

IMPACT OF BLENDED LEARNING ON BUSINESS EDUCATION STUDENTS RETENTION IN WORD PROCESSING IN COLLEGES OF EDUCATION IN GOMBE STATE

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Abstract

The integration of Information and Communication Technologies in teaching and learning process is reshaping the way and manner teachers interact with their students beyond the physical four walls of a classroom environment, the study adopted the quasi-experimental research design. Quasi-experimental design. Research design which uses non-randomized group and these options occur when the researcher cannot randomly sample and assign intact or pre-existing group will be used. The study was conducted in the two Colleges of Education in Gombe State. Federal College of Education (Technical) Gombe and College of Education Billiri, Gombe State. To analyze the results, Means and standard deviation were used to answer the six research questions that guided the study, while the null hypotheses were tested using t-test statistics and Analysis of Covariance ANCOVA at 0.05 level of significance. Any p-Value greater than 0.05 was accepted while any P-value less than 0.05 was rejected. Based on the findings and implications of this study, the following recommendations were made. Business Education lecturers should adopt the use of blended learning instructional method in teaching and learning of word processing and in order to this perfectly, they should learn the process of doing it. Also, blended learning instructional method should be used as a medium of instruction at all levels of the Nigerian educational system as part of their teaching methods The Federal and State Government in collaboration with private sector should provide ICT facilities and resources adequately to implement blended instructional strategy in all Colleges of Education.

Keywords: Blended learning, Retention, ICT and Word processing.



Introduction

The lecturers now use the technologies to blend the classroom traditional learning approach. Blended learning is a way of teaching and learning which integrates e-learning with traditional learning under a unified form. According to Hussaini (2018) blended learning is an approach which combines the best elements of the online learning and face-to face learning. Blended learning is a way of teaching and learning whic Blended learning represents an educational method that converts the curriculum into computerized topics and multimedia facilities with infrastructure such as animations, text images and sounds to make the educational process more effective and valuable to the learners (Almasaeid: 2018), Baker (2014) further stated that in the blended method, e-learning tools such as software, computer facilities and the internet are merged with regular tutorials in which tutors meet with the learners in a face to face most often situations. Essentially blended learning is a kind of hybrid learning which combines the best features of traditional schooling with the advantages of online learning to deliver personalized, differentiated instruction across a group of learners (Powell; 2017). Since most learners hardly get satisfied by a single method or strategy used in teaching and learning, Lei & Wu, (2007) contend that no content can be taught using a single method pr strategy if the teacher wants the students to fully articulate the concepts taught without blending of various teaching methods particularly in the colleges of education because of the specialties in teacher education programmes. Colleges of education are institutions with a post-secondary schools' status whose major objectives is to train teachers who will teach in primary and secondary schools. According Phoebe, (2017) colleges of education are tertiary institutions in Nigeria especially established to provide training for those who aspire to become

teachers. Colleges of Education provide training in Arts, Sciences, and Vocational practices and it is committed to creating an inclusive learning environment that values and promotes diversity in all areas of teacher training business 2009 education as an area of specialization inclusive, (Osuala 2019) stated that the objective of the business education is to produce qualified and competent Nigerian Certificate in Education (NCE) teachers in business subjects who will be able to teach business subjects in secondary to top schools and other related educational institutions. Business Education is an essential part of the preparation of youths for life and living. According to Phoebe, (2017) Business Education is a programme of instruction which consists of two parts (1) Office education a vocational programme of office careers through initial, refresher and upgrading education and (2) General business education - a programme to provide students with information and competences which are needed by all in managing personal business affairs and in using initial and upgrading education. Business Education is that aspect of educational training that helps the individual to acquire relevant skills needed for a living (Ajisafe, Bolarinwa & Tuke, 2016). Therefore, business education students are trained in the colleges from the dictate of the curriculum that contains the core concept of word processing as a course which expect the students to be taught in the Nigerian colleges of education as BED 217-word processing 1: Alphabetic sentence drills, procedures and layout of business letters, personal and official letters and memos, Manuscript, Inset matters, Roman numerals, Speed and accuracy development. Word processing is skill-based approaches that is used to key-in texts or typeset, edit and format text-based documents received or created on a computer related device. However, the problem of low academic retention in



Word-Processing recorded by business education students and lecturers in Gombe State colleges of education cannot be over emphasized. This evident from the results of the student's retention obtained from Gombe state shown in Apendix A-122 state. Word Processing refers to the process of entering, editing and formatting of text. In recent times, word processors have become so powerful that the line between them and desk top publishing software has become blurred. Grace, Ekpereka and Augusta, (2019) stated that words processing can be defined as the creation of texts using a word processor, which permits users to Stop draft letters, write books and create other word centric documents on a computer. Moreover, the current situation comp of intolerable failure in some difficult-to-apprehend courses is so alarming and this has therefore made the study on blended learning relevant.

Blended learning refers to that type of education that combines various educational activities such as traditional learning in the classroom and the e-learning class. Salama, (2015) defined blended learning as the process of blending the traditional roles of teachers with the roles of the e-teacher in classes. Keengwe & Kang, (2013) stated that blended learning includes a course that combines online and face-to-face learning and involves the systematic combination of face-to-face and interactions mediated by technologies between students, teachers, and learning resources. Blended learning has been considered as an important alternative approach to overcome various limitations of both face-to-face and online learning, because the blended learning approach adopts the advantages of both types of learning (Schlager et al. 2002). Colleges of Education refer to those post-secondary schools in Nigeria whose primary objectives are to train teachers who will teach in primary and secondary

schools. According to Phoebe, (2017) Colleges of Education are tertiary institutions in Nigeria especially established to provide training for those who aspire to become teachers. Colleges of Education provide training in Arts, Sciences, and Vocational practices and it is committed to creating an inclusive learning environment that values and promote diversity in all areas of teacher training in word processing.

The academic retention is an ability to retain and reproduce or recall any past experience from the memory whenever the need arises. Retention according to Ngwoke and Eze (2018), is the process by which a child stores information in his memory for use at a later period. Retention occurs when facts or past experience are stored in long term memory. A student may be able to memorize facts in the short term, but May not retain those facts over the long -term memory. Ngwoke and Eze (2018) believe that knowledge and skills are meant to be used not to be stored in the memory, much of the experience one think are not retained were never stored in the long -term memory system.

Cognitive theory of multimedia was propounded by Meyer in 2002. The principle known as the "multimedia principle" states that "people learn more deeply from words and pictures than from words alone". However, simply adding words to pictures is not an effective way to achieve multimedia learning. The goal is to incorporate instructional media in the light of how human mind works. This is the basis for Mayer's cognitive theory of multimedia learning. This theory proposes three main assumptions when it comes to learning with multimedia: There are two separate channels (auditory and visual) for processing information (sometimes referred to as Dual-Coding theory); Each channel has a limited (finite) capacity (similar to Sweller's notion of Cognitive

Load) Learning is an active process of filtering, selecting, organizing, and integrating information based upon prior knowledge.

This theory was propounded by Levy Vygotsky in 1978, Vygotsky. The theory states that learners actively construct their own knowledge and meaning from their experiences. Constructivism is founded on the premise that, by reflecting on our experiences, individuals construct their own understanding of the world they live in. An individual generates his own rules and mental models, which uses to make sense of experiences. Learning, therefore, is simply the process of adjusting our mental models to accommodate new experiences. Constructivist theory is based on the fact that all knowledge is constructed from a base of prior knowledge. Children are not a blank slate and knowledge cannot be imparted without the child making sense of it according to his or her current conceptions.

Statement of the Problems

The state of knowledge explosion, increase in students-lecturers' ratio which give a heavy workload to the lecturers as well as the current state of Boko haram insurgency in Gombe state, conventional classroom instructions alone does not most cases bring out the desired goals from the teaching and learning process, this causes some drawback in students' performance in word processing. Therefore, there is need for an instructional strategy that could help students to learn better and retain to acquire skills in word processing and become better prepared for work in the the industry. in addition, blended learning instructional strategies is thorough to be very important for learning and skills acquisition in word processing. However, it is still not quite certain as to whether it is effective in achieving better learning outcome in word processing as well as enhancing students' retention. The line

also assigned the lecturersto establish a meeting point where students would be meeting occasionally on software packages such as Instagram, WhatsApp, LinkedIn, YouTube, Facebook, Skype, Google etc. which enable them to address problems that hinders instructional activities particularly of Word Processing students of business education students in all Colleges of Education in Gombe state. This situation is becoming rather worrisome and as such has become a matter of concern to many stakeholders such as Business Educators, employers of labor, parents and teachers. Lecturers' pedagogies, strategies and tools used in teaching students may have been defeated as shown through the students' poor performance because most colleges of education lecturers in Gombe State are used to the traditional (chalk-talk) method and punch students' retention.

Objectives of the study

The main objective of the research was to determine the impact of blended learning on business education students' retention in word processing in colleges of education in Gombe state. Specifically, therefore, the research intended to:

1. Determine the mean retention scores of students taught Word Processing using blended learning method and that taught using lecture method in Colleges of education Gombe state.
2. Determine the mean retention score of male and female students taught word processing using blended learning method in Colleges of Education Gombe State.

Research Questions

1. What is the mean retention score of students taught Word Processing using blended learning method and those taught using lecture methods in Colleges of Education Gombe State?



2. What is the mean retention score of male and female students taught word processing using blended learning method in Colleges of Education Gombe state?

Hypotheses

The following null hypotheses were formulated for the study which tested at 0.05 level of significance:

1. Ho₁: There is no significant difference between the mean retention scores of student taught word processing using blended learning and those taught using lecture methods in Colleges of Education Gombe State.
2. Ho₂: There is no significant interaction effects of method and gender on the mean retention scores of students taught word processing using blended methods in Colleges of Education Gombe State.

Methodology

This research was employed quasi-experimental research design. Quasi-experimental design, according to Nwango (2015), is a research design which uses non-randomized group and these options occur when the researcher cannot randomly sample and assign the subjects and, in this case, intact or pre-existing group will be used. The study was conducted in the two Colleges of Education in Gombe State. Federal College of Education (Technical) Gombe and College of Education Billiri, Gombe

State. Gombe State shares borders with Borno State on the East, Bauchi on the West, Gombe State on the South and Niger Republic on the North. Gombe State is situated along the total land area of 340 square kilometers. The two research assistants, who were the Business Education Lecturers in the selected Colleges of Education were used to administer pre-test multiple choice tests of 30 items. before the treatment under the supervision of the researcher, then the results were retrieved immediately and the scores recorded. To analyze the results, Means and standard deviation were used to answer the two research questions that guided the study, while the null hypotheses were tested using t-test statistics and Analysis of Covariance (ANCOVA) at 0.05 level of significance. Any P-Value greater than 0.05 was accepted while any P-value less than 0.05 was rejected. Analysis was done using Statistical Package for Social Science (SPSS, version 26) were used for the analysis.

Results

The result was presented in line with the research questions and null hypotheses that guided the study.

Research Question One: What is the mean retention t score of students taught Word Processing using blended learning method and those that were taught using lecture method? Data for answering research question one were presented on Table I below,

Table 1: Pre-test and post-test Mean retention scores of students taught word Processing using blended instructional approach and those taught using lecture methods.

Groups	pre-test			post-test		Mean gain
	N	x	SD	x	SD	
Experimental	57	80.11	13.47	83.63	10.65	3.53
Control	70	30.60	8.86	66.14	9.72	35.21



The results presented in Table I show that the students taught word processing using blended learning instructional delivery had pre-test mean score of 13.47, post-test mean retention score of 80.11 and mean retention gain score of 83.63. On the other hand, students taught word processing with lecture method had pre-test mean retention score of 66.14, post-test mean

retention score of 10.65 with the mean retention gain of 3.53

Research Question Two:

What is the mean retention score of male and female students taught word processing using blended learning method? Data for answering research question two is presented on Table 2 below:

Table 2: Means and standard Deviation of Pre-test and Post-test Scores of the male and female students in the retention test in word processing.

Treatment	Gender	pre-test		post-test		Mean gain
	N	x	SD	x	SD	
Male	35	83.37	7.85	89.69	9.79	6.33
Female	22	74.91	18.39	9.95	9.95	10.04

Data presented in table 2 shows the mean and standard deviation of the male and female students of experimental group on pre-test and post-test scores. The male students had a pre-test mean score of 33.57 and standard deviation of 9.58 and a post-test mean retention score of 83.37 and standard deviation of 7.85 respectively, making mean gain of 89.69 in favor of post-test. While the Female experimental class had a pre-test mean score of 9.79 and standard deviation of 6.32 and post-test mean score of 74.91 and standard deviation of 18.39, making mean gain of 84.95 in favor of post-test. With these results, male students taught word

processing using blended methods had a higher post-test means scores 10.04 than female students in retention test.

Hypothesis One:

H₀₁: There is no significant difference between the mean retention scores of student taught word processing using blended learning and those taught using lecture methods. Pre-test of control and experimental groups and post-test of the two groups were compared separately to determine the effect of the treatment on students' performance. The results of the analysis are presented in table 3.

Table 3: t-test Comparisons of the Pre-test and Post-test Mean Retention Scores of Experimental and Control Groups

Group	N	Mean(x)	SD	Df	t-value	p-value	Decision
Blended	57	83.63	10.65				
(Online and demonstration)				125	9.662	0.000	NS
Lecture	70	66.14	9.71				



Table 3 shows the 1- test of the pre-test and post-test means retention scores of those taught word processing using both blended and lecture group. At pre-test stage, the Lecture group score is statistically not different from the experimental group retention scores when both were examined using WPAT at ($t_{cal}=9.662$, $df = 125$, $p = 0.000$). This implies that, the control and experimental groups are of similar knowledge level before the

study. At the post stage, the experimental group retention score is significantly higher than the control group with ($t_{cal}=9.71$, $df 125$, $p0.000$).

Hypothesis Two:

There is no significant interaction effects of method and gender on the mean retention scores of students taught word processing using blended methods.

Table 4: Analysis of Covariance (ANCOVA) of the interaction effect of methods and gender on retention scores of students taught word processing

Source	Type III Sum of squares	Df	Mean square	F	sig	
Dec						
Corrected model	9945.613	4	2486.403	24.207	.000	NS
Intercept	20978.474	1	20978.474	204.237	.000	
Pretest	112.869	1	112.869	.297	.437	
Method	153.312	1	153.312	1.493	.224	NS
Gender	1.189. 1	1.189		.012	.915	
Method * Gender	976.047	1	976.04	5.296	.023	
Error	12531.379	122	102.716			
Total	717781.000	127				
Corrected total	22476.992	126				

The result in Table 4 shows that with respect to interaction effect of treatment and gender on retention scores of students taught word processing, an F-ratio of 1.493 was obtained with associated probability value of .224. Since the associated probability value of 0.0224 was less than 0.05 set bench mark, the null hypothesis (Ho2) which stated that there is no significant interaction effect of method and gender on retention scores of students taught word processing was rejected. The inference draw therefore is that, there was no significant interaction effect of treatment and gender on retention scores of students taught word processing.

Discussion of the Findings

The findings of the study were organized and discussed according to the research questions answered and hypotheses tested. Research question one sought to determine

the impact of blended learning on retention of NCE11 students.

in word processing The findings of this study showed that the impact of blended learning instructional method on student's retention in word processing were significantly higher than the retention of lecture method. This finding is in line with findings of Musa (2019) whose findings revealed that there is no significant difference between the arithmetic means of the students' performance in the retention in social studies as a whole due to the teaching method and gender and the interaction between them

Research question two. The finding showed that learning word processing using blended learning instructional approach improved male students' academic retention in word processing than their female counterpart. In other words, teaching word processing using

blended learning instructional approach to be more effective in male students. The findings of the study showed that there was no significant difference in the mean retention scores of male and female NCE11 Students taught word processing using blended learning instructional approach. This finding corroborated the work of Sani (2017) who conducted a study on the impact of gender academic retention in secondary school social studies.

Conclusions

Despite the tremendous advance of information and communication technology usage in teaching and learning, the continuous poor performance and quality of Nigerian graduates is causing great deal of concern to stakeholders in Nigerian education sector and the society at large. In this study, it was observed that blended learning instructional strategy is more effective than lecture method in improving student's retention in word processing. Based on this, it was concluded that there was no significant interaction effect of method and gender on retention scores of students taught word processing. The study also showed that blended learning instructional approach improved female students' retention in word processing than their male counterpart. We can therefore, conclude that gender influenced the retention of the students where the female students taught word processing using blended learning have higher post-test mean retention scores than males counterpart. Based on this research, it was concluded that there was no significant interaction effect of method and gender on retention scores of students taught word processing.

Recommendation

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

1. Seminar, workshop and conferences should be organized by

the NCCE in collaboration with ministry of Education where lecturers, institutions administrators and students will be trained on how to make effective use of blended learning instructional strategies in their day-to-day teaching and learning activities.

2. Modern instructional materials such as well-equipped laboratories to facilitate quality teaching and learning of word processing should be provided by the government and school administrators at all levels
3. The Federal and State Government in collaboration with private sector should provide ICT facilities and resources adequately to implement blended instructional strategy in all Colleges of Education as well as other sisters' institutions

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