E-LEARNING IN THE UNIVERSITY ENVIRONMENT

Monica CONDRUZ-BACESCU

Bucharest University of Economic Studies, Romania

Abstract: The paper focuses on the issue of e-learning in the university environment. Developments in IT have led to the emergence of new ways of working and training for students. Thus, in recent years, in order to increase the recruitment of students, the academic environment has implemented in educational offers online teaching and learning methodologies, less expensive. Distance learning has gained a special rise in the university environment, through the prism of new technologies, being approached the notions of e-learning, virtual library or virtual university. In recent years, an educational boom has been launched through Massive Online Open Courses (MOOCs), a concept that offers anyone the opportunity to study anywhere and anytime. MOOCs are essentially an online phenomenon, integrating the connectivity offered by social networking, with facilitating access to recognized experts in a field of study, as well as to collections of online resources with free access.

Keywords: E-learning; university; online platforms; massive online open courses; communication.

1. Introduction

In a society whose evolution, especially technological, is experiencing a strong acceleration, the use of the computer in the educational process is becoming more and more a necessity. We must not ignore the fact that we work with generations of students who have digital skills built implicitly, through daily, generalized practices, almost common. Digital literacy starts at an early age, even in the family, and is learned like walking or talking.

The use of IT tools and electronic media promoted by ICT can lead to a complex improvement of the learning process. A good use of these tools can streamline teacher-student communication, motivating the latter to study. Teachers have the opportunity to diversify their activity by achieving that differentiation much promoted by teachers. The construction and use of adequate educational platforms can only improve the learning process, through the characteristics of such methods:

- possibility to invite a trainer online from anywhere in the world,
- work sessions can be recorded and archived, so that the student can return whenever he deems it necessary,
- the student can organize his own learning mode; he is the one who chooses the conditions of space and time.

For an efficient use of educational platforms, it is necessary to take into account several aspects:

- correct appreciation of students' initial skills in connection with the use of IT tools and especially with working on such platforms,
- elaboration and transmission to students of a set of clear instructions for working with the platform,

- clearly establish the tasks of the students,
- ensuring the necessary resources for the normal development of the activity (elaboration of course materials and posting on the platform, appropriate hardware and software in the rooms for activities, verification of the existence at home of an internet connection).

The use of virtual learning environments places the student at the center of his training, always keeps him active and leads to: emphasizing individual study in students; developing students' analytical, structured and in-depth thinking; developing students' initiative; the location of the learner (receives knowledge) in controlling the learning process in order to improve the form of education; the successive formulation of questions by the student about the knowledge he possesses; building the process of assimilation and understanding of knowledge starting from the learner; developing the student's thinking and teamwork spirit.

«E-learning platforms are quickly gaining ground in the education system because they allow more efficient use of material and human resources» (Carey, 2015: 89) Nowadays, it is more and more difficult to have a well-defined time management. That is why when it comes to education and the large volume of information, a digital management system attracts us more and more.

The Web offer of open-source educational platforms has increased a lot, several prestigious universities and institutions offering such a solution for organizing online courses. Any university or vocational training institution can provide any subject with a Web space in which teachers can post or edit various teaching materials, homework for students, online tests, communicating with students including through a discussion forum.

For educational websites, the following technical features are provided:
- user interface to be flexible and easy to use,
- to ensure communication between students, teachers and technical-administrative staff,
- to ensure the assistance of students - online and offline, individually and / or in groups,
- online help facilities, the structure of the web page on which the course support or tutorial is initiated, the way of using the icons,
- facilities for online and / or offline assessment and self-assessment of the knowledge acquired by students,
- periodic verification of the feedback from students on the educational services offered to them.

"An e-learning platform provides support for organizing an education system exclusively through the Internet, with a very complex structure and functionality" (Francois, 2014: 74) It should include a public section, generally accessible, informative, but also sections promoted for students, teachers and administrative staff.

The section accessible to a student, after authentication, includes:
- access to information corresponding to the courses in which he is enrolled,
- facilities for viewing and performing homework and online support for them,
- the possibility to manage your own file folder, e-mail account, personal profile (photos, CV, etc.),
- facilities for searching for information of interest - based on keywords or natural language expressions - either within the site or on the Web.

The section corresponding to the development of a certain course must be accessible only to the enrolled students and the teaching staff involved in that course. Its content usually includes the following:

- information about the course and other teaching activities (theory lessons, laboratories, etc.),
- announcements for students or a group of students,
- possibilities to access the course information and the resources associated with the course (textbooks, software tools, websites and others),
- communication facilities between students and teachers,
- subsection for working groups corresponding to that discipline.

The private section of a teacher involved in the teaching activity must include facilities for:
• online editing of teaching materials (courses, tests, laboratory assignments, homework, etc.),

- adding / removing students from a taught course,
- establishing the course schedule,
- setting work topics,
- indicating the resources useful for the course, managing the evaluations.

2. Advantages and disadvantages of e-learning

The *advantages* of this type of learning are the following: accessibility, flexibility, comfort, the user being able to decide for himself, the date and time when he gets involved in the training activity. Compared to the traditional education system, e-learning has many advantages:

- geographical independence, mobility – "the possibility to access the content of the educational material from anywhere and anytime, with the help of the personal computer and the network" (Weller, 2012: 51),
- online accessibility - an important feature specific to this type of education, which means access to education via the Internet in real time, from anywhere and anytime, 24 hours a day, 7 days a week; there is no dependence on time,
- concise and selective presentation of the educational content,
- individualization of the learning process - each trainee has his own rhythm and style of assimilation and is based on a certain type of memory in the learning process (auditory or visual), the courses can be done gradually and repeatedly, quickly controlling their progress, benefiting from a fast and permanent feedback; some subjects perform better on weekends, others in the early hours of the morning,
- various pedagogical methods - e-learning programs must be based on various pedagogical methods, to guide subjects throughout the learning process: to complete teaching materials, to carry out projects, to evaluate online and to certify the program, if necessary; a series of experiments studying the effect of the use of various media in acquiring knowledge have led to the conclusion that, in general, a diversified educational material is retained in proportion of 80% by listening, watching and interactivity,

- online administration - the use of e-learning systems requires ensuring the security of users, their registration, monitoring students and services offered in the network,
- low distribution costs - educational software or e-learning solutions are not cheap. However, their costs are lower than those involved in a classical learning session, as travel expenses, rental of course space, accommodation and meals for the subjects are eliminated,
- reduced study time - in some cases, depending on the technical solution adopted, the time can also be transferred to the category of cost reduction: the subject will not interrupt the professional activity to follow a course, but will learn online or offline, on the computer,
- synchronous and asynchronous interactions - the two types of interactions between instructors and trainees can be completed,
- various dynamic technologies - they allow pronounced feedback, in real time, and formative and summative evaluations, qualitative and quantitative, made in an easy way by the most knowledgeable evaluators,
- if the traditional education is organized on age groups, the online one is organized on subjects; In a virtual classroom can be brought together subjects of all ages, with different backgrounds, neglecting spatial boundaries.

The *disadvantage*s of e-learning are:
- high dropout rate - this type of distance education requires consistent and sustained efforts from all participants in the instructional process. Students must be extremely motivated, otherwise the phenomenon of school dropout is installed, which is much more common in distance education than in traditional education.
- requires experience in the field of computer use - students are required to have some knowledge in the field of IT. In most cases, the installation of an elearning system involves the installation of additional applications or environments that require additional technical knowledge. To minimize this disadvantage, the client can use a web browser. There are cases where this approach is not possible. In this case it is necessary to modularize the application, make an installation kit and a user guide. If the system has a multitude of functions that are not modularized, the user is reluctant to use them and, consequently, the efficiency of the system itself is diminished.
- high costs for design and maintenance - these include technology costs, network information transmission, equipment maintenance, production of necessary materials. Compared, however, with all the costs involved in the classical educational process, they are much lower.

3. Promoting e-learning in the university environment

Developments in IT have led to the emergence of new ways of working and training for students. Thus, in recent years, in order to increase the recruitment of students, the academic environment has implemented in educational offers online teaching and learning methodologies, less expensive. Also, the corporate market approves the e-learning study system for young employees, because it is an advantageous training method for the effort-effect ratio compared to traditional classrooms. "Distance learning

has gained a special rise in the university environment, through the prism of new technologies, being approached the notions of e-learning, virtual library or virtual university" (Young, 2013: 96).

The European concept of e-learning is based on four priority axes: the promotion of digital knowledge, the establishment of virtual European campuses, the promotion of teacher training and actions to promote e-learning in Europe. Today, educational technology is migrating from traditional teaching methods and is in a continuous transformation: "PCs, laptops, tablets, or notebooks not only provide an Internet interface, but are also platforms and tools for digital learning, online assessment, and collaboration between students and tutors" (de Waard, 2014: 56). The e-learning system is an important branch of business education that aims to offer new possibilities to the teaching process aiming at learning, as an activity, to take place according to the needs and possibilities of those eager to know, without restrictions or impositions related to the date, time or attendance. On the Romanian market, still insufficiently developed for e-learning, this learning method can be a great asset for the area of business studies, which can train entrepreneurs or people with management positions in multinational companies. The Internet is a tool increasingly used for educational purposes, for learning and accumulating information.

In recent years, "an educational boom has been launched through Massive Online Open Courses (MOOCs), a concept that offers anyone the opportunity to study anywhere and anytime' (Rosenburg, 2010: 25) MOOCs are essentially an online phenomenon, integrating the connectivity offered by social networking, with facilitating access to recognized experts in a field of study, as well as to collections of online resources with free access. Perhaps the most important element is that it is based on the active involvement of several hundred to several thousand students, who self-organize their participation according to common learning objectives, knowledge, skills and interests. Although it may seem like a conventional online course, pursuing a MOOC does not include tuition fees, and the mandatory requirements are Internet access, interest in studying without high expectations for participants, or formal accreditation. Surprisingly, business schools, especially those in America, have introduced business administration for anyone with a computer and Internet access into the MOOC curriculum for the educational area, covering topics from operational management to the financial market. 'Thus began the educational revolution through MOOCs due to the evolution of the Internet and video streaming technologies that allow a sophisticated level of interactivity" (Selingo, 2014: 38). The first MOOC was launched on July 17, 2011, by the famous Stanford University, and is aimed at those who wanted to acquire basic knowledge in artificial intelligence.

MOOC is synonymous with sharing. That is how a community of receptors can come into contact with the complex information that someone wants to give away. Prestigious universities, institutions dedicated to education, companies that have transformed the industry, experts from various fields have decided to give others a part of what they know.

Here are some online initiatives that have the potential to transform life on Earth:

➤ OpenupEd *http://www.openuped.eu/*

OpenupEd is one of the largest MOOC providers for higher education designed for many participants, open to everyone without qualifications in the respective field that offer free courses. "OpenupEd is an open, non-profit partnership offering MOOCs that contribute to open up education – much to the benefit of individual learners and the wider

society. The vision is to reach out to all those learners who are interested to take part in online higher education in a way that meets their needs and accommodates their particular situation". (www.openuped.eu)

The most important features offered by these courses are learner-centered, openness to learners, digital openness, independent learning, media-supported interaction, recognition options, quality focus, spectrum of diversity. Some of the courses provided are: Teaching Linguistic, Intercultural and Entrepreneurial Competences in a cross-disciplinary ICT context; General Training (TeLIEC); Using ICT to Teach Entrepreneurial Competences in a cross-disciplinary context (ITECo); Learning to Learn Online; An introduction to music research; Economics and Business Management; Technology Enabled Learning etc.

> *Khan Academy: https://www.khanacademy.org/*

Khan Academy is a platform founded by Salman Khan, one of the pioneers of online education. Online academy offers more than 3000 educational videos on subjects ranging from mathematics and physics to history and medicine. Khan did not intend to change the world, but only to help a younger cousin to learn. Initially, he taught his cousin virtual tutoring in math through Yahoo Messenger, but after several relatives and a few friends requested to help them, he decided to record lessons in video format and upload them to Youtube. "A man can educate the world with a computer! I cannot imagine a more inspired use of time that I have available" (www.khanacademy.org), said Khan.

Khan's videos have had an unexpected success, therefore he resigned from the investment fund where he was working to devote to the project Khan Academy. Besides videos, the site also contains a software that allows teachers and parents to assess which parts of the material have been appropriated by students and which not, their evolution gradually being recorded on a "knowledge map". Clips advantage is that everyone can learn at his/her own pace, accumulating knowledge according to their needs and possibilities.

In the past two years, the organization received grants from Bill & Melinda Gates Foundation and the giant Google, and today is one of the most popular educational websites in the world, its lessons being watched over 125 million times by now. Today, over 3.7 million virtual students access the site each month, and Khan invests in translating courses in more languages to be closer to the proposed goal: providing quality education, free of charge, to everybody. People involved in the project Khan Academy have great plans for the future. Academy president said that the project is only one aspect of the major transformations that will take place in education. "Tablets will become cheap and ubiquitous and will allow us unlimited access to information, that will become a resource as easy to find as running water. Access to the highest quality education will be considered a basic human need" (www.khanacademy.org), he says.

> *Udacity: https://www.udacity.com/*

Udacity is the latest attempt to make quality education accessible to all. The project began when Sebastian Thrun, a professor at Stanford University, decided to teach not only to his students the course "Introduction to Artificial Intelligence", but to all those interested, free online. Online participants were to be part of the same education, the same tests and the same attention as those present in the classroom. The initiative has had much more success than expected: in the early hours, over 5000 people have registered on the site dedicated to the course. Finally, the artificial intelligence course

enrolled over 160.000 students from 190 countries. Thrun found that among the students there were people from Afghanistan, traveling long distances through dangerous areas to access the Internet. 23.000 students have graduated and 248 obtained perfect scores (performance that none of Stanford students succeeded). Thrun had established since 2011 that he did not want to extend his contract with Stanford University, which expired, as he would dedicate to another project in which he played an important role: Google Car, in which Google aims to create a machine able to drive itself. It was not, however, the only project that involved Thrun after leaving Stanford.

Impressed by the unexpected success of the online course, professor Thrun decided to spend $200.000 from personal savings to launch a new platform dedicated to online education: Udacity. Thrun aims Udacity to be an institution of quality higher education, to which everyone has access. Udacity launched two courses already available to the public: one in which students will learn along eight months to design a search engine and another who will teach them to program a self-driving car. Courses are open to all, with no need for prior knowledge to participate. Thrun desires Udacity to provide in the future numerous other informatics courses. Sergey Brin, cofounder of Google, encouraged the project, recommending everyone to attend because "informatics allows you to accomplish almost anything". (www.udacity.com)

Thrun has great plans revealed by the manifesto published on his personal website: "I am against education accessible only to the best 1% of students world. I am against higher education costing tens of thousands of dollars. I am against imbalance caused by the current system in the world. I would like to help the other 99% grow stronger. I want to democratize education. Education should be free, accessible to all, wherever and whenever" (www.udacity.com).

Sebastian Thrun estimates that in 50 years our planet will have only ten universities. Emphasizing the validity of this hypothesis, Western European universities seem to have taken things seriously and are beginning to develop various strategies to increase online institutional visibility. In the case of Romania, the specialized opinion tends to see the orientation towards MOOC as a complement of the classic business university education, through which the business administration disciplines can be easily standardized and accessed by a large number of students.

➤ *https://www.coursera.org*

Thrun's example was followed by other of his colleagues at Stanford, who offer several courses in computer science on a new platform, Coursera, on which courses from other fields are also available. Coursera mission resembles that of professor Thrun: "We want to make freely available the best education in the world to people who want to benefit from it. We believe that people around the world - both in the developed and in the developing countries- will use our platform to build an elite education, until recently accessible only to the privileged. In our view, all these people will use their education to improve their lives, their families and the communities in which they live" (www.coursera.org).

4. Conclusions

Nowadays, when time is more and more limited, and the volume of information is very large, e-learning platforms are quickly making their way into the education system because they allow the more efficient use of both material and human resources. Online learning platforms improve the quality of education content, leading to the improvement

of the instructional-educational process by acquiring active and autonomous learning processes, increasing students' interest in training, creating new formal or non-formal learning environments, individually and in groups. E-learning has become a viable alternative to traditional methods of education, so it has been adopted by many universities especially due to the advantages offered by the possibility of continuous training.

The e-learning area is slowly and surely taking on the role of reference leader of the education systems of this century. The MOOC trend will soon enter the sustainability stage. As new business models develop over time, providers of educational services in the MOOC system will make more and more offers available for education. As their attractiveness increases and the value of university degrees decreases, students will choose to focus on quality education. In this case, education systems will be tested, and universities will have to rethink their strategies. The effect will be the liberalization and opening of education to the educational revolution.

References

1. Carey, K. 2015. *Creating the Future of Learning and the University of Everywhere*. London: Riverhead Books.
2. Francois, N. 2014. *Elearning Now: How to Create Successful Elearning Courses and Teach Online Today*. London: Routledge.
3. de Waard, I.I. 2014. *MOOC Yourself – Set up Your Own MOOC for Business, Non-Profits and Informal Communities.* UK: Inge Ignatia de Waard.
4. Rosenburg, M. 2010. *Elearning: Strategies for Delivering Knowledge in the Digital Age*. London: McGraw Hill Education.
5. Selingo, J. J. 2014*. MOOC U: Who is Getting the Most out of Online Education and Why*. London: Simon & Schuster.
6. Weller, M. 2012. *Delivering learning on the Net, the why, what and how of online education*. London: Routledge Falmer.
7. Young, R.J. 2013. *Beyond the MOOC Hype: A Guide to Higher Education's High Tech Disruption.* UK: The Chronicle of Higher Education.

Webography

1. http://www.openuped.eu/ [accessed May 2021].
2. https://www.khanacademy.org/ [accessed May 2021].
3. https://www.udacity.com/ [accessed May 2021].
4. https://www.coursera.org/ [accessed May 2021].