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DIGITAL CULTURE-A CONCEPTUAL PERSPECTIVE

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International and National Priorities on ICT in Education

"Without willing and E-Matured teachers, students cannot benefit from the educational opportunities afforded by technology" - UNESCO, 2016

With the formal adoption of the 2030 Agenda for Sustainable Development at the United Nations General Assembly in September 2015, Member States are asked to abide by the Education 2030 Framework for Action that underscores the central role of teachers in achieving Quality Education through ICT.

The Government of India has come up with the National Curriculum framework for Teacher Education **(NCFTE)** 2009, which mainly emphasised on the Technology introduction. Two major developments in the recent years form the background to the present reform in teacher education – the political recognition of Universalization of Elementary Education **(UEE)** as a legitimate demand and the state commitment towards UEE in the form of the Right of Children to Free and Compulsory Education Act, 2009. The Centrally Sponsored Scheme for Teacher Education for the XII Plan with an approved outlay of 6308.45 crore focuses on improving the quality of teacher education through effective use of ICT.The number of courses offered at different stages – pre-primary, elementary and secondary – face-to-face and distance modes of teacher education; programmes of M.Ed., face-to-face and distance modes, C.P.Ed., B.P.Ed. and M.P.Ed. have increased from 3,489 courses in 3,199 institutions in March, 2004 to a whopping 14,428 courses in 11,861 institutions in March 2009. The student intake has likewise increased from 2,74,072 to 10,96,673 during this period. This expansion has taken a heavy toll on quality parameters like E-Maturity, faculty qualification and their Digital Skills, ICT Resources and student profile.

The National Mission on Education through ICT(**NMEICT)** , the MHRD project launched on 2nd February, 2009 at Tirupati provides a momentous opportunity for all the teachers and experts in the country to pool their collective wisdom for the benefit of every Indian learner and, thereby, reducing the digital divide. Under this Mission, a proper balance between content generation, research in critical areas relating to imparting of education and connectivity for integrating our knowledge with the advancements in other countries is being advocated.

In keeping with the above International and National trends, Teacher education needs to orient and sensitize the teachers to distinguish between critically useful, developmentally appropriate and the detrimental uses of ICT. It will be possible only when the Teacher Education Institutions imbibe and exhibit a Digital Culture and E-Maturity, which can be evident through benchmarks like E-Access, E-Safety and Digital Inclusive Practice (DIP) viz informed choice and smart use of ICT.

The importance and impact of new digital technologies in contemporary social, educational, economic and cultural life have rapidly become important themes in social science research. As Society is shaped by the rapid diffusion of sophisticated digital devices, applications and trends like Web 2.0 Technologies and Social Media, a changing social order and culture are emerging. **The National Knowledge Commission (NKC)** has observed that teachers are the single most important element of the Educational System. Norms and Standards for teacher education institutions have been revised in **2014** in accordance with the recommendations of the **Justice Verma Commission. Digital India** campaign launched by the Government of India in **2015** has taken initiatives for the introduction of Information Technology to empower people in areas relating to education, labour and employment.

Digital Culture

Digital culture is defined as a social phenomenon in which there is an assimilation of Digital Mind-set and Digital Habits in the new Digital Environment by the Digital Natives as well as Digital Immigrants. Brooks Young (2005) provides definitions of the digital native and the digital immigrant: "Digital native is a technology user under the age of 30, who was born into the digital world. Digital immigrant is a technology user, usually over the age of thirty, who was not born into the digital world." Digital natives developed their first information literacy skills "in the digital world with computers, videos, and the Internet". Digital immigrants, on the other hand, formed their information literacy skills "in the print world. Immigrants are immersed in a new culture where life is different from what they know. As they learn about their new culture, its language, accepted behaviors, and nuances, they begin to acclimate and eventually fit in, sometimes even becoming undetectable. Coburn (2004) has designed a formula that provides a mathematical visualization of this process:

Change in Technology Use = f (user crisis vs. user's total perceived pain of adoption)

That is, a change in technology use is a function of the relationship between the user's crisis and the perceived pain of adoption. As the crisis increases and numbs out the perceived pain of adopting the new technology, teachers will embrace and implement the new technology.

Digital Culture in Teacher Education

The topic of Digital Culture in Teacher Education is an area of growing national and international concern. However, a thorough search for any previous research in this vital area throws light on the Research Gap . Over the last two decades,Considerable time and money have been invested in integration and use of technology at all levels of education in general and Teacher Education in particular and a number of large reforms have swept through the Indian education system . However, in spite of the investments and the ever increasing availability of technology (Egeberg, Guðmundsdóttir, Hatlevik, Ottestad, Skaug, & Tømte, 2012), there still appears to be a gap between the technology available in classrooms and teachers' use of this technology for educational purposes (Kopcha, 2012; ten Brummelhuis & Kuiper, 2008; Petko, 2012; Zhao, Pugh, Sheldon, & Byers, 2002).

According to a recent research by **Shear, Gallaher and Patel (2011)** that looked at teaching practices of more than 20 schools from seven countries, one of the key factors that fosters innovative teaching and learning is the close alignment and connection between what the policy envisions and what actually happens in the classrooms. A great deal of research also shows that facilitating ICT-pedagogy integration requires more systematic policy-level changes to create an enabling environment.

Jenny M Lane, (2012) made a study on, "Developing the Vision: Preparing Teachers to Deliver a Digital World Class Education System". In 2008, Australians were promised a 'Digital Education Revolution' by the government to dramatically change classroom education and build a 'world-class education system'. Eight billion dollars have been spent providing computer equipment for upper secondary classrooms, yet the study found little evidence that a revolution has occurred in Australian schools. The study concluded that transformation of an education system takes more than a simplistic hardware solution. Revolutions need leaders and leaders need vision. The study recommended a need to look beyond putting computer hardware into classrooms.

Charles Musarurwa (2011) made an Impact Study on "Teaching with and Learning through ICTs in Zimbabwe's Teacher Education Colleges". An interesting finding of the study is that the rate at which schools in Zimbabwe have embraced the use of ICTs is unprecedented, but this has not been matched with an equal effort by teacher education college.Hence, teacher trainees have been less exposed and trained in using such technologies and evidently this has created a mismatch

Bhattacharjee D.S., (2011) made a study on "Teacher Education in Northeast India-Status, Weaknesses and Alternatives". This study highlights the features of existing teacher education programmes in a cluster of eight states-Arunachal Pradesh, Assam, Meghalaya, Manipur, Mizoram, Nagaland, Sikkim and Tripura .Teacher training scenario in Northeastern states presents a complex and complicated picture with a low usage of ICT by the Teacher Educators as well as Teacher Trainees.

KarpagaKumaravel (2013) conducted a descriptive study to explore the level of ICT Fluency among the Teacher Educators of selected Districts of Tamilnadu. The finding was discouraging and the study recommended the development of an e-Maturity Model to benchmark the Digital Culture in the Teacher Education Institutions.

Padma (2016) conducted a survey on the use of ICT in the Student Support Services of the Distance Teacher Education Programmes in the state of Tamilnadu. The study revealed a dismal picture on the application of ICT and recommended further research in this area for the total evaluation of the use of Educational Technology in Regular as well as Distance Modes of Teacher Education.

Research Need

It is clear from the review of related research studies (both on line and off-line) that no study has been undertaken so far to track the E-Maturity and Digital Culture in Indian Teacher Education. Further, there is no research evidence in India for the levels of E-Access, E-Safety and Digital Inclusive Practice (DIP) viz informed choice and smart use of ICT. Hence, it is suggested that research is undertaken to fill this gap by benchmarking and understanding E-Maturity and Digital Culture among the Teacher Education Institutions in relation to variables like E-Access, E-Safety and Digital Inclusive Practice (DIP) viz informed choice and smart use of ICT.

Twenty first century Teachers and Teacher Educators need the technical, pedagogical and content skills to use information and communication technologies (ICT) to create meaningful learning experiences for their students. In India, Standards have not yet been developed and operationalised at the national level . The suggested study should lay down tools and frameworks for the National Standards and should also help to ensure that Standards are enacted in the daily practices of Teacher Education Institutions across the nation. It will be a humble step to achieve the vision of Digital India, where every Teacher and every Learner are digitally empowered as Digital Contributors to help the country to transform into a knowledge driven economy.

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