



APPRAISAL OF BUSINESS EDUCATION STUDENTS' PERFORMANCE TRENDS IN COMPUTER RELATED COURSES: IMPLICATIONS FOR LECTURERS' INSTRUCTIONAL DESIGN

Ementa, C. N. Ph.D

*Department of Vocational Education,
NnamdiAzikiweUniversity, Awka
cn.ementa@unizik.edu.ng*

Onokpaunu, M. O.

*Department of Vocational Education,
NnamdiAzikiweUniversity, Awka
talk2michel231@yahoo.com*

Abstract

The study was designed to appraise the performance trends of business education students in computer related courses from 2013/14 to 2016/17 academic sessions in Anambra State. Four research questions guided the study. An ex-post facto design was adopted for the study. The entire population of 2161 business education students for the four academic sessions were studied without sampling. Students' scores in CSC 100, BED 143, BED 244, BED 345 and BED 493 from 2013/14 to 2016/17 academic sessions were used for data collection. Research questions were answered using frequency count and percentages. Findings of the study revealed that business education students performed slightly better in domesticated computer courses (BED 143, 244, 345 and 493) than Computer Appreciation (CSC 100) in 2013/2014 academic session. Additionally, the study also revealed that business education students have a better performance in domesticated computer oriented courses (BED 143, 244, 345 and 493) than Computer Appreciation (CSC 100) from 2014/2015 to 2016/2017 academic sessions. The researchers concluded that, lecturers in Physical Sciences should integrate effective instructional strategies that are capable of stimulating business education students' interest and performance in computer appreciation. It was recommended among others that, educational administrators should collaborate with computer service providers on the training and retraining of computer lecturers at least twice a year to enable them acquire modern technological skills and competencies to design effective teaching strategies that can improve business education students performance in computer related courses.

Key words: Education, business education and computer courses

Introduction of the Study

Education is an effective instrument for facilitating qualitative knowledge needed for developing the economic, social-cultural and political indices of a nation. There is a consensus among academics that education is a catalyst for economic growth and human development. This is the reason why no society can afford to toy with the education of its citizens as this could result in a snail speed development (Azikiwe, 2010). A comprehensive look into the Nigerian educational system shows that, it is categorized into pre-primary, primary, secondary and tertiary education. Tertiary education is an advanced education experience offered to students who have successfully graduated from secondary school schools.

Comprehensively, Dada and Eni-Olorunda (2014) opined that tertiary education is normally taken to include undergraduate and postgraduate education programmes of universities, colleges of education, polytechnics as well as institutes of technology that provide higher level of educational experience and training. Tertiary education is important because it enhances not only the intellectual potentials of students but also instil worthwhile character among them for responsible living and



nation building. Although, tertiary education comprised of universities, colleges of education and polytechnics among others, the focus of the study is on university.

According to Ezenwafor and Onokpaunu (2017), a university is fundamental to the construction of a knowledge economy and society where skilled labour is produced for societal and global consumption. There are many educational programmes offered across different faculties in a university among which is business education. Business education is a subunit of vocational education programme in the faculty of education which plays a major role in the training and development of skilled personnel needed for the commercial development of any nation. According to Ugwoke (2011), the package of business education is a work-focused, skill-based, result-oriented and technology-based programme. In another note, Nwazor and Onokpaunu (2016) posited that business education is designed to expose and equip students with the necessary awareness and skills with which to cope with the intricacies and dynamics of the unpredictable challenges of the business environment.

In order to make business education remain relevant among trending contemporary educational programmes owing to the fast pace of globalization and Information and Communication Technologies (ICTs), the curriculum of business education is enriched with computer courses. Computer courses are cluster of educational contents geared towards not only making students read, write and speak the language of the computer but also instil in them the knowledge and skills to utilize and develop computer hardwares and softwares. It is therefore no surprise that, Ile and Ementa (2016) observed that the computer related courses in the business education programme of Nnamdi Azikiwe University, Awka are word processing, computer appreciation and spreadsheet processing among others. Word processing is offered as a basic and general course to all students in the 1st and 2nd year, and secretarial students are to carry on with the intermediate and applied word processing in 3rd and 4th year respectively. Computer programming is offered to the students as an elective for only one semester in the 3rd year, while spreadsheet processing is offered to the students in one semester in the 4th year.

Computer appreciation is a computer course that deals with the awareness and utilization of computer hardwares and software. In the same vein, Allison (2005) stated computer appreciation is a computer course that equips students' with the required computer literacy to operate the simple and complex computers efficiently by performing basic operations like starting a computer, using the mouse and managing various windows among others. In addition, basic word processing is a foundation course in Microsoft Office that enables students' to create, print, edit, save, copy, paste, cut and delete text within a document. Furthermore, intermediate word processing, according to Wallace (2016), is a computer course that enables students' to discover fast ways to format text in a document, find out how to insert graphic images, clip art and photos to a document. With the basic knowledge of word processing, intermediate word processing helps students to edit and format documents, insert images and tables and perform a mail merge. Spreadsheet processing is another computer course offered by students' geared towards making them know how to organize and manipulate numerical data in rows and columns to perform mathematical and statistical operations. In their own view, Hooley, Piercy and Nicoulad (2008) asserted that spreadsheets processing is a computer course that show students how to perform financial and scientific calculations, organize numeric information as well as illustrate data with charts and graphs.



Acknowledging the importance of computer related courses in business education programme, Ezenwafor and Onokpaunu (2017) posited that the integration of technology in business education curriculum will efficiently enhance the academic credentials of business education students and give them the competitive edge to stay in touch with the changing requirements of the globalized workplace without any form of pressure. Introducing business education students to computer appreciation, word processing, intermediate word processing and spreadsheet processing is geared towards equipping them with technological skills to create sustainable business enterprises in the 21st century knowledge-based economy. Despite this development, Ademiluyi (2007) observed that most business education students do not have the ability to succeed in ICT based enterprises due to their inability to handle computer devices and softwares. Could the performance of business education students in computer related courses before graduation be responsible for this situation? Again, there appears to be paucity of research works on the performance trends of business education students' in computer courses in Nnamdi Azikwe University, Awka. Motivated by this situation, the researchers set out to analyze the performance trends of undergraduate business education students in computer courses from 2013/14 to 2016/17 academic sessions in Nnamdi Azikiwe University, Awka.

Theoretical Framework

The Theory of Educational Productivity

The theory of educational productivity was propounded by Walberg in 1981. Walberg postulated that psychological characteristics of individual students and their immediate psychological environments influence educational outcomes. Walberg further mentioned nine key variables that influence educational outcomes, they include, student ability/prior achievement, motivation, age/developmental level, quantity of instruction, quality of instruction, classroom climate, home environment, peer group, and exposure to mass media outside of school. According to the theory of educational productivity, classroom learning is a multiplicative, diminishing-returns function of four essential factors that is, student ability and motivation, and quality and quantity of instruction and possibly four supplementary or supportive factors, which are the social psychological environment of the classroom, education-stimulating conditions in the home and peer group, and exposure to mass media. Each of these essential factors must be sufficient before effective teaching and learning can take place in the classroom. This theory is relevant to this study in the sense that, computer lecturers in universities should take into cognizance the influence of students' active learning strategies, teacher-student relations, and quality and quantity of their instructional delivery on students' academic performance in order to provide authentic educational experiences that will enhance their performance in computer courses. Going with this theory, students will be allowed to practice the contents of computer courses alone or with their lecturer over and over, with an open feedback mechanism until mastery of these courses are achieved. This would enhance their learning and academic performance in computer related courses.

Purpose of the Study

The main purpose of the study is to analyze the performance trends of business education students in computer courses from 2013/14 to 2016/17 academic sessions in Nnamdi Azikiwe University, Awka. Specifically, this study set out to determine:



The performance trend of business education students in computer appreciation (CSC 100), basic word processing (BED 143), basic word processing II (BED 244), intermediate word processing (BED 345) and spreadsheet processing (BED 493) in 2013-2014 academic session in Nnamdi Azikiwe University Awka

The performance trend of business education students in computer appreciation (CSC 100), basic word processing (BED 143), basic word processing II (BED 244), intermediate word processing (BED 345) and spreadsheet processing (BED 493) in 2014-2015 academic session in Nnamdi Azikiwe University Awka

The performance trend of business education students in computer appreciation (CSC 100), basic word processing (BED 143), basic word processing II (BED 244), intermediate word processing (BED 345) and spreadsheet processing (BED 493) in 2015-2016 academic session in Nnamdi Azikiwe University Awka

The performance trend of business education students in computer appreciation (CSC 100), basic word processing (BED 143), basic word processing II (BED 244), intermediate word processing (BED 345) and spreadsheet processing (BED 493) in 2016-2017 academic session in Nnamdi Azikiwe University Awka

Research Questions

The following research questions guided the study:

What is the performance trend of business education students in CSC 100, BED 143, BED 244, BED 345 and BED 493 in 2013-2014 academic session in Nnamdi Azikiwe University Awka?

What is the performance trend of business education students in CSC 100, BED 143, BED 244, BED 345 and BED 493 in 2014-2015 academic session in Nnamdi Azikiwe University Awka?

What is the performance trend of business education students in CSC 100, BED 143, BED 244, BED 345 and BED 493 in 2015-2016 academic session in Nnamdi Azikiwe University Awka?

What is the performance trend of business education students in CSC 100, BED 143, BED 244, BED 345 and BED 493 in 2016-2017 academic session in Nnamdi Azikiwe University Awka?

Method

An ex-post facto design was adopted for this study. In ex-post facto design, it is impossible for the researcher to manipulate the variables of interest since they have already occurred (Salkind, 2010). It is a content based analysis since only existing records of business education students' scores in CSC 100, BED 143, BED 244, BED 345 and BED 493 from Nnamdi Azikiwe University, Awka were used. Since, there was no possibility of experimentation and data required were already in existence in the respective files of the students. Ex-post facto design is therefore more adequate for a study of this nature (Sambo, 2008). The study was conducted in Nnamdi Azikiwe University, Awka located in Awka South Local Government Area. The population of the study comprised 413, 591, 521, 626 and 531 undergraduate business education students in 2013/14, 2014/15, 2015/16 and 2016/17 academic sessions respectively were studied without sampling. The target population is therefore

2161 undergraduate business education students. Students' scores in CSC 100, BED 143, BED 244, BED 345 and BED 493 from 2013/14 to 2016/17 academic sessions were collected and analyzed for study. The researchers with the permission of the Head of the Department, Technology and Vocational Education, Nnamdi Azikiwe University, Awka, Nigeria collected the results of the students. The results of CSC 100, BED 143, BED 244, BED 345 and BED 493 had undergone moderation before being released to students making the instrument valid and reliable for this research work. Hence, there were no validation and reliability procedures for this study. The data collected in relation to the research questions was analyzed using frequency count and percentages.

Results

The result of the study are presented and analyzed in the following tables.

Research Question 1

What is the performance trend of business education students in CSC 100, BED 143, BED 244, BED 345 and BED 493 in 2013-2014 academic sessions in Nnamdi Azikiwe University Awka?

Data collected in respect to this research question were analyzed and the results are presented in Table 1.

Table 1: Performance trend of business education students' in computer courses in 2013-2014 academic session

Course	Grade						Total
	A	B	C	D	E	F	
CSC 100	2 (4.7%)	14 (21.9%)	24 (37.5%)	10 (15.6%)	4 (6.3%)	10 (15.6%)	64
BED 143	10 (7.9%)	30 (23.8%)	30 (23.8%)	14 (11.1%)	4 (3.2%)	14 (30.2%)	126
BED 244	23 (17%)	68 (50.4%)	42 (31.1%)	1 (0.7%)	0 (0%)	1 (0.7%)	135
BED 345	0 (0%)	2 (66.7%)	1 (33.3%)	0 (0%)	0 (0%)	0 (0%)	3
BED 493	4 (4.7%)	11 (12.9%)	17 (20%)	21 (24.7%)	14 (16.5%)	18 (21.2%)	85

Data in Table 1 revealed that the business education students scored more of grades A and B in domesticated computer related courses than in CSC 100. However, business education students scored more of grade C in CSC 100 than in domesticated computer related courses. The table also revealed that business education failed domesticated computer related courses than CSC 100. More so, business education students got more weak passes in domesticated computer related courses than in CSC 100. On the whole, business education students performed slightly better in domesticated computer related courses (BED 143, 244, 345 and 493) than in Computer Appreciation (CSC 100) in 2013/2014 academic session.

Research Question 2

What is the performance trend of business education students in CSC 100, BED 143, BED 244, BED 345 and BED 493 in 2014-2015 academic session in Nnamdi Azikiwe University Awka? Data collected in respect to this research question were analyzed and the results are presented in Table 2.

Table 2: Performance trend of business education students' in computer courses in 2014-15 academic session

Course	Grade						Total
	A	B	C	D	E	F	
CSC 100	0 (0%)	27 (13.2%)	25 (12.3%)	27 (13.2%)	54 (26.5%)	71 (34.8%)	204
BED 143	18 (18%)	14 (14%)	25 (25%)	7 (7%)	22 (22%)	14 (14%)	100
BED 244	29 (22.8%)	33 (26%)	24 (18.9%)	4 (3.1%)	10 (7.9%)	27 (21.3%)	127
BED 345	0 (0%)	9 (40.9%)	7 (31.8%)	2 (9.1%)	3 (13.6%)	1 (4.5%)	22
BED 493	22 (20.3%)	27 (19.6%)	26 (18.8%)	18 (13%)	8 (5.8%)	31 (22.5%)	138

Data in Table 2 revealed that the business education students scored more of grades A, B and C in domesticated computer related courses than CSC 100. The table also revealed that business education failed CSC 100 more than domesticated computer related courses. Business education students got more weak passes in CSC 100 than in domesticated computer related courses. On the whole, business education students have a better performance in domesticated computer related courses (BED 143, 244, 345 and 493) than in Computer Appreciation (CSC 100) in 2014/2015 academic session

Research Question 3

What is the performance trend of business education students in CSC 100, BED 143, BED 244, BED 345 and BED 493 in 2015-2016 academic session in Nnamdi Azikiwe University Awka? Data collected in respect to this research question were analyzed and the results are presented in Table 3.

Table 3: Performance trend of business education students' in computer courses in 2015-2016 academic session

Course	Grade						Total
	A	B	C	D	E	F	
CSC 100	6 (3.1%)	18 (9.2%)	72 (36.7%)	49 (25%)	51 (26%)	0 (0%)	196
BED 143	12 (7.7%)	28 (17.9%)	43 (27.6%)	19 (12.2%)	31 (19.8%)	23 (14.7%)	156
BED 244	18 (17.3%)	33 (28.8%)	24 (30.8%)	13 (12.5%)	1 (1%)	10 (9.6%)	104
BED 345	2 (11.1%)	4 (22.2%)	6 (33.3%)	1 (5.6%)	4 (22.2%)	1 (5.6%)	18
BED 493	22 (14.5%)	22 (14.5%)	34 (22.4%)	15 (9.9%)	30 (19.7%)	29 (19.1%)	152

Data in Table 3 revealed that the business education students scored more of grades A and B in domesticated computer related courses than CSC 100. However, the table disclosed that business education students scored grade C in CSC 100 than in domesticated computer related courses. Result of the table shows that business education recorded failed domesticated computer related courses as none of them failed CSC 100. More so, business education students got more weak passes in CSC 100 than in domesticated computer related courses. On the whole, business education students have a better performance in domesticated computer related courses (BED 143, 244, 345 and 493) than in Computer Appreciation (CSC 100) in 2015/2016 academic session

Research Question 4

What is the performance trend of business education students in CSC 100, BED 143, BED 244, BED 345 and BED 493 in 2016/2017 academic session in Nnamdi Azikiwe University Awka? Data collected in respect to this research question were analyzed and the results are presented in Table 4.

Table 4: Performance trend of business education students' in computer courses in 2016 2017 academic session.

Course	Grade						Total
	A	B	C	D	E	F	
CSC	CSC	1	10	10	7	32	56
100	100	(0.9%)	(8.6%)	(8.6%)	(6%)	(27.6%)	(48.3%)
BED	BED	10	14	23	14	17	50
143	143	(7.8%)	(10.9%)	(18%)	(10.9%)	(13.3%)	(39.1%)
BED	BED	17	63	56	8	7	4
244	244	(11%)	(40.6%)	(36.1%)	(5.2%)	(4.5%)	(2.6%)
BED	BED	0	2	0	2	1	1
345	345	(0%)	(33.3%)	(0%)	(33.3%)	(16.7%)	(16.7%)
BED	BED	12	28	26	17	12	31
493	493	(9.5%)	(22.2%)	(20.6%)	(13.5%)	(9.5%)	(24.6%)

Data in Table 4 revealed that the business education students scored more of grades A, B and C in domesticated computer related courses than CSC 100. The table also revealed that business education failed CSC 100 more than domesticated computer related courses. Except for BED 345, business education students got more weak passes in CSC 100 than other domesticated computer related courses. On the whole, business education students have a better performance in domesticated computer related courses (BED 143, 244, 345 and 493) than in Computer Appreciation (CSC 100) in 2016/2017 academic session.

Discussion of Findings

Findings of the study revealed that business education students scored more of grade A and B in domesticated computer related courses (BED 143, 244, 345 and 493) than in CSC 100. Business education students performed slightly better in domesticated computer courses than in Computer Appreciation in 2013/2014 academic session. Outcome of the study revealed that from 2014/15 to 2016/17 academic sessions, business education students maintained a consistent better performance in domesticated computer related courses (BED 143, 244, 345 and 493) than Computer Appreciation



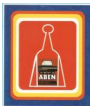
(CSC 100). The above analysis clearly indicates that business education students performed better in computer related courses domiciled in their department than the computer course offered outside their department and faculty. Perhaps, the instructional quality of computer lecturers in the Faculty of Physical Science could have a significant influence on the performance of business education students in computer appreciation. The finding that business education students performed poorly in Computer Appreciation (CSC 100) is in agreement with the study of Hwang, Wu, Tseng and Huang (2011) which reported that lack of effective instructional strategies and students' lack of practice are responsible for students' failure in a computer courses. This supports the earlier studies of Govender (2009) and Kordaki (2010) who reported that the inability of some computer lecturers to effectively teach computer courses is responsible for students' poor performance in the computer related courses. Little wonder, Walberg (1981) attributed quantity and quality of instruction as an essential factor for effective teaching and learning in the classroom. The finding that business education students scored more of grade A and B in domesticated computer courses (BED 143, 244, 345 and 493) could be attributed to the fact that business education lecturers are providing stimulating learning experiences for their students when teaching computer courses in the department of vocational education. More so, the use of student-centered instructional techniques by business education lecturers in teaching computer courses in the department of vocational education could be responsible for business education students' desirable performance in domesticated computer courses.

Implications for Lecturers' Instructional Design

The persistent poor performance of business education students in computer appreciation indicates that the computer lecturers in the Faculty of Physical Sciences are not devising active teaching strategies that foster academic motivation and provide the necessary learning experiences for business education students. The persistent use of textbook and lecture method provides low level knowledge that can only enable business education students to explain the concept of computer courses. Designing and writing computer software and programs cannot be achieved with the frequent use of traditional instructional strategies. Therefore, lecturers of computer related courses need to design instructional strategies and techniques that are practical oriented to improve students' performance in computer courses. The use of action based learning, collaborative learning, creative problem solving, peer assisted learning and problem-based learning among other active learning approaches that can persuade students to think outside the box and grasp the theoretical background and acquire practical coding, programming and algorithmic skills needed in the world of computing must be adopted by computer lecturers in tertiary institutions.

Conclusion

Without doubt, the fast pace of ICTs has not only engendered the demand for ICT professionals in the workplace but has also led to the introduction of computer science courses at different levels of education. However, the study found out that business education students are performing poorly in computer appreciation. This is probably due to poor application of requisite teaching strategies and techniques for teaching computer related courses. It is with this understanding; the researchers concluded that, lecturers in Physical Sciences should integrate effective instructional strategies that are capable of stimulating business education students' interest and performance in computer appreciation.



Recommendations

The following recommendations were made:

Computer courses should be taught by specialist lecturers/instructors who have the requisite knowledge to teach computer science courses and skills to enable students acquire practical computing competencies.

University administrators should domicile all computer courses offered by business education students in the Department of Vocational Education, so that experts in the area can teach the students using appropriate pedagogical approaches and techniques for teaching practical courses.

Educational administrators should collaborate with computer service providers on the training and retraining of computer lecturers at least twice a year to enable them acquire modern technological skills and competencies to design effective teaching strategies that can improve business education students performance in computer related courses.

References

- Ademiluyi, F.L. (2007). *Business competencies needed for effective entrepreneurship as perceived by fresh graduates*. *Business Education Journal*, 6(1), 235-246
- Azikiwe, V. C. (2010). The state of Nigerian education. *The Tribute*, p.24
- Dada, O. C. &Eni-Olorunda, T. (2014).Experienced barriers by persons with special needs on access to higher institutions. *International Journal of Education Learning and Development*, 2(3), 44-59.
- Ezenwafor, J. I., & Onokpaunu, M. O. (2017).Postgraduate business education students' rating of the teaching of soft skills in tertiary institutions for SMES operation in Nigeria. *North Asian International Research Journal of Multidisciplinary*, 3(11), 19 - 31
- Govender, I. (2009). The learning context: Influence on learning to program. *Computers and Education*, 53, 1218-1230
- Hooley, G. J., Piercy, N. F., & Nicoulad, B. (2008).*Marketing strategy and competencies positioning*. England: Pearson Education Limited
- Hwang, G. J., Wu, C. H., Tseng, Judy C. R., & Huang, I. W.(2011). Development of a ubiquitous learning platform based on a real-time help-seeking mechanism. *British Journal of Educational Technology*, 42(6), 992-1002
- Ile, C. M., & Ementa, C. N. (2016).Appraisal of information and communication technology courses in business education programme of universities in South East Nigeria. *International Journal of Higher Education*, 5(1), 200 - 207
- Kordaki, M. (2010). A drawing and multi-representational computer environment for beginner learning of programming using computer: Design and pilot formative evaluation. *Computers and Education*, 54, 69-87
- Nwazor, J.C., & Onokpaunu, M. O. (2016).Strategies considered effective for transforming business education programmes to the needs of 21st century workplace in Delta State, Nigeria. *African Journal of Education and Practice*, 1(5), 74 - 82.
- Salkind, N. J. (2010). *The encyclopaedia of research design*. USA: Sage Publications Incorporated.
- Sambo, A. A. (2008). *Research methods in education*. Ibadan: Stirling-Horden Publishers (Nig) Ltd.
- Ugwoke, E. O. (2011). Effective utilization of ICT for repositioning business education programme in tertiary institutions in Nigeria for national development. *International Journal of Educational Research*, 11(1), 202-214.
- Walberg, H. J. (1981). A psychological theory of educational productivity. In F. H. Farley & N. Gordon (Eds.), *Psychological and Education*(pp. 81-110). Chicago: National Society for the Study of Education
- Wallace W. (2016).*Microsoft office 2016 for dummies*. Harare: Cengage Learning