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Opportunities And Threats In Digital Education

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ABSTRACT:COVID-19 pandemic has caused havoc worldwide. India is also facing challenging circumstances as the figure of infected/positive cases is rising day by day. This study deals with the development of education: Post COVID-19. This paper will help to understand "Digital Education: Opportunities and Threats". The Corona virus has exposed emerging vulnerabilities in learning systems all over the world. A lot of relevant literature was explored to confine the essence of continued learning during these exceptional times. Educational organizations all over the world are moving towards online/Digital learning. This paper also proposes digital education as an urgent need in this lock downs times and social distancing due to COVID-19 pandemic. It also provides a powerful stage for further research. The use of digital technology in education is experiencing a tremendous boom in education sector with cost effectiveness. Although it is unclear whether technology will plug all of the holes in the Indian Education system but it seems that technology is playing a major role in education interventions. Due to advancements in technology, accessibility of low-priced laptops/mobiles, wireless equipments, and related communications setups signs both opportunities and challenges for learning organizations and their faculty and students. Digital Education has potential that can produce knowledge workers. The government has analyzed that ICT sector has important role in education due to that many programmes such as NEOR, NMEICT, NKN, Eklavya, NPTEL, and NROER has been launched. Digital Education has bring success in the field of education but still there area number of challenges in most of Indian institutes like shortage of quality teachers, deprived quality of research, and deprived quality of training etc. Digital Education is overall very beneficial for the students of country like India.

Keywords: Digital Education, e- Learning, Technology, Opportunities and threats.

1. INTRODUCTION

"Digital education is the innovative use of digital tools and technologies during teaching and learning, and is often referred to as Technology Enhanced Learning (TEL) or e-Learning". Digital technologies, including the Internet, mobile apps, sensors and others have the potential to perk up the learning process. These skills offer look forward to fill space in improving teaching and learning process. The fast pace of technological and economic developments

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have needs of learning systems. There is an urgent requirement of the students to more concern on the significance of education, advance their information and skills, and imaginecritically, enhance creativity and innovative new ideas to familiarize themselves for global change (UNESCO, 2004). Recently digital education has emerged as major tool to enhance the education process with speedy diffusion of ICT. Digital Education is measured as amajor innovation that will improve educational process by allowing learners and faculty to participate in remote learning communities to improve quality education by the help of collaborative learning process (Appana, 2008; Cruthers, 2008; Watson, Winograd, & Kalmon, 2004). The major challenges to the digital education mainly in developing countriesare technical and organizational problems and the readiness of faculty and learners (Andersson & Gronlund, 2009.Due to COVID-19 the School schedules are interrupted and school are now totally dependent on digital education for learning and teaching process. The absence of students due to COVID-19 alarms the educational reformers thatthere must education reform to enhance the learning process. Digital Education or eLearning has become a necessity rather than a luxury to improve access to quality education for all students. It will only possible when there will be help and cooperation from all government organizations, substantial investment and considerable efforts. The use of digital technology in education is experiencing a tremendous boom in education sector with cost effectiveness. Although it is unclear whether technology will plug all of the holes in the Indian Education system but it seems that technology is playing a major role in education interventions. There seems a rapid development in ICT and for the benefits of students the institutions must review their advancements to learning pedagogy, together in the corporal and effective 'classroom' spaces. Due to advancements in technology and availability of low-priced laptops/mobiles and wireless equipments and related communications setups signs both opportunities and challenges for educational organizations and their faculty and students. This paper deems these tendencies to raise: 'What are opportunities and challenges of digital education?' The whole world has tremendous changes in education: post COVID-19 and there is an urgent requirement to recognize and hold the changes in pupils, educators and organizations in concert with related to technology/ICT. Digital Education and its applications brings the rewards of placing organizations at the front position of educational carry out and make pupils necessities more flexibility or we can say education is now 'anywhere, anytime, and on any device' learner engagement.

1 NEED FOR DIGITAL EDUCATION

1.1 THE CHANGING LEARNING & TEACHING SETTINGS

Education institutions must have to change their primitive settings as its need of hour. COVID -19 has pressurized the intuitions to change their curriculum, approach to paradigm, institutional strategy and policies. All institutions must have strategy to focus on Blended learning environments, technology planning and sustainability, and fulfill the physical and virtual needs of students. The changing settings meanadjustment in relation to institutions, learners and the technologies.

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1.2 LEARNER CHANGE

There is steadydisclosure to technologies in forms of devices, playoffs, and mobile gadgetsthat has formed a new class of student, who thinks and process information differently from their ancestors known as natives. Prensky (2001) describes that there is change in learners in terms of generational differences for adaptation of new technologies. Oblinger (2003; 2004) considers the new generation inborn familiar with new technology as it's easy to access of these resources. The new generation is intenure of an information technology approachwith highly developed ability in doing many tasks at a time (McMahon & Pospisil, 2005, p. 421), the newage bandkeeps onin touch with through cell-phones, gaming, chatting, TV and social media plate-forms (Rickard & Oblinger, 2003). A new focal point as a result figures out on developing this ability in the communicative responses form,inventive and collaborative way.

1.3 TECHNOLOGICAL CHANGES

There are rapid changes in digital education with help of ICTs for learning and teaching process. In present scenario mobile phones are quite approachable for all as compare to other devices such as laptop computers that are only approachable to smaller section of learners.There is huge developments in technology but still insufficient to make the education process easily approachable to all. Wagner (2005) explained that the success of e learning revolves around rich experience or extensive use of ICT (p. 52).

1.4 INSTITUTIONAL CHANGES

The institutions are affected by market trends and government policies and pedagogical approaches. The institutions have to bear the cost of maintenance of technological resources (Software/Hardware).The institutions have to understand the advancement of ICT and retort to the pupils' and faculty's changing prospects and shifting potentials. Bates and Poole (2003) suggested a model for efficientteaching and learning through technology in education that consist of effortlessness of use and dependability, speed, costs, instructional and learning approaches. Agnes Kukulska-Hulme and John Traxler (2005) analyzedselective global case studies which revealed that mobile technologies have beneficial for learners and fulfilltheorganizational aims.

2. VISION OF DIGITAL EDUCATION IN INDIA

The revelation of digital education in India is mainly centered on three main areas that are as follows:

- ❖ Digital infrastructure that will help to provide high speed internet facility, access to bank account through mobile phones, anopen cloud that has safer and secure cyberspace to all the citizens of India.
- ❖ Governance and services for all citizens' documents that can be on cloud platform and facilities of cashless electronic dealingsthat will help to boost business. The Geographical Information Systems will be combined with the progressive schemes that help citizens.
- ❖ Rural citizens will be empowered with the help of Digital Education that can be possible when it will be provided in their native languages and will work in reality.

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3. MAJOR INNOVATIVE INITIATIVES AND PROJECTS ON DIGITAL EDUCATION BY INDIAN GOVERNMENT

The Government of India has undertaken some projects for digitalization of Education, which is as follows:

a) Digital locker facility helps in storing their important documents digitally like pan card, passport, mark sheets etc. This will help the Government to issue any document(s) securely.

b) My gov.in is another project where citizen can communicate the governance.

c) Swachh Bharat Mission Mobile App is another major project that helps a lot to achieve the goal of Swachh Bharat Mission.

d) Now citizens are allow to digitally sign a document online through e-sign using Aadhar Authentification.

e) Nowadays Hospitals are providing online registration system to facilitate the important services such as online registration, payment of fees and appointment etc.

f) The scholarship process becomes easy through National scholarship.

g) The Government project Bharat Net helps to connect almost all panchayats of the country by providing high internet speed.

h) BSNL has now ready to provide services like voice, data, multimedia/video etc. through its next generation project.

4. OPPORTUNITIES OF DIGITAL EDUCATION

Digital Education has potential that can produce knowledge workers. As only that society can govern the universe that has ability to produce its knowledge workers. Digital Education can improve the standard of life of people living in villages or cities. Only 19% of students are enrolled educational institutions (MHRD, 2014). This enrollment is less in number as required according to National Knowledge Commission (2006). It has been analyzed by the government that ICT sector has important role in education due to that many programmes has been launched such as NEOR, NMEICT, NKN, Eklavya, NPTEL, and NROER etc. Therefore, there is large range of opportunities provided by OER to educational institutions.

4.1 NMEICT

It is a center Government imitative that provide interactive knowledge to the learners anywhere with the potential of ICT. Content generation and connectivity are its two main components. The objectives ofthe mission are:

1. admittance to learning;
2. linkingall Indian institutionswith speedy data networks;
3. Improving staff eminence by training methodology through ICT;
4. Providing education to all and even rural learners; and
5. Creationof e-content and learning videos by use of ICT.

4.2 NATIONAL KNOWLEDGE NETWORK (NKN)

Under NMEICT mostly universities are connected throughNational Knowledge Network.

It provides anintegrated speedy network which is the backbone for all Indian educational organizations. Its main purpose is to carry out the research work and making the institutions best for education process. It will help scientists, scholars and learnersin moving forwardthe individual development in significant and promising areas. It has alreadyconnected many

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educational Organizations and Laboratories all over thecountryside(Home page of NKN, 2015).

4.3 SHAKSHAT

The MHRD has taken this initiative for the development of all the educational institutions and studentsand Teachers. It is a free portal that contains many e-repositories for Educational institutions. It providese-content to the students in form of videos and recorded lecture etc.

4.4 NPTEL

NPTEL provides free online courses for engineering education and a joint initiative of IITs and IISc. The main function of NPTEL is to improve the eminence of engineering learning.

4.5 EKLAVYA

This projectwas launched jointly by IIT, Bombay and IGNOU to providelearning materialin the Open resource. The Open Source Educational ResourcesAnimation Repository createsinteractive animatronics for instructions ona range of concepts to the learners. The e-GURU programme of this project encourages learners to think of innovatively technical its e-OUTREACH programme produces HTML contents, video and audios. The e-CONTENT programme underEklavya project Provides digital contents in Indian languages and relevant writings to educationalinstitutions (Gani, 2010).

4.6 OSCAR

Itis aninitiative by IIT Bombay that creates e-content in form of animations for science and technology based concepts for the students.

4.7 E-Grid

E-Grid portal has been launched by IIIT, Kerala with support of MHRD to facilitatethe educationalresources toenhance the eminenceof teaching and learning process. The foremost aim of Digital Library of India projectis to digitizeall the books inIndia.

5. PROMISING TRENDS OF DIGITAL EDUCATION

5.1 DIGITALIZED SCHOOLROOM/FLIPPED SCHOOL ROOMS

Technology has captured classrooms and provides the same base content to the students as given by the teachers. It has connected the each student to world-class learning, which is not possible by traditional way of black/white chalkboard teaching. This new learning is easy, enjoyable,and more interesting.

5.2 VIDEO BASED LEARNING.

Video-based learning has madelearning more engaging, interesting,enjoyable and exploring. It helps learners to learnwith creativity, fun and entertainment through videos, interactive software, e-books etc.

5.3 MOOCS

It is an online course(s)forunrestrictedinvolvement and open admittanceto all throughthe web. It is very suitable to Indianlearners as the population of India is huge and massive open online course (MOOC) can bring an educational revolution. Ithelpsthe learners to learn at any distance through internet connectivity.

5.4 K12 SECTOR GAME BASED LEARNING

Thistermisused inKindergarten through XII grade that provides game based learning environment that helps learners to easily understand the word ofeducation and can trainedhim-self in better way.

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6. ADVANTAGES OF DIGITAL EDUCATION

Digital Learning/Education has turned out to bemuchadmired with time and its advantages are as follows:-

6.1 NO PHYSICAL BOUNDARIES

The main advantage of Digital Learning is that it is free from barrier oflocation and time restrictions. It has accessto moregroup of learners. The learners are able to access digitallearning anytime,anywhere according to student's need.

6.2 MORE ENGAGEMENT

Digital learning has extra engaging familiarity to the learners then that of traditional learning. Students learns with fun through the use of multimedia is there and is more interactive. Presently gamification is also mainly used as engagement factor.

6.3 COSTS EFFECTIVE

Traditional learning is expensive than that of Digital learning so Digital learning is more beneficial for economical backward students. Digital learning reduced the amounts of money of students that he/she spends to acquire textbooks for institution. The Digital learning/E-learning is vey cost effective due to reduced cost.

6.4 COMFORT ZONE

Digital learning provides comfort zone asit access to the learner to study at the time that suits them. It can access anywhere and anytime that is not possible intraditional learning. In Digital education infrastructure the student can learn according to his own comfort.

6.5 MASSIVE TEACHER EMPOWERMENT

Learners feel morebenefitedwith usage of ICT/ Digital learningas comparison to teachers. Due to changing paradigm, digital education has reduced the gap between students and teachers. Digital Education provides massive opportunity for the faculty to empower themselves.

6.6 BREAKING LANGUAGE BARRIERS

India is a country of many regional languages and people feel comfortable to understand in their mother tongue rather than English and most of educational material is in English language. Digital Education provides facility to use of regional languages that is benefited them a lot.

6.7 ALIKE OPPORTUNITIES THROUGH OUTREACH PROGRAMMES

The education in India is bearing from disparity of learning prospects. Many learners have technological facilities and able toadmittancein these educational possessions but for othersare unable to access these. Digital Education will help to fill gaps between students of "have" and "have not".

6.8 PRIVATE-INITIATIVE

Private participationis increasing day by day in education sector. These are able to investhuge amount of money in education sector. Wipro and HCL are leading IT companies have set up their own universities in India. It produces many resources that are beneficial to the education sector.

Though Digital India programme has faced many challenges in its implementationbut it has some prospects which are mentioned below –

1. It brings celerity and accountability due to delivery of Governmentservices electronically.
2. It largely ends the corruption system prevails in India.

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3. It helps to savetrees & protect environment as it reduces the paper work.
4. National scholarship portal has reduced the student's time and benefited them to apply online all the processes including as application, verification etc.
5. It benefits all the sections of society as well rural people become more literate and aware due to internet facility.

7. CHALLENGES OF DIGITAL INDIA

Digital Education has bring success in the field of education but there are several challenges in Indian education system like shortage of quality teachers, deprived quality of investigation, and deprivedstandard of training etc. in most of the Indianorganizations. It is also true that our top institutions such as IITs, IIMs are failed to rank intop two hundred worlduniversities. The main cause is lack of standardized quality teaching and poor research work in Indian universities. As large force of learners (human resource) are enrolling and converting them into human resource is a dare for Indian education structure. There is need to upgrade our education system by providing quality educational resources,improvement in teaching learning standard, paucity of teachers and need to enhance the capacity of learners.

7.1 TRANSFORMATION OF HIGHER LEARNINGORGANIZTIONS INTO E-HUB RESOURCES

There is large educational hub in India but itlacksof quality institutes of education (engineering, science or management). It is facing tosupply the faculty of education and involvement of skilful human resources that are able to create e-resources.

7.2 SUSTAINABILITY

There is high cost for the growth of open instructive resourceequipmentsbut its large benefits pressurize the government to ensure its sustainability. SoGovernment is taking initiative to distributethe OER material to educational institutions. Private sectors are also funding for developing OER to ensure improved quality of education. This contribution of Private sector will help to settle the overheads of growth of OER material.

7.3 HIGH INVESTMENT

Infrastructural development is the main challenge that Indian education system is facingas these required a large amount of investment in education. TheGovernment of India has launched project NMEICT for the growth of e-learning resources, setting up of communication resources, handling of space satellites etc.Digital Education needs huge amount of investment for Design and technology, infrastructure, and sustainability of OER that is itselfa challenge that government has to face.

7.4 DEVELOPING NETWORK-ENABLED DELIVERY INFRASTRUCTURE

The main issue for digitalization of Educationis to providehigh-bandwidth connections that are lack of reliable access and quality. The speedy internet networks depend upon good funding and sound communicationsfor learning quality and access.

7.5 OPEN ACCESS

Open Access means access to the research papers, review papers and other literary work to the readers without fiscal ortechnological barriers but a few is only available in open access domain. The research scholars areget advantage due to the Open Access strategies.The large number of educational materials in India is in electronic form but they are not available for all.

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7.6 DEMOGRAPHY

Demography is also main challenge or threat for digitalization of education. Digital learning can only education more flexible. Demography is also work as barrier for Participation ineducation. OER and other initiatives can only fill the demographical barrier.

Other threats for digital education are as follows:-

- ❖ India has many states and each state has specific language that has major barrier to integrate the whole country digitally.
- ❖ Each state has different internet protocols and different hardware and software and there are many connectivity glitches.
- ❖ Digital Education needs a large amount of funding, which is not an easy task andneeds strong coordination and cooperation of all the government Departments.
- ❖ Poverty and illiteracy are major obstacles to internet access, which is the one of the pillars of Digital Education programme.
- ❖ Cyber security in a country like India also a main issue that should have privacy norms.
- ❖ National Optical fiber network makesbroadband reaches in each part of the country. But it is not an easy task to connect broadband connection country wide.

2. CONCLUSION

The use of digital technology in education is experiencing a tremendous boom in education sector with cost effectiveness. Although it is unclear whether technology will plug all of the holes in the Indian Education system but it seems that technology is playing a major role in education interventions. There seems a rapid development in ICT and for the benefits of students the institutions must review their advancements to learning pedagogy, equally in the corporeal and practical 'classroom' spaces. Due to advancements in technology and availability of low-priced laptops/mobiles and wireless equipments and linked communications setups signs both opportunities and challenges for learningorganizations and their faculty and students.Digital Education has potential that can produce knowledge workers. As only that society can govern the universe that has ability to produce its knowledge workers. The education administration has analyzed that Information and Communication Technology sector has important role in education due to that many programmes has launched such as NEOR, NMEICT, NKN, Eklavya, NPTEL, and NROER etc. Digital Education has bring success in the field of education but at the momentteaching/learning is facing numerousconfronts like shortage of quality teachers, deprived standard of research, and deprived quality of training etc. in most of the Indian organizations.Digital Education is overall very beneficial for the students of country like India.

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