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Perspectives of Digital Education Systems in India : A Critical Analysis

Dr. Shubhashri Bose

Associate Professor ,Department of Commerce,Vivekananda College (University of Delhi)Vivek Vihar Delhi - 110095
Email sbose@vivekanand.du.ac.in

Abstract: Unprecedented lockdown and various initiatives from GOI, along with greater use of smart phones have paved the way for revolution in education sector. In addition to formal education, reskilling and certification are some of the trends of online education. Numerous platforms for synchronous and asynchronous teaching learning solutions and managing educational process of admission, assessment, certification put in place by different States and UTs. However, absence of regulatory body and easy availability of rich E-Contents for higher, professional and specialised courses are still to be addressed.
Keywords : Digital Education, E-Content, Repository, Learning Platforms

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I. INTRODUCTION

With 1.57 million paid users India's online education market is worth more than USD 40 billion (Hans 2019) is expected to grow exponentially. After the United States, India has been reported to have the second highest number of online course enrolments with more than 1,55,000 students from the country (Hans 2019; KPMG and Google; 2017). Moreover, universal digital literacy is one of the integral components of the Indian Prime Minister's vision of "Digital India". From providing primary, secondary and supplemental education, test preparation, reskilling, higher learning, language and casual learning are categories of online education effected in India. These technologies enabled learning solutions were complemented with Government infrastructural initiatives to reach to people with constrained resource and connectivity.

Mandating lockdown guidelines since March 2020 forced closure of physically functioning of all education institutions in India. At that time the academic calendar was wrapping up. In those crucial times, the Ministry of Human Resource Development (renamed the Ministry of Education in July 2020) in April 2020, presented the Alternative Academic Calendar (India Report; GOI 2020) for students for ensuring continuity in curriculum learning with a blend of online and offline modes.

II.OBJECTIVES OF STUDY

The present study explores the diversification of digital education system accessed by people of our country in the unexpected situation. The data has been collected from various sources such as Reports, Journals, Magazines and different websites. The major purpose of this exploratory study is to understand the present the trends and issues in digital education system. Specifically the study aims to :

1.   To study the various initiatives of Government of India for fostering online education to the grassroots

2.   To explore the use of various platforms used for digitalised education.

III.METHODOLOGY

The different platforms and access to various modes of digitalized education system adopted by the 28 States 7 Union Territories (UTs) in India were analysed during the period since March 2020 till June 2021. Also peculiar characteristics of our learners were incorporated for understanding the actual spread and operability of digital education in India.
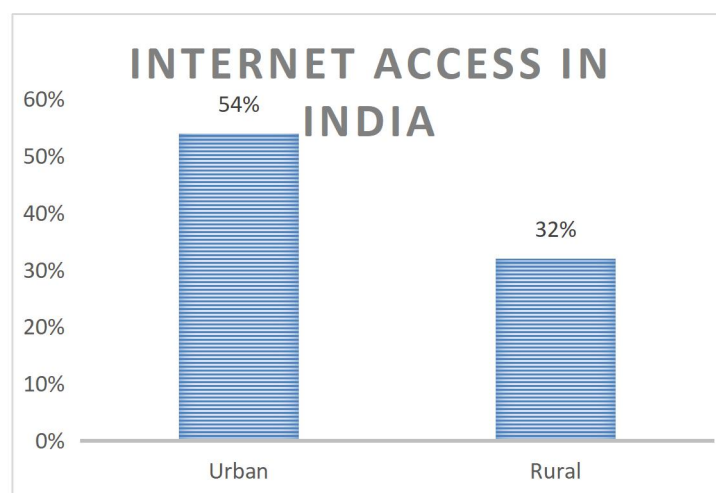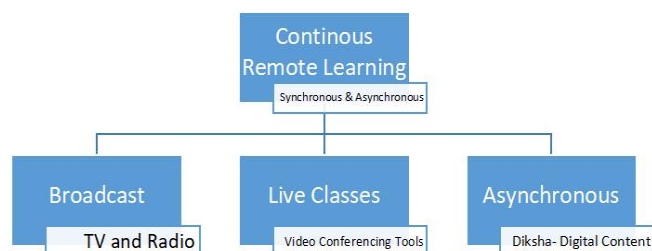

Source : Neilson and AMIA 2019

Mobile access was the main device for internet connectivity, whereas only 11% of the households had access to smartphones or desktops (Unicef 2021). In such a precarious situation the, challenge was to blend the learning facilitation not only with the help of commonly available resources. But also enabling access of reference section like dictionaries, atlas, story books etc. The

learning content in terms of lesson plans, interactive content, activities, were to be held monitored by student, parent, teachers and community (India Report; GOI 2020).

Equitable Access to Remote Learning can be done mainly from three broad dimensions to suit the needs of the learners as per the availability of their resources. These are presented as follows.

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                Continous
             Remote Learning
          Synchronous & Asynchronous

    Broadcast      Live Classes      Asynchronous
    TV and Radio   Video Conferencing Tools   Diksha- Digital Content
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Source: India Report - Digital Education, MHRD,GOI, June 2020

No stones were left unturned for connecting to remote learners and even facilitating teaching learning in local languages. From dedicated TV channels, Local Area Cable TV Networks, Alternative Learning through Radio Classes, uploading digital contents on YouTube, creating repositories in State Data Centres, Webinars, free call centres for doubt clarifications, Whatsapp, Facebooks and other social media group for sharing of digital resources, Mobile App for different purposes like interactive assessment, gamified assessments, multimedia text books were put in place for teaching learning process across the country (India Report; GOI 2020).

Edusat, Radio broadcasting both through AM and FM, dedicated channels like Swayamprabha and specific educational programme hours were put in place as per the requirements. Mobile apps with dashboard for GPS tracking for site visits, attendance, resource sharing, assessments were implemented to monitor and regularise the continuous and systematic learning process amongst the remote learners (India Report; GOI 2020). Live videoconferencing through Google Meet, Zoom, Microsoft Teams, Samvad, Webex were some apps to be extensively used for conducting not only regular classes but webinars, training sessions, assessments, digital credential and certifications in a seamless manner across the country.

For asynchronous learning mechanism, Diksha, is brilliant initiative by GOI effortlessly functioning in both offline and online modes and can be accessed by learners and teachers through multiple devices using either web portal or mobile application. Once e-content is downloaded onto a device, connectivity is not needed to play/access the downloaded e-content. E-content can be accessed and used through multiple types of devices - mobile phones, tablets, laptops and desktop computers as well as projectors, smartboards and smart televisions. Additionally, Diksha can also be accessed in low or no internet areas through an offline desktop solution (India Report; GOI 2020). E-Content, Question Bank, Examination, Homework, Teaching Tools, Lesson Plans were leveraged on Diksha platform. The platform is coalesced enabling regionalized and dynamic solutions with greater choice for states/UTs to connect to the learners. The light of the diverse spectrum of our country all these digitalized mediums and contents were customised by the States and UTs to serve to the learner's assorted contingent on individual resource availability.

According to the reports, the various actions and platforms for ensuring continuous formal remote learning ranged from procedure of online admissions, interactive resources, digital classroom, ICT labs, E-Books, E-Content Repository, E-Portals and many more. The use of these different platforms by different States and UTs are represented in the following diagram.
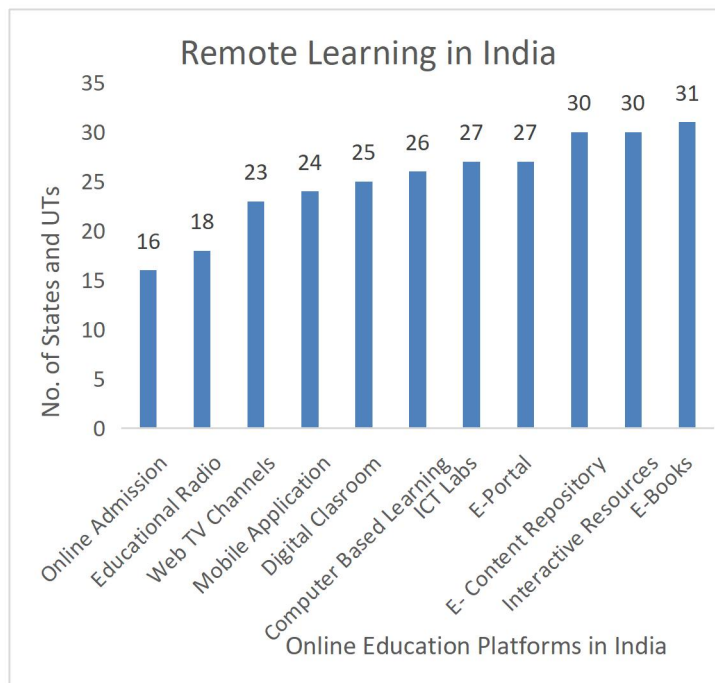
Source : India Report - Digital Education, MHRD,GOI, June 2020

IV.RESULT AND DISCUSSIONS

In our country the spread of digitalized teaching learning process was able to reach the masses with one or the other platforms marring the various challenges. In fact, the States and the Union Territories (UTs) configured medium as per the need and dimensions of the learners. Out of 35 States and UTs online admission were done only by 16; Andhra Pradesh, Bihar, Chhattisgarh, Delhi, Karnataka, Kerala, Himachal, Maharashtra, Meghalaya, Nagaland, Odisha, Tamil Nadu and Telangana. E-Content Repository were not generated by Mizoram, Puducherry, Punjab and Arunachal Pradesh. Assam, Ladakh, Mizoram and Nagaland were the only states which could not forward E-Books to the learners. Interactive Resources were left out by Mizoram, Nagaland, Puducherry, Sikkim, Tripura and Andaman and Nicobar Islands. E-Portals, ICT Labs were created by Andhra Pradesh, Bihar, Chhattisgarh, Dadra and Nagar Haveli, Jammu Kashmir, Himachal, Ladakh, Lakshadweep, Maharashtra, West Bengal, Uttarakhand, Uttar Pradesh, Telangana and many more. Mobile Applications, Digital Classrooms were managed by many States and UTs like Madhya Pradesh, Maharashtra, Meghalaya, Odisha, Haryana, Jharkhand etc.

V.CONCLUSIONS AND RECOMMENDATIONS

The above discussions point out that the percolation of digitalised education system will be a trendsetter in our country which is expected to have more a phenomenal growth in the job seeking population in the coming decades. The online adaptive learning process suitable for diverse purposes like formal education, reskilling, certification etc. strongly advocates for flexible digital

learning medium. The significant growth in the disposable income has led to growing market of smartphones which has emerged as the preferred and easily accessible device for smart learning by the majority of population. The improvement of internet facilities across the country was another driver for online education. However, the demands for rich E-Content for higher and professional courses in regional and local languages is yet to be fulfilled. There is also a need of a regulatory body to ensure the mechanism of disbursement of the evolving digital education system across different platforms in India (KPMG and Google; 2017).

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