



## NEW TECHNOLOGY COMPETENCY NEEDS OF BUSINESS EDUCATION LECTURERS IN HIGHER INSTITUTIONS IN DELTA STATE: IMPLICATION FOR CAPACITY DEVELOPMENT

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### **Abstract**

*The practice in the use of new technology to carry out several functions in the developed world, especially in the academic field calls for upgrading in the use of new technology in order to perform duties effectively. This is in addition to the fact that the business education lecturers' responsibilities are complex. This study, therefore, examined the new technology as ICT and the competencies that business education lecturers in higher institution in Delta State need for capacity development. In order to carry out this study, three research questions were raised and answered using mean and mean differences. The study employed the descriptive survey research design. All business education lecturers in the higher institutions in Delta State formed the population of the study. The population and sample of the study comprised 95 business education lecturers. A structured questionnaire instrument was used for data collection. The reliability coefficients of the questionnaire were 0.80 and 0.72 respectively for the two scale components. The data analysis reveals that business education lecturers need the new technology competencies in the use of instructional delivery, research activities and administrative duties. It was recommended that state and federal governments should develop and implement functional software packages for training and re-training of business education lecturers in the use of new technology for effective and efficient performance of administrative duties.*

**Keywords:** *New Technology Business Lecturer, Capacity Development, Job Performance, Competency*

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### **Introduction**

Higher education is the level of education where emphasis is placed on specialization skills and competencies since it may be regarded as the terminal point of formal education and the point of professional transition from school to work. According to Federal Republic of Nigeria (FRN, 2004), as documented in the National Policy on Education (NPE), higher education shall make optimum contribution to national



development by intensifying and diversifying programmes for the development of high level manpower within the context of the need of the nation. This implies that higher education should provide the necessary skills and competencies through teaching and training to learners to enable them become the manpower force of the nation's cultural, economic and technological growth.

Another goal of higher education as stipulated in the National Policy on Education document is that higher institutions' research shall be relevant to the nation's development goals and that higher institutions shall be encouraged to disseminate their research results to both government and industries. These emphases show that higher institutions research can serve as a strong source and means through which government and industries can accelerate the nation's development, economic progress and goals. These goals are achievable through higher education due to the varieties of programmes in different areas of study or discipline. One of such programmes is business education.

Business education is a skill-oriented programme. It is meant to train learners with the relevant and functional skills and competencies necessary for the world of work (Ogwo & Oranu, 2006; Okoro, 2006; Bassualdo & Toby, 2004). According to Akpan (2003), business education is defined as the training for the acquisition of business skills and competencies needed for business occupations and teaching profession. It is a systematic learning experience designed to give individuals gainful employment in the areas of accounting, management, data processing, marketing and office technology management. One important and unavoidable means of transferring these skills at the higher level is through the instructor, the business education lecturer. The business education lecturer is usually faced with the responsibility of teaching the relevant knowledge, skills and attitudes as well as undertaking researches for both personal and national growth in addition to performing other administrative duties.

The instructional roles of business education lecturers is usually carried out in the lecture halls, workshops/laboratories and through teaching, assessing and evaluating the learners (Olaitan, Nwachukwu, Igbo, Onyemachi & Ekong, 1999). Another important responsibility of the business education lecturer is conducting researches. It is one of the means through which the lecturers grow professionally and contribute significantly to national development. Higher institution lecturers also perform some administrative duties and functions (Obeki, 2012). The administrative responsibility of the business education lecturers may be by virtue of primary responsibility, appointment or election. Some of the administrative duties include



supervising and counseling the students, engaging in students' admission and registration exercises and heading or directing a unit, department, faculty, institute or school and college.

The role of higher institution lecturers also include teaching, research and administration which are obviously complex and time consuming hence, it can be asserted that business education lecturers perform a complex job. This is apparently why Barnett (2000) stated that academics now operate in a world of super complexity where the very frameworks of their professions are continuously in a state of flux. The foregoing implies that the general higher education is a complex one, and its changing context has presented lecturers with the challenges of meeting its complex and new technological demands. In order to withstand or overcome the challenges, business education lecturers need to be equipped with functional new technological skills and knowledge to carry out their duties effectively.

One of the ways by which the multiple natures of the duties of academics may be effectively tackled is the application, adoption and use of new technology in form of information and communication technology (ICT) which is often referred to as new technology. This is the general term representing all the technologies, hardware, software and telecommunication devices through which information is captured, gathered, stored, manipulated, processed, presented and retrieved (UNESCO, 2003). According to Chienien (2003) and Asiabaka (2010), new technology is technology-based, knowledge-based and is indispensable in the new age of technological transformation. This fact makes new technology beneficial to every aspect of human lives. The benefits of new technology in education and business education in particular are numerous; these include its application in business management, scientific, research, office automation, accounting and education (Oladipupo & Ilaboya, 2006; Sansanwal, 2009).

New technology tools are numerous and can be used for various purposes and designs. ICT tools that are used for instructional activities (teaching-learning process) include internet, closed circuit TV, simulation, DVD and CD ROM, interactive television, videoconferencing, caspoc, proteus and e-workshop (Stevens, 2001; Hampton, 2002; Chinien, 2003; Chiemeka, 2011; Agbeoeze, Ugwoke & Onu, 2012). Conducting researches in educational institutions is becoming easier apparently because of new technology. The ICT tools necessary for conducting research by academics include statistical package for social sciences (SPSS), anti-plagiarism software and internet (Chinien, 2003; Morgan, Leech, Gloeckner &



Barrett, 2004; Onugha, 2009). The large number of students seeking higher institutions' admission and already admitted students may not be easily managed without the integration and application of new technology in the administration of higher institutions in Nigeria. Some of these new technological tools used for administrative duties in the higher institutions are video-conferencing, internet, peripherals and online teaching (Selwood, 2004).

The general use of new technology in education has been conceived as the means to achieve the stated goals of institutions. Markus and Lynn (2009) affirmed that the expansion of the application of new technology in teaching and learning in particular has been one of the most ubiquitous major changes in higher education. The Markus and Lynn explained that on the one hand, the use of ICT as new technology is presented as a solution to various teaching and learning challenges brought about by the new higher education landscape; while on the other hand, the process of lecturers application of new technology in the teaching process and the students applying it in the process of learning often represent an almost insurmountable obstacle for both partners.

Challenges in the implementation of new technology in higher institutions in Nigeria are visible. The challenges in the teaching-learning process, conducting researches and performing administrative duties using new technology in higher institutions can be addressed in different ways. In the opinions of Conole, White and Oliver (2007), some of the ways in which higher education institutions have responded to the implementation of new technologies in teaching and learning include developing institutional strategies to change, focusing on the impact of learning new technologies and offering of models for representing and understanding organizational contexts and change management. Another strategy yet employed by higher education institutions in response to new technology challenges is focusing on support for staff development issues and placing greater emphasis on professionalism of academic staff as teachers and assessors (Conole, White & Oliver, 2007; Markus & Lynn, 2009). In recent times, higher institutions have adopted the new technology applications in carrying out duties such as administrative jobs, research, teaching and learning. The situation in higher institutions in Delta State, appear to include lack or inadequate ICT training and retraining of lecturers. Apparently, majority of higher institutions' lecturers undergo personal training in the use of new technology applications, and this may not be good enough because of the cost and time of such training. Hence, inefficiencies in the use of new technology application by the lecturers may arise which will in turn lead to ineffective performance of duties. The need therefore, for new technology capacity



development in the use of new technology applications for performance of administrative duties cannot be over-emphasized.

### **Statement of the Problem**

Based on the foregoing, business education lecturers in higher institutions need to be equipped with the relevant technologies in order to withstand the adoption, application and use of ICT applications to discharge their duties effectively. Since technology changes frequently, business education academic staff needs constant in-service training, especially in new technology for capacity development. Capacity development, according to Ifeanyieze and Osinem (2011), is the process of developing competencies and capabilities in individuals, groups, organization sectors or countries which lead to sustained and self-generating performance improvement. The fundamental goal of capacity development therefore is to enhance the ability of individuals based on perceived needs. Nwobu, cited in Asogwa and Ohagwu (2010), defined capacity development as the effort geared towards improving the level of knowledge, skills and attitude possessed by an individual for proficiency in a given task or duties. Therefore, for effective and efficient use of new technology by business education lecturers and in order to improve their performance in administrative duties, the need to determine the critical and important areas of new technology applications where new technology capacity development is required by the lecturers. The job performance of business education academic staff can be measured by the extent of achievement in instruction (teaching), research and administration. These variables make up the standard and level of professionalism and growth of an academic staff in the higher institutions.

### **Research Questions**

The following research questions were raised and answered in this study;

What are the new technology capacity development needs of business education lecturers for instructional delivery?

What are the new technology capacity development needs of business education lecturers for research activities?

What are the new technology capacity development needs of business education lecturers for administrative duties?

### **Method**

The descriptive survey research design was employed in this study in order to collect data from selected business education lecturers in higher institutions in Delta State. A census of all the business education lecturers in higher institutions in Delta state was



conducted. The lecturers were stratified into federal and state higher institutions lecturers, hence stratified random sampling technique. Questionnaire was the instrument used for data collection. It had items with two categories of response scales of possessed and needed. The possessed category scale had four point response scales of highly possessed (HP), averagely possessed (AP), slightly possessed (SP) and not possessed (NP) with corresponding values of 4, 3, 2 and 1 respectively. This was meant to determine the extent of the ICT competencies possessed by business education lecturers. The needed category scale had four point response scales of highly needed (HN), averagely needed (AN), slightly needed (SN) and not needed (NN) with corresponding values of 4, 3, 2 and 1 respectively and was also meant to determine the extent the lecturers need the new technology competencies in the performance of administrative duties.

The questionnaire was validated by three experts, and its reliability coefficients obtained through Cronbach alpha formula were 0.80 and 0.72 for the possessed and needed scale categories respectively. The data collected were analyzed using weighted mean. The weighted mean with Improvement Need Index (INI) which represents the application, was used to answer the research questions and take decision on the Items where business education lecturers' capacity need in the use of new technology. Ninety-five copies of the questionnaire were administered to the respondents out of which ninety copies were completed and retrieved for data analysis. In taking the decision, the following steps were followed;

Weighted mean value of each of the Items of extent of new technology competencies possessed was calculated ( $X_p$ ), and the weighted mean value of each of the Items of extent of new technology competencies needed was calculated ( $X_N$ )

The new technology competencies application analysis ( $X_{AG}$ ) which is the difference between  $X_N$  and  $X_p$ , was determined by ( $X_{AG}=X_N-X_p$ ) for decision making on capacity development needs as thus:

Where the  $X_{po}$  is positive (+), it means that new technology capacity development is needed and the level of competency needed is greater than the level possessed.

Where the  $X_{PG}$  is negative (-), it means that new technology capacity development is not needed and the level of competency needed is lower than the level possessed.

Where the  $X_{PG}$  is zero (0), it means that new technology capacity development may or may not be needed because in practice, it may still be necessary for new technology for capacity development; at this point, the level of competency possessed is equal to the level possessed.



## Results

The results of this study were obtained from the analysis of the data for the research questions. The results are presented in tables as follows:

### Research Question 1

What are the new technology capacity development needs of business education lecturers for instructional delivery?

**Table 1:** Mean Ratings of New Technology Capacity Development Needs of Business Education Lecturers for Instructional Delivery

S/N	New Technology Capacity Development for Instructional Delivery	$X_N$	$X_P$	$X_{GP} = X_N - X_P$	Remark
1	Competency in using power point presentation	3.86	2.28	1.58	CN
2	Competency to deliver lecture through the internet	3.57	2.08	1.49	"
3	Competency in using interactive whiteboard/starboard for lectures	3.64	2.21	1.43	"
4	Competency in using Skype for distance lectures	3.31	1.86	1.45	"
5	Competency to use CCTV for practical class	3.60	2.00	1.60	"
6	Competency to adopt video conferencing for lectures	3.46	1.96	1.50	"
7	Competency in applying simulation in teaching practical class	3.60	2.01	1.59	"
8	Competency in preparing/delivering lectures with CD/DVD ROM	3.40	2.72	0.68	"
9	Competency to prepare/deliver lecture through the television	3.69	2.24	1.45	"
10	Competency to prepare/deliver lecture through the radio	3.48	2.02	1.46	"
11	Competency to prepare/deliver lecture through YOU-TUBE	3.42	1.83	1.59	"
12	Competency in using social networks	3.16	2.37	0.79	"
13	Competency to adopt audio conferencing for lectures	3.34	2.26	1.08	"
14	Competency in using AUTOCARD/other related pictorial software	3.51	1.76	1.75	"
15	Competency in using assistive technologies for the handicaps	3.33	1.59	1.74	"
16	Ability to use Motion Pictures to deliver lectures	3.20	1.68	1.52	"
17	Competency in using Microsoft Office to produce lecture materials	3.28	2.67	0.61	"

Source: Field Study, 2019.

The data presented in Table 1 shows that the mean responses of the competencies possessed by the business education lecturers in the use of new technology applications ranged from 1.59 to 2.72, while the mean responses of new technology competencies needed by the lecturers ranged from 3.16 to 3.86. The mean values of



new technology competencies ranged from 0.61 to 1.75. Since all the values of the new technology competencies need analysis are positive, it means that the business education lecturers need new technology for instructional delivery in all the identified new technology competencies. However, the extent to which capacity development is needed reduces as the values of the new technology competencies applications decreases or approaches zero.

### Research Question 2

What are the new technology capacity development needs of business education lecturers for research activities?

**Table 2:** Mean Ratings of New Technology Capacity Development Needs of Business Education Lecturers for Research Activities

S/N	New Technology Capacity Development for Instructional Delivery	$X_N$	$X_P$	$X_{GP} = X_N - X_P$	Remark
18	Ability to use the internet to source for online information	3.88	3.13	0.25	CN
19	Ability to use the anti-plagiarism software	3.44	2.04	1.40	”
20	Competency in using Microsoft Excel for data computation	3.71	2.26	1.45	”
21	Ability to format tables using special software packages	3.54	2.20	1.34	”
22	Ability to employ reference style using software packages	3.56	2.38	1.18	”
23	Ability to perform data analysis with SPSS package	3.51	2.04	1.47	”
24	Ability to edit research paper using software packages	3.58	2.27	1.31	”
25	Ability to design research models/schema using software	3.44	2.14	1.30	”
26	Ability to present research papers using power points slides	3.42	2.62	0.80	”
27	Ability to upload research papers into the internet	3.52	2.56	0.96	”
28	Competency in using Word Processing	3.23	2.42	1.00	”
29	Ability to use various Table Tools	3.56	2.02	0.78	”
30	Ability to use laptop in paper presentation	3.45	2.72	0.86	”

Source: Field Study, 2019.

Table 2 reveals that the mean responses of the new technology competencies possessed by the business education lecturers for research activities ranged from 2.04 to 3.13, while the mean responses of new technology competencies needed by



the lecturers ranged from 3.38 to 3.71. The values of the new technology competencies need analysis ranged from 0.25 to 1.47. This simply means that the business education lecturers need capacity development in all the identified new technology competencies for research activities, since all the values of the new technology capacity development needs analysis are positive. It can, however, be deduced that the extent to which new technology capacity development need reduces as the values of the new technology capacity development applications also decreases.

### Research Question 3

What are the new technology capacity development needs of business education lecturers for administrative duties?

**Table 3:** Mean Ratings of New Technology Capacity Development Needs of Business Education Lecturers for Administrative Duties

S/N	New Technology Competences for Administrative Duties	$X_N$	$X_P$	$X_{GP} = X_N - X_P$	Remark
31	Ability to upload and validate students' results online	3.63	2.27	1.36	CN
32	Ability to course advise students through the internet	3.56	2.33	1.23	"
33	Competency in information bank management	3.31	2.30	1.12	"
34	Ability to use computer filing system	3.74	2.45	1.40	"
35	Ability to prepare students' results with Microsoft Office	3.59	2.71	0.88	"
36	Ability to use hardware peripheral	3.20	2.87	0.33	"
37	Ability to use mobile phones to address official matters	3.39	3.07	0.32	"
38	Ability to use video conferencing for issues such as meetings	3.40	2.19	1.21	"
39	Ability to perform students' online admission/registration	3.71	2.41	1.30	"
40	Ability to use multimedia for administrative matters	3.49	1.66	1.83	"

Source: Field Study, 2019.

Data shown in Table 3 reveals that the mean responses of the competencies possessed by the business education lecturers in the use of new technology for performance of duties ranged from 1.66 to 3.07 while the mean responses of new technology competencies needed by the lecturers ranged from 3.20 to 3.71. The values of the new technology capacity development applications analysis ranged from 0.32 to 1.83. These values are positive, and this means that business education lecturers need



capacity development in all the identified new technology competencies for administrative duties, though the extent to which the lecturers need new technology capacity development need for this purpose reduces as the values of the new technology competencies applications analysis decreases or approaches zero.

### **Discussion of Findings**

The data collected to answer research question one revealed that business education lecturers in higher institutions in Delta State need new technology capacity development in the use of new technology for instructional delivery. The data summarized in Table I showed that eight new technology competencies for instruction, having the values of the new technology competencies applications analysis ranging from 1.50 to 1.75, apparently are averagely needed by the business education lecturers in higher institutions in Delta State for instructional delivery while the values of applications for nine new technology capacity development ranging from 0.61 to 1.49 are perhaps slightly needed by the lecturers for instructional delivery. The finding agreed with that of Obi and Akarahu (2010) which revealed that business education lecturers, either male or female, need word processing skills, internet technology skills and telecommunication skills for effective teaching of marketing and management courses in colleges of education.

The data analyzed to answer research question two showed that business education lecturers need new technology capacity development in the use of new technology for research activities. However, the new technology competency applications analysis of 0.25 for Item 18 approaches zero and may be assumed that new technology capacity seems rarely needed by the lecturers in this competency. The values of the new technology competencies applications analysis for the rest of the nine items showed that the lecturers appear to slightly need new technology capacity development in the use of new technology for research activities. The findings are in line with that of Chukwuedo and Igbinedion (2014) which revealed that technical and vocational education lecturers require the use of technology in research purposes for effective supervision of students in technical and vocational education programme in universities.

The data collected to answer research question three revealed that business education lecturers need new technology capacity development in administrative duties, but apparently new technology competencies capacity development are averagely



needed for Items 30 and 36, slightly needed for five item and rarely needed for Items 32 and 33. The findings of this study is likened to that of Okonkwo and Ogwo (2010) which revealed that there was the need to enhance school management of records through the use of new technology since its' applications are poorly utilized in the school records management processes.

### **Conclusion**

New technological applications have become one of the tools upon which every individual can perform certain duties effectively. For effective job performance to be attained by business education lecturers in higher institutions in Delta State, it was found that though the lecturers relatively use new technological applications to perform their duties, there is still need for capacity development of business education lecturers in new technological competencies in order to facilitate their duties with respect to teaching-learning process, conduction of research and administrative duties. This means that if proper training is given to the lecturers on the use of new technological applications to perform their duties, efficiency may be attained.

### **Recommendations**

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

The state and federal governments should develop and implement functional softwares packages for the training and re-training of business education academic staff in the use of new technological applications for effective and efficient performance of duties in higher institutions in Delta State.

There should be adequate process for flexibility for future expansion of new technological applications with regard to new technologies installation required in the teaching process.

There should be availability of well-trained and experienced maintenance technicians to service the new technological appliances regularly to avoid slowing down the pace of progress.

Governments at all level should provide a powerful stand-by generator in case of power failure occurrences.

With inevitable nature of new technological in all business concerns all over the world, Nigeria inclusive, it becomes imperative that adequate provisions in terms ICT infrastructure should be made for the integration of new technological into business education programme.



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