Office Technology and Management (OTM) in an Era of Uncertainties: A Paradigm Shift in Nigerian Tertiary Institutions

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The paper examined office Information and Management (OTM) in an era of uncertainties: a paradigm shifts in Nigeria. The factors that led to this paradigm shift were discussed, most notably among the factors is the COVID-19 epidemic, which sped up the adoption of technology for remote work and brought attention to the necessity of adaptable, robust management techniques. The paper equally x-rays the areas of paradigm shift in in OTM, the challenges associated with this shift, and the future of OTM in an era of uncertainties in Nigeria. The paper highlighted the necessity of increased adoption of digital transformation and upskilling and workforce development as the future of OTM. It was recommended among others that stakeholders in education should provide human and material resources needed to drive office technology and management to meet the best practices in the global world of technology, promote competitive advantage and sustainable growth.

Keywords: Office Technology and Management, Era, Uncertainties, Paradigm Shift

Introduction

Over the past few decades, significant changes have occurred in the field of office technology and administration. Office technology has evolved over time, propelled by developments in computers, communication, and data management. From the days of typewriters and use of carbon papers to the complex digital solutions in contemporary societies. Nigeria's evolution has been influenced by regional possibilities and constraints in addition to following general global trends. The advent of fundamental office equipment including telephones, typewriters, and early kinds of commercial automation occurred in the early 20th century.

In comparison to today's technologies, these tools, albeit revolutionary at the time, were limited in their breadth and capabilities. Personal computers, the internet, and mobile communications were the central components of the technological revolution that occurred in the late 20th and early 21st centuries. Global business options were enlarged, real-time communication was made easier, and office efficiency was greatly increased by these innovations. However, it is the most recent wave of technological advancements, driven by the rise of cloud computing, Artificial Intelligence (AI), and the Internet of Things (IoT), that has brought about the most dramatic changes in office technology and management practices in Nigeria. Typewriters, rotary phones, and manual calculators were among the first office technologies that Nigeria adopted in the early 20th century. Traditional means of communication and record-keeping were prevalent in Nigeria's early workplace environments. These fast-fading technologies were essential to the country's successful transition from the colonial era to an independent state. They equally paved the way for later developments in business operations, administrative duties and management.

Nigeria experienced the adoption of more sophisticated office technologies in the 1960s and 1970s, following its independence. When the early computers and telecommunications equipment started to appear, the typewriter continued to be an important management tool in many offices. A big breakthrough came about in the 1980s when desktop publishing facilities became available, enabling more advanced document creation and management. During this time, early fax and electronic mail systems were established, which also brought about change in the way information was managed within organizations.

This paper treated discussed under the following subheadings, conceptual Framework; areas of paradigm shift; factors influencing paradigm shift in OTM; challenges of OTM in an era uncertainty; the future of OTM in Nigeria; conclusion and recommendations.

Conceptual Framework

The term ”office’’ can be defined traditional as a physical space where administrative, clerical or managerial tasks are performed. Robbins and Judge

define office as" a place where task involving planning, coordination, communication and record-keeping for business are carried out. According to Margretta (2002) technologically office is considered not just a physical space but a virtual environment where communication, collaboration and data processing take place

Nwoju (2012) defined technology as the application of science to solve the challenges that arise in daily life. From the perspective of business education, on the other hand, technology is the scientific technique used to solve problems related to students' skill transfer to satisfy the changing demands and needs of society. Office technology is the use of different hardware and software to effectively manage tasks and operations in an office setting. It includes a broad spectrum of tools and programs intended to improve efficiency, simplify correspondence, and ease data administration in a company. Office technology, according to Oladejo (2016), is essential to contemporary corporate settings because it helps companies automate repetitive operations, freeing up staff members to concentrate on more strategic endeavours.

The integration of office technology is essential for boosting teamwork, guaranteeing correct record-keeping, and increasing operational efficiency. Office technology has evolved significantly over the years and is probably going to continue to do so. It was comparable to the lightbulb or the stapler at one point. The process of effectively and efficiently achieving organisational goals by the planning, organising, leading, and control of resources—human, financial, and technological is known as management. To make sure that organisational goals are reached, management entails creating strategies, organising tasks, keeping an eye on performance, and setting goals. To make sure that organisational goals are fulfilled, management entails creating strategies, organising tasks, monitoring performance, and setting objectives.

According to Nwachukwu (2018), management is a multidimensional field that calls for a combination of conceptual, human, and technical skills. Navigating the intricacies of the contemporary corporate world, which involves managing

technical advancements, competitive pressures, and economic swings, requires effective management.

Office Technology and Management (OTM) is one of the electives offered by business education programs at Nigerian tertiary institutions. OTM was formerly known as secretarial education, and it originated from the use of clay in technology in the Greek era. In those days, secretarial education was rudimentary, and the fundamental tools needed to learn and practise the profession were operated locally in workplaces and schools. Secretarial education has evolved from the handwriting and manual typewriter era to become a pivotal moment in the global application and utilisation of computers and information technologies.

OTM integrates office technology and management concepts to develop a unified system that improves organisational performance. Using technology to help managerial tasks like communication, decision-making, and process optimisation is known as integration. The objective is to establish a smooth workflow that optimises effectiveness, minimises expenses, and enhances total output. The collaboration of office technology and management is essential for businesses hoping to maintain their competitiveness in the current fast-paced business environment, as highlighted by Okoye and Eze (2020). Managers may make well-informed decisions, encourage innovation, and promote sustainable growth by utilising technology. We can call this a paradigm shift.

A paradigm shift in the context of office technology and management refers to a modification of the fundamental presumptions or working methods used in the workplace, usually as a result of technological innovation. Paradigm shift involves changes in the fundamental nature of knowledge and communication within economies and organizations due to technological innovation. This interaction of office technology and management in an uncertain time in Nigeria represents a significant paradigm shift. The future of work in Nigeria will be significantly shaped by organisations' ability to adapt, integrate technology, and employ creative management techniques as they traverse this challenging landscape. through taking use of the new technics to resolve the innate difficulties.

An "*era of uncertainties*" is essentially a time period marked by a great deal of unpredictability and volatility in the social, political, technological, and economic spheres of existence. People, businesses, and governments all experience increased levels of uncertainty during these periods, which makes it challenging to plan ahead and make wise decisions. Uncertainty is present in Nigeria today, impacting the country's socioeconomic and political climate in key areas. Nigeria is currently facing a great deal of uncertainties in the social, political, business, and other spheres Though to this, every aspect now needs to adjust to the new setting in order to remain relevant in the technological world. The quick development of office technology and management in today's world has had a significant impact on workflows, organisational structures, and the general corporate environment.

The use and integration of innovative technology in the workplace have been accelerated by the uncertainties of the modern day. This change is noticeable in Nigeria in a number of industries, including banking, healthcare, and education. According to Eneh (2021), the introduction of digital tools like cloud computing, AI, and the internet of things has changed how traditional office activities are carried out, allowing companies to increase efficiency, optimise workflows, and promote innovation.

The requirements of the new normal has made traditional management techniques difficult to use. Executives tare therefore forced to create new plans that put agility, resilience, and digital fluency first. Notwithstanding the encouraging progress to managing the difficulties brought on by the uncertainties is still a major worry. Furthermore, it is essential to continuously retrain and upskill the workforce in order to guarantee that workers can function effectively in this rapidly changing technological environment (Agbo, Okechukwu & Chukwuma 2021, Omole, 2023).

On the other hand, there are chances for development and creativity during this uncertain time. Nigerian organizations need to adopt a progressive stance and make investments in state-of-the-art technologies not only lessen the negative consequences of uncertainty but also obtain a competitive advantage in the international marketplace. Office technology integration with strategic management techniques can promote sustainable development, organisational

change, and increased economic resilience in Nigeria (Chukwu &Eze, 2020; Umeh, 2021).

Areas of Office Technology and Management Paradigm Shift

Over time, there have been major changes in the development of office technology and administration. Using new technology within a corporation or business can not only help it grow, but it can also initiate a shift that will alter its operations going forward. The following are the OTM domains where a paradigm shift has occurred:

- Information management system;
- Automation and Digital Transformation;
- Remote Work and Collaboration;
- Corporate Social Responsibility

OTM has undergone a revolution due to automation and digital transformation, which integrated cutting-edge digital tools and processes to boost productivity, efficiency, and innovation (Daveport & Ronanki 2018). The way cloud computing and applications for data storage and collaboration in businesses are integrated has also undergone a fundamental shift. According to Brynjolfsson and McElheran (2016) digital transformation improved productivity and decision-making in modern office workspaces by utilising data and artificial intelligence. There is little denying that office automation gives secretaries new but achievable tasks and responsibilities. The secretaries must under retraining requirements to be considered for these new posts. The areas of paradigm shift in OTM are as follows:

Information Management System

Information management systems have also been impacted on by paradigm shifts. Wang (2020) opined that a information management system is how documents are stored, easy retrieval when required. In current digital age, knowledge can be captured and shared with the use of contemporary technologies and techniques. Real-time integration of core business processes is enforced, along with interactions with existing and new customers. Businesses occasionally had to wait weeks to obtain bits of data and information on how their sales, marketing, and other departments are operating prior to key technological advancements like the

internet. Businesses may generate real-time data using the technologies available today, which they can then analyse and apply to specific departments. This will enable users to enhance or modify a few of their tactics in to better or expand the overall functioning of their business.

Automation and Digital Transformation

Modern office information and administration heavily rely on automation and digital transformation. They facilitate better decision-making, increase efficiency, and streamline operations. In an office context, automation is the application of technology to carry out tasks that were previously performed manually. It consists of devices that handle data entry, scheduling, robotic process automation (RPA), workflow automation software, and artificial intelligence (AI). It is impossible to overstate the influence of automation on financial management, particularly when it comes to its use in office settings. Desai (2020) supports this new transformation and automation

Remote Work and Collaboration Tools

Remote work and collaboration have grown to be crucial elements of contemporary OTM, particularly in light of the growth of remote teams and flexible work schedules. platforms for work and communication, including project management applications, messaging apps, and video conferencing for remote teams. Real-time document collaboration, projects that are timeless, and task assignment independent of physical location are all made possible by virtual collaboration and project management. According to Dwivedi, Coombs, Constantinou, Duan, Edwards, and Upadhyay (2020), digital transformation guarantees security protocols to safeguard data in remote work settings. Many organisations were forced by 2019 pandemic to quickly implement remote work policies. According to Nwosu & Nnadozie (2021), the demand for digital platforms and technologies to facilitate remote work sped up the process of digital transformation. a greater dependence on cloud-based programs and communication platforms like Slack, Zoom, and Microsoft Teams (Misra & Ayo, 2021). Nigerian office technology and management have undergone substantial changes as a result of the COVID-19 epidemic, with a move towards digital

solutions, remote work, and increased organisational flexibility. The evaluation of performance is ongoing.

Corporate Social Responsibility

The field of corporate social responsibility has also experienced fundamental shifts. Businesses give back to the communities in which they operate through corporate social responsibility. Participating in the community can help students from underprivileged backgrounds acquire the knowledge and skills needed for careers in technology. One such initiative is IBM's "P-TECH" program (IBM Corporate Social Responsibility Report, Microsoft Philanthropies states that the company is also attempting to close the digital divide by giving underprivileged communities access to technology and the internet. Much to do in this regard for the development of the immediate communities in Nigeria. The awareness of youths of immediate communities are now very high as they atimes become restive.

Factors that Influence Paradigm Shift of Office Technology and Management

Numerous elements that represent the changing needs of the workplace and global technological breakthroughs have an impact on the paradigm shift in OTM. With the introduction of ICTs into the educational environment, OTM education has grown throughout the world as a subset of business education. Its purview has expanded to encompass a broader range of economic and technology expositions in order to promote the advancement of both people and countries. The body of research has demonstrated that one of the most obvious global trends in Out-of-the-Mouth (OTM) education is the ongoing expansion of program scope to address global responsibility and sustainability issues; the most typical response to this is the addition of new ICT modules. This is demonstrated in areas of technology, globalization, workforce demographics, remote work and telecommuting and regulatory and ethical consideration.

Office operations have changed significantly as a result of the automation and integration of artificial intelligence, necessitating the development of new skills and altering the character of work. In addition, the use of cloud-based solutions has revolutionised information access, collaboration, and data management, facilitating real-time communication and distant work. The rise of smartphones

and mobile apps has further accelerated the paradigm change by enabling more flexibility in work locations and hours.

Globalisation has also made it necessary to manage heterogeneous teams in various geographic areas, which has an impact on management and communication tactics. The ability to outsource work to foreign nations has changed the way traditional office layouts and management techniques are carried out.

With the arrival of Millennials and Gen Z, the workforce demographics have introduced new expectations surrounding technology use, flexibility, and work-life balance. To this end, management styles and culture have changed as a result of growing knowledge and use of diversity and inclusion practices. The COVID-19 pandemic hastened the adoption of remote work in many organisations. The way workplace function has permanently changed as a result of this. Employees from various companies can communicate digitally via Zoom, Slack, Microsoft Teams, and other platforms.

Concerns about ethics and regulations also play a role in paradigm shift. Office information management has been impacted by the growing importance of data security and privacy due to the growing use of digital technologies. Business policies are being impacted on by the growing importance of ethical principles in the use and management of technology. All of these elements have combined to cause an ongoing paradigm shift in OTM, necessitating constant adaptation on the part of experts to new environments, methods, and technologies.

Challenges of OTM in an Era of Uncertainties

The challenges of OTM in Nigeria during this era of uncertainties are particularly significant due to the unique and dynamic socio-economic, political and infrastructural landscapes. Inadequate infrastructure is one major challenge of OTM in this era of uncertainties. The frequent power outage in Nigeria poses a significant challenge in the efficient operation of office technology usage at a high cost. Akanbi (2016) who highlighted the impact of electricity supply on businesses agree with this assertion. Limited internet access equally is a serious challenge to the effective operation of technology. Internet penetration in many parts of Nigeria

remains low. Limiting access to cloud-based services and online collaboration tools are now common.

Cybersecurity is largely one of the current challenges of technology use. The increasing incidences of cybercrime in Nigeria as reported by Okeshola and Adeta (2013) attests to significant threat to office technology management. Many organizations lack robust cybersecurity measures and awareness of cyber security best practices, making them vulnerable to attacks. The economic instability in Nigeria is getting more worrisome by the day. Economic uncertainties including all time fluctuating exchange rates and inflation affect the ability of business operators to invest in new technologies. The resources allocation also became very limited. Consequently, many organizations cannot afford to upgrade their technology regularly leading to the use of outdated systems. In addition, there are skill gap and workforce issues. There is significant gap in the availability of skilled IT professionals in Nigeria, which hampers the effective management of office technology as reported by Ogbuanya and Chukwuedo (2017). Other challenges are inconsistent policies and cultural resistance to change. They added that the cost associated with complying with the local and international regulations can be high. Socio-cultural factors also influence technology adoption in Nigerian SMEs. The last but not the least factor on this issue is the digital divide. There is a great digital divide between urban and rural areas in Nigeria, with rural areas having much less access to modern office technology, Omoniyi and Ipinlaye (2014). The underdevelopment of rural areas modern facilities accounts to a large extent for this increasing divide in most parts of Nigeria.

Another challenge OTM is face with in this era of uncertainty is adapting to uncertain economic conditions. According to Oladimeji (2017) economic fluctuations, inflation and currency instability make it hard for organizations to plan for long-term investments in technology. Managers need to balance cost-effective solutions with ensuring their offices are equipped with the right tool. Furthermore, unstable power supply and infrastructure is a big challenge to OTM in Nigeria. Okafor and Onu (2018) opined that in developing countries like Nigeria, inadequate power supply and infrastructure pose significant obstacles to fully

leverage office technology. Frequent power outages disrupt operations, while limited access hinders smooth communication and data processing

Skill gap among employees is equally a challenge to OTM. The transition to advanced office technology often leaves a gap between available tools and skills of employees. Managers need to invest in training and reskilling staff, but it is often a challenge to keep with the speed of technological change (Akinyele, 2010). New technologies emerge at a fast pace, making existing office tools and software obsolete quickly. This forces organizations to constantly upgrade or change their systems, which can be very expensive. Williams and Smith (2021) asserted that the shift towards remote work, exacerbated by global crises like the COVID-19 pandemic, presents challenges in managing teams, maintaining communication, and ensuring productivity. Office managers need to adopt technologies that support collaboration without sacrificing security or efficiency

The future of OTM in an Era of Uncertainties in Nigeria

The future of office technology and management in Nigeria, particularly in an era of uncertainties, will be shaped by several key trends and developments as discussed.

- **Increased adoption of digital transformation**: This will likely see a greater reliance on cloud computing to allow remote work and collaboration. This has been accelerated by COVID-19 pandemic and is expected to continue. Osakwe and Okeke-Uzodike (2019) highlighted how digital transformation is reshaping Africa businesses including Nigeria. Omoniyi (2020) explores the potential impact of AI on job markets in Nigeria including Office management roles. Nigerians must be ready for this information revolution
- **Resilience through Technological Innovation**: To navigate uncertainties, Nigerian organizations must increasingly adopt adaptive technologies that can scale and evolve with the changing conditions. This will include flexible software solutions and modular hardware. The work of Adeola and Eneh (2018) and Olayinka and Omolara (2021) confirmed this assertion.
- **Focus on Cybersecurity and Data Protection**: Organizations should enhance cybersecurity measures. As the digital footprint of organizations

in Nigeria grows, there will be an increasing emphasis on cybersecurity to protect against the rising threat of cyberattack on a continuous basis

- **Upskilling and Workforce Development**: to keep pace with technological advancement, there will be a growing need for continuous professional development and upskilling in OTM. Onifade and Imhanopi (2018) emphasized the importance of human capital development in Nigeria's technological landscape. This however, has serious cost implications in an era of economic uncertainties
- **Emphasis on Sustainable and Green Technologies**: Eco-friendly office practices will be a common place and should be encouraged. The future of OTM in Nigeria would increasingly incorporate sustainable practices, such as energy -efficient technologies and waste reduction strategies. Nwokoye and Okereke (2018) highlighted the potentials for green technologies transforming Nigerian business space. This *ceteris paribus* will enhance performance in this digital age.

Conclusion

The emerging paradigm shifts in office technology and management in Nigeria is a response to the challenges and opportunities therefrom an era of uncertainties. By embracing technology, fostering resilience and investing in skill development. Nigerian organizations cannot only survive but strive in this dynamic environment. The future of office technology and management lies in the ability to anticipate changes and proactive adaption, ensuring long term sustainability of technological culture.

Recommendations

To successfully navigate the paradigm, shift in OTM in an era of uncertainties the following recommendations are put forth for policy options

- Stakeholders in OTM should invest in digital transformation such as cloud computing, adopting automation and artificial intelligence to streamline routine task, reduce human errors and increase productivity.
- Strengthen cybersecurity measures such as implantation of robust security protocols such as firewalls, encryption and multi-factor authentication, as

well as regular security training for workers to prevent breaches and ensure they and how are familiar with the latest threats and how to mitigate them

- Tertiary institutions of learning should step up their training system with proactive and adaptive strategies
- There should be ongoing training and development of worker for technological advancement and innovations

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