

E-Learning in Education

Prof. Deepali U. Patil¹ and Prof. Swati A.Chandankhede²

Assistant Professor

Kamla Nehru Mahavidyalaya, Nagpur, Maharashtra, India

deepali.kalbande2014@gmail.com¹ and swatiachandankhede@gmail.com²

Abstract: *E-learning fulfills the thirst of knowledge and offers online content that can be delivered for the learner at anywhere, anytime and any age through a wide range of e-learning solution while compared with traditional learning system. It also provides the rapid access to specific knowledge and information. With the rapid growth of voluminous information sources and the time constraint the learning methodology has changed. Learners obtain knowledge through e-Learning systems rather than manually teaching and learning. In this research paper proposes the e-learning management system with web services oriented frame work and SOA. This system supports the cross browser and fully integrated with different databases. This system focused around the several features namely Content Management, Content Protection, Learning Management, Delivery Management, Evaluation management, Access Control, etc., and mainly focused on integrated platform needed for e-learning and managements. E-learning has been introduced to empower learners to get basic schooling and enhance skills. Also, they can obtain a degree certificate, without actually attending school or university or any other institution. It is a great source of earning, wherein anyone can teach from anywhere in their preferred time. Applying e-learning to all levels of schooling helped to ensure students grasp the lessons adequately at a faster place. According to psychology, the audio-visual method of teaching leads to a disciplined learning environment. There are effective tutor and student engagements. One of the importance's of e-learning in education is that tutors and participants both can develop advanced learning skills. For example, creating and selling EBooks is one such advancement. E-learning has worked towards bringing learners, tutors, experts, practitioners, and other interest groups to one place. Thus, there is a good practice of knowledge sharing followed through different online platforms. This is important in current times as competition is rising and the world is also growing. Hence, quick information helps in the better growth of an individual. The emergence of Covid-19 pandemic undoubtedly resulted in devastating socio-economic challenges across the world. In attempt to manage the contagion, many countries have implemented restrictive measures to reduce social gatherings and to promote social distancing. This meant the closure of higher learning institutions and a major shift from traditional classroom-based teaching and learning to virtual approach. While higher education may have transformed and moved to online due to Covid-19, it is unknown whether this transformation produces positive teaching and learning outcomes. This literature review is conducted to elicit relevant evidence on E-learning and E-teaching outcomes, challenges and opportunities in the era of Covid-19 pandemic. A comprehensive literature search was conducted on 16 databases for relevant studies published in the year 2020. In addition, reference lists of studies identified from the initial search were used to retrieve additional relevant studies. The search terms used were Covid-19, corona virus, online learning, E-learning, E-teaching and higher education. An inclusion and exclusion criteria was developed to select the most relevant articles for final review. Studies were eligible for inclusion if they addressed higher education E-learning and E-teaching outcomes, challenges and opportunities in the era of Covid-19.*

Keywords: Productivity E-learning, Self-improvement, Medical Courses, Healthcare Professionals, Online Courses ,Online Home Schooling, ICT, Global School Curriculum

I. INTRODUCTION

A learning system based on formalized teaching but with the help of electronic resources is known as E-learning. While teaching can be based in or out of the classrooms, the use of computers and the Internet forms the major component of E-learning. E-learning can also be termed as a network enabled transfer of skills and knowledge, and the delivery of



education is made to a large number of recipients at the same or different times. Earlier, it was not accepted wholeheartedly as it was assumed that this system lacked the human element required in learning. Since the Internet was adopted and further developed as a means of communication by educational institutions in the 1970s, academics have been aware of its massive potential as a learning tool. In recent years, governments of both developed and under-developed nations have become increasingly excited about the possibilities of online learning to deliver cost effective, easily accessible and ever-current education to all ages and social backgrounds, regardless of time and geography.

E-learning refers to the use of various kinds of electronic media and information and communication technologies (ICT) in education. E-learning is an inclusive terminology that encompasses all forms of educational technology that electronically or technologically support learning and teaching. Depending on whether a particular aspect, component or delivery method is given emphasis, e-learning may be termed technology-enhanced learning (TEL), computer-based training (CBT), internet-based training (IBT), web-based training (WBT), online education, virtual education, or digital educational collaboration. 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, underlay many e-learning processes. 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.

II. LITERATURE REVIEW

Higher Education Institutions Response to Covid-19 and Lockdown

Most studies conducted on the impact of Covid-19 and national lockdown address how higher education institutions responded. University and college academics and support staff members were since mandated and encouraged to work from home and observe the Covid-19 protocols. Some universities went to an extent of cleaning or disinfecting the university premises following the Covid-19 positive tests by some of their students and staff members in attempt to avoid further spread of Covid19.

Challenges for Online Teaching and Learning

A sudden implementation of online teaching and learning due Covid-19 and lockdown by many universities has proven to bring numerous challenges into higher education industry. Although there are remarkable successes especially for higher learning institutions who already had well established online teaching and learning systems, it has been recognized that the shift from class-based to online learning has not been smooth for most universities and colleges. The literature shows that, among others, academics' and students' difficulties to adjust; connectivity, network and internet issues, physical space and environment; mental health related issues; lack of basic needs; and lack of teaching and learning resources are the major challenges associated with the sudden change to online learning

Mental Health Related Issues

The mental health issues associated Covid-19 and the sudden shift from class-based to online learning are also demonstrable in the literature. Such issues includes stress, anxiety and depression which occurs due to a sudden change in one's lifestyle and uncertainly about the future Learning loss and dropout rates, other harder to quantify factors due to covid-19 cause social and emotional disruption for general public and worse for students In addition, students whose family income or livelihoods strategy was impacted by Covid-19 and its regulations were found likely to suffer from stress anxiety and depression, which in turn affects motivation to engage in online learning While Covid-19 created fear and other mental health issues among Israeli university students, further discovered that students who are psychologically affected turned to substance use in order to cope. This coping mechanism during these difficult times has negative impact on learning. Among Chinese students, 24.9% have experienced anxiety because of this COVID-19 outbreak

Details of Abstract

Before talking about where e-learning is going, it is worth spending a few words to describe here we are now.

When we think of learning content today, we probably think of a learning objects. Originating in the world of computer-based delivery (CBT) systems, learning objects were depicted. Today, e-learning mainly takes the form of online courses

In the 'Information Age' where the need for 'knowledge workers' increases as the need for manual workers decreases, 'lifelong learning' is seen as key to the continued success of modern society. 'e-Learning' is considered by many as the only viable solution to the problem of delivering the resources required to facilitate lifelong learning.

However, current theories and practices in e-learning are neither simple nor coherent, meaning that the implementation of this solution is happening sporadically, randomly, and with varying degrees of success. In spite of the enthusiasm and commitment being shown by the UK government, there is still considerably apathy, confusion and skepticism about e-learning amongst teachers, students and academics alike. Although most recognize that e-learning has the potential to enhance greatly learning and the learning experience at all levels, many feel that its drawbacks are currently still too great to commit so heavily to it. Although much has been said and written on the subject of e-learning, there are few definite conclusions to be drawn from it. Books are written, Internet groups are formed and conferences are held, but we still seem unable to really define how, when or where e-learning should best be used. While the arguments rage on, an increasing number of institutions are attempting to pioneer their own style of e-learning, all with their own successes and failures. The DFES aims to have in place its 'Unified e-Learning Strategy' by the summer of 2004, but whether this will improve, impede or have no effect on e-learning is itself a mater for debate. A click of a mouse button provides any student anywhere with unprecedented opportunities to learn. So if a child in Grand Junction wants to master Japanese, it's possible online. If a budding artist in Five Points wants to study the masterpieces of the Louvre, it's possible online. If a future Stephen Hawking in La Junta wants to study Gravitational Entropy with the man himself, it's possible online. If military parents want continuity in their children's education throughout frequent moves to serve our country, then it's possible online. 'E-Learning is the employment of technology to aid and enhance learning. It can be as simple as High School students watching a video documentary in class or as complex as an entire university course provided online. e-Learning began decades ago with the introduction of televisions and over-head projectors in classrooms and has advanced to include interactive computer programmer, 3D simulations, video and telephone conferencing and real-time online discussion groups comprised of students from all over the world. As technology advances, so does e-learning, making the possibilities endless.

However, with the rapid progress in technology and the advancement in learning systems, it is now embraced by the masses. The introduction of computers was the basis of this revolution and with the passage of time, as we get hooked to smartphones, tablets, etc., these devices now have an importance place in the classrooms for learning. Books are gradually getting replaced by electronic educational materials like optical discs or pen drives. Knowledge can also be shared via the Internet, which is accessible 24/7, anywhere, anytime. E-learning has proved to be the best means in the corporate sector, especially when training programs are conducted by MNCs for professionals across the globe and employees are able to acquire important skills while sitting in a board room, or by having seminars, which are conducted for employees of the same or the different organizations under one roof. The schools which use E-learning technologies are a step ahead of those which still have the traditional approach towards learning.

The environment in which medical students learn today is vastly different than it was 20 years ago when the Internet was not such a dominant tool in medical education. E-learning platforms are now increasingly utilized by medical schools around the world and comprise adaptive tutorials, audiovisual clips, and virtual models. These educational media possess several distinct advantages over traditional didactic models of instruction, including the ability to update material in a timely manner to ensure delivery of the latest evidence-based content to trainees. E-learning has been demonstrated to be as effective as conventional didacticism and can be used to foster self-directed learning.¹ It encourages medical students to exert greater control over their learning by allowing flexibility over content and pace. In such models, educators can evaluate competencies objectively through online assessments; enabling students to receive personalized feedback for self-improvement-learning will undoubtedly have a significant impact on the environment in which future medical students learn. The gradual shift towards e-learning is seen as a catalyst for applying adult learning theory, which will see more medical educators taking on the role of facilitator and assessor of

competency.¹ Most medical students view e-learning as enjoyable and effective but, interestingly, do not see it replacing traditional didactic methods. Indeed, e-learning is often a complement to instructor-led methods in a blended approach. Studies on nursing and medical students have demonstrated that satisfaction is consistently higher in a blended learning environment compared with a traditional lecture setting. However, this satisfaction is not correlated with test scores, where there is often no significant difference between the two pedagogic approaches. Further research is needed to establish the role of blended learning in medical education.

No doubt, it is equally important to take forward the concept of non-electronic teaching with the help of books and lectures, but the importance and effectiveness of technology-based learning cannot be taken lightly or ignored completely. It is believed that the human brain can easily remember and relate to what is seen and heard via moving pictures or videos. It has also been found that visuals, apart from holding the attention of the student, are also retained by the brain for longer periods. Various sectors, including agriculture, medicine, education, services, business, and government setups are adapting to the concept of E-learning which helps in the progress of a nation.

Some of the benefits are given below:

- E-Learning is student centered. The learner is the core of any e-Learning system. Materials and activities are designed with the needs and interests of the learner in mind. Students assume control of their learning experience and use it to suit their specific needs.
- E-Learning is self-directed and self-paced. Students control the amount of time spent on a particular topic. This allows learners to skip material they already understand or to spend additional time on difficult areas. This individualized approach usually allows learners to complete their education and training faster than in traditional courses.
- E-Learning is interactive and hands-on. The use of a variety of multimedia increases student involvement and reinforces the learning experience. This leads to increased retention and a stronger grasp of the subject at hand.
- E-Learning is flexible. Learning can take place anytime and anywhere, as long as the necessary equipment is available. The logistics and expense of face-to-face education and training can be extremely limiting when students are separated by distance.
- E-Learning also allows physically or otherwise challenged students to more fully participate.
- E-Learning provides consistent and effective training. All of the target learners can participate simultaneously and receive the same information, reducing the variability introduced through multiple sessions in different locations.

III. CONCLUSION

E-learning is not just a change of technology. It is part of a redefinition of how we as a species transmit knowledge, skills, and values to younger generations of workers and students. Learners will have access to millions or billions of knowledge modules. Some will be Web pages with simple text and graphics. Others may include multimedia simulations. In many fields, e-learning has become the default way to conduct training or to provide education. There are four secrets of e-learning. The first secret is to teach what learners need to learn in the way they most naturally learn. The second secret is to define clear learning objectives. The third secret builds on the first two. It is to focus on the right objectives. The final secret is in the power of testing.

REFERENCES

- [1]. Akyol, Z., & Garrison, D. R. (2011). Understanding cognitive presence in an online and blended community of inquiry: Assessing outcomes and processes for deep approaches to learning.
- [2]. British Journal of Educational Technology, 42(2), 233-250. Bates, A. W. & Poole, G. (2003). Effective teaching with technology in higher education: Foundations for success. Indianapolis, IN: Jossey-Bass.
- [3]. Duffy, T. M. & Kirkley, J. (2004). Learner-centered theory and practice in distance education: Cases for higher education. Mahwah, NJ: Lawrence Erlbaum Associates.