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USE OF DIGITAL TECHNOLOGIES IN EDUCATION

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Abstract

Over the years, the use of the digital media has grown manifold in all the spheres of life. Yet its potential needs to be harnessed completely in the field of education. Education in India is still suffering from lacunae that curtail the exploitation of the digital technologies to the fullest for the welfare of the students. In light of the above, the paper attempts to explore the policies and issues that exist in the use of digital technologies in education.

Keywords: *Digital Technologies, Digital Divide, Education*

I. Introduction

Over the years, the role of education has expanded manifold. The social changes in the society have brought about significant changes and have impacted education in numerous ways. The education system is now entrusted with the responsibility of catering to the needs of diverse student population that is now accessing the Indian classrooms. Globalization has raised a lot of expectations from the education system it needs to fulfil in order to keep abreast with the changes happening round the world. India has been striving to match up the pace of the rapidly expanding goals of education at the international level. Through several of its policies and programmes, India has been trying to achieve higher literacy rates among all its different age groups by introducing several policies for promoting school education, adult education, mass education etc.

At this time, digital technologies and their growing role in education has gained importance. The European Commission argues, in their Digital Agenda for Europe 2015, that digital technologies provide flexible and accessible learning opportunities, both indoors and outdoors (Salavati, 2016). This viewpoint was previously stated by several researchers and scholars (cf. Dillenbourg, Järvelä & Fischer, 2009; Pachler, Bachmair & Cook, 2010; Scardamalia, et al., 2010).

Digital technology may be considered as the use of computer and technology assisted strategies to support learning within schools (Education Endowment Foundation, 2018). It includes all devices, tools, content, resources, forums, and services, digital and those that can be converted into or delivered through digital forms, which can be deployed for realising the goals of teaching learning, enhancing access to and reach of resources, building of capacities, as well as management of the educational system (MHRD, 2012). It is an expanded notion of technologies that recognises their development from mere information delivery systems and also clarifies their role in classrooms in contrast to their wider use across schools and learning centres (Cambridge Assessment International Association, 2018). Research has shown that students' learning can be enhanced with digital technologies as it is possible to create places and environments for the students to collaborate and discuss at a different level (Salavati, 2016). ICT devices bring together traditionally separated education media (books, writing, audio recordings, video recordings, databases, games, etc.), thus extending or integrating the range of time and places where learning can take place (Livingstone, 2011).

II. Policies for promoting Digital Technology for Education in India

ICTs bring about a qualitative, structural transformation in the economy effecting changes in the global supply chain of services (Gurumurthy & Chami, 2014). Since last many years, India too has been focusing upon promoting the use of digital technology for education in India. Government of India initiatives like NOFN (National Optical Fiber Network) connecting 5 lac villages via broadband till 2017, 25 cities by Wi-Fi by the end of 2015, is a significant step in this direction (Bisla, 2017) .

The formal project of digital library under the Digital Library
Initiative (DLI) was started in 1994 as a joint initiative of the National Science Foundation (NSF), Department of Defense Advanced Research Projects Agency (DARPA), and the National Aeronautics and Space Administration (NASA), in 1994

The Government of India initiated a Digital Library Initiative in 1994 for investigation and development of underlying technologies for digital libraries (Naskar & Barui, 2016). Several universities have been given funds to establish digital libraries under the initiative to share and disseminate useful literature.

Though several of its flagship programmes such as Sarva Shiksha Abhiyan (2001), Right to Education (2010), India has been trying to provide the ICT enabled infrastructure in all of its schools. The National Policy on Education 1986, revised in 1992 has stressed the need for employing educational technology to improve the quality of education. This led to the

development of a more comprehensive centrally sponsored scheme – Information and Communication Technology @ Schools in 2004 (MHRD, 2012).

The ICT Policy in School Education came up in 2012 to devise, catalyse, support and sustain ICT and ICT enabled activities and processes in order to improve access, quality and efficiency in the school system (MHRD, 2012). The policy focussed upon the usage of ICT for the skill development in the students, for school management, school administration, capacity building of the teachers/principals and other eminent stakeholders at the district level apart from suggesting firm foundations for having a sound monitoring and evaluation system.

Further, the government is working upon its new policy for education which emphasizes on digitisation for achieving the goal inclusive education. The draft proposes to introduce the digital literacy in the curriculum in a graded manner and to track and monitor the health record and status of each child.

III. Using Digital Technologies in Indian Classrooms: Major Issues

In recent years governments have invested heavily in information and communications technology (ICT) in schools. The quality of schools' educational resources, including ICT and connectivity, has increased greatly in recent years. However, international surveys have found that digital technologies have not yet been fully integrated in teaching and learning (OECD, 2016). The International Telecommunications Union, in its 'Measuring the Information Society' Report of 2013, places India in the category of the World's 'Least Connected Countries' based on a composite measure of ICT access, ICT use and ICT skills (Gurumurthy & Chami, 2014). Further, there is clearly a gender gap in access to ICTs. For example: The Intel Women and the Web Study 2013 found that while 8.4% of Indian women, and 11.6% of Indian men are online, there is a weighted gender gap of 27% – meaning that a woman in India is 27% less likely to have Internet access than a man (Gurumurthy & Chami, 2014).Further, figures from the GSMA on mobile access in 2015 report 615 million unique mobile subscribers; which represents 47 per cent of the population of which 30 per cent have mobile internet access (Motteram, 2017)

Taking the case of education specifically, many schools do not yet have access to or are not yet using technology in ways that can improve learning on a daily basis, which underscores the need—guided by new research—to accelerate and scale up adoption of effective approaches and technologies (US Department of Education, 2017). It is striking that although technology is prevalent in our daily lives, the majority of teachers in many countries do not frequently use ICT in their . The teachers are yet not skilled enough to make use of

technology effectively in the teaching learning process (OECD, 2016). Teachers do not feel sufficiently skilled to use ICT effectively, at best using digital technologies to complement prevailing teaching practices. As tertiary-educated professionals, teachers have relatively good ICT skills, but these fall off sharply with age, especially among the large cohort of older teachers (OECD, 2016). Grönlund (2014) states that, it is not merely enough for the teachers to be skilful and competent in using computers, but rather the way the teachers work, and the teaching resources, as well as the students' schoolwork need to change. As research has indicated, technology alone will not enhance learning, but using it as part of good teaching practice can open new doors to learners and teachers (OECD, 2016).

Further, India is still in its developing phase. There are several issues that exist with the digital connectivity. There exist several schools which do not possess even basic infrastructural facilities. In such cases, the use of ICT in some schools rather creates a digital divide which further widens up the gap between the haves and have nots. There are also gaps between policy and program design and between program design and pro gram implementation (IT for Change, 2018) . All these issues need to be attended to before the country can shift to the complete digitalization

IV. Conclusion

Twenty-first century teaching learning skills underscore the need to shift from the traditional teacher-centered pedagogy to more learner-centred methods yet it will take continued commitment from all stakeholders involved to make any kind of substantial and sustainable change (PWC, 2018) towards digitalization.

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