

CHALLENGES IN ICT ENABLED ONLINE EDUCATION

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ABSTRACT

The higher educationists are now becoming aware of the diverse nature of their potential learners and they are engaged in providing them a number of options in teaching and learning. The demanding flexible delivery modes through online platform are now available for school, college and university students that has opened the multiple pathways and opportunities for those who cannot afford offline education in terms of time and money. In fact, the online teaching is proving a boon for those who are completing their education along with earning their living. The Government of India has taken various initiatives to promote online education and has allocated budget in their annual financial plan. Various premier institutions, education departments, policy makers and educationists are working to make this revolution a success through developing course materials, online platform and interfaces for better understanding of subject matter for the stakeholder i.e. students. There is no doubt about the positive aspects of the virtual education and it doesn't require much discussion. But, as every coin has its second face, which cannot be ignored similarly we have other aspects of online education. There are many limitations, constraints, challenges and possibility of negative outcomes in near future that should also be taken into consideration. Through this paper an effort to discuss some of the relevant challenges in the online mode of education from the point of view of Higher Education Institutions has been made.

INTRODUCTION

The term online education is a form of education where students can study various courses through the use of computer and internet. The term online education is defined as “Online education is electronically supported learning that relies on the Internet for teacher/student interaction and the distribution of class materials”[1]. In the last two decades, the Internet has grown from being nearly non-existent into the largest, most accessible database of information ever created. There is drastic a change in the way people communicate with each other, make purchases, socialize, do business and think about knowledge and learning. Among the various sectors where digital revolution has brought important changes, education system has significantly changed in India and globally. A major progress has been observed towards digital education by rising adoption of digitisation by universities and colleges, increasing internet penetration and soaring demand from students. The experts in the field of education are advising the Higher Education Institutes to focus on designing online education programmes, strengthening digital infrastructure and catering to the rising demand for upskilling among students.

INDIA'S INITIATIVES ON PROMOTION OF ONLINE EDUCATION

The 'Digital India' initiative was launched by the Govt. of India in July 2015, to strengthen online infrastructure and expand internet accessibility among citizens. In the same initiative, e-Education programme was also initiated to provide education to students from remote and urban areas through smartphones, apps and internet services. Efforts are also made to being make the electronic items and accessories (Mobile phone, internet, VR display etc.) in the reach of people with low income. The Indian government established the National Digital Educational Architecture (NDEAR) through annual Budget of 2021-22 to strengthen digital infrastructure and support activities related to education planning. The Government introduced the PM e-VIDYA programme in May 2020 to make e-learning more accessible for Indian students and teachers and promote & strengthen digital education in India. The unique e-content in the form of podcasts for hearing and visually impaired students is available on the DIKSHA portal. DIKSHA stands for Digital Infrastructure for Knowledge Sharing, online portal to offer school curriculum-based engaging learning

materials in 18 Indian languages for students, teachers, and parents of 35 states and Union Territory [2]. Similarly there are so many other initiatives by Indian Govt. viz; SWAYAM, SWAYAM PRABHA, ePathshala Portal, NISHTHA, OLabs, Virtual Labs to enhance the digital online education [2]. Many EdTech businesses (e.g., upGrad, Virohan, BYJU's, etc.) have also gained traction in the recent years and are determined to deliver unparalleled learning management resources, such as blended learning, 3D and DIY kits, and AI-based innovative and engaging learning.

ICT IN EDUCATION

The use of ICT in teaching and learning is the mode of education that uses information and communications technology to support, enhance, and optimize the delivery of information. A number of studies conducted by the premier institutions from India as well as across the world have concluded that ICT can lead to an improved student learning and better teaching methods create a significant and positive impact on students' achievements. The ICT enables the students to have better 'knowledge', presentation skills, and innovative capabilities. The e-learning through the mobile phone, also called m-learning, is increasing in which education has outgrown the physical constraints of the classrooms and has acquired mobility. The information is available on mobile phones and laptops and students can access information at any place and at any time, they want. The institutions are engaged in providing such advanced study materials through e-services in place of developing physical infrastructure. There are different forms of ICTs that has been used for delivering education viz;

- Availability of course materials through remote devices
- Online digital repositories or digital library
- Cloud based academic system for teaching
- Supplying study materials through Internet services
- Massive Open Online Courses(MOOCs) that includes coursera, Khan Academy etc.

ADVANTAGES OF ICT ENABLED EDUCATION

ICT in education inculcates the confidence in students to compete in the

global economy and makes them a skilled workforce. The use of ICT enhances learning experiences and provides new sets of skills. Massive Open Online Courses (MOOCs) are accessible to more users. It provides training of faculties, is cost-effective, saves time and improves the administration of institutions. Enabling ICT in institutions will also be useful for obtaining different accreditations like NAAC, NBA, NBHA etc.

ICT enabled education makes the learning easier and interesting with resources such as video, audio, websites, and so on. A diversity of instructional resources, in addition to textbooks and reference books, will be more effective in engaging students' interest.

Teachers can also hope to improve their productivity by implementing ICT enabled education. They are generally called upon to perform additional duties besides teaching. They can spend more time on other duties if they use tablet devices for grading and replace class content with ICT educational content.

The adoption of more attractive, entertaining, effective and fun tools in the classroom to complement standard teaching approaches has been linked to increased student motivation. Similarly, ICT allows for more engagement in learning, as well as increased collaboration and improved communication between teachers and students. ICT also encourages initiative and creativity, as well as individualization and flexibility in the classroom. These benefits, among others, can boost students' information acquisition and have a positive impact on their academic achievements.

Technology also can assist in web conferencing or other online collaboration tools may allow parents to meet with teachers. They can also use internet platforms to monitor their child's attendance, assignments, and grades. They can also communicate with their children via email, texting, instant messaging, and video calling while at work.

CHALLENGES OF ONLINE EDUCATION

University Grants Commission through Gazette of India edition September, 2020 allowed the Higher education Institutions who have NAAC CGPA above 3.26 and top 100 universities in NIRF ranking to offer Online and distance learning courses from the session 2020-21. For quality assurance the UGC directed the Higher Educational Institution recognized for offering

programmes in Open and Distance learning mode and Online mode to establish a Centre for Internal Quality Assurance, to follow the Quality Assurance Guidelines on learning materials in multiple media, curriculum and pedagogy; to take adequate measures for training and capacity building of its teaching and administrative staff at regular intervals and to ensure that the quality of programmes are maintained at par with standards as defined for the conventional mode of teaching in reference to assessment, evaluation and outcomes [3]. The objectives and outcomes of the course must not be tempered within open and online mode of education. The aim of promoting the online and open education through virtual mode is to increase the Gross Enrollment Ratio (GER) of India as well as to bring the education within the reach of underprivileged section of society. No doubt that online education through ICT has many benefits of portability, ease of access, small Infrastructure for teaching, lowering cost and increasing flexibility, but it has some disadvantages and challenges also which need to be focused on.

The policy makers and advocates of online education are assuming that the online learning would be interactive and immersive to teach new generation of students, but the students studying through online mode generally complain that the endless heap of texts, quizzes, frequent learning assignments etc. leads to loss of interest and motivation to study through online platform.

Another glaring drawback of this system is the lack of interpersonal touch with their tutors/instructors that the students experienced through offline classes. Students feel that there is a strong need to maintain a personal interaction between students and teachers which is definitely not possible in virtual teaching.

The delivery of content through online is many a time a one way communication with engagement of the students. Most of the time, the teacher goes on teaching without knowing whether the students are attentive or not. Students do not take interest due to lack of motivation which makes the lectures boring for both teacher as well as students. The students most of the times do not maintain the decorum of classroom through virtual mode in term of their dress, sitting arrangement, selection of venue, their behavioral language that is a very important concern for delivery of quality education. In order to avoid such incidents, most of the times teachers ask to students to

keep their microphones and video off. By doing so, the teacher get cut off with the students during lectures and actual activities of the students cannot be observed by the teachers. Sometimes, the students are not even present in the virtual classroom and someone else handling the electronic gazette marks the online attendance that points out the quality of virtual education.

Through online education it is very difficult for teachers to have personal interaction with their students and to list out the slow and fast learners and initiate remedial action which is a very important practice in regular face-to-face teaching. In order to facilitate quality learning among the students, focusing on the discipline is the main concern. During offline classes it is very easy to maintain the discipline and implement the commonly accepted rules for a safe and secure learning environment. In online classes, teachers do not have actual eye contact with students and so it becomes difficult for them to maintain discipline and monitor undistracted learning. For effective online learning from home, the role of parents or other family members becomes very important to help the teachers by taking the responsibility of providing students with the appropriate learning environment. The main challenge for a teacher is to maintain the quality of virtual classrooms and to make the lecture interactive with blended mode. Making online classes truly interesting and engaging for students is surely quite difficult for teachers

Online education system though doesn't require much large infrastructural requirements viz; Classroom, Fan, Boards, Furniture etc. for delivery of content yet other electronic facilities like computer, adequate software, constant electricity and high-bandwidth internet are required on both ends. In developed and very developed countries these facilities are available with public libraries which are open for all but in developing countries all these facilities are required to be arranged on personal basis. In countries like India, Pakistan, Bangladesh etc. these facilities are available with only a few selected people. The internet facility coverage is poor in remote and rural areas. On many occasions, students as well as teachers face some technical problems for attending and delivery of lectures. Such technical glitches cause interruption in the teaching-learning process and loss of interest at both ends. The equipment, accessories and cost involved in online teaching are too high for everyone to afford the same for the purpose. The internet pack, mobile phone, laptop put extra burden on students to assess the

education through online mode. The ICT tools viz. online platform, lecture capturing system, animation software etc. are too costly to reach for many Higher Education Institutions also. It's a great challenge for the Higher education Institutions as well as Government is to create online infrastructure for students and faculty to deliver the quality education.

In November 2019, after the beginning of COVID-19, the nationwide lockdown was imposed by the government in the middle of the academic session. The SOPs and guidelines issued by health department and education department motivated the faculty to move towards online education. The pandemic stopped all regular face-to-face educational interactions between teachers and students and moved literally overnight to the online-only learning-teaching model. Most of the teachers were neither aware of, nor trained in the successful utilization of the online digital teaching tools, processes and methodologies. Teachers, especially in small cities faced considerable difficulties in adapting to the imperatives of online teaching and conducting meaningful virtual classes. Most of the teachers neither had the basic knowledge of using computers nor the exposure to effective online teaching techniques. The Ministry of Education had already initiated various projects to promote the online education following the trends of developed countries but pandemic accelerated the transformation of classroom from traditional to online mode. The transformation was so fast that there was no time for the teachers' training. The Scheme of Pandit Madan Mohan Malviya National Mission on Teachers and Teaching is the culmination of the Government of India efforts in launching a comprehensive umbrella scheme aimed at improving the quality of education at all levels by infusing quality. The various centers established under this scheme, Human Resource Development Centers of Universities, Internal Quality Assurance Cell of colleges, organized many faculty development programmes and teacher training programmes to make the faculty skilled to deliver quality education. Many of the faculty members who were not technology savvy or at the end of their teaching service were not interested to learn the online teaching methods. The main problem with the faculty in education system is their lack of adaptability and acceptability with regard to such changes. Untrained teachers are limited by not only their inadequate technical competencies but also their insufficient skills and exposure to procedures of accessing relevant digital course material [4].

After the reopening of schools, colleges and universities post nationwide lockdown due to CoVID-19, there was a huge challenge in front of Higher Education Institutions to conduct annual/semester examinations. The first attempt normalized the awards on the basis of students' previous academic records and then an open book examination system through online mode was conducted by most of the Higher Education Institutions which has now become a common practice. Some of the institutions offer online objective type question papers for their students to facilitate the students a stress free examination pattern. In the online education system, the examination papers set by the examiners are not of the standards of Open book examination system. In comparison to the routine and traditional type question papers supplied to students earlier, this pattern failed to assess the intelligence levels of students. Students are attempting the question papers by copying from books and without any subject knowledge. This education system with online examinations has become biased and has totally failed to assess the students. The assessment process in online teaching has also become challenge as sometimes even a teacher cannot differentiate whether the actual student is attempting the paper or someone else appeared in place of him/her. For assessment purposes teachers conduct a number of assessment examinations during regular classes. After submission of this assignment by students many a time it is suspected that the concerned student had not actually written the concerned test. The challenge is to ensure the quality in Evaluation, Assessment and Examination system of this virtual education. The Government and Higher Education Institutions are required to implement regulation to avoid the decline of quality of the examination process.

CONCLUSIONS

Online education has now become a necessity to compete at a global level. The government of India is implementing the National Education Policy, 2020 and is developing digital infrastructure to promote virtual education. Online education is undoubtedly accepted globally as it has enormous benefits for all sections of society. But, there exist a number of challenges to maintain the quality of education through the virtual mode. The government as well as higher education institutions require various initiatives to deal with such challenges. Infrastructural and internet facilities must be provided to the students and faculty in the workplace as well as in remote areas. The

teachers should make an effort to make the class interactive and motivate the students to enhance their subject knowledge. The assessment and evaluation systems in virtual mode need to be revisited to maintain the quality of education and deal with future problems. Higher education institutions must take initiatives to train their faculty and performance-based incentives can be introduced to motivate the faculty to enhance their technical competencies and skills.

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