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REVIEW ARTICLE

Issues and Effectiveness of E-learning

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Abstract

Knowledge plays important role in an individual life and for human kind. Increasing demand has opened many channels to deliver knowledge. These channels revolutionaries the learning process and crossed geographical boundaries and hence made possible to quench the knowledge thirst. One amongst the many available process of knowledge delivery is e-learning. But the process of e-learning has certain pitfalls. In this review, these pitfalls has been discussed and some corrective measures is proposed in order to make e-learning effective and efficient.

Keywords: Knowledge, learning process, e-learning, effectiveness, corrective measures.

Introduction

The revolution in the information technology has increased the thirst of the knowledge manifolds. This increasing demand of knowledge has been revolutionized by the use of technology. Technologies have overcome the geographical boundaries and bridge the gap of learning. Learning by the use of internet or information technology is referred as e-learning. Formally e-learning is defined as “the use of information and communication technology to enhance and/or support learning (OECD, 2005).

In the advent, distance learning geographical boundaries were a major concern but the essence of technology has bridged the learning situation where the mentor and the learner being at distant place, at different time zone or both. E-learning methodology covers wide range of tools and techniques to create deliver and facilitate learning anytime and anywhere. The advantage of e-learning has been referred in many literatures (Shotsberger, 2000; Raab *et al.,* 2002; Bouhnik and Marcus, 2006; Liaw *et al.,* 2007).

The four advantages of e-learning are stated by Bouhnik and Marcus (2006). First is freedom to decide when each online lesson will be learned, second the time dependent constraint of the faculty availability, third freedom of limitation like expressing thoughts, asking questions and fourth is accessibility of the course material to the students will. Furthermore, there are benefits associated with e-learning as cited by Capper (2001). The learner can learn at any point in time and at any place, new education approaches can be incorporated and can be shared immediately. Despite the advantages and benefits of e-learning, research indicates that a volume of student do not finish the course (Dutton and Perry, 2002). This aim of the review is to identify and suggest necessary measures to improve this drop rate.

Literature survey

E-learning refers to the use of Information and communication technology to enhance and /or support learning in tertiary education (OECD, 2005). Four elements need to be considered while developing e-learning resources (Liaw *et al.,* 2007). The four elements are environmental characteristics, environmental satisfaction, learning activities and learner’s characteristics. For effective e-learning system, Raab (2002) suggested three considerations, namely learners’ characteristics, instructional characteristics and interaction. It is necessary to understand the characteristics of the targeted audience like self-efficiency, self-directed behavior and anatomy need to identified. Today conventional distance education learning is the fundamental model adapted in e-learning model of higher education. The concept was adapted to facilitate an individual in rural and remote areas to gain access to higher education. This model evolved phenomenally over the time. This change is because of the technology advancement, beginning with the radio broadcast (Huynh *et al.,* 2003) to the advent of the internet based education (Gunasekaran *et al.,* 2002). With the technological advancements, more and more people gain access to World Wide Web and the ownership cost of the computer has also decreased dramatically and this lead to significant increase in computer literacy (Huynh *et al.,* 2003).

Challenges of e-learning

To every system there are some merits and demerits associated with it. There are major challenges associated with e-learning in higher education. The most fundamental issue to the institution is providing adequate technical infrastructure. This comprise of hardware such as computer, internet connection, multimedia devices etc. and system support to deliver e-learning in most effective manner.

System support refers to the system availability meaning by what if infrastructure fails. What action should be initiated in such situations? The process of e-learning method is self-paced and sometime it is self learnt, in that case, the attention span of the learner may not be enough to learn a concept. One of the most important challenges of making e-learning successful is the skill of the instructor that how simple the topic has been tackled and moved to advance level. This sometime makes it difficult to deliver well in the process of e-learning than classroom. It has also been a major concern that accessibility of the instructor is also less as accountability is less. Once the module is developed and floated for the learning, it is hard to make it interactive and engaging, thus it becomes difficult not only to measure the learning progress but also to ensure the attention and engagement. A major fall out of the e-learning is mushrooming of institution with fake certificate which may not have any value. Last but not the least it would be difficult to measure the level of success and the return on investment. Next section focuses on these issues and tries to resolve it in order to make e-learning effective.

Methodology for maximizing effectiveness of e-learning

It is very important to succeed in the process of e-learning to ensure that a student stay focused and engaged. As in case of class room, attentiveness of a student can be judge by the body language and behavior. On the contrary, student is not able to take in and review the course material at their own speed, as they can with self-paced training. The following methodology is proposed to overcome these kinds of problems. They are gleaned from participating in numerous online sessions and from the research cited under.

Examine technical limitations: It is important to ensure that the learners will have the required infrastructure to view the training. These comprise of computer and network and understand bandwidth issues and test the training with the slowest connection speeds.

Plan the "Composition": A network based learning event needs to be composed in such a way that it looks like an interesting event. Several authors recommend 'you script', the session using a multi-column document, with headings such as Topic, Objective, Learning Content, Graphics, etc.

Team role: It is very important to make e-learning effective which should have Good team of at least two people performing presenter roles:

a. An instructor/facilitator who does most of the talking.
b. A moderator/producer who handles the technology. This person can also do introductions, respond to chat questions, and troubleshoot any technical issue.

If at all possible, have two people online to fill these separate roles. If that's not possible, the instructor should practice ahead of time and have a second PC connected to show what the audience is seeing. It can also work well to have two instructors who swap off the moderator role.

Test to facilitate learning: In case the trainer is novice and has no such experience of delivering lecture then it should be tested prior delivering such lecture.

Keep precise and crispy: It has been referred in many literatures that any live streaming lecture should be of 60 to 90 min as this is optimum time for single session. In case, the learning schedules if instructor based and is for three to four days and if it is converted to e-learning then, we should always take care of trimming the non-essential content and the session should be break into multiple sessions with small assignments and self placed learning in between.

User friendly module: In case a learner is new to the system and has no prior experience of such learning methodology, in that case, it should be started with introduction to the interface component, in order to get familiar with such interface and then progressed further.

Link up learners from the beginning: Session should start with brief self introduction of the learners so that they get comfortable with the environment followed by warm welcome by the instructor individually. Then the session should start with introduction of the annotation tools.

Session should be Interactive: In the process of learning, it has been found that sometimes session becomes monologues and hence learner starts loosing interest. To avoid such situation, instructor should maintain the session interactive. It can be achieved by asking some questions or comprehending the discussed talk.

Keeping slides clean and concise: While preparing the presentation slides, instructor should be clear that it should not contain much text. This way instructor can engage learner to have interactive session and not ending up reading the test of the slides. As reading the slides will distract the process of learning.

Avoid superfluous visuals: Visual (like graphs, animation, etc.) content of the presentation slide should be simple and it should contain only the content which are relevant and required.

Method of idea exchange should be varied: Monotonous approach of teaching and learning is never welcomed. If the teaching methodology is online, then it should be tweak on the fly so that learner always remain focused and can have interactive session. This can be made more interactive by asking learner to respond different questions and making comment of topics under discussion. Further, the attentiveness of a learner can be test by narrating the discussed topic in some specified time.

Understanding can also be checked by asking learner to comprehend and write some assignment on the discussed topic.

End session by question and answer: A session can be ended with a question and answer session. Such that learner can submit questions and the instructors and respond to those questions.

Record session for analysis: Once session is concluded it is always better to record each session and then it can be used for the purpose of analysis. The term analysis refers to how much a learner understood the content and for instructor what are the shortcomings during the session which can be improved upon in subsequent session.

Conclusion

The objective of incorporating the technological advancement in the world of virtual learning is proposed in the review. The proposed virtual learning environment made to realize that it has to be clear and functional to obtain good learning result. Also to make e-learning adaptive for different learning styles, learner's behavior in learning environment has to be studied. Questionnaires in the beginning and at the end of a course can be delivered to the students to find out their background information and get feedback. The feedback is important when redesigning a course. Feedback is also important to ask during a course to find out the defects in it. The students might answer more eagerly to the feedback questionnaire when it is during a course because that way they can get the benefit out of it.

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