



INFLUENCE OF TECHNOLOGICAL INNOVATIONS ON BUSINESS EDUCATION LECTURERS' JOB PERFORMANCE IN TERTIARY INSTITUTIONS IN CROSS RIVER STATE, NIGERIA

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Abstract: This study determined the influence of technological innovations on business education lecturers' job performance in tertiary institutions in Cross River State, Nigeria. To achieve the purpose of the study, two research questions were raised and two hypotheses were formulated to guide the study. The study adopted survey research design. The population of the study consists of 136 business education lecturers in tertiary institutions in Cross River State, Nigeria; they were all involved in the study due to the manageable size of the population. A 14 item questionnaire titled "Technological Innovations and Business Education Lecturers' Job Performance Questionnaire" (TIBELJPQ) was used for data collection. The TIBELJPQ was validated by three (3) experts. The overall Cronbach Alpha Reliability coefficient was 0.94. One hundred and thirty six (136) copies were successfully retrieved. The data collected were analysed using mean (X) and Standard Deviation (SD) to answer the research questions. The null hypotheses were tested at 0.05 level of significance using independent t-test. The findings from data analysis showed that interactive whiteboard and multi projector, utilisation influenced business education lecturers' job performance in tertiary institutions. While the test of hypotheses revealed that there is no significant difference in the mean responses of male and female business educators on the influence of interactive and whiteboard utilisation on lecturers' job performance in tertiary institutions based on the year of experiences. Based on the findings of the study, it was recommended among others that institution's management should organize workshops on how to use interactive whiteboards for lesson delivery, as this would ensure academic staff use the available IWBs to deliver their classes. The implications indicate that the lecturers of these institutions would perform their duties with ease, especially when they utilise these technological innovations

Key words: Technological. Innovations, business education, lecturers', and job performance

Introduction

Across the globe, it has been observed that countries that thrive in all sectors of their economy did embrace education as their bedrock. It is therefore not farfetched to understand that a nation is as good as the kind of education system it operates. The development of a country's natural resources is dependent on the quality of its human resources and the quality of human resources in turn depends on the quality of education (Akpan, 2018). Employees are the most valuable assets in any organization and they play an important role in achievement of organization's goals and objectives. Educational institution like any other organization is established with the aim of achieving specific goals and objectives. Academic staff members are the key resource

in higher education institutions and play a vital role in achieving the institutions goals. The main goal of any school is to prepare students to be globally competitive and to become useful citizens to them and the nation's is an indispensable tool for the growth of every country of the world.

Business Education is an essential element of this general education. According to Osuala (2004), business education is that aspect of vocational education which emphasizes job competency, career preparation and work adjustments. Business Education is a form of vocational education according to Bode (2018) that is directed towards developing the learner to become productive in teaching, paid employment and self-employment. This may not be achieved without the

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business educators' performing their jobs effectively. A business educator in the context of this research is a lecturer that had undertaken an educational programme in Business Education and teaches Business Education courses to business education students in the Faculty of Education in tertiary institutions. Hasan, Boostanimehr and Bhargava (2011) defined the performance as the level of target achievement for both the institution and the individual (employee). While, Akposi (2016) considered employee performance as individual's work achievement after making a great effort.

Business education lecturers' job performance in the context of this study is the act of accomplishing or executing a given job/tasks by the educator. More so, it is seen as the duties performed by the business educator at a particular period in the school system in achieving educational objectives of the programme. According to Su and Wood (2012), there are three criteria of a good academic staff at tertiary institutions. First, the good academic staff at the institution are those who reflects on what they do to develop a greater awareness of themselves and their students. Second, a good academic staff at the institution are those that involve students in dialogue motivated by a desire to know and understand them and their own practice better. Third, a good academic staff is expected to be highly qualified for the position and have the specialist knowledge in the subject area which they teach, as well as, the necessary skills to pass on this knowledge to students. Hence, Business education lecturers' job performance can be measured through the extent to which they effectively teach allocated workloads, attendance of learned conferences, publication of books and journal articles etc.

However, it has been observed that some business educators in the study area have not been performing their jobs optimally. According to Ikot (2018), some educators in Cross River State find it challenging to deliver instructions effectively and they do not manage the class effectively during instructions. The researcher has also observed some visible signs of poor job performance among some business educators in tertiary institutions in Cross River State, which include: poor preparation of lecture notes, uninteresting mode of delivery of lecture, and unsatisfactory method of evaluation. Although, some researchers like Oseh (2021); and Udida (2017) have attributed educators' poor performance to lack of motivational factors,

infrastructural facilities, instructional skills, professional skills and capacity development. Others like Ntukidem (2012); Abigail and Emmanuel (2016) asserted that poor job performance by educators was a result of insufficient staff strength, high students' enrolment, lack of teaching resources, poor infrastructural facilities, poor learning environment, and lack of funds. However, this problem still exists. Though the problem of poor job performance of business educators might be connected to their non-utilization of technological innovations.

It is certainly true that Educational Technology has greatly changed education. It has morphed how teachers teach and how learners learn. Classroom has been equipped with tools and devices to enhance the teaching and learning environment. There is another kind of classroom, which its walls have disappeared. Alonso Suárez (2013) opined that these changes do not change the fundamental learning approaches, but they have changed the way people do things and how they see them. The traditional view of the learning process has been shifted to a new view, which incorporates hi-tech as a tool for teaching and learning processes. Van Laer, Beauchamp and Colpaert (2014) stated that Interactive Whiteboard (IWB) is one of the technologies that transform classroom activities and teachers' role. Chalkboard has been developed into interactive electronic board. A learner can see and feel his/her achievement at the same time. By finger-touch, a user can write, draw, drag an object, manipulate a text or shape something. It is true that IWB is a teaching tool and learning resource at the same time. A teacher can bring the outside world inside the classroom through the Internet.

Interactive Board is the fusion of two types of technologies i.e. graphic technologies (whose purpose is to project the content) and computer technologies (which are known for storing, processing and retrieval of information). Peled, Medvin and Domanski (2015) defined interactive whiteboard as an instructional tool that allows computer images to be displayed onto a board using a digital projector. The instructor can then manipulate the elements on the board by using his finger as a mouse directly on the screen. Items can be dragged, clicked and copied and the lecturer can handwrite notes, which can be transformed into text and saved. Ozerbas (2013) asserted that there are several types of IWBs versions because of the development of software and



manufactures. According to design, there are two kinds of Interactive Whiteboards (IWBs): front projection board and rear projection board. The former works with an existing data projector and computer. The IWBs are always fixed to classroom walls while the data projector is hooked to the ceiling of the classroom.

Interactive whiteboards are dry erasable whiteboards that comes with a Liquefied Crystal Display (LCD) projector. Whatever that could be seen on a computer screen can be replicated on this whiteboard. It is a known fact that the impact of communicating a matter visually is deeper than doing it verbally. Therefore, Weiss (2016) stated that the objective of these whiteboards is to make the students more engaging. Similarly, multi projector is another technology that is popularly used in some Nigerian tertiary institutions for lesson delivery. It is evident that Business Education as a course of study admits large number of students yearly in most tertiary institutions; hence, measures should be in place to provide for their needs. One of such resources is the multi projector. This can used during lesson delivery, research project or seminar defense as the case may be. Considering that the world is in its computer era, most services have gone digital, Hence, digital library is another technological innovation.

Every organization aims at achieving specific goals and objectives. Resources constitute a major strategic factor in organizational functioning. To accomplish these objectives, tasks must be identified, tools and other resources must be provided and utilized appropriately. Same with Education, it is necessary for everyone and very important, as without education, no one can lead a good life. Uguru and Abdullahi (2017) agreed that the goal of functional education is to prepare its beneficiaries with all it takes to adjust well in the society, contribute meaningfully to the development of the society, and as well as live a fulfilled life.

Teaching and learning are the important elements in education. The teacher uses different methods and material to teach his/her students to aid effective learning. With the passage of time, different methods and techniques are utilized in the field of education and teachers use different kind of aids to make teaching effective. Teaching aids arouse the interest of learners and help the teachers to explain the concepts easily. The unavailability of these teaching aids/instructional materials to teach the students are likely to lead to poor

learning outcomes and also affect the lecturers' output. Audio tape, multi projectors, model, radio, computer and video are very important resources in the teaching and learning process especially in this age of ICT.

A multi projector is an instructional material or a teaching aid; Isola (2010) referred to instructional materials as objects or devices, which help the teacher to make a lesson much clearer to the learner. Material like charts, maps, models, film strip, multi projectors, radio, television are example of instructional aids (Rather, 2004). A multi projector is therefore a technological device, visual in nature which may represent diagrams or a combination of pictorial, graphic, numerical or verbal materials prepared to give a clear visual summary of vital processes, concepts or a set of relationships (Akpan, 2018). They are used to present ideas and concepts which may be difficult to understand if presented using the verbal code only.

According to Walter (2018), the use of multi projector in teaching improves the students' reading skill and stimulates creativity in the learners. A multi projector presents an abstract rendition of reality because what is presented is shown as effective in the cognitive domain of learning. A multi projector can be utilized to present a filmstrip, which is an important method of teaching. A filmstrip is a roll of 35 mm transparent film containing a series of related still pictures showing one concept at a time (Ikot, 2018). Filmstrip can be used to teach skills, show relationships in order to convey knowledge, to affect attitude through individual and independent study groups or other tutorial groups viewing (Gupta, 2016).

In his opinion, Etim (2016) stated that learners can learn more easily and retain the information longer when concepts and other subject matters are presented using instructional pictures with a multi projector. Multi projectors are used to supplement verbal explanation of concepts or any description so that the lesson could be real to the students. The absence of these materials in teaching of practical business education courses could make the class very uninteresting to students and discourage learning thereby leading to low or poor achievement. It has been observed by the researcher that only few business education lecturers utilize this technological innovation because it has not been made available by the school management.

Multi projector utilisation is very important because what students hear can easily be forgotten but what they



see cannot be easily forgotten and it last longer in their memory. Nguyen, Williams and Nguyen (2012) listed LCD multi projector, computer, speakers and over-head multi projector among the tools that support lectures in classroom. There are some complex concepts that teacher may not be able to teach effectively but with the aid of multi projectors, such concepts could be effectively demonstrated to the students.

Multi projectors as visual aids are important in the education system. Multi projectors when used in classrooms encourage teaching learning process, make the process easier and interesting. This aid is the best tool for making teaching effective and the best dissemination of knowledge. A multi projector when effectively utilized can provide the learners with realistic experience, which capture their attention and help in the understanding of the historical phenomena. Utilisation of multi projector in the process of learning appeal to the mind through the visual auditory senses (Jain, 2004). This is in line with a famous Chinese proverb that “one seeing is worth, a hundred words” it is fact that we receive knowledge through our senses. There is another proverb that “if we hear we forget, if we see we remember, and if we do something we know it” so it means that use of multi projector make teaching learning process more effective.

In addition, Kishore (2003) stated that utilization of multi projector stimulates students’ thinking and understanding. The use of multi projector in teaching learning process has multifarious values (Mohanty, 2011). It gives opportunity to speakers to make a more professional and consistent presentation. The teaching profession is filled with countless opportunities to enrich the academic lives of students, while some concepts and educational objectives will be easy for students to grasp, other will require the business education lecturer to think creatively to ensure that important learning objectives are met. Using multi projector in teaching is one way to enhance lesson plans and give students additional ways to process subject information (Kunari, 2016). Multi projector presents unit of knowledge through visual stimuli with a view to help learning. It concretizes the knowledge to be presented and help in making learning experience real, lively and vital. It supplements the work of the teacher and help in the study of the textbooks. According to Nicholls (2010), exclusive oral teaching cannot be the key to successful pedagogy. To make the

teaching learning process interesting the teacher has to use instructional aid like the multi projector. Utilisation of multi projectors in the teaching-learning process, facilitate the learning of abstract concepts and ideas, keep the learners busy and active thus, increasing their participation in the lesson. It also save teachers’ energy of talking too much, illustrate the concepts clearer and better than the teachers’ words only and help overcome the limitations of the classroom by making the inaccessible accessible. Furthermore, it helps broaden students’ knowledge, increase their level of understanding as well as discourage rote-learning and help to stimulate and motivate learners. Oyeniran (2003) observed that students learn best if they are given the opportunity to see and to make observations of what they are taught. Hence, the utilisation of multi projector as a technological innovation with regards to lecturers’ job performance cannot be overemphasized. Therefore the study determined the influence of technological innovations on business education lecturers’ job performance in tertiary institutions in Cross River State, Nigeria.

Purpose of the study

The main purpose of this study was to determine the influence of technological innovations on business education lecturers’ job performance in tertiary institutions in Cross River State, Nigeria. Specifically, the study sought to determine the influence of:

1. Interactive whiteboard utilisation on business education lecturers’ job performance in tertiary institutions.
2. Multi projector utilisation on business education lecturers’ job performance in tertiary institutions

Research questions

The following research questions were posed as a guide to the study:

1. What is the influence of interactive whiteboard utilisation on business education lecturers’ job performance in tertiary institutions?
2. How does multi projector utilisation influence business education lecturers’ job performance in tertiary institutions?

Null Hypotheses

The following hypotheses are formulated for the study and were statistically tested at 0.05 level of significance.

1. There is no significant difference in the mean responses of male and female business educators on the



influence of interactive whiteboard utilisation on lecturers’ job performance in tertiary institutions.

2 There is no significant difference in the mean responses of business educators on the influence of multi projector utilisation on lecturers’ job performance in tertiary institutions based on the year of experiences.

Methodology

The study adopted survey research design. The population of the study consists of 136 business education lecturers in tertiary institutions in Cross River State, Nigeria; they were all involved in the study due to the manageable size of the population. A 14 item questionnaire titled “Technological Innovations and Business Education Lecturers’ Job Performance Questionnaire” (TIBELJPQ) was used for data collection. The TIBELJPQ was validated by three (3) experts. The overall Cronbach Alpha Reliability

Table 1: Mean Ratings of Respondents on Influence of Interactive Whiteboard Utilisation on Business Education Lecturers’ Job Performance in Tertiary Institutions (n=130)

S/No	Influence of Interactive Whiteboard on Job Performance	N	X	SD	Decision
1.	Teaching with IWB improves business education lecturers teaching/learning performance	130	3.70	0.46	Strongly Agree
2.	Interactive white board help teachers to clarify subject matter better.	130	3.38	0.49	Agree
3.	The use of Interactive white board is mostly a great experience to improve business education lecturers’ knowledge and reduce note memorization.	130	3.41	0.49	Agree
4.	Interactive whiteboard helps teachers to enhance cognitive, affective and psychomotor skills amongst students	130	3.44	0.57	Agree
5.	Interactive whiteboard provides business education lecturers with simple procedure for instructional purpose during lesson delivery.	130	3.42	0.51	Agree
6.	Interactive whiteboard provides medium for Business education lecturers to impact knowledge and inspire students	130	3.44	0.50	Agree
7.	Interactive whiteboard assists business education lecturers to teach new concepts in a developmentally appropriate way	130	3.43	0.49	Agree
Grand Mean			3.46	0.50	Agree

Note: X= Mean; SD = Standard Deviation

From the results displayed in Table 1, the grand mean of 3.46 revealed that business educators agree that interactive whiteboard utilisation influence lecturers’ job performance in tertiary institutions. All the seven items

coefficient was 0.94. One hundred and thirty six (136) copies were successfully retrieved. The data collected were analysed using mean (X) and Standard Deviation (SD) to answer the research questions. The null hypotheses were tested at 0.05 level of significance using independent t-test.

RESULTS

The results are presented in the order of the seven research questions and seven null hypotheses in the tables below.

Research Questions

Research Question 1

What is the influence of interactive whiteboard utilisation on business education lecturers’ job performance in tertiary institutions?

The data providing answers to the above research question are presented in Table 1 below.

analysed shows items (1-7) obtained the mean scores above 2.50. The standard deviations for all the items are within the same range indicating that respondents are homogenous in their mean ratings.



Research Question 2

How does multi projector utilisation influence business education lecturers’ job performance in tertiary institutions?

The data providing answers to the above research question are presented in Table 2.

Table 2: Mean Ratings of Respondents on Influence of Multi Projector Utilisation on Business Education Lecturers’ Job Performance in Tertiary Institutions (n=130)

S/No	Influence of Multi Projector Utilisation on Job Performance	N	\bar{X}	SD	Decision
8.	The use of multi projector helps business education lecturers to delivery lesson with ease.	130	3.58	0.55	Agree
9.	Multi projector is used to emphasise key point in lesson while teaching	130	3.38	0.59	Agree
10.	The use of multi projector help teacher to promote class interaction during instructional delivery	130	3.51	0.62	Agree
11.	It helps teacher to increase student’s participation in class overtime.	130	3.25	0.61	Agree
12.	Multi projector is use by business education lecturers to display likely exam questions during lecture period.	130	3.28	0.63	Agree
13.	Multi projector also helps to business education lecturer’s presentation of class assignments which promotes interaction	130	3.38	0.53	Agree
14.	The use of multi projector by business education lecturers has increased students’ participation in classes overtime	130	3.40	0.52	Agree
Grand Mean		3.40	0.58	Agree	

Note: \bar{X} = Mean; SD = Standard Deviation

The results in Table 2 showed that all the seven items (8-14) obtained the mean scores above 2.50. The grand mean of 3.40 revealed that business educators agree that multi projector utilisation influence lecturers’ job performance in tertiary institutions. The standard deviations for all the items are within the same range

indicating that respondents are homogenous in their mean ratings.

Research Hypotheses

H0₁: There is no significant difference in the mean responses of male and female business educators on the influence of interactive whiteboard utilisation on lecturers’ job performance in tertiary institutions.

Table 3: Independent t-test of Mean Ratings of Responses of Male and Female Business Educators on the Influence of Interactive Whiteboard Utilisation on Lecturers’ Job Performance in Tertiary Institutions (n=130)

Items	Category of Respondents	N	\bar{X}	SD	df	t-cal	Alpha	p-val.	Decision
1.	Male Business Educators	73	3.71	.456	.34	0.05	.731	NS	
	Female Business Educators	57	3.68	.469					
2.	Male Business Educators	73	3.38	.490	-.03	0.05	.978	NS	
	Female Business Educators	57	3.39	.491					



3.	Male Business Educators	73	3.42	.498					
	Female Business Educators	57	3.40	.495	.24	0.05	.810	NS	
4.	Male Business Educators	73	3.45	.578					
	Female Business Educators	57	3.44	.567	.13	0.05	.895	NS	
5.	Male Business Educators	73	3.45	.501					
	Female Business Educators	57	3.39	.526	.73	0.05	.467	NS	
6.	Male Business Educators	73	3.46	.502					
	Female Business Educators	57	3.42	.498	.51	0.05	.614	NS	
7.	Male Business Educators	73	3.45	.501					
	Female Business Educators	57	3.42	.498	.35	0.05	.726	NS	

Note: Level of Sig. = 0.05; NS = Not Significant; S = Significant

The result of the t-test analyses presented in Table 3 indicated that there is no significant difference in the mean responses of male and female business educators on the influence of interactive whiteboard utilisation on lecturers' job performance in tertiary institutions. This is because data in Table 8 showed that the p-values for all items (item 1-7) ranged from 0.467 - 0.978, which is greater than 0.05. Since the p-values for all items is greater than p (.05), this implies that the null hypothesis

that stated that there is no significant difference in the mean responses of male and female business educators on the influence of interactive whiteboard utilisation on lecturers' job performance in tertiary institutions is retained.

H0₂: There is no significant difference in the mean responses of business educators on the influence of multi projector utilisation on lecturers' job performance in tertiary institutions based on the year of experience.

Table 4: One Way Analysis of Variance of the Influence of Multi Projector Utilisation on Lecturers' Job Performance in Tertiary Institutions Based on the Year of Experience (n=130)

Item	Variables	N	X	SD		
8	0-5 years	42	3.64	0.618		
	6-10 years	55	3.60	0.494		
	Above 10 years	33	3.45	0.564		
	Total	130	3.58	0.555		
Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-value	p-value	
Between groups	0.7061	2	0.3530	1.1489	.320	
Within groups	39.0247	127	0.3073			
Total	39.7308	129				
Item	Variables	N	X	SD		
9	0-5 years	42	3.45	0.504		
	6-10 years	55	3.44	0.570		
	Above 10 years	33	3.18	0.683		



	Total	130	3.38	0.587	
Source of Variation	Sum of Squares		Degree of Freedom	Mean Square	F-value
p-value					
Between groups	1.6896	2	0.8448	2.5044	.086
Within groups	42.8411	127	0.3373		
Total	44.5308	129			
Item	Variables	N	X	SD	
10	0-5 years	42	3.57	0.547	
	6-10 years	55	3.51	0.663	
	Above 10 years	33	3.42	0.662	
	Total	130	3.51	0.626	
Source of Variation	Sum of Squares		Degree of Freedom	Mean Square	F-value
p-value					
Between groups	0.4005	2	0.2003	0.5077	.603
Within groups	50.0918	127	0.3944		
Total	50.4923	129			
Item	Variables	N	X	SD	
11	0-5 years	42	3.24	0.576	
	6-10 years	55	3.22	0.629	
	Above 10 years	33	3.33	0.645	
	Total	130	3.25	0.614	
Source of Variation	Sum of Squares		Degree of Freedom	Mean Square	F-value
p-value					
Between groups	0.2889	2	0.1444	0.3795	.685
Within groups	48.3342	127	0.3806		
Total	48.6231	129			
Item	Variables	N	X	SD	
12	0-5 years	42	3.28	0.636	
	6-10 years	55	3.36	0.649	
	Above 10 years	33	3.12	0.600	
	Total	130	3.28	0.635	
Source of Variation	Sum of Squares		Degree of Freedom	Mean Square	F-value
p-value					
Between groups	1.2169	2	0.6085	1.5207	.222
Within groups	50.8139	127	0.4001		
Total	52.0308	129			
Item	Variables	N	X	SD	
13	0-5 years	42	3.36	0.533	
	6-10 years	55	3.49	0.540	



Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-value
Above 10 years	33	3.24	0.502	
Total	130	3.38	0.534	
Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-value
p-value				
Between groups	1.3203	2	0.6602	
			2.3651	.098
Within groups	35.4489	127	0.2791	
Total	36.7692	129		
Item	Variables	N	X	SD
14	0-5 years	42	3.36	0.485
	6-10 years	55	3.51	0.540
	Above 10 years	33	3.27	0.517
	Total	130	3.40	0.522
Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-value
p-value				
Between groups	1.2662	2	0.6331	
			2.3695	.098
Within groups	33.9338	127	0.2672	
Total	35.2000	129		

Note: Level of Sig. = 0.05; NS = Not Significant; S = Significant

The result of the t-test analyses presented in Table 4 indicated that there is no significant difference in the mean responses of business educators on the influence of multi projector utilisation on lecturers' job performance in tertiary institutions based on the year of experience. This is because data in Table 9 showed that the p-values for all items (item 8-14) ranged from 0.086 - 0.685, which is greater than 0.05. Since the p-values for all items is greater than p (.05), this implies that the null hypothesis that stated that there is no significant difference in the mean responses of business educators on the influence of multi projector utilisation on lecturers' job performance in tertiary institutions based on the year of experience is retained.

Influence of Interactive Whiteboard Utilisation on Lecturers' Job Performance in Tertiary Institutions

Based on the data analysed on the influence of interactive whiteboard utilisation on business education lecturers' job performance in tertiary institutions, the responses of the respondents agreed that interactive whiteboard utilisation influences business education lecturers' job performance in tertiary institutions. This is because an interactive WhiteBoard is an interactive electronic white board which can be used for different educational purposes. It is connected to a computer and to a projector

which displays the image seen on the computer screen. The finding is supported by Bakadam and Asiri (2012) who opined that IWBs with the support of the IWB software enable following features: Highlighting, screen-shade, spotlight, annotation, capturing, record, handwriting recognition (OCR), zooming, screen sharing over network, and so on. In the same vein, Alvarez, Salavati, Nussbaum and Milrad (2013); Emeagwali and Naghdipour (2013); Murcia (2014) supported the finding, the authors stated that IWBs have been performed in several disciplines and regarded as having potential to facilitate instruction owing to numerous advantages including easy-to-use, interactivity, adaptability to various environments, and usability with most of instructional methods and techniques successfully. By virtue of all those benefits of IWBs, Katwibun (2014); Erbas, Ince and Kaya (2015) in consonance with the finding stated that it enhances various crucial indicators including learners' interaction, achievement, active participation, attention, and motivation in a positive manner.

Based on finding of the study, Emeagwali and Naghdipour (2013) analysis showed that interactive whiteboard could have positive effects on teaching. Interactive Whiteboard as presentational tool help teachers in many ways. Similarly, Ozerbas (2013) stated



that this assistance included increasing teaching time by allowing teachers to present more than one resource in the lesson and more efficiently. In line with the finding, De Vita, Verschaffel and Elen (2014) opined that learning activities with an interactive whiteboard may include, but are not limited to the following: i. Manipulating text and images ii. Making notes in digital ink iii. Saving notes for later review by using e-mail, the Web or print iv. Viewing websites as a group v. Demonstrating or using software at the front of a room without being tied to a computer vii. Creating digital lesson activities with templates, images and multimedia viii. Writing notes over educational video clips viii. Using presentation tools that are included with the white boarding software to enhance learning materials ix. Showcasing student presentations.

However, the findings on the hypothesis tested showed that there is no significant difference in the mean responses of male and female business educators on the influence of interactive whiteboard utilisation on lecturers' job performance in tertiary institutions. The finding contradicts the thoughts of Wajcman (2006) who argued that most women are reluctant to go into technology because of the sex-stereotyped definition of technology as an activity appropriate for men. In her words: As with science, the very language of technology, its symbolism, is masculine. It is not simply a question of acquiring skills, because these skills are embedded in a culture of masculinity that is largely coterminous with the culture of technology...therefore to enter this world, to learn its language, women have to first forsake their femininity" (Wajcman, 2006:73). The finding also disagrees with Kofi Annan (2003), who was then United Nations Secretary General, said that: "The so-called digital divide is actually several gaps in one... There is a gender divide, with women and girls enjoying less access to information technology than men and boys".

Influence of Multi Projector Utilisation on Lecturers' Job Performance in Tertiary Institutions

Based on the data analysed on the influence of multi projector utilisation on business education lecturers' job performance in tertiary institutions, the responses of the respondents agreed that multi projector utilisation influences business education lecturers' job performance in tertiary institutions. This is so because a multi projector as an instructional material, also acts as a teaching aid. The finding agrees with Walter (2018), who

asserted that the use of multi projector in teaching improves the students' reading skill and stimulates creativity in the learners. A multi projector presents an abstract rendition of reality because what is presented is shown as effective in the cognitive domain of learning. In his opinion which supports the finding, Etim (2016) stated that learners can learn more easily and retain the information longer when concepts and other subject matters are presented using instructional pictures with a multi projector. Multi projectors are used to supplement verbal explanation of concepts or any description so that the lesson could be real to the students. The absence of these materials in teaching of practical business education courses could make the class very uninteresting to students and discourage learning thereby leading to low or poor achievement. It has been observed by the researcher that only few business education lecturers utilize this technological innovation because it has not been made available by the school management. Multi projector utilisation is very important because what students hear can easily be forgotten but what they see cannot be easily forgotten and it last longer in their memory. The finding is supported by Nguyen, Williams and Nguyen (2012) who listed LCD multi projector, computer, speakers and over-head multi projector among the tools that support lectures in classroom. There are some complex concepts that teacher may not be able to teach effectively but with the aid of multi projectors, such concepts could be effectively demonstrated to the students. However, the findings on the hypothesis tested showed that there is no significant difference in the mean responses of business educators on the influence of multi projector utilisation on lecturers' job performance in tertiary institutions based on the year of experience.

Conclusion

Based on the findings of the study, it was concluded that interactive whiteboard and multi projector utilisation influenced business education lecturers' job performance in tertiary institutions. On the findings based on hypotheses tested, it was concluded that gender, institutional type (University or College of Education) and institutional ownership (private or public) do not affect the opinion of the respondents on the influence of interactive and whiteboard utilisation on business education lecturers' job performance in tertiary institutions.

Recommendations



Based on the findings of the study, the researcher recommended that:

1. Institution's management should organize workshops on how to use interactive whiteboards for lesson delivery, as this would ensure academic staff use the available IWBs to deliver their classes.

2. Departmental Heads should ensure lecture halls have at least one multi projector, this would ensure lessons and key points are displayed for students to jot down, even when the class is crowded

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