



STRATEGIES FOR THE TEACHING OF INFORMATION TECHNOLOGY AND COMPUTER APPLICATION RELEVANT IN PREPAREDNESS FOR TODAY'S WORKFORCE

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Abstract

The study examined strategies for the teaching of information technology and computer application more relevant in preparedness for today's workforce. Three research questions guided the study and one null hypothesis was tested at 0.05 level of significance. Descriptive survey design was adopted for the study. The population of the study comprised 33 Office Technology Management Education lecturers in the four colleges of education in Delta State. The entire population was studied. Data for the study were collected by means of structured validated questionnaire. Test re-test was used for reliability test, which yielded coefficient value of 0.83. Mean and standard deviation were used to analyze the research questions while t-test was used to test the hypothesis. Findings revealed that allocation of 3 credit units to information technology and computer application improves content coverage and adequate Information Technology resources, can add relevance to its teaching at very high extent respectively. Hypothesis proved that there was no significant difference in the responses of the respondents on the extent allocation of 3 credit units to information technology and computer application is a strategy for adding relevance to its teaching. Based on the findings, recommendations made include the need for curriculum review that can properly position information technology and computer application as a core OTME course, with 3 credit units and adequate information technology resources should be made available in the right quality and quantity for effective teaching and skills acquisition in OTM E programme.

Keywords: *Strategies, Teaching, Information Technology/ComputerApplication, Preparedness, Workforce*



Introduction

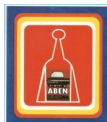
Teaching is as old as man, even during the ancient times of informal to the present classroom settings. The main focus is for the teacher who is the subject specialist to teach the subject matter contents to the learners in the best possible way that can bring about the desired change in their behaviours. According to NTI, 2012, teaching is an attempt to help people to acquire some skills, attitudes, knowledge, ideas and appreciation. It is a deliberate attempt to transfer ideas, knowledge, skills and attitudes from a more informed person, which is the teacher to a less informed, known as the student. Applying pedagogical strategies in teaching business education programme is to ensure that students are adequately prepared for relevant workplace through skills acquisition. In order to make teaching more organized, meaningful and impactful, colleges of education have been empowered by National Commission for Colleges of Education (NCCE) to produce quality graduates for the teaching profession, office occupation and skillful entrepreneurs. For this to come to bear, the students must be adequately taught and be able to demonstrate the skills effectively within the school and in the world of work. As noted by Amesi (2018), skill is like a key used in opening doors of fortune whereas lack of it is a major cause of unemployment and corruption. The benefits inherent in skills acquisition includes self-employment, diverse job prospects, employment generation, operative function and crime reduction.

College of education is one of the post-secondary educations, under the supervision of National commission for colleges of Education (NCCE). It is purely an educational institution to produce manpower for the teaching industry and other related occupations. Among its programmes, is Business Education with options in Accounting Education and Office Technology and Management Education (OTME). Business education is a generic name for all the educational processes involving the study of techniques, related sciences, acquisition of practical skills, attitudes and knowledge relating to occupations in the vocational sector of the economic and social life. This is why one of the objectives of business education is to equip graduates with the right skills that will enable them to engage in a life of work in the office as well as for self-employment (NCCE, 2012). Therefore, effective teaching of Information Technology and Computer Application, as an aspect of Information and Communication Technology (ICT) in Colleges of education is imperative to bridge the digital divide and properly position OTME graduates for any occupation in a computerized office.



Office Technology and Management Education Programme as outlined in National Commission for Colleges of Education (NCCE, 2012) is designed to equip the students with relevant knowledge, skills and competencies needed to function as office workers, teachers and entrepreneurs. OTME students at their final year focus on courses that will make them master their area of specialization. The curriculum and course specification clearly points to the lecturers the course contents, contact hours and activities to engage in delivering the lecture which is highly practice oriented. Also, students are mandated to use the model office as a means of aiding their efficiency. Thus, OTME programme aims at providing the business world with highly skilled knowledgeable workers who will manage information efficiently, being equipped with a comprehensive range of skills including managerial, technological and communication skills (Adelaken in Garba, 2012). Moreover, secretarial functions globally, are undergoing a lot of technological changes. As a result, modern office equipment which gives the secretary the opportunity to increase her efficiency abound. Many office functions and secretarial duties which were previously done manually have been mechanized. Thus, the diversities of these office technologies require OTME students to possess new skills that will make them relevant in the world of work upon graduation. On the contrary, Nwaiwu, Dikeocha, Onwuagboke and Ikwugbado (2016) lamented that many colleges of education running business education programme do not have model offices, no internet facilities, no adequate computers and that available ones were treated like sacred cows. They posited that in some institutions, students are restricted from operating the available computers without close supervision so as to avoid spoilage as they are few and expensive to procure. This is in line with the reports of Iweh and Ufor (2012) which declared that business education departments in colleges of education and universities do not have adequate computer studios as a result, these institutions continue to use the traditional method of teaching. Therefore, to effectively teach computer related courses; computers, word processors, printers and applications software among others must be available; otherwise the students would not be able to acquire the necessary skills required in the world of work.

The essence of business education (which OTME is a part) is to turn out graduates who will become entrepreneurs tomorrow, especially in Nigeria today where the white collar jobs are hard to find (Nwaiwu, 2009). The business teacher in the 21st century must be very conversant with information technology and computer application in order to impact requisite knowledge and skills to the younger generation for economic sustenance



Information Technology and Computer Application, with course code BES 328, is an ICT course being offered by final year Office Technology and Management education students in colleges of education. Its components are word processing using Microsoft word, the word star, data processing with Lotus/Excel (spreadsheet) application, desktop publishing, electronics data application systems dealing with batch processing, on-line processing and real-time processing systems, record keeping systems, decision-making systems and problem solving systems. Also included is electronic communication systems covering electronic mail system, internet, Local Area Network (LAN); Global System for Mobile Communication (GSM) and Computer Assisted Learning. A critical look at the contents of this Course, considering the digital age we are in, and being a core course which OTME students ought to master as they are about graduating from the school system to the world of work; one wonders why such important course should be treated so shabbily, by allocating to it just one (1) credit unit. The contact hours assigned for its teaching and contents coverage could as well be adversely affected. Whereas, shorthand which had little or no relevance in this information age, had 2 credit units. According to Parkinson in Onwuachu and Agim (2018), the art of shorthand is dying. The authors equally stated the reports of Vocational City and Guide over the continuous decrease in number of people taking shorthand course for the past 10 years. In the same vein, Robert (2011) presented list of obsolete skills, which are no longer useful to mankind in this digital age, among which shorthand was ranked the 4th. Little wonder Onwuachu and Agim (2018) submitted that the art of shorthand does not just have one foot already in the grave, but the other planted firmly on a banana peel. This study concurs that shorthand is already appealing for mass burial for it to rest in pieces. Even biblical injunction clearly stated that one cannot put a new wine in an old bottle.

There is need to examine how effective is the teaching of information technology and computer application in colleges of education in Delta State with a view of producing vibrant ICT compliant OTME graduates. Effective teaching depends on a number of factors, such as knowledge, ability and personality of the teacher, equipment, facilities and material resources available for teaching, class management, contact hours for teaching theory and practice, credit unit(s) assigned to such course and so on. This is because the amount of contact hour(s) assigned to a particular course depends largely on if it is a core course, its credit unit as well as course contents to be covered. This is why a course of one credit unit cannot be given equal contact hours and contents coverage as that of three credit units course.



With one credit unit assigned to information technology and computer application, irrespective of the fact that it is a core course, which its skills are very much required by OTME graduates for success in employment and progress in this career path. The study envisages lack of in-depth teaching and contents coverage of information technology and computer application. Also, worrisome are these pertinent questions: These final year OTME students that are taught information technology and computer application; are they knowledgeable and skillfully equipped to work in the 21st century modern offices? Do they possess the right skills and abilities to teach the relevant course contents of this course to the younger generations on graduation? Can they successfully utilize these knowledge and skills maximally to their own benefits in entrepreneurial businesses?

Research Questions

The following research questions guided the study:

To what extent will the allocation of 3 credit units to information technology and computer application serve as a strategy for making its teaching relevant?

To what extent will increment in contact hours assigned for theory and practice of information technology and computer application serve as a strategy for making its teaching relevant?

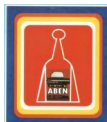
To what extent will adequate information technology resources act as strategies for making the teaching of information technology and computer application relevant?

Null Hypothesis

There is no significant difference between the mean ratings of male and female OTME lecturers on the extent allocation of 3 credit units to information technology and computer application can serve as a strategy for making its teaching relevant in colleges of education in Delta State.

Method

Descriptive survey design was adopted for the study. The population for the study comprised 33 OTME lecturers in the four colleges of education in Delta State, namely: Federal College of Education (Technical) Asaba (16), College of Education Agbor (10), College of Education Warri (03) and Delta State College of Education, Mosogar (04). There was no sampling as the population size was manageable. A



structured validated questionnaire was the instrument used for data collection. The instrument has a 5-point rating scale of Very High Extent (VHE)5, High Extent (HE)4, Moderate Extent (ME)3, Low Extent (LE)2 and Very Low Extent (VLE)1. A reliability index of 0.83 was obtained using Cronbach Alpha Method. Mean and standard deviation were used to analyze the research questions while t-test was used to test the null hypothesis at 0.05 level of significance. Any response of 3.00 and above was acceptable and below 3.00 was rejected. For the hypothesis, t-calculated value greater than the critical t-value was rejected, otherwise hypothesis of no significant difference was accepted.

Results

Research Question 1

To what extent will the allocation of 3 credits unit to information technology and computer application serve as a strategy for making its teaching relevant?

Table 1: Respondents mean ratings on extent allocation of 3 credit units to information technology and computer application for contents coverage can add relevance to its teaching

| S/N | Item Statement | X | SD | Remark |
|----------------------|---|-------------|-------------|------------|
| | Allocating 3 credit units to information technology and computer application will position it as a core OTME course | 4.73 | 0.57 | VHE |
| | Teaching of information technology and computer application with 3 credit units would add more relevance than when it is just 1 credit unit. | 4.67 | 0.48 | VHE |
| 3. | With 3 credit units, contact hours for teaching would increase for contents coverage | 4.45 | 0.71 | HE |
| | Allocating 3 credit units to information technology and computer application, creates room for in-depth teaching | 4.45 | 0.75 | HE |
| | With 3 credit units, disintegration of components of information technology and computer application for detailed teaching of Peculiar skills, adds relevance | 4.42 | 0.71 | HE |
| Grand Mean/SD | | 4.54 | 0.64 | VHE |

Data in Table 1 shows that the five question items had mean scores ranged between 4.42 and 4.20 with a grand mean of 4.73 and standard deviation of 0.64. Therefore, the grand mean of 4.54 indicates very high extent allocation of 3 credit units to Information Technology and Computer Application for contents coverage could add relevance to its teaching, The standard deviation of 0.64 shows homogeneity in the respondents ratings.



Research Question 2

To what extent will increment in contact hours allocated for practical aspect of information technology and computer application, serve as a strategy for making its teaching relevant?

Table 2: Respondents mean ratings on extent increment of contact hours for practical aspect of information technology and computer application can make its teaching relevant

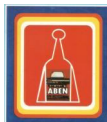
| S/N | Item Statement | X | SD | Remark |
|-----|--|-------------|-------------|------------|
| | Contact hours allocate to information technology and computer application makes its practical aspect more impactful | 4.52 | 0.67 | VHE |
| | Constant practice by students add relevance to teaching information technology and computer application based on the periods allotted to it | 4.45 | 0.62 | HE |
| | Periods allocated to information technology and computer application guarantee students skills' acquisition through adequate practice | 4.82 | 0.39 | VHE |
| | More contact hours for information technology and computer application, more opportunities for theory and practice, and teaching becomes relevant | 4.91 | 0.29 | VHE |
| | Three hours (1 hour theory/2 hours practice) of three contacts per week for teaching information technology and computer application enhances skills acquisition | 4.42 | 0.79 | HE |
| | Grand Mean/SD | 4.62 | 0.55 | VHE |

Table 2 reveals that the mean ratings of the items ranged from 4.42 to 4.91 with a grand mean of 4.62 and standard deviation of 0.55. The grand mean of 4.62 shows that increase of contact hours for theory and practice of information technology and computer application can make its teaching relevant at very high extent. More so, the standard deviation of 0.55 is an indication that the respondents are not wide apart in their ratings.

Research Question 3

To what extent will adequate information technology resources act as strategies for making the teaching of information technology and computer application relevant?

Table 3: Respondents mean ratings on extent adequate information technology resources can act as strategies for making the teaching of information technology and computer application relevant



| S/N | Item Statement | X | SD | Remark |
|----------------------|--|-------------|-------------|------------|
| | Adequate computers for students to practice after being taught theoretical aspect of information technology and computer application, adds relevance to teaching | 4.82 | 0.39 | VHE |
| | Computer application programmes such as Microsoft Word, Excel spreadsheet, installed for teaching students, makes teaching relevant | 4.58 | 0.61 | VHE |
| | Networked printers installed in all the systems for students to learn how to print hard copies, adds relevance to teaching information technology and computer application | 4.45 | 0.83 | HE |
| | Uninterruptible power supply during theory and practice of information technology and computer application makes teaching more relevant | 4.88 | 0.33 | VHE |
| 15. | Availability of printing ink and stationeries add relevance to teaching of information technology and computer application | 4.36 | 0.74 | HE |
| Grand Mean/SD | | 4.62 | 0.58 | VHE |

Table 3 reveals that the mean responses of the respondents ranged from 4.36 to 4.88 with a grand mean of 4.62 and standard deviation of 0.58. Therefore, the grand mean of 4.62 indicates very high extent adequate information technology resources can act as strategies for making the teaching of information technology and computer application relevant. Moreover, the standard deviations for all the items are within the same range, showing homogeneity in the ratings of the respondents.

Null Hypothesis

There is no significant difference between the mean ratings of male and female OTME lecturers on the extent at which assignment of 3 credit units to information technology and computer application can serve as a strategy for making its teaching relevant in colleges of education in Delta State.

Table 4: Summary of t-test analysis of the mean responses of male and female OTME lecturers on the extent allocation of 3 credit units to information technology and computer application can serve as a strategy for making its teaching relevant

| OTME Lecturers | N | X | SD | Df | t-Cal | t-Tab | Level of Sig. | Remark |
|----------------|----|------|------|----|-------|-------|---------------|--------|
| Male | 09 | 4.69 | 0.55 | 31 | 0.88 | 1.98 | 0.05 | NS |
| Female | 24 | 4.49 | 0.66 | | | | | |

Table 4 shows that there is no significant difference between the mean responses of male and female OTME lecturers on the extent allocation of 3 credit units to



information technology and computer application can serve as a strategy for making its teaching more relevant in colleges of education in Delta State. The calculated value of 0.88 is less than the table value of 1.98 at 0.05 level of significance. Therefore, the null hypothesis is accepted.

Discussion of Findings

The study found that allocation of 3 credit units to information technology and computer application for contents coverage can add relevance to its teaching. This is because information technology and computer application is a core course and its mastery for effective job performance in this digital age, is very necessary for Office Technology and Management Education Students (OTME) on graduation. In-dept teaching of the course for contents coverage, to a large extent, depends on the credit load allocated to it. With 3 credit units, contact hours for teaching would increase, making room for in-dept teaching and contents coverage of information technology and computer application. This will provide the needed platform for the production of knowledgeable and skilled OTME students fit for any computerized job on graduation. Oyedele (2011) lamented that Nigerian youths are being educated more in accordance with yesterdays' world rather than in preparation for tomorrow's living. This assertion is very correct. Even though most organizations are now computerized with modern sophisticated equipment and machineries, yet OTME final year students are being taught computer appreciation, which is very elementary aspect of the course.

Findings equally reviewed that no significant different exists between the mean responses of male and female OTME lecturers on the extent allocation of 3 credit units to information technology and computer application could serve as a strategy for making its teaching relevant. This is in agreement with Okereke, Onokpaunu and Ikonmwan (2018).

Similarly, the study also revealed that increment in contact hours assigned for theory and practice of information technology and computer application is an effective strategy for making its teaching relevant. This anchors on the fact that information technology and computer application is a skilled course and requires more contact hours for effective practice after theory. As stipulated in NCCE Minimum Standard (2012), in teaching information technology and computer application, that every one hour theory lecture should be followed by two hours of practice. When this is done,



there will be enough time for the lecturer to teach and the students to demonstrate on what had been taught, thereby enhancing their skills. According to Moses (2011), lecturers are duty bound to help students acquire and develop needed skills and attitudes for employability by aligning theory with practice. Improvement on computer application skills could be possible, with adequate contact hours allocated to practical aspect of information technology and computer application. It is an established fact that practice makes perfect.

Finally, the study identified adequate information technology resources, effective strategies for making the teaching of information technology and computer application relevant. Adequate information technology resources such as computers, printers, office application programmes, uninterruptable power supply amongst others, must be provided for meaningful teaching and acquisition of relevant skills. Computer and its peripherals are gradually taking the place of manual typewriter. Therefore, information technology resources and facilities, if put in place, will enable the teaching of information technology and computer application to remain relevant and position OTME students to survive the current challenges of information age. Facility availability enhances OTME students' acquisition of knowledge and technological skills required in one or more areas of business occupations, thus providing enough practical experience. Also, the success or failure of any classroom interaction depends to a large extent on the availability and functionality of instructional equipment and facilities, the teacher and the curriculum (Bongotons and Onyenwe, 2010).

Conclusion

Information technology and computer application is a very important course that could equip the graduates of Office Technology and Management Education (OTME) with adequate knowledge and skills needed for success in paid or self-employed jobs in this digital age. To further enhance the teaching of this course, allocation of 3 credit units, increase in contact hours for practical aspect and adequate information technology resources are considered effective strategies.

Recommendations

Based on the findings of the study, the following recommendations were made:

There is need for curriculum review that can properly position information technology and computer application as a core OTME course, with 3 credit units.



Teaching periods allotted to information technology and computer application should be increased to at least 3 hours of 3 periods per week, with emphasis on 2 hours practical for skills acquisition.

Adequate functional computers, information technologies software, printers, constant power supply and other peripherals should be available in the right quality and quantity.

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