Adequacy of Information and Communication Technology Resources for Office Technology and Management Programme In Delta State Polytechnics

AMIAYA, ANITA OGHENEOVO (MRS.),
Department of Office Technology and Management,
Delta State Polytechnic,
P. M. B. 05, OZORO,
Delta State, Nigeria
e-mail: ovomon@yahoo.com
gsm: +2348038829859

Abstract

The study focused on the assessment of the adequacy of Information and Communication Technology (ICT) resources for Office Technology and Management (OTM) programme in Delta State polytechnics. Thirty-five OTM lecturers and three hundred National Diploma students comprised the population. The entire population was used as the sample for the study hence an intact population. The instrument used was a structured questionnaire. Data were analyzed using mean and standard deviation, while the null hypothesis was tested using t-test statistics. The findings revealed that available ICT resources such as e-mail are fairly adequate; computer, uninterrupted power supply, local area networking and ICT support personnel were somewhat adequate while other items listed as available such as projector, teleconferencing, cybercafé, among others, were rated inadequate. The findings also revealed that, there was no significant difference between the mean responses of lecturers and students on ICT resources available for OTM programme. It was recommended, among others, that ICT resources needed for OTM programme should be adequately provided to ensure effective implementation of OTM programme in the polytechnics.

Keywords: Adequacy, Office, Technology, Management, Resources, Polytechnic

1.   Introduction

Office Technology and Management (OTM) programme in Nigeria was designed by the National Board for Technical Education (NBTE) (FRN, 2004a) to replace the Secretarial Studies programme offered in Nigerian polytechnics. Office Technology and Management is now the new name for the former Secretarial Studies. This was approved in 2004 by NBTE, the supervising body for Polytechnics in Nigeria. This approval was accompanied with a mandatory new curriculum (Atueyi, 2010). The new objectives, theoretical and practical contents of the new curriculum are geared towards integrating graduate students of OTM programme into the evolution of technology. Ntukidem (2000) observed that the wind of change heralded by technological advancement has enveloped business education especially secretarial profession and its training programme. Ntukidem further observed that the secretarial profession is faced with impressive array of telecommunication tools and facilities based on modern technology. It is imperative to observe that OTM is facing technological changes which demands that graduates should acquire both practical and theoretical skills in order to fit into this era of technological innovations.

The new curriculum of the programme was designed to equip students with vocational skills in Office Technology and Management and socio-psychological work skills for employment in various fields of endeavour and this is in line with the provision of the National Policy on Education (FRN, 2004b) with the aim of acquiring appropriate skills, abilities and competencies; both mental and physical, as equipment for the individual to live in and contribute to the development of the society (Aquah and Obi, 2001). The new name, Office Technology and Management programme is used as a comprehensive term referring to those aspects of the educational process involving general education, the study of technologies and related sciences, and

the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life.

According to Adelakin (2009), the OTM programme was designed for two major reasons; first, as a response to the yearnings of the secretarial studies students and practitioners on the need to change the name of the programme as their products are only suitable for the traditional office environment. Secondly, and most importantly, as a result of the change in curriculum with more emphasis on Information and Communication Technology (ICT) and management so as to enrich the knowledge of the students and equip them with necessary skills needed in today's office environment. The aim of the OTM programme, according to Dolor (2002), is to impart skills, knowledge and competencies, which makes the beneficiaries self-reliant.

According to Ojukwu (2009), the curriculum was reviewed due to a perceived need to improve upon the existing curriculum based upon development in technology and the need for improvement in the way things are done for societal development. It was based on these needs that the National Board for Technical Education (NBTE) embarked on a comprehensive review of all minimum guide curricula from 2001, which sought to radically transform the polytechnic programmes to meet new technological and socio-economic trends and demands of the world of work. The main focus was to ensure that every programme contain ICT and entrepreneurship modules.

The revised curriculum emphasized more on psychomotor domain, that is, practical work. Ojukwu observed that ICT courses in the OTM curriculum include ICT Office Applications I and II, Database Management System, Management Information Systems, Advanced Web Page Design, Advance Desktop Publishing and Modern Office Technology. Thus, there is now more emphasis on

ICT-related courses. Some polytechnics, as noted by Ojukwu, have sincerely indicated that there are not enough ICT resources to competently deliver especially the ICT related new courses.

According to Ugwuanyi and Eze (2009), Office Technology and Management programme could be implemented by polytechnic at the HND level provided that:

1. The implementation of the curriculum as it is done at the ND level is first of all adequate so as to equip the students to meet the challenges at the HND level.

2. The department should be ICT-compliant in line with the new trend, stressing that without enough computers and their packages, there is no way Office Technology and Management curriculum can be implemented.

The design of the OTM programme curriculum appears to be a response to a global initiative with an objective that portends new academic direction in favour of ICT. It is interesting to note that because of the changes both in the curriculum and the name of the programme, emphasis is now placed more than ever before on the practical aspect of teaching which involves Word Processing and other ICT-related courses (Baba and Akarahu, 2012). The proper execution of practical work on ICT-related courses will mean adequacy of ICT resources will be place.

2.   Statement of the Problem

The availability and adequacy of ICT resources for OTM programme have generated serious concerns recently. The OTM programme in Delta State Polytechnics faces the problem of inadequacy of ICT resources and had hampered the acquisition of knowledge and skills expected to prepare the learners for the world of work. Learning practical work would be meaningless without the use of teaching resources and students would grope in darkness for long before they could get a grasp of what the teacher would be teaching (Azih, 2008). Office Technology and Management programme curriculum that appears to be a response to a global initiative with an objective that

portends new academic direction in favour of ICT requires adequate provision of ICT resources for effective teaching and learning. Unfortunately, there seems to be inadequacy of these resources with the attendant negative consequences.

3.   Purpose of the Study

The major purpose of this study was to assess the adequacy of ICT resources required for OTM programme in Delta State Polytechnics. Specifically, the study sought to:

1. Identify the available ICT resources for OTM programme in Delta State Polytechnics, and

2. Assess the adequacy of ICT resources available for OTM programme in Delta State Polytechnics.

4.   Research Questions

The following research questions guided the study:

1. What are the ICT resources available for OTM programme in Delta State Polytechnics? and

2. How adequate are the ICT resources available for OTM programme in Delta State Polytechnics?

5.   Hypothesis

Ho_1: There is no significant difference in the mean responses of lecturers and students on the adequacy of ICT resources available for OTM programme in Delta State Polytechnics.

6.   Methodology

A survey research design was adopted for the study. The population for the study comprised 35 OTM lecturers who teach in the studied Polytechnics in Delta State of Nigeria and 300 National Diploma (ND) students in the polytechnics. The entire population was studied, hence there was no sample because the population was a manageable size. The study was delimited to adequacy of ICT resources available for OTM programme in the polytechnics. Data was collected through the use of

structured questionnaire which consisted of two sections (A and B). Section A sought the demographic data of the respondents while section B consisted of 20-item questionnaire with five point rating scale of 'Very Adequate', 'Adequate', 'Fairly Adequate', 'Somewhat Adequate' and 'Inadequate'. Three hundred and thirty five copies of the questionnaire were distributed and out of the 335 copies distributed, 311 copies were retrieved fully completed.

The research questions were analyzed descriptively, using mean and standard deviation, based on a 5-point rating scale. On the other hand, the null hypothesis was tested using t-test of difference between the mean of lecturers and students sampled at an Alpha level of 0.05. To answer the research question, a decision rule was established as follows: mean responses of 5.00 were regarded as very adequate; 4.00 – 4.99 were regarded as adequate; 3.00 – 3.99 were regarded as fairly adequate; 2.00 – 2.99 were regarded as somewhat adequate while below 2.00 were regarded as inadequate. The decision rule for testing the hypothesis was that if the calculated t-value is less than the critical t-value, the hypothesis will be accepted. On the other hand, if the calculated t-value is greater than the critical t-value, the hypothesis will be rejected.

The instrument was subjected to face validation to determine its adequacy, appropriateness for the study and for its proper wordings. This was done by presenting it to three experts, one in Curriculum Studies, Educational Technology and Measurement and Evaluation. Based on their comments and suggestions, the instrument was modified to suit the study.

In order to ascertain the reliability of the instrument for the study, it was trial-tested in Federal Polytechnic, Auchi, Edo State of Nigeria. Thirty copies of the instrument were administered to lecturers and students of OTM Department. The result obtained after the trial testing was subjected to the test of internal consistency using Cronbach Alpha procedure to measure its

reliability, before it was used for the study. The test yielded a coefficient of 0.87, indicating that the instrument was quite reliable for the study.

7.   Presentation and Analysis of Results

Appendix 1 presents the analysis of the result of the mean ratings on the adequacy of ICT resources available for Office Technology and Management programme by lecturers and students in the polytechnics investigated. The finding shows the level of adequacy of ICT resources available for OTM programme in Delta State Polytechnics. Out of the 20-items identified, none was rated very adequate or adequate by the respondents. Item Numbers 6, 7, 11 and 20 were rated somewhat adequate; meanwhile, the students rated Item Number 7 as inadequate. All other items were rated inadequate by both lecturers and students.

Appendix 2 presents the t-test analysis of the mean opinion of lecturers and students on the adequacy of ICT resources available for Office Technology and Management programme in the polytechnics where the study was carried out. The finding shows that the calculated t-value of 0.14 is less than the t-critical value of 1.96. Therefore, the null hypothesis is accepted, suggesting that there is no significant difference between the mean opinion of the lecturers and students on the adequacy of ICT resources available for use in OTM programme in Delta State polytechnics. This implies that the respondents' opinions indicate that there is inadequacy of ICT resources in the implementation of the new OTM programme which is geared towards ICT application in practical work.

8.   Discussion of Findings

The study, which focused on the level of adequacy of ICT resources available for the implementation of OTM programme, reveals in Appendix 1 that ICT resources available such as e-mail, are fairly adequate; computer, flash drive, uninterrupted power supply, local area networking

(LAN) and ICT support personnel used for OTM programme in the polytechnics were somewhat adequate, while other items listed as available such as projector, printers, teleconferencing, cybercafé, among others, were rated inadequate. This finding is corroborated by Ojukwu (2009) who noted that some polytechnics are of the view that there are not enough ICT resources to competently deliver ICT-related new courses in Office Technology and Management programme being implemented nation-wide.

Appendix 2 was used to test the hypothesis. The findings, however, did not indicate any significant difference in the responses of lecturers and students on the adequacy of ICT resources for OTM programme in the polytechnics in Delta State. The reviewed curriculum in Office Technology and Management programme in the polytechnics is a giant stride in the right direction; especially in this era of Information and Communication Technology (ICT). This lofty idea, however, cannot be effectively achieved without adequate provision of ICT resources that the OTM lecturers whose responsibilities it is to implement the programmes make use of.

Mumah (2008) put the situation more succinctly when he maintained that many of the lecturers were trained over twenty years ago with rickety manual typewriters as the best equipment/facilities they had access to. These ICT resources are fundamental for effective implementation of the Office Technology and Management curriculum and therefore, should be seen as emerging challenges in the polytechnics which should be attended to.

9.   Conclusion

The curriculum reform focused on the modification of, or the review of what has been in existence in the secretarial studies programme. This is intended to add or substitute some elements or modules as a result of observable needs or societal demands for improvement. The reform led to

a major shift from the old paradigm which also led to a change in the nomenclature from Secretarial Studies/Secretarial Administration to Office Technology and Management (OTM). Unfortunately, the new reform has thrown a critical challenge in the Polytechnics in the areas of ICT and equipment/facilities requirements for effective implementation of the reviewed curriculum for Office Technology and Management programme.

The Office Technology and Management programme is an outcome of an objective response by NBTE to the yearnings for a curriculum change for secretarial studies. The success of the OTM programme, however, is affected by the inadequacy of these resources. If these resources needed for the OTM programme are adequately provided, the emergent office functions in the present dispensation would have been adequately catered for.

10.   Recommendations

Based on the findings of this study, the following recommendations are made:

1.   Modern ICT equipment/facilities required to teach Office Technology and Management courses should be adequately provided to enhance teaching and learning. This has become critical as Office Technology and Management courses are ICT resource–based and therefore, cannot be taught without making the equipment/facilities available in the right quantity and quality.

2.   The OTM lecturers need urgent professional development in the ICT modules and their pedagogical applications for successful implementation of Office Technology and Management curriculum in the polytechnics.

3.   The governments at both the state and local government levels as well as private institutional operators of polytechnics should realize that Office Technology and

Management programme is capital-intensive. Therefore, adequate capital votes for the programme should be made. Other stakeholders such as Alumni Associations, employers of Office Technology and Management graduates and other relevant donors should assist in the provision of the needed equipment/facilities.

4.   Besides availability and adequacy, the subject of functionality of ICT resources should not be taken for granted. Consequently, the polytechnics should imbibe maintenance culture.

5.   For available ICT resources to function well and for the purpose of utilization, there should be regular electricity supply. The present practice where generators are used to power available ICT resources is detrimental to all users of ICT resources, apart from the exorbitant costs involved and health hazards associated with their usage.

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APPENDIX 1

Mean Ratings on the Adequacy of ICT Resources Available for OTM Programme by Lecturers and Students in the Polytechnics

Status/Number = 311		Lecturers = 29			Students = 282		
S/N	ICT Resources Available	X	SD	Decision	X	SD	Decision
1	Computer	2.13	0.94	SA	2.30	0.95	SA
2	Projector	1.90	0.88	I	1.97	0.91	I
3	Printer	1.87	0.86	I	1.83	0.99	I
4	Teleconferencing	1.00	0.00	I	1.00	0.00	I
5	Cybercafé	1.77	0.78	I	1.87	1.00	I
6	Flash Drive	2.50	0.72	SA	2.60	1.03	SA
7	Local Area Network (LAN)	2.17	0.99	SA	1.87	1.00	I
8	Television/Video	1.83	0.86	I	1.83	0.87	I
9	Modem	1.64	0.73	I	1.66	0.76	I
10	Franking Machine	1.20	0.40	I	1.37	0.48	I
11	Uninterrupted Power Supply	2.12	0.85	SA	2.05	0.88	SA
12	e-mail	3.25	0.67	FA	3.06	0.86	FA
13	Multimedia	1.20	0.46	I	1.25	0.44	I
14	Facsimile Machine	1.40	0.63	I	1.50	0.74	I
15	Software Packages	1.58	0.76	I	1.55	0.70	I
16	Scanner	1.23	0.86	I	1.43	0.71	I
17	Shredding Machine	1.37	0.66	I	1.27	0.55	I
18	Sealing Machine	1.30	0.46	I	1.43	0.86	I
19	Reprographic Machine	1.80	0.88	I	1.88	0.89	I
20	ICT support personnel	2.17	0.83	SA	2.12	0.85	SA
	Grand Mean/SD	**1.77**	**0.71**		**1.79**	**0.77**	

Keys: SA: Somewhat Adequate; FA: Fairly Adequate; I: Inadequate

APPENDIX 2

T-test analysis of the mean opinion of lecturers and students on the adequacy of ICT Resources Available for OTM Programme

Status of Respondents	N	X	SD	Df	t-cal	t-crit	Decision
Lecturers	29	1.77	0.71	309	0.14	1.96	Accepted
Students	282	1.79	0.77				