IMPACT OF DIGITAL TECHNOLOGIES & APPLICATIONS DURING COVID-19

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ABSTRACT

The COVID-19 pandemic is one of the major global crisis in our history as it has various impacts including social and economic. Digital innovative strategies have been adopted by the government and people during the lockdown period. It has been seen that digital solutions have contributed in discovering vaccines for this virus but also helps in running businesses, education sector, health sector, delievering services to consumers etc. Government has been using digital technologies and applications such as dedicated COVID-19 information portals, e-services, virtual consultations, tracking and tracing apps, self diagnosis apps etc. This paper focuses on the digital technologies and applications that are used in COVID times and illustrates its impact on our lives. Moreover, it is concluded that it is the need of the hour to strengthen national capabilities for digital solutions so that people have built up trust on digital government strategies. Digitalization has led the firms and institutions to move towards work from home.

Keywords : Digital technologies, Healthcare, Education , COVID

Introduction:

Coronavirus has adversely affected both the economic acitivity and human lives. Most of the sectors have negative impact because of this outbreak. Also, India has to cope up with diseases in the past like small pox, plague, polio etc. But, this virus that was originated first in China in the month of December end of 2019 and speedily spread in almost all parts of the world in a very short period of time has become one of the major health crisis in world history.Digital technology is the only hope in this time even in the development of vaccines and this has made hard times to be simple and comfortable to some extent. With the help of digital technology and applications , we are able to face this situation by tracking and tracing apps and use of artificial intelligence.

Digital technology has major role in various field of education, medicine, banking, social media etc., which has made people socially connected in this outbreak. It becomes possible with the help of digital technology where highly trained professionals designed e-content, virtual labs which helps the students in their course work. The government has taken various initiatives in the field of healthcare with the help of digital technology like e-health divison, drones, tele-consultations. Moreover, various digital platforms has been used in banking sectors as well like mobile applications, digital payments, digital money where society has now shifted to e-banking because of this outbreak.Various digital initiatives has been launched by MHRD during this outbreak which includes Swayam Platform, e- vidwan, National digital Library etc. So, in this way , digital technologies have played a vital role in fighting COVID times.

Digital Technologies Against COVID-19:

Bluedot is the first software of the world to predict and locate the COVID infected person which is based on Artificial Intelligence. Following are the digital technologies that are used in this outbreak :

Increasing Digitalization: It is the need of the hour to invest in network equipment, network bandwidth, digital infrastructure by the organization of almost all fields in order to tackle this situation.Various digital technologies like Cloud, Block Chain Technology, Machine Learning etc. has been used by the firms and organizations. Major changes has been noticed in education and healthcare sector where health and medical records have been prepared with the help of Block Chain Technology taking into care of privacy and protection. Besides the healthcare, education sector has also been moved towards online classes through various platforms like Webex, google meet etc.

Adoption of Robotics: Specially designed intelligent machines known as robots are specifically used in this outbreak in medical hospitals. Spraying of disinfectants, checking the patient's temperature, delivering the meals and medicines for isolation ward has been done by robots specially in AIIMS Hospital in New Delhi. Other one is MITRA which is an

interaction robot who is providing services in Fortis Hospital, Banglore.They also perform the work of survelliance and teleconsultations, provides food and medicines. Robots can be used as healthcare workers as they are very less chances of getting infected and minimize the spread of virus.

Mobile Applications launched during COVID-19:

Various applications have been developed during this outbreak that helps to find the COVID positive persons. These applications are easy to download on smart phones and track the person by using Bluetooth or GPS. Moreover, it also sends alert to other person who comes in contact with COVID positive patient. **Aarogya Setu** and **Corona Kavach** are the two main applications which are launched by Central and State government during this outbreak. These applications are free to be downloaded and available on google play store. They have different features like self-diagnosis, monitoring the location of inhome quarantine by quarantine watch in Karnataka, travelling history etc.

Work from Home and gig workers: Work from home culture has been adopted during this outbreak. Uber, Swiggy, zomato are the various online platforms where manufacturing and service firms are doing their work. The focus has been on their work norms, trust and team building, evaluating performance, technostress etc. Doing jobs from home in order to maintain social distancing during this lockdown by various organizations and firms have been specifically seen in almost all the sectors.

Online Teaching: Educational institutions, schools and colleges have come to closure during this outbreak. Online teaching has been conducted through different digital platforms and applications which includes google meet, google classroom , webex, zoom etc.Onlone content has been developed during this outbreak for making teaching effective.

Monitoring Workplace and Technostress: Monitoring of workplace constantly being on job on the employees working from home by using various digital technologies like video conferencing has now become easier for the managers and bosses to call the sub-ordinates at anytime. By using such technology on one side there is increase in productivity and growth but on the other side, it has increased technostress where employees have to cope up with multitask work. They have to stay with digital devices all the time which puts constant work pressure and affect their health and family life as well. It has been suggested that firms should maintain work equity and balance which helps employees in managing stress.

Online Fraud: Online Frauds, scams, intrusions and security breaches has been noticed during this time with the increasing use of digital technologies. A scenario of insecurity and vulnerabilities has been created by the fraudsters where digital resources has become the target for them. Strong initiatives and actions should be taken by the government and organizations to curb the frauds and scams. Security arrangements and innovations will be implemented by the firms who are providing security services. They should focus on managing security and upgrading it.

Digital Payments: Digital payment technology has played a key role in the pandemic situation. Government has encouraged digital payments, online delivery services, online fund transfer through digital payment systems which is much safer than banknotes and coins as there are chances of carrying virus with them. Digital platforms has been used by the customers and staff to carry out their banking transactions in order to control the spresd of this virus. Thus, e-banking and digital payments has played a vital role in this situation of crisis.

Webinar and Video- Conferencing : Webinar has been conducted by using video conferencing technology by professionals using computer, webcam, microphones in order to improve learning and new skills in their fields. Webinar has played a vital role in this outbreak as they are flexible, less cost , interactive which helps a lot in education sector. Various digital applications like skype, cisco webex meetings, google meet, zoom has been used for conducting virtual lectures and workshops. This technology has helped a lot in education sector and motivated the students and teachers.

Issue of Surveillance and Privacy: Issue of surveillance and privacy has arised during this outbreak as government is using digital means and apps to track and trace infected person. But theses digital platforms are reliable and efficient in tracking this disease. COVID-19 tracking apps has focused on benefits but ignore various social complications which is threat to user's personal information. Various issues of intrusion of privacy have been noticed especially during online classes. It is the duty of the government to examine the privacy concerns and risks of breach of privacy while using COVID-19 tracking apps and online classroom applications.

Healthcare: Digital technology has been extensively used by medical professionals to diagnose the patients. Chest Computerised Tomography has been used in order to diagnose as positive or negative for COVID-19Virtual consulting

and screening is one of the widely used digital technology during this outbreak in the field of healthcare in order to follow the norms of social distancing. For the safety point of view, delivering heathcare facilities at a distance has resulted in the reduced spread of this virus. Interactive dashboards provide COVID data which is further helpful in analysis and computational purpose and thses digital solutions have provided timely information to healthcare organizations which helps in managing efficient control over this virus.

Recommendations and Suggestions:

It has become need of the hour to design secure technologies in education and healthcare sector. In order to increase the digital transformation, policy must be formulated by the government in order to regulate digital infrastructure. There is a need to design such technologies which are more secure for online transactions and payments. Moreover, organizations and firms have to understand the resistance to technology and they should know how to manage employees and customers. Besides above recommendations, there must be formulation of internet intermediaries who keeps and take care of the issue of privacy and surveillance with the government and society as in future importance of internet will become more.

Conclusion:

Digital technologies and applications have played a major role during this outbreak. Almost every sector whether it is healthcare or education has shifted towards digital technology by using various applications like e-learning, digital payments and transactions, attending meetings and conferences, e-pass etc. With the help of this technology, we stay connected and followed the norms of social distancing. Inspite of its positive impact on society and people, we still need to improve our internet connections, technical software, security issues, goog IT infrastructure facilities etc. This paper suggests that there is more need of future research on digital technology in order to understand its effect after pandemic. It is the need of the hour to discover innovative use of such technologies. Moreover, we need to formulate various policies and strategies for regulation and evaluation of digital technologies. Ultimately efforts gas been made to encourage the use of digital technologies, dissemination of timely information, investing in innovative technologies, to improve public delivery e-services and to ensure transparency and accountability.

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