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Procedia Computer Science 3 (2011) 791–795

**Procedia
Computer
Science**

www.elsevier.com/locate/procedia

WCIT 2010

Barriers to e-teaching and e-learning

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Abstract

Considering rapid growth of Technology and Population seems inevitable that e-education is going to be main agent for education. There has been much research into method of enhancing the quality of learning outcomes of e-education and it has been considered from different perspectives, With a comprehensive literature review of research and survey data provided by concerning e-learning Institutes. This paper is trying to outline a classification of barriers to e-learning and suggesting appropriate solution. In general there are four kinds of barriers 1. The Learners ; which has subdivision like financial problem, motivation , assessment of their progress, isolation from peers , inadequate skills and experience in distance learning , affection and social domain 2. Teacher; which has subdivision barriers like lack of adequate knowledge about e-teaching environment, difficulty for assessment of different domain progress 3. Curriculum; ambiguity, quality, resource, teaching process, evaluation 4. The school; organizational and structural factors. Overcoming these groups of barriers needs more cooperation of related factors like curriculum developers, teachers, parent's students, social authorities, technological specialist, and also preparing virtual and actual interaction among children and teachers and society.

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Selection and/or peer-review under responsibility of the Guest Editor.

Keywords: education; elearning; barriers of education; eteaching; elearning

1. Introduction

Meeting the needs of today's learners requires instructors and administrators to rethink delivery strategies and instructional methods. Many organizations are turning to distance education, because of its effectiveness, to help learners develop and improve their knowledge, skills, and abilities. E-learning and E-teaching continue to grow at the tremendous rate. E-learning companies are springing up everywhere. The field is growing at an amazing rate and its standards have yet to be developed or even agreed upon. As It is clear by its name, e-learning can be understood as any type of learning delivered electronically. Defined broadly, this can encompass learning products delivered by computer, intranet, internet, satellite, or other remote technologies. Brandon Hall, a noted e-learning researcher, defines e-learning as "instruction delivered electronically wholly by a web browser, through the Internet or an intranet, or through CD-ROM or DVD multimedia platforms." Increasingly, the common understanding of e-learning relates exclusively to web-based training -- or learning products delivered via a web browser over a network. Morgan Keegan's investment analysis team deems e-learning as a technology that fully leverages the distributive power of the Internet and encourages investors to consider the "e" in e-learning to represent "effective".[1]

E-learning is sometimes classified as synchronous or asynchronous. Both terms refer to "the extent to which a course is bound by place and/or time. Synchronous simply means that two or more events occur at the same time, while Asynchronous means that two or more events occur "not at the same time."For example, when you attend live training – like a class or workshop--then the event is synchronous, because the event and the learning occur

simultaneously, or at the same time. Asynchronous learning occurs when you take an online course in which you complete events at different times, and when communication occurs via time-delayed email or in discussion list postings. Both kind of this classification, have special kinds of difficulties and barriers which should be determined before implementation a course of study.[2]

2. Designing & Developing E-Learning

The process of designing and developing e-learning products, which can include courses, Seminars, workshops, Online learning portals, Chat sessions/Discussion groups, and more, involves a careful mixture of personnel resources, hardware and software specifications and applications, standards for interactivity and media, and design parameters based on user capabilities. Developers that produce e-learning products usually have well-defined resources dedicated to design and production, along with standard production schedules and timelines. Organizations considering building their own products should consider these resources as essential to the production and deployment of e-learning as well. Developer should be aware of process of curriculum development, technical pedagogical knowledge, (TPCK), content knowledge, the place for designing and delivering the course, the learners . They should know the characteristics of their learners, their developmental tasks and age. Learners is one of the most important factors in education that should be known clearly and totally. [3]

3. Learners

One of the main important factors in education is learner. In fact in education we teach learners to learn. In e-learning student are far from their instructors so beside their usual difficulties like mental and physical readiness, they have different kind of difficulties and barriers that may extinguish their enthusiasm for learning. Research which was carried out in Shahid Rajaei University showed some of these barriers and difficulties like:

3.1. Learner confidence and expertise in using computers

Learner's confidence and expertise in using computers is related to their age and their educational background. In a research for adult learners, findings were as follow:

The survey found the majority of E learners felt confident about using computers. Around a third (36%) said they were very confident in using computers for a wide range of tasks, whilst four in ten (39%) described themselves as quite confident. Overall, men were more likely than women to describe themselves as very confident about using computers (44% compared with 29% of women). There were also differences between ages, with older learners less confident than younger learners. Only a fifth of learners in the 45+ age category (19%) and a quarter of 35-44 year olds (28%) felt very confident about using computers compared with nearly half of 16-18 year olds. [3] But in every curriculum development for e-learning we have to consider learners confidence in using computers and maybe they need pre-education before starting the course, although it depend on the location of the learners .Some countries are more familiar with using computers.[4]

3.2. Access to computing facilities at home

Before starting the course we have to check the learner's facilities at their home. It is one of the most important factors for learners to help them in their communication. in a research on adult learners in Iran the findings showed that, over eight in ten learners (83%) had access to a computer at home and they had used it for their college course. This was particularly high amongst those aged fewer than 24 and those with no disability or learning difficulties. The vast majority of learners with a computer at home said that they had access to the internet (84%) and broadband was the most widespread mode of accessing the internet.

Particularly, learners with a computer at home were much more computer confident and likely to be using ICT more extensively at college as well as at home. Those who did not have a computer at home were not necessarily using college computers to compensate for a lack of computer at home, as a third of these learners (36%) said they never made use of computers at college. [3] So one of the other important factors for learning is access to intrnet and computer which should be checked before starting the course.[5]

3.3. Computer provision at college

Beside, preparing equipments at home, we need computer provision for school or college before starting the course. Preparing services for maintaining the equipment is another important factor that can facilitate the learners learning process. In a research in Iran the findings show that, Just over three-quarters of learners (78%) were using computers at college while around a quarter of learners (24%) said they had never used the college computers. Most learners using the computers felt that access to computers at college was good: three in ten said it was always possible to get onto a computer whilst two in ten said it was usually possible to do so. Three quarters of users of college computer equipment considered their quality good enough for them to be used for all their college coursework.

3.4. Attitudes towards computer and ICT usage

In the same research on adult learners, they were asked about their attitudes towards computer usage as part of their course and more traditional methods of learning. Overall, learners were positive about using computers and recognized the benefits. Almost three quarters of learners (75%) agreed or agreed strongly that they preferred to learn through a variety of media than just reading books or listening to the tutor and around two-thirds of learners felt they did better in assessments as a result of using computers (66%). A similar proportion (68%) said because of the way computers were used on their course, they have more choices about place and time of their study. In addition, almost seven out of ten (69%) were in agreement that they understood their lessons better because computers were used on their course and only 27% felt they learnt less well when computers were used.

Therefore, although computers were not necessarily seen as a replacement for face-to-face contact and traditional classes, there was widespread acknowledgment that they provided more choices, a better understanding of the topic and helped improve the quality of assignments. Most learners valued the benefits of learning through a range of media rather than just books and listening to the instructor. However, there is still some way to go before computer technology is used by all learners for studying and communication purposes which should be considered. [5]

4. Instruction team

As was cleared, E-learning is learning which takes place as a result of experiences and interaction in an Internet environment. It is not restricted to a regular school day and can take place in a variety of locations including home, school and community locations e.g. libraries, cafes etc. So E-education involves e-teaching and e-learning along with the various administrative and strategic measures needed to support teaching and learning in an Internet environment. It will incorporate a local, regional, national and international view of education So What type of team is necessary to build and implement E-education? Typically, personnel involved include instructional designers, graphic artists, programming or authoring specialists, project managers, subject matter experts, quality assurance personnel, and a webmaster or database specialist capable of administering and managing the courseware via a learning management system or a simple web learning portal .All of them should be aware of educational issues and have enough information about their students and their develop stages and know about their developmental tasks. In this team we need a curriculum planner to help the team exactly to consider the process of curriculum development like need assessment, determining goals, development of content and finally evaluation system. Beside defining our exact criteria for our students and teachers according to our goals we have to consider the situation that do not restrict innovation and divergent thinking. We have to consider offering problems and challenging situation in which student can have innovation and being entrepreneurial in the process of learning. [6]

This competency framework concerns those instruction team, as well as those Responsible for their training and development, and policy makers, who are directly involved in the management and delivery of curriculum. It will also be pertinent to the other people who are involved in supporting learners, such as coaches, mentors, Librarians etc, who constitute an important team of instruction. The knowledge, skills and attitudes required should be presented under the heading of eLearning competencies. The use of these technologies is becoming increasingly widespread for learning purposes, as their potential is recognized and as new demands are made on those who support learners and on the learners themselves. So, Instructors competencies and the new competencies required in a knowledge society, and the curriculum planning should reflect this.

Activities, assessment of learners and evaluation of programs, will be recognizable to all those involved in education and training. What is new is not only the need to acquire technical competencies but also to have been ready for a transformation of 'traditional competencies' and for the acquisition and development of those competencies that result from radical changes in roles and practice. These changes are being simultaneously driven by the evolution of society and by the previously unimagined opportunities offered by technology. Societal demands for improved accessibility, inclusion and learner-centred pedagogy are being facilitated by innovative techniques and tools for teachers and trainers.[7]

5. Curriculum

The Curriculum of E-Learning Branch should be developed collaboratively and appropriate with technical pedagogical content knowledge (PCK) and pedagogical content knowledge (PCK) and to provide supports to the Learning Sector by:

- Refining and implementing a provincial vision for strengthening the learning program and the use of technology in education;
- Providing a range of consultative and advisory supports;
- Co-ordination systems of people, processes, and infrastructure to provide access, deliver programs, manage projects, and ensure accountability;
- Developing and implementing policy, effective practices, and supports for the Learning Sector;
- Managing provincial networks on behalf of the Learning Sector;
- Promoting an innovative learning environment in the province through strategic professional development using a variety of methods and technologies;
- Developing and implementing exemplary curricula/courses for the guidance of teachers and learners; and,
- Identifying, evaluating, developing, recommending, and distributing resources to support teaching and the achievement of learning outcomes.

Curriculum development for classroom based learning primarily involves the content expert/teacher in tasks that require them to act variously as instructor, author, project manager, designer, desktop publisher, editor and instructional designer. The process is often heavily depend upon the past experience of the participants and is iterated over a number of delivery cycles to an optimum process. The significantly higher resource commitment required by eLearning demands an expanded and in depth curriculum development phase, which is much more a team effort. Needs analysis must take into account the requirements and aspirations of a more diverse learner group and their employers/parents. The curriculum must be planned and documented in sufficient detail for the content to be developed out of sequence and by different members of the team applying their own specialist skills. The project management task is more critical and complex. A typical team will consist of a project manager, the curriculum expert who preferably should have IT skills, web designer with complementary educational skills, IT services representative, administrative support and access to an outside reviewer.[8]

The proposed curriculum outline must meet certain criteria to be suitable for on-line delivery; it must be based on knowledge transfer and the development of cognitive and social skills. Although e-content is not so appropriate for societal development, but we have to consider necessary interaction among learners and instructors. Content can be complex and require time to assimilate and rely heavily on project work to engage and interact with the learner. On-line learning is less suited to skills practice except in the special case where intelligence in the software can be exploited such as basic language learning or keyboard skills, where group work is necessary specialist resources in the Learning Management System, LMS, are required. Similarly special features are needed for learner testing and assessment, and if progress tracking is important again an LMS must be used[9]

6. School or place of delivering E-course

Designing, developing, and delivering e-learning products requires a mixture of hardware. Components and software applications, along with an strong infrastructure capable of sustaining multiple users and networked applications. For users, though, the required resources are much more minimal. We have to exact c what is typically

required to create e-learning .The personnel listed above must have hardware resources and software applications to utilize in the design and development effort. These needs typically include development workstations along with a networked server to support collaborative development. Additionally, if hosting services are offered, then a hosting infrastructure must exist, containing primary and backup servers and the requisite connections to host both online courses and the management applications used to manage and track usage. Software resources include authoring applications; web editing tools, graphic production tools, multiple browsers, scripting applications, and learning management systems.[10]

7. Conclusion

Distance education is not a new attempt; this kind of education like traditional systems of education has its own barriers and necessities which should be considered for achieving our learning outcomes. In this Global village that we live, education is not restricted in special place like school, all learners should be life-long learners and it should not be restricted to time and place. New education should help students to learn how to learn and what to learn. It should encourage them to think critically and innovatively. Beside all of these necessities E-education like any other kind of education has special kind of barriers which should be known and considered. Like other curriculum development we should know the effective factors like our learners and their characteristic, their developmental age and tasks, their needs, their goals and motivation. We should know our instructors and their necessities, their abilities, their talents and needs. We should be aware of characteristics and process of curriculum development, PCK and TPCK, and different system of evaluation and assessment meanings. We have to know about the place and the equipment which is needed for designing and delivering the course. Beside all of this preparation, we should remember the lack of enough interaction among learners and teachers should not lead to isolation of students and feel of anxiety for not learning the curriculum.

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