

Research Paper on Role of Digital Technology during Pandemic

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1. **ABSTRACT**

The COVID-19 is part of the worldwide pandemic of coronavirus disease 2019 called as COVID-19. And as per various sources, we know it was originated from China. This disease is caused by severe respiratory syndrome coronavirus. The first patient of Corona in India was detected on 30 January 2020. As we all know in March 2020 lockdown was announced in our country and pandemics have become dangerous for humanlife. In this Pandemic daily we are learning new techniques of fighting and facing such unexpected situations because of this virus which can kill millions of people in whole world. Technologies cannot prevent the effect of disease of this coronavirus however, it can help us to prevent from spreading, we can educate, warn, and empower people to be aware of this critical situation, and we can help everyone to understand the impact. This pandemic has boosted so many key technology trends, including digital payments, telehealth, Remote work, online education and robotics. Here, in this research, I have put together inputs of people to analyze how effectively they have taken the benefits of digital technologies during a pandemic and

what difficulties they have faced while using these technologies.

2. **INTRODUCTION**

During the COVID-19pandemic, technologies are playing important role in our society to make it functional during lockdown and quarantines. And all these technologies may have a durable impact after COVID-19 also. the world was trying very hard to find ways to slow the spread of the coronavirus and to find an effective treatment. These digital technologiesare helping in pandemic to manage and response in so many ways. many successful countries have used these technologies for pandemic planning, surveillance, testing, contact tracing, quarantine, and health care etc. Technology has demonstrated a useful and necessary tool to ensure that frontline and essentials workers are able to provide essentials services to Society during the COVID-19 crisis. As the coronavirus was spreading rapidly around the world, government has announced several restrictions on the movement of people, On functional services, and rules on Social distancing. Within this subject, technology have a profound effect on people's daily lives and allowed them access to HealthCare

services, to grab information, and communication with competent authorities, among so many things. Digital technologies may be a solution to many of the problems occurring from the crisis like How to control the spread of COVID-19? How do we continue to provide education to students from their home only? All the government authorities on the frontline of the COVID-19 crisis have used digital technologies to monitor, predict and influence the spread of the disease, and to provide education for students who cannot access school.

3. REVIEW

In this outbreak of coronavirus, digital technologies have become boom to our country. The Digital technologies have shown its impact in all aspects of humankind. It has its prominent role in the field of Qualification, Health Care, banking sectors, Online Shopping, social media etc., which connects the Society in Social Distancing also.

In education field, online class or e-learning has its excellent impact on students and teaching faculties. In daily life we are using social media like (Face book, Instagram, Twitter, WhatsApp, Telegram) smart phones, searching the content in internet and many other things which are based on Artificial Intelligence and Machine Learning. For less human interaction Development of drones and robots has been widely used in pandemic. They can also be used to analyze and prevent

from the epidemic ill. Technology makes critical situation to be easier and more convenient. medical practitioners and governments to fight against COVID-19, digital technologies helped medical Field and governments to fight in the following ways like tracking Positive cases of corona in our nearby location, by creating awareness, and helping people to work in difficult situation along with social distancing. In digital technology world Artificial Intelligence, Machine Learning, Big Data are playing major role towards it because of this our Government has taken lot of initiatives in Healthcare Services and it is called as e-health division. This division is purely based on Data Provided by various digital platforms and Communication technology. Drones, tele-consultations are helping humans in smart cities. This Pandemic has made banking field to work using digital technologies which includes various social media, chat bots, mobile apps, and the Iot to face the pandemic situation. People have started to use digital banking services due to this crisis. Everyone is going with contactless Payment with help of Online Transaction app. However, this covid-19 pandemic outbreak has shown powerful importance of digital technologies and its usage across the world. This paper review on some of the digital technologies and how they have impacted people's life during Pandemic.

4. APPLICATION OF DIGITAL TECHNOLOGY DURING PANDEMIC

4.1 COVID-19 tracking Apps

COVID-19. Many Application were designed to track the person who is infected with COVID-19. These apps can be easily installed in any smart phones. Governments have introduced many applications that are developed for COVID-19 as a mandatory one. Bluetooth, GPS location are playing major role of these applications to track the COVID-19 patients and alerts the others who come to contact with patients.

Following are apps launched by Indian government:

4.1.1. Arogya Setu

Prime Minister of India Narendra Modi requested people of India to download the "Arogya Setu" mobile app, by saying it will help our country to fight against COVID-19. as it provides important information about patients who are infected with virus. as more number of people use it, its effectiveness will increase he tweeted on Twitter. Arogya Setu app is created by the National Informatics Centre, Ministry of Electronics and Information Technology, India. This app was launched by the Central Government on 2nd April 2020. To use this app Bluetooth of

your

smart phone must be on to track infected person nearby you. this application is available in 11 languages including English, Hindi, Gujarati, Punjabi, Bengali, Kannada and others. It is compatible for both android and iOS devices and available in PlayStore. In Present time 16.84 Crore people has been downloaded this app in their smart phones. The Government has made mandatory for all government employees, for working professionals, students and common people.

4.1.2. Corona Kavach

One more app called Corona Kavach is launched by Union Ministry of Electronics & Information Technology along with the Ministry of Health and Family welfare. This app provides with livetime location of the infected users whenever they activate this application.

4.2 Adoption of Robots

The robots are developed to design intelligent machines that helps human in many situations During Pandemic. Use of robotics has been increased in medicine field During COVID-19. In India usage of robots becomes the remarkable one, AIIMS hospital has deployed floor disinfectant robot for the isolation wards. In Bangalore, Fortis hospital developed an interaction robot MITRA It is kept in the entrance of hospital to do screening of everyone. In Cuttack, the government ITI in

association with SakRobotix has designed two robots COBOT and NIGABOT. COBOT is used for providing food, water and medicine to the patients of isolation ward and NIGABOT is used for observation and tele consultation by doctors. In Kerala Nightingale-19 Robot is providing medicines and food. To reduce interaction between the infected person and health workers, the robot named KARMI-Botis developed in Ernakulam Government Medical College hospital, Kerala. Some robots are used to deliver the food, grocery to people. Robots can be called as “Health Care Workers” because they can reduce the spread of virus and can be easily disinfected, and they cannot carry diseases.

5. USAGE OF INTERNET DURING LOCKDOWN

Digital technology is the Pillar of this ongoing time period. Internet has become more Powerful and effective key in the world. It has its major impact in Education, Business, Social media, Banking Sector, Medicine field and so on. Now a days use of internet has become very easy. The usage of internet has increased very faster during this lockdown period. Internet was the best option left out to carry out our task during this pandemic when we are isolated from workplaces.

Following are the few field where internet was mostly used During Lockdown:

5.1. Work from Home (WFH)

Work from Home (WFH) has emerged in all sectors. Due to this lockdown, IT companies and many other organizations had asked their employees to do their job from home in this pandemic situation to ensure social distancing. As a result, almost 90% of employees worked from home. In which 65% of employees are from metros and 35% of them belongs to small towns.

5.2. Online Learning

This crisis of coronavirus resulted in education field to close across the world. As a result, the way of teaching mode has been converted into online learning, in which teaching is done virtually through the available digital platforms. So many applications are available to conduct the teaching and learning process. Apps such as Zoom, Microsoft teams, Google classroom, WhatsApp are commonly used among student's community. Many online courses are available (free & paid) from where student can gain the knowledge in a better way. Online learning making the education field convenient, affordable and effective.

5.3 e- banking

Since ATM's are drawn in this pandemic, the role of e-banking and cashless payment is most important during this COVID-19. To prevent the spread of the corona virus most of the services that bank offers are made

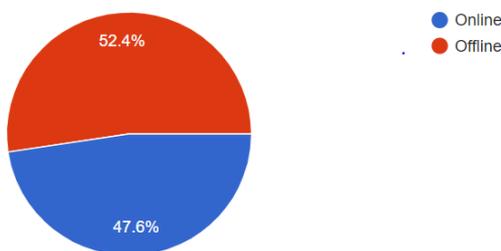
available online for safety purpose of their customers and staff. With the use of these digital technologies so many apps are available to make transaction easy and faster, apps such as Google Pay, Paytm, Phone Pay, Amazon Pay etc.

6. DATA & SURVEY RESULTS

I have created one Survey form to collect the information from the people to know how digital technology impacted their life during pandemic. I have divided the survey based on person's occupation. for each occupation I have created separate section like students, employee, business and as per section I have asked questions in the survey.

1.Student

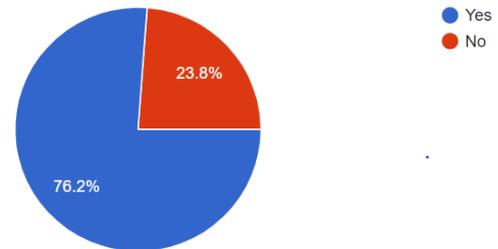
Q1. Which way of learning do you find comfortable?



As we can see in above pie chart 52.4% students are preferring Offline learning and 47.6% are comfortable with Online learning. from above ratio we can say that both way of learning can helps students to

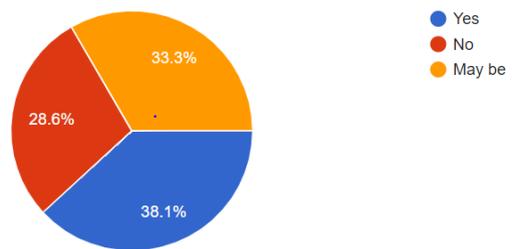
continue their education.

Q.2 Do you feel interested to interact with teachers while taking online class?



As per the survey 76.2% students are being active while taking online class.

Q.3 Do you find any difficulties to make notes during online class?



38.1% students are saying they are able to make their notes while taking online class and 28.6% are finding difficulties while making notes whereas 33.3% sometimes able to make notes.

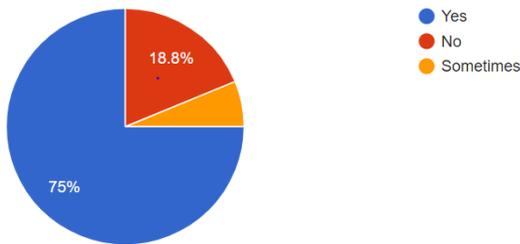
Q.4 For your whole education life, if you will get chance to choose between online and offline class what will be your preference Online or Offline? (mention reason also)

For this question most of students feel better with offline learning as per them online can be

a temporary solution for some duration and because of net issue study get interrupt but offline is more interactive and students can easily interact and concentrate well, and teachers can pay more attention to students.

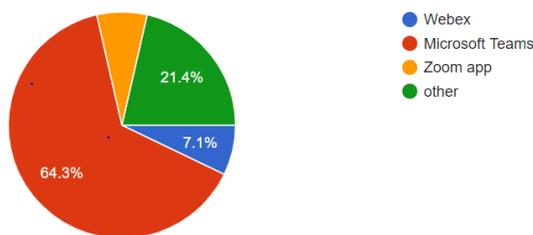
2.Employee

Q1. Are you Working from home?



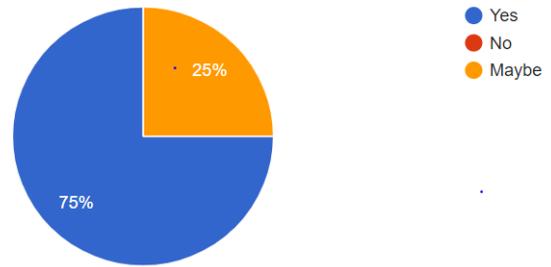
As per pie chart 75 % people are working from home in COVID-19 situation.

Q.2 Which Platform do you use for communication with your team?



As we can see MS teams is used by 64.3%, 21.4% employee using other application, 7.1% employee use Webex and Zoom app.

Q.3 Do you think digital technologies are helping our country to grow better in this pandemic situation?



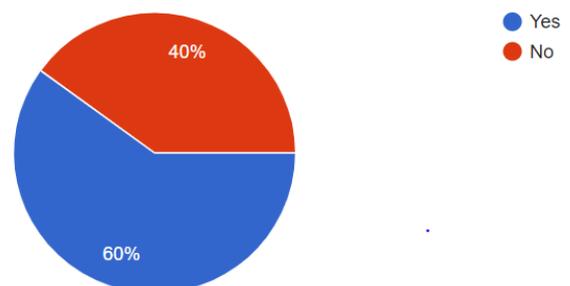
75% employee thinks that technologies can help our country to grow in pandemic also whereas 25% employees are not sure about this.

Q.4 How does technology impacting your work life in pandemic?

As per the response I received impact of digital technologies have pros and cons both for some employees it helped them to stay connected with work and they got opportunity to learn new technologies while staying at home whereas some employees feeling pressurize and lacking physical activity and their screen time is also increased.

3.Business

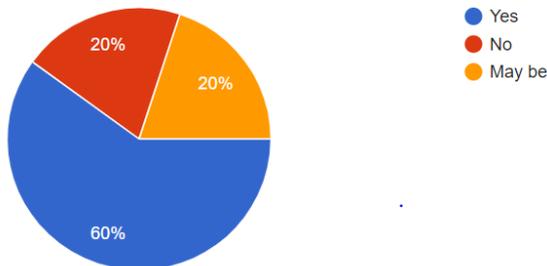
Q.1 Have you adapted any digital technology to grow your business in pandemic?



As per pie chart 60% people have included

online platform to grow their business and 40% have not used any digital technology.

Q.2 Do you find any benefits in your business after using technologies?



As we can see 60% find digital technology is beneficial for their business and 20% are not sure whether this technology helping them to grow or not and 20 % are not getting any benefit.

Q.4 What are the difficulties you faced while adapting technology in your business?

As per response I received digital technology causing difficulties to those who are not that much aware of how to use smart phones how to use applications related with their business means we can say that lack of knowledge making difficult for people to grow their business.

7. CONCLUSION

Due to these technologies, people can keep their business open digitally. Technologies are helping our society more effectively in the situation of pandemic and other threats. COVID-19 has shown the importance of digital technology, which helping business and life to continue normal as much as

possible during pandemics IT world and advance technologies has become the backbone of the whole world during COVID-19 pandemic. The need for personal protective equipment will be reduced by using robots in Hospitals. It also helps health care workers in hospitals to keep an eye on the patient seven after pandemic where human less interaction is required. Because These technologies we are able to move in a virtual environment and stay connected with the people in less contact. One such most prominent component is the development of mobile app. All these applications require good internet connection and software run in the background helping silently. From this research it is understood that India is still crawling towards the dream of DIGITAL INDIA as many of the rural areas do not have internet connection and many people do not know how to use it.

8. ACKNOWLEDGMENT

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