

OTM DIGITAL COMPETENCIES AND SUSTAINABLE GLOBAL ECONOMY

¹**Elizabeth Omone, OJO (PhD)**

Department of Office Technology & Management,
Yaba College of Technology, Yaba, Lagos.

²**Nicholas Oseremen, OSIME**

Department of Office Technology & Management,
Nigerian Army School of Finance and Administration, Apapa, Lagos

³**Abosede Oluhaigbe, AMOS-OLALEMI**

Office Technology & Management Education, School of Business Education,
Federal College of Education (Technical), Akoka, Lagos

Abstract

The study sought to examine OTM digital competencies and sustainable global economy. Three research questions guided the study. A descriptive design of survey type was adopted. The population of this study comprised HND I and HND II students of OTM in Federal Polytechnics in South-West, Nigeria. Using proportionate sampling technique, a total of 25 HND I and HND II OTM students were selected from each polytechnic selected making a total of 125 OTM students as sample size. The study used researcher developed instrument tagged: OTM Digital Competencies and Sustainable Global Economy Questionnaire (OTMGCSGEQ) with 0.92 as reliability coefficient for data collection. Mean and standard deviation were used for answering research question 1. Research questions 2 and 3 were analyses using Chi-Square (X^2). The findings of the study revealed that there was association between OTM digital competencies and unemployment ($X^2 = 17.320$, $df = 117$; $p = 0.00 < 0.05$). There was association between OTM digital competencies and poverty ($X^2 = 15.386$, $df = 117$; $p = 0.00 < 0.05$). The study recommended that OTM lecturers should lay more emphasis on practical digital competences by giving OTM students ICTs and problems to solve.

Keywords: Digital, Competencies, OTM, Sustainable Global Economy, Unemployment, Poverty

Introduction

The nations of the world today are currently focusing on the ways and strategies to attained sustainable global economy in which every member of the world have equal chances of getting employment-opportunities for poverty reduction. Attainment of sustainable global economy could take-place in four different forms such as employment generation/creation, poverty reduction, improved standard of living and protect our environment/planet. This is consonant with Sustainable Development Goals (SDGs) which were set up in 2015 by the United Nations General Assembly (UN-GA) and are intended to be achieved by the year 2030. However, the attainment of sustainable global economy in this study was tailored by poverty and unemployment.

The state of being very poor among university graduates in Nigeria has been reported (Orah, 2019). To be poor therefore is a state of having very little money or few possessions that are hardly enough to take care of one's need. Poverty is a manmade disease and can only be healed by the efforts of human beings. Poverty means more than just lack of financial resources, but lack of economic self-reliance and self-sustenance skills most of time can leads someone to poverty circle. Poverty reduction programme is a set of measures, both economic and humanitarian or acquisition of saleable skills put into the operation to permanently lift people out of poverty. Poverty can be reduced through the development of productive enterprises that provide an adequate income for entrepreneurs and workers (Adebayo *et al* 2021).

According to Amoda *et al* (2020), sustainable global economy is the key to higher living standards and connected to the developments in human capacity, the standard of living of the citizenry of a particular nation, the strength and buoyancy of its institutions and the overall societal wellbeing of its people. For a nation to attain development, its social, economic and political institutions must be in tandem with sustainable global economy and that within this framework. Sustainable global economy measures the actual standard of living of the people and the level of freedom they have to enjoy a good living condition. Simply defined, sustainable global economy is the process whereby the total supply of goods and services of the society increase leading towards improved living standards. Sustainable global economy is a multi-dimensional process involving major change in social structures, popular attitudes and national institutions as well as the acceleration of eco-growth, the eradication of poverty and reduction of inequality of wealth (Kurotimi *et al* 2017). The end result of sustainable global economy is an increase in living standards, improvement in self-esteem needs and freedom from oppression, plus a greater choice.

Nigeria needs broad-based skilled personnel of all grades, to attain sustainable global economy so as to empower the teeming youths and adults alike to be gainfully employed in all sectors of the economy globally. Hence, the acquisition of skills in vocational education has been recognized all over the world as that branch of education that gives empowerment to young people and adults to become self-reliant and stimulate the growth of entrepreneurship through small-scale business management. This is the reason why advanced nations like: United States of America (USA), Britain, Russia, Canada, Germany, France, Italy, Japan, among other, do not play with it because they know that the programme is a veritable means of preparing their citizens for various occupations and gainful global employment; and this is the reason why they have utilized most of their resource capacities to gain enviable industrialization (Gbinigie, 2018). Invariably, taking a clue from the above situation, poverty has come to stay almost permanently in many developing counties in Africa, especially Nigeria. It has become endemic as a single factor plaguing many tertiary institutions' graduates, and something drastic must be done by all tiers of Nigerian government to arrest the ugly situation. Unemployment, therefore, is a situation of socio-economic problem in which people, whether trained or untrained, are willing and able to work but are not employed. Although most nations in the world experience unemployment but it varies in magnitude from place to place. Any person affected is always seeking for job or forced to be self-employed. Self-reliance means using ones acquired skills to achieve self-employment in order to guarantee economic survival. Unemployment and self-reliance, therefore, are likened to two sides of a coin. Hence, they are the two economic consequences which affect many countries and are parallel in nature. Self-reliance is positive while unemployment is negative to the achievement of national development and economic efficiency (Gbinigie, 2018).

However, records have revealed that the types of educational training received by students' in tertiary institutions could predict the attainment of sustainable global economy (Ukata, 2021; Okute *et al* 2022; Musa, 2022; Olaniyi, 2022). Office Technology and Management (OTM) is one of the vocational education that trained recipients for self-reliant towards attainment of sustainable global economy (Musa, 2022). OTM formerly referred to as Secretarial Studies in Nigeria, evolved out of a need to meet the technological and managerial demands of today's workplace. The new name OTM was approved by the supervising body for Nigerian polytechnics, the National Board for Technical Education (NBTE), in 2004. According to Ezechukwu *et al* (2021), OTM is an educational programme designed to develop individuals' abilities, skills, work ethics, and attitudes, as well as to impart the necessary knowledge and competencies required for effective entry and steady progress in gainful employment. The two main reasons for designing the Office Technology and Management programme were, first, to address the needs of the conventional office environment, which has long been the desire of the Secretarial Studies students and practitioners, and, second, to enhance students' knowledge by

equipping them with the requisite competencies for today's modern office/work environment towards attainment of sustainable global economy (Ezechukwu *et al* 2021). These changes led to a change in curriculum with more emphasis on acquisition of digital competencies that could prepare students towards attainment of sustainable global economy. Musa (2022) buttressed this point by reiterating that OTM programme is designed to offer students training in different competencies for employment in various fields of effort. Moreover, in these modern economies, continuous modernizations have led to major transformations in workplaces, giving rise to pervasive competencies gaps and skill mismatches. In order to bridge the skill gaps, OTM programmed is investing significant effort and resources in training of students in different skills taught in OTM programme include digital skills (Musa, 2022).

Digital competencies often referred to as basic, non-technical, or employability skills are skills that facilitate the creative and productive application of disciplinary skills and knowledge in the workplaces (Okute *et al* 2022). Abdullah *et al* (2023) stated that use of digital competencies are crucial skills required by future workplace in the corporate world. In respect to this study the researcher view that acquisition of use of digital competencies could impact employment prospect of Office Technology and Management students for prosperity establishment. Digital competencies have become more majority in society that led to a concern about the need for ICT skills in everyday life of beginners. These include the use of variety of ICT tools such as communication, v-learning plat forms, desktop conferencing, online programmer such as web, video conferencing, social media plat forms, web cam, internet, among others. Acquisition of digital competencies clusters of knowing and using hardware and knowing and using digital software applications are fundamental for OTM students in the tertiary institutions. Since the Internet has become a part of everyday life, OTM students requires the skills and competences to make full use of the medium (Okute, *et al* 2022). These authors stated that the ability to know where to seek assistance, both online and offline, is related to concepts such as autonomy and problem-solving, which have been identified as important factors in the development of digital competences. Problem-solving skills can have a positive effect on the development of digital skills and competences, helping users identify the correct digital tools needed to reach their goals, as well as enhance their ability to use digital tools in order to solve conceptual, but also technical problems. This knowledge could empower the business education students to act independently in the development of their digital skills, to search for information, and to solve problems they may encounter.

Technology acceptance model (TAM) was the theoretical framework that drove this study. The theory was developed by Davis *et al* (1989) as an information systems theory. The model is based on how users come to accept and use technology in terms of facilities. The theory was adopted from the Theory of Reason Action (TRA) which was developed by Ajzen and Fishbein (1980). TAM models suggest that when users are faced with new technological challenges due to innovation in computer-based facilities. By assuming other variables are constant, the easier the technology to be used, the higher and its possibility to be adopted by users. The implications of this theory to the present study was that the characteristics of OTM students are grouped within the individual context; the technological context refers to the characteristics of the technology itself; while the implementation context refers to the specific professional environment of the user. Davies (2009) believed that using particular computer facilities will enhance sustainable global economy for employment creation and consequently poverty reduction. It also indicated that general determinants of OTM students' acceptance of innovation in computer-based facilities and can be applied to explain or predict their behaviours for job creation could to certain extent promote attainment of sustainable global economy.

Ndubuisi (2023) explored the various digital operational skills possessed by office management and technology lecturers in Rivers state University and indicated that audio-visual technology, software tools, e-applications, and hardware tools were among the popular tools available to lecturers of Rivers State University for training students for the attainment of

sustainable global economy. Ukata (2021) adopted a descriptive survey research design on digital skills of OTM Students in Rivers State owned Polytechnic as solution to Nigerian economic challenges and found that ICTs and problem-solving skills of OTM students serve as a high solution to Nigerian economic challenges of unemployment and poverty through generating employment and wealth creation as well as Okute *et al* (2022) revealed that the acquisition of digital skills by business education students of tertiary institutions in Nigeria is fundamental in the 21st century and beyond if they must be globally competitive. Musa (2022) on his work on use of digital skills by OTM students in the Polytechnic Bali in meeting the challenges of contemporary information age and found that ICT and problem-solving skills of OTM students serve as challenges of the contemporary information age of redundancy and deficiency through generating employment and prosperity formation. Okoye and Nwagu (2022) indicated that the wide range of competencies such as pedagogical competencies, technical competencies, ICT competencies, professional competencies, social competences and supervisory competencies among others to meet the objectives of equipping students with skills for gainful employment and self-reliance for the attainment of global economy. Ukonu and Habu (2022) delved into sustainable technological skills that will unlock Office Technology and Management (OTM) students' potential in the 21st century workplace and revealed that computer literacy skills, database management skills, website development skills, digital marketing skills, project management skills and cyber security skills are some of the skills that are required for unlocking OTM students' potential for the 21st century workplace towards attainment of sustainable global economy. Ile and Abi (2021) investigated the extent of acquisition of digital skills by Office Technology and Management (OTM) students in tertiary institutions in Benue State and showed that the acquisition of these digital skills by OTM students in tertiary institutions in Benue State was at a moderate extent. Soyebi *et al* (2021) assessed skills in Office Technology and Management programme for graduates' economic sustainability in Nigeria and found that parts of the identified skills in Office Technology and Management Programme (OTM) for graduates' economic sustainability are: management skills, risks management skills, Information and Communication Technology (ICT) skills, accounting skills, and so on. Although, significant numbers of literatures have been conducted on OTM digital skills and sustainable global economy; however, most of these studies failed to find the association between OTM digital skills and sustainable global economy indicators such as poverty and unemployment. These have created gaps analysis in the body of literature which made this study significant.

Tertiary institutions in Nigeria are continue to produce graduates of different classes to the labour market every year and this continues to increase the numbers of graduates' unemployment in the country. Opinions poll and evidences have revealed that any country that is experiences high unemployment rate will also have high rate of poverty, high crime rate and division in the society. Government and stakeholders in the economy in Nigeria have taken series of measures to reduce graduates' unemployment in the country; in spite of that move, the rate of unemployment continues to increase. There have been many reasons or factors identified to have caused this ugly issue; one of them is that today graduates are being trained on theoretical aspect of their courses and these have made them not to be self-reliant jeopardizing the attainment of sustainable global economy. This prompted the current researchers to look into how OTM digital competencies could be used towards the attainment of the sustainable global economy.

Objectives of the Study

The main objective of the study was to examine the relationship between OTM digital competencies and sustainable global economy. Specifically, the study sought to:

1. Identify required digital competencies in OTM for sustainable global economy.
2. Find out the relationship between OTM digital competencies and unemployment in global economy.

3. Ascertain the relationship between OTM digital competencies and poverty in global economy.

Research Questions

The following research questions guided this study:

1. What are the required digital competencies in OTM for sustainable global economy?
2. What is the relationship between OTM digital competencies and unemployment in global economy?
3. What is the relationship between OTM digital competencies and poverty in global economy?

Methodology

A correlational design of survey type was adopted in this study. The justification for using this design was that it helps the researchers in collecting data from the respondents towards providing answers for objectives of the study, research questions and hypotheses. The population of this study comprised HND I and HND II students of Office Technology and Management (OTM) in Federal Polytechnics in South-West, Nigeria. South-West has a total of five Federal Polytechnics vis-a-vis Federal Polytechnic Ilaro; Yaba College of Technology; Federal Polytechnic Ado-Ekiti; Federal Polytechnic Ede, Osun; and Federal Polytechnic Ibadan. Using proportionate sampling technique, a total of 25 HND I and HND II OTM students were selected from each polytechnic selected making a total of 125 OTM students as sample size. The study used researcher developed instrument tagged: OTM Digital Competencies and Sustainable Global Economy Questionnaire (OTMGCSGEQ). OTMGCSGEQ is a self-structured instrument geared towards eliciting information from OTM students regarding digital competencies in OTM and sustainable global economy. The questionnaire requested responses on a four – point rating scale. The responses rating scales are as follows:

1. Strongly Agree (SA) 4 point
2. Agree (A) 3 point
3. Disagree (D) 2 point
4. Strongly Disagree (SD) 1 point

OTMGCSGEQ has two sections such as section A and B. Section A was based on demographic characteristics of the respondents while section B further divided into 3 parts. Part 1 was based on the required digital competencies in OTM for sustainable global economy. Part 2 based on the items showing relationship between OTM digital competencies and unemployment and Part 3 is based on items showing the relationship between OTM digital competencies and poverty. To ensure the face validity of the instrument (OTMGCSGEQ), a copy of the instrument was made available to the experts at the university-level of education (specifically from the Department of Business Education and Test and Measurement, Tai University of Education, Ijagun, Ogun State) to review in content, grammar and structure. The final draft was used to gather relevant data for study. Reliability of the instrument was done using the Cronbach alpha. In this case, copies of the instrument (OTMGCSGEQ) was administered on 5 OTM HND II Students at Federal Polytechnic Offa, Kwara State. The collected data were analyzed and respective reliability estimate was reported as 0.92. This was an evidence that the instrument OTMGCSGEQ can elicit required data for the study. However, the consent of the students (respondents) were sought to participate in the study. The exercise was done within 3 weeks and with the help of three research assistants who were properly briefed. Thus, out of 125 copies of the questionnaire administered, only 118 was retrieved. Retrieval rate was 94.4% as well as mortality rate was 5.6%. For record purpose, retrieval rate was used for analysed. Descriptive statistics of mean and standard deviation were used for answering all the research question 1. Research questions 2 and 3 were analyses using Chi-Square (X^2). Decisions were made at 0.05 alpha level of significance.

Results and Discussion

Research Question 1: What are the required digital competencies in OTM for sustainable global economy?

Table 1: Descriptive statistics on the required digital competencies in OTM for sustainable global economy

Items	Mean	Standard Deviation	Remark
ICT competency	2.61	.952	Agreed
Media competency	2.87	.947	Agreed
Information literacy competency	3.04	.647	Agreed
Internet competency	2.81	.752	Agreed
Problem-solving competency	2.71	.783	Agreed
Database management competency	3.47	.793	Agreed
Website development competency	3.57	.791	Agreed
Digital marketing competency	3.61	.728	Agreed
Project management competency	3.40	1.027	Agreed
Cyber security competency	3.11	1.110	Agreed
Cluster Mean	3.12		

Source: Field Survey, 2023

Table 1 revealed the empirical results on the required digital competencies in OTM for sustainable global economy. From the table, it was showed that cluster mean was found to be 3.12 which greater than bench mark of 2.50 ($3.12 > 2.50$). The implications of these results were that ICT, media, information literacy, internet, problem-solving, database management, website development, digital marketing, project management and cyber security competencies respectively were among the required digital competencies in OTM for sustainable global economy.

Research Question 2: What is the relationship between OTM digital competencies and unemployment in global economy?

Table 2: Chi-square results on the relationship between OTM digital competencies and unemployment in global economy

	Low OTM digital competencies	High OTM digital competencies	Df	Chi-Square (X^2)	P	Remark
Low unemployment	17	26	117	17.320	0.00	Significant
High unemployment	6	69				

Source: Field Survey, 2023

From table 2, the results showed that $X^2 = 17.320$, $df = 117$ and $p = 0.00$. Since $p = 0.00 < 0.05$, this implied that there was relationship between OTM digital competencies and unemployment. The implications of this result were that OTM digital competencies can reduces unemployment by 17.3% towards the attainment of sustainable global economy.

Research Question 3: What is the relationship between OTM digital competencies and poverty in global economy?

Table 3: Chi-square results on the relationship between OTM digital competencies and poverty

	Low tools digital availability	High digital tools availability	Df	Chi-Square (X^2)	P	Remark
Low level of teaching	17	26	117	15.386	0.00	Significant
High level of teaching	7	68				

Source: Field Survey, 2023

From table 3, the results showed that $X^2 = 15.386$, $df = 117$ and $p = 0.00$. Since $p = 0.00 < 0.05$, it implied that there was relationship between OTM digital competencies and poverty. The implications of this result were that OTM digital competencies can reduce poverty by 15.4% towards the attainment of sustainable global economy.

Discussion of Findings

The findings of the study revealed that ICT, media, information literacy, internet, problem-solving, database management, website development, digital marketing, project management and cyber security competencies respectively were among the required digital competencies in OTM for sustainable global economy. These findings were in support to Okute *et al* (2022) revealed that the acquisition of digital skills by business education students of tertiary institutions in Nigeria is fundamental in the 21st century and beyond if they must be globally competitive. Musa (2022) on his work on use of digital skills by OTM students in the Polytechnic Bali in meeting the challenges of contemporary information age and found that ICT and problem-solving skills of OTM students serve as challenges of the contemporary information age of redundancy and deficiency through generating employment and prosperity formation. Okoye and Nwagu (2022) indicated that the wide range of competencies such as pedagogical competencies, technical competencies, ICT competencies, professional competencies, social competences and supervisory competencies among others to meet the objectives of equipping students with skills for gainful employment and self-reliance for the attainment of global economy.

The findings of the study further indicated that there was relationship between OTM digital competencies and unemployment. These findings corroborate with Ukonu and Habu (2022) delved into sustainable technological skills that will unlock Office Technology and Management (OTM) students' potential in the 21st century workplace and revealed that computer literacy skills, database management skills, website development skills, digital marketing skills, project management skills and cyber security skills are some of the skills that are required for unlocking OTM students' potential for the 21st century workplace towards attainment of sustainable global economy.

Furthermore, the findings of the study revealed that there was relationship between OTM digital competencies and poverty. These findings correlate with Soyebi *et al* (2021) assessed skills in Office Technology and Management programme for graduates' economic sustainability in Nigeria and found that parts of the identified skills in Office Technology and Management Programme (OTM) for graduates' economic sustainability are: management skills, risks management skills, Information and Communication Technology (ICT) skills, accounting skills, and so on.

Conclusion

The achievement of sustainable global economy is visible in Nigeria, if necessary things are being put in place. However, the type of education receiving in various institutions in the country need to improve upon for acquisition of digital skills. The following conclusions were drawn based on the findings of the study that ICT, media, information literacy, internet, problem-solving, database management, website development, digital marketing, project management and cyber security competencies respectively were among the required digital competencies in OTM for sustainable global economy. And that, acquisition of OTM digital competencies could made possible to attain sustainable global economy vis-à-vis reduction in unemployment and poverty.

Recommendations

Based on the findings of the study, the following recommendations are raised:

1. OTM lecturers should lay more emphasis on practical digital competences or skills by giving OTM students ICTs and problems to solve and taking them on field trips to industries to gain firsthand experience of how job functions are performed. This will give them added advantage in the labour market when they embark the search for jobs to enable them gain employment and create wealth.
2. OTM department in polytechnic should collaborate more with industries to support OTM programme through continuous industrial training activities and encourage industrial work scheme to sharpen soft skills of their students for success in the labour market.

3. Curriculum planners should review the current OTM curriculum so as to incorporate digital competencies and skills in the curriculum. This will improve the teaching of the skills to students which will better prepare them for successful employment on graduation.

References

- Adebayo, A., Fasola, B. O. Adebajo, I. M. & Odusanya, A. A. (2021). Improving education quality through entrepreneurship studies in Tai Solarin University of Education, Ogun State, Nigeria. *UNILAG Journal of Curriculum and Instruction*, 2(1), 1-10.
- Ajzen, I. & Fishbein, M. (1980). *Understanding attitudes and predicting social behaviour*. Englewood Cliffs, NJ: Prentice-Hall.
- Amoda, M. B., Adebayo, A. Kazeem, S. O. & Babajide, K. R. (2020). Achieving sustainable economic development through entrepreneurship education in Ogun State owned universities, Nigeria. *International Journal of Research and Design in Technical, Vocational Education and Training*, 4(1), 78-89.
- Davies, D. D. (2009). *Research as scholarly activity: context and culture*. In J.W Cresswell (ed.) new directions for institutional research 50; 7-23 Francisco Jossey-Bass
- Davis, D., Bagozzi, Q. P., & Warsaw, R. M. (1989). *Business research for decision making* (3rd ed.). Belmont, CA: Wadsworth.
- Ezechukwu, L. C., Okanazu, O. O. Babalulu, M. M. Arowolo, A. A. & Olelewe, C. J. (2021). Career readiness of graduating office technology and management students in polytechnics in Southeast Nigeria. *International Journal of Learning, Teaching and Educational Research*, 20(2), 290-303.
- Gbinigie, O. U. (2018). Secretarial education for self-reliance and the challenge to small-scale imbalance in Nigeria's tertiary institutions. *Journal of Vocational and Technical Education*, 12(3), 234-245.
- Ile, C. M. & Abi, A. M. (2021). Extent of acquisition of digital skills by office technology and management students in tertiary institutions in Benue state. *NAU Journal of Technology and Vocational Education*, 6(1), 22-30.
- Kurotimi, F., Franklin, A. Aladei, G. & Opigo, H. (2017). Entrepreneurship education as a 21st century strategy for economic growth and sustainable development. *World Academy of Science, Engineering and Technology International Journal of Mechanical and Industrial Engineering*, 11(9), 2168-2179.
- Musa, A. (2022). Use of digital skills by OTM students in the polytechnic Bali in meeting the challenges of contemporary information age. *International Journal of African Sustainable Development Research*, 9(2), 327-334.
- Ndubuisi, O. (2023). Digital operational skills possessed by office management and technology lecturers for effective content delivery in Rivers State Universities. *International Journal of Advanced Research and Learning*, 2(1), 1-11.
- Okoye, A. C. & Nwagu, C. C. (2022). Business education and acquisition of employability skills for global competitiveness in the Covid-19 era: Competency needs of business educators in Anambra state. *COOU Journal of Educational Research*, 7(1), 153 – 164.
- Okute, A. L., Enang, C. E. & Etoma, M. G. (2022). Framework for digital skills acquisition for global competitiveness by business education students of tertiary institutions in Nigeria. *Nigerian Journal of Business Education (NIGJBED)*, 9(2), 172-182.
- Olaniyi, O. N. (2022). Digital skill and future of business education students. *International Journal of Multidisciplinary and Current Educational Research (IJMCER)*, 4(1), 186-192.
- Orah, J. O. C. (2019). Re-generating secretarial education for poverty eradication, self-reliance and national development. *Journal of Resourcefulness and Distinction*, 4(1), 1-10.
- Ukata, P. F. (2021). Digital skills of OTM students in rivers state owned polytechnics as a solution to Nigerian economic challenges. Department of Office Technology and Management, School of Business and Administrative Studies, Captain Elechi Amadi Polytechnic, Rumuola, Port – Harcourt, Nigeria.
- Ukonu, E. E. & Habu, J. U. (2022). Sustainable technological skills: The key for unlocking office technology management students' potentials in the 21st century workplace. *African Scholar Journal of African Innovation & Advanced Studies (JAIAS-2)*, 24(2), 267-276.