

## The Place of e-Learning in Romanian Universities' Strategies

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*The educational policy documents at European level reaffirm professors' status as key players of strategies aimed to stimulate socio-economic development. In a powerful knowledge-based society, the e-Learning system has the capacity to transform education, creating major initiatives required to identify new skills and behaviors. In this paper we try to outline the position of this new educational system in the Romanian higher education strategy.*

**Keywords:** e-Learning, Portals, ICT, Universities

### 1 Introduction

The modern world is facing a rapid evolution of science and technology, with deep implications on the teaching content and methodology, thus amplifying his formative-educational character.

In order to face scientific challenges, new methodologies are required in order to guarantee, both for teachers (information providers) and students (main beneficiaries), the ability to formulate and solve problems based on knowledge networking in different areas, to build their own experiences to optimal professional guidance, and to develop capabilities which enable integration into various social groups.

E-Learning is not regarded as an objective in itself, but rather a way to make education and training systems more effective, more universal. As a powerful engine of the knowledge-based society, the e-Learning system has the capacity to transform education, creating major initiatives required to identify new skills and behaviors. The new system includes concepts such as content management, knowledge management, performance support, production practice and virtual cooperation [4].

For several years, educational policy documents at European level reaffirm the professors' status as key players in any strategy aimed at stimulating economic and social development. For example, as part of a

European strategy for development by 2010, the European Council report on the actual objectives of education and training (Brussels, February 14, 2001) state as first-level priorities an increase in education effectiveness and the improvement of training programs and continuous training of teachers, with the following basic elements:

- Appropriate support for teachers and trainers in order to meet the challenges of the knowledge-based society;
- Forming skills and competences in the field of ICT (Information and Communication Technologies);
- Providing access to all the new technologies.

In the European vision, the e-Learning system is considered a key component of all actions aimed at achieving the Lisbon goals, sustaining the economic growth and the number and quality of job offers.

European eLearning Industry Group has made recommendations to European governments that public investment should be based on a coherent strategy and to better balance the four key elements of e-Learning public policy (infrastructure, open standards, content and services' quality, teachers' training) in order to maximize benefits for end users. It is considered that public authorities can help accelerate promoting e-Learning by using their purchasing power to acquire infrastructure support and enhance

the new networks of training. In addition, public authorities should take the initiative to implement e-Learning policies for their own employees.

“The pressure to adopt e-learning should also be seen in the context of the pressure on European higher education systems to reform and modernize in terms of curricula, teaching methods, expanded learning outcomes, new types of students, qualification frameworks, quality assurance, research and innovation (cf. Bologna reforms and the Lisbon Agenda). Universities have been criticized by the EU Commission (CEC 2006) for offering ‘the same courses to the same group of academically best-qualified young students and failing to open up to other types of learning and learners’ (p.3); their approach has ‘slowed down innovation in curricula and teaching methods’ (p.3); and universities are informed that they need to ‘grasp more directly the challenges and opportunities presented by the lifelong learning agenda’ (p7)”. [1]

“For any e-Learning strategy it is important to recognize and improve plans according with the range of tools already provided by publishers to support applications with a high degree of flexibility” [4].

In this context, the Romanian legal regulations state that the purpose of the education system is attained by "modern strategies and techniques for training and education, supported by education sciences and school practice in accordance with each level of educational objectives”:

- Equal and improved access to education;
- Ensuring high quality education and training of the knowledge-based society;
- Considering the investment in human capital investment as the most profitable in the long run;
- Institutional development and continuing education.

Our paper provides an overview of the role attributed to e-learning platforms by Romanian universities, with respect to their strategies. It is structured in several sections, starting with some assertions quoted from the literature, followed by an overview of the

Romanian academic environment and its position towards e-learning, seen both as a tool and as an educational decision support system. The overview is anchored in a quantitative study based on a criteria framework and a structural analysis of implemented features. The paper ends with the synthetic conclusions regarding the challenges that are to be met in the future phases of e-learning adoption on a wider scale.

## 2 Related Works Assertions

“The interest in implementing e-learning in higher education systems throughout the world has been influenced by a number of demands and drivers. According to Hammond (2003) higher education institutions exist within political, cultural and social contexts which shape policy and practice. In this background, the most important drivers are the national policies and priorities regarding economic and social development, the beliefs and expectations of the role of education in terms of supporting those priorities, and the developments in educational technologies which have the potential to enable the system to achieve these objectives.” [1]

“A number of countries have been developing national e-Learning strategies for the higher education (HE) sector which aim to meet needs for lifelong learning, up skilling, and quality improvement.

A number of national and international e-Learning strategies hold out the goal of ubiquitous and lifelong access to higher education. However, it should be acknowledged that the realization of such a vision will require more than the availability of technological infrastructure. Lifelong access to higher education via e-Learning will require HE institutions to implement strategies and policies which focus on: flexible modular frameworks; innovative pedagogical approaches; new forms of assessments linked to learning outcomes, including e-portfolios; cross-institutional accreditation and credit transfer agreements; institutional collaboration in development

and delivery; multiple access and exit points from programmes; and, most crucially, commitment to equivalence of access for students on and off-campus. In the context of modernizing the system, some of these processes are already in train in European higher education, for example, implementing the national qualifications framework and adopting the Bologna reforms. However, while the system is responding to the policy drivers, in the form of strategy formulation, there are also significant barriers to implementation at local level.” [1]

“Many universities (and other tertiary institutions) are providing programmes wholly or partly online; some for students on-campus, and many for external (distance-education) students. While the aggregate scale of university involvement in e-learning is uncertain, observation suggests that virtually all universities in EU countries have well developed IT infrastructures (with facilities for Internet access, email, file transfer, and the like), and many (e.g., virtually all those visited by the author) routinely use these facilities in teaching students. Just what proportion of European universities offer discrete e-learning programmes, however, or have formal strategies for the deployment of online technologies in teaching, is unclear at this time. A recent strategic study, carried out on behalf of the EU Commission, showed that while the level of integration of ICT in teaching has increased greatly over the last two years, considerable variation still exists between institutions in this regard. Secondly, while strategies vary between institutions and scale of provision between countries, e-Learning activity in Europe continues to grow.”[6]

“Despite the significant growth in e-learning and virtual campuses over the last 10 years, a number of key problems and issues led to expensive failures in a number of e-Learning and virtual campus projects have been identified by the “Megatrends in e-Learning Provision” project ([www.nettskolen.com/in\\_english/megatrends/the\\_project.html](http://www.nettskolen.com/in_english/megatrends/the_project.html)). Examples of high profile

e-Learning and virtual campus initiatives that did not reach their targeted goals included the Californian Virtual University, the Scottish Interactive University, the United Kingdom e-University, the Alliance of Lifelong Learning and the Open University of the United States (Keegan et al., 2007). Many large-scale e-Learning and virtual campus initiatives were funded using £10millions of public money which has largely been lost when these initiatives folded. Typical problems that led to the downfall of such initiatives have been identified by Keegan et al., (2007) as including overly ambitious plans in relation to the potential student market, lack of market research and a lack of financial planning” [2].

### 3 The Romanian Academic Environment

We emphasize that within the e-Learning system, with respect to some Romanian universities prior to 2005, considerable efforts have been spent for:

- initiating students in information and communication technology, focusing on the possibility to use these technologies in education and learning. Thus, there were created conditions for the students to access the Internet at no cost, with an emphasis on "didactic" specifics for training and learning in a virtual environment;
- there were created study materials adapted to the new teaching/learning type, where students can find numerous case studies, problem situations, opportunities for simulating real situations;
- specialized rooms were created, with access to real time data and current information on certain topics in the disciplines of study;
- certain teaching activities (teaching, seminars, and practical work) were designed and carried out using various technologies, enhancing the attractiveness and the degree of interest from students.

Starting from these achievements, we tried in the next paragraphs to analyze the educational platform integrated in the university's web sites in 2010.

Here are some of the definitions that we considered in the analysis:

An e-Learning portal should provide on one hand flexibility in the electronic management of the educational process through specific management facilities of a university, and on the other hand, effective learning process, by providing students and teachers of online assessment modules and remote distance working. [11]

“In higher education especially, the increasing tendency is to create a Virtual Learning Environment (VLE) (which is sometimes combined with a Management Information System (MIS) to create a Managed Learning Environment) in which all aspects of a course are handled through a consistent user interface standard throughout the institution.” [13]

The e-Learning systems are highly complex solutions. The offered facilities are various, from schooling modules, to modules required for the financial accounting, to human resources management modules, or even to research grants modules. Lately, most of e-Learning solutions offer an educational portal type interface allowing great visibility and

aperture. Considering these aspects, the evaluation of such system is a very difficult problem due to the large number of factors, which usually are not directly quantifiable.

We decided to find a framework for evaluation and selection of e-Learning portals for universities and applying this framework to achieve a comparative analysis.

We applied a quantitative analysis for studying the online information published by universities, acquiring and analyzing the observations made by HE institutions that have implemented this system of instruction (training).

At this time, Wikipedia lists for Romania a total of 113 universities and institutes, of state and private administration. The study methodology was based on evaluating web sites of Romanian HE institutions, namely we have developed a quantitative study of the contents published by the universities regarding the endorsement for e-Learning activities.

We considered the following comparative criteria (Table 1), with the results listed in the right column:

**Table 1.** Comparative criteria on evaluating web sites of Romanian HE institutions

<b>Criteria</b>	<b>Observations</b>
<b>Existing link: <i>Strategic development plans</i></b>	⇒ <b>Over 85% of the visited universities</b>
<b>Specification in the <i>Strategic Plan</i> of the necessity for e-Learning development and expansion</b>	⇒ <b>Over 75% of the visited universities</b>
<b>Existing link: <i>Department for distance learning:</i></b> - <b>On the first page of the university presentation website</b> - <b>Level 2, 3 or other level of the presentation website</b>	⇒ <b>45% of the visited sites</b> ⇒ <b>35% of the visited sites</b> <b>The rest have no mention in this regard.</b>
<b>Implemented platforms:</b> - <b>Moodle (In-house localized variant)</b> - <b>Academis</b> - <b>Blackboard</b> - <b>other (Claroline, etc)</b>	⇒ <b>57 % of the visited universities</b> ⇒ <b>17% of the visited universities</b> ⇒ <b>5% of the visited universities</b> ⇒ <b>21 % of the visited universities</b>

<p><b>Predominant users structures:</b>  <b>System administrator, examiner, course creator, tutor, students, program manager (including secretarial tasks)</b>  <b>or</b>  <b>Secretariat for administrative activities with students, specialization director for organizing the educational process; teachers (without roles) to support the educational process; students - direct beneficiaries of the activities of other groups of visitors; database administrator to ensure optimal functioning of the platform framework</b></p>	<p>⇒ <b>77 % of the studied platforms</b></p> <p>⇒ <b>23% of the studied platforms</b></p>
<p><b>Platform <i>User Guide</i> for teachers and students:</b>  - for all visitors  - with user name and password</p>	<p>- <b>56 % of universities</b>  - <b>44% of universities</b></p>
<p><b>Online courses - free or protected</b></p>	<p>⇒ <b>over 90% of universities</b></p>
<p><b>Digital library</b></p>	<p>⇒ <b>over 80% of universities</b></p>

After 2005 the development strategy of each university (or college) from Romania, be it private or state education included a distinctive point related to the necessity of a portal derived from several factors and requirements:

- Attracting new students;
- Due to a very high volume of information resources;
- Compliance with European standards;
- Integrated management activities;
- A more efficient control over operations;
- Real time access to a unique data source;
- Improve decision making process.

A representative Romanian university portal, now, is:

- Created from the university's own resources - The development of an own educational portal is a bold action that involves investing in a team of specialists from various fields; the main disadvantage is that of the extensive time to achieve such a solution.
- A project won and developed by its own team (CNCSIS grants, PHARE funds, other unredeemable funds) or purchased (the existing solutions on the market can be a considerable financial effort, given that prices can range from 20,000 USD to

1 million USD, depending on the number of users, facilities, implementation and maintenance manner).

Based on the analysis performed on Romanian universities' websites, we can affirm that most of them offer the following **general components of an educational portal:**

1. **SysAdmin**, through which the administration of the entire system is done:
  - Sending urgent messages to users (Quick message link);
  - Carrying out primary statistical processing on the use of portal (Statistics link);
  - Temporary or permanent access restriction for users who violate the rules of the training portal (IP Block link);
  - Adding / editing secretary type users;
  - Real-time monitoring of active users (Active Learners link);
  - Analysis of all user activities based on journals (Logs link).
2. **Secretariat**, which runs secretarial work:
  - Adding / editing training modules and their association to training modules (Teachers link);
  - Adding / editing subjects and their association to training modules and teaching staff (Materials link);

- Adding / editing learners and their association to training modules (Students link);
  - Adding / editing process related training periods (Structure link);
  - Specifying the rights of students re-examination (Students with applications link);
  - Communication between the Secretariat and students (Messages with students link);
  - Compile reports relating to students' activity (Centralizer link).
3. **Teacher**, in which teachers work is carried out:
- Allows adding / editing the support of each course's theoretical chapters related to the teacher;
  - Allows adding / editing the subjects necessary for self-testing and examination and their difficulty setting parameters;
  - Allows communication between teachers and students;
  - Allows changing students' rights to be re-examined.
4. **Learner**, which provides necessary functionalities for learners:
- View personal data and change their access password (Personal data link);
  - View the structure of phases corresponding to the training process (Year Structure link);
  - Communication with the Secretariat to receive / send information (Communication with the Secretary link);
  - Communication with the training staff (Communication with Teachers link);
  - Access to training materials for online review or download (Courses link);
  - Self-testing of the assimilated knowledge (Self-testing link);
  - Online exams to assess knowledge level (Exam link), active only during the exams session.
  - Other information: urgent messages for all learners, current period, information required for the correct use of the interface.
5. **Communication**, which enables secure communication between different types of portal users.
- Email;
  - Forum;
  - Weblog.
6. **Self test / exam**, which allows self-testing activities and examinations.
- Some HE institutions consider the following main components of an educational portal:
- *Educational process*: Curriculum, Electronic Libraries, Multimedia Courses (audio / video / slides) Assignment, Correcting homework, Papers, Feedback collection, Private work spaces.
  - *Administrative Process*: Schedule, Calendar, Catalog, Registration Form, Reports, Statistics, Tax payments.
  - *Communication*: Email, Announcements, Events, Feedback forms, Mailing lists.
- The educational process supported by an e-Learning platform should relate to a complete cycle of study (bachelor, master or doctorate) in an approved curriculum structure, distributed in certain domains and organized in study formations. An e-Learning platform has a uniform structure in terms of concept and has implemented procedures specific to each university, providing the virtual come about of administrative and teaching activities.
- University strategies are subject to various objectives, such as:
- Deeper understanding of key issues and critical success factors underlying the implementation of educational portals;
  - Providing a practical framework to guide the creation of best practices in e-Learning implementation;
  - Publication of best practices examples, case studies and use case scenarios;
  - Ensuring a high level of awareness of problems and approaches to create successful and sustainable e-Learning.
- The portal is used by universities simply to enhance an educational community, with the intention of contributing significantly to the increase of education quality. In other words, it encourages communication between professionals, endorses innovation, parents' education, supports non-governmental associations in actions involving universities,

and sustains proficient authorities and volunteers.

In Romania, the potential of the ICT-based education is still inappropriately exercised. Problems that arise are related to impartiality and independence, handling and control, ethics and confidentiality, in other words the objectivity, timeliness and relevance of the information presented.

#### 4 Conclusions

The formulation of a coherent strategy in the development and implementation of Romanian e-Learning leans on the experience with equipment carrying projects, undertaken in recent years, and on solid theoretical foundation, both on a technical level, and especially on a pedagogic one. Building up specific strategies for universities' development will offer conditions for a standards-based reform, as a prerequisite for quality education, by fostering self-evaluation and continuous correlation with its objectives.

The students' use of computer is a dominant activity, for both professional guidance and information, and consistent with trends of the time allocation for online communication and leisure purposes. The age for computer beginners is low, and families have more than one computer. The total time of exposure to computer screen for business or leisure is very high relative to average daily activities. The time spent by students on the Internet is also significant. Much of this time is consumed for online communication (email, chat, etc. socializing networks.), but also the Internet is the preferred source of information and documentation for professional purposes.

Of course, nationwide, the issue is to initiate not only students in ICT, but also teachers (some do not know or did not correctly implement these technologies in teaching-learning-evaluation, while others will not adapt to new requirements; some educational institutions lack an organized form for continuous training for teachers in ICT).

In nowadays Romania we observe an increased concern of the executives, civil

society and educational system (secondary and higher education) to implement an efficient e-Learning system in universities. E-Learning must not be perceived strictly as an educational environment, but also as collaborative process framework aimed to increase individual and organizational performance, thus providing an operational-level decision support.

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