

## DIGITAL CAPABILITIES AND SKILLS IN EDUCATION

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Dr. Ubaid Akram Farooqui\*

### ABSTRACT

*Education is facing problem with the digital world because most of the middle-aged teachers are digital novices whereas the students today are digital experts. This digital generation gap has created a digital divide between teachers and students. The middle-aged teachers are not so comfortable with the advanced technology, especially smartphones, smartboards and other electronic devices which are widely used by teachers in online teaching or blended teaching for that matter. They rely on their children to help them out in preparing the PPTs, shooting the videos and finally uploading the videos and thus making them available for their students. There has been blended teaching for almost a decade now but it was not as popular as it has become now in Covid-19 and post-Covid-19 days. Blended teaching was confined to public schools and private colleges only, however, it is being used by the government schools and colleges too because there is no other option to reach out to students who are quarantined within the four walls of their houses for almost a year now due to Covid-19. Therefore, to satisfy the novel learning needs of the twenty-first-century generation students, teachers are supposed to acquire skills and competence to integrate technology not only in the classroom but also in their routine life. Although, it is a quite difficult task for digital novices yet it is equally essential for them to grasp the working of those digital tools in today's digital age of information and knowledge explosion because it is 'New Normal' now.*

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**Keywords:** Digitalization, Communication, Revolution, E-learning, Globalization, Technology, Covid-19.

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### Introduction

Globalization, knowledge explosion, communication revolution and also the ever-increasing convergence of digital technologies are the numerous characteristics of our world at the turn of the 21st Century. This era of fast pacing globalization has resulted in a lot of changes in our lives; from communication to the dissemination of information; from the global economy to boundary-less education everything has changed. The methods used for knowledge dissemination have baffled the teachers because millennia-old methods of face-to-face oral instructions are now being largely replaced by data communication technologies, internet and e-education. This digital revolution seems to be highly necessary for developing countries like India where students are abundant and teachers are relatively scarce. As a result of rapid technological change, the Indian education system is facing many new challenges and providing various new educational opportunities. New millennium experiences the phenomena of liberalization, privatization, globalization and straightforward access expediting the emergence of digitalization of education, which is important for the Indian education system. These digital technologies have changed the design of functioning of the education system and its governance with the assistance of digital data, its storage, retrieval, manipulation and transmission. It has emerged as an economical and time-saving tool. To accomplish growing educational demands, we must adopt the most effective possible methods to incorporate digital technology in our education system to rework our academic institutions into potential learning centres to cater the growing needs of the world learners. Quality education is the key to the development of any nation. The appliances of digital technologies in the education system can play a great role and help India to attain the status of a developed nation.

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\* Associate Professor of English, BSR Government Arts College, Alwar, Rajasthan, India.

### **Role of Digital Era**

Digitalization of education includes the use of digital tools and technologies for educational administration, teaching-learning process, evaluation, research and extension activities. Universities are the pillars of knowledge and better education presents a good picture of a nation. Digitalization of higher education system by integrating Information and Communication Technology (ICT) and related technologies could be a notion that may empower the governing bodies to manage the advancement of any educational and managerial plan and reforms in the whole nation and supply service in a far better manner to all. Education institutions throughout the world are progressively using this information and digital technologies. It is a prerequisite to possess technical skills to figure and communicate with others in today's technological world comprising knowledge-based societies. In this digitalized world, it is important to create the skill of computer and technological knowledge among the stakeholders of education and improve their capacities for the formation and usage of digital resources optimally. With the progression of digital technology in education, there has been a paradigm shift in the education system throughout the globe. It is shifting from the traditional method of teacher-centred learning to modern methods of learner-centred teaching. The students today acquire knowledge, learn facts, skills, and attitude from the computer, internet and social media. Technology has created a major difference in various processes associated with education.

Teaching and learning through digital technology is playing an increasingly vital role today. Technology heralded the event and implementation of recent and innovative teaching strategies in Education. The demand for such skilled teachers who can guide students to a successful life in an exceedingly technology-infused, knowledge-based society is rising worldwide. Technology offers teachers the keys to unlock a large world of opportunities available to satisfy this demand of education system across the globe. One of the foremost acceptable ways of learning being surfaced nowadays is learning through digital technology. These digital technologies have the potential to individualize training experiences and extend the reach of educational activities outside the boundaries of educational institutions. Learning through technology is hi-tech, substantive, content-focused and caters the necessity of individual differences providing personalized learning experiences. These learning experiences encompass a spread of vibrant, splendid, striking and animated text resources frequently supported with pictures, graphics, animations and videos, thus offering a rich and complex learning environment and intrinsic motivation to learners. These instructional resources are regularly updated and freely available to learners. The learners may navigate through these resources and use them in the learning activities as per their need, interest and convenience. The greatest advantage of learning through digital technologies is that it provides a chance for those who cannot attend regular classes.

### **Digital Competence: Significance in Education**

Teachers' exposure to technology continues to be in its nascent stage in India. Teachers working in the Indian education system need to learn the technologies and avail of the facilities available for effective teaching like virtual laboratories, e-learning resources from MOOC, NPTEL, INFLIBNET, SWAYAM and other open educational resources, mobile education, etc. A teacher equipped with digital command can nurture critical thinking, sharpen creative faculty and develop scientific temper in the students to rework them into life-long learners and innovators. They need to value life-long learning together with learning forever and learning through life. The said changes required for the expected learning outcomes including a mixture of information, values, attitudes and skills with a specific emphasis on those skills that are associated with critical thinking and creativity, collaboration, and communication skills of teachers. It is a demand of time because the world is changing fast; it has entered into an age of digitalization and has created new and effective approaches which will increase the standard of education.

The concept of digital competence is rapidly becoming popular in educational settings. As a result of an explosion of knowledge, communication and interaction among people it is now required to make awareness and understanding in the individuals for providing them with a perspective that ICT has become more vital than ever. This awareness must instigate the values of a brand-new humanism in the individuals by situating them at the middle of the knowledge society, developing a critical attitude towards technology, fostering a way of autonomy in a global communication context, making them value and respect cultural diversity, and stimulating the concept of the cosmopolitan universal citizen with apparent rights and responsibilities. In this regard, Jenkins et al. (2006) discussed the new participatory culture, and also the role of education in providing the talents and skill to each student so that he becomes a vigorous and productive participant. There are various online communities and forums, which

offer a platform to young individuals to participate in the activities of their preference and interest, give opportunities to share their digital creations, collaborate in formal and informal teams, and shape their ideas. These activities often require new varieties of skills, which include distributed cognition, simulation, appropriation, multitasking, collective intelligence, information evaluation, transmedia navigation, networking and netiquettes. These skills strengthen the communication, critical thinking and problem-solving approach in a digital environment. In the digitally mediated environments where digital tools are being highly used, digital competence has become an integral component. Digital Technology is creating a Midas touch for education. It is an indisputable fact that technology has brought in many new opportunities i.e., the web 2.0 facilities, social networking platforms, e-books, MOOC, online learning platforms, e-libraries, webinars, OERs, virtual universities etc. Integration of digital technology has transformed the education system throughout the world, which upsurges the development of knowledge, skills and attitudes associated with digital competence in the students and teachers alike. It is important to notice that digital competence is not ICT rather it is a cross-curricular responsibility together with literacy and numeracy. It emphasizes the development of digital skills, attitudes and competence that apply to a good range of subjects and situations; may appropriately be used in personal life and professional career. Nonetheless, it is not anticipated that digital competence must be forcefully imposed in all the subjects. It may be included in such classroom tasks as, home assignments, and team-activities, projects and problem-solving strategies so that natural and meaningful development of digital skills can take place.

### **Digitalization of Higher Education System in India**

India has been as a centre of excellence in the field of higher education. Nalanda, Vikramashila and Takshashila were a few of the oldest universities in the world and were the foremost renowned seats of higher education in ancient times. Students from distant countries came to seek education in these universities. Education in India has seen massive growth in the post-independence era. Today India has emerged as the most important education systems in the world with a few excellent institutions for education. The Indian teaching system is undoubtedly complex but in recent times, pedagogy in India has changed tremendously, resultantly, its education system is fast progressing. Universities are the pillars of the knowledge and better education is the façade of a nation. The standard of Higher education is believed to be the building blocks of a developed nation with a sound economy. It contributes in various ways in the development of a nation. It promotes social and economic development by building human and technical capabilities of society. The development of Higher education is extremely correlated with the amount of overall development. The 21st century is marked by a paradigm shift in education that has resulted in endeavoring for the development of highest educational, technological and digital skills to refine the whole world into a world community. Educational institutions throughout the world are progressively using digital technologies. Inclusion of digital technology has brought a revolution in every aspect of society; pedagogy has also not remained untouched from this ongoing revolution. It has brought new challenges and opportunities for an educational activity. ICT has changed the design of functioning of the academic system and its governance with the assistance of digital data, its storage, retrieval, manipulation and transmission. It has emerged as an economical and time-saving tool. To accomplish growing educational demands, we must adopt the simplest possible methods to incorporate digital technology in our education system to remodel our academic institutions into potential learning centres to cater to the growing needs of world learners.

### **Conclusion**

The role of teachers today has changed and continues to change from being a teacher to becoming a constructor, facilitator and creator of learning environment together with this they have to think critically and creatively to analyse available information with their own experience. Inclusion of digital technologies has extended the scope of educational programmes outside the boundaries of the classroom and thus providing an opportunity to those who are somehow unable to attend the regular classes. Through Networked learning learners connect with resources, teachers and other students. Massive Open Online Courses (or MOOCs) utilize networked learning methods to relay information from one person to groups of learners. The networked learners experience an upscale and complicated online information environment through which they navigate themselves. Digital learning is hi-tech, content-focused, deliver driven and supports individual learning. The learners are exposed to a spread of colourful, magnificent, attractive and animated textual materials very often supported with graphics. These instructional materials are updated constantly to produce the latest learning materials to the learners organized by a number of the most effective resource persons. Learners are engaged to participate in learning activities at their convenience through online technologies. Eminent

educationists from different parts of the country and even overseas may well be asked for teaching at their convenience through mobile technologies and seamless communication technologies that support 24x7 teaching and learning. These online learning programs aim to motivate, encourage and empower people through education. Thus, it is said that to be a good teacher in all these areas, a teacher must be receptive to learning on a way to integrate technology and digital tools in the teaching-learning process together with life skills.

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