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Virtual Reality in Open and Distance Education: Innovations and Challenges in Pandemic Era

Sharmila Jajodia[1]

Abstract: Open and distance learning provide a golden chance for those who do not get opportunity to learn formally due to any reason. There are many who believe in earning and learning at the same time due to the unexpected inflation, the high cost of education and to have the much-needed feel of work experience for a bright future. In 21st century when information and communication technology is booming, e- learning provides an extension to open and distance learning. With the changing scenario, new employment avenues and introduction of choice-based grading and semester system of examination and evaluation pattern in formal and regular system of education, open and distance education has a great challenge to meet expectations of its customers i.e. distance learners. It has to deliver them information related to various traditional and vocational courses at the click of the mouse, supply them not only study material but also provide employability. To achieve these goals it has to maintain the quality of education for its sustenance. Therefore, keeping the demands of the current global scenario in mind, it is essential that these institutes make use of virtual reality maximum possible for teaching, learning and evaluation of the students though COVID-19 has provided these institutes too enough opportunities to make innovations at every step from admission, counseling, teaching, providing audio-video contents, examination, evaluation and result declaration. In the light of the said observations, this research article investigates how these institutes can adopt online methods to meet the demands of the present century; what are the various possibilities and problems ahead if open and distance education institutes make innovations or attempts in this direction in the post pandemic era.

Key words: Communication, Distance and open education, Employability, Virtual Reality

Introduction

Open and distance education initiated in varied progressive countries globally aims to bring education to the home of those who could not or cannot go to schools, colleges or universities owing to any of the reasons - poverty, family obligations, geographical reasons - lack of educational institutes in the proximity, hilly areas, age, health etc., and attracted the attention of those who are fond of education. Moore (1990) defines distance learning as "all deliberate and planned learning that is directed or facilitated in a structured manner by an instructor . . . separated in space and /or time from the learners."(Powar, 2002, p.269)

It is not a traditional education system which tries to address the basic requirements of education of a special target group – a heterogeneous learner group and includes all other situations except traditional classroom situation where students and teachers communicate face to face throughout the course. While open learning is described as "arrangements to enable people to learn at the time, place and space which satisfy their circumstances and requirements." (Manpower Service Commission) Powar, 2002, p.270). In distance education, the teacher and student are not physically in proximity, so the distance is spatial and temporal while in open education, education is available to learners according to their choice as far as time and space is concerned, and at a speed appropriate to the learners without taking into consideration their earlier educational qualifications, abilities and capabilities or age. Distance and open education system is flexible, highly productive, and able to respond immediately to market demands. It also satisfies the needs of equality and universal education as it is an alternate, cost-effective channel to reduce the burden on the formal and regular education system. It gives second chance to the dropouts and disadvantaged sections of society such as poor rural, women and adult citizens who desire to update their knowledge, skills etc.

The utilitarian aspect of distance learning is recognized so much these days that 60 countries have jointly established an International Council of Distance Education in 1938 in Canada. Distance and open learning is the 3rd stage as far as the evolution of Indian education is concerned and symbolizes the transition of education from the stage of craft to the stage of technology.

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Objectives:

i) To understand the prevailing open and distance education in Indian subcontinent and review it critically.

ii) To evaluate the various methodologies and technologies which can be used with respect to the speedy glocal changes

iii) To investigate the probabilities of innovations in open as well as distance learning in digital era and the challenges those lie ahead in the post pandemic era.

Literature

The Government of India in 1966 recommended that "opportunities for part-time education through evening colleges and own-time education through programmes like Correspondence Courses should be extended as widely as possible and these programmes should also include courses in science and technology." (Powar, 2002, p. 281)

The three key parameters of the 21st century college and university education are – "the need and demand of lifelong learning, the requirements of learners for alternative types and modes of educational provision; and the impact of media technology on changing patterns of the education processes in the backdrop of massification of education, explosion of technology and globalization of knowledge." (Madan,2002,p.) It is more than necessary especially during pandemic and post pandemic era.

Methodology

Sources of Data Collection:

The research method mainly used is systematic literature review so the secondary data is collected from books and website.

Findings

At present, India is the country at the second rank having higher numbers of open universities at international level. Indira Gandhi National Open University which is the largest university globally, offers undergraduate, postgraduate, doctoral degree courses in a number of disciplines- management, library and information science etc., in addition to traditional streams- arts, commerce and science, certificate and diploma courses besides.

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Garrison has recognized 3 generations of distance education wherein the teaching aids for the first generation were mainly print media and audio-video cassettes but it was extended to second generation and education through air i.e. broadcast and telecast, talk back TV, interactive TV and teleconferencing (audio and video) became the trend. For the third generation, computer based technologies such as software packages, CD-ROM, multi-media, e-mail and internet are being used.

Virtual Reality in Indira Gandhi National Open University

Indira Gandhi National Open University has employed an appropriate instructional strategy which integrates multiple media. It consists of not only old media - printed study materials, audio-visual aids such as radio and TV, teleconferencing (audio and video conferencing). It also engages physical counselling sessions through its study centres throughout India. It has also implanted MOODLE and mobile learning. It also telecasts many programmes which have general as well as specific themes every week on all working days through the country wide television network, Doordarshan.

These are the national classrooms and the open channels of this university whose main target is the undergraduate students. These programmes are of 18-30 minutes duration and the larger part of the content i.e., about 80% is prepared in India and the rest 20% is imported from the other countries for high quality and relevance. In the year 2000, IGNOU established virtual classrooms through multipoint video conferencing system in collaboration with technologically advanced and educationally committed cable operators in Chennai, Trivandrum, Bhopal and Calcutta. This was the first initiative to exactly create a conventional classroom situation through virtual campus/ classroom to catch up with learners habitual of conventional education.

Gyan Darshan (GD) channel, an educational television is an excellent step in the field of distance and open education in India. It is a joint collaboration of the various ministries -education, information and broadcasting and agencies- Prasar Bharati and IGNOU. GD, started in 2000, offers the best programmes 24 hours a day. It covers lots of subjects to cater to the needs of learners across cross sections of society ranging from pre-school to university students such as job seekers, homemakers and working population. The software is ensembled from institute and organisations engaged in education and development. GD conducts live sessions of two hours every day to make Open and Distance Learning interactive and participatory.

Its designated academic counsellors, subject experts and regional center staff interact with its bonafide learners for academic and administrative purposes. Induction programme for freshers and degree certificate distribution ceremony for outgoing- graduate, postgraduate and Ph.D, students are yearly features. These are conducted live through teleconferencing and are available on multiple platforms - DTH, Cable TV and IP TV. GD is available on webcast too and thus its scope is extended to audiences all over the world. Its telecast is also useful for the students of the conventional education system. It can be accessed easily through the link https://www.ignouonline.ac.in/gyandarshan/ and is a must carry channel by a number of private operators including DTH and Cable according to the Gazette notification of the Indian government. GD is currently available on channel no. 25 of Swayam Prabha of education department.

Gyan Vani (GV), a network of educational FM Radio channels, was launched in 2001. It operates from different cities of India to supplement the teaching and learning in non-conventional system to enhance its capacity. Each GV Station covers approximately 60 kilometres. It includes nearby rural areas too. It is a suitable medium for focused target group of learners for their local needs of education and socio-cultural development. The language preferably is either local/ regional, Hindi or English. The content caters to all- primary, secondary, technical, vocational, higher education in addition to adult, distance, open, extension education etc.,. The facility provided by GV Stations- Interactive Radio Counselling (IRC), gives students an opportunity to converse with the teaching and non-teaching support staff. The programmes are popular in live phone-in mode and are broadcast through each stations. Its content can be both- pre-recorded and live. The IRC sessions scheduled daily include the participation of more than 20 schools, many Divisions of IGNOU besides STRIDE and RSD.

"Two live sessions are broadcast every day on FM Gyanvani Delhi and online at Gyandhara from 11:00am to 1:00pm with repeats broadcast from 5:30 p.m. to 7:30 p.m . In addition, every Thursday, 4-5 pm a special IRC session is conducted for Students Support Services. Other special IRCs on different themes and issues are also conducted from time to time. Students can listen to these live discussions by the teachers and experts on the topic of the day and interact with them through telephone, email or through chat mode on Gyan Dhara". (IGNOU, 2022)

IGNOU students also receive the benefit of another internet based audio counselling service Gyandhara. They listen to the live discussions and interact with subject experts and teachers through chats, email and telephone. In the absence of live sessions, the learner can avail Gyanvani Delhi on this platform. The Gyandhara streaming can be accessed globally. To broadcast important programmes by GV Delhi Gyandhara feed is used to relay it too on all GV stations. The link for it is https://www.ignouonline.ac.in/gyandhara/ and available on the university website.

The IGNOU eGyanKosh, an all India level digital treasure trove of resources for college and university education is accessible by clicking the link: http://egyankosh.ac.in/ . It is freely available for all the stakeholders including common citizens. It presently stores the e-content for approximately 3920 courses of 380 programmes. IGNOU e-Content Mobile App is an official application for a digital learning initiative to extend technology enhanced learner support services and to distribute and circulate the digitised course material to its student fraternity. This app can be used through smart phones and tablets too.

Live sessions are webcast at http://ignouonline.ac.in/ and also conducted via Facebook while counselling sessions are generally held as scheduled by the student support centres beyond the working hours of institutions which host these sessions where these centres are set. If the strength of students in a particular programme is small, the university provides web enabled academic support to the learners.

Edusat, an exclusive educational satellite, was conceived in 2005. It was a historic moment because it led to the growth and development of distance education when initially 100 Edusat supported Satellite Interactive Terminals were established in its regional study centres throughout India. It also launched an online portal Samarth to share guidelines and information in addition to enhance interaction with students as well as partner institutes. It lists every detail like all programmes and has support services for solving queries related to registration and evaluation so has a robust query management systems. Its learning management system gives learners a space to interact through community blogs and discussion forums. It also displays a list of partner institutions. Thus from traditional system it has stepped into a technically virtual system to reach the student community. Its learning material is prepared not only by in-house faculty but also by experts from higher education institutes all over the country. Therefore, the university received the "Award of Excellence for Distance Education Materials" (IGNOU, 2022) by The Commonwealth of Learning on 4th March 1999.

IGNOU has also ventured into web enabled academic support for its many programmes. It is a single window platform for study material in varied formats, quiz, discussion forum, academic calendar as well as counselling in addition to links of multiple resources etc.,. It is very simple to use as ICT tools are easily available. The students enrolled through it get access to specific portal related to their programmes of study and they get the digital course content. Online peer-to-peer and teacher-taught interaction, discussion with experts is also possible through the link - https://sites.google.com/ignou.ac.in/weas.

IGNOU became the first open university to receive A++ grade on 19 January 2021 by National Assessment and Accreditation Council. For the fourth generation of distance education- video desktop and virtual classrooms, Web conferencing and Webinars, Mobile Web 2.0, ipad, ipod, e-reader devices and software for e-books, digital library, open source educational websites, tablets etc., are the teaching aids. The web based content delivery through podcasting, T.V., zoom, meet, teams, webex and LMS- Google Classroom, MOODLE and Whatsapp, telegram, youtube, cable, radio and its availability and accessibility $24 \times 7 \times 365$ is a reality now. Virtual classrooms enable students to interact with the professors online and even measure their own progress with immediate feedback after completing every topic through real time tests.

Conclusion

Hunger, electricity, network connectivity, unemployment, lack of hard and soft skills, employability skills and digital divide are the major threats. With the changing scenario, new employment avenues and introduction of choice based grading and semester system of examination and evaluation pattern in formal and regular system of education, open and distance learning institutes have a great challenge- to meet the expectations of its customers i.e. distance learners. It has to deliver them information related to various traditional and vocational courses at the click of the mouse, supply them not only study material but also provide employability in post pandemic era.

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