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E-Learning in the work-places in the Rural Sector of northeastern Greece

Hossein Jahankhani,[1]
University of East London, School of Computing and Technology, UK
H.Jahankhani@uel.ac.uk
Lazaros Iliadis,
Democritus University of Thrace, Greece
liliadis@fmenr.duth.gr
Elias Pimenidis,
University of East London, School of Computing and Technology, UK
e.pimenidis@uel.ac.uk

Abstract

Internet based applications and in particular e-learning ones have proved very successful when applied to training diverse groups in small and disparate communities. This paper discusses the potential of e-learning methods in training in the rural sector of northeastern Greece. A survey was carried out amongst Greek rural communities in the region of Eastern Macedonia and Thrace during the autumn of 2003. The results of the survey have been analyzed and discussed with two axes of focus in mind: Establishing which areas of learning would be the most immediately acceptable for use in an e-learning application of training within the farming industry and to ascertain the extent to which e-learning has already been adopted within the rural areas of northeastern Greece.

Keywords: E-learning, E-learning in the rural sector, Computer based education, Online-training.

Introduction

Web-based learning can be used in order to provide virtual lectures, virtual conferences, support collaborative work on projects which are shared among institutions, exchange of useful material, experiences among teachers, research results and conclusions as well as versatile and more attractive presentations of the subjects taught. E-learning Revolution with the aid of the World Wide Web is an international initiative by Governments and Heads of industry who have and are taking advantage of the Webs capabilities to give educational access to individuals or groups around the world.

The target of web-based learning is the development and promotion of special methods and techniques for the increase of quality, effectiveness and suppleness of learning in the work-places such as the Rural Sector of northeastern Greece. It covers two main areas:

i)   Educational, the improvement of the existing learning methods and the development of new learning methods special group of learners.

ii)   The technological, the provision with new distance learning methods with the use of information and communication technologies. (H.Jahankhani, 2002).

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[1] Corresponding author

E-Learning Overview and Strategies

Generally, Computer Based Training (CBT) can be identified as the beginning of e-learning. CBT was the first real inroad into the empowerment of the learner to study with the aid of a computer, at a time and place when convenient for them to do so. Rosenberg (2001) describes the difficulties encountered when early efforts to load training applications on mainframe computers in the 1970's gave marginal successful results.

It is the move to Server Networked computers with Local Area Networks (LAN) and Wide Area Networks (WAN) that has enabled the computer user to copy small parts of much larger information onto computer terminal to work on. This new technology has enabled users to access a much wider scope of information at any one time.

Server Networks have also enabled computer users to connect via a telecommunications link to a much wider area network the 'World Wide Web'. This total 'connectivity' has now prompted the need for sophisticated training programs that can engage the learner and enable them to move from one Internet link to one another, incorporating a wealth of detailed computer graphics, as well as video capture and audio instruction too. Elearnity, an e-learning consultancy based, published in white paper Executive Summary (eLearnity, 2000) list the following essentials for the e-learning mix as:

- Good quality of learning materials
- Greater access for the student
- A roadmap for developing an e-learning strategy
- A combination of appropriate supporting content
- A combination of learning services and technology to provide high value 'blended' learning 'anytime, anyplace'.

As e-Learning has defined an approach to teaching and learning that utilizes networked technologies to communicate in an educational context. This will includes technology that supplements traditional classroom training with web-based components and learning environments where the educational process is experienced online. Since last 5 years e - learning has grown in vast majority of topics. Up to now proposals and protocols are available for standardisation of information models such as learner profile, content package and assessments methods. Numbers of Online Course Development Software Products are available in the market. Examples are Blackboard, Convene, Embanet, ECollege, Saratoga Group, Symposium, TopClass, WebCT, Web Course in A Box, and WebMentor. Recent developments in on-line assessment provide flexibility in question types and ability to assess higher level learning.

Effective online courses provide students with learning activities that treat them as engaged, active participants, not disengaged, passive spectators. E-learning methodology will provide and promote quality interaction between lecturer, students and resources.

There are basically 4 key players in E-learning;

Students - Meeting the instructional needs of students is the cornerstone of every effective virtual education program, and the test by which all efforts in the field are judged. Regardless of the educational context, the primary role of the student is to learn.

Faculty - The success of any virtual education effort rests squarely on the shoulders of the faculty. In a traditional classroom setting, the instructor's responsibility includes assembling

course content and developing an understanding of student needs. Develop a working understanding of delivery technology, while remaining focused on their teaching role.

Support Staff - These individuals are the silent heroes of the virtual education enterprise and ensure that the myriad details required for program success are dealt with effectively. Most successful virtual education programs consolidate support service functions to include student registration, materials duplication and distribution, textbook ordering, securing of copyright clearances, facilities scheduling, processing grade reports, managing technical resources, etc..

Administrators - Although administrators are typically influential in planning an institution's virtual education program, they often lose contact or relinquish control to technical managers once the program is operational.

Undoubtedly the main advantage over traditional on site learning is the amount of time it saves. Students don't have to get up, take an hour getting ready and then an hour getting to school or college and another hour traveling home - essentially three hours a day of "wasted time". They can just stay at home and spend the time learning. This is especially important for people with full time jobs or children who can choose the most convenient time for them to study.

E-Learning is also especially useful for adults who want to do a degree or executives and highly skilled workers who need to update their knowledge and skills but don't have the time to go to college. Education through e-learning is more flexible, accessible and rewarding than the physical classroom environment. It gives the learner the opportunity to reflect creatively on his own writing. A student learns the ability to formulate the ideas and opinions in writing in such a way that their meaning is clear to other people who are not physically present essay (Bates, 1995).

In addition to that e-learning (distance) teaching universities such as the 'British Open University' are demonstrating significant cost advantages compared to the traditional universities because of the reduction in the need of campus based student facilities such as buildings or administrative and academic staff and because of the economies of scale. E-Learning via the Web is much cheaper, around 50% to 90%, than traditional courses as there are less teachers, buildings, materials and so on to be paid for. This can also save the Government money along with the economies of scale achieved by many individual institutions sharing their resources and knowledge to provide courses e.g. The UK government is currently seeking to establish an "e - university" whereby they will organize a collaboration of UK universities to provide their expertise for online courses.

Disadvantages:

A problem of e-learning (distance teaching) is that the learner doesn't get in touch with other students and lecturers compared to the traditional education with seminars and workshops on the campus. There is a lack of in developing his social skills such as working in a group and to interact with each other order to find a solution for a task, which is based on the consensus of the group.

Though it works well with things like business studies, history etc e-learning can't be used to take certain courses where hands on experience is needed such medicine, dentistry, some engineering courses.

There are individual preferences and differences particularly among adult learners.

Online teaching can't suit all students. The developers and planners often seem to forget the fact that people are different and that they differ just as much in their preferences for learning modes as they do in other areas in their life. Some of the learners will benefit greatly from this medium other will rather prefer traditional teaching.

Converting courses from a classroom to the Internet is hard work for lecturers & Professionals this needs a lot more commitment of time from them e.g. A barrage of e - mails back and forth between students around the clock and more time writing up lecture notes.

There is no physical peer contact/social interaction between students which may take some of the fun out of learning.

The commentator, also fears of the dangers of profit making companies entering the e-learning market that it is "commodifying" education and making courses competitive.

E-learning as a tool for community information dissemination

Research on learning is primarily focused within the educational environments and in particular those of higher education. Establishing such initiatives is relatively straightforward to establish since for e-Learning programmes that exist within an organisational context, such as universities or virtual learning institutes, it is clear that the organisation has the power to facilitate or to control development of e-Learning courses. By imposing corporate views on course philosophies, learning models and strategies, it can control feasible pedagogical models. (MPherson 2002, Ardus and Fabi 2003)

However, in recent years a number of individual efforts have been targeted at more diverse audiences such as mature students amongst members of e-learning communities and individual requiring regular and in-depth access to local or specialist information (Weissman 2002). 'E-Learning Communities' are community-based participative models for the creation, management and exchange of networked community information resources. According to Cook and Ravenscroft (2002), in an e-Learning context 'informal learners' can be used to describe a very diverse body of the population but could, for example, include the UK Online Centre at the High Trees Community Development Trust, South London, which was launched in February, 2002 .

Such requirements make the development more challenging but at the same time well focused. Furthermore, informal e-Learning in communities mediated by internet tools and can be very usefully in directing the scope of an investigation to understand the role of innovative empowering technologies in stimulating and facilitating informal learning processes.

Other approaches favour the integration of efforts from both educational and community bodies in providing shared e-learning environments. Such an example is that discussed by Cheung (2002) involving the SOUL, HKU SPACE launched in Hong-Kong. This can provide both large and small-sized organizations and institutes can the same services available to teachers and students of academic institutions. The bridging of the business and the academic world is expected to provide the community with quality e-learning, that is flexible, personalized and ensures Intellectual Property protection.

Carchiolo et al (2001) target possible variations in the level of knowledge amongst students. This is quite common and expect within the boundaries of communities where the mode of learning is rather informal. The system can adapt dynamically to student's needs, for instance suggesting if the student does not own an initially declared knowledge, the system could detect these missing information from exercises results and could suggest a new path to the student; or the system may change the path altogether if the student's available time varies.

The Greek Unions of Rural Cooperatives

The first Greek Rural Cooperative was established in 1780 in the area of Ambelaki of Thessaly. This is considered to be one of the first Rural Cooperatives in the world. The first act about the establishment, organization and function of the Rural cooperatives was introduced in 1915 (Act 602/1915). Since then, several acts have been introduced (Act 921/1979, Act 1541/1985, Act 1667/1986, Act 2169/1993 and Act 2810/2000). (Kamenidis, 2001).

Thrace is a major area of Greece that consists of three prefectures and it is located in the North-Eastern part of the country. Thrace together with Eastern Macedonia constitutes a Region. The economy of the Region of Eastern Macedonia and Thrace is mainly based on the activities of the rural sector. The Unions of Rural Cooperatives (U.R.C.) play a major role in the development process of the Region's economy.

The eight major secondary cooperative organizations (Unions of Rural Cooperatives) located in the Eastern Macedonia – Thrace region of Greece can be seen in the following table 1.

Name of U.R.C.	Name of U.R.C.
Kavala	Rodopi
Paggaio	Evros
Drama	Didimoticho
Xanthi	Orestiada

Table 1. The U.R.C., which were evaluated

The activities of the rural cooperatives are very important and they expand in many different fields. They supply rural accoutrements (fertilizers, pesticides, seeds, forages etc) and they produce and manufacture rural products (forest, agricultural, cattle, fishing). They make arrangements of the rural faith, by allowing various types of loans (cultivating) to the members. Finally they are activated in the field of trade of rural products in Greece and abroad. (Abdelidis 1984, Kamenidis 2001).

The structure of Greek rural cooperatives subtends the join of Physical Persons to primary cooperatives, and the join of the first-class, second-class and third-class cooperatives to the higher cooperative stage. The second-class cooperatives are known as Unions of Rural Cooperatives (U.R.C).

During the last years the associations in Greece affront many difficulties that threat the physiognomy and the identity of the cooperative movement. Those problems are related to the lack of good management, to the misty procedures and to the lack of a serious development policy.

Method

The main investigation was conducted during October 2003.
The primary research data consists of a questionnaire survey 'delivery and collection' by hand at the time of completion, this ensured the maximum response level. Respondents for the survey

came from various departments of the rural cooperatives of the region of Eastern Macedonia and Thrace, and all respondents are of varying grade, age, gender, length of service.

The purpose of the questionnaire was to establish the level of awareness regarding e-learning methods within the rural areas and in particular the region of Eastern Macedonia and Thrace, which is a very sensitive geopolitical area.

Members of staff from the rural cooperatives were specifically targeted as one of the main responsibilities of these cooperatives is the organisation of training for the staff and members of the cooperatives.

This is the first level of this research with a similar activity planned to take place in the rural areas of South Eastern England in spring 2004. The second phase of the research is expected to expand to other areas of Greece and the UK.

The results of the questionnaire survey are discussed below.

Analysis of results

The questionnaire comprised eight questions, with the first three targeting the level of knowledge or appreciation of e-learning within the respondents. The other five questions were focused on evaluating the experiences with other training methods, the expectations from e-learning programmes and the willingness to participate in such activities. A copy of the questionnaire is attached as an appendix to this paper.

Figure 1 below provides a graphical representation of the answers to the first three questions. The first two questions revealed a very low awareness of and participation in e-learning activities, while the third one identified an almost unanimous tendency for exploring the potential of such training methods.

Answers to the fourth question revealed that the respondents expected e-learning to contribute mostly in personal development and administrative skills training, with a relatively small preference shown on agricultural management or technical skills training. Finally the vote of non-confidence on e-learning methods was quite low.

Question five aimed at evaluating the respondents' experiences with various training approaches. The majority of answers appeared to favour supervised training (more than 52%), while those that have experienced computer based training have found it very effective (16.5%).

Difficulty in finding time to attend and lack of resources were identified as the key reasons for not attending training sessions at all with 82% of the respondents agreeing on this. Similarly the same level of response confirmed their belief that e-learning can help them overcome difficulties in attending training sessions, with only 18% having reservations as to the potential contribution of e-learning in that direction. Amongst those who have cast a vote of confidence on e-learning, the majority felt that lack of time and lack of resources would be the key hurdles that could be overcome. This last result is illustrated in figure 2 below.
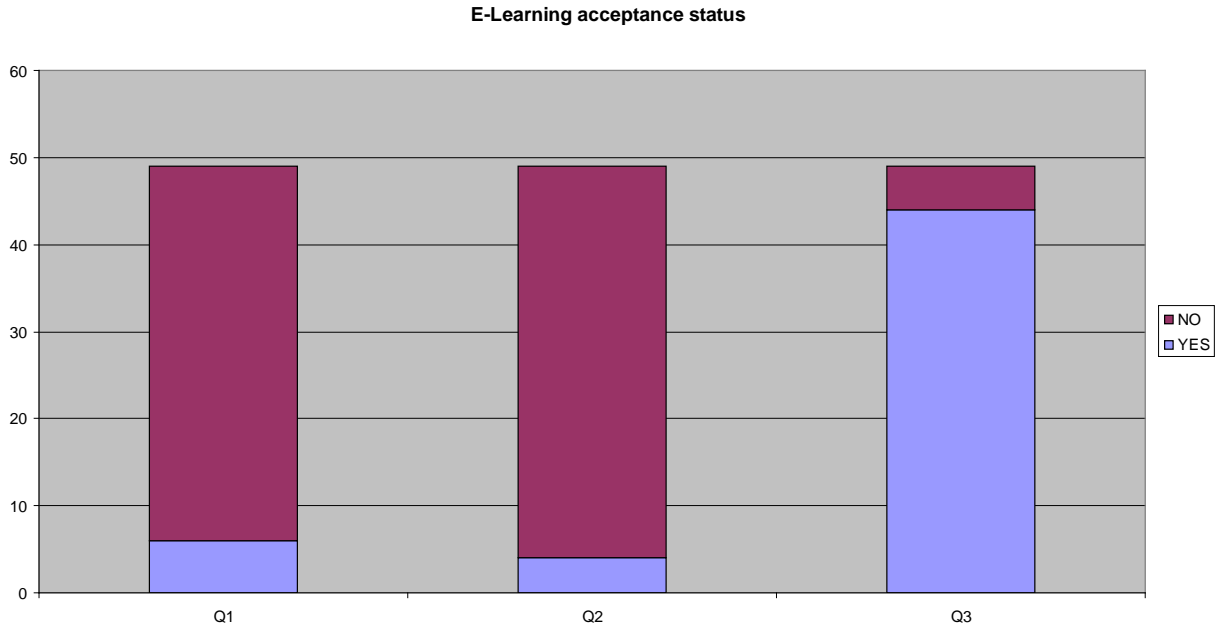
E-Learning acceptance status

Figure 1. Participation and acceptance of e-learning methods
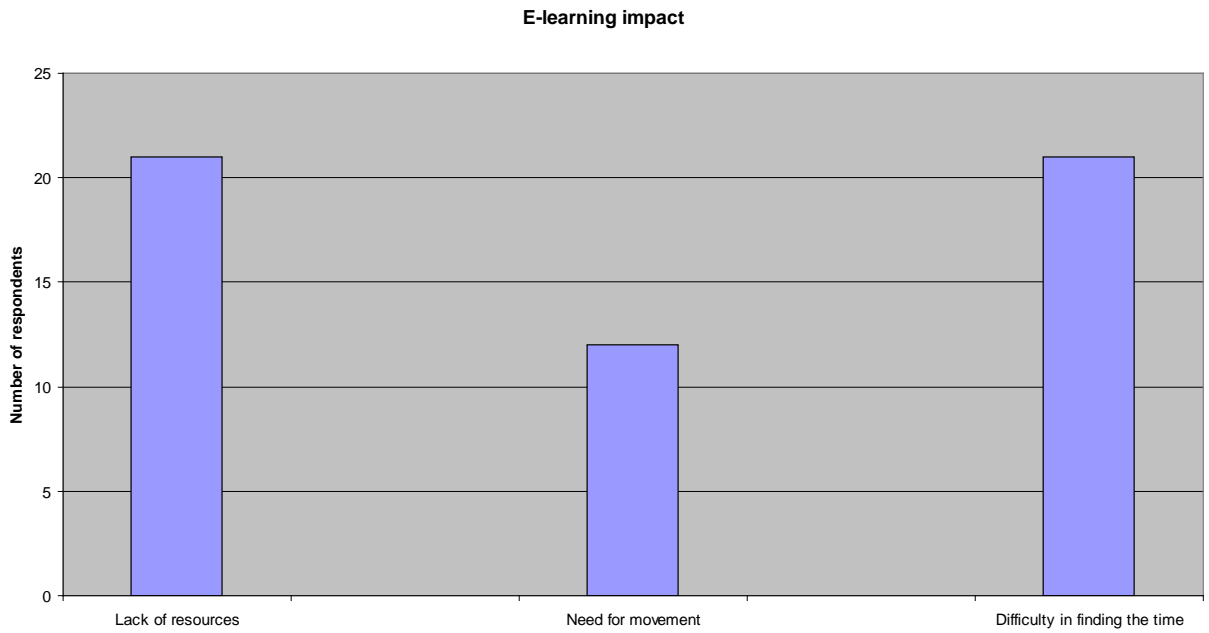
E-learning impact

Figure 2. Constraints to training that e-learning can help overcome

Conclusions

Despite the great potential of e-learning methods and the efforts for integrating e-learning within the framework of communities, rural areas appear to be unaffected by the impact of such

methods. The survey contacted in the region of Eastern Macedonia and Thrace in Greece, revealed very low levels of awareness of e-learning methods and little experience of computer based methods.

Respondents are facing obstacles in terms of participation in training sessions offered via traditional channels and expect that e-learning might offer a viable alternative that would assist in overcoming those problems.

The area of application of this research is limited, though the results appear to be encouraging and in line with similar experiences recorded in other countries. The research is currently extended in the UK and comparison of results is expected to provide useful guidance as to the future direction in this research topic.

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E-Learning in the Rural Areas - Questionnaire

1)   Have you heard about E-Learning?   Yes ☐   No ☐

2)   Have you ever used E-Learning facilities?   Yes ☐   No ☐

3)   Do you want to participate in E-Learning activities?   Yes ☐   No ☐

4)   Which of the following areas do you feel you want to do?

      Technical Skills   ☐

      Agricultural management skills   ☐

      Administrative activities   ☐

      Personal development   ☐

      None   ☐

5)   From the training methods used, which of these did you find effective or not as effective? Please select all that apply.

	Effective	Not effective
One-to-one	☐	☐
Class / face-to-face	☐	☐
Self managed	☐	☐
Distance learning	☐	☐
Computer Based	☐	☐

6)   What were the main reasons for not attending training sessions? Please select all that apply.

      Lack of resources   ☐

      Need for movement   ☐

      Difficulty in finding the time   ☐

7)   Would E-Learning help you overcome any of the above obstacles?

      Yes   ☐   No   ☐

8)   If Yes which ones? Please select all that apply.

      Lack of resources   ☐

      Need for movement   ☐

      Difficulty in finding the time   ☐