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The future of e-learning and tools in higher education

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ABSTRACT

The article examines the latest trends in e-learning. In particular, the author comes to the unpleasant observation that the situation of the distribution of e-learning in the Republic of Yemen is not at the highest level. In this context, the article is useful for developers of e-learning systems in this country and in other regions with a similar problem.

Key words: ICT, E-learning, Blending Method, Educational Approach, Blackboard Systems, Learning in Yemen

1. INTRODUCTION

The developments in information and communication technology (ICT) have brought psychological, sociological as well as technological changes in the field of education [14]. The present boon of ICT has its own very special impact on education. This impact of ICT is noticeable in formal and informal education, traditional and professional education as well as at all levels of education. The most recent influence of the ICT in the field of education is recognized as e-learning. E-learning has many other nomenclatures such as computer assisted instruction, computer-based training, online education, web-based training, etc. E-learning is there for quite some time now [5].

E-learning is an inclusive term that describes educational technology that electronically or technologically supports learning and teaching. Bernard Luskin, a pioneer of e-learning, advocates that the "e" should be interpreted to mean "exciting, energetic, enthusiastic, emotional, extended, excellent, and educational" in addition to "electronic." This broad interpretation focuses on new applications and developments, and also brings learning and media psychology into consideration.[16], [17] Parks suggested that the "e" should refer to "everything, everyone, engaging, easy".[13] Depending on whether a particular aspect, component or delivery method is given emphasis, a wide array of similar or overlapping terms has been used. As such, e-learning encompasses multimedia learning, technology-enhanced learning (TEL), computer-based training (CBT), computer-assisted instruction (CAI), internet-based training (IBT), web-based training (WBT), online education, virtual education, virtual learning environments (VLE) which are also called learning platforms, m-learning, digital educational collaboration, distributed learning, computer-mediated communication, cyber-learning, and multi-modal instruction. Every one of these numerous terms has had its advocates, who point up particular potential distinctions. In practice, as technology has advanced, the particular "narrowly defined" aspect that was initially emphasized has blended into "e-learning." As an example, "virtual learning" in a narrowly defined semantic sense implies entering the environmental simulation within a virtual world [17], [18].

2. E-LEARNING

E-learning is the use of electronic media, educational technology and information and communication technologies (ICT) in education. E-learning includes numerous types of media that deliver text, audio, images, animation, and streaming video, and includes technology applications and processes such as audio or video tape, satellite TV, CD-ROM, and computer-based learning, as well as local intranet/extranet and web-based learning. Information and communication systems, whether free-standing or based on either local networks or the Internet in networked learning, underlie many e-learning processes [15].

E-learning can occur in or out of the classroom. It can be self-paced, asynchronous learning or may be instructor-led, synchronous learning. E-learning is suited to distance learning and flexible learning, but it can also be used in conjunction with face-to-face teaching, in which case the term blended learning is commonly used.

E-learning includes, and is broadly synonymous with multimedia learning, technology-enhanced learning (TEL), computer-based instruction (CBI), computer managed instruction, either SI (MKS) or CGS as primary units. (SI units are strongly encouraged.) English units may be used as secondary

3. WHAT IS E-LEARNING?

E-learning is learning enabled by the electronic media. It is a learning facilitated by the application of ICT. E-learning is a process of education using computer, telecommunication, networks, and storage technology. According to CISCO's definition quoted by Jeevan [9].

- Remote Learner-Teacher:

In the e-learning environment, the learner and the teacher need not to travel to a common physical location for the purpose of education. They can be away from each other, yet achieving the goal of education through technological means.

- Learner Centered:

E-learning can be personalized to the learner, or as it is called customized to the needs of the learner. Unlike the classroom-based learning the e-learner can choose his/her learning module.

4. E-LEARNING TOOLS

Apart from the Internet, Intranet and other network tools and techniques, the e-learning community extensively uses the following tools:

- Course Management Systems (CMS):

CMS tools are also known as virtual learning systems, content management systems, learning management systems ,learning content management systems, etc. CMS tools help in the creation, and management of course material such as lessons/courseware, assignments, glossaries, citations to other resources, etc. In other words these tools help in total e-learning.

- Blogs:

A blog enables to disseminate and access specific information. Apart from blogs devoted to LIS, the websites of departments of library and information science have blog facility. Blogs can be used by students as well as by instructors to provide updated information. They are useful to initiate discussions.

- Wikis:

Wikis is a piece of software where individuals under the control of an editorial board, can upload contents or modify existing contents. Wikis is a use ful source for getting information and extensive links to information. For example, LITA (Library and Information Technology Association) offers blogs and wikis for the LIS e-learners. Wikipedia and Knol are other examples of wikis.

- E-mails:

E-mails as well as e-mail-based discussion forums such as LIS-forum are use ful in delivering contents as well as communications about e-learning.

- Messenger:

Messenger such as Yahoo Messenger, MSN Messenger can be used for synchronous interaction. Facilities like eZ meeting can also be used for real-time conferencing. The ACRL, for example, has live chat series called On Point. Using this tool the ACRL organises e-learning events for various occasions.

- E-learning 2.0:

It refers to new ways of thinking about e-learning. It is inspired by the emergence of Web 2.0. It emphases on use of social learning, and tools such as blogs, wikis, podcasts, and virtual world such as second life. According to Craig [4], new generation learners are influenced by social networking. Experienced and empowered to create, publish, and redistribute contents, they find the structure of LCMS traditional and inflexible in contrast with the user-centered approach of web 2.0 services.

5. THE BLENDING METHOD

In fact, the blending of the traditional teaching methods and e-learning for imparting LIS education will be the best strategy to optimize the efficiency of the LIS professionals. The traditional teaching methods should be adopted to provide the basic knowledge, and to develop skills in carrying out library housekeeping operations, and the e-learning should be adopted for the continuing education in LIS. According to Krishan Kumar and Jaideep Sharma, the use of blending method in LIS education will help to retain students in the LIS courses [11]. Thus, the use of e-learning in LIS education need not be thought as a competitor to traditional LIS education. On the contrary e-learning complements the traditional LIS education. LIS e-learner learns by using the electronic information sources and various ICTs. As are sult they will be in a better position to manage electronic information sources effectively in hybrid and electronic library, and therefore more capable to provide effective services to his e-learning users.

6. EDUCATIONAL APPROACH

The extent to which e-learning assists or replaces other learning and teaching approaches is variable, ranging on a continuum from none to fully online distance learning. A variety of descriptive terms have been employed (somewhat inconsistently) to categorize the extent to which technology is used. For example, 'hybrid learning' or 'blended learning' may refer to classroom aids and laptops, or may refer to approaches in which traditional classroom time is reduced but not eliminated, and is replaced with some online learning.

7. SYNCHRONOUS AND ASYNCHRONOUS

E-learning may either be synchronous or asynchronous. Synchronous learning occurs in real-time, with all participants interacting at the same time, while asynchronous

learning is self-paced and allows participants to engage in the exchange of ideas or information without the dependency of other participants′ involvement at the same time.

Synchronous learning refers to the exchange of ideas and information with one or more participants during the same period of time. Examples are face-to-face discussion, online real-time live teacher instruction and feedback, Skype conversations, and chat rooms or virtual classrooms where everyone is online and working collaboratively at the same time.

Asynchronous learning may use technologies such as email, blogs, wikis, and discussion boards, as well as web-supported textbooks, hypertext documents, audio video courses, and social networking using web 2.0 [1], [8], [12]. At the professional educational level, training may include virtual operating rooms. Asynchronous learning is particularly beneficial for students who have health problems or have child care responsibilities and regularly leaving the home to attend lectures is difficult. They have the opportunity to complete their work in a low stress environment and within a more flexible timeframe [10]. In asynchronous online courses, students proceed at their own pace. If they need to listen to a lecture a second time, or think about a question for a while, they may do so without fearing that they will hold back the rest of the class. Through online courses, students can earn their diplomas more quickly, or repeat failed courses without the embarrassment of being in a class with younger students. Students also have access to an incredible variety of enrichment courses in online learning, and can participate in college courses, internships, sports, or work and still graduate with their class. Both the asynchronous and synchronous methods rely heavily on self-motivation, self-discipline, and the ability to communicate in writing effectively.

8. BLACKBOARD SYSTEMS

Does The System Meet the Seven Principles of Good Practice in Education? Recently university EFL programs have been using blended learning to enhance the language learning experience. The majority of the university programs use course management systems. The most widely used of which is Blackboard (based on market share). Many have criticized these types of systems as being too mechanistic in their approaches to learning. Chickering, and Gamson [4] created an excellent list of principles with which to guide educators. In designing or revising a course, faculties are faced with at least three crucial decisions: what to teach, how to teach it, and how to ensure that students are learning what is being taught.

Rather, this paper will critique how the Blackboard management system can be used when applying the seven principles for the EFL University setting. First, a quick evaluation of the specific needs of the EFL situation while occur.

EFL University Needs

Research has shown that, the student needs a high frequency of exposure. Learning a new item without being able to go back and practice in a meaningful way is not effective manner of teaching. Blended learning provides various tools that can compensate for the various deficiencies in the EFL setting. One thing that is important for educators to remember is not how to use the tools but rather what teachers need to do to choose the most effective tools to bring out the learning outcomes desired.

Contact

The first principle is to encourage contact. In the past it has been discussed that even though blackboard is designed for communication. Simply using Blackboard instead of web pages to deliver the handouts and presentations and combining it with discussion boards resulted in some staff stating that we were not really doing any e-learning on the course which is a communication and support tool, it is not a learning tool [7].

Handing this out to students will allow them to understand the importance of using the discussion boards as it is not just for fun. Chat groups and virtual chats can be defined and facilitated by the lecturer so that there is a meaningful outcome to using these features. For example one can assign students into chat groups. Within these groups there are specific topics to explore.

Reciprocity and Cooperation

On blackboard not only can you set up students as moderators but also grade their postings. For the EFL setting this allows the instructor to have the students work together.

Active Learning

Active learning is important.

The problem with using digital technology is the lack of transparency of student effort. As discussed in [7] they also believed that students abused the flexibility issue:

I asked them to read things… they weren't doing it….

Feedback

Research has shown that feedback is essential in language learning. Every time a student posts in a discussion correction by the teacher of content, structure, and form of the language is essential in aiding the students learning.

Emphasis on task

Diligence in forcing students to spend the needed time for an activity is crucial in the success of blended learning.

High Expectations

For the EFL student this is important because practice and spending time communicating allows students to acquire language. Often students and teachers have preconceived expectations of what blended learning can accomplish. Also in the face to face first meeting teachers should collaborate with the students to set up a contract of what is expected of the teacher and what is expected of the learner.

Respect for ways of learning

The final principle of encouraging respect of diverse ways of learning is hallmark in EFL pedagogy. This is a major component in language learning.

9. E-LEARNING INITIATIVES IN YEMEN

The distance / open education in Yemen is spreading very slowly. There are number of institutions offering distance education in E-LEARNING. The institutions of distance education are the first to adopt the e-learning in LIS. As has been discussed earlier e-learning suits more to distance education. Realizing the importance of e-learning in distance education the Sana'a University and various state open universities in Yemen are already testing its feasibility. Even the distance education departments of traditional universities are also working to use the e-learning for their distance learning programs.

10. CONCLUSION

For the EFL setting blended learning can be defined as a pedagogical approach that combines the effectiveness and socialization opportunities of the classroom with the technologically enhanced active learning possibilities of the online environment [6]. For example in treating posttraumatic stress disorder (PTSD) [4], [9]. In practice, a "virtual education course" refers to any instructional course in which all, or at least a significant portion, is delivered by the Internet. "Virtual" is used in that broader way to describe a course that not taught in a classroom face-to-face but through a substitute mode that can conceptually be associated "virtually" with classroom teaching, which means that people do not have to go to the physical classroom to learn. Accordingly, virtual education refers to a form of distance learning in which course content is delivered by various methods such as course management applications, multimedia resources, and videoconferencing. Students and instructors communicate via these technologies [12]. The worldwide e-learning industry is economically significant, and was estimated in 2000 to be over $48 billion according to conservative estimates [2]. Developments in internet and multimedia technologies are the basic enabler of e-learning, with consulting, content, technologies, services and support being identified as the five key sectors of the e-learning industry. Information and communication technologies (ICT) are used extensively by young people [10]. E-learning expenditures differ within and between countries. Finland, Norway, Belgium and Korea appear to have comparatively effective programs [1].

REFERENCES

1. A. Aristovnik, **The impact of ICT on educational performance and its efficiency in selected EU and OECD countries: a non-parametric analysis.** *The Turkish Online Journal of Educational Technology*, 11(3), 2012, pp. 144-152. (MPRA Paper No. 39805 http://mpra.ub.uni-muenchen.de/39805/ Retrieved 17 Jan. 2015.)
2. A. Bates and G. Poole, ***Effective Teaching with Technology in Higher Education***. San Francisco. Jossey-Bass/John Wiley, 2003.
3. A. W. Chickering and Z. F. Gamson **Development and Adaptations of the Seven Principles for Good Practice in Undergraduate Education**. *The American Association for Higher Education Bulletin*, 1987. http://www.lonestar.edu/multimedia/SevenPrinciples.pdf Retrieved 17 Jan. 2015.
4. E. Craig, **Changing paradigms: Managed learning environments and Web 2.0**. *Campus-Wide Inform. Sys.*, 24(3), pp. 152-61, 2007.
5. J. Cross, **An informal history of e-learning**. *On the Horizon*, Vol. 12, no 3, pp. 103-110, 2004.
6. C. D. Dziuban, J. L. Hartman and P. D. Moskal, **Blended learning.** *Center for Appl. Research*, Vol. 2004 (7), 2004. http://net.educause.edu/ir/library/pdf/erb0407.pdf. Retrieved 17 Jan. 2015.
7. A. Heinze and C. Procter, **Reflections on the use of blended learning**, in *Education in a Changing Environment*, Conference Proceedings, University of Salford, 2004. www.ece.salford.ac.uk/proceedings/papers/ah_04.rtf Retrieved 17 Jan. 2015.
8. A. Hemmerly-Brown, **DoD gives PTSD help 'second life' in virtual reality.** www.army.mil/article/50751/dod-gives-ptsd-help-second-life-in-virtual-reality/ Retrieved 17 Jan. 2015.
9. V. K. J. Jeevan, ***Computers @libraries***. ESSPublications, New Delhi, 2006, 111.
10. H. M. Johnson, Dialogue and the construction of knowledge in e-learning: Exploring students' perceptions of their learning while using Blackboard's asynchronous discussion board. *European Journal of Open, Distance and E-Learning* 2007/I. http://www.eurodl.org/materials/contrib/2007/Henry_Johnson.pdf Retrieved 17 Jan. 2015.

11. K. Kumar and J. Sharma, **E-learning: The learner centered education for LIS professionals**. *J. Lib. Inform. Sci.*, 32(1), pp. 1-16, 2007.
12. K. Kurbel, **Virtuality on the Students' and on the Teachers' sides: A Multimedia and Internet based International Master Program**, in *Proceedings on the 7th International Conference on Technology Supported Learning and Training*, Berlin, Germany; November 2001, pp. 133–136
13. E. Parks, **What is the "e" in e-Learning**? www.askinternational.com/knowledge/articles/eBasic/whatsElearn.html Retrieved 17 Jan. 2015.
14. I. Peneva, S. Stoyanova, K. Yordzhev, **On the Necessity of Learning Informatics by Psychology Students**. in *Proc. on Sixth International South-West University, Faculty of Mathematics & Natural Sciences*, Blagoevgrad, Bulgaria, 10 - 14 June, 2007, v.1, pp. 176-179. http://www.fmns.swu.bg/Fmns2007.html Retrieved 17 Jan. 2015.
15. D. Tavangarian, M. E. Leypold, K. Nölting, M. Röser and D. Voigt, **Is e-Learning the solution for individual learning?** *Electronic Journal of e-Learning*, 2(2), pp. 273−280, 2004.
16. K. Yordzhev, I. Peneva, **Computer Administering of the Psychological Investigations: Set-Relational Representation**, *Open Journal of Applied Sciences*, 2012, 2, pp. 110-114. http://www.scirp.org/journal/PaperInformation.aspx?PaperID=20331 Retrieved 17 Jan. 2015.
17. www.youtube.com/watch?v=xidko60S2Uk Retrieved 17 Jan. 2015. **Nurse education in second life at Glasgow Caledonian University [demo]**
18. https://www.youtube.com/watch?v=G2jN7L80bH8 Retrieved 17 Jan. 2015. **Second Life Nursing Simulation [demo]**.
19. www.educause.edu/ero/article/think-exciting-e-learning-and-big-e Retrieved 17 Jan. 2015 **Think "Exciting": E-Learning and the Big "E"**.

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