

**TELECOMMUTING: A PRO-ACTIVE RESPONSE TOWARD ACHIEVING THE FOURTH
SUSTAINABLE DEVELOPMENT GOALS IN NIGERIA**

IKPE, PAUL C.

E-mail: ikpepc@gmail.com

DEPARTMENT OF SOCIAL SCIENCES, FEDERAL POLYTECHNIC NEKEDE, OWERRI.

&

OPARA, UGOCHUKWU A.

E-mail: ugochukwuzitere@gmail.com

DEPARTMENT OF SOCIAL SCIENCES, FEDERAL POLYTECHNIC NEKEDE, OWERRI.

Abstract

Sustainable Development Goals (SDGS) is an eclectic but pragmatic goal set by the United Nations to globally, improve human society. Telecommuting or remote working is increasingly, adopted in most modern societies to realize issues of importance. The paper reflected on the mechanism that could ensure equitable quality education for all Nigerians, and established a nexus between telecommuting and education. The paper largely qualitative and exploratory relied on secondary sources and library materials for data generation and analysis. The objectives of the paper include, to demonstrate the utility telecommuting offers in realizing equitable quality education for all Nigerian, and to highlight the challenges associated with telecommuting in a developing country, like Nigeria. Utilizing the Work-Family Border theory, the paper examined the nature of telecommuting in context of the fourth SDGS of the UN. The study found that, telecommuting is a pro-active mechanism that could lead to the realization of quality education and promote lifelong learning opportunities for all Nigerians (the fourth SDGS), amongst others. It recommended therefore, that telecommuting should be adopted at all levels of education particularly, secondary and tertiary, and that there should be full-scale digitization of the educational sector in Nigeria to dispel misgivings about the utility of telecommuting. It further recommended that SDGS indicators on equitable quality education at the local level should be reported to the state and federal governments.

Key words: Telecommuting, Sustainable Development Goals, Education and COVID-19.

Introduction

Telecommuting is one of the technological innovations in the late 20th century with the advent of home computer and information technology. Telecommuting or remote working is the concept of working from anywhere outside the work environment by using a computer, telephone, e-mail and internet resources. Research on telecommuting appeared in 1973 when Jack Nilles coined the terms “Telecommuting” and “Teleworking” (Hamilton, 2003). The early years of the 21st century marked the beginning of digital age of data/information storage (Hilbert & Lopez, 2011) which helped in transforming organizations and work process. Data, an essential corporate asset, have shifted from manual filing system to electronic storage removable devices (diskette and compact disc) and to cloud based storage such as Drop-box and Google drive (Hollidge, 2018). These developments in Information and Communication Technology (ICT) have expanded the range of modern firms and industries in terms of functionality and automation. Telecommuting initially, was to address only transport related issues, but now applies to boost productivity and social welfare.

In the era of globalization driven by ICT such as computer and Internet resources most teaching staff and students, indeed the educational sector perform some related duties from remote locations, evidenced during the COVID-19 Pandemic lockdown in Nigeria. As access to data/information continues to grow making the world a global village the world of work, no longer remain mere avenues for the transmission of prescribed

set of information (Thomburg, 2000) but must promote global issues such as inclusive and equitable quality education for all, sustainable development goals (SDGS) of the United Nations. The internet resources/access now considered basic human right, is to encourage and improve digital ease of use for all in work processes (Kemp, 2021). Work processes have changed and most organizations therefore, adopted work arrangements such as telecommuting to fit changing environment and labour needs (Harrison, Johns & Martocchio, 2000). It is therefore necessary to examine the practice of telecommuting in Nigerian educational system and its expected outcomes on the SDGS 4. This goal strives to ensure that all children, adults inclusive especially, those from marginalized communities have improved access to education (<https://www.sociologygroup.com/17-sustainable-development-goals>).

Evidence suggests that ICT policies in Nigeria are not robust to deal with education related issues (The Ministerial Committee on ICT Policy Harmonization Report, 2012) which over the years relatively, remained unchanged. However, the adoption of telecommuting, indeed digital knowledge to promote work in Nigeria is rapidly evolving. If harnessed, could lead to the realization of the SDGS 4, amidst challenges such as high cost of internet resources which is unaffordable for some operators, as they are owed arrears of salaries (Dawodu & Osondu, 2011) in the face of ongoing Academic Staff Union of Universities (ASUU) strike, and dwindling economy. Besides, available internet facilities could not be maintained because of high running costs especially, in the absence of adequate power supply. Evidently, most educational sector operators in Nigeria are involved in telecommuting as they relay taped-messages, use computer and Global System for Mobile-communication (GSM) to perform activities, or transmit information to their colleagues, students, or management. In this way, telecommuting becomes a mechanism for work leading to productivity increase (Abdulkareem & Mope, 2009). Telecommuting provides the opportunity to modify work and learning environment to better match how and when they should be done. Utilization of this mechanism could guarantee inclusive and quality education in Nigeria. The scope of the paper therefore, is limited to the realization of SDGS 4, and the data generated through secondary sources such as library materials. The objectives of the paper include, to demonstrate the utility telecommuting offers as a work option in realizing SDGS 4, and to highlight the challenges associated with telecommuting in a developing country, like Nigeria.

Concept Clarification: Telecommuting/Teleworking, and the Motivating Forces

Telecommuting as coined by Jack Nilles describes a growing trend and future way of work aided by information technology and computer (Nilles, 1994). Telecommuting variously, referred to as telework, home-working, working-at-a-distance, off-site worker, remote work, amongst others (Peters, Tijdens & Wetzels, 2001; Rognes, 2002) makes it difficult to have a common notion of the term. Telecommuting reflects social, labour and technology changes taking place in the global occupational system. Specifically, it is working from home, satellite office or alternative place and communicating with the conventional workplace aided by electronic system (Moktharian, 1991). This suggests that work is something you do, not some place you go (Hamilton, 2003) thus, telecommuting is not restricted to a particular form or work. An employee could be engaged where the organization so desires, to work part or full time during normal business hours, for which commute is eliminated, shifted or shortened. It could constitute all or part of the employee's or self-employee's job, aided by technology to maintain links with the conventional office, in some situations to designated colleagues, clients or customers (Mayo, Pastor, Gomez-Mejia & Cruz, 2009) beyond official working hours, either frequently or occasionally.

Telecommuting and teleworking are interchangeably used, and sometimes confusing. In this regard, Othman, Yusof and Osman (2009) indicate that networking, remote working, flexible working, electronic home working and e-work are commonly used in place of teleworking or telecommuting. Telecommuting initially, excludes several telework-based substitutions for transportation such as self-employed, home-based workers, private consultants, contract workers, over time work at home, mobile workers amongst others (National Transport Library, 1993). Nilles (1994) defines teleworking as any form of substitution of information technologies such as telecommunications and computers for work-related travel. Distinguishing the terms, telecommuting and teleworking, Othman, Yusof and Osman (2009) argue that telecommuting is a form of teleworking whereby all telecommuters are teleworkers but not all teleworkers are telecommuters. Conversely, Avellino (2005) sees teleworkers as home-workers who use personal computers, the internet,

or mobile phone during their work. Telecommuting emphasizes reduction of work-related travel whereas telework emphasizes flexibility to work anywhere. Technological advances and changing work practices have made telecommuting and teleworking seamless. Peters, Tijdens and Wetzels (2001) consider the two variables as same that could be interchangeably applied, and as such used in this study.

Development in telecommunication and information technology exerts influence on human activities as it has passed through different epoch to currently, computer technology and internet resources which have more packages that enhance flow of information climes. The global nature of work currently, dominated by service industries has been permeated by the creation, use and distribution of information as computer files easily transmit them to where needed. As such, organizations that provide computer to their employees believe that it would be used for additional work at home or elsewhere (Cross, 2015) considering that workers are increasingly information oriented.

However, the quality of life at home has become of interest to most organizations and governments. The nature of families is fundamentally changing such as single-parent and employed parents. Additionally, women are becoming more receptive to education, technology and career ambition (Cross, 2015) hence, the organizational landscape and mobility are changing as working environment are increasingly improving through ICT. In this regard, telecommuting becomes beneficial making, productivity a prime objective, and decentralization inevitable. Globally, nations are seeking alternative means to improve air quality given that reduction in global green house emission might not be achieved only through measures such as emission control and improved transit at national and international levels. These underscore the emergence of telecommuting as conceived by Nilles, and steady rise in telecommuting as many countries are motivating their public and private sectors to telecommuting (Yen & Mahmassani, 1994).

Equally, global insecurity in form of armed robbery, terror attack, bank fraud, hostage taking, cyber attacks and other life threatening attacks are adopting advanced technologies including social media to monitor, send and receive at times, coded messages. Bergesen and Lizardo (2004) link violent behavior to globalization resulting from world-system dynamics that adopts driving forces of modernization and industrialization. This situation has facilitated criminal complex-operations, obtain huge funds and develop hi-tech capability which require surveillance shift for instance, the September 11, 2001 attack in the U.S. spiked interest in telecommuting. The Obama administration signed into law the Telework Enhancement Act of 2010, which entails federal agencies to develop telework plan, a tacit emergency preparedness underscored by the earthquakes in New Zealand between 2010 and 2012 that forced many organizations to adopt telework which was considered staff motivating and pro-active emergency measure (Guyot & Sawhill, 2020).

Furthermore, global infectious diseases such as the COVID-19 Pandemic affected the socio-economic activities across the globe prompting governments and organizations to limit the number of people congregating in public places including closure of schools (Chikezie, Ojiagu & Nzewi, 2021). The disruption affected an estimated 1.6 billion students in over 190 countries apparently, shaded more light on digital and online education globally. Some organizations and governments encouraged their staff to telecommute or work remotely, even from their homes to avoid the ravaging effect of the disease. Poor digital infrastructure added to high rate of poverty exposed Nigeria's inadequacy to handle emergency. This brought to the fore the efficacy of telecommuting as a tool for handling emergency and mechanism for improving the education sector. Undeniably, in Nigeria telecommuting is evolving, revealing a huge digital deficit that requires improvement to be information-driven in an increasing global village where jobs that require manual strength are becoming less common and, physical location less important. To acquire the requisite skills in the ever competitive global economy therefore, most academic institutions, business organizations and governments are progressively, resorting to different aspects of telecommuting such as online learning, virtual meetings, and training of staff in ICT knowledge, installation of ICT and internet infrastructure (Nnonyelu & Ikpe, 2021).

Theoretical Orientation

The appropriateness of a theory is determined by its dynamism and ability to integrate its views on managing people at whatever level (Smerek & Peterson, 2007). Work-Family Border theory, developed by

Clark in 2000 belongs to this category. The theory illuminates the utility of telecommuting in ensuring “inclusive and equitable quality education and promote lifelong learning opportunities for all”. It gives individuals the responsibility to plan and control their work as means of increasing satisfaction underpinned with the belief that work and family are different domains with peculiar rules, behavior, values and means. Work provides income and sense of accomplishment while home satisfies close relationship. A person’s role takes place within specific domain separated by physical, temporal, or psychological borders (Clark, 2000). Because of differences in domains, individuals often manage to integrate work and home to some degree, making the boundary flexible. Physical borders are where relevant behavior takes place such as workplace, or home. Temporal border divides work and family responsibilities such as bidding a spouse good-bye. Psychological borders are behavior patterns and emotions appropriate for a domain (Othman, Yusof & Osman, 2009).

Boundary flexibility is the degree to which an individual moves from one domain to another to meet certain demands without diminished value. An individual plays different roles; a student, a worker, or a spouse which could be difficult should borders be strictly maintained. However, the theory argues that flexible boundaries facilitate integration between two or more domains and tries to guarantee conflict-free relationship which often, not feasible. Simultaneous control of two or more domains though difficult, could be attained through telecommuting. Telecommuting being dynamic enhances permeability, flexibility and domain overlap that lead to seamless blending. The border being less exclusive connects work, family and their ambient without value loss. Sturdy border when permeated becomes flexible and consequently, blends. Adopting the analytical insights of the theory, the utility of telecommuting is examined in context with “inclusive and equitable quality education” that could promote lifelong learning opportunities for all Nigerians, the UN SDGS, 4.

The theory highlighted the nexus between telecommuting and quality education, and how their interaction could mutually, be beneficial. It explained how the education operators could maintain, negotiate and cross boundaries to attend to other domains. Since works vary, the theory offers useful approach to organization and personal practices for instance, problems of motivation, absenteeism, learning, teaching, work-family conflict and myriads of complaints associated with management are addressed by telecommuting because, it grants the education operators the autonomy to adjust schedules in context with variables such as teaching and learning thereby, boosting inclusiveness and efficiency.

Telecommuting in Nigeria

Telecommuting in Nigeria is largely unknown evidenced in the difficulty experienced by some staff and students in accepting online or e-learning contrary, to what obtains in some private organizations where a good proportion of the staff telecommute. Obviously, some staff relay taped messages, use computer, Global System for Mobile-communication (GSM) etc. to perform office related-works, and to transmit information to students or colleagues. These have mitigated some challenges, made work relevant to emerging situation and accomplish personal satisfaction (Abdulkareem & Mope, 2009). Roles conducive to telecommuting rely on ICT devices or information-base. The education sector being knowledge-driven is expected to be adroit in ICT devices which make job interesting, enabling teachers and students to freely interact (Onyeukwu, Adeniyi & Amin, 2020).

ICT policy in Nigeria began in 2001 after the National Information Technology Policy was approved to guide the telecommunications industry. The National Information Technology Development Agency Act 2007, establishing the National Information Technology Development Agency (NITDA) to ensure ICT sector development. This is elaborated in the Nigeria Vision 20:2020 (2009) National Development Plan thus, “The increasing globalization driven by ICT makes it imperative for Nigeria as an emerging market to irreversibly consider the application and promotion of ICT strategy to facilitate its rapid growth and development” with the belief that efficient ICT would expand the Nigerian economy. It acknowledges poor digital knowledge across the country particularly “in knowledge generation, penetration of ICT, access to and usage of internet and telephone penetration and physical infrastructure.” The objective of the ICT Policy is, to make ICT networks and services accessible to all, and to transform Nigeria into a knowledge-based economy (The Ministerial Committee on ICT Policy Harmonization Report, 2012).

Despite this, the situation has not substantially improved as Adeniyi (2016) maintains that most Nigerians lack access to Personal Computer (PC) and internet facilities. The International Telecommunications Union statistics reveals that PC penetration is at ratio of 7 computers per 1000 Nigerians. The National Universities Commission (NUC) prescribes PC ownership to be one to every four students; one to every two lecturers below Lecturer 1; one per Senior Lecturer, and one per Professor/Reader (Agyeman, 2007). Some universities such as the Nnamdi Azikiwe University, Awka have achieved a better ratio for their faculty but the same cannot be said for the PC-to-student ratio. Some education organizations have made it compulsory application of ICT to its services and researches in addition, to compulsory basic-ICT-training for the teaching-staff for instance, the University of Jos and some private Universities have embarked on e-learning and campus networking. The National Open University of Nigeria (NOUN) established in 2002 is trying, to establish computer-based study centers in all states of the federation in order to make tertiary education available to all citizens (Nnonyelu & Ikpe, 2021).

However, the educational sector is yet to make ICT skill a requirement for staff, teachers and students in Nigeria. Available data show that ICT in Nigeria has substantially improved, there are about 92.3 million internet users, and could reach 187.8 million in 2023. Internet penetration is expected to increase from 47.1 percent in 2018 to about 84.5 percent in 2023 with more than 50 million Nigerians acquiring the capacity to access the internet (Onyeukwu, Adeniyi & Amin, 2020) Those with this capacity are largely the teaching staff followed by students that are fast acquiring digital knowledge. This is of immense benefit to telecommuting in teaching and learning. Unfortunately, few staff in the education ministry are acquainted with ICT skill the outcome being, poor utilization of the telecommuting amidst inflationary trend rising to 14.89% (National Bureau of Statistics, 2020). Internet penetration and inflation are critical factors in telecommuting, and could affect Nigeria's move toward becoming knowledge based society. The use of internet resources, telephones and other social media, like Zoom, Google class and meet, WhatsApp amongst others make remote working less stressful and educational activities more qualitative. The implication is that educational activities could be carried out from outside the conventional offices and classrooms, with less stress, a fit yet to be achieved in Nigeria.

In 2020 several learning activities, meetings, conferences and seminars were done through telecommuting, online, via WhatsApp, Zoom, Webinars, Skype, amongst others following the ravaging effects of the COVID-19 Pandemic. The successes recorded by telecommuting particularly, in the educational sector need to be improved upon to ensure inclusive and equitable quality education that guarantees lifelong learning opportunities for all Nigerians. Many researches on online studies showed that telecommuting has a lot of benefits for the educational sector, and in the development of human capacity by providing effective teaching technique hence, like other countries should be embraced to realize the SDGS 4 of the United Nations before the year 2030.

In contemporary learning environment multi-media techniques are needed to impart knowledge, but most learners and educational facilitators such as teachers are yet to develop the skills vital to telecommuting that could ensure quality education in Nigeria. Telecommuting is becoming more accepted in developing countries such as India, Mexico and Indonesia amongst others (Barber, 2013; Balaker, 2005). India, a developing country like Nigeria, has improved digital skills among Indians by developing Educational Satellite (Kundu, 2018) possibly, for the realization of the SDGS before 2030. To address the issue of low digital penetration and infrastructure in Africa, the New Partnership for Africa's Development (NEPAD) provided over 600,000 schools across Africa with computer equipment and internet access (Dawodu & Osondu 2011). Nigeria is yet to fully embrace this innovation because successive administrations lack the political will to establish required social infrastructure and modern educational technologies to develop human capacity (Tinio, 2013; Dawodu & Osondu, 2011) invariably, actualizing the SDGS 4, in 2030. Given the difficulty in making robust education policy, implementation and sustainability by government in the face of constant industrial actions in the sector, utilizing a dynamic mechanism that requires less government influence becomes imperative. A situation where the providers, practitioners and recipients move at their own pace and simultaneously, controlling incidental influences. The study examines the utilization of telecommuting as a mechanism for inclusive and quality education in Nigeria.

A cursory look at the UN 17 SDGs: The Fourth Goal

The SDGs is built on the efforts by the UN Department of Economic and Social Affairs (UNDESA) which the UN member States in 2015 adopted, realizable in 2030. Sustainable Development is an outline for global peace and prosperity to be achieved by global partnership, the core being the 17 SDGs. Ending poverty and deprivation align with improving health, education, reducing inequality, stimulating economic growth, amongst others. The progression to SDGs started in June 1992 at the Earth Summit in Rio de Janeiro, Brazil where member States agreed to build global partnership for sustainable development. At the UN Headquarters in New York in September 2000, the eight Millennium Development Goals (MDGs) was adopted to reduce extreme poverty by 2015.

Furthermore, in South Africa in 2002, the Declaration on Sustainable Development and the Plan of Implementation was adopted reaffirming, the global community's commitment to poverty eradication and the environment. At the UN Conference on Sustainable Development in Brazil, in 2012, the process to develop SDGs was launched and following, a 30-member Open Working Group set up in 2013 to develop the SDGs plan. In September 2015 the UN General Assembly adopted the 2030 memo for Sustainable Development with 17 SDGs as its core. Indeed, 2015 marked the adoption of several agreements including, Framework for Disaster Risk Reduction; Action Agenda on Financing for Development; Transforming our world; the 2030 Agenda for Sustainable Development with its 17 SDGs; Paris Agreement on Climate Change and, the annual High-level Political Forum on Sustainable Development, the UN platform for the follow-up and review of the SDGs (<https://sdgs.un.org/goals>). The 17 SDGs include,

- End poverty in all its forms everywhere.
- End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
- Ensure healthy lives and promote well-being for all at all ages.
- Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
- Achieve gender equality and empower all women and girls.
- Ensure availability and sustainable management of water and sanitation for all.
- Ensure access to affordable, reliable, sustainable and modern energy for all.
- Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
- Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
- Reduce inequality within and among countries.
- Make cities and human settlements inclusive, safe, resilient and sustainable.
- Ensure sustainable consumption and production patterns.
- Take urgent action to combat climate change and its impacts.
- Conserve and use the oceans, seas and marine resources for sustainable development.
- Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and biodiversity loss.
- Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.
- Strengthen the means of implementation and revitalize the global partnership for sustainable development (<https://sdgs.un.org/goals>).

The aim of the SDGs is to eradicate poverty and deprivations, analytically rooted in the fourth Goal, “inclusive and equitable quality education and promote lifelong learning opportunities”. This goal strives to ensure that all children, adults inclusive especially, those from marginalized communities have improved access to education (<https://www.sociologygroup.com/17-sustainable-development-goals>). Education concerns human capital development invariably, to improve quality of life, creativity, enhance productivity, peaceful and transformed society, economic growth amongst others (Anyika, Anikelechi & Thobejane, 2021). Failure is imminent where citizens are not provided with effective and functional education necessary for nation-building and overall development.

Education offers numerous socio-economic, health and political benefits to the individual and the society at large. It improves quality of human life and inter-relationship, and guarantees economic growth and social progress vital for sustainable development. Inclusive education has a strong focus on improving equity to meet the needs of women, children and disadvantaged populations in particular so that “no one is left behind” <https://www.undp.org/sustainable-development>. Technological advances are functional-education related and critical in nation-building and development. It arouses the human mind on the need and means to revitalize partnership for sustainable development. Education ubiquitously runs through the gamut of the SDGS including, application and improvement of itself. To achieve the SDGS of the UN the human mind must be transformed through education to be receptive to global development.

Brief on the Educational System in Nigeria

Education, a primary means of human capital development and the UN 4th sustainable development goals essentially, aims at achieving economic growth including improved quality of life, creativity, innovation, enhanced productivity, peaceful and transformed society. Its neglect stultifies a nation and certainly, failure is imminent where the citizens are denied effective and functional education necessary for nation-building and overall development (Anyika, Anikelechi & Thobejane, 2021). The Nigerian education system is drearily typified by poor political leadership and policies and programmes. The 6-3-3-4 system of education Nigeria adopted in 1989 discarding the erstwhile British system is almost a failure due largely to poor funding, ineffective policy devoid of sufficient data and poor administrative skills (Ekudayo, 2019) alongside infrastructural decay, poor conditions of service amongst others. Available record shows that Nigeria has about 10.5 million out of school children, aged 5-11, and the world’s highest number. About 61% of 6-11 year-olds attends primary school regularly whilst half of the school-age girls mostly in states in Northeast and Northwest of the country are not enrolled in school (UNICEF Report, World Literacy Day, 2019) implying that Nigeria is highest in the global illiteracy index. As well, there are about 60 million illiterate citizens constituting over 30% of its population (Bolarin, 2010) which undoubtedly, portrays the country as unserious in her quest for development.

Educational system in Nigeria clinically, does not guarantee inclusive and equitable quality education that promotes lifelong learning opportunities for all. As access to data/information continues to grow, making the world a global village, our educational institutions cannot remain avenues for the transmission of prescribed set of information but must promote the acquisition of knowledge and skills that make possible continuous learning over the life time. Futurist Alvin Toffler states “the illiterate of the 21st century will not be those who cannot read and write but those who cannot learn, unlearn and relearn” (Thomburg, 2000). Effective use of ICT resources represent a competitive edge in increasingly, globalizing village found only among privileged few societies, a situation that has created educational gap and lopsided academic progress.

Eight years to the 2030 target for the attainment of the UN SDGS, Nigeria is still far from the reality of the SDGS as no appreciable progress in education has been made which experts largely, linked to poor funding and obnoxious practices. A cursory look at the funding of the educational sector for eleven years (2010 to 2020) presented in table 1 below, illuminates overwhelming challenges facing the Nigerian education sector (Udo, Abner, Inim & Akpan, 2020). This does not suggest that the past decades were better as the sector remains below the UNESCO benchmark of 26% hence, continued degeneration. Table 1 below shows Federal government budgetary allocation to the educational sector eleven years (2010-2020).

Table 1: Federal Government’s Budgetary Allocation to Education: 2010-2020

Year	Budget (N Trillion)	Educational Allocation (N Billion)	Percentage of Budget (%)
2010	5,160	249.09	4.83
2011	4972	306.30	6.16
2012	4877	400.15	8.20
2013	4987	426.53	8.55

2014	4962	493.00	9.94
2015	5068	392.20	7.74
2016	6061	369.60	6.10
2017	7444	550.00	7.38
2018	8612	605.80	7.03
2019	8830	620.50	7.03
2020	1033	691.07	6.7

Source: Udo, Abner, Inim & Akpan (2020:629)

Additionally, the teachers (primary, secondary and tertiary) are poorly paid coupled with dearth of funds for research and development (R & D) which often elicit agitations and consequently, industrial action and other unwholesome practices noticeable in the education sector that denies the sector of positive position in global rating of the profession (Ifenkwe, 2013). This reality has consequences for students, the teachers and the society in general. The Tertiary Education Trust Fund (TETFund), an interventionist agency, for tertiary institutions came on stream in 2011 following agitation for the refitting of the public tertiary institutions by the Academic Staff Union of Universities (ASUU) and general decline in the education sector.

Generally, the educational curriculum is unstable and ineffective in providing education administrators, teachers and students defined structure and measurable plan for delivering quality education and a road map for the realization of the educational goals which serves the needs and challenges in modern society. The Nigerian education curriculum is yet to be harmonized for instance, the public schools adopt that of the Ministry of Education while the private schools are at liberty to select either or both the Nigerian, American and British systems thereby causing hiccups in the system (Anyika, Anikelechi & Thobejane, 2021). Consequently, the sector has lost significant percentage of Nigerian children-of-school-age to adjoining countries such as Liberia, Ghana and Benin Republic whose educational system is considered more functional and stable. Mention should be made on the dearth of technological facilities, internet resources and ICT skills necessary for the dissemination and acquisition of knowledge. As pointed out by Futurist Alvin Toffler, “the illiterate of the 21st century will not be those who cannot read and write but those who cannot learn, unlearn and relearn” (Thomburg, 2000). Effective use of the ICT in the dissemination and acquisition of knowledge has become a competitive edge in an increasingly, global village, a process that makes possible continuous and inclusive learning over the life time.

Sequel to this, the Universal Basic Education (UBE) Programme launched in Sokoto state in 1999 to ensure free, universal and compulsory 9-year education for every Nigerian child aged 6-15 years remains till date, a mirage (Obayan, 2002). The essence of the programme being to eradicate illiteracy, ignorance and poverty, accelerate development, political consciousness and national integration amongst others is yet to be achieved. However, enrolment in primary and junior secondary schools have increased, but the transit and completion rate remains low (Becker, 2012). Actually, the UBE as envisaged is yet to attract millions of children to school particularly, the Northern states where the Koranic schools, known as ‘almajirai’ continue to exist alongside the UBE programme besides, socio-cultural and religious barriers that hinder female children from participating in basic education. Also among some southern states there is prevalence of boy-child drop out of school (Anyika, Anikelechi & Thobejane, 2021). The realization of the ills of the almajiri system and boy-child-drop-out syndrome made some notable politicians such as Senator Ahmed Shehu Sani; the Kaduna State Governor, Mallam El Rufai and host of governors from the South amongst others to speak against the loathsome practices.

However, the incidence of the COVID-19 Pandemic brought to the fore the importance of telecommuting as a survival strategy during emergency or disaster in Nigerian. The reality of the COVID-19 pandemic dawned on Nigeria on 27th February 2020, when it was first confirmed. In a bid to contain the spread of the virus the Federal Government shut down all schools which affected over 45 million students, and directed that pupils and students should tune to public media channels such as radio and television for learning programmes. This lacked clear policy thrust, and students were kept at home without academic engagements. Some private institutions adopted virtual learning and continued with academic activities while public schools remained shut, laying bare Nigeria’s weak educational system and lack of capacity to

migrate to virtual learning platforms (Anyika, Anikelechi & Thobejane, 2021). Indeed, some wealthy individuals engaged their children and wards in learning activities via the ICT and internet resources while many families could not as they lack the resources to engage in such. More worrisome is that while the Nigerian children were languishing at home their counterparts in other nations were making progress during the lockdown for instance, the Chinese government provided computers and mobile data to low income families to enable them participate in virtual learning. Obviously, the digital divide between average Nigerian and their counterparts in most countries was exposed (Hussain, 2020). With technological advancement, increasing changes in the labour market and the global environment, Nigerian educational system therefore, should align with the dynamic global realities to realize the SDGS 4, of the UN before 2030.

Nexus between Telecommuting and Inclusive and Equitable Quality Education in Nigeria

Across the globe number of changes is occurring in the education sector where telecommunications are substituted for in-person services such as tele-education, tele-library, and e-learning which allow the sector players such as the teachers, students, and staff of the education ministry to perform some responsibilities away from the conservative environment. The roles of the sector include teaching, research, scholarly activities, curriculum development, and improvement of the learning environment amongst others. The staff particularly, the teaching staff use ICT facilities to transmit instructions to students, perform some academic works which minimizes commuting and serves simultaneously, students in different locations and those physically, unable to appear on campus. This reduces the challenges by exploiting information and telecommunication technologies to perform official duty from anywhere. One assumption against telecommuters is that they could engage in other ventures and make believe to be working. Stanford (2013) admonishes that telecommuting is not permitting staff to engage in private businesses. It seems simple but touches on issues of attitude, nature of work, travel behavior, comportment and isolation because its part of flexible-workplace options which should be properly handled (Allen, 2001).

Telecommuting as a mechanism could be favorable to the developing countries where problems such as unemployment, insecurity, labour unrest amongst others often occur (Okey & Onyishi, 2011). Most countries in Africa, Nigeria inclusive lack the required competitive ability needed in global socio-economic affairs being, the reason for overall low performance. Nigeria could be better-off by embracing telecommuting to reduce commute cost, boost qualitative education, provide businesses and leisure opportunities to her citizens (Anugwom, 2006) by so doing, serves as performance driven and result oriented mechanism to increase human capacity.

Organization's ability to telework depends on ICT infrastructure, organizational goal and the environment (Neirotti, Paolucci & Raguseo, 2012). Organizations that under invested in ICT, such as the education sector face higher costs adopting telework. Similarly, environmental conditions, technology and global demands affect organization's decision to telecommute (Jaakson & Kallaste, 2010). Drawing from these variables there is huge deficit in digital infrastructure by implication, the educational industry in Nigeria. Bailey and Kurland (2002) view supervision style as major obstacle to telecommuting in the sense that management feels that employees who are not visible may not be working, the same way teachers feel that students may not be studying and, jobs or studies requiring certain collaboration could be difficult for telecommuters. Following the COVID-19 experiences telecommuting appears to be the 'new-normal' as some organisations gave permission to staff to operate from anywhere even, from the comfort of their homes (Nnonyelu & Ikpe, 2021) which by no means affected manager-subordinate, or teacher-student relationship. Socio-demographic variables such as age and gender are not likely to influence telecommuting as the U.S study of households aligns with the equality mantra that anyone could telecommute (Davis & Polonko, 2001). In Nigeria, organisational and household systems tilt more to Western system despite religious and cultural differences implying that, both men and women are at liberty to telecommute, more so academically.

Hamilton (2003) posits that telecommuting could enable individuals; an employee/staff, teachers or students to deal with responsibilities such as home demands and other needs without disruption to work. One charge against telecommuting that appears justified is permeability of work and family roles. Boundary flexibility enables a person to regulate demands between work and family domains. Boundary flexibility is

the degree to which the location and timing of work are under the employee's control (Ashforth, Kreiner & Fugate, 2000). Flexibility mitigates the effect of permeability and spurious interferences by allowing employees to optimally schedule work, the outcome being improved productivity. Improved productivity in form of robust and equitable quality education is one of the essential benefits of telecommuting (Pinsonneault & Boisvert, 2001) since performing tasks remotely leads to fewer disruptions and affords more time to study through hours saved from not commuting. This provides staff, teachers or students the opportunity to modify their work or study to match when to perform them which essentially, ensures quality education that promotes lifelong learning opportunities for all Nigerian.

Cross (2015) suggests that isolation is a psychological problem faced by telecommuters but, this was dispelled by Scandura and Lankau (1997) that telecommuting provides support for qualitative education hence, lowers negative tendencies. The fear of vulnerability of the data base, loss or leakage of data particularly, these days of cyber attacks and poor cyber security is no longer a concern, in the sense that organizations having strong cyber security are increasingly, adopting telecommuting, jettisoning analogue form of supervision and must-be-physical presence, even during examinations. Physical presence does not guarantee effectiveness although, some employees and students in the Nigerian education sector are ICT deficient, and some areas do not have internet coverage thereby, exposing them to manipulations (Stanford, 2013; Tustin, 2014). Additionally, there is absence of functional law covering remote working and the policy guiding ICT is not comprehensive to deal with ICT-employee related issues (The Ministerial Committee on ICT Policy Harmonization Report, 2012). The implication is that analogue working, teaching and learning methods would continue to apply which runs counter to development anchored on technological application and innovation. This however, could be addressed through legislation, cheap ICT equipments, adequate power supply and human resource development such as training of staff and student on digital literacy.

Countries such as Japan and Sweden allegedly, have built tele-cottage centers in rural areas to provide information technology to the local populations (Commission of the European Communities, 2002). U.S. is one of the countries that have legislated on telecommuting by passing in 2010, the Telework Enhancement Act that grants Federal employees and eligible States and their agencies the right to telecommute. The Act aims at organisational effectiveness to enhance service delivery (Guyot & Sawhill, 2020). Nigeria could draw from such experiences because as the society is becoming information driven, physical presence is becoming less important. In an event of emergency or crisis such as terrorist attack, fire outbreak, amongst others telecommuting reduces the effect since the operators could operate from decentralized locations (Cross, 2015; Tung, Palvia, Huei, Ye-Meng & Yee, 2012). While the aforementioned are realities in most developed countries, same are not obtainable in most developing nations such as Nigeria until the COVID-19 Pandemic in 2020. Telecommuting increases the working and studying ability of disabled workers and students by boosting their independence and self-worth (Balaker, 2005) in addition to crime reduction raging in the country.

However, the challenges facing telecommuting are largely, technological and managerial. Technological challenges include expensive equipment, accessibility, poor power supply, etc. while managerial challenges arise from supervision to ensure that employees align with the vision and mission of the organization, considered more important (Wang & Walcumbwa, 2007). Innovation such as telecommuting could generate challenges for industrial relations in areas of competent skill, relationship in the education sector, technological tools, changes in systems and processes, etc (Okey & Onyishi, 2011) which poses some difficulties because of the feeling that employees including, students who are not visible are not working, or studying. Most developed countries have overcome this by periodically, even daily receiving from subordinates or students, reports on their performance schedule via WhatsApp, Skype, Zoom and other social media. Nigeria could draw from these experiences to improve her educational system.

Conclusion

The Nigeria's educational system has experienced serious neglect over the years that it seems difficult for the country to achieve the 4th SDGS of the UN by the year 2030. To effectively, address this issue the country needs to adopt modern work mechanism that would guarantee inclusive and quality education and, promote

lifelong learning opportunities for all Nigerians. It is clear that Nigeria's educational system currently, cannot endure further distress having been much muddled. The government therefore, should abreast reforms that would broaden the country's education system particularly, telecommuting which this paper considers veritable for educational development. Most countries are adopting the mechanism because the global society is becoming information driven and academic knowledge no longer domicile in the classroom nor teachers possessing monopoly of knowledge: many jobs can be accomplished from anywhere with few tools; a computer, internet access, cell phones amongst others. This is yet to be obtained in Nigeria due to infrastructural and managerial constraints. The COVID-19 Pandemic and its experiences have further compelled most governments across the globe to adopt telecommuting to sustain their education sector. Nigeria has to save her deteriorating educational sector by embracing telecommuting as it holds a lot of attraction for the industry and the society at large.

Way Forward

1. Telecommuting should be immediately adopted in the education sector as the event of the COVID-19 Pandemic has shown that it is a viable tool especially, in times of emergency and disaster.
2. Institutions should improve their ICT infrastructure and other work place settings to dispel misgivings about the utility of telecommuting in achieving dynamic educational system.
3. The Nigerian government should commence immediately or as soon as practicable full-scale digitization of the education sector to aptly integrate its system into the globalized educational system.
4. Government should domesticate the SDGs at the local level so that identified SDGS indicators on equitable quality education could be reported at the local level onward to the state and the federal governments.
5. Government at all levels in the country should prioritize, document and make available their progress report to the UN Department of Economic and Social Affairs Sustainable Development with a view to attracting support and guide from the UN relevant agencies.

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