



E-Learning in Nursing Education

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Abstract

Rapid changes in the technology and global developments forces Nursing educational systems to make necessary modifications from time to time. As a result we are facing a rapid development and use of new educational approaches such as e-Learning, simulations, virtual reality etc. Infact they brought a revolution to teaching and learning. E-learning and LMS has many advantages when it is used in a prudent manner. A major challenge in adopting E-learning in Nursing Education is to enhance personal touch and interaction in E-learning, facilitating e-learning environment with peer support, academic fulfillment and familiarity with global culture. Nursing profession as a whole is in a cultural shift along with the technological development. Along with this nursing education also must accelerate the transformation to a digitally supported education system added to the face to face education system.

Keywords: E-Learning; Nursing Education; Technology; LMS; Global Culture

Introduction

It is said that knowledge based societies are the reality of the near future, where information and knowledge will act as a key to the development of a Nation. Looking at the Nursing one can say that today's learners are tomorrow's problem solvers, leaders, policy makers and nation builders. So today access to quality education is vital not only to complete the course and achieve a job, but also for building up a healthy strong and economically sound global culture.

Infact it is a time of global reformation especially when COVID-19 taught us many lessons irrespective of health, economics, education or developmental status. It taught us that Education is an area where a drastic change is needed which influences the present and the future. A movement from the traditional face to face learning culture to e-learning; learning any where any time, unlimited.

Thus E-learning has become mandatory component of all educational institutions, including the universities in and around

the world. Along with this trend, nursing education has stepped into the digital world faster than ever. Traditional face-to-face instructions swiftly changed into online learning. Teachers equipped themselves for virtual class room sessions, students and families were forced to provide the needed technical devices and internet services to attend the online classes.

Its' a time where world class education system is striving to invest in teachers formation and equipping the institutions to facilitate the best and apt learning, irrespective of geographical area, time of learning and other privileges. The ultimate goal is to mould every learner to be capable of meeting the global demands and to be in par with the global developments.

Definition

E-learning refers to the use of internet technology to deliver and enhance knowledge, skill and attitude.

The letter 'E'- stands for electronic. the wide scope of e-learning is expressed in the words of E-learning pioneer BERNARD LUSKIN

(2001). He explains 'e' as-exciting, energetic, emotional, extended and educational. Internet based E-learning today has advanced to online or virtual learning with the support of more technological adaptability [1].

Concept

E-Learning an advanced approach to learning, where the learners have the control over what to learn, when and where. It can be an initiated program in an organization institution or in an individual level. It focuses on the learner and accordingly content is designed, delivered and assessed. On the whole, E-learning is a broad array of solutions that enhances knowledge and ability to fit into the learning needs and styles of the learner.

E-Learning today is described as a revolution in the field of general education and also in Nursing Education Adaptability of E learning has bridged the geographical gap among the learners and teachers. Best example is the classes during the covid 19. Use of technical tools make both parties to feel the ambience of an actual class room. E-learning is a store house of education, information, communication, training skills and performance management.

Building an E-learning culture/environment

Building up a virtual learning environment has become highly significant in our institutions today. A systematic approach is needed to cope with this educational transformation.

There are certain factors that have to be considered while establishing an E-learning culture/environment in Nursing Education.

Basic skills

Acquisition of skills like basic computer/communication, assembling and using technological devices or resources, use of pre designed learning packages based on curriculum.

E-learning process

It is based on ADDIE model.



Analyze the learning content based on learning objective and the type of learner.

- **Design:** Here the teaching learning experts need to create a design document that incorporates the recommendations of the learning management team. Requirement of the institution teachers and the students along with the ultimate learning goal.
- **Develop:** Specification in the design document are executed by incorporating the content, visuals, graphic user interface and multimedia elements etc. which can be used for giving definite shape to your e-learning course.
- **Implement and evaluate:** Quality of the developed course is tested to ensure accuracy of functionality as well as content. Finally, the course is hosted on the LMS/or any other portal. Monitoring, assessment and follow up is carried on.

Best practices in nursing education

Technological advancement provides the scope for creating the virtual class room by filling the gap between the teachers and the learners. The challenge associated with it is to make the online learning effective, satisfying and useful. Remember that challenge is not with the technology: but with ideas, strategies and means of using technology to make the online learning rewarding.

What are the best practices to adapt? Have a....

A supportive team

Consisting of -The institution, teachers, supporters, learners and their parents as a team with a we feeling within. This enables and encourages interactions, communication with one another. And the outcome will be an enhanced educational experience.

Clear expectations

Students should be made aware of what is to be learnt, what content will be received, what is the course objective and the expected outcome. There should be mutual agreement between the teacher and the learner. Clarity should be there regarding the time duration, mode of communication, technical platform used, devices used etc.

Asynchronous and synchronous activities

It is important to incorporate activities that are more interactive, as well as activities that need student to practice reflective thinking,

personalized learning, problem solving, learn by doing research etc. A blended learning method is recommended.

Effective use of available resources

Teach the learners how to learn and what to learn so that they will be equipped to manage the given situations appropriately tackle problems effectively and build a prepared future. In essence, learning is not only for the present but also to tackle tomorrow's demands. Learn by igniting curiosity in order to be fit for global survival.

Methods of E-learning (Delivery Methods)

In today's E learning environment the types of E-learning that takes place is generally divided into synchronous and asynchronous [2].

Synchronous learning

Any tool that is in real time, e.g.: online video conferencing, online chat (where live session is there). Students who participate in synchronous learning classes are able to interact with teachers and peer groups during the class. The main advantage is that it enables the students avoid isolation feeling. This method is not flexible in terms of time. It is a live teaching session in real-time.

Asynchronous learning

Course work and communications are delivered via web, email, messages, WhatsApp or other social media are examples of Asynchronous learning. In this method students will typically complete their lesson on their own and use the internet as support too/rather than venturing online solely for interactive classes. In this method students need not worry about scheduling the time. This is apt for student who take time to learn, or doing research and so on. Students can feel isolated as there is no interactive environment in this form of e-learning.

Ideally effective e-learning courses should include both synchronous and asynchronous learning activities in Nursing Education. An effective e-learning course takes a good deal of time, hard work and commitment to maintain quality and effectiveness.

Linear learning

Computer based-self-paced learning activities in which content is delivered via internet using browser. Videos or animations can be embedded to enhance the learning.

Flipped class rooms

In this strategy computer assisted teaching is integrated with class room instruction. Students are given basic essential instruction face to face or in the class room before the delivery of content. Then the instruction content is delivered outside the class room often on line (videos, reading materials, online chats etc).

E-learning culture: elements and roles



The learner

Expected behavior: In E-learning, learners are responsible for attending class and completing the learning assignments prescribed by the teacher. Through E-learning learner can save time, money and transportation cost. For that the learner should:

- Use appropriate technology to collaborate with the teacher and their peers.
- Utilize feedback and consultation facility to develop and refine knowledge, skill and attitude; learn what is taught. And be equipped to apply the knowledge when needed.
- Positive attitude, motivation, self responsibility and the sense of need determines the level of learning.
- Attend the class in the assigned time, complete the assignment and make use of the collaborative learning. Practice a lifelong learning.

Components

Teacher

Her responsibility in face-to-face and online classes is generally same; but the process to carry out these responsibilities in online setting is unique [3].

- Improve learning process by planned instruction- Plan and co-ordinate the content transmission according to the curriculum.
- Diagnose the learning needs: Follow the progress (good or bad), prepare remedial sessions, discussion, rewards etc.
- Prescribing content delivery through class activities through Google meet, zoom meeting, Moodle etc....) for other online platforms.

- Assess the level of learning: On-going-Summative/formative - in compassion with learning goals.
- Evaluate the effect of instruction along with curriculum Comity. Collaboration with parents and student higher authorities. It is the key to progress and success.
- Teacher should learn different innovative methods to make their teaching learning more enjoyable and effective. Include: reflective thinking, clinical journalism, storytelling, Gamification, self directed learning, problem solving, critical thinking, peer teaching etc.
- Attend the training programs to raise themselves to the mentors live who may build their capacity to meet the dynamic needs of each learner online, blended and digitally rich learning environment.
- Choose appropriate platforms for delivering the content, assessment evaluation etc. Above all, motivate your students to be the best learner. Teach them how to learn.
- Continuous teacher presence.

E-Learning environment

The trend of e-learning has put pressure among institutions, universities and academic institution to compete in an environment where globalization of learning is becoming a reality through the delivery of their courses on the internet. Here learning is based on the premise where knowledge exists in the world rather than in the head of an individual in a particular locality.eg. Bringing speakers from somewhere else.

LMS or Learning Management System is the back bone of online learning let us look at the word meaning of LMS or Learning Management System [4].

LMS is an application that is used to administer, track, report and deliver learning program.

Learning

Learning is the core of any educational or training program-the acquisition of knowledge or skills through study practice experience or being taught.

Management

Management is the system of the learning program which manages all the schedules for each and every individual.

The system: System is the e-platform to deliver the different types of learning program

LMS is designed to help the learners to develop, manage and provide online classes and highlight their skills whenever and wherever they need as per their convenience.

- LMS also saves institutions' time, money and manpower through easy administration of large amounts of information in a user friendly, environment.

Advantage included supported face-to-face learning, online and blended learning solutions in a way maintaining the essence of traditional education style and also equips the learner to be competent in the modern scenario.

Features of LMS: LMS is the platform for teachers and students to learn and display their skills have certain common features:

- **Easy graphical user interface:** More aesthetically pleasing and functioning.
- **Customization:** Option to tailor the systems according to your needs (e.g.: language), option, notification setting.
- **Enrollment:** Option to enroll students to track their details, to assess course progress and to send test results for them.
- **Virtual class rooms:** Integrates white board system, online calendar system etc.
- **Social net working:** It helps to integrate with social Medias like twitter, WhatsApp, face book etc. at the click of a button.
- **Communication:** There is built in functionality for communicating with students, provides chat room for exchange of ideas.
- **Course Pathways:** It can specify the details of a course with a flexible work flow to keep students on some learning pathways.
- **Reports:** It has a reporting system of choice, into Excel, graphical representation of your data for easy understanding (simple form: Google Classroom).
- **Help with content creation:** Being user friendly, it uploads manages and distributes content within the system.
- **Testing:** It can set questions, set time limit, test result can be stored and available with the reporting area of your LMS [5].

Now let's get familiar with some of the selected learning management system of the year 2020.

- **Mind Flash:** Out of the class room train anywhere. Mind flash is cloud based E-learning platform and provides simple intuitive training solution for learners from home, in the institution or field.
- **Sky Prep:** It is an award winning LMS, recognized by industry experts, for its ease of use and outstanding customer support. The cloud based solutions enables you to deliver, manage and track your training with ease.
- **I spring:** Here also learning goes beyond the class rooms; can learn anywhere with this device. It keeps track with who is studying and who is not.
- **Moodle:** Stands for Modular Object Oriented Dynamic Learning Environment. (By Martin Dougiaman-computer scientist). It is the world's most customizable and trusted online learning solution. Moodle LMS is complemented by Moodle work place, Moodle apps, Moodle cloud etc. [The word 'Moodle' means insight, creativity etc.] [6].

Moodle LMS allows educators to create safe accessible, flexible and highly energizing online spaces for learners whether in universities, colleges, academics or institutes. It is open source flexible learning, mobile learning accessible for all, with easy integration.

Moodle is used for blended learning, distance education, flipped class rooms and other learning projects in schools universities and other sections. Teachers and learners can contribute to the educational experience.

Philosophy of Moodle includes a constructivist and social constructivist approach to education. Moodle provides an effective environment for learning communities.

Core features of moodle

- It offers a single platform for learning multiple course creation and quick back up along with convenient data management.
- It has collaborative tools and plans, detailed reporting, notification and alerts.
- Multilingual capability, multimedia integration is possible.

Some other LMS are: Canvas, Edmodo, Blackboard, Joomla, C-front, Schoolgy etc.

Though online learning has become the brand and the need of the time, the nature of Nursing Education which gives its significance to knowledge and hands on training along with soft skills, we cannot purely rely on online learning alone [7]. So there comes the recommended mode of Blended Learning.

Blended learning

Blended learning is combination of offline (face-to-face traditional learning) and online learning; the type that compliments online and offline learning. It provides the learners opportunity to enjoy the best of both worlds, for example, Nursing theory classes online and Lab and clinical, offline. Blended learning is called a Hybrid Learning. Institution can decide how it is organized.

There are two key principles of its success commonly associated with Blended Learning. They are social learning and collaborative learning [8].

- Students who share information with students and work with peers have a more enriched learning experience.
- Collaboration between students can be facilitated through group activities which rely on the information gathered through on line learning. It is a kind of social collaborative learning.
- Students who complete online classes followed by interactive face-to-face learning activities have richer experience.
- Students can benefit from another's strength, experience, ideas and skills. Here students are responsible for another's action and tasks which encourage effective team work as well.
- By engaging in shared task (e.g.: a project), learners gain the opportunity to learn a variety of skills such as group analysis and creativity. Collaborative team work builds skills.... according to blooms taxonomy, level of creation is reached.
- Added to it students who attend the live classes can learn from the collaborative learning and other stored or recorded contents.

Other methods of effective learning

- **Micro Learning:** Provides knowledge and skills without over whelming the learner. It is an emerging e-learning trend. Content of the topic will be broken down into smaller lessons and projects in micro steps and goes hand in hand

with traditional and E-learning. It provides bits of information which makes the learner to gather more information through reflective thinking, collaborative and social learning. Unlike “traditional” e-learning approaches, micro learning often tends towards push technology through push media, which reduces the cognitive overload.

- **Gamification Learning:** It is the use of game thinking and game mechanics in a non game context to encourage user and solve problems. E.g. Snake and Ladder game model to teach personal hygiene to children or healthy diet to diabetic patients.
- **Personalized Learning:** It is the tailoring pedagogy, curriculum and learning environments to meet the needs and aspirations of individual learners. (E.g.: a nurse, who has complete d the basics, wants to be trained in Dialysis units). What to learn when, where and how much is decided by the learner. It gives opportunity for the learner to learn the way it suits their target, interest and learning styles. Clinical Journalism peer to peer learning, reflective thinking etc. also can be utilized for personalized learning [9].

E-learning success model

Diagnose and Plan: Goals, readiness or need assessment.

- **Analyze and Design:** Content analysis - it includes range of topic to teach, how you will schedule theory and practical. Here identify what is most important, most time sensitive etc.
- **Audience analysis:** Whom we are serving - Diploma, GG, PG, doctors and clinical staff etc. Their needed areas, development needed etc.
- **Infrastructure:** Technology integration- adequate hard ware and the resources: Software, technical trainers, institutional designers, in view of global culture and development.
- **Development of learning content:** Learning analysis and content analysis - learning objectives, course length, access to technology, experience with knowledge, style of learning etc.
- **Presentation of the specific content:** Blended learning - Collaborative, social approach, who is responsible for development and delivery of the content.....media, tools, methods etc. Pre and Post assessment of presentation.....

- **Measure and evaluate:** Based on objective and outcome: improvement/reward/recommendation.

E-learning in nursing education-researches

Studies say that we have to consider the global changes as well as global demands while formulating the future nursing education system. Teachers and students needs to be prepared with different e-learning pedagogical approaches. E-learning improved the possibility of multidisciplinary usage, enhanced the creativity, motivation and accessibility to learning irrespective of time, place and status. Proposals came up are: Introduce the facilities of augmented reality to teachers and students to create layers of digital information including both virtual world and real-world elements to interact with real time.

The core competency for Nursing Education in 21st century explains the social nature of learning. The new literacy described are on skills needed to work in the society, strong communication skills, expertise in right usage of technology, innovative and creative thinking skills and problem solving skills. Prepare the old and young generation for a changing inter- connecting the world. Nursing profession typically require a post graduate degree in the field related to educational psychology, educational media, human performance technology, instructional design and so son. They found that digital technologies increasingly affect nursing globally. Example, include growing presence of Artificial intelligence (AI) and robotic system support. Societies rely on mobile, internet and social media and tele-health. So clinical decision support, electronic health records and other virtual models of care are essential in Nursing practice, so nursing education should be in the same direction. Nursing profession typically require a post graduate degree in the field related to educational psychology, educational media, human performance technology, instructional design and so on. It is found that digital technologies increasingly affect nursing globally. Example, include growing presence of Artificial intelligence (AI) and robotic system support. Societies rely on mobile, internet and social media and tele-health. So clinical decision support, electronic health records and other virtual models of care are essential in Nursing practice, so nursing education should be in the same direction.

Hence health policy makers and regulating bodies in the developing countries should put policies in place so that it may help in responding, coping and managing any crisis or modernization

through the revised education system. Nursing stays relevant to all time: Continue to give compassionate care in digital world. Nursing must accelerate the transformation into a digitally enabled profession, by investing in informatics, education, teachers, parents and the public as per the need. Digital technologies provide opportunity to support new models of care and approaches to nursing practice so don't prohibit progress on account of cultural and historical interpretations. So to say that Nurses should utilize informatics across all areas of professional practice, create leadership opportunities in digital Health and reform health policy in this area [10].

Concerns related to E-learning

Though there are benefits like no boundaries, no restrictions, more fun, cost effective, adopt technology etc., one cannot deny the drawback related to E-Learning.

- Practical skills are harder to pick up from on line resources.
- Isolation - students may feel a sense of isolation. As learning online is a solo act for the most part, which may give the learner the feeling that they are acting completely alone? Solution for it is video conferencing completely alone.
- A solution for these problems is video conferencing, social media and discussion forum.
- Health related concerns: -Continuous use technological devices lead to eyestrain, bad posture, back pain, Spondilosis etc. [11].

Conclusion

It is true that as individuals we all don't respond to one teaching method in the same way- some learn visually and others learn with repetition or writing. E-learning responds to those different needs with use of different types of material, whether that is audiovisual or interactive sessions, there is plethora of options to cater to the needs of each and every learner. Of course in the coming days there will be full individual personalization of content and pedagogy enabled by cutting edge technology, multiple ways of using technology, facial expression or neutral signal response clubbed with hands or training too. In a world where shocking natural emergencies occur, we cannot afford to compromise on molding of younger generation. So education system must be or will be prepare to empower the humanity to withstand and survive in this world happily, effectively and productively. So as nurses

and nurse educators let us ignite the nightingale's lamp with the modern technology, so that we can stay as relevant and needed professionals in the constantly changing society.

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