

Integrating ECTS Credits and Diploma Supplement in Chemistry Third Cycle Studies

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In addition to her work on conservation science issues, professor Evangelia A. Varella is pursuing research on educational problems arising within the European Higher Education Area. The present paper addresses the integration of 'Bologna tools' in third cycle studies.

The Bologna Process was introduced with the scope of strengthening the competitiveness and attractiveness of European higher education, while fostering student mobility and employability through transparency and recognition of qualifications. In this context, the three-cycle system has been implemented, and a series of tools based on the concept of learning outcomes has been developed. These encompass qualifications frameworks, transfer and accumulation of credits, and the methodical description of all competences acquired during studies.

A key consequence of the Bologna Process has been the increasing tendency towards placing third cycle studies under institutional responsibility through structured programmes. In this context, doctoral studies in chemistry or pertinent interface topics have already been the subject of a detailed approach. The following paragraphs deal with the integration of ECTS credits and Diploma Supplement in these studies.

The European Credit Transfer and Accumulation System endows teaching and learning across Europe with a transparency apparatus, and eases recognition of all studies. A number of countries in the European Higher Education Area have already adopted a line allocating ECTS credits to all components of the third cycle, and there is a tendency towards increasing relevant numbers. In this context, and while taught educational components are easily 'measurable', it must be emphasised that the research part forms one integral non-modularised learning activity. Actually, in the third cycle the workload is not connected to time, but reflects the total effort done by the candidate in order to complete his research. If administrative requirements proceed to the allocation of ECTS credits per semester or year, attention should be called to the fact that this splitting up does not quantify progress in research, and fragmentary credit award is nominal and provisional.

The Diploma Supplement identifies the level and function of a qualification, as well as the results attained. It reports on the nature, level, context, content and status of the studies pursued and successfully completed. In the third cycle, the Diploma Supplement becomes essential whenever the candidate has followed structured doctoral studies involving a taught component or encompassing mobility initiatives. Under these circumstances, the learning outcomes outreach by far the thesis and the subsequent expertise in a well-defined scientific area, since they include a varying number of transferable competences, namely core research skills along with personal and professional proficiency. A Diploma Supplement completed by a portfolio would definitely increase transparency and foster employability.

Taking into account that the Diploma Supplement is a flexible, non-prescriptive tool, capable of adaptation to local needs, it should be considered to which degree and under what circumstances it is beneficial for young scientists, who are about to be awarded the doctoral degree. In this context, and in order to facilitate Diploma Supplement issuance even the case of non-structured doctoral studies in chemical sciences, explanatory remarks to the Diploma Supplement model are proposed in form of footnotes, based on the above-cited concepts and on a large number of actual examples.