DIGITAL LITERACY AND COMPETENCE FOR EDUCATORS

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Abstract

Over the last few decades concept of digital literacy and digital competence have been widely used in public discourse. These are the latest concepts, skills necessary for modern life, concerned with the scientific and technical implementation of new emerging technology in various aspects of life such as education, economy, politics and production. The development of these digital concepts depends upon both traditional and diverse media. Digital literacy is a skill that provides plenty of opportunities to the person in current digital environment, so that it can be called a new modern skill. Digitally literate teachers can facilitate and equip their students with modern skills in the competitive world. Use of digital devices and Information and communication technology exposes the students to a new approach in teaching and learning. The paper discusses the significance of teacher's awareness to digital literacy and competence vis a vis the use of digital devices to create the digital environment in the classroom.

Keywords- Digital literacy, Digital competence, Technology, ICT

Introduction

Being literate means not only being able to read, write and speak but also having the ability to produce, interpret, understand and create meaning. These abilities assure a person to acquire higher education and secure livelihood. In today's technology-dependent world, literacy goes beyond the ability to understand the information written in books. Information can come in many forms such as sound, video, text, and images and a person would need to master new skills to understand and to create meaning out of the information. The internet is a digital platform that provides opportunities for the exponential growth of the intellect. Internet has made available surplus virtual information, as a result of which the learning process requires the ability to find, access, locate, extract, evaluate/assess and organize the present digital

information (Argentin, et. al., 2014). Cornell University defines digital literacy as the ability to use technology to find, create, evaluate, utilize and share content using information technology (Shannon 2017). According to United Nations Educational Scientific and Cultural Organization (UNESCO), there are many ways wherein technology facilitate universal access to education, bridge learning divides, support the development of teachers, enhance the quality and relevance of learning, strengthen inclusion, and improve education administration and governance. ICT has acquired a prominent role in the learning process, both in the educational system and at home (Meyers et al., 2013, Argentin, et. al., 2014). During the Covid-19 pandemic, technology played a significant medium in the teaching and learning process. Now teachers are increasingly using digital tools as their teaching aids to teach students in various institutes all over the world. Digital literacy is described as creating a social network within individual's lives and the ability to reflect on this process using digital tools appropriately. Further, digital literacy involves identifying digital resources and content, reaching, managing, combining, evaluating and making analysis/synthesis, forming new data, creating new ways of media expressions and making it possible to communicate with others (Martin, 2008 cited by Singh, 2018). It includes devices such as smartphones, tablets, laptops, and desktop PCs for purposes of communication, expression, collaboration and advocacy. Teachers acquainted with digital technology enrich the curriculum, thereby enhancing the pedagogical approaches in classrooms. Digital literacy is related to learner's ability to find and choose reliable as well as relevant information within complex networks (Gilster, 1997). A digitally literate person knows the most effective and well-organized manner to search for the information he needs. In that way, an individual has quick access to ways of searching for relevant information. A digitally literate person knows how to select and use the digital technologies where, when, and in a purposeful way. Digital literacy is also related to critical thinking about the opportunities and benefits of digital technologies used frequently such as social networks, and mobile applications (McLoughlin, 2011). A person using these skills to interact with society may be called a digitally literate person. Literacy in the digital age means that we are informed and logical decision-makers. Literacy means that we comprehend and analyze the various multimedia sources and, in the context of our own lives, make rational decisions. (Singh, 2018).

Digital competence is related to the concept of "literacy" which represents the ability of a person to work and utilize digital environment effectively. Some studies describe digital literacy as the relationship between cognitive, emotional and technical skills of Internet

resource use (Erstad 2010). Other studies use this concept to describe the interaction of an operator with digital technologies since they mediate many social interactions. Skills are the abilities that help in the promotion of mental and social well-being, and competence in young children to face the realities of life. These are the ability that makes individual to adjust and be forward-looking, and even in difficult situations can identify a ray of hope and opportunities to find solutions. Digital literacy is a skill that plays an imperative role in all aspects of life. A Digital literate person can make pace with changing needs of society. If a teacher is digitally efficient, he can deliver his subject knowledge to digital literate students effectively.

Digital literacy for teachers and students

Teaching and learning in the 21st century are inspired through the digital literacy. This ensures individual's competency in the digital learning platforms. In today's world discussion of what to teach, how to teach and what kind of skills a person should have in the knowledge society, has changed to the concepts of digital literacy and digital competence (Ilomaki, Paavola & Lakkala, 2016; cited by Spante, 2018). During the Covid-19 pandemic, technology played a vital role in keeping work, studies and relations going on. All these unexpected changes are now part of our daily life. Teachers must know how to manage, manipulate and articulate digital tools into their teaching practices. These technologies require teachers to develop new skills to teach and help their students become responsible digital person.

In the teaching-learning process, digital literacy brings plethora of opportunities for a teacher to share his content effectively with his students. For the application of this way of teaching in the classroom, teachers need an institution that supports and enables them to teach in this way. In this process, a teacher might find new technology as a challenge to use. So teachers should come out of their comfort zone and seek new opportunities in digital literacy as a challenge worth tackling not just for the classroom, but for their academic and professional development.

A teacher must feel included and comfortable in a digital environment. A teacher can inspire from online tools available to use in their classroom teaching. The teacher needs to develop new and better skills integrating technology in their teaching process.

For technical proficiency teachers should consider a development programs, and IT troubleshooting course, reading literature or practicing in spare time.

Teachers need to use and promote digital literacy, the utilization of digital tools and technology equally like reading and writing. Students must be familiar with the technological

advancements made in this direction. Students can develop their skills by attending the class of making use of ICT besides learning by themselves. Communication skills and searching skills also can be improved by making use of digital tools. By having those skills, students can improve themselves and can easily bring themselves to the newly organized platform (Baharuddin, 2016). When technology is integrated into lesson design, educators can create a safe learning environment for all students to express themselves and for teachers to know their students in a better way.

Changes in learning and information- Digital skills inculcate and familiarize students, in locating the digital resources (via the web, cloud-based learning tools, etc.) and analyze the benefit of the source in digital learning environment. Students are no longer given a static text set that dictates how and what they should learn. Students will build their media literacy, including skills in communicating using digital systems relevant to their disciplines. Developed digital literacy skills afford students the ability to seek out and utilize knowledge resources that help them create a personal learning connection.

Acquisition of skills- Instead of memorization, it promotes the acquisition of higher-level skills i.e. analysis, synthesis coordination, amongst students. Digital literacy skills are transformable from the tech world to the actual world and meet many of the basic needs as required in today's learning mandate. Instilling strong levels of digital literacy creates great avenues to learn and practice these higher-order skills, ranging from students working collectively via a Google doc to developing the ability to analyze web sources' credibility.

Prepare students for a digital world- Educators need to equipped students with digital technology to ensure their success after school. For this purpose, students should be familiar with the technology. Whether it be working with Microsoft Office, understanding the nuances of a Windows/Mac operating system, or even the simple use of a mouse and keyboard, students need to be ready to roll when sitting down in front of a digital device. In today's digital world, gaining familiarity with digital device functions and features is now just as important as learning to read and write.

Technology is playing a significant role in changing the educational system. Students have access to all kinds of information from the internet, social media, websites, YouTube and other sources. With the help of technology, an individual can take information and master the skills. People, students, and teachers acquire skills through online sources. Everyone can learn cooking, drawing, painting, driving skills, dancing skills, swimming skills, speaking

skills, different languages and music classes through online courses. Many applications are available online which are helpful to improve general knowledge, current affairs and prepare individuals for future competition. In the age of the internet, one can use it at any time and learn every skill which is useful in his /her daily life.

Impacts of Digital Learning on education

Technology has supplemented human society with various advancements by making learning easy and smooth. It has been instrumental in bringing the revolution in the classrooms and the growing educational society. Digital learning has its pros and cons.

Flexibility in learning and development - Digital learning has revolutionized the ways of learning. According to Edger dale the more sensory channels possible in interacting with a resource, the better chance that many students can learn from it. Digital learning helps students to learn in the best-suited ways by using all senses. It helps make it possible for a teacher to assess a student's specific needs and change things if they simply aren't working. If he/she is unable to understand through theory, he can use interactive programs to get a better understanding of the concept. Various online programs, applications are available to understand the concepts.

Removal of Spacetime barrier- students can access study material on their digital devices anytime and from anywhere with the help of the internet and technology. As a result, now students are free to learn in the school and outside the school.

Improvement in academic achievement- Digital learning helps students to improve their skills and performance in academics. By using digital tools lessons can be made more interactive. The use of videos, audio, pictures during lessons can give students clarity of explanation and also they understand the emotion and tone of the source.

Easy learning- Students can use different applications and software to enhance learning according to their pace. They can also repeat the study material again and again till required.

Stored information- It also helps a person to record their performance. For example pen drive, disc, hard disc are devices that can store a huge amount of information. Unlike books in the libraries which after a considerable period of time loses its outer/pages cover stored information helps in retaining the same information intact ensuring the quality as well as quantity of the content

Enhancing creativity- Digital learning helps students to use their creativity to perform in various aspects of life. It provides space to explore a variety of resources from traditional arts and crafts to modern digital tools like 3D printers and laser cutters.

Enhance understanding of concepts- Blended learning tools are very helpful in making the concept understandable. Students are better able to comprehend problems.

Enhance involvement- Digital learning helps to develop an interest in subject matter hence increasing the involvement of the learner. Both teachers and students are benefited from digitalized boards in the classroom. Where on one hand it becomes convenient for the teacher to present their ideas in an effective as well as impressive manner, it becomes easy for the students to understand the topic.

It seems that technology has changed the lives of people in a versatile manner. It is important to explore how technology can be integrated into the education system. But technology can have a large impact on users' mental and physical health. Digital learning can become a bit of a distraction at times. The student can spend more time on it, as a result of which he can completely lose interest in his class lecture. Being addicted to technology can cause psychological issues such as distraction, narcissism, the expectation of instant gratification, and even depression. Besides affecting users' mental health, the use of technology can also have negative repercussions on physical health causing vision problems, hearing loss, and neck strain. Even long sitting causes various physical diseases etc.

Digital tools like laptops, smartphones, pads etc. are quite expensive thereby limiting their availability to a certain specific category of individuals. It is important to remember that all educational programs can not be received through digital learning. A classroom is a small unit of social groups and a classroom environment is essential to promote and stimulate collaborative learning (Singh 2018). The physical presence of a teacher keeps students stimulated through interactive and interesting activities. This enables students to retain more from what they have learned during a session. Class lectures and discussions are important learning processes. The bond of a teacher and pupil is very important for a positive learning experience. As seen above, digital learning has two sides to it. It can be concluded that traditional teaching methods must be carried out hand in hand with digital learning. During digital learning, it is important to monitor the time, frequency, and content viewed while using technological devices and to ensure that children have or develop adequate physical activity opportunities, healthy eating habits, proper sleep cycles, and nurturing social environment.

Conclusion

Digital literacy is a piece of digital information, which requires a cognitive level to produce, analyze, and access information from digital tools. For almost a decade, digitalization of all the sectors is being emphasized. The education sector was also rebuild in the light of new emerging knowledge and has been boon to many. The government of India has launched various programs like the Digital India campaign, e-pathshala, NROER, SWAYAM, SWAYAMPRAVA, NDL India etc. for facilitating the use of ICT in an educational context. Now NCERT has introduced a digital safety curriculum for schools. Hopefully, we will see, digitally literate teachers building pathway towards a digitally educated India. However, there is need to improve existing infrastructure. A smart blend of online and offline teaching can help in bridging the digital divide. Students will have to face the challenges and threats that come with living with technology whether we expose and prepare them for it or not. So, surely it is better to teach them the skills they need to stay safe and thrive.

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