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Digital Educational Initiatives of India for Bridging the Digital Divide

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Abstract:

Digital divide is a hindrance and an impediment to the economic development of the nation. The digital divide in India is larger owing to the larger population below poverty line. People belonging to this category had little to no access to smart phones and therefore it became difficult for students in such families to cope up with the digitalised education. In the present ICT environment, there are huge educational resources scattered in electronic media. The GOI has been also supported for the development of ICT based educational resources that are suitable for the fulfillment of educational information needs of the youth community. The educational initiatives are authentic and enriched by multimedia content, good search facilities, multiple remote access and free open access. This research study discusses some issues of digital divide and the digital initiatives of the Ministry of Human Resource Development, Government of India for greater access to higher education in our country.

Keywords: digital divide, access, ICT, poverty, digital initiatives

Introduction

The pandemic has affected the education system in such a way that now technology plays a very critical role. Inclusion of technology in education system has made quality content available to students anytime, anywhere in abundance with just a click of a button. So online lectures have led to increased use of computers and smartphones which has led to increased screen time of the students. In the present ICT environment, there are huge educational resources scattered in electronic media. The GOI has been also supported for the development of ICT based educational resources that are suitable for the fulfillment of educational information needs of the youth community. The educational initiatives are authentic and enriched by multimedia content, good search facilities, multiple remote access and free open access. The National Broadband Mission under the National Digital Communication Policy 2018 has the stated objective of broadband for all. The Ministry of Human Resource Development, Government of India has taken several digital initiatives for enhancing the quality, access and penetration of higher education among a vast section of the population.

Research objective

The objective of the present study is to have an understanding of the various digital educational initiatives undertaken by the Ministry of Human Resource Development (MHRD), Government of India for bridging the digital divide in education.

Research Methodology

The present study is based on secondary data such as journals and documents.

Advantages of Digital Educational initiatives

1. Students, Scholars and Professionals also enrol in this platform,

2. All courses are free of cost,

3.Recorded lectures available at any time,

4. Anyone, anywhere and anytime can learn,

5.Mobile Learning,

6.Multiple courses may be pursued during the same period.

7.The high-quality education will reach to everyone.

National Mission on Education through ICT (NMEICT)

The quality of learning outcomes can be improved by using technology in digital education. For improving the quality of learning outcomes, the Ministry of Human Resource Development now named as Ministry of Higher Education has launched a comprehensive project named National Mission on Education through ICT aimed at embracing digital education solutions to increase access to high-quality material and learning outcomes. Despite the fact that the NMEICT programme has supported a wide range of initiatives, the most visible current initiatives are SWAYAM, SWAYAM PRABHA, the National Digital Library (NDL), e- Yantra, FOSSE, Spoken Tutorials, and Virtual Labs, which are being implemented by a number of higher education institutions.

National Digital Literacy Mission (2014) and Digital Saksharta Abhiyan:The government of India took the initiatives for the digital library where a large collection of ebooks, thesis,journals, archive newspaper, magazine, reports, policy documents, and e-contents for different disciplines.

Digital initiative of Government of India in Education

E-Gyankosh,- One of the initiative taken by national government to share digital learning resources which is developed by the open and distance learning institutions in the country. Study material is also made available for the students.

Gyandhara- It is internet service where students can listen live discussions made by experts and also can interact with them through telephonic conversation

-Adhyayan, Swayam- It is said that SWAYAM covers over 1900 courses are available which covers school and higher education

e-Pathshala mobile app (Android, iOS, Windows), and web portal can be used to access e-textbooks. It can be accessed by students, teachers and parents. 3,500 pieces of audio and video content of NCERT are available. It is available in different languages – English, Sanskrit, Urdu, Hindi.

Swayam https://www.swayam.gov.in/

Study Webs of Active Learning for Young Aspiring Minds (SWAYAM) is a programme initiated by Government of India and designed to achieve the three cardinal principles of Education policy viz., access, equity and quality. The objective of this effort is to take the best teaching learning resources to all, including the most disadvantaged.

Swayam Prabha https://www.swayamprabha.gov.in

The INFLIBNET Centre maintains the web portal. It is a group of 34 DTH channels devoted to telecasting of high-quality educational programmes on 24 X 7 bases using the GSAT-15 satellite. Every day, there will be new content for at least four hours which would be repeated five more times in a day, allowing the students to choose the time of their convenience. The Channels are up linked from BISAG, Gandhinagar. The contents are provided by NPTEL, IITs, UGC, ECE, IGNOU, NCERT and NIOS.

Virtual labs: Different sciences and Engineering disciplines needed laboratory facilities for a better understanding of the subjects' contents. Therefore, with the efforts and initiatives of the Government of India through different IIT, NIT, and Central University started the virtual laboratory especially for students enrolled in Higher Education

National Digital Library of India NDLI (https://ndl. iitkgp.ac.in or https://www.ndl.gov.in)

National Digital Library of India (NDLI) is an all digital library that stores information (metadata) about different types of digital contents including books, articles, videos, audios, thesis and other educational materials relevant for users from varying educational levels and capabilities. It provides a single-window search facility to access digital contents currently existing in India as well as other digital sources under a single umbrella. It is developed, operated and maintained from Indian Institute of Technology Kharagpur.

National Academic Depository (NAD) https://nad.gov.in/

The vision of National Academic Depository (NAD) is born out of an initiative to provide an online store house of all academic awards. National Academic Depository (NAD) is a 24X7 online store house of all academic awards viz. certificates, diplomas, degrees, mark-sheets etc. duly digitized and lodged by academic institutions / boards / eligibility assessment bodies. NAD not only ensures easy access to and retrieval of an academic award but also validates and guarantees its authenticity and safe storage.

E-acharya: It is an integrated e-content portal developed under National Mission for Education through ICT (NME-ICT). The portal provides facility to search and browse the learners all learning materials includes audio, video, textual materials, etc. through a single interface. The portal cover quality learning resources from top institutions in the country in eight subject categories viz. Agriculture Science, Biological Science, Chemical Science, Physical Science, medical and Health Science, Engineering and Technology, Social Science, and Arts and Humanities.

FOSSEE https://fossee.in

FOSSEE (Free/Libre and Open Source Software for Education) project is part of the National Mission on Education through Information and Communication Technology (ICT), Ministry of Education (MoE), Government of India. It project promotes the use of FLOSS tools to improve the quality of education in our country. It aims to reduce dependency on proprietary software in educational institutions. It encourages the use of FLOSS tools through various activities to ensure commercial software is replace by equivalent FLOSS tools. It also develop new FLOSS tools and upgrade existing tools to meet requirements in academia and research.

Barriers to access digital educational initiatives

- **Language barriers**
  Language is a key vehicle which connects the people and is a source of sharing information between different groups. India is a multicultural and multilingual country. A large percentage of information contents for higher education are in English which acts as a constraint or a barrier for the people of those countries where primary language of the people is not English.
- **Electronification**
  This is the essential requirement for using ICT. But in India, especially in rural areas and small cities supply of electricity is a big issue. ICT initiative in rural areas cannot get far without solving the problems associated with power.
- **Lack of device**
  Across the country, a very low number of households own a computer and internet usage and broadband subscriptions are low. Rural people use mobile phones but the ever-increasing cost of recharge subscription are created a bar towards continuing the service connections. Mobile devices do not offer graphics or processing power of a PC. The users are constrained to use small screen which limit the complexity of applications and keyboard and low-resolution pictures and videos.
- **Low Internet penetration**:
  Due to several factors like rural, urban areas, remotest areas, hilly areas, cross border areas and varied geographical regions lead to low internet penetration. Cities have 42% Internet-enabled homes while in

rural India 15% are connected to the internet (Ministry of Statistics and Programme Implementation, 2018).

- **Infrastructural Barriers**
  India is yet to have robust and fully equipped Libraries and information centres, with their primary objective of promoting access to information and promotion of life–long learning. Public libraries which can provide access to the Internet do not have computers and Internet access. Although India has witnessed a tremendous and progressive growth of cyber–cafes but financially poor people cannot afford to have access due to their financial constraint.
- **Economic barriers**
  Due to economic constraint or the lack of proper funding, the people of low socio-economic status do not have discretionary money to spend on private cyber–cafes or to have internet connectivity on their own to have the access digital information.
- **Literacy and skill barriers**
  Strong education leads to the use of internet, technology adaptation and innovation. Literacy in the form of Information technology (IT) is very important to allow access to digital information. According to the National Survey of India, the overall literacy rate in India in 2022is 77.7 per cent while it is 87.7 per cent in urban areas and 73.5 per cent in rural areas. Kerala has registered highest literacy rate of 96.2 percent and Andhra Pradesh is the lowest literate State (67.35 per cent)

Suggestion and conclusion

The following suggestions are put forth to bridge the digital divide in the field of education.

- The Government along with the private should invest heavily in developing computer literacy in the rural areas and adopt measures to motivate the rural people to be comfortable with computer and IT related tools and technology,
- One of the most important factors to narrow down the digital divide uninterrupted supply of electricity Alternative power sources should be exploited to meet power requirement in rural areas.
- Initiatives are required be taken by the Government and private sector to develop technology that can translate English into other vernacular languages of our country so that the students in rural areas can benefit from higher education.
- Most of the rural college library has a setup of Wi-Fi connectivity which is accessible for the college teachers and the students only and the rural colleges are having computer lab and e-library for the students to access internet. College libraries should allow the hostel students and local others students of rural areas who face problem with the internet access due to unavailability of internet provider to use computer for access digital educational resources after the college time. This type of service now a day's very popular by the name of best service of college libraries. The NAAC also encourage the college libraries to provide this kind of community services by which a society can develop. The student or the rural people are using mobile phone. The rural college library should disseminate the important current information through the mobile phone and make available in their hand with a single click and for that should make use of groups, WhatsApp groups by which the library can disseminate the current information to the rural community. The rural college library should provide computer education and training to the local people near by the college. Librarian should Conduct information literacy programmes both for the teachers and the students to motivate the rural students to use e-resources and access digital educational initiatives on the internet and how to use them for users benefit.
- To bridge the gap of digital divide in its real sense there is need to increase PC penetration. The reason is very simple; mobile cannot do everything a PC can. But, mobile are cheaper, more portable and their extended battery life is suited to regions where access to electricity is lacking or non-existent. The infrastructure needed to connect wireless devices to the Internet is easier and less expensive to build. There are also no learning curve, no literacy barrier and no technical-support challenges to overcome. There are no costly and burdensome applications to load, maintain and update. Thus, mobile is best suited for the rural people. The Government should provide fiscal incentives to personal computer, laptop and mobile companies to manufacture these at cheaper cost and provide necessary incentive to the companies to make

them available to economically backward students and those living in villages and backward regions of the country.

- The Government and the private institution should develop the infrastructure relating to broadband in rural areas where large section of students live.
- Institutions of higher learning should take initiatives in training faculty members and students who are not comfortable with the tools and techniques of information and communication technology and also College authorities should develop infrastructure facilities in the libraries to support digital educational environment;

References:

Bhattacharjee, Bishweshwar & Bhattacharjee, Bireshwar (2020) " The Status of Digital Divide and Education in India " Psychology And Education 57(9):5405-5410

Digital Initiatives In Higher Education, Government of India, Ministry of Human Resource Development

Jensen, T. (2019). Higher Education in the Digital Era: The current state of transformation around the world in the digital era. International association of Universities (IAU) http://www.iau-aiu.net

https://www.nirfindia.org

https://ndl.iitkgp.ac.in/

https://nptel.ac.in

http://oscar.iitb.ac.in/

http://www.sakshat.gov.in

https://shodhgangotri.inflibnet.ac.in/