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Teaching Innovation Network: An educational virtual model

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Abstract

This paper presents the strategic transformation developed by the National University of Distance Education (UNED), which involves the introduction of new instruments, new facilities for current and prospective students and a new network organizational structure that provides global access to content and new methodologies. It is emphasized Teaching Innovation Network, with special attention to the Educational Innovation in Finance research project. In this presentation, it is shown a real example of combination of institutional change and educational initiatives.
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1. Introduction

The Web, educational platforms, communication tools, both asynchronous and synchronous, computer applications developed ad hoc and multiple teaching models, form a new educational scenario in which imagination is the only limit.

Let's focus on some of the main concepts of innovation teaching. Paraphrasing Zabalza (2004), "Innovation is not just doing different things but to make things better. And keep the changes until it has been able to consolidate a new culture that changes […] necessarily entail". Therefore, only changes which represent a substantial improvement make sense. This requires a preliminary feasibility analysis, which justifies requirements, and evaluation, using techniques that do not bias the benefits of the system (Mauri et. al., (2007)).

On the other hand, relation between teaching innovation and Information and Communications Technologies (ICT) has been overestimated. ICT have become the backbone of the innovation process (Zabalza (2004)), not only by their advantages and new features, but by the influence on teachers´ motivation. But we must remember that the innovation process in education is much broader, encompassing other types of procedures and mechanisms are not necessarily based on technological development and its possibilities (Villa (2004), Elmore (1990)).

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The role of ICT in the process of change must be properly weighted. As stated by Celestino et al. (2003), technology is not the center of teaching revolution, but rather a tool kit, it should never be confused with the ultimate goal: student learning, avoiding a "culture of technological work" that become a cluster of separate processes and would not represent progress in educational process.

Not every teaching model that integrates ICT can be considered an innovative education and do not necessarily contribute to the process of change in an educational institution. However, to get the process of educational innovation effective, a relaxation, not only of the teaching task, but the entire university structure with involvement of all stakeholders -teachers, students, managers, etc.- is needed (Salinas (2004)). Many authors have pointed out several sources of pressure that stimulate educational innovation processes, and the progress in the culture of technology as a trigger for significant change must be highlighted (Edwards and O'Mahony (2000), Bates and Poole (2003), Le Grez (1995), Toffler (1985)).

ICT are, more than any other tool, a central stone of the change process, and therefore eventually draws all universities in the same direction. For Fernández et al. (2007), the first universities able to encompass in its structure a model of educational innovation present a significant competitive advantage, which will be easily neutralized once the model is generalized, but would lead to disadvantage for those who do not fit it. Obviously, this is a motivating argument to every educational institution to undertake the implementation of new processes based on ICT.

2. Traditional University vs. Distance University: UNED

Although the ultimate goal of any university is student learning, the differences between traditional universities and distance universities (open universities) are well known, not only in the organizational structure, but also in developing materials, channels and lines of communication and relationship between different actors.

The term *distance education* refers to various forms of study at all levels of education in which there is no need of systematic spatial or temporal confluence of teachers and students, so need not be time synchronization between teaching and learning time. Students are not under constant and immediate teacher's supervision in a classroom, but may benefit from support and guidance of an educational organization 'ad hoc'.

The key factor in the distance education university model is the ability to design and produce, at a central location (physical or virtual), high-quality educational offerings, which can, then, be distributed locally. Thus obtained, first, the benefits of *economies of scale*, while, on the other hand, allows a more flexible and suited needs education, receiving, even, support from (local) tutors. In most cases, it also provides communication mechanisms to join students with the offering organization.

In addition to all the above factors, the type of students at distance universities is also a distinguishing feature, characterized by diversity. Bujan Fernandez (2001) describes a student according to a social-statistic point of view: "The current profile might be: middle-aged, college-educated media, stable occupation pictures intermediate, married with concerns for personal and/or professional growth". This sketch of student moves the preparation and background study on the scale of responsibilities, behind family, work, and sometimes, their social life.

UNED is a reference university in Spain, in Europe, and even Latin America, due to its structure, operation, number of students and the continued application of new technologies to improve teaching and management process. It has more than 200,000 students, 11 faculties, 62 *Associated Centers* and with operations in 130 other major cities, through their *University Classrooms*. Covers the entire Spanish territory and is present in 12 centers abroad, across Europe, America and Africa. Pay special attention to more than 6,000 students with disabilities and more than 1,500 students in its program of Prisons.

Although UNED has distance education in its birth name, its teaching process could certainly be qualified as blended or mixed education. The size and magnitude of the institution have required a student support structure organized around the figure of the tutor who, from the Associated Centers and University Classrooms, support and are responsible for continuous assessment, linking students and Faculty Central Headquarters. Therefore, tutors are

one of the keys in UNED model, having been trained in new technologies as they also have access, within their functions, to virtual platforms that the University provides for every member of UNED community.

The new scenario that presents the EHEA has several points in common with the methodology of UNED. Moreover, it has been at the forefront thanks to a technological culture that reaches all levels and provides flexibility to an organization of over 1,400 teachers in the headquarters and the 6,900 tutors. Teaching innovation, therefore, be understood as an ongoing process at this University and covers the entire education community, as well as all the organizational level. In short, it fulfills all the parameters to become what many authors call the *Virtual Campus*.

Figure 1. ELEMENTS OF THE VIRTUAL CAMPUS

Source: Compiled from Aggarwal (2003) and Fernandez et al. (2007)
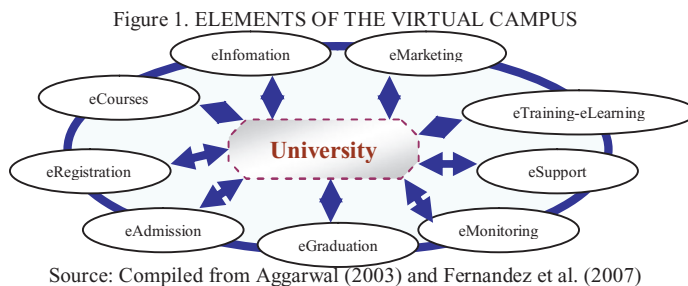
2.1. Teaching Innovation Network: An Educational Virtual Model

Educational Innovation in Finance aims to develop a distance learning model, rooted in the application of new tools adapted for this purpose, with clear objectives (González et al. (2008)).

First, reduce differences between teaching and distance learning. Some differences can be saved or at least significantly mitigated through virtual teaching techniques. In distance education, classroom relocation, the absence of templates, schedules and timetables and the anonymity that often leads to physical distance, made, in practice, difficult to following the continued evolution, student motivation and effort, limiting thereby the evaluation process to a series of tests, which may be biased by the personal circumstances of the day they are made.

Obviously, the possibilities that are opened in the field of computerized teaching have been many, and developed applications to adjust to the needs of the teaching-learning process in the most convenient and efficient for each of the parts involved. In this sense, educational platforms, specifically the WebCT- which is used by UNED along with other platforms-, allow to avoid more or less definitely the problem on the following, investigation and evaluation of the efforts and abilities of students.

This is one of the pillars that support the intention of the model that arises in the project: the optimal use of the tools of virtual teaching platform in order to follow properly not only the learning process and student training, equivalent to the defining of classroom instruction, but it is reflected in the evaluation process, according to their skills and efforts in addition to knowledge so far, as a rule, was the only measurable fact.

Figure 2. EDUCATIONAL VIRTUAL MODEL

Source: Authors
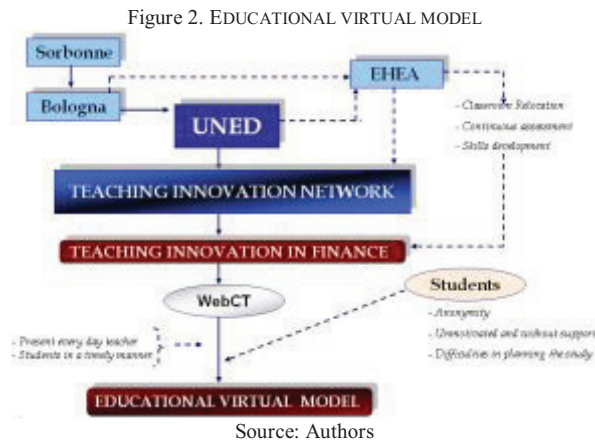
The second factor behind the essence of the proposed model, is the search for the use of all possibilities in a more consistent and regular way that offer to teachers and students not only educational platforms and patented model, but also of those developments, applications and software which affect to specific parts of the teaching process.

The monitoring reports of the application show different data on the use, both in number of users and frequency of the platform, having a significant disparity in the comparison between studies, years and even levels. However, what is no doubt is that platform used is a very powerful tool that offers huge range of possibilities, most generally, are not being exploited to its full potential range, so we can extract that the platform is underutilized many applications such as tracking students, the use of chat -in frequency and purpose-, the working groups, and so on. This is, as we warned, the second of the reasons that justified the project.

For the development of the above goals, the project affects the achievement of collateral objectives, each with partial information, ensure better teaching practice and paves the way preparing a scenario in which the student optimize his/her efforts and results based on more efficient teaching procedures. Among others, we note as partial targets to achieve the following:

- Strengthen communication between all those involved in the learning process. So the model aims to encourage communication between students and teaching team, making it more regular and fluid which will stimulate the former to go more regularly to the teacher with any questions or problems. Enhance communication more actively among students, which can benefit not only the face of the special preparation of the subject, but also in social and sociological component that carries a career.

- To remove the anonymity of the students involves more closely know of them and may influence on their mood, avoiding the lack of motivation and the confusion that sometimes have, and involving them more actively in their learning process so they take it on a more active and less mechanical way.

- In so far as to achieve the previous goals, we will be able to create a feedback with the students that will offer information of great importance in improving as teachers, not only in the procedures of the Model but also when preparing materials or intrinsic to the agenda issues and development.

- The last phase of the teaching-learning process should be the evaluation, and in this we need to echo the above process. In this way, it would be appropriate to carry on the implication, tracking and proceedings of students to the evaluation process, and these were included in the final score. This idea itself, responds to the essence of planning a continuous-time teaching model with the lowest degree of anonymity possible.

After several academic years of implementation, the model has been more than fulfilled the expectations set, not only quantitatively in relation to the grade obtained by students who have voluntarily involved and the application of

a continuous evaluation model, but also in the achievement of qualitative goals marked, getting the assimilation and involvement of students, not only with specific activities, but with the essence of the Model[2].

Figure 3. SUBJECTS, PARTICIPANTS AND RESULTS
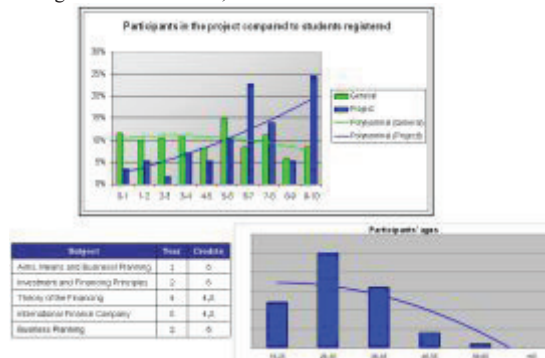
Source: Authors

3. Conclusion

It is belief that educational opportunities and apply teaching models are limited only by the imaginative capacity of the teacher. Based on the concept of educational innovation, whose center of gravity in most cases turns around ICT, there are many models adjusted to the characteristics of the subjects or areas of reference materials. But this whole process cannot distract attention from those issues that, indeed, involve teaching innovation:

- Firstly not all model or project that uses ICT in its development can be considered an innovation process, especially if this is punctual and the procedure is not acceptable in the global institution. It is not reasonable to think that a course offered through the web with tutorial support through forums is an innovation.
- Innovation processes must cover the entire institution, in each and every one of its aspects and levels, providing the flexibility to adapt adequately the model to undertake the projects.
- Finally, once passed the above two points should be keep in mind that "no anything goes". Are acceptable only those projects that offer an added value or competitive advantage compared to the previous model.

Therefore, the implementation of changes requires a protocol necessary to take into account prior to the establishment or restructuring of current models:

- A preliminary analysis of the requirements and dissatisfactions of the different groups involved, along with a review of the possibilities offered by ICT to influence these aspects.
- A preliminary feasibility study on all possible alternatives, identifying those that generate a real benefit and prioritization criteria based on utility.
- Must be reconciled interests and motivations of all stakeholders. The dialogue is the key to success in the implementation process and reduces the natural resistance to change.
- Decision-making should be firm and resolute, scheduled and defined in time, which will facilitate the systematic incorporation of those groups that are resistant to change.

UNED is leader in educational innovation because reconciles institutional change and educational initiatives, combining the efforts towards better service and attention, both to students and the rest of the university community.

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