QUALIFICATIONS FRAMEWORKS AND QUALITY ASSURANCE – KEYSTONES FOR THE SUCCESS OF THE BOLOGNA PROCESS

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Winds of changes have been blowing in the European Higher Education Area (EHEA) over the past years, with visible effects. In these notes and in the lecture I shall identify and examine the background and objectives that are leading to this immense reform, involving some 16 million students and well over 5000 institutions of 46 countries, with special emphasis on the role that the development of National Qualifications Frameworks, compatible with European Guidelines, and the creation of the European Register will have in the expected and desired outcomes.

Indeed, the Bologna Process has to be understood as one of the major components of a model for European development, in the historical background of progress in science and technology, of societal and political changes that took place on the last quarter of the 20th Century. The commitment is to develop a competitive economy based on a knowledge society, a model for growth and jobs. This requires increasing mobility and trans-national co-operation. Such can only be based on TRUST, which is only achieved with readable national qualification frameworks and degree systems and with transparent quality assurance systems. The Bologna Process should thus be seen on a dual environment of related and complementary, but different, academic and political issues.

A tremendous effort is being made by governments, academia and professional societies to respond to these challenge of reform: (i) the degree system is being harmonized; (ii) a new directive of professional recognition has been approved, at European Union level, in close agreement with the proposed degree system; (iii) the BFUG-Bologna Follow-up Group is committed to promote decisively National Qualifications Frameworks in the period up to 2009; (iv) the Register for quality assurance has been approved in the London meeting of May 2007; (v) the EUR-ACE quality label was launched in November 2006; (vi) The TUNING project is active; (vii) the CDIO group propose sets of competences related to contents in all engineering areas; (viii) at a lower, specific, level, but serving as example, the European project CHEMEPASS – Chemical Engineering Mobility Tools, in progress, represents a serious effort towards this goal of mutual improved understanding of qualifications; (ix) also, as another example at the same level, in chemical engineering, the Working Party on Education of the European Federation of Chemical Engineering proposed in 2005 a set of recommendations for a core curriculum, both for first and second cycles; (x) right now, on the 23rd of April, 2008, the European Council and the European Parliament formally approved and therefore adopted the Recommendation on the European Qualifications Framework for Lifelong Learning.

In parallel, the European Quality Assurance Register (EQAR) has been set on the 4th of March 2008, as an international non-profit association, having as members the founding members

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(ENQA, EUA, EURASHE and ESU), the Social Partner Members and the Governmental members, with the objective of furthering the development of the European Higher Education Area by enhancing confidence in higher education and by facilitating the mutual recognition of quality assurance decisions.

In short, Today, after London 2007 and looking ahead to 2009, thinking of the 10 action lines developed along the Process, the development of national qualifications frameworks, compatible with the guidelines approved in Bergen 2005, and the establishing of quality assurance procedures emerge as keystones for establishing the European Higher Education Area.

Technical Education, more specifically engineering education, can for sure benefit from the reforms that are being enforced. In the lecture I shall comment and give my views on some specific implications of the Bologna Process in changing methods and curricula in the engineering area, indeed on how the Bologna Process may be seen as even linked to changing paradigms of Engineering Education.

In practical terms, two major questions of the exercise are: (i) what role and distinction of education at the tertiary stage (University education)? (ii) what should be the structure and the core content of engineering curricula for the different qualifications recognised in the engineering profession (as set in the European Directive for Recognition of Professional Qualifications)? What, what depth, when, how, which teaching aids?