STRATEGIES FOR IMPROVING QUALITY USE OF ICT TOOLS IN OFFICE TECHNOLOGY AND MANAGEMENT PROGRAMME IN POLYTECHNICS IN DELTA STATE FOR NATIONAL DEVELOPMENT

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Abstract

The purpose of this study was to assess strategies for improving the quality use of ICTs in Office Technology and Management programme polytechnics in Delta State for national development. A survey research design was adopted. The population comprised 35 OTM lecturers in polytechnics in Delta State. One research question and one null hypothesis guided the study. The study used a structured questionnaire with 15 items for data collection. Three experts validated the instrument and it obtained a reliability coefficient of 0.86 using Cronbach Alpha. Data collected were analysed using mean for the research question and ANOVA for testing the null hypothesis at 0.05 level of significance. The findings of the study showed that OTM lecturers accepted all the items listed as strategies for improving the quality use of ICTs in OTM programme in Polytechnics in Delta State for national development. The study also showed that the OTM lecturers did not differ significantly in their opinions regarding the strategies for quality use of ICTs in the OTM programme in polytechnics for national development. Recommendations were made, among others that lecturers and students of OTM programme in Polytechnics in Delta State should develop personal interest in the use of ICTs for quality instructional delivery and the government should provide adequate funding for procurement of ICT tools for instructional delivery for quality learning.

Introduction

Nigeria, like most developing nations has come to recognize the importance of information and communication technology (ICT) as a catalyst for sustainable socio-economic development. The increasing globalization driven by ICT has made it imperative for Nigeria as an emerging market to irreversibly consider the application and promotion of ICT strategy to facilitate her rapid growth and development. Government, in order to implement the national policy on education, has emphasized that information and communication technologies (ICTs) should be increasingly used and improved upon at all levels of the education system (FRN, 2013). In recognition of the relevance of ICTs in instructional processes, the government promised to provide facilities and necessary infrastructure for the improvement of quality ICTs at all levels of education system in Nigeria (Amiaya, 2016). Amiaya averred further that remarkable improvements have taken place in every sphere of human activities in all societies since the advent of ICTs and these improvements have been very much pronounced in the educational sector, making teaching and learning more meaningful.

In fact, any nation that wishes to attain and sustain meaningful development must therefore enthrone ICT at the highest level of priority of its visioning, planning and nation-building process. Thus, governments around the world are focusing more attention on strategies to increase access to and improve the quality of ICTs in education for national development. Information and communication technology is an

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indispensable part of the contemporary world and the field of education. According to Ubogu (2010), the educational system in Nigeria had been affected by the penetrating influence of ICT worldwide. Ubogu asserted further that ICT has made impact on the quality and quantity of teaching, learning and research in the traditional and/or distance educational institutions. Looking at the role of education in the national development of any society, ICT application and use will prove beneficial in improving Nigeria's educational system and giving students a better education.

Information and communication technology in education means different things to different educators and researchers. Osakwe in Ayoola (2015) saw ICT as an electronic device used for accessing, processing, gathering, manipulating, presenting and communicating information. According to Abiodun-Oyebanji and Omotayo (2012), ICT is the combination of computer and telecommunication system to improve the quality of research, teaching, learning and communication through its gathering, processing, storing, connecting, analyzing data functions and dissemination of information. This study adopts the definition of Abiodun-Oyebanji and Omotayo as a concept of ICTs for the study. Thus, ICTs are technological tools aimed at inducing and enhancing the teaching and learning process in Office Technology and Management (OTM) to promote the achievement of students by way of meaningful changes in their knowledge, skills and attitudes. Information and communication technology is an indispensable tool for attaining the objective of rapid national development in the world; and hence, ICT tools in instructional delivery have positively and maximally influenced the field of education including OTM.

Office Technology and Management programme is a nomenclature that has replaced Secretarial Studies Programme in Nigerian Polytechnics in 2004 (NBTE, 2004). This was as a result of an extensive review of Secretarial Studies Curriculum in order to make its recipients to be ICT-compliant and appropriately fit in the world of work, most especially, in modern offices that are characterized by various types of state-of-the-art communication and technology. Polytechnic education in Nigeria is recognized as part of tertiary education which aims at providing middle-level manpower for the various sectors of Nigerian economy (Ikelegbe & Odede in Amiaya, 2014a). Baba and Akarahu in Amiaya (2016) asserted that OTM in Nigerian polytechnics is used as a comprehensive term referring to aspects of the educational process involving, in addition to general education, the study of technologies and related science, and the acquisition of practical skills, attitudes, understanding and knowledge related to occupations in various sectors of economic and social life.

The Baba and Akarahu in Amiaya (2016) submitted further that the design of the OTM programme components in the polytechnics also appear to be in response to a global initiative with an objective that portends new academic direction in favour of ICTs in OTM. Information and communication technologies are especially invaluable in skill-related education programmes such as OTM where graduates are required to demonstrate skills and competencies demanded in the 21st century workspace that is highly competitive and technology-driven (Amiaya, 2014b). Information and communication technology has helped in national development around the world by changing the way people live and work (Ayoola, 2015). The information and communication technology revolution has a role and prospect in national

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development. Over the past decade, new applications of ICT have improved service delivery, transparency and public access in national development.

National development is the means by which people's welfare can be improved by eliminating illiteracy, ignorance by poverty and providing amenities like education, transportation, health care, among others (Ayoola, 2015). Information and communication technology is a vehicle with great potential to improve and accelerate the developmental process of any developing nation. Oloruntoyin and Adeyanju (2013) asserted that information is a vital key to national development and a *sine qua non* in all phases of development from birth to death. Oloruntoyin and Adeyanju expatiated further that, the world, most especially developing countries have witnessed an info-technological revolution that has given birth to effective data flow, computer inter-connectivity and the ability to go beyond the national boundaries. Information and communication technology is a unique tool capable of encouraging sustainable economic and social development in the society. Effective integration of ICT in OTM programme and quality improvement of its usage in instructional delivery and information sharing become an enabling force for sustainable societal development.

Information and communication technology shared helps to link the world together through networking where people are able to interact with one another in real-time without having to travel from one end of the world to the other where education in far places is brought closer to people in their homes, offices and places where there is availability of internet access (Ssewanyana & Busler, 2007). Information and communication technologies play a very important role in the educational sector by enhancing knowledge and skills through access to information, which is seen as an important factor for development. The field of education has been affected by ICTs which has undoubtedly affected teaching, learning and research as noted by Yusuf in Omotayo and Umoru, (2015). The author affirmed further that ICTs have the potential to innovate, accelerate, enrich and deepen skills; motivate and engage students, help students relate school experiences to work practices, create economic viability for tomorrow's workers as well as strengthen teaching. According to Al-Ansari (2006), a great deal of research has proven the benefits of ICTs to the quality of education.Omotayo and Umoru (2015) asserted that ICTs facilitate learning in programmes, learning in subjects areas and learning at home on one's own. Omotayo and Umoru expressed further that pedagogy through the application of ICTs has the advantage of heightened motivation, recall of previous learning, provision of new instructional stimuli and activation of the learners' responses.

Thus, education determines the state of prosperity, sustenance of welfare and security of people. Osakwe (2012) supported this view by saying that education enables skill development that makes individuals live and contribute meaningfully to the sustainable development of the society in which they live. Osakwe expatiated further that since government regards education as an instrument for facilitating and fostering national development as well as economic growth, it is imperative that the kind of education provided should be holistic and wholesome so as to foster balance in national development. It is therefore imperative for OTM students in polytechnics to have access to online information and digital collaboration opportunities which will

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help in the transformation and meaningful national development process. Stemming from this purpose, this paper was carried out to study the strategies for improving the quality of ICT usage in OTM in Polytechnics in Delta State for national development.

Statement of the Problem

Despite the introduction of ICT in Nigeria educational system and the new curriculum designed of the OTM programme in the polytechnics by the National Board for Technical Education (NBTE) in 2004 to make OTM recipients to be ICT-compliant and appropriately fit into the world of work in modern offices that are characterized by various types of state of the art of information and communication and technologies, the life expectancy and illiteracy rate of OTM recipients on ICTs are still low compared with the expectations from the objective of the programme on ICT literacy for national development. Thus, in a bid to address this situation to help OTM programme in the polytechnics to improve quality use of ICT to accelerate national economic development, this paper assessed strategies for improving the quality use of ICT tools in OTM in Polytechnics in Delta State for national development in Nigeria.

Purpose of the Study

The main purpose of the study was to assess strategies for improving the quality use of ICTs in OTM in Polytechnics in Delta State for national development. Specifically, the study sought to:

1. assess the strategies required for improving the quality use of information and communication technologies in OTM for national development.

Research Questions

The following research question guided the study.

1. What are the strategies required to improve the quality use of information and communication technologies in OTM for national development?

Hypotheses

The following null hypothesis was tested at 0.05 level of significance.

1. There is no significant difference in the mean ratings of OTM lecturers in Delta State polytechnics on the strategies for improving the quality use of information and communication technologies in OTM for national development based on location of polytechnic.

Method

The descriptive survey research design was adopted for the study. The population and sample for the study comprised all the 35 OTM lecturers in the three polytechnics in Delta State (Delta State Polytechnic, Ozoro; Delta State Polytechnic, Ogwashi-Uku and Delta State Polytechnic, Otefe-Oghara) as gathered from the various institutions. The instrument used for data collection was a 15-item structured questionnaire. The instrument was structured on a 4-point rating scale of Strongly Agree (SA) 4-points; Agree (A) 3-points; Disagree (D) 2-points and Strongly Disagree (SD) 1-point. Three experts in business education validated the instrument. The experts' corrections and recommendations were integrated to produce the final copy of the instrument before it was administered on the respondents. The reliability

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of the questionnaire was established through a pilot test using ten OTM lecturers from the Federal Polytechnic Oko, Anambra State and a 0.86 coefficient index was obtained using Crombach alpha analysis. The researchers with the help of two research assistants administered copies of the questionnaire. Data related to the research question were analyzed using mean ratings while the hypothesis was tested at 0.05 level of significance using the Analysis of Variance (ANOVA). The decision rule for the research question was a real limit of number.

Response Options	Point	Real Limit of Numbers
Strongly Agree (SA)	4	3.50 - 4.49
Agree (A)	3	2.50 – 3.49
Disagree (D)	2	1.50 - 2.49
Strongly Disagree (SD)	1	1.00 - 1.49

The null hypothesis was accepted when the F-calculated is less than the F-critical value and/or was rejected when the F-calculated is greater than the F-critical value.

Results

Research Question One

What are the strategies required to improve the quality use of information and communication technologies in OTM in Polytechnics in Delta State for national development?

Table 1: Mean Responses of OTM Lecturers on the Strategies Required to Improving the Quality Use of Information and Communication Technologies in OTM for National Development

S/N	Items on Strategies required for Improving Quality Use of ICT Tools	Mean	Remarks
1	Curriculum enrichment to incorporate ICTs instructional contents	3.03	A
2	Internet-based instructional delivery of the curriculum content that is enriched with environment for learning	2.72	A
3	Acceptance of the flexibility of ICTs in teaching and learning	2.53	A
4	Acceptance of learner-centred instructional approach that involves the use of multimedia resources for self-paced and flexible learning	2.62	A
5	Acceptance of the truth that teacher role has changed from transmitter of knowledge to mediator in learning from varieties of information sources	2.52	A
6	Acceptance of the belief that system that include technology can improve efficiency and effectiveness of student learning	2.67	A
7	Engage all lecturers in lifelong learning with required application of technologies	2.82	A
8	Provision of tele-centre facilities with extremely versatile ICTs for effective usage	3.12	A
9	Professional development of teachers on quality use of ICTs	2.52	A
10	Expand access of learning to take place at all time and location of the choice of the learner with ICT tools	2.63	A

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11	Create a balance among content learning, technology learning and social experience on the instructional strategies to accommodate individual learning styles	2.95	A
12	Enhance teachers-learners contact with the ICT resources	2.75	A
13	Maintain continuous education for the teachers to be current with quality use of ICTs	2.72	A
14	Create a just-in-time training for the teachers on emergence of new technologies	2.98	A
15	Enhance sharing of knowledge with ICTs	2.70	A

Table 1 shows the mean responses of OTM lecturers on the strategies required to improve quality use of information and communication technologies in OTM programme in Polytechnics in Delta State for national development. The Table reveals that all the items listed were agreed to be strategies to improve the quality use of information and communication technologies in OTM programme in polytechnics for national development. This indicates that, if all these strategies are applied in the implementation of OTM programme, the recipients of the programme will receive quality learning and will be enabled to make significant contribution to national development in Nigeria.

Test of Hypothesis

Hypothesis One

There is no significant difference in the mean ratings of OTM lecturers on the strategies required for improved quality use of information and communication technologies in OTM for national development based on the location of polytechnic.

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Table 2: Summary of Analysis of Variance (ANOVA) on the Mean Responses of OTM Lecturers Regarding Strategies Required for Improved Quality Use of Information and Communication Technologies in OTM for National Development

Sources of Variation	Degree of Freedom	Sum of Squares	Mean of Squares	F-Calculated	F-Critical
Between Groups	2	0.04	0.02		
Within Groups	31	10.08	0.36	0.18	3.30
Total	33	10.12			

Table 2 shows that the F-calculated value of 0.18 is less than F-critical value of 3.30. Thus null hypothesis is upheld. It is, therefore, concluded that the responses of OTM lecturers on the strategies for improving the quality use of information and communication technologies in OTM in Polytechnics in Delta State for national development were not significantly different statistically.

Discussion of Findings

Findings of the study indicated that OTM lecturers accepted all the items listed as strategies for improving quality use of ICTs in OTM in Polytechnics in Delta State for national development. This shows that, if all these strategies are applied in the implementation of OTM programme, the recipients of the programme will receive quality learning and will be enabled to make significant contribution to national development in Nigeria. This finding is in line with Gajarag (n.d) who asserted that in improving the quality of learning using ICTs, there are strategies that allow faculty to incorporate new information and update learning materials, and they will enable immediate and rapid transfer of information pertaining to the administration of a course or a programme of study.

The study also showed that the OTM lecturers did not differ significantly in their opinions regarding the strategies for quality use of ICTs in the OTM programme in polytechnics for national development. This finding was supported by Gajarag (n.d) who confirmed that one of the most powerful reasons for considering using ICTs in an educational system is that they put learning in the hands of the user, they facilitate individualized curriculum, permit learners to dictate the pace of learning and widen sources of information.

Conclusion

It is clear that ICT tools offer opportunities not available previously to educators. Using tools such as e-mail, the Web; audio-, video-, computer–conferencing, both synchronously and asynchronously, a very rich interactive and individualized learning environment can be created that allows learners to dictate their pace of learning, place of learning and the company they wish to keep while learning. Information and communication technologies also promote active learning and allow for interaction between and among peers and mentors. The study concluded that ICT tools are enablers for national development because of their crosscutting nature thus affecting all sectors. Thus, adoption and proper strategies to improve the utilisation of ICTs in OTM programme in the polytechnics will lead, among others, to increased yields and quality production of goods and services into a significant contribution to

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national development. Thus, ICTs have direct positive relationship with economic growth with social and all round national development

Recommendations

Based on the findings and conclusion of the study, the following were recommended:

1. Lecturers and students of OTM programme in Polytechnics in Delta State should develop personal interest in the use of ICTs for instructional delivery.
2. The government should provide adequate funding for the procurement of appropriate ICT tools for quality instructional delivery.
3. Information and communication technology tools should be made compulsory to be used in the institutions and OTM lecturers should be given training and retraining on improve quality use of ICTs.
4. Information and communication technologies should be promoted all over the country and be made available and affordable to the people especially the lecturers and students in educational institutions for quality use for instructional delivery.

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