to achieve the laurea degree is 180 credits (60 credits per year), while for the laurea specialistica degree it is 300 credits, including also those yet recognized valid for the laurea degree. Such rule has been recently confirmed by art.6 of the Presidential Decree (DPR) no.212/05 [11].

Again, the Ministerial Decree 270/04 [10], art.1 says that "A credit (CFU) is the measure expressing the amount of learning work, including the individual study, requested to a student owning a proper initial knowledge, in order to acquire knowledge and skills in the training activities included in the training programs". Thus, ECTS/CFU credits are established taking care of the learning (not teaching) time needed and on the obtained results, more than on the content of the study plans, to be intended not only as a body

of knowledge but also as acquired skills. As in the ECTS system, art.4 subsection 4 of Ministerial Decree (DM) 270/04 says that "credits referred to each training activity are acquired by the student after passing the exam or an equivalent validation tool/technique...".

4 The Diploma Supplement

The Diploma Supplement intends to grant that knowledge and acquired skills will be transparent and easily comprehensible in the context of mobility. One of the goals in the Berlin meeting in September 2003 was to assure that all students achieving a diploma will receive such document in an automatic manner, free of charge, both in Italian (official education language) and in one other European language, starting from 2005 on (DM 2004/04/30 no.9, art.6) [9].

In Italy this procedure has been implemented since 2004. Institutes may choose whether or not to charge a fee for the Diploma Supplement. Ministerial Decree 2001/05/30 describes the essential data on the student career and in the diploma supplement certification release [8]. It regulates the issue in art.4, presenting in the annex the schema with requested data, as confirmed also by DM 2004/10/22 no.270 (art.11, subsection 8) which states that "university teaching regulations establish the procedures against which universities release, as a diploma supplement for each study title, a certificate showing, according to templates conformant to those adopted in the European countries, main information about the specific curricula the student has followed in order to achieve the study title" [10].

The Diploma Supplement:

- Makes more transparent the study title because in this way it is integrated with the description of the study curricula actually followed and with information on the national higher education system according to a common schema.

- Accompanies the evolution – at an increasing speed – of study titles, providing a greater value to the content of the new training offered by universities.

- Encourages student mobility, access to higher levels of instruction and to continuous training.

- Simplifies the understanding and evaluation of new academic titles by employers.

Quality Assurance (QA)					2-Cycle				Recognition				Total Score
Development	Evaluation systems	Participation of students	International participation	Score QA	Implementation	Student enrolment	Access	Score 2-cycle	Diploma Supplement	Lisbon Rec. Convention	ECTS	Score Recognition	
3	2	2	3	3	5	4	2	4	3	5	4	4	3

Figure 1: Bologna Scorecard for Italy

■ Makes easier the academic and professional recognition of Italian study titles abroad and the free international circulation of second-degree graduates.

5 Quality Assurance

In order to expedite the recognition of quality assurance in education, the majority of signatory countries to the Bologna Declaration have established independent national bodies.

In Italy CNVSU (*Comitato Nazionale per la Valutazione del Sistema Universitario*), established in 1999, is the agency devoted to perform these assessments. This body, affiliated to ENQA (European Association for Quality Assurance in Higher Education <www.enqa.eu>), established the general evaluation criteria for all universities and prepared an annual report³ on the evaluation system [12]. Apart from other signatory countries, in Italy there is no involvement of students, foreign experts or professionals in a specific domain of reference in the *external evaluation process*. In the *internal evaluation*, it is performed in a consistent manner and students participate by expressing their opinions in questionnaires and other evaluation methods in the university evaluation units (*nuclei di valutazione di ateneo*), according to the text of the Ministerial Decree no.509/99 [5].

After the Bergen meeting, another view of the state-of-the-art on the Bologna Process was recently summarized within the *Bologna Scorecard* [1], where it is possible to observe through three dimensions of analysis (Quality Assurance; Two-Cycle Degree System; Recognition of Degrees and Periods of Study) for a total of 10 drivers Rated against an ordinal 5-points scale. In the Figure 1 the rating for Italy has been set out.

The assessment done using the *Bologna Scorecard* returned a result not properly positive: lower ratings were assigned for Quality Assurance (i.e. at the current time an independent agency does not exist for the external evaluation which is currently performed by ministerial committees).

Another document of interest is the ESIB report [13], reporting on the state-of-the-art of the Bologna Process but from the students' perspective. In general, this report complains about the low level of involvement of students. They should be an active part of the evaluation process, while but they are often kept out of any kind of assessment procedure.

An Italian website about the progress and state-of-the-art of the Bologna Process, presenting laws, regulations, conference proceedings and many more is [16]. In particular, in November 2005 a conference was held at L'Aquila, about the analysis of the Italian progress on the Bologna Process.

³ The latest one is [18].

⁴ An interesting CHEPS report [3] has attempted to go beyond 2010, looking at a new deadline, ten years later, in 2020, providing three possible scenarios for higher education in Europe.

6. Conclusion

Moving towards the 2010 deadline, it is possible to perceive a huge and growing attention of MIUR to achieve the objectives established during years, from Paris to Bergen. We are midway along the path: there is much still to do, but there is also the strong desire in all the signatory countries to be able to arrive at the end of this path having reached the established objectives. And having done so one could go further still⁴.

"Education is a social process. Education is growth. Education is, not a preparation for life; education is life itself" (John Dewey, 1859-1952, American Philosopher, Educator).

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