A Staff Development Program for Promoting Change in Higher Education Teaching and Learning Practices

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Abstract: This paper presents and discusses a faculty development program being carried out at the University of Aveiro, aiming at providing academics with essential skills in areas such as teaching best practices, student-centered curriculum design, collaborative learning and the adoption of ICT/Internet technologies.

1 Background

Founded in 1973, the University of Aveiro is one of the youngest Portuguese Universities, with a staff of more than 900 in 2006, including senior and junior members. The traditional model of teaching has been centred on the teacher with the predominance of information-passing style in lectures. However, new technological innovations, the globalisation of our society and culture, and new lifestyles will bring a demand for a different type of education. The role of the teacher as well as the student has been changing in the past years due to the new demands of the information society. Faculty cannot be focused only on the delivery of knowledge but also on how that knowledge is acquired by students and the resources they use to make the information more accessible [1].

From that early stage in 1998 up to today, the adoption of the Internet has soared. At the present the university owns a Blackboard Academic Suite™, which includes an LMS and a Content Manager. More than 90 per cent of the 12.000 students and over than 80 per cent of more than 800 staff members use Internet-based ICT to support their daily teaching and learning activities.

Continuous professional development (CPD) programs for faculty members at universities have never been a priority in Portuguese higher education institutions. Neither the rules for academic career progression nor the institutional authorities stimulate the personal and institutional investment in the development of

pedagogical and didactic skills, except for a minor part of self-stimulated staff members or educational experts.

However, our own and others' experience is providing evidence that the use of Internet-based ICT promotes a set of benefits not only to students but also to teachers, providing means to enrich student-centred learning experiences. Many arguments may be used to explain this effect, but a relevant one is that the use of Internet-based ICT may lead a teacher to organize learning as a set of activities that will engage learners in pre-established tasks that require their own effort to be accomplished. This leads to a direct involvement of learners, improving the chances of meaningful learning experiences, thus resulting in the acquisition of new knowledge.

Taking advantage of the reorganization of higher education in Europe towards the creation of a common higher education space, as defined by the Bologna declaration, the University of Aveiro has decided to organize a CPD program running in 2005 and 2006. This initiative aims to help faculty members to get a better understanding of the power of Internet-based ICT in the promotion of their teaching and learning skills.

2 The staff development program

Technologies are tools to help build solutions. So is the case in education: technologies, namely Internet-based ICT, are tools to help build and deploy learning solutions. But technologies are not the solution by themselves. Technologies can even be a problem if not properly used. For example, if they are not used as a way to achieve a required result, but just as an easy way to create funny gadgets.

That is why the initial of the three modules that compose the staff development program covers the basic concepts and strategies relating to pedagogy and curriculum design in higher education. The second module provides an in-depth view of the power of Internet-based ICT in education, and addresses the most relevant issues concerning the current status of standardization and available products for the creation and management of learning solutions using Internet-based ICT. Finally, the third module addresses the practical issues related to building and managing distributed learning communities.

The next section provides a description of the general organisation of the program and a short syllabus of each of the three modules.

2.1 General organization

Each module of the staff development program runs for 2 months with a 50-hour workload and is organised on a blended-learning approach, thus comprising face-to-face (f2f) and Internet-supported distance activities.

In each module there are three one-day f2f moments. The first happens at the end of the first week of the module. During the first days of this week some distance activities are proposed, namely a couple of ice breaking social activities and some initial readings. This first f2f activity is very important because it enables students to build a common understanding of the learning outcomes to be achieved and of the work strategies to be used during the following weeks. It is, also, the moment for

each person to get acquainted with the other participants and to understand the possible scientific, professional and personal bridges that students may be interested in establishing with each other, namely for the work to be carried out throughout the module.

The second f2f session is held at the end of the fourth week, and is used to share the work that each group has developed after the first f2f meeting and to (re) organise the work for the last part of the module. Each module ends with the third f2f session comprising final presentations and discussions. The completion of an online portfolio of the reports highlights the work carried out throughout the module. This final activity is strongly recommended since it will stimulate the reuse and dissemination of the knowledge acquired by the participants.

2.2 The pedagogy and curriculum development module

Today, we acknowledge a growing concern of the faculty members about the issues of pedagogy and academic success. It is clearly a turning point in the traditional conception of teaching and learning in higher education [2].

Bearing in mind the continuous transformation of higher education (HE) systems all over Europe, we believe that more than ever, academics need to reflect upon issues such as university pedagogy and curriculum development. Furthermore, continuous professional development of university teachers will create more qualified teachers in the area of didactics and educational sciences.

In order to achieve this purpose, this module is build on three premises: i) the acquired knowledge of pedagogy and curriculum design in HE, ii) best teaching practices, and iii) professional experience of the participants. The activities developed throughout the module comprise f2f or on-line debates about a specific issue of the program. These debates will lead to a set of written reports that will culminate in a final portfolio.

At the end of the module, participants should be able to achieve a number of competences, such as i) critical analyses of the challenges of HE in the context of the Bologna declaration, ii) critical thought, with a strong theoretical emphasis, regarding the curriculum design and the process of teaching and learning in HE, and iii) ability to monitor their practices as a way of modifying and improving their daily teaching activities.

2.3 The ICT module

The main objectives of the ICT module are to familiarize academics with the current status of the power of Internet-based ICT in education and to provide a comprehensive view of the status of standardisation.

Learners are encouraged to read reference texts covering the main areas of application of technologies: content delivery, individual and group interaction through asynchronous and synchronous communication, and assessment, among others. Furthermore, the need and advantages of using a comprehensive management environment is discussed, leading to the familiarisation with the typical functionalities currently available in Learning Management Systems (LMS), Learning Content Management Systems (LCMS) and Learning Activities Management Systems (LAMS).

As far as standardization is concerned, learners are introduced to the most relevant standardization organizations (e.g. ADL, IMS, IEEE) and an overview of current standard specifications is provided. Special attention is given to the SCORM model and to the IMS Learning Design specification, and discussions are carried out concerning concepts such as re-usability, content granularity and its interdependence.

During the first f2f session of this module, a general presentation of the main topics is provided. However, most of the time is reserved for practical exercises concerning the creation and organisation of work areas in an LMS and the creation of SCORM-compliant learning objects and their integration under the LMS. For this last purpose the eXe™ authoring tool is used, which provides a very easy and user-friendly tool. For the organisation of the learning objects content the use of the IMS Learning Design concepts and paradigm is encouraged, leading the way for an activity oriented learning strategy.

The work plan adopted in this module provides a complete and comprehensive view of the steps regarding the creation and maintenance of learning contents in LMS/LCMS/LAMS and, also, of the main technological paradigms and options that faculty members have to face when designing a course.

2.4 The collaborative teaching and learning module

Collaborative teaching and learning in higher education is certainly the secret for the academic success of students, academic staff, curriculum and institutions [3]. But the big question is how to effectively mobilize the actors of the process for contributing to the new teaching and learning paradigm. In fact, recent trends and meta-trends in educational theory and practice in higher education emphasise collaborative teaching and learning for students and academic staff construction or co-construction of knowledge and pedagogical and technological innovations in teacher education systems [4]. This point is very important for different actors, mainly to the students and academic staff. One important issue that we should focus our attention on deals with the following question: how do lecturers and students manage the different problems these learning situations pose and what do they actually do and must they do in the future? In this context, the learning communities assume a relevant importance. Recently, there is a growing attention to the development of on-line learning environments, which easily allow “partnerships between academics across faculties and disciplines; partnerships across multiple campuses; and partnerships online regardless of location” [5].

Thus, the aim of this module is to promote the development of learning partnerships inside the University of Aveiro and in the near future across countries. Following this main purpose it is our objective:

To identify new forms of learning and their implications for the future of teaching and learning in higher education.

To describe learning partnerships in the context of lifelong learning.

To describe on-line learning environments and to explain the advantages of some e-learning platforms such as Blackboard.

To reflect about best teaching practices and new forms of teacher training.

The tasks are planned to engage actively the participants of the module with the broader objective to establish learning partnerships inside the work group. Furthermore, some of theses activities will imply the discussion of some topics in the f2f sections as well as in the discussion forums using the ICT teaching-learning tool: Blackboard.

3 Conclusions

The main project aims targeted the development of specific intervention strategies for academics to improve their knowledge of topics such as curriculum design and collaborative learning by using an ICT teaching-learning tool (Blackboard).

Faculty members acknowledge this staff development program with a lot of interest, and all the available places (more than 150 for the three modules) were filled.

The courses are currently being run, and preliminary evaluation based on informal questionnaires and case studies developed by trainees show that the program helped academics develop their methodological and technological skills and also their perception about the adequate role of ICT as an enhancement factor to improve higher education teaching and learning practices.

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