

Factors Affecting use of E-Learning in Nursing Education: A Literature Review

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Abstract

Purpose: The review paper presents the factors which are viewed as barriers affecting utilization of eLearning among nurse educators.

Objectives: The aim of the review paper is to analyze critically available literature on use of eLearning as one of the innovative teaching strategies in nursing education and associated challenges in its

utilization by identifying factors and barriers affecting use of elearning, Identify how lack of using elearning affect quality of teaching and learning and to establish how nurse educators can be assisted to overcome the identified barriers.

Rationale: The rationale for undertaking this exploration is grounded from the fact that information technology has developed and expanded. The benefits of electronic learning (e-learning) is rapidly gaining popularity and it seen as an essential tool that can enhance and facilitate lifelong learning.

Methodology: Literature was retrieved using credible data bases Ebscohost, Pubmed and Google scholar utilizing key words highlighted below and only articles which discussed the related topic were considered for the development of the paper.

Results: Results revealed that there are several factors which inhibit the utilization of eLearning by nurse educators which includes, lack of faculty skills regarding ICT, lack of support, lack of funds and fear to lose control by nurse educators in learning and teaching process.

Recommendations: Due to the emerging use of technology and the requirement for nurse educators to intergrate technology in teaching and learning it is recommended that Faculty ICT development programmes be a priority and strengthening of existing ICT policies in nursing education.

Keywords: *eLearning, eLearning models, Nursing education, Information technology, eCompetence, Barriers for eLearning.*

Introduction

The use of information and communication technology (ICT) in health professional education or even high education is rapidly increasing. Nurse educators are required to be responsive to these changing paradigm .The health care delivery environment is dramatically changing which pose a challenge to nurse educators to prepare healthcare providers who are competent and who can cope in this highly digital environment. (Daniel& Oyetunde, 2013).

eLearning is emerging as the new paradigm of modern education and it is described as having an advantage of liberating interactions between learners and instructors or interaction between learners and learners. (Pei- Chen, Tsai, Finger Yueh-Yang & Yeh, 200

It is of no doubt that education is a principal measure of bringing about changes in the lives of individual and this has led to many countries making the creation and diffusion of information and communication technology. eLearning has become synonymous with the latest approaches in providing quality care. However there has been a series of barriers which inhibits full and effective utilization of eLearning technology. The purpose of this paper capstone Project is to analye literature review to establish factors affecting the use of

eLearning in nursing education and to identify which measures should be put in place to overcome such barriers.

Statement of the problem

Learning technology enhances communication and interaction between facilitators and learners as it offers a wide range of options. Utilization of eLearning assist in designing learner centered, interactive and facilitated learning. However most nurse educators have not exploited eLearning as an innovative teaching strategy because of several factors and barriers. Schneckenberg (2010), Barrios and Carsternson, (2004) have found that only 5 % of the active faculty in German Speaking University use learning technology for their courses. Some studies suggests that nurse educators are battling to intergrate information and communication technology skills into undergraduate nursing curricula because of lack of adequate preparation, and lack of support in implementing eLearning approaches. (Kiteley &Graham, Wilmer, 2005). Allen and Seaman, 2007 state the inadequate level of eCompetence as one of the reason for the slow adoption of eLearning in teaching and learning practice. However Nurse educators have a key role to play in terms of modeling the significance of ICT and eLearning skills in relation to nursing practice.

Purpose of the paper

The purpose of this review is to identify the factors which interfere with the utilization of eLearning as a teaching strategy amongst Nurse Educators.

Objectives are:

- 1) To identify the factors and barriers affecting use of eLearning as stratergy
- 2) To identify how lack of using eLearning affect quality of teaching and learning
- 3) To identify how Nurse Educators can be assisted to overcome identified factors.

Literature review

The nursing education nowadays focuses on the shift from teaching to learning hence the advantages of electronic (eLearning) is gradually gaining popularity (kala, Isaramalai & pohthong, 2012, Francis, 2013)

eLearning has been described as a web-based system that makes information or knowledge available to users or learners with no geographical restrictions. It is an instructional method which has several advantages such as emphasis on interaction and communication through internet channels, videoconferencing, teleconferencing in asynchronous sessions or synchronized sessions. (Odunayo, Olugbeko and Izu, 2013). Lecturing has been viewed for several years as a cost effective way of presenting new ideas and concepts especially to a large group of students. However most scholars recommend a paradigm shift to begin to utilize methods of teaching which may stimulate students critical thinking skills to reduce the passiveness which students display when lecturing is used as the sole method of delivery. (White & Sykes, 2012) .

More scholars have described benefits of eLearning and nurse training as a flexible method which utilizes student centered approach which would enhance continuing professional development and lifelong learning which are critical aspects in nursing practice.(Woodall, 2013, Darvish, etal, 2014, Francis, 2013)

Despite the benefits of utilizing eLearning as an instructional approach several authors have documentant a wide range of factors which inhibit the use of eLearning in higher education and also nursing education. Such factors have been outlined as inadequate eCompetence among faculty, lack of adequate ICT resources in some institutions and slow or lack of internet services, geographic location of learners, economic factors such as inability to buy ICT gadgets by learners. (Allen & Seaman, 2007, Barrett & Carney, 2005, Odunayo, 2013). Other factors associated with low utilization of eLearning are the fear of instructors losing control in the learning process, human interaction is reduced hence reducing chances of

providing guidance and motivation for students and thus students feeling isolated (Yung-Ming, 2014)

The researchers highlighted the importance of government support in developing policy which can enhance ICT training and in prioritizing structural and environmental developments to enhance ICT access. It is also evident that in today's dynamic health systems, technology plays an important role in education so it is very appropriate for Nurse Educators to possess ICT competencies in general. (Darvish, Bahramnezhad, Keyhanian & Navidhamidi, 2014). Other observations which have been revealed by researchers are that there are several models which have been developed to understand eLearning but there has been an omission in interrogating the social factors which may promote acceptance of electronic learning. (Pi-Tzong, His-Peng & Tzu-Chuan, 2012)

Literature synthesis

There is consistency and agreement in the studies reviewed that there is a rapid growth in information communication technology with an increased focus on educational delivery methods and that nurse educators have to integrate eLearning technology into nursing education to develop enhanced skills among graduate nurses. (D'Souza, Kardada & Castro, 2014).

There is also an agreement that eLearning is viewed as an innovative approach for delivering designed, learner-centered, interactive and facilitated learning environment and found to enable students to be independent, have a self-directed and self-discipline.

(Noesgaard & Orngreen, 2015, Pourghaznein, Sabeghi & Shariatinejad, 2015).

Some authors have a view that learning should be blended and not entirely rely on eLearning and throwing away other traditional pedagogies so as to reduce student isolation as some situation in teaching and learning requires face to face interaction. There is an agreement that even though eLearning is a preferred method of instructions there are certain factors which may affect and limit its utilization. (Odinayo, 2013, White & Sykes, 2012).

Methodology

This literature review was conducted to identify factors affecting the use of eLearning in nursing education. Data search was done electronically utilizing credible sources such as Ebsco, Google search and Pubmed. Key words utilized to search were eLearning, nursing education, eCompetence, information technology and barriers for eLearning.

Inclusion criteria

Credible articles from peer reviewed and reputable journals were used to retrieve information related to barriers and utilization of eLearning in nursing education.

Exclusion criteria

Articles which did not relate to utilization of eLearning nursing education, barriers affecting learners were not considered for the discussion.

Results

The findings of this literature review indicate that attitude of educators towards use of ICT in teaching and learning, provision and access to ICT resources, cost, time has been outlined as the common factors which affect the use of eLearning. (Pie-Chen, et al, 2007) This is congruent with the findings by Odunayo, et al, (2013). Who also highlighted factors such as economic factors which include the cost of purchasing ICT gadgets, the geographical location of students which contributes to poor ICT access and the lack of required ICT skills. The above are the major factors which inhibit lecturers' utilization of eLearning. Robin & Graham, (2009) emphasized the need for government policies to support the structure and resources required for adequate implementation of eLearning and including Nurse educator preparation in obtaining ICT skills as they play the major role in teaching and learning.

Table 1. Benefits of elearning in nursing education

Authors	Name of article	Benefits
Kala, S, isaramalai, S & Pohthong, A. (2010)	Electronic Learning and Constructivism: A Model for Designing Effective Learning Experiences	Providing consistency with the delivery of educational activities, reducing instruction time, enhancing cognitive recall and mastery of learning
Pi-Tzong.J., Hsi-Peng.L & Tzu-Chuan.C (2012)	The adoption of eLearning :An institutional Theory Perspective	Reduces courses of training for organizations. Increases availability of training and accessibility for training anywhere
White, S & Sykes, A (2012)	Evaluation of Blended Learning Approach Used in an Anatomy and Physiology Module for pre-registration Healthcare Students	Leads to development of computer skills. Encourages independent learning and assists in decentralizing the teaching process

Table 2. Barriers affecting utilization of eLearning in nursing education

Authors	Name of Article	Barriers
Olugbeko, S & Izu, G.O, (2013)	The reality and Challenges of E-Learning Education in Africa: The Nigeria Experience	Internet access and its costs The cost of purchasing ICT gadgets Limited time for facilitators to teach and manage ICT Inadequate preparation of teachers
White, S & Sykes, A (2012)	Evaluation of a blended Learning Approach Used in an anatomy and physiology module for pre registration Healthcare studies	Lack of computer skills Preference for face to face teacher centered learning
Schneckenberg, D. (2010)	Overcoming barriers for elearning in universities- Portforlio models for eCompetence development of faculty	Technical issues Budget constraints Inadequate eCompetence of faculty in ICT
Pei-Chen etal (2007)	What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction	Time constraints Labour intensiveness Attitude towards of both learners or faculty towards computers

Discussion

The findings of this review demonstrated various barriers that hinder utilization of eLearning in teaching nursing. Factors such as lack of ICT skills or eCompetence, lack of resources and cost are outstanding. However despite the barriers highlighted benefits of utilizing Elearning can not be over emphasized such as encouraging critical thinking through independent learning and accessing information despite the geographical location. Some authours feel that eLearning be blended with the traditional face to face approach to avoid students isolation and to enhance student's guidance.

Recommendation

Based on the literature reviewed and with the highlighted barriers to utilization of elearning the following recommendation are proposed:

- 1) Faculty development in eLearning pedagogy
- 2) There should be establishment of professional development programmes carefully designed to support educators to transform their ICT knowledge
- 3) Government policies should encourage provision of ICT facilities and infrastructures in rural areas to reduce the access gap.
- 4) Clear eCompetences required for nurse educators should be established

Lesson learnt

Nursing education nowadays has changed from teaching to learning and therefore this paradigm shift challenges educators to design educational experiences that enhances cognitive mastery by intergrating technology in the teaching and learning process. There are factors which can affect eLearning performance despite its preference over other methods of teaching and learning. Despite the advantages of eLearning traditional approaches are not to be abandoned as they also provide benefits which would not be achieved by eLearning such as reducing students isolation and situations which may require face to face interaction.

Conclusion

The review of this paper was focusing on the factors affecting utilization of eLearning as an emerging teaching pedagogy. eLearning is viewed as an alternative method of teaching to the traditional face to face education which can be utilized to meet students needs and enables learner to learn anywhere without being limited by geographical location. It provides several advantages such as improved independence in learning and enhance development of critical thinking skills. However there are barriers which educators face which pose challenge in adequately utilizing technology in the teaching and learning process.

It is very emperative that nurse educators be equipped with the skills of intergrating technology in their teaching which requires support and resources.

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