

E-Learning in Adult Education

Georgios Besas Georgios Giannoukos
Adult Educators, Second Chance School, Greece

Abstract

E-learning is a special category in the computer use for learning process. In this paper we will try not only to present the meaning of e-learning, but also to analyze the required conditions in order for such a possibility of learning process to take place. The extensive use of the Internet has caused great changes in the traditional nature of distance learning, i.e. teaching by using the usual mail and telephone, books and written notes, educational audio and audiovisual means, television and teleconference. Nowadays, the Internet constitutes a widespread technological tool which develops radically and in which millions of users from everywhere around the world have access. This technological evolution has affected a number of modern social and economic activities, distance education included. While during the previous years the term “distance education” signified the geographical distinction between the academic foundation or the educational institution for the learners, nowadays this term is replaced by other terms, such as “e-learning”, “web-based learning”, “virtual learning”, “distributed learning” etc. These terms mean that there is no longer a distinction - neither geographic nor time distinction - in the education and learning process. The education takes place via the Internet and the World Wide Web and it can happen in completely virtual places, where learners can complete their studies without being transferred to a real educative place (i.e. a classroom), or it can include mixed learning forms both at real and at virtual places. The education via the Internet can be offered anywhere at anytime, it can be guided or facilitated by the teacher in a greater or lesser degree, or it can even be completely free and in accordance with the learner’s rhythm of learning.

Keywords: e-learning, distance learning, adult education

Introduction

In this stage of the research, it would be crucial to comprehend the meaning of e-learning and what it implies. In order to define the meaning of the e-learning more clearly, we have to analyze it in its three basic forms:

- Self-paced training involves a combination of educational material which is offered to the learners (books, reports on the Internet, video messages, notes, learning programs based on the computer etc.), usually divided into units (lessons), which they use independently at their own learning pace; that is to say that the learners are the ones who decide where and when they will use them. Most importantly, there is no communication with a teacher or other learners.
- Asynchronous e-learning is quite similar to the previous form of e-learning. In this case, participants have the chance to work with the teaching material whenever and wherever they want, having at the same time the possibility of an asynchronous communication. For example, communication via e-mail or chat, with the rest of participants – if they exist – and the teacher. The teaching material does not have to be fully given from the beginning of the lesson, but it can be offered to the students gradually in the same way, i.e. via e-mail. The rhythm of the lesson is defined by the teacher in collaboration with the learners.
- Synchronous e-learning is the third type of e-learning, in which the students and the teacher may be at different places and through the use of video conference technologies they can actually form a virtual teaching class, and thus eliminate distance limitations. The lesson is carried out in a way that it offers the same or even more possibilities than those offered in a real teaching class.

E-learning is being recognised as a dynamic tool for the reformation of adult education by an increasing number of institutions, which specialise in the field of education and professional training. With regard to a series of factors which used to prevent group participation in educational programs for adults - such as the high cost of the program organisation, the lack of free time for attendance and study by adults and the difficulty in their attendance at the educational centres because of big geographical distances -, the development of e-learning applications are a significant step towards their confrontation.

E-learning characteristics

The characteristics of e-learning constitute the biggest possible exploitation of the communication and information technology, and the Internet technologies as well, in order to provide the following benefits (Sampson, Karagiannidis & Kinshuk 2002):

- Individualized education, that is to say education which is not restricted by geographical and time boundaries, but which addresses every learner and which is adapted to his/her ever-changing needs and interests (these change constantly, because the users who are trained

through a distanced system change frequently).

- Interaction, that is to say procedures in which users operate actively within a series of situations and environments, and which have the possibility to develop genuine learning through the use of simulations of real situations, Internet corporations, collaborative environment etc.
- Content presentation via a variety of means, as there is the use of rich multimedia sources for the presentation of a knowledge body.
- Educational material and support delivery at the right moment and at the location the learner needs them to be in order to achieve a particular activity in a real work environment.
- User-central environments where the learners take over the responsibility of their own learning, and the teacher's role is to assist and facilitate them throughout the learning process.

Asynchronous e-learning

As was discussed above, asynchronous e-learning is mainly based on the asynchronous communication between the teacher and the learner, and most of the times special software needs to be used in order for something like this to be achieved (this software is called "Learning Management System/LMS"). Asynchronous e-learning is divided into three sub-categories:

- Self-teaching, in which the learners are being taught by themselves, using every means they consider to be the most appropriate (books, Internet etc.)
- Semi-autonomous learning, which has the same characteristics as self-teaching, with the difference that there is certain communication with the responsible teacher time schedule, either by appearance in the classroom, or via the Internet, e-mail etc, or via video conference.
- Collaborative learning, in which the teacher and learners communicate asynchronously, i.e. the learners study in their preferred location, they send the homework that has been assigned to them by the teacher within a particular time period.

Even a simple website could be considered as an asynchronous e-learning platform, in which the teacher uploads the lesson's material and then the students send their homework by e-mail. In order for a platform of asynchronous e-learning to work, it should at least satisfy the following prerequisites:

- Support the creation of a discussion forum for the communication between the learners and the teacher asynchronously.
- Support chat rooms for "synchronous" discussion and the exchange of views.
- Create and apply e-mail for better communication between the users.
- Provide the trainees with the possibility of local "save" of the lesson's material, for processing outside the network.

Despite the fact that the aforementioned are considered utterly necessary for an asynchronous e-learning platform, thanks to technological development and the more and more demanding users, more characteristics have started to be added on, such as:

- The existence of the lesson's material in an easy-to-print form for the users who prefer the printed versions.
- The environment's accessibility by a simple web browser, so that it will not be necessary for the users to install additional software and that it will be accessible from everywhere.
- The monitoring of the learner's progress.
- The support of the creation of online tests.
- The support of the presentation of other multimedia material such as video, audio, pictures etc.

3.1 An asynchronous e-learning platform "Moodle"

"Moodle" (Modular Object Oriented Developmental Learning Environment) is a free Course Management System. It is usually used for the needs of the asynchronous e-learning. Until now, it has had over 200.000 registered users and its translation is available in over 75 languages, the Greek language included. "Moodle" provides the teacher with the possibility to create e-lessons which, among other things, include:

- Websites able to be discovered.
- Conversations in real time with those who participate in the lesson.
- Asynchronous conversations between the participants.
- Publications which enable the teacher to evaluate the course's progress.
- Folders in which users can upload files and use them with other participants.

From the above one comprehends that it is a platform which is based on the interactive learning, providing four types of educational activities which enable the following operations:

- Chat

- Forums
- A dictionary regarding the terminology used during the lesson
- Wikis

Synchronous e-learning

In synchronous e-learning, the teacher and the students are not in the same place and they communicate each other in real time with the help of some video conference system. Synchronous e-learning systems provide conference possibilities of sound and audio (although they provide other possibilities as well, such as file exchange, the use of electronic display etc.) via Internet. In order for the lesson to be achievable via synchronous e-learning, it needs the virtual classroom to provide at least all the features offered by a simple classroom:

- Electronic whiteboard. The board is the most important tool used by the teacher for the lesson in the classroom. It is therefore necessary for the teacher to have this ability in a virtual classroom, as well.
- Interactive audiovisual communication between the participants. It is extremely necessary for the lesson's success that there is a high quality communication between participants in order to eliminate the distance and to create the impression that everybody is at the same place. Obviously, priority is given to audio input, but the necessity of video does not have to be underestimated, since it has been proved in practice that when video quality drops, so does participant interest.
- Possibility of application sharing. It is necessary for the teacher to be able to present digital material to his/her students (power point presentation, web browser, word document etc.). Just as in the typical classroom the teacher is able to show slides to his/her students, so it is necessary for the teacher to be able to present the lesson's material in the virtual classroom (power point presentation).

The aforementioned demands are the minimum that a virtual classroom needs to fulfill. However, given that advanced technological features are offered to the teacher's service, s/he can exploit them in order to enrich his/her lesson with other points, namely:

- Video showing
- Simultaneous browsing through websites
- Use of several Internet applications
- Use of simulation programs. This way, virtual labs are able to be created.

4.1 Participant's roles

In order to gain greater insight into e-learning, the participants' roles in the e-learning have to be analyzed, that is to say the learner's and the teacher's role respectively. With regard to the teacher, s/he has to know the student, schedule the learning process and organize the learning environment. In addition, s/he needs to organize the learner groups, survey the learning process, consult and guide the learners, resupply them with material, evaluate them, but also self-evaluate. On the other hand, the learners' role has a completely new dimension and totally differs from the one it used to have. The first crucial difference is found in the fact that the role of collaborative learning is getting stronger, as the learner becomes not only transmitter, but also recipient of this new learning approach. Moreover, the trainee learns to be activated and to look for new information through personal observation, which means that s/he is no longer a passive recipient of the knowledge offered to him/her by the books. At the same time, s/he becomes responsible for his/her actions; s/he is self-defined and s/he self-evaluates his/her effort. Therefore, the learner's role in the e-learning process is yet to be defined, with new perspectives emerging for the learners and the roles they are to assume.

Educational material of distance learning

An important factor for the quality of distance learning is the quality of the educational material which has to be designed in such a way, so as to cover the basic operations made by the teacher in the face-to-face teaching process as much as possible, and to allow the student to define the place, the time and the pace of study (Matralis 1998a, 1998b). According to Rowntree (1994), the teaching material of distance education programs can be categorized into:

- Texts: Books, manuals, notes, diagrams, annexes, summaries, diagnostic tests, activities, evaluation and self-evaluation tests.
- Audiovisual means: Audio and video cassettes, radio programs, TV shows, slides.
- Modern means of computing and telecommunication technology: Educational software, e-mails, the World Wide Web and educational video conference.

At the same time, the educational material has to be designed in such a way that it covers the distance education

students' needs. More specifically, it has to:

- Replace the teacher to a great extent.
- Be adapted to the educational needs of the learner.
- Guide the learners in their study.
- Interact with the learners through exercises and activities.
- Explain difficult points and meanings.
- Promote the energetic and, at the same time, interactive learning.
- Evaluate the learners and inform them on their progress.
- Encourage them to continue.
- Allow the trainees to choose the time, the place and the pace of their study, implementing the rules of distance education. (Matralis 1998a, 1999b, Keegan 1996)

Evaluation tools

Evaluation constitutes a fundamental aspect of every teaching-learning process. It is used by the teachers to know how their students learn and whether they've achieved their set goals. What is more, it has to be used by the students in order to know what they have learned and if they have improved. The evaluation itself has to be a learning point for the students. In the case of the adult evaluation, we consider the one which is made by the teacher to be of the same importance as the evaluation which is made by the students, considering that it helps them to control the learning process itself. There are various evaluation tools which can be used, such as RSS, diagrams/rubrics, self-evaluation, traditional evaluation (written test with multiple choice), oral examination and tests. On the other hand, there are evaluation tools on the Internet, as well. In the following part of the dissertation we are going to present the most important ones.

6.1 Rubistar

"Rubistar" is a tool which assists the teacher who wants to use rubrics but s/he does not have the time to develop them at all. "Rubistar" provides these general rubrics, which can simply be printed and used in many different designs and research tasks, and in such a form that they can be adjusted to each of the teacher's needs.

E-learning advantages

So far, the basic form of education has been "teacher-centred". That is to say that it has been focused on the teacher's needs and the students were obliged to adapt to them. Nowadays however, with the advancement of new technologies and their implementation in the teaching process, the education shifts into a student-centred model, in which the student is in the spotlight. Thanks to e-learning, the students have the possibility to watch the lesson at their leisure, from everywhere they want. At the same time, thanks to the Internet and its applications, the educational material is accessible at anytime from any place. Via the Internet, anybody can have access to great informative material, such as the World Wide Web, libraries, dictionaries etc, giving the learners the chance to participate actively in the acquisition of knowledge. One more significant characteristic of e-learning is that the students can adapt their courses and create a program which covers their needs. They will be able to choose by themselves where to focus on and which points they want to absorb. This way, lifelong learning becomes now possible, since the lesson can be formed in accordance with the students' preferences and free time, as well. With the assistance of modern e-learning, valuable time is saved and the cost from pointless travel from lesson to lesson is reduced. Lots of people are given the possibility to watch actual lessons easily and with no cost at all and to realise collaborations among universities. On the other hand, e-learning does not only benefit the learners, but also the teachers, since they have the possibility to enrich their educational material. The possibility that the students have to choose their own educational environment is another advantage. Unlike the traditional learning system, in which the educational environment is predetermined, in the distance education system the learning environment is chosen by the students themselves, and it may be the place where they live, work etc.

E-learning disadvantages

Since we referred to advantages, we have to analyze the e-learning disadvantages as well. More specifically, one of the crucial e-learning disadvantages is the fact that there is generally, a weakness of direct questioning to the teacher, questions which may occur during the study, since the communication takes place basically through asynchronous form. Moreover, trainees are not aware of their progress compared with the progress of their co-trainees, as it would happen in the traditional learning form of the cognitive subject, and the competitiveness which exists in a group does not show up. The communication with the teacher is faceless and the lack of the face to face communication with the trainees, a lot of times creates misunderstandings. Also, the non sufficient teachers and trainees education over technical knowledge can make the whole process tedious and difficult.

Either way, e-learning grows rapidly. The globalisation of the information and communication technologies has set e-learning integral part of the e-world, constantly creating new possibilities in the learning sector. This is happening by setting the new technologies as a valuable tool for the trainees and the teachers, with continuously increasing possibilities and an inexhaustible information data, accessible to everybody.

European lifelong Programmes

The objective of the lifelong learning programme 2007-13 is to develop and foster interchange, cooperation and mobility, so that education and training systems can become a world quality reference in accordance with the Lisbon strategy. This way the European Union can be developed as an advanced knowledge society, with sustainable economic growth with more and better jobs and greater social cohesion. In order to achieve this overall objective, the programme has set specific goals that concern lifelong learning in the European Union, some of which are indicated below:

- Contribute to increasing the participation of people of all ages, including those with special needs and those belonging to disadvantaged groups.
- Promotion of language learning and linguistic diversity.
- Support of the development of means that information and communication technologies (ICT) offer.

The lifelong learning programme 2007-13 includes all European programmes in the field of lifelong learning. It is based on the previous programmes in the period 2000-06: Socrates, Leonardo da Vinci, E-learning programme and Jean Monnet action. A single community support programme in the fields of education and training will be more consistent, more rational and efficient. A single programme will therefore contribute to a better cooperation among various sectors, to greater promotion in particular, it will improve the capacity to cope with developments in this field and offer better cooperation. The eLearning programme, together with the Socrates and Leonardo da Vinci programmes, joined the new lifelong learning programme 2007-13. Overall, the programme has had a significant impact on education and training, contributing to the creation of a European educational area. The impact has been both quantitative and qualitative, and is visible on an individual and institutional level, but also on the level of policy-making. More specifically, the eLearning programme provided has added value in dealing with socio-economic differences, and in the establishment of a cooperation spirit among the European institutions. Throughout its duration, the programme has financed the following activities:

- eTwinning projects involving 7 813 schools (23 812 schools indicated participation) ·
- 21 plans for virtual training rooms ·
- 25 projects for digital literacy ·
- 16 projects for lateral action.

References

- Keegan, D. (1996). *Foundations of Distance Education*, 3rd edition, London: Routledge
- Matralis H. (1998a). *Distance Learning*. In D. Vergidis, A. Lionarakis, A. Lykourgiotis, V. Makrakis & Ch. Matralis *Open and distance learning. Institutions and functions.*(Vol. A). (pp. 41-46). Patra: Greek Open University.
- Matralis H. (1998b). *Demands from the tutors*. In D. Vergidis, A. Lionarakis, A. Lykourgiotis, V. Makrakis & Ch. Matralis *Open and distance learning. Institutions and functions.*(Vol. A). (pp. 57-58). Patra: Hellenic Open University.
- Rowntree, D. (1994). *Preparing Materials for Open, Distance and Flexible Learning*. London: Kogan Page.
- Sampson D., Karagiannidis C. and Kinshuk (2002). *Personalized Learning: Educational, Technological and Standardization Perspectives*, *Interactive Educational Multimedia* (on-line journal ISSN 1576-4990), Special Issue on Adaptive Educational Multimedia, 4, April 2002.

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:

<http://www.iiste.org>

CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: <http://www.iiste.org/journals/> All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: <http://www.iiste.org/book/>

Academic conference: <http://www.iiste.org/conference/upcoming-conferences-call-for-paper/>

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library, NewJour, Google Scholar

