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E-Learning in Relation to Healthcare

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Abstract

This paper is part of research work to establish an e-learning framework for e-health education for nurses in developing countries, it will help you understand the E-Learning concept in relation to the healthcare sector with regards advantages, barriers and importance integration of E-learning into medical registration. E-learning has proven effectiveness in medical education comparable with conventional learning while wide range of solutions still to be implemented to overcome its barriers such as standardization strategies ,integration of E-learning into medical curricula and training.

Keywords: E-learning, healthcare; Continuing Professional Development (CPD); Learning Management System (LMS); Learning Object.

1. Introduction

With the birth of internet and due to changes in health care delivery, e-learning gains its popularity in medical education, Number of e-learning resources are available, digital libraries and repositories that offer a vision of expanded access to a large numbers of high- quality sharable e-learning materials have been established E-learning is growing more and more in all levels of medical education including Undergraduate ME, Graduate ME, Continuing ME ,and post graduate level .In 2006 School of e-Learning Science of the College of Internet Distance Education (CIDE) at Assumption University of Thailand has offered First and Only PhD in e-Learning Methodology in the World. And so, this research helps support e-learning model /framework in e-health education for under graduate nurses and graduate health practitioners from different specialties in developing countries. It will aid in accomplishing medical registration requirements and maintain competency in a technology driven health care environment through Continuing Professional Development (CPD).The proposed model will assist strategic planners and decision makers make sound decisions connected to the deployment of education innovations in medical education and CPD based on evidence generated from well-designed research studies. Furthermore, this interrogative review paper aims to examine benefits and challenges in the deployment of e-learning in CPD for health professionals in order to explore online learning possibilities in health in developing countries. This will help move to the next steps in policy execution to be in bar with developed countries which have achieved good progress in this field.

2. Definition of E-Learning

There are common set of terms related to e-learning which have been mentioned in literature. Terms include online learning, web-based learning, resource-based learning, mixed-mode learning and blended learning. These terms are used interchangeably to describe a method to education that combines face-to-face and distant approaches to education. This means an instructor or tutor meets with students (either face-to-face or through a technological means) and a resource-base of content materials and learning activities are made available to students. Having said that, there is no universally unique accepted definition of e-learning, but all definitions entail that technology is used to boost teaching and learning that are either Web-based, Web-distributed or Web capable [1].

The e-learning concept encompasses three main components. The first is the learning object, which is a digital file or tool that can be reused in e-learning contexts. The second is the Learning Management System (LMS), which is a collection of e-learning tools available through a shared administrative interface. The third is a learning management system, which can be thought of as the platform in which online courses or online components of courses are assembled and used.

3. Advantages of E-Learning

E-learning has proven its effectiveness compared to the traditional face-to-face teaching. This makes it a valuable and legitimate learning technique in education for healthcare professionals in health care & academic institutions. Reasons for adopting e-learning in medical education and continuing professional development include the prospective of achieving life learning, fulfilling personal interests and time-saving [2]. It offers the possibility of quickly tailoring or fully customizing the content to meet the job needs and information diversity, flexibility in time and space, which has less impact on family responsibilities, job duties and life [3]. Being a self-regulatory learning method makes it of significant importance for adult learners. The capacity to provide a well-organized and large amount of information quickly and without error makes it cost-effective, where systematic information can be offered to a large number of learners [4]. Moreover, accessibility of information and ease in updating the contents, personalizing the instruction standardization and distribution of [5].

Further advantage of e-learning is that cost saving which can be achieved by retaining the service of trained staff in the health sector during after completion of their studies through sponsorship by their employing organization. This will result in staff retention and decreasing the turnover rate which will thus reflect positively on the quality of health care. It also facilitates the integration of new conceptual knowledge with practice through the application of learning by the real situations in assignments and projects [6].

A wide range of technologies can be employed to support healthcare education as other advantages of e-learning have attracted much interest among policy-makers to deploy e-learning in medical education and to debate, whether its advantages will be sufficient to overcome its barriers.

4. Barriers of E-Learning

Despite the many advantages of e-learning, it still has barriers that challenge both learners and educators. This includes lack of suitable courses, poorly designed packages, high costs, lack of provision by the employer lack of managerial support and protective time for learning in addition to technical barriers. Technical barriers include no avail of a computer, poor infrastructure, lack of internet access, computer anxiety, ICT illiteracy, lack of access to e-Learning [4]. Furthermore, absence of direct communication and interaction with instructors and colleagues could result in poor preparation quality due to lack of teacher/tutor guidance and explanation. The risk of the studies not being recognized due to the particular way of having the courses is a limitations of e-learning that cannot be ignored [7].

Developing countries still have a long way toward the deployment of effective e-learning in medical education that necessitate integration of efforts and organization of activities [8]. Raising awareness of the relative advantages and practical feasibility of e-Learning in comparison with traditional learning, success of an online course development is dependent upon the commitment, enthusiasm, interest and skills of dedicated instructors. Delivering quality online courses is a challenging task for the instructors if compared to traditional courses hence they must be provided with ongoing training and support in order to become technologically proficient [9]. Thomas Michael Link and Richard Marz (2006) consider attitudes towards e-learning as an umbrella for learning methods supported by information and communication technologies (ICT). The authors argue that students would benefit from formal ICT training given to the wide range of computer skills among students, while a single computer course for all students would not be useful as students' ICT skills vary [10]. Special consideration should be taken to prevent students who lack computer skills from being disadvantaged or from developing computer-hostile attitudes, which will lead to frustration and negative attitude towards e-learning as there is no one-size-fits all course design available. The cost of developing e-learning content can be reduced by something of low-cost such as multimedia with more simple approaches, such as audio podcasts which can be listened to on digital media players or most mobile phones. The implementation of blended (hybrid) learning methods and managerial support by providing protective time for learning and bearing the cost of learning courses and will be an important means for overcoming barriers of e-learning in continuing professional development [11].

5. Integration of E-Learning into Existing Medical Education

Since advantages of e-learning have surpassed its barriers, it became an attractive option for busy medical professional to maintain competency and to update their medical knowledge and skills for fulfilling Continuing Medical Education (CME) requirements, It also helps to pursue their postgraduate studies and promote a culture of lifelong learning. In changing healthcare systems every 4-5 years 50% of the medical knowledge, and every 8-10 years, 70% of the same knowledge is

considered as “old”. Thus, the knowledge gained in a period of general or specialized academic CME will not be sufficient for a future career hence the International Federation of Medical Education asked the medical universities in 1997 to prepare grounds to integrate e-learning and CME [12]. With the advancement of health system in Qatar, medical professionals will be connected to the most up-to-date information on biomedical advances in the more technologically developed countries [13]. On-line CME accomplishes this goal and is a regular feature of professional development at WCMC– [4].

The integration of e-learning into existing medical education is an inevitable issue and effective solution for e-learning with health professionals. Universities have to begin their way in this era [2]. This should be the result of a well-designed plan that begins with a need assessment and concludes with the decision to use e-learning [7]. There is adequate evidence in terms of research studies on effectiveness of e-learning in different categories of health practitioners. Web CME can lead to behavior change and sustained knowledge gain that are superior to traditional [5]. Lockyer .L (2007) explored nurses' perceptions on the impact of an online education package in patient care amongst nurses the results showed that nurses who worked through the e-learning package were more confident to care for their patients and were able to transfer their learning to their clinical practice. This supports utilization of e-learning in CME and professional development. Hugenholtz (2008) investigated the effect of e-learning on knowledge on mental health issues as compared to lecture-based learning in a CME program for occupational health physicians. The results showed e-learning is comparable to a lecture-based approach in terms of effectiveness. Based on these findings the author argues that e-learning may play an even more important role in CME of Health Care Professionals [5].

6. E-Learning for Medical Registration

Licensure laws in several registration authorities require that health practitioners demonstrate they are regularly updating medical knowledge and skills by maintaining a certain number of CME credits. Companies such as CME.web.com and GE Health Care are able to offer online continuing medical education credits through web-based tutorials and other electronic means. With this being said, become an attractive option for medical professionals with time constraints in fulfilling CPD requirements [13]. Also e-learning has become a high profile approach for pre-registration health students and for continuing professional development, most UK universities are investing in e-learning for all different student categories including health [14].

Duffy (2002) compared the outcome of course delivery for health professionals including post-registration nurses in the conventional classroom -based, distant learning with face-to-face tutorials, as well as completely online with no face-to-face interaction [15]. They found that overall, module results were significantly higher for the students who studied completely online.[16].

Effectiveness of e-learning in medical education should not be disregarded. The majority of evaluation studies of e-learning in continuing medical education were only at the level of reaction and were based on participant satisfaction there has been little research about the use of different approaches of e-learning interventions and effectiveness of e-learning in change in performance, and influencing patient or health outcomes and enhance quality of service in health care industry [11].

7. Conclusion

Despite the fact that there are still many challenges faced in utilizing e-learning in medical education, there is strong evidence for its effectiveness and acceptance within the medical education community, especially when combined with traditional teacher-led activities in a blended-learning educational experience. E-learning is a golden method to build capacity of busy healthcare staff without disrupting health services, therefore efforts have to be directed toward paving the road for healthcare practitioners to utilize E-learning to update their medical knowledge and skills and fulfilling continuing medical education requirements with minimal negative impact on other life areas including personal and professional life.

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