From Social Distancing to Distance Education

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Abstract :

The Coronavirus pandemic has affected the society in a big way. Social distancing has now become the new norm of the day. In this situation educational institutions all over the world are facing variety problems. This article advocates the use of distance education to overcome these problems to some extent. The developments in Information and Communication Technology (ICT) in the past few decades have been quite encouraging. The status of ICT is adequate enough to achieve teaching through digital media. There are certain issues related to access and equity that need to be addressed before digital resources can be used effectively. This article discusses how Open and Digital Learning (ODL) can become a reality in the fields of formal, non-formal as well as informal education.

1. Introduction:

Coronavirus that originated from China has now spread all over the world. It has now taken the form of a pandemic claiming a large number of lives both from developing as well as developed countries. Corona being a new virus, there is no medicine or vaccine available to control it. Hence, social distancing has been advocated time and again to control further spread of this virus. This has affected day to day life of people significantly. Work places are closed and working from home is advised wherever possible. Religious places like temples, churches or mosques are closed. Air, sea and road transport has come to a standstill. Restaurants, malls, gardens, etc. where a public gathering can take place are not allowed to function normally. Maintaining a specific physical distance from each other has become the norm of the day. The society is struggling to adjust with this new norm.

The Coronavirus Pandemic has also affected education systems throughout the world. They are not in a position to function in their traditional style. Some educational institutions are taken over by government authorities to use as COVID Quarantine Centers. One is not sure when these institutions will start functioning in a normal way. Even if they start in the foreseeable time span, social distancing will have to be applied without compromise. The number of students in each classroom will have to be minimized to maintain distancing. This will add to the burden of acquiring more classrooms and more teachers to run the schools and colleges.

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Running schools and colleges by maintaining a social distance is almost impossible in India as the number of students in our country is very large and many classrooms are overcrowded. Some state governments have asked the educational societies not to start the schools and colleges on scheduled dates. Many examinations are cancelled. Instead, teachers are advised to establish contacts with their students remotely. As a result, school teachers and college professors have started giving webinars. There are many issues related to remote teaching that needs to be addressed. The teaching profession seems to be on the crossroads. Adoption of Open and Distance Education Methods can provide some relief.

2. OPEN AND DISTANCE LEARNING :

Distance Education is defined as the practice of using correspondence, either written or virtual, to learn. In this mode of education face to face interaction of teacher and learner is not envisioned. Instead, they remain separated either by a short or a long distance. In spite of their separation the teaching learning process goes on leading to the completion of a specific course. Distance Education system, often called as correspondence course, was set upfor those who could not attend regular schools or colleges due to their responsibilities. In this mode of education students were sent specially designed print material. Students would study the material at their pace and appear for examination. At the same time they would work on a project assigned to them and submit the report. The university or school would then assess students' project reports and answer sheets and award the Certificate or a Diploma.

Correspondence courses began in Europe in 18th century. In the initial period the focus was on print material. As the communication technology grew, the institutions started using radio and television to provide instructions to students remotely (Walker 2013). On some occasions the audio as well as video tapes were made available to the learners. As the transport facility improved periodic Contact Sessions were added to the system. The teachers and students could meet at a specific place for the specific period of time to get their doubts resolved.

As the demand for distance education increased and the technology improved the concept of Open Education took shape. The word open is used to denote Openness in access, Openness to curriculum and Openness to method of teaching. The first university to function on these lines was UK Open University (often referred to as UKOU). It was established in 1969 by the Labour Government of the United Kingdom in a planned town of Milton Keynes, about 80 kilometers away from the megacity of London.

Following the establishment of UKOU academic leaders from other countries took initiative in setting up similar universities in their regions. Within a short span of time almost all the countries in different continents had their own Open University set up (Daniel, 1999). India too, following the lines of these developments started its first National Open University at New Delhi by an Act of Parliament in 1985. Named after the first lady Prime Minister of India it is known as the Indira Gandhi National Open University (IGNOU). Soon, many state and regional open universities were set up in the country. It is now working as a parallel system of education catering to a large number of adults in the country. In order to provide the benefit of distance education to school children the National Open School was also established in 1989. With the headquarters at Delhi the National Institute of Open Schooling now controls a large number of open schools set up in different states of the country.

3. DEVELOPMENTS IN ICT :

Nineteenth century has witnessed an unprecedented growth in technology. It all began with the presentation by a great Indian scientist Professor Jagadish Cchadra Bose at the Royal Society, London in 1897. In his presentation he referred to his own work that demonstrated the possibility of transferring sound waves with the help of radio waves from one place to another. Using this principle an Italian technocrat Gugliani Marconi made an instrument that could transmit audio signals over a long distance without the help of wires. This work led to the invention of Radio that enabled long distance communication.

Twentieth century witnessed the development of yet another important gadget called television. It facilitated capture and transmission of the movements and actions faithfully. Thus began the revolution where audio visual signals could be sent from one place to another. To begin with there were primitive television sets that worked on vacuum tubes. Things soon changed for the better giving rise to television sets working on Light Emitting Diodes (LEDs). The clarity and faithfulness of the video are now much more reliable than they were in the past. To begin with television programmes could be telecast over a short distance. This problem was dealt with by setting up Microwave Links. With the launching of Communication Satellites this problem has been solved permanently. Now, one can tune into any television station from any part of the world.

Computers also underwent notable changes in the second part of twentieth century. It was Alan Turing who made the first computer in the form a coding machine during the Second World War. Since then it has come a long way. Developments of Integrated Circuits brought down the size of the gadget drastically. Although size has decreased the capacity of the computer has increased. Developments of Personal Computers (PCs) gave a boost to its use by

common public. Laptops enabled people to carry office with them. It is now the most reliable instrument for information processing and storing.

Email facility came as a boon to communication technology. This development enabled a person from one place to communicate with another within a short time.Sabeer Bhatia, an Indian technocrat initiated email facility named as Hotmail. A large number of persons from different walks of life resorted to using this facility. Developments in internet facility connected the computer network and design of websites made available information on the fingertips. As the situation stands, one can access the information available on the World Wide Web (WWW) without much difficulty.

The fourth quarter of the twentieth century witnessed the development of mobile telephony. The Nippon Telegraph and Telephone (NTT) was the first to launch the cellular network in Japan in 1979. Although India started using mobile phones in the last decade of twentieth century there has been a speedy growth in this domain in twenty first century. The availability of gadgets improved, the connectivity got developed and the facilities provided by mobile telephony witnessed progress. All this resulted into the establishment of a “Connected Society”.

The technology related to information processing and communication is known as Information and Communication Technology (in short ICT). As discussed above ICT progressed to a great extent over the last few decades and simplified the tasks of information processing and communication. One can see the impact of ICT on various aspects of human activities like Banking, Tourism, Shopping, etc. Education, being a social process was also influenced to some extent. Nonetheless, the impact of ICT on the teaching learning process has been minimal. It is the social distancing forced on us due to Coronavirus Pandemic that has made us to think of using ICT in a big way in education.

4. OPEN AND DIGITAL LEARNING (ODL) :

With the developments in ICT the teaching aids available to the teacher and learner have changed. The computer, the mobile phone, the television are now playing the role of teaching aids in these days of information revolution. The websites designed in large numbers have become the source of information. These changes have given a way to Open and Digital Learning. Open here means open to people, places, methods and ideas. In this mode of learning there are minimum hurdles that come in the way of learning.

A variety of groups and institutions have taken an initiative in digital learning. The movement of Open Educational Resources (OER) took shape in the first decade of twenty first century. The next decade saw the development of Massive Online Learning Courses (MOOC). In India the

SWAYAM (Study Webs of Active-learning for Young Aspiring Minds) was launched in July 2017. Unfortunately, these efforts were considered as support to normal education. The restrictions on social interaction placed due to Coronavirus Pandemic, has brought those efforts to the surface. Academicians are now resorting to webinars, remote classroom and digital learning. Although some people see this as a short term solution it must be remembered that digital technology is here to stay and we as educators must incorporate it in our teaching learning process effectively.

When we refer to education we normally refer to Formal Education offered in educational organizations like schools, colleges and training institutions. It must be mentioned that along with formal mode of education there are two more methods that are being followed for human resource development. They are Non-formal Education, offered through material without any teacher and Informal Education, offered through natural experiences. Open and Digital Learning (ODL) has a big role to play in all these types of education systems. Of course, the needs and requirements of these systems are different and ODL has to take note of those differences. For example, the ODL material designed for formal education must cater to the curriculum prescribed by the education board as the students are expected to appear for formal examination to receive certification (Agarkar, 2016). On the other hand the non-formal education system must develop methods and materials to inculcate skills and values useful in industrial society where the person has to adjust himself/herself to its changing needs.

5. CHALLENGES TO FACE :

ODL is a new phenomenon. It will take its own time to settle. Nonetheless, we need to speed up the process of ODL for the survival of the education system that supports a large number of persons (teachers, students, administrators and supporting members). There are many hurdles that need to be crossed before ODL becomes useful and popular in the present education systems. One notices the following challenges to be faced in this endeavor.

5.1 Teacher Preparations:

The present education system is the outcome of an industrial revolution that took place in nineteenth century. A special community called the teacher was created to prepare future generation employable in professions created by industries. Teacher training institutions were established to acquaint the community with the psychological foundation of learning and techniques to facilitate it. They were asked to teach within the four walls of an educational institution, during a stipulated time allotted by local educational managers and by following the specific curriculum prescribed by the education ministry. The ICT has enabled them to see beyond the classrooms. Lack of proper training, however, has handicapped the teaching

community to use these devices effectively. An in-service courses need to be arranged for practicing teachers to expose them to ODL model of learning.

Educational psychology witnessed a paradigm shift in twentieth century (Agarkar and Brock, 2017). Nonetheless, the psychological paradigm that dominates classroom interaction in India has been advocated by behaviourist psychologists. It focuses on providing information to the students and inculcating desirable skills among them. This plan worked well for previous centuries but will not work in the present century. Teachers must realize that there is a sea change in the demands placed by the society on education system. The society now expects that the education system should offer training in CMI (Contextualized Multiple Intelligence) and prepare the manpower with a capacity to deal with the problems of twenty first century. At the same time they must take note of changes that have taken place in the understanding on how children acquire knowledge. Modern constructivist paradigm in educational psychology tells us that children acquire knowledge through construction. Hence the role of the teacher is that of a facilitator in knowledge construction rather than that of knowledge distributor. The teacher needs to be convinced and trained to play this role effectively with the help of digital resources.

5.2 Experiential Learning:

The ODL presents a learning environment to the students with which they are not familiar. They are, in fact, conditioned to listen to the teacher and follow his/her instructions. ODL, on the other hand, provides them multiple learning resources. They are expected to choose proper resources and learn through their own experiences. The present education system is teacher centered where teacher is worried about covering the syllabus is a given time period. ODL, on the other hand, is child centered. It provides an opportunity to the student to understand the content at per his/her pace.

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ODL make the child responsible for his/her learning. He/she has to manage resources, gain useful experience and build knowledge. The student community is not ready to this change. However, there is scope to believe that they will be able to adjust to it as they are quite fast in handling modern digital technology. In the present system of education individuality of a child is hardly taken note of. ODL, on the other hand enables the child to acquire knowledge as per his/her learning style. He/she can pause or repeat the lesson as many times as required. There is a huge scope for peer interaction while using digital resources (Robertshaw, 2002). The parents and elders at home have a big role to play in supporting student's learning.

5.3 Development of Interactive Units:

Development of digital learning material poses a great challenge. Recorded classroom lessons are not going to serve the purpose. Similarly, the use of lessons prepared in developed

countries will not achieve the impact that we desire (Roy, 2002). The Educational Designers will have to think innovatively in developing Open and Digital Learning material so that the child notices relevance to his/her daily lives.

The uses of modern technologies like the Virtual Reality or Augmented Reality in developing such units are found to serve the purpose. Recent work in designing interactive units using 3D models with the help of Augmented Reality has shown positive results. These units, not only motivate the students to engage in the activity but also keep them engages for a longer time. Through the use of these units students are found to improve their conceptual understanding in science (Agarkar, 2019).

5.4 Availability of Resources:

Availability of gadgets and their connectivity pose yet another challenge. The Radio and Television network is quite widespread in India. Availability of indigenous Communication Satellite has made it possible to receive radio and television signals even in remote parts of the country. The same cannot be said about computer connectivity and mobile telephony. The internet connectivity in many parts of the country is not reliable. Moreover, the required bandwidth is not available to receive audio visual signals. Mobile telephone are commonly used both by urban as well as rural population of India. However, many of them do not have Smart Phones that are required for digital learning. Fortunately, these challenges are not insurmountable. With the government initiative for digital India and the opportunity given by EDUSAT (a dedicated satellite launched by Indian Space Research Organization for education), there is an ample scope to believe that these challenges problems can be overcome easily (Padsule, 2006).

6. CONCLUSIONS:

The Coronavirus pandemic has given many shocks that have affected tourism, industrial production as well as social interaction adversely. Education, being a social activity, has also experienced a big jolt. Planners and thinkers are trying to find solution to overcome the problem. Fortunately, ICT has a potential to provide education remotely. Use of Open and Digital Learning system can help us in providing education to our young lads making them responsible for their learning. Shifting to ODL poses certain challenges that need to be addressed before it is practiced effectively. Fortunately, the time is ripe to use technology to use space based resources to educate our young lads, make them life-long learners to develop manpower so that the dream of *Atmanirbhar Bharat* is achieved within a short span of time (Runyon, 2006).

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