Implementing ECTS at the University of Cyprus

Elpida Keravnou-Papailiou

Abstract

The article reports on experience in applying the Bologna reforms at the University of Cyprus, particularly in implementing the ECTS requirements (workload, learning outcomes) to all programmes of study, under all three Bologna cycles, for both transferring and accumulating credits. The ultimate objective is to have a fully-fledged student-centred, learning-oriented education methodology, comprehensively applied to all programmes. The article focuses primarily on the methodology used for implementing the reforms, including the obstacles encountered and how they were overcome or side-stepped. Through the implementation of the reforms, it transpired that the implications of these changes were much more far reaching than could have been initially perceived. The reforms will be fully accepted when the direct benefits of having a transparent and consistent system of learning outcomes and student assessment methods will impact at large on the students themselves, irrespective of any additional benefits from mobility and recognition.

Content Page

1. Introduction and background 2

2. Approaches to change, difficulties and obstacles 4

2.1 Approaches to change 4

2.2 Practical difficulties 10

2.3 Obstacles 12

3. Follow-up process 14

4. Further actions and conclusions 18

1. Introduction and background

University of Cyprus

The University of Cyprus (UOC) is the oldest state university of Cyprus, opening its doors to students in 1992. It currently has 3944 students attending Bachelor programmes (*Ptychio*), 797 students registered on Master programmes and 316 doctoral students. The education system of UOC always conformed to the three Bologna cycles (4 years for the 1st cycle, 3 to 4 semesters for the 2nd cycle and 4 years for the 3rd cycle, which can be reduced to 3 years if the student holds a Master degree in a relevant discipline). In Cyprus, even before the establishment of home universities, holders of Bachelor degrees had full access to the labour market. Furthermore, at UOC and other universities in Cyprus, access to a 3rd cycle (doctoral) programme can be directly from a 1st cycle qualification, although such doctoral students have additional taught requirements over the holders of 2nd cycle degrees.

UOC has a two-semester academic year. From the beginning, the university adopted a credit-based system for all cycles, principally the 1st and 2nd cycle programmes, where courses[1] run over a semester and course dependencies are expressed through prerequisites. Students have relative flexibility in planning their individual study schedules, and accumulating the credits required by their programmes of study. Thus the notion of "credit accumulation" was always in place. However, the initial credit system was based on teaching hours and not on student workload, although teaching staff were required to specify aims, learning outcomes and assessment methods for their courses. The assessment methods had to comply with the overall philosophy of the university, for continuous assessment. The level of detail in the specification of the learning outcomes varied substantially between courses, even courses of the same department.

The three cycles

All 1st cycle programmes include courses from other departments. These are language courses and free electives that are potentially open to all students of the university, and courses specifically offered to students of one department by another department.

The 2nd cycle programmes are considered stand-alone autonomous programmes, with their particular learning outcomes that could comprise a mixture of academic and professional knowledge and competencies. Thus they are neither considered (exclusively) as a top-up of 1st cycle qualifications for labour market purposes, nor as a stepping stone (preamble) to 3rd cycle programmes (although specific programmes could serve exclusively such purposes). A 1st cycle qualification is needed in order to gain access to a 2nd cycle programme.

---

[1] The term "course" is used to denote the units comprising the taught components of programmes of study.

The 3rd cycle programmes are structured and include taught courses and qualifying examinations, in addition to the central component which is the conducting of original research and the submission of a thesis, defended against a committee that necessarily includes members external to UOC.

Applying ECTS to all programmes

UOC has participated in the Socrates/Erasmus programme since 1998, and has used ECTS as a credit transfer system since then. In July 2003 the Senate of the university took the historical decision (given that there is no national legislation to this effect) to apply the ECTS requirements to all its programmes, in all three cycles, for credit accumulation.

In practical terms, this meant:

a) converting the existing system of credits to ECTS credits measuring student workload

b) specifying in a systematic and comparable way learning outcomes, teaching/learning and assessment methods for every course, and allocating credits to the courses[2]

c) justifying the workload corresponding to credits in relation to the course requirements

d) analysing the reformed programmes against the corresponding generic level descriptors proposed in the context of the Bologna process (the Tuning project descriptors and/or the Dublin descriptors).

The overall aim was to convert the UOC education system to a student-centred, learning-oriented system.

The reformed programmes started running in the academic year 2005/06. This milestone had been preceded by the issuing in 2004 of Diploma Supplements to all graduates of 1st and 2nd cycle programmes, currently only in English, but free of charge. During the first year of running the reformed programmes there was a close follow-up of the developments and sharing of experience between the departments of the university. The academic year 2006/07 was the second year of running the reformed programmes. The essence of the reforms appeared to have settled down, although further refinement and consolidation became necessary.

A commonsense methodology

The UOC experience could be usefully shared with other institutions. The methodology used, discussed in Section 2, could be adapted to the situation of another institution. In retrospect it is nothing else than a set of commonsense guidelines. Like most commonsense approaches, though, its initial perception (codification) was illusive, as we were

[2] UOC has 30, 37 and 35 1st, 2nd and 3rd cycle programmes respectively, collectively comprising about 1500 individual course units.

looking for a more technical step-wise approach. UOC believes that the major obstacles encountered are not specific to its particular situation, but have wider relevance, as they are mostly concerned with human reaction to change and not necessarily with the lack of resources. The obstacles and how these were dealt with are also discussed in Section 2. Section 3 presents the procedure used for following-up the reforms and outlines the various matters that arose through the follow-up process. The article concludes in Section 4 by giving some perceptions of what remains to be done in verifying further the reforms and their outcome.

2. Approaches to change, difficulties and obstacles

Why change a system that works?

When the Senate decision was taken to implement the Bologna reforms, the old education system had been running for 11 years, and students and teachers alike were satisfied with the state of affairs. "So why change a system that works?" was the obvious question directed to the university leadership. Giving the answer "to make it better", or "to comply with the rest of Europe", is not immediately convincing. As it turned out a lot more effort than was initially estimated was required to get the university community willing to join efforts in introducing such major reforms. Soon after the Senate decision a plan of action was drafted and approved according to which the reformed programmes could be in place and start running in a year's time, i.e. from the academic year 2004/05.

2.1 Approaches to change

False assumptions

This initial approach was founded on a number of assumptions that shortly were shown to be false (see Table C 3.3-2-1). As a result the initial schedule was abandoned and a new substantially revised plan was formulated. The new plan succeeded in reforming the programmes and getting them into operation from the academic year 2005/06.

Assumption	Why the assumption was wrong
1. The existing credit system could be directly translated into the new credit system.	The underlying philosophies are very different.
2. The university community (teaching and administrative staff, students) understood and shared the vision of the reforms and would react positively towards them.	There were widespread misunderstandings (to some extent due to lack of information), and negative reactions to the changes, even unwillingness to see the other point of view.

3. The reforms would be relatively constrained, revolving around the references to credits.	The reforms had far reaching implications since they were touching and changing the foundations of the education system.
4. The reforms could be implemented in a year's time following a specified plan of action with deadlines and intermediate outcomes.	The required time at the end was twice as long, since people needed time to go through the motions.

Table C 3.3-2-1 Wrong assumptions underlying initial approach

Revised approach

The strengths of the revised approach as perceived by the author are listed in Table C 3.3-2-2. Starting from the premise that the UOC credit system, based on teaching hours, had to be replaced with a new credit system based on student workload, and an entirely different underlying philosophy (learning- rather than teaching-oriented education paradigm), the first thing was to define the conceptual framework for this fundamental reform.

Strength	Reason
1. Persuasion and argumentation, rather than enforcement.	For such major reforms, the support of the university community at large is necessary, if there is to be any success; the support cannot be obtained through enforcement.
2. A more relaxed, i.e. less time-pressed, plan of action.	It is more important to reach the goal eventually, even if it takes longer, rather than not to reach it at all because a more forceful plan would collapse in failure.
3. Open discussions with all members of the university community (one held at the beginning and another halfway through the implementation of the reforms).	Everyone should be given the opportunity to air openly his/her views no matter how controversial these may be. Minutes of the open discussions documenting all matters discussed and all opinions raised were circulated to all members of the community.
4. Frankness about the benefits and the drawbacks of what was attempted; openness about difficulties and additional effort required.	The university community should have the correct expectations of what it is required to do, and should have no misconceptions.

5. Extensive information dissemination, both general and university specific information (copies of the Tuning book circulated to all departments, many other articles circulated, articles explaining the reforms and their implementation at UOC were written, circulated and discussed, and a web site was set up for further information dissemination).	A major handicap in any attempt for substantial reforms is lack of information. The affected parties should be as objectively informed as possible, in order to avoid misconceptions, wrong expectations, and negative reactions.
6. Open communication channel/ helpdesk.	Everyone should be able to raise questions or request clarifications, at any point in the process and expect to get back replies promptly.
7. Closed meetings with specific groups (departments, students, student services, studies committees, etc.) to discuss specific matters arising.	Such interactive meetings with specific groups are necessary since more focused discussions targeting matters of specific interest can be held. However, closed meetings were held on an if-needed basis, on the exclusive initiative of the requesting group.
8. Regular discussions with the two committees in charge of the reforms, the Graduate Studies Committee and the Committee of Studies and Student Affairs.	All the reformed programmes had to be evaluated by the relevant committees, before being approved by the Senate. The two committees had to coordinate their procedures.
9. Conceptual framework for the reforms collectively decided and approved by the Senate.	The rules and regulations underlying the system of education of the university had to be revised and fixed before the programmes could be reformed. These rules/regulations constituted the hard constraints that had to be necessarily satisfied. Other, softer constraints were also specified, but these could be relaxed for particular cases, to give some breathing space (transition period) where this was justified.
10. Transition rules for old students and transfer of student records to the new system.	A standard principle is that old students should not be adversely affected by reforms. Thus relevant transition rules had to be collectively decided. The objective was to convert all students to the reformed programmes, so that the old system of credits (and its underlying framework) ceased to exist when the reformed programmes started running.
11. Mediation between departments.	Mediation was necessary to resolve conflicts, especially regarding courses with mixed audiences (students from different departments).

Table C 3.3-2-2 Strengths of revised approach

Credits are central

The centrality of the notion of credit became apparent when all the implicated concepts directly or indirectly affected by the change in the credit system were linked together (see Figure C 3.3-2-1). This way it was possible to identify where revisions in the university's framework of rules and regulations were required, before the rethinking and ref-

ormation of the actual programmes could start. It is important to stress that in any system where a foundational change is attempted, this change has to be analysed conceptually and holistically so that all affected parts of the system are identified and a complete and sound revised framework may be defined. Otherwise, if the system is not viewed in totality, but instead the attempted change is approached syntactically and locally, inconsistencies and gaps are likely to occur in the reformed system. In other words, simply transliterating the references to credits in the various rules and regulations, into the new system of credits is certainly not a recommended strategy. Not only it is likely to generate rules that are not aligned with the new education philosophy, but also it defeats the whole purpose of the reforms, which is to rethink all study programmes in a global way from the new educational perspective.

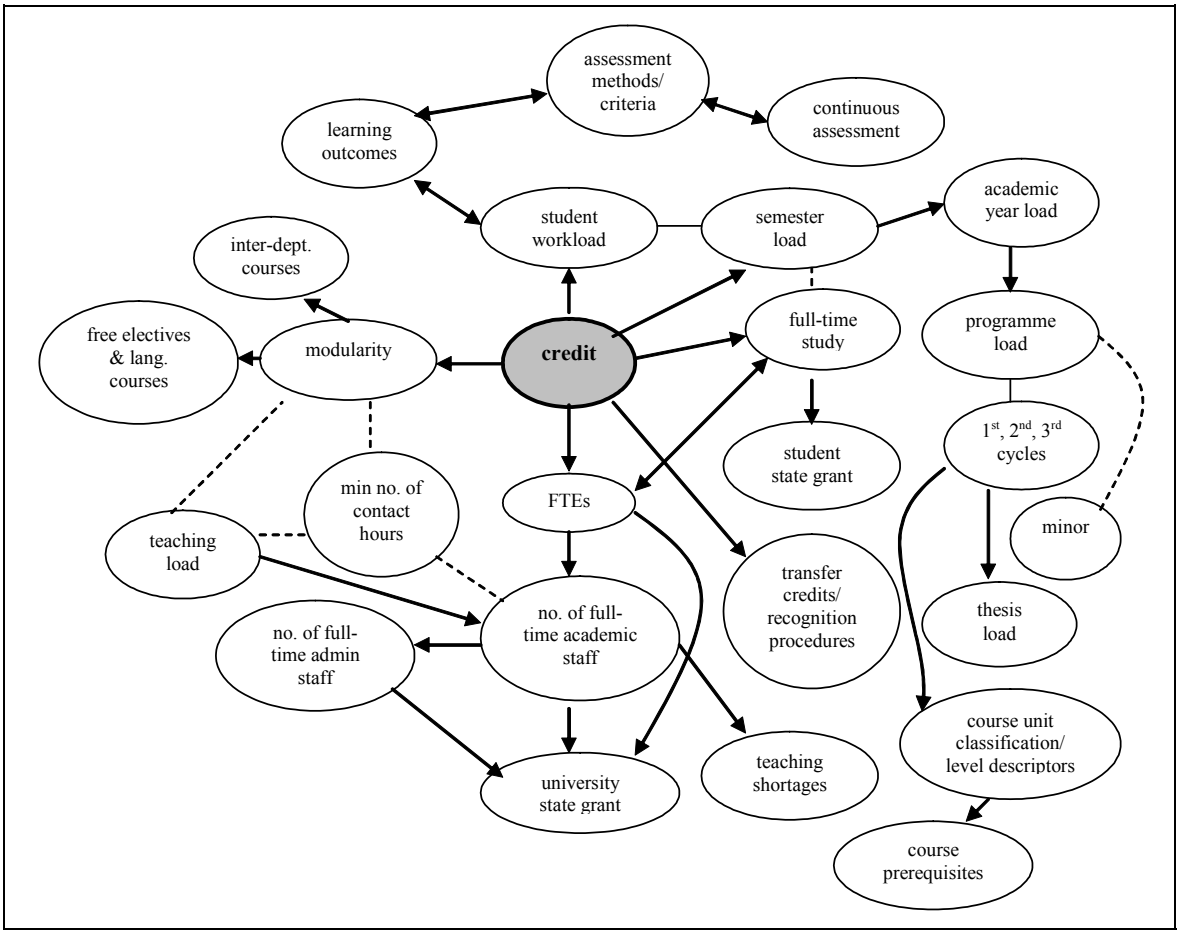

Fig. C 3.3-2-1 **Centrality of notion of credit, and implicated concepts**

Full-Time Equivalent student

Referring to Figure C 3.3-2-1, the notion of credit impinges directly on the notion of "full-time study". The latter is central in the formula for computing the Full-Time Equivalent (FTE) of students, which in turn constitutes a critical parameter in the algorithm for computing the full-time equivalent of academic staff. This in turn affects substantially the university state grant. This chain of implicated concepts goes to show that a change in the credit system could conceivably have a major effect on the university's finances.[3] Furthermore, according to State legislation in Cyprus, only full-time students can claim an annual state grant. Thus, changing the definition of "full-time study" could have affected negatively the status of some students.

Credit allocation for modules

In the previous system of credits, programmes had a modular allocation of credits, i.e. all the course units comprising a programme were given the same number of credits, e.g. 3 credits for programmes in humanities, or 4 credits for programmes in sciences and engineering. Given that in the old system, credits denoted contact hours, a fixed allocation of credits within a programme was the natural thing to do. A modular credit allocation had the advantage that course intermixing from different university departments, a necessary requirement for all 1st cycle programmes, was facilitated. However, under the whole rethinking of programmes and the new meaning of credits as student workload, modularity in the allocation of credits within a programme could not necessarily be sustained.

UOC opted against the "enforcement" of some fixed number of credits for every course unit, i.e. requiring every course's learning outcomes and overall content to conform to some "standard" workload. The courses comprising a programme can therefore vary in their allocation of credits. Thus the freedom/flexibility is given to define the learning outcomes and associated content of some course independently of any standard workload, but within the overall constraints that the total number of credits for one semester and for one academic year should be 30 and 60 credits respectively. However, in order to facilitate the required intermixing of courses from different departments in the case of 1st cycle programmes, some "standardization" was deemed necessary and justifiable, namely that a course unit serving exclusively as a free elective course, or any foreign language teaching course, needs to have a workload of 5 credits.

Providing information

Another thing learned through the experience of the reforms at UOC is that there is never too much information, and that one should not worry about information overloading. The key items of information should of course be singled out in executive summaries; these can be supplemented with additional information to any extent. On the other

[3] The university's finances could have been adversely affected if the new definition of "full-time study" reduced considerably the FTE of students.

hand, lack of information about what is being attempted and the rationale behind it can be detrimental. It is well known that some people will read nothing, some will read everything, but most will read something. Information dissemination was significant because the university community had to become adequately informed of the pursued changes, if it was to support these changes. Thus, the methodology gave particular emphasis to information dissemination and discussions, both open discussions about the general matters, and closed discussions about specific matters (see Table C 3.3-2-2). Overall, two open discussions were held, one at the beginning during which the rationale of the reforms was presented and discussed, and a second one halfway through the process. Both open discussions were well attended and, especially during the second one, a lively discussion took place. More specifically, many queries/concerns were raised such as:

Actively addressing concerns…

- What does ECTS offer? What are the negative aspects of ECTS?
- Why is it good for a new university to apply ETCS? Is UOC mature enough to get into such a difficult process?
- Do we have to apply for the "ECTS Label"? Does this entail evaluation of the academic staff? What are the criteria for obtaining the Label? Does the Label assure academic quality or any form of quality?
- Can the ECTS requirements be applied without causing adverse effects and operational problems to the programmes? Is there any flexibility regarding the various constraints? Can some of these be relaxed, even temporarily?
- How is the student workload estimated/computed? Does ECTS dictate how students should be assessed? Will we be "forced" to relax our standards and make it easier for students to pass?
- How do we deal with old students?

… in an open and frank way

These questions and many more had to be addressed and all issues of concern had to be clarified and substantiated in an objective fashion. Various positions were also stated. Some people were bluntly against the reforms. For example, some people advocated that "ECTS does not promote a student-centred philosophy but a labour market philosophy, where learning outcomes are geared towards the needs of the labour market, and in addition it does not assure the learning of fundamental knowledge, but instead it nullifies the significance of research and it nullifies plurality." Furthermore, it was argued that "ECTS causes a substantial increase in administrative work, converting the academics into teachers and interfering with their academic freedom." It was necessary to argue convincingly against such provocative and unfounded claims. However, it was generally accepted that potentially observing that a given programme of study of the university entailed a substantially lower student workload than the expected one based on its length

(4 academic years), that would in fact be a strong reason in favour of applying ECTS, rather than the opposite (because this way existing weaknesses could be brought to the surface). Thus, the whole rethinking of programmes under the new paradigm gave UOC a much better self awareness about its programmes, leading to improvements. If the perceived improvements pointed to the need for extra resources, e.g. through the addition of new courses, then this need could be solidly justified on the basis of the reforms, so that the additional resources could be successfully sought.

2.2 Practical difficulties

Handout C 3.3-2-1 lists the major difficulties encountered. These centred around the allocation of credits to the course units comprising a programme, the estimation of student workload, the specification of learning outcomes and the sustainability of a modular credit allocation within programmes. Modularity facilitates the combination of course units/credits from different departments, but as already explained, a strictly modular allocation of credits within programmes could not be attained. Any choice for a fixed number of credits for all course units would have caused serious problems (for example, choosing 7.5 as the fixed number of credits, would have caused courses to be terminated or combined, while choosing 5 credits would have required the addition of new courses or the splitting of courses). However, as already mentioned, certain restrictions had to be decided and adhered to by everyone regarding language courses and courses offered exclusively as free electives.

Practical difficulties

- Allocation of credits to the courses comprising a programme, so that the relevant constraints were satisfied.
- Difficulties encountered in using either the absolute or the relative approach to credit allocation.
- A modular allocation of credits was not possible. Difficulties occurred in using a semi-modular approach.
- Difficulties in conceptualizing the “typical” student and the workload required to successfully attain the learning outcomes.
- Variations in the specification of learning outcomes; a course template acted as a guide.
- The teaching hours of certain courses had to be increased to account for the specified workload. Variations in the teaching hours of courses created difficulties in organizing the teaching loads of staff and also yielded teaching shortages.

Handout C 3.3-2-1 Practical difficulties encountered

Defining learning outcomes

Regarding student workload, and learning outcomes, the principles suggested in the context of the Tuning project were applied. Copies of the report on the first phase of Tuning (Gonzalez, Wagenaar 2003) and other relevant material were circulated to all departments, and discussed in closed meetings with the departments. Learning outcomes had to be specified for entire programmes and for the individual course units comprising each programme. The granularity of the specification is different at the level of programmes and at the level of individual course units. However, there are no gold standards, just rules of thumb. The learning outcomes could include knowledge, competencies and skills. The analytical exposition of the learning outcomes for the individual courses within the same programme (and to a reasonable extent across programmes) was expected to be comparable. Furthermore, for the course units, a direct linkage between the learning outcomes and the means for assessing the attainment of the particular outcomes by the learners was expected. In other words, the association between the learning outcomes and the specified assessment methods was required to be as explicit as possible.

Programme vs. course outcomes

The current specifications of the learning outcomes, the assessment methods, etc. simply represent a first iteration that needs to be subsequently refined. The learning outcomes of each programme, and the decomposition of that programme into component courses, are decided by the board of the department offering the programme. The board consists of all the academic members of the department and a number of student representatives. Based on the fundamental principle of academic freedom, the learning outcomes of an individual course are essentially decided by the academic member of staff teaching the course (who is expected to specify the particular learning outcomes within the overall context of the learning outcomes associated with the entire programme). The details of the content of each programme and the required learning resources need to be approved by the Senate of the university.

Level descriptors

The course unit classification proposed by the Tuning project that defines semantic levels for courses was also adopted. Departments were also requested to evaluate each of their programmes against the generic learning outcomes defining the level of a programme's given cycle (level descriptors). Both sets of descriptors were used, namely the Tuning descriptors and the Dublin descriptors. The latter were subsequently adopted by the conference of Ministers in Bergen as the qualifications framework for the European Higher Education Area (Bologna Working Group on Qualifications Framework 2005). In order to facilitate the specification of courses in accordance with the ECTS requirements and in order to have adequate uniformity, a course template was decided by the Committees in charge of undergraduate and graduate studies, and sample course specifications using the template were circulated to all academic staff for illustration. The course template is given in Appendix I.

2.3 Obstacles

Negative reactions to change

Handout C 3.3-2-2 lists the major obstacles encountered. The key obstacle was the instinctively negative reaction of people to change, primarily due to the extra effort required. Inertia is bliss, especially if the status quo is considered satisfactory. Informing people about the significant strengths of the pursued reforms and explaining objectively and in detail what is required of them, can lead to the necessary positive reaction.

Obstacles

- People instinctively react negatively to change, due to the extra effort required but for other reasons as well.
- Misconceptions can be deeply rooted and difficult to dispel; sometimes they are based on some ideology.
- Information is circulated but people do not read it to get informed.
- Additional resources required (e.g. additional teaching staff), that were not readily available.
- Overcoming the mental barrier about number of credits and course significance.
- Getting across the message that the reforms did not affect the teaching load that continued to be counted in terms of contact/ teaching hours.

Handout C 3.3-2-2 Obstacles encountered

Need for targeted efforts

However, some students and staff continue to insist that ECTS is the cause of all ills, ascribing a kind of super status to ECTS and refusing to see it as merely a transparency tool. Some of these critics have not tried to understand the essence of ECTS, advocating instead that it makes their programmes more difficult and demanding (students) or that it interferes with their academic freedom (staff), as already mentioned, or that it is a tool for controlling and assessing them (staff). It is hoped that time, more targeted efforts in explaining and communicating the benefits of the reforms, and most importantly experiencing in reality their benefits, will gradually succeed in dispelling such negative (and unfounded) beliefs and attitudes.

Extra teaching resources

In the case of some programmes, the reforms brought to the surface the need for extra teaching resources that were not readily available. Although this has not yet changed, at least now the university has the necessary evidence (e.g. through the validation of student workload) to persuading the State to make such resources available. In fact, it was already known that relevant strengthening of the particular pro-

grammes was required through additional course units and/or practical work. These extra resources can now be justified and argued for in the light of the rethinking of programmes based on a new education philosophy advocated at European level. This development is quite important.

Number of credits and course significance

Another obstacle which required overcoming was the mental barrier about the number of credits and the significance of courses. As mentioned in the ECTS literature, particularly the ECTS Guidelines of the European Commission (ECTS Guidelines 2007), the status and importance can be managed in a variety of ways but not through the allocation of credits. This was the message the UOC attempted to covey. After all, the status of course units at the university, in the context of a programme, is determined by their classification as mandatory or optional for that particular programme. If a course is classified as mandatory, even if it is allocated 1 ETCS credit, no student can graduate from the particular programme unless s/he satisfies the learning outcomes of the given course. In addition, modularity was used within the same category of courses, so that it could not be argued that an optional course was more or less appealing to the students on the ground of its credits.

Teaching load and student workload

Finally, it was necessary to get across the message that the reforms did not affect the teaching, which continued to be counted in terms of contact/teaching hours, independently of the ECTS credits and hence also of the student's workload. Some people suggested that it was unfair to continue to base the teaching load on contact hours, and that an analogous way for measuring teaching workload should be devised. They argued convincingly that a course with 100 students enrolled cannot be compared to a course with 5 students enrolled (5 being the minimum number of students for an optional course to take place), irrespective of whether the two courses are counted the same with respect to their contact hours. This is especially true given UOC's standard requirement for continuous assessment, accentuated by the student assessment reforms in relation to learning outcomes. To a large extent these arguments applied to the previous system as well. This is why courses with large audiences (especially mandatory courses) are assigned teaching assistants.

3. Follow-up process

First year of reforms

During the first year of running the reformed programmes, there was a close follow-up of the developments. More specifically, there were visits to all departments to examine particular matters arising and in order to evaluate the overall application. In parallel, an open communication channel through email was established with students, which was utilized by a number of students. In addition there were meetings with the Student Union, and a joint information day was held at the end of the first year of running the reformed programmes to exchange views on the actual implementation of the reforms, their benefits and other Bologna matters. The general conclusion of the follow-up process was that the departments and the majority of students did not face any particular problems or difficulties with the reformed programmes. This was especially rewarding for everyone concerned given the effort expended. This section summarizes the general matters that arose in the follow-up process, as listed in Handout C 3.3-2-3.

Status of "old students"

As already indicated, the reforms did not just amount to a simple redistribution of some new total of credits. Instead each and every programme was rethought along the Bologna lines. As a result programmes were revised, in some cases substantially revised, where new courses were added, the status and content of courses was changed, and the flow of programmes was modified (courses were moved from one semester to the other, etc). Clearly, the decision comprehensively to apply the ECTS requirements for credit accumulation, gave UOC the opportunity to rethink and revise the programmes in their entirety. No doubt this has led to improved programmes and thus improved education provision on the part of the university. For practical reasons (since the learning resources could not allow us to run both the old and the reformed programmes in parallel until the former were faced out), but also because we wanted the "old students" to share the benefits of the improved programmes, these students were also transferred to the reformed programmes. The majority of "old students" were adequately covered by the transition rules, which were defined on the basis of the principle that "old students" should not be adversely affected. Some problems did arise though and were dealt with through specific measures taken by the departments concerned.

Matters arising during the first year of running the reformed programmes

- How the "old students" have been affected.
- Coordination between departments.
- The practical problem of 4 contact hours per week (instead of the norm which is 3).

- The interpretation of credits in relation to doctoral programmes, and attending taught courses in parallel with the conducting of research.
- The validation of credits/student workload.
- What happens if the majority of students on some programme finish their requirements in less time than the normal full-time duration of the programme?
- Using the course template.
- Course catalogue, student exchanges and transfer of credits.
- Utilizing the summer period.
- The next steps.

Handout C 3.3-2-3 Follow-up process: matters arising

Coordination between departments

Due to the fact that modularity (in the allocation of credits) across programmes could not be imposed, some departments had to work hard towards attaining the necessary coordination between their programmes. Some problems still exist in this respect, but possible solutions are under discussion. For example, one department may wish to allocate 5 and another 6 credits to the same mandatory course attended in parallel by students from both departments. A possible solution is to have two distinct courses with substantial overlap, but also where the difference of 1 credit is visible. Several departments were also concerned about the decision that standard taught courses of 10 ECTS credits should have 4 contact hours per week instead of 3 and had to figure out ways of covering the extra teaching[4]; thus the concern was due to the existing shortage in teaching resources.

ECTS and doctoral programmes

The interpretation of ECTS credits with respect to doctoral programmes was raised by most departments, and the existing situation regarding the 3rd cycle in the Bologna process was explained. In particular, it is now understood that the credits assigned to the research part of a doctoral programme simply count time, and as such it has been further decided that no credits will be allocated for periods that exceed the normal duration (4 years) of a doctoral programme.

[4] 10 ECTS credits is the maximum allocation for standard taught courses of one semester duration. Although not stipulated, most courses with a credit allocation above 7 have 4 teaching hours per week.

Validation of student workload

The most significant matter that arose in the follow-up process, certainly from the point of view of the students, was the validation of the credits and hence the student workload. Given that students attend courses of the same level from different departments as well as courses of different levels within the same department, intra- and inter-departmental comparisons were inevitable. Thus comments such as "advanced courses carry more credits but are less demanding in terms of student workload", or "there are significant differences in the student workload between courses of the same level and the same number of credits within the same department and across departments", understandably dominated the follow-up discussions. While putting across the message that some differences are expected and justifiable, given the inborn differences between disciplines (e.g. engineering and humanities), at the same time one expects to find adequate comparability.

The Tuning project proposal for an iterative process regarding workload validation was discussed at length in the follow-up meetings, in conjunction with the analytical course unit template (see Appendix 1). This requires detailed analysis and justification of the credits allocated to a course, in direct relation to the learning outcomes and the student assessment methods. Relevant literature was also circulated. However, it was decided not to impose a central procedure for the validation of credits, leaving it instead an open matter for the departments to employ their own approaches, in close collaboration with their students.

Interesting insights from Initial validation

Some departments had already started a validation process. For example, Figure 2 summarizes the initial findings of the Department of Computer Science regarding its 2005/06 Spring Semester courses[5]. For each course they had attended, students were requested to complete questionnaires retrospectively, in which they listed the total workload in hours for study including exercises, for completing their projects and assignments, and for preparing for the mid-semester and the final examinations. Although the methodology used needs refinement, and the findings are not completely accurate, these initial findings were nevertheless quite interesting and revealing. For example, it was interesting to note that more than half of the students attending course CS132 during the particular semester found the course less demanding on their time than its credit allocation implied. Given the range of hours per credit, i.e. 25-30 hours, "less time demanding" meant that the student actually needed to spend less than 25 hours per credit to achieve the learning outcomes, while "more time demanding" meant that s/he actually needed to spend more than 30 hours per credit. In this case, the CS132 course teaches advanced principles of computer programming, and always had the reputation of being a rather demanding course.

---

[5] Special thanks to Christoforos Panayiotou for providing these validation results.

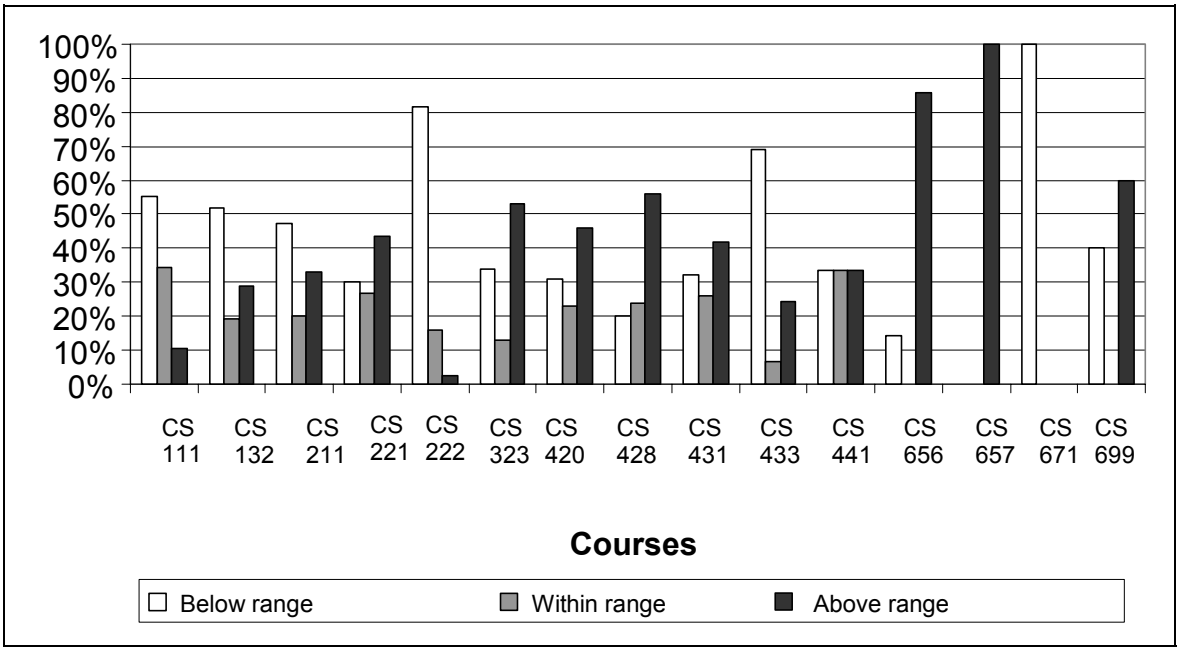

Fig. C 3.3-2-2 **Workload validation for the 2005/06 spring semester courses, Department of Computer Science**

Should students be allowed to take a higher workload?

All programmes are designed so that their load is 60 credits per academic year (or more accurately 30 credits per semester[6]). This load is based on typical students. However students may choose to take a lower load, especially if they attend a programme part-time, but for other reasons as well. Likewise, students may be allowed to take a higher load, purely based on academic criteria. The main reason for doing so is in order to attend in parallel a minor programme. Sometimes, though, students want to finish their programme in a shorter period of time than the normal period (fast-tracking). Some departments expressed concern regarding the possibility of a situation whereby most students on a programme are able, if allowed to do so, to complete their programme in a shorter period of time, say 3 instead of 4 academic years for a 1st cycle programme, and suggested that students should not be allowed to take a higher load. Obviously such a suggestion could not be accepted since a system should be as flexible as possible to the needs and abilities of the students. Furthermore, assuming that the credits allocated to the courses of a programme in-

[6] Given that the Winter Semester is somewhat shorter than the Spring Semester, in the normal flow of a programme it is allowed to have a slightly lower load (between 1 to 3 credits, i.e. 27-29 credits) in winter semesters and hence a slightly higher load in spring semesters, provided of course that the load of the two semesters comprising an academic year adds up to 60 credits.

deed match the actual workload, then such a state of affairs is an unlikely possibility. Thus, it again emphasises the importance of validating the implied workload against reality through reliable means.

Other matters discussed included the course catalogue, student exchanges and the recognition process regarding transfer of credits.

Finally, in the follow-up meetings, many departments discussed ways of utilizing the summer period for 1st cycle programmes as an integral part of their programmes (since 2nd and 3rd cycle programmes already do so), e.g. preparatory work for dissertations, industrial training, etc, and assigning learning outcomes and credits, under the understanding that a summer period load should be around 15 credits.

4. Further actions and conclusions

The author believes it is fair to say that during the last three and a half years a lot has happened at the University of Cyprus regarding the implementation of the Bologna reforms, and in particular the reform of all study programmes at all three Bologna cycles, along the Bologna lines (ECTS for credit accumulation, learning outcomes, level descriptors, student-centred approach, etc). the UOC experience has been shared with other institutions of higher education in Cyprus, both public and private, that are going through the same motions (Keravnou-Papailiou 2006 A).

Ongoing evaluation and consolidation

Undoubtedly further evaluation and consolidation of the reforms is necessary. All aspects need to be validated, especially the student workload. The adoption of the course template calls for a fairly analytical exposition of the learning outcomes and assessment methods, and for a detailed justification of the implied workload. This is a necessary step if adequate transparency, consistency and comparability are to be achieved. Analytical course descriptions constitute key input to the validation process. Differences still exist at various levels. This is understandable and expected. The rough edges, though, need to be gradually smoothed out.

Internal quality culture

In parallel to the reforms discussed in this article, the university is developing its internal mechanisms for quality management and enhancement based on the European standards and guideline (ENQA 2005), thus promoting its internal quality culture (Keravnou-Papailiou 2006 A, 2006 B). The reform of the programmes constitutes a fundamental step for the internal quality assurance of the education provision of the university. The existing internal quality assurance mechanisms regarding the establishment of new programmes and the approval of programme modifications are considered appropriate and

comprehensive. These mechanisms are fully accepted by the academic staff and the students, and they do have an impact on the design of curricula. More specifically, the approval of a new programme goes through various quality assurance stages involving the board of the proposing department, the Senate committees on planning and development, and studies, and ultimately the Senate. Students are represented in all these bodies.

Quality criteria

The quality criteria used for deciding the development of a new programme include:

a) demand and supply (based on the needs of the labour market, the societal goals as expressed through state policies, and the student preferences)

b) university capacity to support the students (building infrastructure, lecture rooms, library, central computing facilities, student support services)

c) capacity of the proposing department to support the programme (academic and other teaching staff, administrative staff, specialized laboratories, student increase)

d) sustainability of a high level of quality (incoming students, the potential for acquiring new academic staff, etc.)

e) financial sustainability of the programme regarding minimum number of students, and state support.

Review of programmes

At present there are no mechanisms for the periodic, holistic review of programmes. Likewise, the existing mechanisms for the continuous monitoring of programmes could be enhanced. In particular, student evaluation of courses through questionnaires is mandatory but it is used solely for the self-evaluation of teaching staff and as such the results of the questionnaires are disclosed only to the teaching staff concerned. So far there is resistance on the part of the academic staff for extending the purpose of the course evaluation questionnaires to anything beyond self-evaluation. The evaluation of visiting and special teaching staff is however taken into consideration for the renewal of teaching contracts. However, internal quality assurance mechanisms are now under discussion for the continuous monitoring and periodic review of programmes, involving additional quality criteria to the ones mentioned above, i.e. criteria specifically concerned with the delivery of programmes *per se* and the quality of the graduating students (for example in the labour market).

The ultimate objective of the reforms discussed in this article is to create a learning environment in which everyone (students, teaching and administrative staff) appreciate the benefits of the reforms and accept that the added value of these reforms was worth the extra effort required.

Impact on students

The author believes that true acceptance of the reforms will result when the direct benefits of having a transparent and consistent system of learning outcomes and student assessment methods, will impact at large on the students themselves, irrespective of any additional benefits from mobility and recognition. Obviously, at European level, the opportunity to practice the benefits of having a common language of credits, and common structures, levels, and quality standards in the higher education systems and the qualifications that these lead to, in other words for students and staff to experience horizontal and/or vertical mobility for studies, research or work, will gradually give meaning to the word "unification" for the higher education area of Europe (Bergen Communiqué 2005). Although there is still work to be done at all levels (institutional, national, European), it is principally on the ground, i.e. at institutional level, that this change will have most concrete impact on students. For this to become a widespread reality, this change also needs continued facilitation at the higher levels.

Bibliography

Internet references valid, October 2007.

[1] Bergen Communiqué (2005): *The European Higher Education Area – Achieving the Goals,* Communiqué of the Conference of European Ministers Responsible for Higher Education. Bergen, 19-20 May 2005.

[2] ECTS Guidelines (2007): *European Credit and Accumulation System*, Directorate-General for Education and Culture, http://ec.europa.eu./education/programmes/socrates/ects/index_en.html

[3] ENQA (2005): *Standards and Guidelines for Quality Assurance in the European Higher Education Area*, http://www.enqa.eu/files/ESG_v03.pdf

[4] Gonzalez, J.; Wagenaar, R. (eds.) (2003): *Tuning Educational Structures in Europe: Final Report Phase One*, University of Deusto and University of Groningen, RGM, S.A.

[5] Keravnou-Papailiou, E. (2006 A): The *Implementation of the Bologna Reforms at the University of Cyprus* (in Greek: *Η Εφαρμογή των Προνοιών της Διαδικασίας της Bologna στο Πανεπιστήμιο Κύπρου*), Publications of the Office of the Vice-Rector for Academic Affairs, http://www.ucy.ac.cy/vrectacaf/docs/ekdoseis/bologna_ekdoseis.doc

[6] Keravnou-Papailiou, E. (2006 B): *The Development of an Internal Quality Assurance Policy for Research at the University of Cyprus*. In: Proc. 1st European Forum for Quality Assurance, Technical University of Munich, http://www.eua.be/fileadmin/user_upload/files/QAForum_2006/GS_I_7_Keravnou.pdf

[7] Bologna Working Group on Qualifications Framework (2005): *A Framework for Qualifications of The European Higher Education Area*, Ministry of Science, Technology and Innovation, Copenhagen

UNIVERSITY OF CYPRUS

CRN	Code	Course Title	ECTS

Instructor

Term **Academic Year**

Schedule details

Day	Lecture	Lab	Tutorial

Office hours

Course level

Undergraduate
- Basic ☐
- Intermediate ☐
- Advanced ☐
- Specialized ☐

Graduate ☐

Course type

Core	Programs of study incorporating the course as a compulsory course.	
Supportive	Programs of study incorporating the course as an optional course.	
Secondary (Only for undergraduate courses)	Offered exclusively as a free elective.	☐
	Offered additionally as a free elective.	☐
	Not offered as a free elective.	☐

Prerequisites

Code	Title

Objectives

Expected learning outcomes and competencies to be acquired

Course contents

Language of instruction

Teaching methods

Assessment methods

Analysis of ECTS credits

Recommended reading

Appendix C 3.3-2-1 Course Unit Template

Biography:

Elpida Keravnou-Papailiou is Professor of Computer Science at the University of Cyprus. She served as Vice-Rector for Academic Affairs during the period 2002-2006. Since 2004, she has been Chairperson of the Cyprus Council for the Recognition of Higher Education Qualifications (KY.S.A.T.S.). She is also a member of the Evaluation Committee for Private Universities in Cyprus, a Bologna Promoter for Cyprus and the National Academic Contact Point for Recognition. In the context of her responsibilities as Vice-Rector for Academic Affairs, she coordinated the implementation of the Bologna reforms at the University of Cyprus.

Contact:

elpida@ucy.ac.cy