



ISSN: 2230-9926

Available online at <http://www.journalijdr.com>

IJDR

International Journal of Development Research

Vol. 10, Issue, 07, pp. 38592-38594, July, 2020

<https://doi.org/10.37118/ijdr.19490.07.2020>



RESEARCH ARTICLE

OPEN ACCESS

UBIQUITOUS MODE OF LEARNING: THE NEED OF THE HOUR

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ARTICLE INFO

Article History:

Received 09th April, 2020

Received in revised form

26th May, 2020

Accepted 20th June, 2020

Published online 30th July, 2020

Key Words:

Ubiquity, U-learning, Technology, Synchronous learning, Asynchronous learning.

ABSTRACT

Ubiquitous Mode of Learning is the learning process that happens on an everyday basis, and is enhanced by the use of technologies. The major benefit of this type of learning is that learning is possible at any time and any place. The learning process needs techniques and tools to present the knowledge, interact with it and share it with others. Even though e-learning has been in existence since 1990 with the advent and spread of the internet, it has got more significance in now-a-days. In the present context of pandemic and lockdown, learning by using technology has become more popular and it became an important tool to support the learning system to achieve its goals. Since Covid-19 demands us to keep physical distance in all walks of our life, educational system found technology based learning as the one and only resort to rely on to make teaching-learning process to happen. Thus we can see a great paradigm shift from traditional physical mode to a ubiquitous mode of learning. Thus ubiquitous mode of learning is an everyday learning environment supported by devices such as computers, mobile phones, networks etc. Types of delivery in this type of learning includes both synchronous and asynchronous learning where learners of different backgrounds can be accommodated and are able to manage their time and continue in their learning as and when they needed it. During this lock down period all these facilities are very effective to cater to the needs of the learner. This article deals with the nature and advantages of e-learning that happens with the help of technology, and the necessity of this mode of learning and its ubiquity in the present day scenario.

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Citation: Dr. Suja K. 2020. "Ubiquitous mode of learning: the need of the hour", *International Journal of Development Research*, 10, (07), 38592-38594.

INTRODUCTION

In the present scenario of Covid -19 pandemic and lockdown e-learning has become a 'new normal' mode for knowledge transaction. With the introduction and wider use of internet since 1990's online learning gained attraction. Those who are more familiar with technology and learners those who are not able to use traditional classroom facilities due to various reasons such as geographical distance, time constraints, physical constraints etc have welcomed it. With the outbreak of COVID-19 pandemic, learning with the help of technologies became an inevitable and useful tool for education. Learning with the help of technologies not only transact knowledge but also is helpful in developing and exchanging resources. This medium of study without a physical space, black board, chalk etc became the need of the hour. Ogata *et al.*, (2009) defined ubiquitous learning as a learning environment in an everyday context and is supported by computers, mobile phones and wireless networks. Hwang *et al.* (2008) pointed out that the aim of ubiquitous mode of learning is to provide learners with content and interaction at any time and at any where basis. It is a mode of learning by using computers and smartphones with the help of internet connection, where scheduled online classes can be conducted by using video

conferencing tools or through learning management systems (LMS). Learners can also access and use online learning materials prepared and uploaded by teachers and students can discuss their lessons in the live interaction sessions. Learning process enhanced by the use of technologies is considered as the ubiquitous mode of learning, where the basis of learning is the need and interest of the learner without bothering about the physical space, time, distance, age and so on. It uses electronic media and information and communication technologies to facilitate learning and teaching. Other names used to represent this type of learning platforms are, computer assisted, web based, online and virtual learning. Media for knowledge transaction in online platform are text, audio, video, animation etc. E-learning can be considered as a student centered approach in education where learners are the focal point and they have freedom and flexibility to use various facilities to access the available resources in the internet such as lectures, videos, kindle versions, presentations, online versions of journals, online or e- library etc. There are two types of delivery in online mode of learning viz., synchronous and asynchronous. Synchronous delivery is the real time communication which requires the presence of all learners at the same time and the learners have to work on a common schedule with other students and teacher where mutual interaction, motivation, and discussions

enrich each other in their learning. Asynchronous delivery provides the flexibility to learn at their own pace and at their own schedule. In asynchronous mode of delivery the responsibility of learning is upon the learner and it does not stick on the percentage of attendance as in a scheduled class. Interaction and communication in this mode is by using e-mail, chats and other electronic messaging facilities. The benefit of this type learning is that students from various geographical regions of the world and various time zones can attend the same course without having the restrictions of the schedule. The disadvantage of asynchronous learning is that the students learn at their convenience but feel isolated in the learning environment without communication and interaction between students and teachers in the real time. Without having fixed learning schedule and structure students will not get enough motivation from teachers and their fellow students. Thus both the systems have their own pros and cons. To solve the problems of both the systems a hybrid of both type of learning can be adopted for a better result where a mix of both of the system can be used according to the convenience of the learners and teachers.

REVIEW OF LITERATURE

Ogata *et al.* (2009) proposed LORAMS, a personal learning assistant that helps the learners with a system to share and reuse experience in ubiquitous learning by providing links of movies and environmental objects. The result of the study indicated that performance of the learners by doing a task using LORAMS is better than doing the same task without its assistance. Bill and Mary (2009) proposed ubiquitous learning as an agenda for educational transformation and suggested seven moves which are characteristic of ubiquitous learning. Each explores and exploits the potentials of this type of learning. If we make each of these moves, we may discover that a new educational paradigm begins to emerge and they take a leading role on technological innovation. Vicky and Jun (2004) pointed out that Ubiquitous learning (U-learning) has the potential to revolutionize teaching-learning process and education as a whole. Assimilation of u-computing in education will be a great step and u-learning allows learners to access education with flexibility, calmness and seamlessness. Integration of adaptive learning technique for personalized learning with u-computing and u-learning may offer great innovation in education. NelsonB and Gustavo (2012) proposed the design, implementation and evaluation of system for Mobile Collaborative Knowledge Construction called MCKC supporting collaborative face-to-face tacit knowledge construction and sharing it ubiquitous scenario and this system can be used by students of undergraduate level to learn how to construct, allowing them to create at anytime and anywhere, make explicit and share their knowledge with fellow learners by using visual metaphors, gestures and sketches to implement the human-computer interface of mobile devices. There are certain factors that compel educators and teachers for this mode of learning.

Physical Distancing: In our present context of lockdown and physical distancing u-learning has become the need of the hour. The outbreak of COVID- 19 pandemic has brought forward many uncertainties into the lime light all over the world and keeping physical distancing is one among them. These uncertainties can be seen almost all sectors of human lives which include economy, education, industry, tourism etc. Education is one among them and has got great significance. In March 2020, the educational institutions were shut in the context of the health emergency without any prior planning for the immediate future. The uncertainty lasted for days and weeks and then the educational sector has come out with certain plans for the future. Learning with the help of internet and technologies is the feasible solution for present day situation that is a ubiquitous mode of learning, where learners can attend courses while keeping physical distancing.

Concerns regarding the Geographical Boundaries: During Lock down most of the learners from all over the world returned to their

native places and now they are living in their native places far away from their educational institutions where they were enrolled for various courses. Ubiquitous mode of learning is the need of the hour for such learners in order to save their time and effort which they already invested in. Now the learners who are away from their educational institutions can also use this mode of learning without considering the geographical boundaries. Ubiquitous mode of learning improves opportunities to students who are disabled due to various reasons, temporary illness and those who are part-time or fulltime employed.

Constraints regarding the time zones: Learners who are away from their institutions can be in a different time zone and in such contexts the ubiquitous mode of learning becomes the need of the hour in order to accommodate them and their learning needs. These learners can access the resources according to their time convenience and thus ubiquitous mode of learning is very much necessary for them to have flexibility in their time related constraints.

A transition to an innovative method: In the old method,teaching-learning happened in an examination point of view and in an academic score oriented way. New method of teaching promotes innovative, technology driven and inquiry based learning. Promotes master their knowledge by 'drill and practice', which is a rote method where in new way of teaching-learning is an inquiry based learning where needs of the learners can be specifically considered. Students have the freedom to learn what they are interested in. Complex topics which are very difficult to explain with words can be illustrated with videos, animations and illustrations.

A transition from teacher centered to a learner centered classroom: Transition from teacher centered to a learner centered classroom environment is very much necessary in our present context where the learners have the freedom to learn independently and this mode of learning provides opportunity for problem solving.It also encourages inquisitiveness and research mind to learn topic which are of learner's need and interest. In the old method of teaching teacher had the role of an instructor with talk,chalkand board where in the new method teacher is only a facilitator. Here students take the responsibility of their learning and they construct knowledge.

ICT Enabled Learning: Learning is a lifelong process, which must happen even at the time of adversities. This is the lockdown experience of learning. ICT enabled learning in lockdown has become a popular mode of learning. Through technology assisted initiatives learners, facilitators and educators can access materials and resources round the clock and they provide enough flexibility, convenience and interactive user interface.In the present scenario of lockdown, various national initiatives for online education are promoted to continue learning during the lockdown. PM e-Vidya programme is one of the important initiatives for digital education launched in May 2020 for school education. Under this DIKSHA, 'One Nation One Digital Platform', quality e-content, QR code enabled text books for all grades and various MOOC courses etc. are made available for school education. SWAYAM, an online platform has a repository of 1900 courses and having subscribers all over the world. SWAYAM PRABHA TV Channels, Radio programmes, DAISY, special e-content for visual and hearing impaired, online coaching provisioned by the Department of Higher Education like ITPAL for NEET and JEE etc. are some of them. Other programmes include e-patasaala, National Repository of Open Educational Resources, ShikshaVaani, a CBSE Podcast,Virtual labs, language learning programmes, Robotics Education and so on. ICT has eased the burden and concerns of educators and parents by providing digital and online tools. Virtual classes through Zoom, Google classroom, WebEx, Skype, MS Team etc. are used by students and educators in order to be in touch with parents, fellow students and teachers. There are many online courses offered through these platforms where students, teachers and educators can make use of these courses during this pandemic period in order to boost and excel in their interested area of learning.Many of them are free of cost also. These ICT tools also provide opportunities to educators to create educational resources of their own not only to

help students and but also to help themselves to improve their self-image in their profession. Students can have access to many e-content like, books, notes, lectures, theses etc. through various online platforms like Swayamprabha.gov.in, ugcmoocs.inflibnet.ac.in, youtube.com, shodhganga.inflibnet.ac.in etc. Thus Covid -19 pandemic period and other times can be used as times of learning and self-improvement.

Challenges of ubiquitous mode of learning: Even though Ubiquitous mode of learning has got many prospects for the future, there are certain challenges in this mode of learning which cannot be ignored. The ethical concern of 'digital divide' is the major challenge when we promote this type of learning. In the Indian context, there are thousands of learners who are not able to afford devices such as computer or mobile phones with 4G internet connection. Constant power failure, poor connectivity, non-availability of sufficient bandwidth etc are real challenges even in the metro cities. Possibilities of mis-use such as cheating, unwanted use of devices etc are to be addressed. Other concerns are social resistance to anything new, ill-management of virtual classrooms due to limited skills and experience among students and teachers, bias towards technology based learning, lack of opportunities for social interaction and social learning, lack of face to face motivation, encouragement and instant feedback from teachers and students, communication gap, distractions in learning, lack of time management skills and self-discipline etc. can hinder the true learning.

Recommendations

- U-learning can be considered as a paradigm shift in education, especially during the lockdown
- Educational transformation is possible by using U-learning to create, deliver, store and share learning resources.
- U-learning as a potential tool in education for teaching learning process.
- Use u-learning tool as an anytime, anyplace approach in learning.
- Use U-learning along with physical mode of learning as a hybrid or collaborative approach.
- Join hands together national, state and local level authorities to alleviate constraints regarding poor internet connectivity, electricity problems etc. in order to have access to these facilities.
- Efforts are needed to avoid or minimize discrimination and ethical concerns regarding digital divide.
- Arrange orientation programmes for people in rural areas to equip them for u-learning.

Conclusion

Covid -19 pandemic helped all across the world to adapt them to a digital or online friendly lifestyle in order to keep physical distancing. Same is happened in the case of education sector too. Teachers, educators and learners find online as a quick fix in the pandemic but this adaptation can be fruitfully continued even after the pandemic period.

Online learning / ubiquitous mode of learning and its tools are familiar now which can be used in future as an optional mode. This mode can also be used along with the physical classroom as a hybrid model to get maximum benefit of both systems. Ubiquitous mode of learning has the potential to provide the learner independency in learning, problem solving skills in learning and higher self-confidence. As India being a land of diversity in its variety of cultures, languages etc. with limited resources compared to our larger population, encounters various challenges in terms of Digital divide, power cuts, lack of skills etc., in introducing a nationwide online or ubiquitous mode of education. National, State and local level coordinated programmes and initiatives are very much needed in order to minimize the ethical concerns regarding the digital divide, internet connectivity, power failure etc. A hybrid or collaborative mode of learning, incorporating the advantages of both physical mode and ubiquitous mode of learning at the post-Covid era, is the future prospect of the present digitalized learning.

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