



A Study on Online Learning - Benefits and Challenges

Jinitha R¹, Meghana V²

2nd Year M.Com (FA), Jyoti Nivas College, Autonomous, Bangalore

ABSTRACT

This expansive nature of the Net and the accessibility of new technology have generated a great hike in the demand for web based teaching as well as learning. Distance learning or online education is quickly into school districts and colleges across the nation. This paper aims to explore whether students could benefit from online learning and also to examine the potential challenges-drawbacks of online learning. Distance education or online education is known as a way of formal learning activity, which is expected to occur when students and instructors are being separated by distance or can be by time. Communications technology such as television, videotape, computers and email support. Online learning or Distance learning is to be the learning experience or environment that is completely dependent upon the network or net as the first delivery mode of communication as well as for presentation. There are potential benefits of investing in online learning for example, Educational Benefits, Reduced Time to Market, Growth in Faculty Learning Curve increased access, improved quality of learning, “lifelong” learning opportunity, profit making, and many more. Learning through out in the 21st century can be characterized by the convergence of diverse global learners using web- based technology tools to develop and sustain virtual communities of practice. Limitations are the evidence in this popular learning environment. Such as Causes of Security Threats, Online learning being inaccessible to the computer illiterate population technical support and many more. This article will review the benefits and challenges of online learning.

Keywords: Distance Learning, Technology, Internet, Security

I. INTRODUCTION

Online learning is known as the newest and very popular form of distance education today. From the past decade, it is said to have a major impact on education and the trend is only increasing. Online learning is education that takes place over on any wireless devices or wire devices through the help of Internet. It is often known or referred to as “E-learning” among other terms in general. However, online learning is just one type of “Distance Learning” - it is the umbrella term for learning that takes place across distance and not in a traditional classroom.

Nowadays, the education field is changing and it is growing worldwide. In many other countries, the system is said to have more relevance because of the quality and the demand as well as the innovative systems etc. This new educational trends are being reflected in several studies about distance education.

The studies had shown that online learning is comparatively better than “Face to Face Learning” and the implementation is being more effective because of the different technological that are expected to be used, based on marketing and Big Data Systems. The change of education, based on resistance, causes effective learning following systemic evolution, which is expected to drive teaching methodologies with the application of technology disrupting with challenges in the educational world.

The benefits of the online education is much higher than that of the negative consequences, legal effects and cautions always have to be take in attention. Accordingly, possible legal issues and conflicts in online education such as copyright and data protection are expected to be studied and prevented in omission and negligence. Although these issues are also expected to appear in “Face-to-Face Learning”, in online platforms are more sensitive because physical proofs are always recoded in databases although the publications can be modified.

The number of online users is being expected to increase every day, which may be due to multiple reasons. Recently COVID-19 has resulted in schools shut all across the world. Globally, there are over 1.2 billion children are out of the classroom. As a result, automatically education has changed dramatically, with this distinctive rise of online learning, whereby teaching is undertaken remotely and on digital platforms.

Past few researches says that online learning has shown to increase retention of information, which is the changes due to coronavirus having caused might be here to stay. While countries are at different points in their COVID-19 infection rates, worldwide there are currently more than 1.2 billion children in 186 countries affected by school closures due to the pandemic. After a study, it says in Denmark, children up to the age of 11 are expected to be returning to nurseries and schools after initially closing on 12th March 2020, but whereas in South Korea students are responding to roll calls from their teachers online. With such unexpected sudden shift far away from the classroom in many parts of the globe, some worry whether the adoption of online learning will continue post-pandemic.

Even much before COVID-19, there was already high growth and adoption in education technology, with global investments being reaching US\$18.66 billion in 2019 and the overall market for online education projected to reach \$350 Billion by 2025. Language apps, virtual tutoring, video conferencing tools, or online learning software, there has been a significant surge in usage since COVID-19.

a. Education Sector Responding To COVID-19

In action of the significant demand, many online learning platforms started offering free access to their services, platforms like BYJU’S, a Bangalore-based educational technology and online tutoring firm founded in 2011, which is now known as the world’s most highly valued Edtech company. Also announcing free live classes on its Think and Learn app, BYJU’s has seen a 200% increase in the number of new students using its product, according to Mrinal Mohit, the company's Chief Operating Officer.

Tencent classroom, meanwhile, has also said to be used extensively since the mid-February after the Chinese government instructed a quarter of a billion full-time students to resume their studies through online platforms. Which resulted in the largest “Online Movement” in the history of education with approximately 730,000, or 81% of K-12 (kindergarten to 12th) students, attending classes via the Tencent K-12 Online School in Wuhan.

Few other companies are bolstering capabilities to provide a one-stop shop for teachers and students. For instance Lark, which may be a Singapore-based collaboration suite which was initially developed by ByteDance as an indoor tool to satisfy its own exponential growth, began to offer teachers and students unlimited video conferencing time, auto-translation capabilities and lots of more features. Global server was be ramped up by lark for infrastructure and engineering capabilities to make sure reliable connectivity.

Alibaba’s distance learning solution, DingTalk, was to be organized for an identical influx: “To the support of large-scale remote work, the platform was tapped by Alibaba Cloud to deploy quite 100,000 new cloud servers in only two hours last month – setting a replacement record for rapid capacity expansion,” consistent with DingTalk CEO, Chen Hang.

II. LITERATURE REVIEW

M.H. Benson Soong, H. C., & Loh, K. F. (2000). The study is based on to evaluate hypotheses on the critical success factors for on-line course resources in a tertiary setting. Evolutionary of educational media and methods leading up to the usage of such resources are also briefly discussed. In this case it shows that it is essential for all these factors to be considered in a holistic fashion; the inadequacy of even one of these factors would have an immensely detrimental effect on the overall success of the on-line resource.

Volery, T. (January 1, 2001). A huge growth of end-user computing, low-cost communication, and the development of the Internet has led to a surge of online courses. Outcome of this, many educators still await the promise of technology's power to enhance teaching effectiveness. This research article presents an exploratory study of a Web-based distance education course at a serious Australian university. It had been identified that three critical success factors were related to teaching effectiveness within the online delivery that's technology, the lecturer, and therefore the students' previous use of the technology.

Chaney, E. G. (November 1, 2001) article raises questions based on how to support a virtual class at the high school level. Virtual high schools were offered students around the world an alternative way to learn and interact with each other and with teachers. A study conducted at a school examined whether a school of the rural Midwest may benefit from online instruction. Student and parent reactions to a Web-based learning environment differed in the study.

Norton, P. (Mar 19, 2006). Regardless of whether it might or not online learning reflects sound educational practice, it changes the landscape of high school learning. Yet, many still wonder: Will online learning result in better learning? The answer appears in paper to be a resounding no since the experts say that most of the online curricula are simply traditional material copied to the Web. The paper aims to elaborate on an alternative design model, The Online Academy, a virtual high school currently being developed that adopts new models to frame emerging learning environments.

Tinker, R. (February 5, 2008). The most important three approaches for online learning strategies were identified that is: online lecture, course supplement and correspondence, it was based on the centrality of student collaboration. There were eight design characteristics of the Concord model that could fit together to create a practical, powerful design for online courses are detailed. Experiences in applying of this model to the teacher professional development, student courses, and online course developers are summarized.

Johnson, C. M. (08 April 2015). As many colleges had to continue to expand online offerings, student participation within courses should have been assessed to ensure that teachers can implement effective, responsible lesson plans. The research examined discourse in an online classroom in order to get student participation by observing each student and instructor exchanges within the discussion board. This study says that through insightful planning and guided responses, instructors can manage online classroom discussions to better direct student communications to improve collaborative learning and knowledge construction.

a. Research Gap

The previous articles are more concerned with the online learning even before the pandemic has arisen and focused on the high school online learning, now after the pandemic has arisen online learning has drastically increased which has resulted in many benefits and also challenges which the study is concerned about. Even after online learning being popularized it was not adopted worldwide but now without any option everyone are into online learning. Therefore the current study looks in revealing the benefits and challenges of online learning.

III. RESEARCH METHODOLOGY

a. Statement of the Problem

The prospect of getting a whole university experience compacted into a private device is unusual to mention the smallest amount. Online learning makes standardized education accessible to students all-around the globe. This is often a spectacular advantage for online education providers, students in remote locations, and people without the funds to commence traditional campus study programmes where fees and student debt frequently eclipse the enjoyment of learning, but the problem rises with respect to security, trust issues and also it can be difficult for students who have only ever known traditional

classroom settings. However, online learning does require the necessary computer equipment to run online learning platforms, this will potentially pose problems for college kids and schools with old outdated hardware and software. This context becomes important to understand and access various benefits and challenges that are faced by the online learners to determine its future in India.

b. Objectives of the Study

- To identify the challenges faced while learning online.
- To identify the factors benefiting online learning.

To meet the objectives of the study, a conceptual research has been carried out. The study is completely based on secondary data. The data has been collected from internet, articles, newspapers, blogs etc. which includes an analysis of research works carried out on online learning.

IV. THE CHALLENGES FACED WHILE LEARNING ONLINE

• Causes of Security Threats

Security threats in online learning can be examined from two aspects: the user side and the management side. As far as the user side is concerned, emerging ICT applications and imprudent human behavior are the main causes that lead to security issues in online learning. Besides, of the security risks inherent in the Internet, the development of new learning technologies and social media have allowed for many new security breaches and a much larger security impact (Adams & Blandford, 2003; He, 2012), the quantity of malicious content and therefore the number of cyber-attacks on these new Web applications is rapidly increasing.

From the management perspective, E-learning providers have made some mistakes or issues. In the domain of E-learning, threats or problems not only come from outsiders, but also from insiders (Alwi & Fan, 2010). Many scholars argue that problems related to security risks are created by online learning providers' underdeveloped security policies and immature security measures. Most of online learning providers rush to adopting information communication technology without fully understanding the related security concerns. Yao and Ji (2011) points that E-learning system designers consider the quality of online course content a considerably bigger issue than the security of their online systems. Furthermore, Weippl and Ebner (2008) notes that even though almost all institutions have firewalls and anti-virus software to protect their campus resources, they often fail to perform adequate information system security management. Unfortunately, content and technology are still the focuses of online learning (Srivastava & Sinha, 2013).

• Online Learning Is Inaccessible to the Computer Illiterate Population

96% of Americans own wireless devices, and around 73% of Americans own a personal devices. Therefore, it is easy to argue that online education is easily accessible to most people. However, the

statistics don't paint the whole picture. In spite of the booming growth in technological capabilities, the rates of computer literacy are still far from perfect. The average percentage of computer illiterate people are around 25%, which means that a quarter of people will have to face major trouble in accessing E-Learning as an educational method. In many parts of the world, the situation is often very serious. In India, despite the country being one of the major players in the world of Online Learning, there is still a serious large gap in computer literacy in the population. Till such gaps in society exist, E-education will not be able to reach all citizens. Therefore, it's very important that we look at online learning as an addition, rather than as a replacement to traditional education.

- **Technical Support**

As with any real-time event, time zone differences are a concern especially with classrooms. The wider the student demographics, the more complicated the problem becomes. (Taylor, 2002). Additionally technical problems are always potentially troublesome in the case of videoconferencing and virtual meetings. Issues such as sound and video quality can be affected by network traffic, improper set up, and other technical parameters (Taylor, 2002). Infrastructure differences among participants can also come into play, both in terms of local hardware and connection speeds.

V. BENEFITS OF ONLINE LEARNING

- **Educational Benefits**

A common benefit found in online courses is that students learn more than just course content. Weiner (2003) found that E-learning significantly improved writing and computer skills in many Cyber Schools. The study revealed that the key to successful online learning for students lies within motivational issues and highly structured courses. Additionally, the results of this research study indicate that most of the students are ready to learn in cyberspace if they are able to provide appropriate support and guidance is available to them, especially from their teachers. Also anyone could study life time with the help of online learning or would be motivated to learn something apart from their study field.

- **Growth in Faculty Learning Curve**

Working with most creative web design teams will enhance one's own appreciation of the complications of designing most effective online course. The instructor should have the ability to enhance their presentation by the addition of slides, audio messages, video animation, flat or three-dimensional images, and hyperlink texts. Multimode presentations easily convert to web presentations. Online courses mean instantaneous communication. Faculty benefits from the experiences of having students from different time zones, different countries, and different cultures.

- **Reduced Time to Market**

A huge benefit to E-learning is the ease and speed with which course materials would be updated. Given revised data used to mean having the material retyped, printed and bound, then mailed out to students or distributed to them in class, often after significant delay. With the help of an online course, the instructor might edit the appropriate web pages in the course, also can upload the new material and it becomes available to students instantaneously. The time lag is removed.

VI. CONCLUSION

Online learning is here to remain. Many universities, continuing education institutes, and countless commercial organizations are turning to online learning for very valid reasons. Online learning does provide the chance to succeed in new markets both for selling their programme and educating students. Lifelong learning within the 21st century are often characterized by the convergence of diverse global learners using web-based technology tools to develop and sustain virtual communities of practice. These virtual communities can connect geographically and demographically disparate individuals from schools, education, and therefore the workplace to collaboratively achieve common purposes or solve real problems. Online learning as an addition, instead of as a replacement to traditional education. The flexibility of online learning is clearly of great value to several mature adults trying to balance work, family, and study requirements.

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