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NEW MEDIA LITERACY; CHALLENGES, POSSIBILITIES AND OPPORTUNITIES IN EDUCATION

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Abstract
Digital Divide has always been a huge concern in India. This divide emerges from the power, wealth, the dominance of English, absence of culturally relevant content and digital illiteracy. According to Digital India, a flagship programme of Government of India to transform India into a digitally empowered society and knowledge economy, this digital divide can be bridged by connecting all gram panchayats through high speed broadband and by ensuring mobile access in all the villages by 2018. Though the role of New Media in transforming India into a knowledge economy is widely accepted but the concern over reaching the unreached and bridging the divide has been immense. Lot of initiative have been taken in the past to bridge this divide and number of projects and schemes were rolled out. The intent of the projects and schemes were good but the implementation of same has been unsuccessful because of lack of coordination /collaboration amongst such projects. The Digital India project, coordinated by DIETY, the Department of Electronics and Information Technology, Ministry of Communications and Information Technology, Government of India, attempts to address this problem by bringing all new and old e projects under one umbrella with the objective to facilitate citizen engagement, providing access to internet and phone and building infrastructure. The whole idea is to have synchronised implementation. Mere infrastructure development is not a solution to bridge digital divide. The readiness and preparedness of citizens is very important to bridge digital divide. This preparedness can be achieved through digital literacy. This paper explores how important digital literacy is to bridge the Digital Divide and the role Digital Literacy campaign can play in Nation Building. The paper will also explore the initiatives taken by the Indian Government to make India Digital Literate.

Keywords:
Digital Literacy, ICT Curriculum, National Digital Literacy Mission, Digital Divide, ICT Curriculum

INTRODUCTION

According to Census 2011, there has been rise in literacy rates from 64.8 per cent in 2001 to 73 per cent in 2011. This shows the continuous and concerted efforts by the government, civil society and private sector to improve the quality of education in the country which is the result of numerous reforms in the field of education since independence. But with the rapid advancements in new technologies, there lie new challenges, possibilities and opportunities in front of the Indian education system. The challenges include motivating teachers and students to embrace technology based education, making infrastructure- both hardware and software available, making teachers and students digital literate so that they harness the potential of new technology, development of content in regional languages and the last mile connectivity. The opportunities and

possibilities of new technologies include making education accessible to all, a shift from textbook centric education, reducing rigidity in the education system which is otherwise quite inflexible especially in context of examination and handling the issue of lack of teachers/lectures in schools and colleges. New technologies hold a potential to change the age old process of education.

To give new direction to Indian Education System, Government of India has initiated discussion on educational issues by creating a group "New Education Policy on My Gov Platform".

MyGov(2015)

http://mygov.in/new-education-policy-group.html

The objective of this Group is to formulate a new Education Policy for the country through an inclusive, participatory and holistic approach. The National Policy on Education was framed in 1986 and modified in 1992. Since then several changes have taken place that calls for a revision of the Policy. The Government of India would like to bring out a National Education Policy to meet the changing dynamics of the population's requirement with regards to quality education, innovation and research, aiming to make India a knowledge superpower by equipping its students with the necessary skills and knowledge and to eliminate the shortage of manpower in science, technology, academics and industry. For this purpose, 33 themes have been identified for discussions under this Group. The themes are divided separately for the School Education (13 themes) and Higher Education (20 themes) sectors. The group consists of Tasks and Discussions. Tasks are both online and on-ground. Discussions enable participants to share their thoughts and ideas.

Since new technologies hold a strong potential to overcome challenges of Indian Education system and strengthen the system, both in school education and higher education, New Education Policy group identified three themes for discussion that is related to ICT Literacy:

- Promotion of ICTs in school education and adult education
- Promoting Open and Distance Learning and Online courses
- Opportunities for technology enabled learning

This process of formulation of new Education policy has started when India is going through a digital revolution. The New Education Policy should take into account various initiatives that have been launched under Digital India Programme. (Digital India programme has been launched by the Department of Electronics and Information Technology, Ministry of Communications and Information Technology, Government of India). Lot of prominence is given to education in this programme as the mission of the programme is to prepare India for a knowledge future.

Though in India the policy framework, financial support and guidelines to ensure a national standard of education is provided by the Government of India through the Ministry of Human Resource Development (MHRD). But as far as ICT integration is concerned in addition to MHRD, the Ministry of Communications and Information Technology (MCIT) is also responsible for and engaged in designing and implementing various projects related to Digital Literacy. Various projects and initiatives to integrate ICT in education are in place. Ranging from making hardware and software available to providing incentive to teachers for innovatively using ICT in education, from developing repositories of open educational resources to offering national platform for Massive Open Online course, the initiatives are many. The MHRD that operates through two departments the Department of School Education and Literacy and the Department of Higher Education has taken lot of initiatives both at school level and higher education level. There have been continuous efforts to integrate ICT in education in India and make India Digital Literate.

ICT LITERACY ACROSS THE WORLD

The need for ICT integration in education has been emphasized at many international forums in the last decade. During the 26th G8 summit held in Nago, Okinawa, Japan, in 2000 the focus was on Information and Communication Technologies (ICT). It was noted that ICT has become an engine of growth for the global economy and has the potential to contribute significantly to sustainable economic development, to enhance public welfare, to strengthen democracy, to increase transparency in governance, to nourish cultural diversity, and to

foster international peace and stability. It was also emphasized during the conference that there was great need to develop human resources who are skilled enough to respond to the demands of the information age and to nurture ICT literacy and skills through education, training, and lifelong learning (Japan International Cooperation Agency, 2002).

The Organization for Economic Co-operation and Development (OECD) also emphasizes the economic importance and impact of ICT in developed countries and points out the need for these countries to develop a workforce with the skills to use ICT to increase productivity, as well as the need for young people to develop ICT skills in preparation for adult life. OECD countries are making substantial investments in ICT in order to improve the quality of teaching and learning. According to OECD report Measuring the information economy 2002, economies increasingly depend on technological knowledge and skills, and ICT skills are particularly important. The use of computers at an early age helps students to learn ICT skills which can then be used as a tool in the education process.

The World Bank is also playing an important role in assisting countries in taking advantage of the opportunities in information and communications technologies (ICTs) to contribute to education goals and poverty reduction strategies. Support for ICT in education includes assistance for equipment and facilities; teacher training and support; capacity building; educational content; distance learning; digital literacy; policy development; monitoring and evaluation; and media outreach (World Bank, 2003)

A World Bank (2003) report cites the potential that ICT has to improve efficient delivery of resources to the poor, to bring markets within reach of rural communities, to improve government services, and to transfer knowledge needed to meet the Millennium Development Goals (Kozma, 2005)

At the World Summit on the Information Society, the United Nations (2005) noted the potential of ICT to expand access to quality education, to boost literacy, and to provide universal primary education in developing countries.

Based on the discussion which were held on various international platforms, countries the world over came up with different policies and schemes to integrate ICT in the education sector.

INITIATIVES TO PROMOTE DIGITAL LITERACY IN INDIA

The National Policy of ICT in education

The National Policy of ICT in education was formulated in India in 2008.

With the convergence of technologies, it has become imperative to take a comprehensive look at all possible information and communication technologies for improving school education in the country. The comprehensive choice of ICT for holistic development of education can be built only on a sound policy. The initiative of ICT Policy in School Education is inspired by the tremendous potential of ICT for enhancing outreach and improving quality of education.(National Policy on ICT in Education)

This policy endeavors to provide guidelines to assist states in optimizing the use of ICT in school education within a national policy framework. The policy aims to promote universal equitable, open and free access to a state of the art ICT and ICT enabled tools and resources to all students and teachers, development of local and localized quality content and to enable students and teachers to partner in the development and critical use of shared digital resources, development of professional networks of teachers, resource persons and schools to catalyze and support resource sharing, a critical understanding of ICT, its benefits, dangers and limitations.

ICT Curricula for Students and Teachers

National Policy on ICT in education also proposed a model curriculum for ICT in Education for teachers and students. The curriculum has been developed by the National Council for Educational research and Training (NCERT) an autonomous body under Ministry of Human Resource Development, Government of India. This ICT curriculum is a major shift from what the country had seen till now as computer literacy programme, with a push this switch and click that button emphasis. Through such computer literacy programmes not only do we portray ICT as more difficult than it actually is, but also hinder intellectual development and creativity. Also, using computers and internet as mere information

delivery devices grossly underutilizes their power and capabilities.

The ICT curriculum therefore anchors itself to the National Curriculum Framework. The aim of the curriculum to involve the teacher in a critical appraisal of the availability and appropriateness of technological solutions to address educational problems. For the student, emphasis is on creative use of the medium and widening of one's horizons.

The curriculum proposes six thematic areas in which ICTs can be explored. The six themes in the curriculum are:

- Connecting with the world
- Connecting with each other
- Interacting with ICT
- Creating with ICT
- Possibilities in Education
- Reaching out and bridging the divide

The main idea behind the curriculum is to integrate Information and Communication Technology with other subjects rather than treating it as a standalone subject.

Open Educational Resources (OER) Movement in India

Under National Mission on Education through Information and Communication Technology (NMEICT) a Open Licensing Policy was also formulated. This decision has its root in the National Knowledge Commission recommendation to the Government of India. The NKC was constituted in 2005 under the chairmanship of Mr. Sam Pitroda (an internationally respected telecom inventor, entrepreneur and policy maker)to prepare the blueprint for reforms of knowledge related institution and infrastructure which would enable India to meet the challenges of future. The NKC recommended the creation of a national educational foundation to develop a web based repository of high quality educational resources as OER through collaborative process. It said,

An enabling legal framework that would allow unrestricted access without compromising intellectual authorship must be devised for this purpose".

On the basis of NKC recommendations in the last ten years many institutions in India have embraced this idea of having Open Educational Repositories to address the challenge of quality and equity. But these initiatives like the National Science Digital Library(NSDL), the Open Source Courseware Animations Repository (OSCAR), the National Programme on Technology Enhanced Learning (NPTEL), the Virtual Academy for the Semi-Arid Tropics(VASAT) and Indira Gandhi national open university(IGNOU) were limited to higher education. National Policy on ICT in School Education proposed a web based digital repository and the responsibility to build this repository was given to CIET, NCERT. The National Repository of Open Educational resources (NROER) was developed in collaboration with HomiBhabha Centre for Science Education, Mumbai. NROER is a comprehensive digital repository of resources that can be used by teachers in the teaching learning process.

According to the Open Licencing Policy, all educational materials shall be released under an appropriate open licensing regime and the current preference is CC-BY-SA (Creative Commons-Attribution-Share Alike) This license will permit users to share (copy and distribute) the material in any medium or format; and adapt (remix, transform, and build upon) the material for any purpose, even commercially. The user shall provide attribution to the original creator and also mandatorily, distribute any adaptation and .or enhancement under the same license. All the knowledge resources developed under the NMEICT have to follow Open Licencing Policy Guidelines. Even though the policy is in place, the adherence to this policy is an issue. As many of the projects still have not mentioned the licence under which they are releasing the content. Also the adoption of different creative Common license for different projects under NMEICT is a matter of debate. The rationale of using CC-BY-SA-NC (Creative Commons-Attribution-Share Alike-Non Commercial) for the projects like National Programme for Technology Enhanced Learning (NPTEL), National Institute of Open Schooling (NIOS) and CC-BY-SA for the projects like NROER is not clear. Also, there is a great need to create awareness about these knowledge portals amongst teachers and students. These portals and repositories that offer Open Educational Resources can play a huge role in bridging digital divide by offering the content that is contextual and also by allowing its content to be translated in different

regional languages. The dominance of English language that is considered as one of the major reason for digital divide can be reduced by creating portals that offer content in regional languages and also by releasing content under creative commons licence so that the resources can edited, remixed and translated according to the needs of different groups.

National Digital Literacy Mission

ICT intervention at the school level is the need of the hour as it can play a significant role in solving lot of problems that the Indian Education system is facing. At the same time Digital Literacy should not be treated as something that is possible within the formal set up of education system. The vision of Digital India can be possible with the Digital Empowerment of all citizens. This includes Universal Digital Literacy, Universally accessible digital resources, Availability of digital resources/services in Indian languages, Collaborative digital platforms for participative governance. IT Mass Literacy scheme has been formulated keeping in view " National Policy on IT 2012" which includes an objective of making one person IT literate in every household. As per the recommendation of Standing finance committee , the name 'National Digital Literacy Mission' was adopted for the scheme. A digital literate person according to the scheme is one

- Knows the basics (terminology, navigation and functionality) of digital devices
- Uses digital devices for accessing, creating, managing and sharing information
- Uses the Internet to browse in an effective and responsible manner
- Uses technology to communicate effectively
- Appreciates the role of digital technology in everyday life, in social life and at work.
- Uses technology to communicate effectively with government and other stakeholders (G2C, C2G and G2G)
-

Dos & Don'ts of Digital Technologies (Ethics, Security, Social & Human issues and Health & Safety).

Though the policies take into consideration the key issues like promoting Digital Literacy, Development of content in regional languages and connecting gram panchayats through high speed broadband, ensuring mobile access to bridge digital divide but still there is a need to have a synergy between what ICT can do and what are the requirements. National Policy on ICT in Education do look at ICT intervention in a holistic manner which aims at making infrastructure available (Hardware and software, connectivity, power supply and computer lab) Besides this, it also aims at digitization of available educational audio video and print resources, development of e content in multiple languages, teacher related interventions which includes capacity enhancement of all teachers in ICT and introduction of scheme for national ICT awards as a means of motivation. The challenge now lies in the implementation-making ICT infrastructure available, development of e content in multiple formats and multiple languages, training of teachers, teacher educators, policy makers in the use of ICT. To make this happen various organizations have to join hands and pool the resources which are available in abundance in our country. The effort has to be made to map these resources with the school curriculum. Also, teachers after being trained in ICT have to start contributing in the creation of content and offer individualized learning environment to her students.

Most of the time ICT Literacy or Digital Literacy programmes are introduced and pursued for implementation only when the required infrastructure and content is available so that the citizen access or avail the services offered by the government, civil society or private sector. On the contrary, ICT literacy can also be introduced even with the limited infrastructure and content. This literacy would then generate demand for ICT infrastructure and content which can play a huge role in bridging the digital divide.

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