OFFICE APPLICATION SOFTWARE SKILLS NEEDED FOR EFFECTIVE IMPLEMENTATION OF OFFICE TECHNOLOGY AND MANAGEMENT EDUCATION CURRICULUM IN COLLEGES OF EDUCATION SOUTH-SOUTH NIGERIA

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Abstract
The study ascertained office application software skills needed for effective implementation of Office Technology and Management Education (OTME) curriculum in colleges of education in South-South, Nigeria. A research question guided the study. Two null hypotheses were formulated. Descriptive survey research design was adopted for the study. The population comprised 234 business education lecturers in the nine public colleges of education in South-South, Nigeria. The entire population was studied without sampling because the size was not too large. The instrument for data collection was 21-item structured questionnaire. The instrument was validated by three experts. Cronbach Alpha was used to determine the reliability of the instrument and value of 0.72 was obtained. Mean and standard deviation were used to answer the research question, while t-test and ANOVA were used to test the null hypotheses at 0.05 level of significance. The findings revealed that business education lecturers highly needed office application (software) skills for effective implementation of OTME curriculum in colleges of education in South-South, Nigeria. Gender and years of teaching experience did not significantly influence their mean ratings on needed office application (software) skills. Based on the findings, it was concluded that office application (software) skills listed in this study are needed by business education lecturers for effective implementation of OTME curriculum in colleges of education in South-South, Nigeria. Recommended among others, is that there should be constant training and re-training of OTME business education lecturers on the use of office application (software) for implementing the OTME curriculum.

Keywords: ***office application package (software), Skills, OTME, Curriculum, Implementation, Colleges of Education.***

Introduction

The world is experiencing a new wave of glory in terms of modernized ways of accomplishing office, personal and corporate tasks using computer technology. Computer as a technology cannot function to produce the desired results without combination of the features of its hardware components and software by the user. In this wise, computer is defined as a machine that accepts data through its input devices, processes the data and gives out relevant information through its output devices. The keyboard, monitor and the case housing the central processing unit are some examples of hardware parts of the computer. While the software are code of instructions or programs not felt by sense of touch, but execute a given task in conjunction with the hardware. Office application software which is the focus of this study relies heavily on the user's abilities to apply the right skills for its usage to be meaningful and impactful. A skill is an activity, which is developed by a person with time and becomes automatic in terms of performing it (Azuka, 2020). The author further stated that certain skill can be considered acquired when a person can perform it to an acceptable level of competency without thinking about the techniques of performing this action. Lapak, Moris and Shikfu (2018)

defined skill as an expertness, aptitude and competencies appropriate to perform a task with high knowledge, creativity and mastery. From the various definitions of skill, it can be deduced that skill represents practical knowledge demonstrated by ability, dexterity, speed and accuracy and can be acquired or learnt in school especially through office technology and management education (OTME) programme.

Office technology and management education (OTME) as an option of business education programme in colleges of education is meant to equip learners with the right skills that will enable them function as office workers, business studies teachers and as well manage their own businesses (self-employment). Nwosu (2022) asserted that OTME programme in colleges of education has been structured to equip its recipients with the necessary knowledge, attitude and practical skills toward achieving economic development and ensuring self-reliance among its graduates.

Colleges of education refer to institutions of higher learning created to give students the knowledge and skills they need to become qualified teachers who can successfully teach at the junior secondary, pre-primary, or early childhood and care levels, adult and non-formal levels, and special needs level (FRN, 2013). Uzoka (2022) posit colleges of education as a higher education that give students the skills, knowledge and education required to work as teachers and other specialized occupations upon graduation and that the graduates are awarded Nigeria Certificate in Education (NCE).

The goals of colleges of education include: to encourage further the spirit of enquiry and creativity in teachers, to provide teachers with the intellectual and professional background adequate for their assignment and make them adaptable to changing situations, to provide the technical knowledge and skills necessary for agricultural, industrial, commercial, economic and educational development of Nigeria, to give training and impact the necessary skills for the production of technicians, technologists and other skilled personnel who shall be self-reliant and enterprising (FRN, 2014). The NCE programme therefore, should be geared towards developing OTME students' manipulative skills, creativity and familiarity with the various forms of technology and software resources. This will help to bridge the gap between theory and practice, thereby preparing the students for improved learning and a better future upon graduation.

Curriculum is the totality of all that is required to be learnt by a learner in a school setting. According to Oluwadare, Omidiji and Awe (2022), a curriculum is an embodiment of all knowledge, skills and attitudes which a nation, through her schools, impart to her citizens; emphasizing that knowledge in the definition covers facts, theories, principles, generalizations and rules needed to be acquired to be certified as competent in the field. The curriculum in this study is specially for office technology and management education (OTME) at the college of education level. Hence, its effective implementation will guarantee the production of quality manpower for the teaching industry, practicing secretaries, entrepreneurs and responsible citizens of the society. Ikelegbe and Odede in Azih and Ama (2018) stated that implementation is the vehicle that drives curriculum plan into practice. Thus designing a curriculum does not bring about the desired end until the implementation stage which is based on the set objectives are achieved. Onyeachu (2010) asserted that the objective of any education cannot be achieved if the planned programme for such level of education is not well implemented. Thom-Otuya and Ubolom in Azih and Ama (2018) had reported that the challenges of office technology and management are in the implementers not being updated with appropriate skills, since nothing can compensate for a poor teacher. Hence educators according to Uzoka (2022) are the real implementers of educational programme and that without them, the other resources will be unable to make any meaningful impact on the students. Importantly, Nigeria Certificate in Education (NCE) graduates are expected among other occupational prospects, to be employed to teach business studies in junior secondary schools, which is the foundation of skills' acquisition

for future employment or self-reliance. Consequently, there is need for business educators who teach in OTME programme to be at a comfortable level of demonstrating inherent skills in office application package and transferability to their students.

Office application package (software) skills are those specific skills inherent in Microsoft suite such as Microsoft Word, Excel, PowerPoint, Desktop Publisher and Database Management. According to Garba in Okolo (2019), application software embraces programmes that users can access to carry out specific tasks and these include Microsoft word (word processing application); Microsoft excel (spreadsheet application); Microsoft publisher (desktop publishing application); PowerPoint (presentation software and Microsoft access (database management application). The software programmes are vital in document creation, storage, retrieval, information dissemination, presentation, book publication, specification, and all kinds of tabulation and display works. No doubt every modern organization needs personnel that can comfortably use the diverse office application software in accomplishing tasks and enhancing organizational productivity.

Word processing software skills enable one to easily create all kinds of documents, letters, memoranda, mailing lists, greeting cards, labels, newsletter, business reports, business cards, letter heads and tables. Computer is the major technological equipment used with Microsoft word in teaching and learning of word processing. As stipulated in NCCE Minimum Standard (2020), OTME students are to be exposed to the use of computer and its application to input, edit, format, save, store, retrieve and print diverse documents; from first year through the third year when students are expected to graduate. Students ought to be conversant with the word environment, working with multiple windows, using the menu and tool bars, changing page layout and orientation, inserting header, footer and page numbering to multiple page document, formatting and editing of documents, just to mention a few.

Microsoft Excel (spreadsheet application) deal with numerical values, labels and data. It contains columns and rows into which numbers and letters are entered. It makes use of formula and calculations are automatically performed and presented even in graphical form. It is therefore effective for financial reports and statistical analysis. Applying spreadsheet skills, make it easy to create budget, tables, cost analysis, financial reports and statistical analysis (Adeola in Okolo, 2019). It allows data to be manipulated and has the ability to project answers to questions with application of formula.

Desktop publishing software skills enable computer user to efficiently combine texts and graphics to produce documents such as newsletters, brochures, posters, books and design materials for publication. It helps for easy arrangement of textbooks and magazines and preparation of calendars, invitation cards, posters and identity cards among others. Okoro and Ndinechi (2013) stated that desktop publishing skills include the ability to open desktop environment, identify and use documents, produce a simple publication, set up page size/orientation and margins of a flier and create quality and attractive text area/text frame.

PowerPoint presentation software skills enable the user to create slides, open PowerPoint work area, add titles, subtitle, animation, change fonts size, colour and running the slideshow. These specific skills are highly required in modern day offices, businesses and work environments, that are digitally influenced. This calls for business educators to be skillful enough to be able to apply the skills in the course of implementing OTME curriculum.

Business educators are specialized teachers who have undergone professional training in teacher education programme, equipped with pedagogical competencies to teach business subjects in educational institutions (Obi and Arhueremu, 2020). As used in this study, business educators are male and female with diverse years of teaching experiences, who may be core certificated business education specialists or associates, but teach business education courses in colleges of education.

Gender of business educators is a factor that could influence their acquisition of requisite skills needed for effective implementation of OTME curriculum. In vast majority of cases, females are more preferred for secretarial jobs than the males and might be more apt to respond positively to the needed skills. Oyinloye and Umoru (2022) observed slight difference with male lecturers having higher mean response ratings than their female lecturers on online pedagogical skills needed for effective online teaching and learning of office technology and management courses. On the other hand, Okolo (2019); Ayemhenre, Okolo and Ogidan (2023) found no gender difference on office application and digital skills required for effective instructional delivery in colleges of education.

Regarding years of teaching experience (0 – 5years; 6 – 10years and above 10years), there is the tendency of business educators with long years of teaching experience who are used to analogue system of office management, to display unfavourable disposition towards the need to upgrade their skills unlike their counterparts with lesser years of teaching experience. However, Okoli and Okolo (2023) in their study on business educators' rating of entrepreneurial skills for effective implementation of office education curriculum in colleges of education in South-South, Nigeria, found that years of teaching experience of business educators had influence on the entrepreneurial skills needed for effective implementation of OTME curriculum. Hence it is expedient to find out if gender and years of teaching experience moderated business educators' office application software skills' acquisition need for effective implementation of OTME curriculum in South-South, Nigeria.

Statement of the problem

Office technology and management education (OTME) programme in Nigerian colleges of education have undergone series of revision of its curriculum contents with more innovations and inclusions on aspects of mechanization, digitalization and entrepreneurship. The refinement of the curriculum involves the removal of traditional office practices dealing with shorthand and typewriting skills and inclusion of computer keyboarding, desktop publishing, entrepreneurship and online marketing (NCCE, 2020). This is to better equip OTME students with relevant knowledge, skills, competencies and attitudes necessary for gainful employment, self-reliance and for global competitiveness; especially in Nigeria where unemployment is at an alarming rate.

For the implementation of the current revised OTME curriculum as contained in national commission for colleges of education (NCCE, 2020) to meet the desired end, business educators who teach these OTME students must possess office application software skills. This is because the earlier OTME curriculum are considered not relevant in this modern day digital work environment. Consequently, business educators who implement OTME curriculum need to possesses office application software skills and proficiently transfer to OTME students for employability, self-reliance and global competitiveness on graduation. This could help to avert the stories that touch the heart, as reported by Umoru and Yakubu (2018), that higher education programme in Nigeria had fallen short of expectations and as a result, many graduates of those institutions lack basic skills required by the labour market. That the short fall in required skills has also resulted to mass unemployment among the graduates. Amesi, Amaewhule and Akoku (2022) remarked that business educators should inculcate the skills on the use of computer application software in their students, as they are expected to possess software skills to be able to teach effectively as well as achieve the mandate of business education programme as enshrined in the National Commission for Colleges of Education (NCCE, 2020).

Research Question

What are the office application package (software) skills needed by business educators for effective implementation of OTME curriculum in colleges of education in South-South, Nigeria?

Hypotheses

1. There is no significant difference in the ratings of male and female business educators on office application package (software) skills needed for effective implementation of OTME curriculum in colleges of education in South-South, Nigeria.
2. There is no significant difference in the ratings of business educators regarding office application package (software) skills needed for effective implementation of OTME curriculum in colleges of education in South-South, Nigeria based on years of teaching experience.

Method

The study adopted a descriptive survey research design. The population of the study comprised all 234 (134 males and 100 females) business educators in the nine public colleges of education in South-South, Nigeria. All the 234 business educators were used because the population sample was small. As a result, the study adopted a census survey. A structured questionnaire having two sections: section 'A' was on demographic data of respondents; while section 'B' contained 21- item question statements with a 5-point rating scale and weighted as: Very Highly Needed (VHN,4.50-5.00), Highly Needed (HN,3.50-4.49), Moderately Needed (MN,2.50-3.49), Lowly Needed (LN,1.50-2.49), Very Lowly Needed (VLN,1.00-1.49) was used for data collection. The instrument was validated by three experts. Cronbach Alpha reliability test was used to determine the reliability of the instrument which yielded coefficient value of 0.72 indicating that the instrument is reliable. The instrument was administered with the help of nine research assistants. Out of the 234 copies of the questionnaire distributed to the respondents, 226 copies (representing 97 percent) were retrieved with an attrition rate of 8 copies (representing 3 percent) and used for data analysis. The data collected were analyzed using mean and standard deviation to answer the research question while t-test and ANOVA was used in testing the null hypotheses. A null hypothesis was rejected where the calculated p-value is less than the 0.05 alpha level. Conversely, where the calculated p-value is greater than or equal to the alpha level (0.05), the null hypothesis is not rejected.

Results

Research Question One: What are the office application package (software) skills needed by business education lecturers for effective implementation of OTME curriculum in colleges of education in South-South, Nigeria?

Table 1: Mean ratings on the office application package (software) skills needed for effective implementation of OTME curriculum

S/N	Office application package (software) skills needed	$\overline{X}$	SD	Remarks
1.	Ability to professionally use Microsoft Word to create diverse documents, eg. Reports	4.40	0.44	Highly Needed
2.	Ability to use Microsoft Excel in creating spread sheet, tables accurately	4.20	0.54	Highly Needed
3.	Ability to use Desktop Publisher such as Microsoft Publisher or CorelDraw in creating graphics and designs	3.70	0.56	Highly Needed
4.	Ability to create slides and presentations using Microsoft PowerPoint	3.69	0.58	Highly Needed
5.	Ability to open and work with more than one			

	application at a time (multi-tasking)	3.54	0.60	Highly Needed
6.	Ability to insert page numbering in multiple page document	4.24	0.52	Highly Needed
7.	Ability to insert header and footer in word document	4.80	0.43	Very Highly Needed
8.	Ability to use mail merge to create letter for multiple recipients	3.50	0.63	Highly Needed
9.	Ability to insert and delete page border	4.38	0.46	Highly Needed
10.	Ability to spell-check document	3.56	0.59	Highly Needed
11.	Ability to insert and format tables	3.54	0.61	Highly Needed
12.	Ability to input values and labels in a worksheet	4.24	0.52	Highly Needed
13.	Ability to name and rename a worksheet	4.20	0.54	Highly Needed
14.	Ability to sort and filter data	3.50	0.63	Highly Needed
15.	Ability to apply formula functions in Excel	4.38	0.46	Highly Needed
16.	Ability to build in charts and graphs in worksheet	3.56	0.69	Highly Needed
17.	Ability to open a PowerPoint work area	3.54	0.61	Highly Needed
18.	Ability to add titles and sub-titles to a slide	4.24	0.52	Highly Needed
19.	Ability to name and rename a worksheet	4.20	0.54	Highly Needed
20.	Ability to run slide-show in a PowerPoint	3.50	0.63	Highly Needed
21.	Ability to preview and print document	4.38	0.46	Highly Needed
	Cluster Mean	**3.96**		**Highly Needed**

Data in Table 1 shows the cluster mean score of 3.96 indicating that business educators highly needed office application package (software) skills for effective implementation of OTME curriculum in colleges of education in South-South, Nigeria. The analysis of the items further indicates that business educators rated one item out of the 21 listed items as very highly needed. The mean rating for the one item is 4.80. The remaining 20 items were rated by business educators as highly needed with mean ratings ranging from 3.50 to 4.38. The standard deviation of 0.43 to 0.69 shows that respondents are not wide apart in their ratings which indicate homogeneity

Hypothesis 1

There is no significant difference in the ratings of male and female business educators in office application package (software) skills needed for effective implementation of OTME curriculum in colleges of education in South-South, Nigeria.

Table 2: Summary of t-test analysis on male and female business educators' differences on office application package (software) skills needed for effective implementation of OTME curriculum

Gender	N	X	SD	α	df	t-cal	p-value	Decision
Male	131	3.20	.19					
				0.05	224	1.511	.056	Not Significant
Female	95	3.17	.15					

Table 2 reveals mean score of male business educators (*M=3.20, SD=.19*) is significantly greater than that of female business educators (*M=3.17, SD=.15*). Table 2 shows t-calculated value of 1.511, at 224 degree of freedom and the p-value of .056. Testing at alpha level of 0.05, the p-value is not significant, since the p-value is greater than the alpha value (0.05). This implies that male and female business educators do not significantly differ in their mean ratings on the office application package (software) skills needed for effective implementation of OTME curriculum in colleges of education in South-South, Nigeria. Therefore, the null hypothesis is not rejected.

Hypothesis 2

There is no significant difference in the ratings of business educators regarding office application package (software) skills needed for effective implementation of OTME curriculum in colleges of education in South-South, Nigeria based on years of teaching experience.

Table 3: Summary of ANOVA of business educators' difference in office application package (software) skills needed for effective implementation of OTME curriculum based on years of teaching experience.

Variable	N	X	SD	Lower Bound	Upper Bound	Minimum	Maximum
1-5years	56	3.17	1.38	1.4794	1.9872	2.00	20.00
6-10yrs	75	3.35	1.65	1.5431	1.8876	4.00	21.00
Above 10yrs	95	3.51	1.21	1.2393	1.6607	9.00	19.00
Total	226						

As shown in Table 3, the mean score of business educators with 1-5years (*M=3.17, SD=1.38*) is significantly less than that of business educators with 6-10years (*M=3.35, SD=1.65*) and significantly less than that of business educators with above-10years (*M=3.51, SD=1.21*). This implies that business educators' years of teaching experience do not significantly differ in their mean ratings on the office application package (software) skills needed for effective implementation of OTME curriculum in colleges of education in South-South, Nigeria.

Table 4: Summary of ANOVA on the office application package (software) skills needed for effective implementation of OTME curriculum based on years of teaching experience.

	Sum of Squares	df	Mean Square	F	P-value	Remarks
Between Groups	1.134	2	1.941			
				15.816	1.281	Not Significant
Within Groups	1.561	223	1.782			
Total	2.695	225				

As shown in Table 4, the F-ratio (df: 2/223) is 15.816 and the P-value (1.281) is greater than the stipulated 0.05 level of significance (P-value > alpha level). It is therefore decided that there is no significant difference in the mean ratings of business educators regarding office application package (software) skills needed for effective implementation of OTME curriculum in colleges of education in South-South, Nigeria based on years of teaching experience. Therefore, the null hypothesis is not rejected.

Discussion

The study found that business educators highly needed office application package (software) skills for effective implementation of OTME curriculum in colleges of education in South-South, Nigeria. This finding disagrees with Ojohwoh (2019) who revealed that work performance of office technology and management graduates in the areas of word processing, spreadsheet and internet application skills was adequate. It agrees with Okolo (2019) that the business education lecturers' competency level on word processing, spreadsheet, desktop publishing and database management was at a moderate level. This implies that office application package (software) skills possessed by business educators are not adequate for effective implementation of the OTME (2020 Edition) revised curriculum. Hence, business educators highly needed office application package (software) skills order to prepare the students for better job opportunities in this digital era and for global competitiveness on graduation. Reilly (2021) had admonished that paying attention to the performance of the

secretary is vital to ensuring that the office runs efficiently and remains productive in this digital era. This aligns with Amesi, Amaewhule and Akoku (2022) that business educators should inculcate the skills on the use of computer application software in their students, as they are expected to possess software skills to be able to teach effectively.

The findings also showed that gender and years of teaching experience did not significantly influence business educators' mean ratings on the office application package (software) skills needed for effective implementation of OTME curriculum in colleges of education in South-South, Nigeria. The finding on gender difference agrees with that of Okolo (2019); Ayemhenre, Okolo and Ogidan (2023). It disagreed with Umoru and Yakubu (2018) who observed slight difference with male lecturers having higher mean response ratings than their female lecturers on online pedagogical skills needed for effective online teaching and learning of office technology and management courses. Findings on years of teaching experience is in variance with the reports of Okoli and Okolo (2023) who found that years of teaching experience of business educators had influence on the entrepreneurial skills needed for effective implementation of OTME curriculum. However, the implication of the findings was that gender and years of teaching experience of business educators had no influence on office application package (software) skills needed for effective implementation of OTME curriculum in colleges of education. This could be as a result that business educators irrespective of gender and years of teaching experience found office application (software) skills very useful and needful for professional relevance.

Conclusion

Based on the findings of the study, it was concluded that, office application (software) skills were needed by business education lecturers for effective implementation of Office Technology and Management Education (OTME) curriculum in colleges of education in South-South, Nigeria as gender and years of teaching experience did not in any way influence their needed office application (software) skills.

Recommendations

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

1. There should be constant training and re-training of business educators especially Office Technology and Management Education (OTME) lecturers by the management of colleges of education to acquire office application (software) skills for effective implementation of OTME curriculum that would best equip their students with modern office and teaching skills amongst others; for employability, self-reliance and for global competitiveness on graduation.
2. Business educators who are lacking office application (software) skills should make conscious efforts to embrace digital upskilling in order to remain relevant in teaching profession through self-development.
3. Government through Tertiary Education Trust Fund (TETFUND) should be apt to allocate adequate funds for the training of business educators to enable them attain high level competences in office application software usage in instructional delivery.

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