

E-LEARNING IN HIGHER EDUCATION

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Abstract. The paper is made up of two parts: the first part presents a complex analysis of the Romanian on-line educational offer, emphasizing the modality of communicating with the audience, the degree of interaction enabled by the website format, as well as the manner of on-line promotion of the educational offer

The second part of the paper presents a case study: the working plan on the material entitled The Management of the European Projects at the UTM meant to support the process of teaching/learning via modern IT means, to facilitate the learning process, to stimulate creativity and competition as well as team work, to add new technologies to the traditional didactic methods, to employ new but also free software a substitutes for expensive or hard to acquire didactic materials and instruments.

Nowadays we experience the effect of the two important discoveries within the IT field, that have lead to **evolutions and revolutions in communication and education** (the revolution produced by Gutenberg’s invention (the typing machine) and the revolution produced by the internet. The positive social-economic impact of the discovery and use of the TIC can be structured according to the following directions of the transformation of human society: ¹

- Transformation of our manner of communication, employment of information and the manner of research
- Changing of our manner of learning and work, our manner of designing and manufacturing goods;
- And therefore the changing not only of the work method of the administrative management but also of the relationship between humans and the environment.

The CE definition for [eLearning](#) is: „The use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration.” eLearning is one of the key elements of the CE i2010 program and of the component program [Education and Training](#), adopted by all member states; The Education and Training program is implemented through an open method of coordination: the member states are responsible for the organization of the system of formal and continuous education, being supported for the achievement of an exchange of experience in the shaping of the policies and for the achievement of common indicators. In our case, the online courses are rather forms of informal education.

MEC enables the accreditation of online courses, prescribed by „**Standards regarding the use of e-learning sources (e-Learning) within distance learning**”. With respect to the online courses developed by companies, they cannot be accredited through the [Methodology of accrediting the providers of professional training for adults](#) of [CNFPA](#)²: "The providers of training that organize unconventional programs of professional training, such as open distance learning, through mail, e-learning, etc., do not obey the authorization rules comprised in the above mentioned Methodology. " One therefore needs an

¹ Emil Cretu, Argentina Gramada-“ The Positive Social Impact of the Employment of TIC ”

²CNFPA- Instructions regarding the monitoring of the providers of professional training by the authorization committees- www.cnfpa.ro/Files/Norme%20metodologie/Instr%20monitorizare%2019_12%20bis.pdf ; www.cnfpa.ro/Files/Norme%20metodologie/Metodologia%20de%20autorizare.pdf

alignment of the accreditation methodologies to the European standards, the promotion of these programs, training the E-learning facilitators.

The educational programs are expected to be a cognitive challenge, attractive and motivating for the students. The students are supposed to become active participants in their own learning process through a formation of competencies.³

„The key COMPETENCES are: communication in the mother tongue ; communication in foreign languages; competences in math, a science and technology; digital competence; learning to learn; interpersonal, intercultural and social competences ; entrepreneurship ; cultural expression.”⁴

The Program Education and Training prescribes the development of **competencies** necessary **in a knowledge based society**: not only digital competencies, but also **creative competencies for solving practical problems and even more teamwork**. In order to do this one needs an open, flexible, high-quality educational environment, accessible to everyone. Most of the member states and ministries of education encourage and recommend the employment of open educational resources, of open -source systems, of new collaborative technologies Web2.0.

In Romania, most of the universities, many schools and companies of IT and training, foundations have been participating in European e-learning projects. Therefore there are **competences and products developed** through these programs. Unfortunately, many projects do not continue after the financing project ends. There are also initiatives sustained by the government or the local administration or individual projects of universities and companies. The most important Romanian e -learning projects can be found on Resurse Timsoft, section [eLearning in Romania](#).

According to a study done by Intel, three quarters of the Romanian students spend three hour per day in the front of the computer. |⁵ Over 70% of the students use the internet as an additional learning source. Only 2% access the internet from the university computers. Daily, 78% of the Romanian students spend at least three hours in the front of the computer, according to a study ordered by Intel Romania and made by Hermes Advisors* in university centers from Bucharest, Timi oara and Cluj between 1 -15 October. A third of the students that take part in the study process spend daily up to six hours in front of the computer. Most of the time is dedicated to on-line communication and searching for information on the Internet.

The website of the Timsoft company is also a portal of eLearning si blogging: [eJournal](#), [Resources](#), [The Blog Collections / Romanian RSS](#), gathering around [eLearningBlog](#) a community of those interested in these areas.⁶ This is open to Web 2.0 technologies, integrating the blogs of the facilitators and participants, open educational resources, collections of resources built by the participants using systems of collaborative bookmark. The participants are encouraged to develop their own platform of learning using Web2.0, and utilize it for continuous learning, for creating a p ortfolio of their activity, for collaborating with professionals from the same field. Timsoft was included in Prizes TIC, within the category the Project with the best educational content with the project [Ceduconsult](#) about school and professional counseling, as well as the project [eLearning pentru Manageri](#).⁷

³Gramada Argentina Dragu - « **Mise en Oeuvre des Reformes de Bologne dans Les Établissements D'enseignement Supérieur : Facteurs de Succès et Défis pour Les Systèmes D'enseignement Supérieur** » -

⁴ [Ján Figel'](#) Commissioner for Education, Training, Culture and Multilingualism -“Key competences for lifelong learning in Europe ”
<http://europa.eu.int/rapid/pressReleasesAction.do?reference=MEMO/05/416&format=HTML&aged=0&language=EN&guiLanguage=en>

⁵ Mihaela Rentea-www.elearning.ro

⁶ www.timsoft.ro/weblog/index.php?blog=1&title=articol_despre_elearning_in_efinance&more=1&

⁷ www.timsoft.ro/phare/

Electronic learning or **eLearning** is a general term used to refer to computer-enhanced learning. It is used interchangeably in so many contexts that it is critical to be clear what one means when one speaks of 'eLearning'. In many respects, it is commonly associated with the field of [advanced learning technology](#) (ALT), which deals with both the technologies and associated methodologies in learning using networked and/or multimedia technologies.⁸ Many technologies can be, and are, used in eLearning, including [blogs](#). Teachers should strive to promote a new quality in information and knowledge which would allow students to master the scientific, social and cultural knowledge and thus serve the ideals of sustainable development and responsible citizenship. This is done with the purpose of stressing the public service role of higher education and its contribution to building a culture of peace.⁹ Creativity is a key competency skill sought after by many employers. And yet, one of the major criticisms of business schools relates to its lack of programs that promote creative and/or innovative thinking. This could be compounded by the fact that a large number of programs are currently offered online.

Consequently, the issue of whether online education stifles or enhances students' creativity is brought to the forefront. Using this question, the authors engaged in an inquiry process dealing with university students' perceptions of how online courses impact their creativity. Based on students' feedback, it appears that taking online courses generally enhances their creativity. They are not only more inclined to be creative thinkers, but also more likely to be organized and exercise critical thinking.

A student who is learning in a way that uses information and communication technologies (ICTs) is using e-learning. These interactive technologies support many different types of capability:

- internet access to digital versions of materials unavailable local;
- internet access to search, and transactional services;
- interactive diagnostic or adaptive tutorials;
- interactive educational games;
- remote control access to local physical devices;
- personalized information and guidance for learning support;
- simulations or models of scientific systems;
- communications tools for collaboration with other students and teachers;
- tools for creativity and design;
- virtual reality environments for development and manipulation;
- data analysis, modeling or organization tools and applications;
- electronic devices to assist disabled learners.

For each of these, there is a learning application that could be exploited within HE. Each one encompasses a wide range of different types of interaction – internet access to services, for example, includes news services, blogs, online auctions, self-testing sites. Learning technologies have been developing haphazardly, and a little too rapidly for those of us who wish to turn them to advantage in learning. This becomes apparent if we compare these technological developments with the historical development of other key technologies for education. Table 1 shows some of the main developments in information, communication, and delivery technologies over the last three decades, and against each one proposes a functional equivalent from the historic media and delivery technologies. The story begins with interactive computers because the move away from batch processing brought computing to non-programmers. The user had access to a new medium which responded immediately to the information they

⁸ http://en.wikipedia.org/wiki/Electronic_learning

⁹ UNESCO/NGO Collective Consultation on Higher Education UNESCO, 27-29 Nov 2000

put in. As a medium for information processing, it was radically different from the much more attenuated relationship between reading and writing, thus creating a new kind of medium for engaging with ideas.¹⁰

Date	New technology	Old technology equivalent	Learning support function
1970's	Interactive computers	Writing	New medium for articulating and engaging with ideas
	Local hard drives and floppy discs	Paper	Local storage with the user
1980's	WIMP interfaces	Contents, indexes, page numbers	Devices for ease of access to content
	Internet	Printing	Mass production and distribution of content
	Multimedia	Photography, sound, and film	Elaborated forms of content presentation
1990's	Worldwide Web	Libraries	Wide access to extensive content
	Laptops	Published books	Personal portable access to the medium
	Email	Postal services	Mass delivery of communications messages
	Search engines	Bibliographic services	Easier access to extensive content
	Broadband	Broadcasting, telephones	Choice of elaborated content and immediacy of communication
2000's	3G Mobiles	Paperbacks	Low-cost access to elaborate content
	Blogs	Pamphlets	Personal mass publishing

Table 1: New media and delivery technologies for information processing and communications compared with their functional equivalents for reading and writing¹¹

In the past five years, the number of online technologies has exploded, with many of them being well-suited for teaching and learning. Those applications defined as "Web 2.0" hold the most promise because they are strictly Web-based and typically free, support collaboration and interaction, and are responsive to the user.¹² „Learning and Technology: innovations in Web-Based Training“. This blog will allow us to share experiences with learning and the application of technology to the learning process - <http://leekraus.blogspot.com/>. The most commonly used (and discussed) tools interactive is E-Learning.

Using web logs in higher education Given the easy access to and increasing availability of these tools, it is no surprise that so many of them are being discussed in professional meetings and publications related to teaching and learning. A web log is an updated site with entries that are automatically indexed and dated.¹³ The difference between a web log and a personal webpage is that the web log contains entries with comments and links to other on-line resources,¹⁴ updates in reversed chronological order, the access is

¹⁰ Emil CRETU, Argentina GRAMADA –“The Impact of the New Teaching Tools in Higher Education”-

¹¹ Diana Laurillard “E-Learning in Higher Education” www3.griffith.edu.au/03/ltm/docs/E-Learning_in_Higher_Education.doc

¹² These applications have great potential to be used in a way that is learner-centered, affordable, and accessible for teaching and learning purposes.

¹³ Cretu Emil, Argentina Gramada, - “Blogs, weblogs in higher education”- The 4th International Scientific Conference eLSE "eLearning and Software for Education", BUCHAREST, April 17-18, 2008

¹⁴ The term Weblog-ul was created by Jorn Barger in 1997 – see Weblog History - www.rebeccablood.net/essays/weblog_history.html - and it represents one of the most popular applications of RSS. One estimates the existence of approximately 8 million weblogs – see PubSub, while thousand are being created on a daily basis.

public, the visitors being also provided with an internal browser that can be easily accessed even if they have disappeared from the first page due to the browser's dynamics. The web log can also be a working platform meant to support the teaching/learning process by modern IT means, to facilitate the learning process, to stimulate creativity and competition as well as teamwork, to complete the traditional didactic methods with new technologies, to employ simulation software as a substitute for the didactic materials and instruments that are expensive or hard to procure. In concrete terms a working platform of this kind for the subject The Management of Projects for the Faculties of IT and Economic Sciences from the Titu Maiorescu University offers materials in digital format, links and other useful information on www.proiecteu.ro .



Image 1 The eLearning platform for the Management of the European Projects

Information and the interactive work with the students is completed by another platform of information, created on the address <http://groups.google.com/group/infompe> where the students can access the information provided to the group, by introducing their personal data of the Gmail account.¹⁵ The advantage of this way of work is that one can add files that can be viewed by all the members of the group. Thus, it is no longer necessary to send e-mails to each student. Another advantage is that this group has an email address infompe@googlegroups.com that is known by all the members of this group.¹⁶ The groupware or the software group infrastructure is an ensemble of working tools that allow the students to work together via communication, cooperation and coordination at different times and in different places.

¹⁵ <http://groups.google.com/support/bin/topic.py?hl=en&topic=9245>

¹⁶ Thus email address can be utilized only if one sends a message from a Gmail account, by a user who is already a member of the group, otherwise the mail is not distributed (example: sending an email to infompe@googlegroups.com from a yahoo account will generate error).

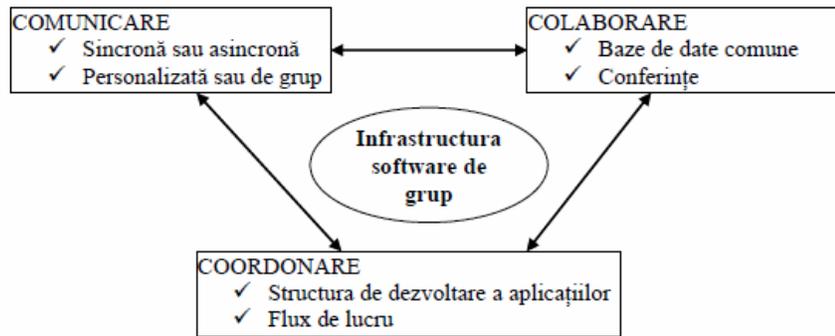


Image 2 The classic group infrastructure

A Google Group is a user-owned group created using the Google Groups service. Google Groups not only allows you to manage and archive your mailing list, but also provides a method for true communication and collaboration with group members. Unlike other free mailing list services, Google Groups offers generous storage limits, customizable pages, and unique management options. User groups are typically independently run, volunteer groups that meet on a regular basis to discuss and share information on a variety of technical topics. Participation in a user group is an excellent, inexpensive way to receive technical content, education and to meet with your peers to get more out of the Microsoft platforms, products, technologies, and resources which you are interested in.¹⁷

Conclusions

The access to new efficient training and improving methods was tested for two years through the web log and it will be completed during the school year through the group software infrastructure for the Management of the European Projects. This will be done through learning according to specific requirements to each individual („on demand learning”), learning through direct involvement („learning by doing”). Confucius stated: „Tell me and I will forget. Show me and I may remember. Get me involved and I will understand. Therefore “research - innovation –wealth from knowledge”¹⁸.

Bibliografie

1. Emil Cretu, Argentina Gramada-, „The impact in New Teaching Education in **Higher Education**”- **University Titu Maiorescu 2008**
2. Emil Cretu, Argentina Gramada, - “**Blogs, weblogs in higher education**”- The 4th International Scientific Conference eLSE “**eLearning and Software for Education**”, BUCHAREST, 2008
3. Argentina Gramada Dragu-«**Informatizarea managementului invatamantului preuniversitar**» - Ed Cartea Universitara-Bucuresti- 2004
4. Argentina Gramada Dragu- « **Mise en Oeuvre des Reformes de Bologna dans Les Établissements D’enseignement Supérieur : Facteurs de Succès et Défis pour Les Systèmes D’enseignement**

¹⁷ www.microsoft.com/communities/usergroups/default.aspx

¹⁸ **World Conference on HIGHER EDUCATION** -Paris - 2009-
<http://unesdoc.unesco.org/images/0018/001833/183368E.pdf>

Supérieur- «Sesiunea internationala–“STANDARDE EUROPENE IN EDUCATIE . PROCESUL BOLOGNA” - 19 - 20 martie 2008 dedicata Zilei Internationale a Francofoniei ”

5. [Ján Figel'](#) Commissioner for Education, Training, Culture and Multilingualism --“**Key competences for lifelong learning in Europe** ”

<http://europa.eu.int/rapid/pressReleasesAction.do?reference=MEMO/05/416&format=HTML&aged=0&language=EN&guiLanguage=en>

6. Kierkegaard ,Sylvia Mercado -- “**Blogs, lies and the doocing: The next hotbed of litigation?** “ - <http://connect.educause.edu/Library/EDUCAUSE+Review/WikisandPodcastsandBlogsO/44993>
7. Laurillard Diana-“**E-Learning in Higher Education**” -www3.griffith.edu.au/03/ltm/docs/E-Learning_in_Higher_Education.doc
8. Radu Jugureanu –Siveco-AEL, „**Learning and Content Management System**”
9. **World Conference on HIGHER EDUCATION** -Paris - 2009-
<http://unesdoc.unesco.org/images/0018/001833/183368E.pdf>
10. **Higher Education Consulting Blog** - <http://ihec-djc.blogspot.com/2009/01/unesco-laura-w-bush-traveling.html-International>
11. **UNESCO Forum on Higher Education, Research and Knowledge** -
http://portal.unesco.org/education/en/ev.php-URL_ID=26596&URL_DO=DO_TOPIC&URL_SECTION=201.html
12. **E-Learn 2009 -World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education-oct-2009-** www.aace.org/conf/elearn/
13. Dan Noveanu --“**Informatizarea sistemului de invatamant.Programul SEI**” -
www.elearning.ro/resurse/EvalSEL_raport_2008.pdf
14. Marin Vlada- **Virtual Learning - Virtual Reality: Models, Technologies and Software Solutions** -
<http://virtuallearning.ning.com/profiles/blog/list>
15. CNFPA- Instructions regarding the monitoring of the providers of professional training for adults by the authorization committees
www.cnfpa.ro/Files/Norme%20metodologice/Instr%20monitorizare%2019_12%20bis.pdf

Visited websites:

www.timeshighereducation.co.uk/WorldUniversityRankings2009.html

www.microsoft.com/data/oledb/default.htm

<http://connect.educause.edu/Library/Educause+Review/WikisandPodcastsandBlogsO/44993>

www.technologyreview.com/Blog

<http://groups.google.com/support/bin/topic.py?hl=en&topic=9245>

www.educause.edu/eli/

www.webblog.ca/design.html

www.academicblogs.org/wiki/index.php/World_History_Blog

www.webblog.ca/software.html

www.softwarepit.com/articles/2008/02/29/microsoft-dynamics-gp-ax-nav-sl-crm-merge-or-coexistence/

www.fiveplus.ro/ro/solutii-si-servicii/invatamant-la-distanta-elearning

www.knowledgepresenter.com/2006demos/kptour/launchfull.htm