

# **I**MPACT OF MODERN OFFICE TECHNOLOGIES IN CURBING THE SPREAD OF COVID-19 PANDEMIC FOR SUSTAINABLE DEVELOPMENT IN NIGERIA

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## **ABSTRACT**

**T***his paper highlights the impact of modern office technology in curbing COVID-19 pandemic for sustainable development. Modern office technologies are the technologies which enables the office worker to perform his/her functions effectively by being more accurate while saving time. Types of equipment that can sustain the modern office technologies are: modem, router, network switch, uninterruptable power supply, desktop and laptops, headsets, servers among others. Reliable conference Lines, diverse communication tools, cloud-based platforms, sit/stand desks and IoT, robust private office network, dependable Wi-Fi, cyber security among others are some of modern office technologies that will help in curbing COVID-19 for sustainable development. Some of the*

## **Introduction:**

Corona Viruses are a group of Ribonucleic Acid (RNA) viruses that cause diseases in mammals and birds. In humans and birds they cause respiratory tract infections that can range from mild to lethal. Mild illnesses in human include some cases of common cold while more lethal varieties can cause Severe Acute Respiratory Syndrome (SARS), and COVID-19 which is causing an ongoing pandemic. Almost every country and territory worldwide have been affected by COVID-19 disease. To contain the COVID-19 virus, there has

*impacts of Modern office technologies are: it saves time through efficiency and automation, location is irrelevant, savings are shared, communication options keep growing, communication options keep growing, changing the way people communicate, making business operations more productive. Despite all the relevance modern office technology has in helping to curb the spread of COVID-19, there are still some teething problems that will hinder the full acquisition and utilization of these technologies and they include but not limited to inadequate or lack of modern facilities and equipment, erratic or epileptic power supply, inadequate of lack of trained technicians, expensive nature of these modern office technologies. Based on the foregoing, the following suggestions are made: that management of organizations should procure modern office equipment that will enhance the use of these modern technologies, trained technicians should be employed and constantly sent on workshops and conferences to learn and relearn the use of these modern office technologies that are evolving by the day among others.*

**Keywords:** *Office, technology, modern office technologies, COVID-19 pandemic, sustainable development*

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**b**een advocacy for social distancing, use of hand sanitizers, hand washing, wearing of masks and other safety protocols as presented by Nigeria Centre for Disease Control (NCDC) before the presentation of vaccines. Unfortunately, even after the presentation of the vaccines, the virus is still circulating at a very high rate even in countries with relatively high vaccination rates such as USA and Germany. These vaccines do not still offer permanent cure to this virus. People are still advised to continue to observe these safety protocols in order to be safe. What does this mean in the work space or offices where people must come together to work?

Modern office technologies has a role to play in curbing the spread of the deadly virus, which mutates with more deadly variants day by day. Oyinloye & Oluwalola (2019) asserts that modern office technologies continues to play vital role in transforming the work environment.

Changing technologies including computers, intranets, multimedia projectors and the internet have had a major impact on the office environment since the twentieth century. The ability to use technology is an essential skill in the ever changing workforce of the twenty first century. Offices in today's society are transmitting information via electronic mail teleconferencing as well as other electronic devices. Communication via technology is just as important as oral and written communication in the work environment. Advances in technology have transformed the world of work. As the work environment has changed, individual workers see how their work connects not only to their particular work place, but to the entire value chain especially in COVID-19 pandemic era.

Notwithstanding the damage done to economies of countries due to COVID-19 pandemic Oyinloye and Oluwalola (2019) demonstrated that Modern office technology is emerging in the fast lane of the information super highway of the twenty first century world of work, faster information systems, blink of an eye access to the global marketplace, virtual offices, virtual teams and virtual organizations are coming into existence. Messages can be transmitted electronically within an office (intranet) as well as around the universe (internet). Office systems consists of tasks to be performed procedure to complete the task, sets of automated technologies designed to enhance productivity, and personnel working within the framework of a business organizational structure. Office systems exist in facilitating and retaining communications and creating, processing and distributing information.

Modern office technologies can facilitate economic resiliency by allowing employees in certain sectors to work from home, facilitating direct payments to workers in more vulnerable industries to stave off mass unemployment, and helping deliver essential services while minimizing the required labor presence. Adequate communications infrastructure also facilitates interpersonal connections at a stage when much of the population is likely to have been forced into isolation. Workers can send emails, text or video chats or even video conference with subordinates or superiors through social networking apps like Whatsapp, skype, zoom

among others. With the help of modern office technology, people no longer need to be present at their workplace, can engage in other important works outside the office and keep in touch even face to face with colleagues at the office through video chats and conference.

The objective of this study is therefore aimed at finding out the impact modern office technologies have in curbing the spread of COVID-19 pandemic, promoting sustainable development and the challenges today's offices are facing in the acquisition and utilization of these modern office technologies in Nigeria.

### **Conceptual Review**

In order to clarify some basic terms, keywords and concepts used in this work, the researchers reviewed the under listed concepts to ease understanding of this work:

#### **Office**

Udo (2014) defined the office is a room, set of rooms, or building where the business of a commercial or industrial organization or of a professional person is conducted. Ukonu and Ukonu (2017) asserts that an office could equally be defined as a room assigned to a specific person or a group of persons in a commercial or industrial organization where clerical, secretarial and administrative duties are performed. The design and functionality of the office could affect the employees' safety and productivity (Nwabuona, 2020). Giving the staff proper lighting, adjustable desks and comfortable temperature control can actually work to protect them and increase their performance, allowing them to reap the benefits over the long haul especially in COVID-19 pandemic era. With myriad options to choose from, keeping the office up to date takes some efforts and planning. Managers need to have tomorrow's technology today to ensure that the office space stays with the times and does not become outdated in its practices.

#### **Technology**

Technology according to Advanced Oxford Dictionary, (2007) is the application of scientific knowledge for practical purposes, especially in

industry. Technology has completely changed the way companies or organizations collaborate. Technology has helped people connect with people anywhere and at any time. Oluwalola (2019) posits that the increased collaboration has brought a high level of flexibility in communication that allows employees, co-workers and managers to connect with each other easily. Technology helps in keeping the business fully organized in today's workplace. For example, systems like Project Management Software helps in building, delegating, reviewing, and assessing a task. Employers and managers can easily supervise workplace activities that help in keeping everything on track with the use of this technology.

### **Modern Office Technologies**

Abdulrahman et al (2020) define Office Technology as the study of a wide range of subjects related to careers in the modern office of today. The programme provides the training necessary to perform successfully in the many and varied clerical, secretarial and office administrative positions. Modern office technologies are the technologies which enables the office worker to perform his/her functions effectively by being more accurate while saving time. This is the era of computers and information and communication technology which has become an enabler of greater convenience. Modern office technology is all about efficiency and speed in office functions. Three of the most popular computer software programmes are word processing, which helps the user to write and edit memos, letters and reports. Data management programme or databases, which helps the user to use long lists to data and spreadsheets programmes, which handle tables and numbers. The role of modern office technology are not limited to the above, but also is now easier to send messages via email, zoom, virtual conferencing, skype among others than the traditional mails (Obiorah, 2020). Modern office technology makes the premise of the office itself less relevant as internet access coverage and performance improves. The modern office environment is more about

what you can do as opposed to where you do it. New technology is changing the scope of what is considered an office.

### **COVID-19 Pandemic**

Pandemics present challenges of an entirely different type than other disease outbreaks or the vast majority of other natural disasters. Because these diseases strike global populations which have no immunological experience with them, their spread is far more rapid, and frequently, more deadly than any comparable disease outbreaks. Pandemics impact virtually every corner of society almost simultaneously, in contrast with the comparatively contained damage of other events. Corona Viruses are a group of Ribonucleic Acid (RNA) viruses that cause diseases in mammals and birds. In humans and birds they cause respiratory tract infections that can range from mild to lethal. Mild illnesses in human include some cases of common cold while more lethal varieties can cause Severe Acute Respiratory Syndrome (SARS), and COVID-19 which is causing an ongoing pandemic. Almost every country and territory worldwide have been affected by COVID-19 disease.

The COVID-19 pandemic represents a combined global economic, social and health crisis more acute than any such event so far this century. The first index case of the virus was detected in December, 2019 in a fishing town Wuhan, China. In Nigeria, the index case was recorded on 27<sup>th</sup> February, 2020. Currently, there are 247, 775 reported cases and 26,277 deaths. And as of March, 7<sup>th</sup> 2022 over about 467,876,755 million cases had been confirmed around the world, leaving at least about 6,020,775 dead so far (Nigerian Security Trackers, 2022). These figures almost certainly underestimate the true toll, given the mass testing shortages which have hamstrung the worldwide response so far (Nirupam, 2022). Nirupam went further to state that unlike other types of disasters, pandemics target not physical infrastructure, but the very human infrastructure which is most necessary to combat them. The longer a disease rages on, and the more it kills and incapacitates vital personnel



on the front lines of the response, the weaker the defenses societies can mount against an inferno which burns hotter the more fuel it consumes.

### **Sustainable Development**

Sustainable development is the idea that human societies must live and meet their needs without comprising the ability of future generations to meet their own needs. Sustainable development is a way of organizing society so that it can exist in the long term (<https://youmasterworld.definition>). This means taking into account both the imperatives present and those of the future such as the preservation of the environment and natural resources or social and economic equity. Modern office technologies if harnessed and utilized effectively will help in Sustainable development in the COVID-19 Era because workers do not need to meet or collaborate physically in order not to deplete the already exhausted human resources due to the effect of the virus.

### **Effect of COVID-19 Pandemic on the Nigerian Economy**

The shock impact of the COVID-19 pandemic hit the industry hard, resulting in a significant reduction in demand for products, as well as plummeting prices and income. The following are the effect of COVID-19 on the economy:

- i. Complete lock down made things very hard for people
- ii. Socioeconomic activities was grounde
- iii. Loss of jobs
- iv. Shut down of school system
- v. Nigeria being a mono economy went into recession because the prices of crude oil went down drastically
- vi. Food shortage
- vii. Health insecurity
- viii. Increase in crime

### **Types of equipment that can be used to operate these modern office technologies**

Office equipment is any office equipment that is operated manually, mechanically, or electronically that helps employees to perform their tasks

faster neater and efficiently. Akpomi and Ordu (2005) opines that new technological devices have altered the procedure and techniques for office operations. The types of equipment that can house these modern office technologies as enumerated by Akpomi and Ordu are as follows:

- i) An internet modem – Modem, an acronym for modulated and demodulated is used as an interface between an Internet Service Provider (ISP) and an office network.
- ii) A router – the router is a small but important piece of office equipment that sits between an internet modem and office network. It is used to set up a Virtual Private Network (VPN), which makes it possible for those with the right permission to securely connect to network devices from home or while traveling.
- iii) A network switch – Routers typically have a limited number of physical ports, fortunately, routers can be connected to a switch. Switches have as many as 48 ports.
- iv) An uninterruptable power supply (UPS) – Since modems, routers and switches are low-power devices, a low-end UPS can keep these running for a few hours during a power failure. More expensive UPS devices can keep servers and network-powered VoIP phones running for hours (Zuppo, 2016).
- v) Voice over Internet Protocol (VoIP) – with VoIP service, the traditional PBX functionality that lights up phones, controls what is in their displays and makes them ring is replaced by PBX functionality that runs in the cloud
- vi) Desktop and laptops;
- vii) Headsets;
- viii) Servers;
- ix) Multi-function printers;
- x) A projector or a big screen
- xi) Interactive white boards

### **IMPACT OF MODERN OFFICE TECHNOLOGIES IN CURBING COVID-19 PANDEMIC**

Ehirheme (2019) enumerated some impact of modern office equipment as follows:

1. With modern office technologies, **offices inevitably get more work done with fewer people**, and there is pressure to keep a modern



professional image by staying on top of the latest tech trends. Here the influx of people is reduced drastically in line with COVID-19 safety protocols.

2. **Saves time through efficiency and automation** - It helps workers spend less time on routine tasks which frees them for additional projects. Computer savvy workers explore computer automation practices, reducing time spent on frequent repetitive tasks, e.g. employees save time formatting documents using templates. Someone can exponentially improve efficiency by sharing a template with other workers through remote server access, cloud storage and email from anywhere there is cellular coverage. Services like google drive, iCloud and Microsoft Azure are practical solutions for organizing and sharing frequently used templates, sharing spreadsheets and work related documentation. Organized cloud sharing eliminates the need for a data sharing intermediary person. This is very relevant in curbing the spread of COVID-19 Pandemic.

3. **Location is irrelevant, savings are shared** - Job involving a worker sitting at a computer terminal all day typically do not need to be done in a specific location. Modern communication technologies not only make working from home and the road possible but seamless. If people do their job on a laptop, they can do it from their office cubicle, hotel rooms through zoom, skype, video/virtual conferencing and the virtual office among others. Telecommuting helps in sustainable development because employees can substantially save on transportation cost, save time each day by not commuting and have an easier time juggling family life and also observing the COVID-19 safety protocols

4. **Communication options keep growing** - Chigbuson, 2019 observes that broadband and mobile internet connections are fast enough to handle simultaneous video streams without tethering people to physical locations, videoconferencing service like Skype work great for holding meetings without having participants in the same building. Social media is an alternative avenue for customer communication: a strong social media presence can go a long way towards bolstering the bottom line. For the fact

that people do not need to meet face to face is one of the COVID-19 safety protocols to curb the spread of the deadly virus.

5. **Practical Data Redundancy** – Data redundancy through cloud services and remote storage can save a business a lot of heartache and money. Storing data in a remote server also makes it practical for workers to share massive amounts of information regardless of location (Esene & Mgbonyebi 2019). This also helps in curbing the spread of COVID-19 pandemic because workers can still do their job effectively from shared data.

6. **Changing the way people communicate** – the arrival of smartphones, social networking sites, chat apps has brought communication to a new level. Communication among the employees or management to subordinates, or management to management has become fast, instantaneous, more deliberate, collaborative and unified. This also helps in curbing the spread of COVID-19 Pandemic.

7. **Making business operations more productive** – the role of modern office technology in improving productivity and performance of the organization. Access to modern office technology has enabled the employees to do things faster with precision and has helped in discouraging workplace distraction, thus raising productivity and sustainable development.

Forbes technology also enumerated some Modern Office Technologies that will help in curbing the spread COVID-19 Pandemic as follows:

8. **Reliable conference Lines** – this is a critical piece of technology that **connects both remote workers and team members** at all locations. This is a reliable service for conference and video calls for companies of all sizes, it is truly the best.

9. **Diverse communication tools** – Wallace (2017) opines that the biggest challenges is communicating idea either from one discipline to another or across time and space, making it quick to convey ideas whether with physical whiteboards, video conferencing or digitally sharing screens

– the specific technology will depend on the need at the time. A single tool will rarely fill all the needs, so finding tools that work together is crucial.

**10. Cloud-based platforms** – Every office should use cloud-based platforms to **protect data** and make it accessible to those authorized to have it. This can help people work from anywhere on any type of device that they have now or that will be developed in the future.

**11. Sit/Stand Desks and IoT** – To promote employee wellness and collaboration, every office should using live OS, an Io/t system that connects sit/stand desks. It allows users to control the desk height and set activity goals

**12. Robust Private Office Network** – One thing that will continue to increase is the amount of data that people move around the internet and onto the local systems, so, people should ensure that infrastructure is already in place to support the added capacity.

**13. Dependable Wi-Fi** – dependable Wi-Fi is key to keeping employees in the zone. It allows IT team to understand network load and manage accordingly to forestall future problems that might present the team from being productive.

**14. Internet of Things technologies** – Devices like smart thermostats extend the lifespan of expensive equipment by optimizing system use, and the cost saving of smart energy management can be reinvested elsewhere, thereby enhancing sustainable development.

**15. Multi-Factor Security** – Every modern day office needs to be armed with multi-factor security. A badge and password are no longer strong enough tools to keep companies protected, both physically and digitally.

**16. Cyber security** – No matter what changes in the technological playing field, there will always be a need for robust, effective cyber security. Just about every company out there stores so much value on line that few things make more sense than investing in strong security and keeping it undated.

**17. Electronic Whiteboards** – Every office space should be investing in electronic whiteboards since they have the capability to store and print everything that is written on them. This will save time with note taking

and printing, thus increasing productivity. During meetings, all notes that are taken can be saved without having to rewrite them from the white board, creating a better note-taking experience (Oyinloye & Oluwalola, 2014).

### **Problems of Acquisition and Utilization of Modern Office Technologies**

Some of the problems militating against acquisition and utilization of these modern office technologies as listed as follows:

- Inadequate or lack of modern facilities and equipment
- Erratic or Epileptic power supply
- Inadequate or lack of trained technicians
- Expensive nature of these modern office technologies
- Aloofness on the side of people who do not subscribe to change

### **Conclusion**

COVID-19 pandemic has come to stay and so the use of modern office technology in the workplace must be encouraged because it has changed the way traditional workplaces used to work. Offices can now use a variety of virtual communication services like skype, zoom, for webinar, video conferencing among others in their day-to-day activities. Technology has helped people all over the world to connect anywhere and at any time. This increased collaboration has brought a high level of flexibility in communication that allows employees, co-workers, and managers to connect with each other easily, although not physically, thus curbing the spread of COVID-19 Pandemic and promoting sustainable development.

### **Recommendations**

In view of the foregoing discourse, the following recommendations are made to enable all critical stakeholders to factor them in, in their bid to address these daunting challenges:

1. Management of organizations should procure modern office equipment so that office workers will tap into these lofty benefits.

2. Trained technicians should be employed and constantly sent on workshops and conferences to learn and relearn the use of these modern office technologies that are evolving by the day.
3. Management of organizations should provide alternative power supply to combat the erratic power supply that is inherent in our clime.
4. Government should subsidize the procurement of relevant office equipment.
5. Incorporation of ICT in all facets of our lives.
6. Government should adequately equip our institutions with information and communications technologies, so that students will acquire the necessary skills while in school for consequent performance in the work place.

## References

- Abduraman, S., Yahya, T. & Suleiman, A. (2020). Promoting sustainable development through information and communication technology in developing countries. *European Journal of Computer Science and Information Technology*, 2 (2), 24 - 29
- Chigbuson, A. 1. (2019). Enhancing generic skills through business education for graduates employability in the 21<sup>st</sup> century workplace. *Journal of Business Education*. 2 (1 ), 425 - 434.
- Ehirheme, P. E. (2019). Producing a global worker through business education with office technology and management (OTM) in perspective. *Nigeria Journal of Business Education*. 2 (1), 221-230.
- Esene, R. A. & Mgbonyebi, D. C. (2019). Towards improving the strategies of effective teaching of entrepreneurship development education courses to OTM students of polytechnics in Delta State. *Delta Business Education Journal*. 5 (1), 65 - 72.
- Etonyeaku, E. A. C., Kanu, 1. A., Ezeji, H. A. & Chukwuma, 1. N. (2019). Entrepreneurial skills needs of secretarial education graduates of colleges of education for self-sustainability in Enugu State, Nigeria. *American Journal of Industrial and Business Management*, 4 (2), 601 – 607.
- Nwabuona, E. (2020). Office technology and management: some issues and solutions. The Scribe, Federal Polytechnic, Oko.
- Obiorah, J. O. (2020). Basic ICT skills and keyboarding for office technology and management Lagos: Adura publishers, Idah.
- Oduwole, T. A. (2015). Youth unemployment and poverty in Nigeria. *International Journal of Sociology and Anthropology Research*, 1 (2), 23 – 39.
- OECD (2016). Getting skills right, Anticipating and responding to changing skill need. Paris: OECD publishing,

- Oluwalola, F. K. (2019). The place of office technology and management curriculum and information and communication technology in poverty alleviation efforts in Nigeria. *Secretarial Forum Journal for the Promotion and Advancement of Management and Secretarial Profession*. 5(1), 38 - 52
- Oyinloye O. T. & Oluwalola, F. K. (2019). Modern office instructional facilities in office technology and management in Polytechnics: a means to insecurity management in Nigeria. *ABEN Conference Proceedings 1 (1)*, 125 - 133
- Nwanaka, C. R. & Amaefule, S. (2021). Skills acquisition: Imperative for business studies among secondary schools in Rivers State, *Mediterranean Journal of Social Sciences*, 2 (7), 123- 1
- Nirupam, B., John, B, & Yingxin, Y. (2022). ICTs and public health in the context of COVID-19. *ICT India Working Paper*, 1(2), 1 – 30.
- Udo, M. P. (2014). Attitude of vocational business education students towards acquiring maximum vocational business skills and competencies for sustainable development in Nigeria. *Asian Journal of Social Sciences & Humanities*, 3 (4), 113 – 123.
- Ukonu, E. & Ukonu, E. E. (2017). *Basic office management*. (1<sup>st</sup> Edition): Mubi, Data-Graphics Publishers
- Zuppo, C. M. (2016). Defining ICT in e boundary less world. *International Journal of Managing Information technology*, (1), 11 – 23.  
<https://councils.forbes.com>
- Nigerian Security Trackers (2022) <https://nigeriansecuritytrackers.com> , retrieved 6<sup>th</sup> March 2022
- <https://www.youmasterworld/definition>