REPOSITIONING AND SUSTAINING OFFICE TECHNOLOGY AND MANAGEMENT EDUCATION FOR ADAPTABILITY TO E-ECONOMY IN NIGERIA

DR. EZENWOBI EMILY CHINELO
School of Business Education Gombe
Federal College of Education (T), Gombe State
chineloemilyokafor@gmail.com

Abstract
The need to make Office Technology and Management (OTM) education responsive to e-economy necessitated this study. The study focused on repositioning and sustaining OTM education for adaptability to e-economy in Anambra State, Nigeria. Two research questions and two null hypotheses guided the study. The study adopted descriptive survey research design, with 68 OTM lecturers in tertiary institutions offering OTM education studied without sampling. A 17-item self-developed questionnaire face validated by three experts in the field of OTM, and Measurement and Evaluation was used for data collection. The reliability of the instrument was established using pilot-testing approach and Cronbach Alpha calculation yielded correlation coefficients of .89 and 78 for cluster B1 to B2 with an overall value of .84 obtained. The researcher with the help of two research assistants administered copies of the questionnaire to the respondents. Out of 68 copies of questionnaire distributed, 64 (94%) copies were correctly filled and returned. Statistical mean and standard deviation were used to answer the research questions while t-test was used to test the null hypotheses at 0.05 level of significance. Findings showed that OTM lecturers in Anambra State tertiary institutions to a very small extent integrate digital innovations to reposition and sustain OTM education for adaptability to e-economy; OTM lecturers to a small extent adopt pedagogical innovations to reposition and sustain OTM education to e-economy. Years of teaching experience was not a significant factor in this regard. Based on the findings, the researcher concluded that OTM lecturers are not integrating or adopting digital and pedagogical innovations to reposition and sustain OTM education for adaptability to e-economy in Anambra State, Nigeria. It was recommended among others that; administrators of OTM Programmes in tertiary institutions in Nigeria should organize regular digital technology training programmes for OTM lecturers to help them up-date their digital skills in Cloud Computing, Virtual Reality, Artificial Intelligence, and Machine learning among others. This will help them to improve the standard of the programme.

Key Words: Repositioning, OTM Education, Adaptability, E-economy

Introduction

Change is the sole constant in life, and digital technologies have facilitated swift changes in all facets of human existence. The rapid changes in society that have taken place in the 21st century are a result of the advent of digital technologies and skills in fields including banking, health, engineering and education. Education makes it possible for new students to adjust to the changing nature of the workplaces is Office Technology and management (OTM) education (Orheruata & Mutah, 2017). OTM education is a branch of business education programme that equips aspiring secretaries and office managers with knowledge and skills for effective performance in modern offices. Onojaife (2020) defined OTM education as an efficient educational programme that promotes independence and self-actualization. OTM provides students with practical skills for working as employees in office-related professions or to become job creators (Oguejiofor, 2020). The National Board for Technical Education (NBTE) (2014) listed objectives of OTM education as follow: exposes students to industrial experience in order to give them the opportunity to put their

skills into practice; develops in the students an occupational interest; and provide students with knowledge, competencies, and specific skills to enable them to successfully hold positions as managers, and administrative assistants in sectors. For the objectives of OTM programme to be realized especially in this current digital era, there is need to reposition the programme in line with the demands of the digital workplaces.

Achieving e-economy growth is the concern of organizations around the world, and tertiary institutions need to be flexible and responsive to this new reality (Akpomi, Ben-George & Wolugbom, 2021). E-economy refers to a broad range of economic activities that use digitized information and knowledge as key factors of production (Rillo, 2018). The term also referred to as the "Internet economy, New economy, Web economy or Digital economy. It describes an industry that relies heavily on digital technologies, such as computers, software, digital communications networks (Internet, intranets), and other related information technologies (Turban, King, Warkentin & Chung, 2016). The e-economy comprises a combination of telecommunication facilities, ICT firms, and the numerous commercial and social activities made possible by the Internet, cloud computing, and mobile, social, and remote sensor networks (United Nations, 2013). The e-economy encourages innovation while also fueling job creation and economic progress.

The e-economy has radically transformed organizations, and redefined their operating methods. These new realities have put new pressure on the OTM education in Nigeria to re-evaluate skills offered to students. Oyefara, Adejoh, Adisa, Abdulsalam & Alabi, (2021) pointed out that tertiary institutions in Nigeria must adapt to the e-economy. In view of this, the International Labour Organization (ILO) (2021) advocated the need for higher institutions to developing countries to institutionalize digitalization so as to equip youths with digital skills to harness e-economy benefits. Although, e-economy has already experienced high growth in developed economies, Nigeria has not yet fully realized the potential this new trend for sustainable development. This according to the United Nation (2019) is due to poor ICT infrastructures and inadequate digital skills development. Similarly, it appears that tertiary institutions in Nigeria have not been able to reposition and sustain their educational programmes to adequately prepare students that can fit into the digital economy upon graduation. Reorganizing the delivery channels is all that is required to reposition OTM education. Repositioning OTM education necessitates clarifying instructional objectives and adopting novel strategies to enhance skill acquisition. Efanga (2017) stated that repositioning educational programme involves refocusing, strategically planning and developing current educational programmes that can match the modern skills needs of e-economy.

Adaptability enables OTM education to recognize and respond to digital-based demands (Akpomi et al., 2021). OTM education that is adaptable expects, accepts experiments with change, is inquisitive and keeps up to date with current events (Cleverism, 2019). Adaptability is not only via training but also through education and experience. Ogbaji (2017) noted that repositioning educational programme for adaptability involves adopting innovative teaching strategies and integrating digital innovations in OTM delivery. This also requires embracing new pedagogical innovations, technological innovations, integrating research and development programmes, and incorporating emerging skills in OTM curriculum (Akpomi et al., 2021). Additionally, the Organization for Economic Co-operation and Development (OECD) (2016) believed that strategies for repositioning tertiary institutions for adaptability include: capacity building programme for lecturers, reforming pedagogies and integrating appropriate software and courseware in teaching and learning of OTM courses.

The integration of digital innovations in teaching OTM courses can foster innovation in the programme's delivery. This

requires a shift from the traditional teaching methods towards innovative teaching strategies that seamlessly incorporate digital technologies into instructional processes. Integration of digital innovations could help OTM lecturers prepare more effectively, teach students new and emerging skills required to gain employment and succeed in the current labour market. Digital innovations in OTM education include: the internet, software programmes, audiotapes, videotapes, audio/video conferencing facilities, laptop/desktop computers, interactive whiteboards, digital printers and scanners, satellites, telnet, email. Others are Mailing lists, newsgroup and FTP (File Transfer Protocol), social media, mobile technologies, and projectors. Emerging digital innovations are wireless presentation technologies, Artificial Intelligence (AI), Extended Reality (XR), Augmented Reality (AR), Virtual Reality (VR), Analytics, Internet of Things (IoT), Cloud Computing and Machine Learning among others.

The primary difficulty in Nigerian education system is modernizing the frequently inflexible and outmoded educational programme. The world is transforming quickly. Too many students lack motivation and perform much below their capabilities. Higher institutions in Nigeria need to be prepared to step outside their comfort zones and abandon the tried-and-true old delivery methods. Innovation is crucial. Significant changes in curriculum policy also support educational innovation. Competency-based OTM curriculum can encourage the development of 21st century skills. Skills such as teamwork, perseverance, creativity, and invention are more inherent to various teaching and learning methods through innovative pedagogy. Pedagogies in OTM education must purposefully nurture 21st century skills in students for global competitiveness. Istance (2023) stated that pedagogical innovations to be adopted in repositioning teaching and learning in tertiary institutions include**,** blended learning, Gamification to foster students' self-regulation and ability to handle complex and unfamiliar challenges. Others are computational thinking, experimental learning, embodied learning, and multi-literacies and discussion-based teaching to enhance students' acquisition of soft skills for gainful employment or self-reliance.

In Anambra State, there are many public tertiary institutions offering OTM programmes. In the face of the e-economy, the OTM education in these institutions needs to reposition and sustain their programme in order to remain adaptive to the digital skill needs of students. The opinion of lecturers on strategies for repositioning and sustaining OTM education for adapting to e-economy in Nigeria could be influence by years of teaching experience of OTM lecturers. Experienced OTM lecturers (6 years and above) could differ with those with inexperienced OTM lecturers (1-5 years) in this regard. This could be attributed to differences in training, classroom experiences, capacity building programmes attended and pedagogical competencies acquired. Based on this background, the present study ascertained ways of repositioning and sustaining OTM education for adaptability to e-economy in Anambra State, Nigeria.

Statement of the Problem

The e-economy has brought unprecedented changes in office environment as well as skills and competencies OTM students need for global competition. E-economy is putting immense pressure on the OTM education to reposition and sustain its programme in order to adapt to e-economy. OTM education should remain relevant in develop digital skills of students, and in responding to e-economy needs of youths of Nigeria. However, these demands cannot be met if the programme is not re-positioned to meet the 21st century needs. OTM Education in tertiary institutions in Nigeria IS in a sorry state. There are inadequate infrastructures in place, ICT laboratories and equipment for teaching of skill courses are also inadequate. Additionally, there is over emphasis on outdated teaching strategies while most OTM lecturers possess inadequate digital skills to make the programme adaptive to change. To

solve these problems, some strategies have to be adopted. The fact that these problems persist suggests that these strategies may not be adequately adopted probably due to insufficient knowledge on their effectiveness in repositioning and sustaining the programme for adaptability to e-economy.

Purpose of the Study

This study specifically ascertained the extent:

1. Digital innovations are integrated to reposition and sustain OTM education for adaptability to e-economy in Anambra State.
2. Pedagogical innovations are adopted to reposition and sustain OTM education for adaptability to e-economy in Anambra State.

Research Questions

The following research questions guided the study;

1. To what extent are digital innovations integrated to reposition and sustain OTM education for adaptability to e-economy in Anambra State?
2. To what extent does adoption of pedagogical innovations help to reposition and sustain OTM education for adaptability to e-economy in Anambra State?

Null Hypotheses

The following null hypotheses were tested at 0.05 level of significance;

1. OTM lecturers in tertiary institutions do not differ significantly in their mean ratings on the extent digital innovations are integrated to reposition and sustain OTM education for adaptability to e-economy in Anambra State based on years of experience (1-5 years/ 6 years and above).
2. There is no significant difference in the mean ratings of OTM lecturers in tertiary institutions on the extent pedagogical innovations are adoption to reposition and sustain of OTM education for adaptability to e-economy in Anambra State based on years of experience (1-5 years/ 6 years and above).

Method

This study adopted descriptive survey research design. It was carried out in Anambra State. The population of this study consisted of 68 OTM lecturers from Nnamdi Azikiwe University Awka and Chukwuemeka Odumegwu Ojukwo University in Anambra State offering OTM programme. There was no sampling since the population is manageable and accessible to the researcher. A self-developed questionnaire titled "Repositioning and Sustaining OTM Education for Adaptability to E-economy (RSOTMEAE). The questionnaire consisted of two sections; A and B. Section A contained one item on demographic information of the respondents such years of teaching experience while Section B contained 19 items in respect to the two research questions and structured on a five-point rating scale of Very Great Extent (VGE) = 5, Great Extent (GE) = 4, Moderate Extent (ME) = 3, Small Extent (SE) = 2, and Very Small Extent (VSE) = 1. Face validity of the instrument was determined using the opinions of two experts from OTM programme, and one expert from Measurement and Evaluation Unit all in Faculty of Education in Nnamdi Azikiwe University Awka .

The reliability of the instrument was established using pilot-testing method and data collected were calculated with Cronbach Alpha which yielded coefficient values of .89 and 78 for cluster B1 to B2 respectively with an overall index of .84 obtained. The researcher with the help of two research assistants administered copies of the questionnaire to OTM lecturers in their institutions. On the spot distribution and collection of questionnaires was deployed and those who did not fill theirs immediately were revisited on another agreed date. Out of 68 copies of questionnaire distributed, 64 (94%) of the copies were correctly filled and returned. Statistical mean and standard deviation were used to answer the researcher questions and determined the homogeneity of respondents' views while t-test was used to test the null hypotheses at 0.05 level of

significance. A null hypothesis was rejected where the p - value is less than 0.05 level of significance; otherwise, the null hypothesis was accepted. The data analysis was carried out using statistical package for Social Sciences (SPSS) version 23. These are the rating scales: Very Great Extent–4.50-5.00, Great Extent-3.50-4.49, Moderate Extent-2.50-3.49, Small Extent-1.50-2.49, Very Small Extent-1.00-1.49.

Result

Research Question 1

To what extent are digital innovations integrated to reposition and sustain OTM education for adaptability to e-economy in Anambra State?

Table 1: Respondents' mean ratings and standard deviation on the extent Digital Innovations are integrated to reposition and sustain OTM education for adaptability to **e-economy**

S/N	Integration of Digital Innovations	$\bar{x}$	SD	Remarks
1.	Google Doc	1.52	.51	Small Extent
2.	Google sheets	1.50	.52	Small Extent
3.	Google presentation	1.71	.53	Small Extent
4.	Satellites	1.48	.52	Very Small Extent
5.	interactive whiteboards	2.11	.32	Small Extent
6.	Google classroom	1.51	.46	Small Extent
7.	Artificial Intelligence (AI) tools	1.28	.50	Very Small Extent
8.	Extended Reality (XR) tools	1.30	.47	Very Small Extent
9.	Cloud Computing tools	1.40	.54	Very Small Extent
10.	Virtual Reality (VR) tools	1.34	.78	Very Small Extent
11.	Machine Learning tools	1.29	.71	Very Small Extent
12.	Internet of Things (IoT) tools	1.47	.83	Very Small Extent
	Cluster Mean	**1.49**		**Very Small Extent**

Data in Table 1 shows that out of 12 digital innovations listed for integration to reposition and sustain OTM education for adaptability to e-economy, items 1, 2, 3, 5 and 6 are integrated by OTM lecturers at a small extent with mean scores ranging from 1.50 to 2.11 while the remaining items (items 4, 7, 8, 9, 10, 11 and 12) are integrated at a very small extent. The cluster mean score of 1.49 shows that on the whole, OTM lecturers in Anambra State tertiary institutions to a very small extent integrate digital innovations to reposition and sustain OTM education for adaptability to e-economy. The standard deviations for all the items are within the same range showing that the respondents are not wide apart in their ratings.

Research Question 2

To what extent does adoption of pedagogical innovations help to reposition and sustain OTM education for adaptability to e-economy in Anambra State.?

Table 2: Respondents' mean ratings and standard deviation on the adoption of pedagogical innovations to reposition and sustain OTM education for adaptability to e-economy

S/N	**Pedagogical Innovations**	$\bar{x}$	SD	Remarks
13	Blended learning	1.64	.48	Small Extent
14.	Gamification to foster students' self regulation and ability to handle complex challenges	1.44	.50	Very Small Extent
15.	Embodied learning	1.58	.31	Small Extent
16	Online discussion-based teaching	2.43	.56	Small Extent
17	Modeling	1.57	.50	Small Extent
18	Industrial visiting	1.40	.46	Very Small Extent
19.	Seminars/paper presentation	2.52	.49	Moderate Extent
	Cluster Mean	**1.80**		**Low Extent**

Data in Table 2 show that items 14 and 18 with mean scores ranged between 1.40 and 1.44 are rated very small extent, items 13, 15, 16 and 17 are rated small extent with mean scores ranging from 1.57 and 2.43 while the remaining one item is rated moderate extent. The cluster mean score of 1.80. This shows that OTM lecturers to a small extent adopt pedagogical innovations to reposition and sustain OTM education to e-economy. The standard deviations for all the items are within the same range showing that the respondents are not wide apart in their ratings.

Hypothesis 1

OTM lecturers in tertiary institutions do not differ significantly in their mean ratings on the extent digital innovations are integrated to reposition and sustain OTM education for adaptability to e-economy in Anambra State based on years of experience (1-5 years/ 6 years and above).

Table 3: Summary of t-test Analysis of Significant Difference in the Mean Ratings of Lecturers on the Digital Innovations are Integrated to Reposition and Sustain OTM Education for Adaptability to E-economy Based on Years of Experience

Years of Experience	N	$\overline{X}$	SD	df	t-value	P-value	Decision
1- 5 Years	22	1.43.	.64				
				62	1.06	2.01	Not Significant
6 years and Above	42	1.48	.53				

Table 3 shows that the t-value of 1.06 with 62 degree of freedom has p-value of 2.01 which is greater than the alpha level of 0.05 (P-value = 2.01 > 0.05). Therefore, the null hypothesis is accepted. This means that OTM lecturers in tertiary institutions do not differ significantly in their mean ratings on the extent digital innovations are integrated to reposition and sustain OTM education for adaptability to e-economy based on years of teaching experience.

Hypothesis 2

There is no significant difference in the mean ratings of OTM lecturers in tertiary institutions on the extent pedagogical innovations are adoption to reposition and sustain OTM education for adaptability to e-economy in Anambra State based on years of experience (1-5 years/ 6 years and above).

Table 4: Summary of t-test Analysis of Significant Difference in the Mean Ratings of Lecturers on the Extent Pedagogical Innovations are Adoption to Reposition and Sustain OTM Education for Adaptability to E-economy Based on Years of Experience

Years of Experience	N	$\overline{X}$	SD	df	t-value	P-value	Decision
2- 5 Years	22	1.54.	.70				
				62	1.13	.06	Not Significant
6 years and Above	42	1.91	.61				

Table 3 shows that the t-value of 1.13 with 62 degree of freedom has p-value of.06 which is greater than the alpha level of 0.05 (P-value = .06 > 0.05). Therefore, the null hypothesis is accepted. This means that there is no significant difference in the mean ratings of OTM lecturers in tertiary institutions on the extent pedagogical innovations are adoption to reposition and sustain OTM education for adaptability to e-economy based on years of teaching experience.

Discussion of Findings

Findings of the study disclosed OTM lecturers in Anambra State tertiary institutions to a very small extent integrate digital innovations to reposition and sustain OTM education for adaptability to e-economy. The study revealed that OTM lecturers rarely integrate digital innovations such as Artificial Intelligence (AI) tools, cloud computing technologies, Extended Reality (XR) tools, Virtual Reality (VR) tools, Machine Learning tools and Internet of Things (IoT) tools in equipping students with digital skills to prepare them for the e-economy. This could be the reason why many graduates of OTM programme lack the digital skills to fit into digital workplaces. This finding could be attributed to inadequate ICT infrastructures in OTM laboratories, inadequate competencies by OTM lecturers or poor attitude among OTM lectures towards integrating new innovations in the classroom. Findings of the study further showed that OTM lecturers in tertiary institutions do not differ significantly in their mean ratings on the extent digital innovations are integrated to reposition and sustain OTM education for adaptability to e-economy based on years of teaching experience.

Findings of the study also revealed that OTM lecturers to a small extent adopt pedagogical innovations to reposition and sustain OTM education to e-economy. It was likewise found that there was no significant difference in the mean ratings of OTM lecturers in tertiary institutions on the extent pedagogical innovations are adoption to reposition and sustain OTM education for adaptability to e-economy based on years of teaching experience.

Conclusion

Based on the findings of the study, the researcher concludes that OTM lecturers are not integrating and adopting digital and pedagogical innovations to reposition and sustain OTM education for adaptability to e-economy in Nigeria are lagging behind due to low integration and adoption of digital and pedagogical innovations by OTM lecturers.

Recommendations

Based on the findings of the study, the researcher makes the following recommendations;

1. Administrators of OTM Programmes in tertiary institutions in Nigeria should organize regular digital technology training programmes for OTM lecturers to help them up-date their digital skills in cloud computing, Virtual Reality, Artificial Intelligence, and Machine learning among others. This will help them to improve the standard of the programme.
2. Federal and State governments in Nigeria should provide more emerging digital technologies to OTM Departments for effective delivery of the programme.

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