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TECHNOLOGY ENHANCED LEARNING (TEL): STUDENT TAILORED PRACTICES IN eLEARNING

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***Abstract**: Today eLearning means more than learning content and courseware, and goes far beyond the Learning Management Systems (LMS), Personal Learning Environment (PLE), administration tools and authoring tools for building courses. Nowadays, the current challenges of eLearning are related to the lack of face-to-face interaction, the lack of sophistication in terms of Computer-Based Assessment and the challenge of developing engaging and stimulating online lessons. For students who shifted from a paper-based culture with handwriting, highlighting, post-it and gap-filling to a screen-based culture, with e-mails, blogging, gaming and webcams, streaming and googling are but a few of the solutions that would tailor eLearning for the 21st century skills and curriculum.*
Institutions have already challenged themselves unto meeting the new millennial students' needs by providing courses which foster not only life and career skills, but also learning and innovation ones, in corporate training and formal education environments alike, focused on professional development and encompassed by clear standards, as well as assessment and curriculum issues.
The present paper will showcase the actions taken with respect to all these aspects, both in Romania, by a team within "Carol I" National Defense University, and in Spain, by a team from ESADE Law and Business School. The first team will lay stress on the foreign language education-related organizational and pedagogical changes meant to support blended and eLearning strategies and management, whereas the second one will refer to management and law education; the main objective of the paper is to share the lessons learned, by highlighting both common aspects in terms of educational and methodological approach, and differences in terms of cultural response and attitudes of those benefiting from the eLearning type of education, irrespective of the way the latter is delivered, i.e., be it on-line or blended.

***Keywords:** eLearning, bLearning, technology-enhanced learning, online education, student centeredness*

I. INTRODUCTION

The evolution of ICT, in general, and of eLearning, specifically, has allowed a world of opportunities and new challenges in the use of ICTs for educational purposes. The evolution of eLearning technologies has been greatly influenced by the emergence and spread of the Internet, which allowed the first online universities to come into being. According to Bates [1], the use of ICTs for education in the 21st century will be better integrated in the daily life of individuals and organizations alike. The temporal flexibility of the eLearning models has made it possible for a larger number of adults to combine their Higher Education studies within their Work Life Learning Balance [2]. In this respect, we can notice that the increasing need for professional mobility and business-

oriented training required rethinking education in general and creating opportunities for a larger typology of learners as possible beneficiaries of higher education studies (i.e., accessibility and round-the-clock availability for adults having a professional activity, for people living in rural areas, etc.).

All this triggered three main changes, as follows: (a) the development of new pedagogical models for the distance learning university, e.g. pedagogies that would place the student in the limelight and the teacher on the margin, methods that change the face of competition among teachers and give credit to the virtual classroom; (b) the adjustment of the curriculum and adjacent syllabuses according to temporal flexibility of online learning and the new pedagogical models of eLearning [3]; (c) the development of eLearning in the European Higher Education leading into a new role for educators, as digital, technically savvy facilitators of learning. The teacher in an eLearning environment does not embody the same conceptual teacher we used to know. In this new context the teacher is a facilitator, a stage director, someone who just enhances students' learning by making sure the latter get the right amount of information in a given time, following a certain learning objective. The teacher will just guide one's steps unto further knowledge not offering input, but sending the student to the exact resources he/she needs for his/her level, target, background and age. In this way, each of the students gets individualized learning, which is not detrimental to their peers as in a Virtual Learning Environment (VLE); everybody has their share of attention from one and the same teacher carefully orchestrating the knowledge acquisition process.

II. THE STATE OF eLEARNING IN ROMANIA

In 2010 and at the beginning of 2011, Romania had the fastest broadband connection in Europe, and held the 4th place for speed connection worldwide. According to Eurostat Yearbook 2010 [4], most Romanians aged 16 to 74 used the Internet at home (77%), only 31% at work, and 20% at their place of education. The number of women (17%) using the Internet to obtain and share content in 2010 was smaller than that of men (22%), while women aged 20 to 24 had a higher percentage of completing at least upper secondary education (78.8%), compared to men (77.7%) [5]. Still, the percentage of women attending other forms of education is 1.4%, while the one of men – 1.2%, both among the lowest in Europe according to Eurostat statistics [6]. Moreover, the number of Romanian users searching information with the purpose of learning is also low, i.e., 17%.

In Romania, life-long education via eLearning platforms is not sufficiently developed. Still, universities, private firms, and other organizations are interested in developing new learning tools via eLearning. Romania does not have an Open University to provide online courses, even if the platform (www.academiaonline.ro) developed by InsideMedia offers a number of free courses. However, some steps have been taken in order to ensure students' access to digital courses.

In 1998, the Ministry of Education, Research, Youth and Sports designed its portal (www.edu.ro) to present information in education and research. Another portal (www.1educat.ro) came with information regarding courses available in the fields of management, Information Technology and Communication, and foreign languages. Another portal, the Online School, accessible at www.e-school.ro provided free resources to students, virtual lessons, games, and a chat room.

In 2001, SIVECO Romania, a firm founded in 1992, launched AEL, an integrated learning platform, which provided support in learning, evaluation and assessment. In 2006, a team from "Carol I" National Defense University developed the first digital English course. The following year, SIVECO Romania joint-ventured with the Polytechnica University a portal meant to foster teamwork and collaborative projects in the field of eLearning by providing teachers and students with assessment and training modules.

Currently, almost 58% of the universities have eLearning departments or use eLearning solutions in their activity. Private organizations are also interested in the design of online courses. The COLFASA Organization is involved in the stimulation of life-long learning and the development of online courses for English, management and IT with free access via www.e-instruire.ro, while the

project *eLearning Romania* (www.elearning.ro) provides information regarding the use of new technologies for learning by publishing a series of articles on best practices and eLearning-related projects designed by Romanian experts.

Therefore, the increasing number of Romanian universities and organizations involved in the development of online courses shows that people are becoming more and more interested in the opportunities offered by eLearning platforms, even if it is difficult to state whether their involvement is driven by the desire to learn and be informed or only by the need to socialize and look for entertainment.

III. THE STATE OF eLEARNING IN SPAIN

Distance education in Spain was limited to adult radio and correspondence courses on basic contents from 1940s to 1970s [7]. Later the first distance university, the Universidad Nacional de Educación a Distáncia (UNED), was set up in 1972 as a life-long learning model aiming to reach those students spread in the rural areas of Spain [8]. This first model of Spanish distance education was based on asynchronous methods, i.e., postal mail and TV programs. Finally, in 1995, the Catalan Online University (UOC) was created as the first fully online, eLearning university in Spain [9]. One of most important decisions in the development of the UOC is the decision to start from scratch considering the requirements and opportunities of the distance education model. The faculty in the UOC was hired considering the eLearning competencies required for authoring and tutoring in online education. In other countries, the online universities had been created as an extension to the traditional face-to-face university [10]; they then had to meet the challenge of transforming the traditional face-to-face model into e-learning ones [11].

The UOC model pursued collaboration among all the actors involved in learning; although it was first focused on Catalan students, it rapidly spread to Spain and South American countries. In the wake of this new model, other universities, such as UNIR, the first European online university offering a grade in elementary education, are growing this innovation sector in Spain. In addition to these, in secondary education, the Institut Obert de Catalunya (IOC), whose target population are adult students with a primary school degree, numbered over 23,000 students during the last academic course (Generalitat de Catalunya, 2010) [12].

Currently in Spain there is a growing number of students and an extension of the present profile of the online learner, that is, adults combining professional activity and learning [13]. This new context is therefore not only focused on adult, life-long learning students, but also on younger students replacing onsite by distance education, and profiles that combine face-to-face learning activities with the performance of distance education programs. Students enrolled in undergraduate programs and aged under 30 are more than⅓ of the students in the UOC, the largest Spanish online university with 56,000 students [14]. We therefore consider that the technologies used in learning institutions should be adapted to this new student population profile, in order to promote assurance of learning and overcome the lack of eLearning quality certificates.

These new demands of an ICT-based society are also triggering changes within traditional universities [15]. To the question of how to graft a more flexible, eLearning model on the structure of face-to-face educational institutions, ESADE has given a quality answer by creating the Direction of Educational Innovation and Academic Quality (DIPQA), whose main task is to design, develop and implement a quality bLearning model. It could take advantage both from the teaching staff and their knowledge transmission on the face-to-face classes [16], together with eLearning modules and adapted educational materials, with the aim of facilitating students' access to these learning programs and offer an adapted solution to their present needs for flexible learning systems, which can help professionals to better manage their working, learning and professional time [17].

IV. bLEARNING AND eLEARNING IN "CAROL I" NATIONAL DEFENSE UNIVERSITY

4.1. Description of the use of ICTs in "Carol I" National Defense University (NDU)

The courses unfolding inside "Carol I" NDU are both eLearning- and bLearning-based; most of them are supported by the ILIAS LMS, while a few are run by means of some educational foreign language software, i.e., commercial products used inside the Foreign Language Resource Center.

In addition, "Carol I" NDU provides eLearning courses for the refresher sessions and bLearning courses that run on longer sessions, distance learning slots alternating with short periods of face-to-face. Courses vary from foreign languages to military subject matters. At onset, there was the first online military terminology course for the Romanian armed forces (2007),[18] fully developed in-house and followed by a refresher course created via the same ILIAS platform, while other commercial software were only meant to complement this, for other linguistic competence levels, languages other than English, a.s.o.

4.2. Pedagogical models used for implementing eLearning

Throughout this period, different pedagogies have been used with reference to eLearning related to foreign language acquisition; we currently use the constructivist approach for the eLearning sessions, while for the bLearning ones the communicative approach is preferred during the face-to-face slot. While most of the courses are built on constructivism, the tendency is to shift to the social constructionism which encourages activities like forums, blogs and online tasks that create bonds and make people interact and communicate feelings and ideas as a very important element in foreign language teaching and learning.

4.3. Curriculum, standards and quality assurance in eLearning

In discussing the quality assurance and standards of the education provided by our language courses, we need to refer to one basic assumption, namely that "quality in education is served when the student receives the right amount and the right type of information he/she needs to meet his/her purposes and standards." [19]

The curricula and syllabuses of the dedicated foreign language courses, be they of the blended or eLearning type, are tailored according to the specific learning objectives our students should meet, IAW with the European and MOD-related standards. Another equally important guideline in this respect is given by the competencies which the students need in order to perform effectively in their future jobs or assignments, IAW their job prospects. The main issue here is to assess to what extent we provide quality courses; this means we must know at any time if we are doing/did a good job, and also identify if and what corrections need to be made in both syllabus, i.e., course contents and pedagogy for quality assurance [20].

In general terms, the syllabuses follow the pattern prescribed by the Common European Framework for Reference and the new framework for the language training programs issued in 2011 by the Human Resources Management Directorate. The curriculum (and the adjacent syllabus) specifies the following elements: course objectives; course length (in weeks or hours); specific competencies and skills to be developed; delivery form (i.e., face-to-face, distance-learning, blended); minimum standards of performance; type and frequency of assessment; course contents; recommended bibliography; number of credits (if applicable).

By way of consequence, we may conclude that the degree of achieving the objectives in the courses referred to (the knowledge, skills and behavior included) gives us the measure at which quality has been assured.

It therefore results that the pivotal element is measuring performance. According to some authors [21], this can be performed in several ways: by progress, mid-, and end-of-course tests; by applying course critique questionnaires; by networking with stakeholders in order to learn about course graduates' on-the-job performance and their intellectual behavior languagewise; by comparing

present courses with foreseeable future demands; by identifying ways of motivating students to work harder; last, but not least, by learning from mistakes or failures and by accepting them as challenges to improve further overall performance.

From our experience, in both blended and eLearning language courses, the former encompassing the traditional face-to-face approach as well as the IT facilitated one, and the latter requiring a different type of teacher to student / student to teacher / student to student exchange of ideas, interaction and feedback, as well as transfer of knowledge and skills, the outcomes are comparable. One important flaw mentioned in roughly 30% of the course critique as to the eLearning courses is the lack of student-student interaction, which might be an indicator of what has been previously referred to as part of performance and competency, that is *behavior* in a foreign language.

One way to sort this out is to focus more on forum discussions where students can interact on topics they had in the reading or listening sections on the platform; they can also be encouraged to develop a blog section that would improve their writing. As for the speaking skill, in bLearning this skill is covered within the face-to-face sessions, while for the eLearning course-type chat rooms can be organized via Skype, and therefore real online learning can be performed. Mention should be made that this type of improvement requires no special infrastructure.

4.4. The organizational changes of "Carol I" National Defense University for supporting bLearning and eLearning

2004 was the year when the Resource and Learning Center (RLC) was set up within the Foreign Language Department, with American support in logistics, materials, software and expertise, i.e., training for teachers and the technical staff. By 2005 the RLC was fully operational.

The RLC now provides courses developed on the bLearning system, alternating the face-to-face sessions with the distance learning training modules, in combinations of 5 to 8 weeks of intensive language courses.

Moreover, the competency of developing tailored materials for this new type of courses was gradually transferred to the teachers of English, French and German employed by the NDU. If at first the courses were based on open resources and some materials provided by the American partner as educational software, we are now developing our own courseware, using the ILIAS LMS platform, while more teachers are trained on-site in order to be both tutors and material developers.

V. bLEARNING AND eLEARNING IN ESADE

ESADE is an international academic institution with more than fifty years of history. Its key mission is to develop individuals unto becoming highly-competent professionals with a high capacity of reflection, dialogue and initiative. ESADE promotes quality education and research through its Law School and the Business School, both for undergraduate and post-graduate students and Executive Education (ExEd) participants, ranging from 20 to 80 years of age.

5.1. Evolution of the use of ICTs in ESADE

In the context of the first email use in Spain, ESADE underwent its own ICT revolution around 1990. In the 2000s, an ad hoc eLearning solution was used, called the *Learning Areas*. In 2007, in order to assess the process of developing the ICT use in teaching and learning processes in ESADE, the open-source Learning Management System Moodle [22] was adopted IAW a benchmark among the top-ranked universities and business schools worldwide. As a socio-constructivist oriented environment, it was an opportunity to support the ESADE pedagogical model and to meet the educational and organizational changes that the Bologna Process involves [23]. The main ESADE academic programs successfully adopted this VLE to support the subject webs in on-site programs and, more specifically, to host the bLearning courses. The use of Moodle in these contexts allows

teachers to expand classroom activities, post information and resources, manage communication with participants and assess learning continuously.

Within this new bLearning context, ESADE is at this time committed to developing eLearning courses in their main areas of expertise such as Finance and Marketing. Eventually, in 2011, the evolution of this learning model led to the first online course in Finance.

5.2. bLearning and eLearning courses in ESADE

The development of the bLearning pedagogical model in ESADE has permitted to sustain a global learning model based on an outstanding quality approach. This learning model follows the combination of the best methods in face-to-face activities with the best possibilities of the distance learning solutions. Currently, the vast majority of the educational programs comprise an important on-site activity; therefore, the use of ICT is primarily meant to support the preparation of face-to-face sessions (PRE), the development of onsite sessions (PRO) and the post face-to-face sessions (POST). bLearning has a support role among the undergraduate courses (15% of virtuality), a complementary role in Masters' degree courses (30% of virtuality) and a core role in Executive Education (up to 50 % of virtuality) [24]. The bLearning ExEd courses present a PRE which contains a greater amount of course materials, activities and even online training modules. The PRO is usually structured as intensive onsite modules where students collaborate in different learning activities. Finally, the POST typically consists of synthesis, evaluation and knowledge transfer activities. The online courses such as eFinance [25] are becoming a part of the ESADE pedagogical model both as an integrated and an independent activity, in the PRE and POST bLearning course.

5.3. Pedagogical model

ESADE has always been committed to the development of a pedagogical model that situates the learner in the centre of the knowledge and competence development process, promoting the active learning methodologies. This pedagogical model is based on human qualities and its application to the academic and professional contexts. The model is developed based on the respect and promotion of the diverse educational methodologies that provide for the assurance of learning and the quality of the training experience. In ESADE, the pedagogical model of ICT use aims to support and enhance the different educational methods, ensuring quality learning as well as learning experience.

5.4. Curriculum, standards and quality assurance of eLearning

In order to promote the development of educational standards of the European Higher Education Area (EHEA) and those specific to business schools (AACSB, EQUIS), ESADE has developed and internal service promoting the learning innovation and quality meant to provide guidance and support to all the strategic units and programs in ESADE, called DIPQA (Direction of Educational Innovation and Academic Quality). The DIPQA team leading the eLearning field has the objective to promote the pedagogical use of ICTs which contribute to improving the quality of the teaching-learning process and encourage innovation in this field. Developing ICT use is aimed at developing ESADE's pedagogical model, bearing in mind the added value provided by using ICTs in each specific situation. In the undergraduate programs the main objective is to use the Moodle course websites to achieve the learning quality standards required by the EHEA, such as the competence assessment and the publication of the learning guides for students. In the context of postgraduate programs, and especially the Masters' degree programs, the goal is to achieve the learning and the quality assurance of the teaching and learning process according to the ESADE bLearning model as well as the standards of the Association of Advanced Collegiate Schools of Business (AACSB) and European Quality Improvement System (EQUIS) accreditation by the European Foundation for Management Development (EFMD). It is notable that ESADE was the first business school in Spain to gain the EQUIS accreditation in 1998.

5.5. The organizational changes of ESADE for supporting bLearning and eLearning

With the purpose of promoting the quality of learning processes and the correct pedagogical outcomes of ICT use in ESADE, the Direction of Educational Innovation and Academic Quality (DIPQA) was created in the early 2000s. To provide information on new experiences and innovation in teaching, and also to promote the exchange of ideas among ESADE faculty members, DIPQA regularly organizes a series of open innovation sessions throughout the academic year. Focused on bLearning and eLearning practices, DIPQA's eLearning department is devoted to the strategic promotion of the pedagogical use of ICTs, especially to the assessment of faculty, by helping them increase their own ICT competences and giving incentives for the integration of bLearning methodologies in their courses.

VI. CONCLUSIONS: A COMPARATIVE ANALYSIS OF ELEARNING IN "CAROL I" NDU AND ESADE

For the comparative analysis of the Romanian and Spanish cases and in order to study the development of eLearning in Higher Education, we will consider firstly the common points, and then the main differences between the two models.

6.1. Common points

From a general perspective, we can notice a similar evolution of eLearning in Higher Education in both countries, especially in the development of the distance learning models which moved from TV broadcasted lessons in the early 90s to the eLearning programs using Learning Management Systems (LMS) in the late 90s, and online distributed learning in the first years of the 21st century. A second major common feature is represented by the European-scale implications of the EHEA standards. In both countries, the EHEA was implemented at the same moment that ICTs were generalized, and allowed to achieve part of the EHEA objectives by supporting the new learner-centered models with the use of educational ICTs.

From the technological perspective, we can remark that the use of the LMS is a shared characteristic both in ESADE, by Moodle, and in "Carol I" NDU, by ILIAS. The analysis of these two platforms' features allowed us to notice that both platforms have similar features and usability.

When comparing the organizational framework designed to support the eLearning development in the universities, it results both ESADE and "Carol I" NDU have set up a learning innovation unit, helping both the faculty and the program staff to use eLearning technologies and to develop the eLearning contents. The learning innovation unit is composed of 7 members in ESADE on the pedagogical side, and an additional team in the ICT services composed of 3 members, whereas in "Carol I" NDU there are 8 full-time members of the ADL Department that enhance the ILIAS LMS platform use and the technological support for all the eLearning courses, along with the pedagogical support provided by the teachers of the Foreign Language Department.

Another common point is that, irrespective of the urgent need to enlarge and improve this field, there is no policy for giving incentives to the teaching staff in the use or creation of eLearning content, a case similar both in Romania and Spain.

6.2. Differences

The main difference revealed so far by our comparative analysis resides in the following aspect: although statistics show that 140,000 high school teachers in Romania have received training for eLearning, not all of them are delivering eLearning courses; moreover, the training of the higher education staff is being performed in only some institutions across the country - most of the HE staff choosing self-training, autonomous learning as well as on-the-job training in order to get familiar with, and become users of, an eLearning system of delivering education, from building the materials to actually facilitating the knowledge transfer. At this point, we should mention that there are some

professional training opportunities offered by specialized firms, within the European Framework Program; the training costs are usually covered by the trainee.

Moreover, the eLearning education in Romania started with departments inside well-known universities: the fact is that there is no online university to have started from scratch, similar to the Open University in the UK.

It is noteworthy that ESADE has started to promote the use of eLearning and bLearning among their faculty in the last few years and is planning to organize more advanced eLearning seminars for the permanent faculty and the academic collaborators as well.

Another difference between the Romanian and Spanish systems is related to the history of ICT use: ESADE's first eLearning solutions came as early as 2001, whereas in "Carol I" NDU they started in 2005. In addition, ESADE's first bLearning course, i.e., MBA PWC was launched in 2004; "Carol I" NDU's first integration of eLearning came in 2005, and its first in-house bLearning course dates from 2007.

"Carol I" NDU's foreign language students have access to open educational resources by means of the ILIAS LMS platform. The comparative study performed hereupon shows ESADE has not open educational resources, only some videos accessible on ESADE.tv.

Last, but not least, we should point out the higher support offered by the ILIAS platform in the information provided to teachers in the creation and use of SCORM-based content and also in providing feedback to monitor the students than the one the Moodle offers.

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