Digital Education In Jammu And Kashmir: Opportunities And Threats

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Abstract:Digital education as an emerging concept focuses on digital technology driven operations and management of educational systems, institutions and teaching learning methodologies utilising software packages and codes, hardware infrastructure systems, algorithms and data portals facilitating active interaction and communication between students, educators, policy makers and inter-institutional collaborations. In 21st century age of Information and Technology, educational tools, methodologies and the concept of education itself got rapidly transformed through opportunities provided by digitisation with emphasis on distance learning, flexible timelines, open access to education resources, online teaching modules, real-time assessment, integrated information systems for collaborative research between institutions world over, and proactive policy for approaches for real-timemonitoring, performance review and management of educational institutions. However, this rapid shift towards digital education has posed challenges of data security, personal privacy, cyber bullying, blackmailing and profanity despite presence of robust cyber security mechanisms and stringent cyber laws. The paper explores competitive edge of Digital education, efficacy of its various opportunities, threats of security issues, and need for proactive policy approach for rejuvenation of Digital education in Jammu and Kashmirmore so in view of recent Covid-19 lockdown which led to closing of educational institutions world over thereby mandating exploration of new means of learning.

Key words: Digital education, digital technology, data portal, cyber security, profanity, Covid-19

1. INTRODUCTION:

Digital education as an emerging concept focuses on digital technology driven operations and management of educational systems, institutions and teaching-learning methodologies utilising software packages and codes, hardware infrastructure systems, algorithms and data portals facilitating active interaction and communication between students, educators, policy makers and inter-institutional collaborations. In 21st century age of Information and Technology, educational tools, methodologies and the concept of education itself gotrapidly transformed by digitisation with emphasis on distance learning, flexible timelines, open access to education resources, online teaching modules, real-time online assessment, integrated information systems for collaborative developmental research between institutions world over and proactive policy approaches for real time monitoring, performance review and management of educational institutions. Digital technologies are, of course, not supplanting the analogue paper-based infrastructure but increasingly augment it with a software layer that accelerates the temporalities of data collection, calculation and

communication (Williamson Ben, 2016). Digital education is increasingly proving to be useful in skilling 21st century youth by enabling ICT based problem solving methods, development of creative, innovative and analytical abilities; and providing access to global educational resources and competitive environs. In today's knowledge society intellectual and technological skills are pivotal to groom next generation 'knowledge workers'- term first used by Peter Drucker (1965). Educational, Research and training institutions are gradually developing ICT platforms to restructure learning framework, empower teachers with IT skills and digitise education resources with intra institutional and inter institutional databases. With 62% of world population using internet as on 30th June 2020 with 1239% growth over last two decades (source: www.internetworldstats.com) and exponential increase in Global Digital Education Content Market more so due to recent Covid-19 lockdown; the transformation in educational policies putting in robust secure mechanisms enabling paradigm shift towards online education, E-learning and development of open access digitized education resources has gained immense momentum and importance.

1. Objectives of The Study:
o   To explore competitive edge and opportunities of Digital Education.
o   To evaluate need for Digital Education in Jammu & Kashmir.
o   To study government interventions towards promotion of Digital Education.
o   To analyze challenges/threats of Digital education initiatives in Jammu & Kashmir.
o   Torecommend suggestions for transformation of digital education services.
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2. RESEARCH METHODOLOGY:

The study aimed at evaluation of opportunities and challenges of DigitalEducation in Jammu and Kashmir perspective using analysis of data from secondary sources viz Research Journals, Published books, Government websites, archives and Newspapers. Because primary data could not be collected as field surveys and group discussions were not possible in view of Covid-19 pandemic restrictions.

3. NEED FOR DIGITAL EDUCATION IN JAMMU AND KASHMIR:

With 1.22 crore populationhaving more than 68% of population below 35 years of age, Jammu and Kashmir needs to capitalise over its demographic dividends by skilling, upskilling and re-skilling its youth with modern age technologies, bridge the rural-urban and gender gaps in education, develop basic educational infrastructure and revisit educational policies emphasizing focus on market-tailored vocational courses and inculcation of scientific temperament among students. Here is the need, scopeand role of ICT enabled teaching-learning process. E-learning or digital education isvital for augmentation of traditional in-campus education by enabling easy to access online resources, Smart classes, real time data sharing among students, intra institutional and inter- institutional knowledge discussions among teachers, and ICT based optimisation of institutional management. Jammu and Kashmir is diverse Union Territory with distinct regional socio-economic development levels, thereby leading to significantly varying regional literacy rates. Whileurbanareas are embedded with all modern gadgets including optimum facilities for both offline and online education servicesin both public and private sectors, most of the villages are yet to reap the benefits of technological advancements due to widespread poverty, lack of basic ICT infrastructure and prevalent illiteracy. As Gandhi remarked 'India lives in villages'- hence for Jammu and Kashmir to excel and lead in modern age, villages need to be empowered with basic ICT infrastructure which will not only increase employment opportunities to address poverty but also will bridge the literacy gap by facilitating digital education and address drop-out rates. With ever increasing number of internet users in Jammu and Kashmir, digital education has scope not only to raise Gross Enrolment Ratio (GER) by enhancing access to

education opportunities but also improve quality of education by making it more affordable, inclusive and skilled as well as help in re-training the workforce for career upgradation. Recent Covid-19 lockdown resulting in closing of traditional education opportunities, has necessitated shift towards digital education than ever before due to availability of affordable, flexible and open access online education resources and knowledge sharing digital portals.

4. OPPORTUNITIES OF DIGITAL EDUCATION:

Digital Education is enabling sweeping transformation in learning paradigm both in elementary and higher education. It is helping to increase Gross Enrolment Ratio (GER), reduce student drop-out values and enhance large scale expansion of high-quality education opportunities. Some opportunities provided by Digital Education are-

a) Affordable:Digital Education is cost effective as compared to formal education with optimum quality, due to large student base and least infrastructure and logistic costs.

b) Accessible:With anywhere, any time and any pace flexibilities, Online Education is more advantageous as it enables easy access for geographically distant learners to participate in and avail standard learning opportunities as per their convenience and time schedules.

c) Inclusiveness:E-learning enables bridging the rural-urbandivide and make education opportunities inclusive by reducing gender disparities. While Jammu and Kashmirhave56.43% female literacy rate as compared to 76.75% that of males (Source: JK Socio-Economic 2011 census Report), Digital education has come as a handy tool to bridge the gaps.

d) Employability:By a flexible market-oriented wide range of courses of study, Digital Education helps to increase skills and employability ratio in youth.

e) Standard quality:E-learning has ability to involve remotely living best experts to deliver online lectures, assuring standard quality education.

f) Synergy:Digital education facilitates dynamic interaction between teachers and students as well as among the students themselves to share resources and ideas in proactive synergetic atmosphere.

g) Student centred:Online education is primarily student centred due to its flexibility in encouraging students speak, discuss and retain relevant information as per specific needs.

h) Use of internet:With ever increasing internet penetration, online learning has become a pivotal mechanism of enlarging education base.

i) Capacity building of workforce:Digital education has opened new opportunities for market-oriented capacity building and career upgradation of workforce.

j) Skilling the unskilled:Digital education has enabled skill development of youth by augmenting short term and long, easily accessible online skill development courses.

k) Best education avenue in times of Crisis:Recent global Covid-19 lockdown which forced closing of traditional educational institutions, has mandated urgent shift towards Digital Education and proven it as best educational avenue in times of crisis.

5. GOVERNMENT INTERVENTIONS TOWARDS DIGITAL EDUCATION:

Subsequent to ICT revolution, Government of India and Jammu and Kashmir administration are proactively incorporating digital technologies into education to develop competitive, skilled and informed knowledge society. Prime focus of government strides towards Digital Educationis to reap the benefits of demographic dividend provided by its more youthful population. While Ministry of telecommunication has been entrusted with ensuring ICT penetration across India including Jammu and Kashmir, Ministry of Human Resources Development as well as other Education Regulatory Bodies are facilitating E-learning and digitization of education resources. MHRD has taken several innovative steps to provide enterprising platform for widespread Digital education revolution. Doordarshan network has

started 24X7 dedicated educational TV channel 'Gyan Darshan' while as Jammu and Kashmir administration has started various educational TV programs as well as facilitating digital education through online portals like *Zoom App, WISE App, Google Meet* etc.Following are some such interventions-

a) Study Webs of Active Learning for Young Aspiring Minds (SWAYAM):Launched in 2017 it is a Massive Open Online Courses (MOOCS) platform for providing open access best quality education allowing students across India to take courses offered by the best faculty in the country with high quality learning experience, one stop web portal, peer group interaction and Hybrid model like salient features.

b) SWAYAM Prabha:Started in 2017 in collaboration with Bhaskar Acharya Satellite Application Centre and Geoinformatics (BISAG) Gandhinagar and ECIL Hyderabad, it is pilot project to telecast high quality educational content through 32 DTH channels on 24X7 basis with several salient features like daily content updating, 6 times daily repetition of content, wide range content curriculum for elementary education/ higher education/ Life-Long Learning/ IIT-PAL enabled certification and training courses for aspiring IIT students.

c) National Digital Library of India (NDLI):Started in 2018 with active participation of IIT Kharagpur under NMEICT project, the library aims to collect, preserve and disseminate country's intellectual output by acting as digital repository of more than 75 lac textbooks, articles, videos, audios, lectures, research studies and simulations as well as provide open online access to all level students. Its main features include collating large e-contents for schools/ colleges/ universities/ virtual libraries, OAI-PMH server for Metadata Harvesting and indexing, serving as pan-India virtual teaching-learning-evaluation-knowledge platform and consolidation of resources from other ministries like Ministry of Health, Culture etc.

d) National Academic Depository (NAD):Started in 2016 in collaboration with INFLIBNET, NDML and CVL, NAD is a digital repository of academic awards provided by academic institutions in India. It facilitates ICT enabled issuance, storage, access and verification of academic awards. It is an innovative and progressive initiative under 'Digital India Program' towards Digital enablement of Education Records and Digital Academic Certificates for every Indian.

e) Virtual Labs:The concept has been initiated on pilot basis by MHRD to enable digitalsharing of research equipment operations and research knowledge among students, researchers and scientists of the country to pave way for joint experimentation and dissemination of scientific skills and knowledge.

f) E-Yantra:An MHRD initiative under NMEICT Programme implemented to introduce Robotics into engineering education providing students hands-on application of mathematics, computer science and engineering principles.

g) Campus Connectivity:A pan-India project to provide high speed internet access in campuses of colleges and universities with establishment of 1GBPS and 20.5 MBPS internet connectivity to universities and colleges respectively through optical fibre and WIFI networks.

h) Talk to a Teacher:The digital education platform developed by IIT Mumbai under National Mission on Education through ICT to provide open access to a few selected courses taught at IIT Mumbai using A-View collaboration tool developed by Amrita University.

i) E-Shodh Sindhu:A digital education initiative by MHRD through INFLIBNET Gujarat to allow open access to more than 15000 international electronic journals and e-books to all higher educational institutions in the country.

j) E-Acharya:Also called 'Integrated e-Content Portal' it is the official repository of NMEICT e-content stored, processed and preserved at INFILIBNET centre Gujarat for ensuring long term availability of digital content.

k) E-Kalpa:MHRD/NMEICT project to create Digital-Learning Environment for Design in India with e-Learning content on Design, Digital Design Resource Database including craft sector, Social networking for Higher Learning with Design Learning Space and Design inputs for NMEICT like salient features.

l) The Free and Open Source Software for Education (FOSSEE):It is IIT Mumbai sanctioned digital project to promote use of open source software in education centres through OPENFOAM and DWSIM softwares enabling delivery of instructional material, tutorials, documentation, textbook companions, awareness workshops etc.

m) E-Vidwan:The INFLIBNET Centre initiative also called 'Expert Database and National Researcher's Network' to collect academic and research details of faculty, researchers and research scientists working in India and abroad and share the content with academicians, policy makers and government agencies for specific research and scientific assistance.

n) Central Cloud Infrastructure:The project awarded by MHRD under NMEICT to IIT Delhi to setup a vibrant 24X7 backed Data Centre and cloud infrastructure called 'Baadal' hosting e-content and videos of E-Acharya.

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6. CHALLENGES/ THREATS IN IMPLEMENTATION OF DIGITAL EDUCATION PROGRAMMES:

The opportunities provided by Digital Education remainunder-utilised due to various implementation challenges as described below-

a) Inadequate ICT infrastructure:Despite strenuous government initiatives for large scale ICT infrastructure development in educational institutions, towns and villages, there exists gross regional and institutional disparities in progress of these initiatives.Government's flagship *'Digital India Program'* aiming at transforming India into a digitally empowered knowledge economy, has not achieved desired results due to coordination issues between implementing agencies (Goswami Himakshi 2016). As per DoT government of India report 2019, 43000 villages are yet to be digitally connected. Basic ICT infrastructure is yet to reach remote educational institutions.

b) Rampant Illiteracy:Jammu and Kashmir's 2011 census data reveals that average literacy rate in the Union Territory is 67.16% with 76.75% for males and 56.43% for femalesand also disparities in rural and urban literacy rates; which has diminished outcomes for digital education programs.

c) Poverty: According to 2011 census, Jammu and Kashmir has still 10.35% of population below poverty line, the people for whom basic needs of food, clothing and shelter become more essential than any formal or informal online education.

d) Sub-optimal digital literacy:Although literacy statistics have significantly improved over the past decades, but still digital literacy rates across Jammu and Kashmir cutting across gender and regional divisions, are minimal thereby limiting success of any Digital Education program.

e) Insufficient Multilingual E-Content:Jammu and Kashmirhas diversity of culture, language, customs, food habits, traditions and laws. As such providing digital education and online learning through only English and Hindi media is diminishing its progress.

f) Personal Privacy issues:Alarming increase in incidences of online harassment, cyber bullying, blackmailing, profanity and data hacking pose severe challenges for personal privacy in online education.

g) Data/Cyber Security threats:In this information age, knowledge is power and capital, as such more susceptible for threats and security. Increasing incidences of data leaks, website hacking and online phishing have led to growing concerns for security of online scientific and

research data. As revealed by National Security Advisor Mr. Ajit Doval on 19th September 2020, India witness 500% spike in cyber-crimes.

h) Inadequate internet services in J&K: Due to volatile political environment J&K witness frequent internet shutdowns and reduction in internet speed which has severely impacted education services. Post abrogation of special status of J&K in August 2019, mobile internet was restored after 5 months with only 2G speed.

Suggestions for promotion of Digital Education in Jammu & Kashmir:

• Robust digital infrastructure needs to be developed in all educational institutions with inter-institutional connectivity as well as building IT parks, increasing smart phone penetration and ensuring optic fibre connectivity in villages.

• Urgent intervention is mandated to improve literacy rate and remove regional and gender disparities in education.

• Prime focus is needed to address poverty so as to enable inclusive educational development.

• Optimum digital literacy levels need to be ensured among people.

• E-content needs to be made multilingual at least in all official languages of the Union Territory so as to cater diverse audience.

• Proactive digital privacy mechanisms need to be put in place besides stringent implementation of cyber laws before starting Digital education programs.

• Uninterrupted highspeed internet services be ensured, being pre-requisite for success of any digital education initiative.

7. CONCLUSION:

Digital education is the key to harness vast potential enabled by ICT revolution to augment teaching- learning process and to increase range, scope and quality of education services. By enabling open access to remote resources, knowledge sharing, easy online certification and degree programs, skill development initiatives and any-where, any-time, any-pace mechanisms for attending classes; digital education has revolutionized global education paradigm. Jammu and Kashmir having more youthful population, is aspiring to develop knowledge economy by digitally empowering its population to gain market-oriented knowledge, skills and scientific temperament with the help of wide spread digital education schemes. However, several issues need to be addressed for ensuring success of Digital Education initiatives, to harness opportunities enunciated in National Education Policy-2020 and to bridge the digital divide.

8. REFERENCES:

[1] Williamson.Ben, "Digital education governance: An introduction",EuropeanEducational Research Journal, Vol.15(1), pp 3 –13, 2016.

[2] Goswami. Himakshi, "Opportunities and Challenges of Digital India Programme", International Educational & Research Journal, Vol.2(11), 2016.

[3] Ministry of HRD Government of India's Information Brochure,"National Convention onDigital Initiatives for Higher Education", 2017.

[4] J&K Socio-Economic Census Report, 2011.

[5] J&K Economic Survey Report, 2011.

[6] www.internetworldstats.com.