

## Application of Multimedia and Hypermedia Technologies in the Teaching of Business Education in Nigeria Universities as Perceived by Lecturers in Universities in South-South and South-West

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### ABSTRACT

*This study examined the application of multimedia and hypermedia technologies in the teaching of business education in Nigerian universities. Two research questions and four hypotheses were used for the study. The research design adopted for this study is descriptive design. The population which also served as sample comprised 174 lecturers in Business Education in Universities in South-South and South-West Nigeria. The instrument used for data collection was a questionnaire. Three (3) experts from Business Education Department and 3 experts from Measurement and Evaluation Department, all from Delta State University Abraka validated the instrument. The findings revealed that some multimedia technologies such as Apple's Keynote, Camcorders and CD/DVD read/record drive are utilised to a low extent while Email, Flash drives, Mobile Telephony are utilised to a high extent by business education lecturers, the study also revealed that business education lecturers utilise some hypermedia technologies such as Blogging, Clipboards, Contents and Electronic portfolios to a low extent while business education lecturers utilise browsing to a high extent. It was recommended that Policies on the integration of multimedia and hypermedia technologies should be formulated by National Universities Commission and business education planners, Training and retraining of business education lecturers on how to use multimedia and hypermedia should be carried out by university authorities.*

**Keywords:** *Application, multimedia, hypermedia, universities, business education, South-South, South-West*

### INTRODUCTION

The world is currently moving into a global village in the era of technological innovations. The issue of global village is that all nations are highly connected together with the use of technologies such as internet and computer facilities. Individuals can access information from a particular source in any parts of the world without difficulties; therefore, the whole world is linked together with modern information technologies. Umah and Nwokike (2016) opined that many nations including Nigeria are bracing up to mark their position in the global square with the growing trend of modern communication technologies being a tool for educational reform. In the same vein, UNESCO (2003) as cited by Babalola (2010) observed that educators are centrally important in tapping the potentials offered by modern technology to enhance the quality of education. New technologies in teaching and learning business education subjects according to Ezenwa for (2012) include:

- Using broadcast materials or CD-ROM for information collection and storage.
- Using micro-computers with software applications to write or produce documents
- Skilful keyboarding
- Emailing and messaging.
- Internet browsing using search engines, windows, messenger, yahoo, chat room, etc.
- Using opaque projector, slide projector and multimedia projector.
- Utilizing e-banking, economics, etc.
- Utilizing different computer software applications such as word processors, spreadsheets, power point, desktop publisher, graphics, etc.

Okenwa (2008) observed that the application of ICT have advanced the development of communication and multimedia equipment that are capable of accepting data, processing data

into information and storing both the data and information for future use and reference purposes. Multimedia can simply be referred to as multiple media combined together. Vin-Mbah (2016) defined multimedia as a tele-service concept that provides integrated and simultaneous services of more than one telecommunication services, namely voice-world, video-world and data-world. On the other hand, hypermedia refers to media that are linked together. According to Vin-mbah (2016), hypermedia refers to media like text, graphics images, sound and video with property of non-linearity. Roblyer and Edwards (1998) as cited by Vin-Mbah (2016) states that the advent of multimedia and hypermedia have rapidly transformed the scenario in using instructional technologies in the educational institutions particularly in higher education. Vin-Mbah's (2016) earlier studies revealed that the following multimedia technologies are not utilised in tertiary business education classroom: DVD players, Online computers, Flat-screen monitors, LCD projectors, Scanners, Digital cameras, Electronic chalkboards, Camcorders, Apple' keynote9 as well as Headset, Digital probes and microscopes, Video conferencing, and Interactive TV. However, Vin-Mbah's (2016) study revealed that the following multimedia technologies are being utilised in tertiary business education classroom: Microsoft PowerPoint, Printer, Mouse, Flash drives, External hard drives, CD/DVD read/record drive, E-mail/file transfer, Mobile telephony, Internet access

Vin-Mbah's (2016) study also showed that the following hypermedia technologies are not being utilised in tertiary business education classroom: Paging, Browsing, Blogging, Contents, Glossary, Clipboards, Hyper card stacks, Interactive video disc system, Hyper studio, Micro worlds project builder, Multimedia tool book, Electronic portfolios, and Multimedia slideshows.

Business education at the university level is education for and about business; which is in the old focused on training individuals to acquire professional skills to enable them set up their own businesses other than depending on government for survival. Business education was introduced to solve the rate of unemployment and poverty. At the university level, the following courses are offered in business education programme; principles of

accounting, principles of business education, principles of economics, word processing, keyboarding, small scale business management, taxation, auditing, business machine, consumer behaviour, principles of management, and human resources management. These courses will expose the students to various career opportunities that will enable graduates to set up their business and manage it successfully, which is some of the focus of business education programme. Ubulon (1999) as cited by Nedum-Ogbede (2016) identified the objectives of business education as follows:

- To make available to all students the opportunities to explore and learn about world of business and the possible interests and potential careers it has to offer.
- To help develop in all students the ability to choose discriminately and to use wisely the goods and services that business has to offer.
- To assist in developing an intelligent understanding on the art of all students of the various occupations to be found in the world of business
- To develop in particular ways an understanding and an appreciation of the need for his personal use.
- To prepare students to perform business activities common to many professional areas.
- To prepare students for more effective study in the field of business.
- To prepare students to become business teachers.

### **Statement of the Problem**

Education in Nigeria at all level has positively been influenced by new technologies in teaching and learning, especially in business education programme that requires skill development. Multimedia and hypermedia technologies have improved the teaching and learning of skill subjects positively, since it requires practical experience. Unfortunately inadequate funding and unskilled personnel has characterised the successful implementation of multimedia and hypermedia in teaching and learning of business education. Business education at all level involve skill development that will enable the graduates have skills that will enable them to set up their own businesses without experiencing

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failure. It has been observed that many graduates of business education programmes are not exposed to multimedia and hypermedia application in their day-to-day operation in their offices. The problem of the study therefore, to what extent is multimedia and hypermedia applied in the teaching and learning of business education programme in Nigerian universities?

### Purpose of the Study

The purpose of this study is to assess the application of multimedia and hypermedia technologies in the teaching of business education in Nigeria universities. Specifically, the study will:

- assess the extent of the application of multimedia technologies in the teaching of business education by business education lecturers
- assess the extent of the application of hypermedia in the teaching of business education by business education lecturers

### Research Questions

The following research questions guided the study:

- To what extent do business education lecturers apply multimedia technologies in the teaching of business education?
- To what extent do business lecturers apply hypermedia in the teaching of business education?

### Hypotheses

- There is no significant difference in the mean responses of male and female business education lecturers on the extent of application of multimedia technologies in the teaching and learning of business education courses
- There is no significant difference in the mean responses of male and female business education lecturers on the extent of application of hypermedia technologies in

the teaching and learning of business education courses

- There is no significant difference in the mean responses of lecturers in South-South and South-West on the extent of application of multimedia technologies in the teaching and learning of business education courses
- There is no significant difference in the mean response of lecturers in South-South and South-West on the extent of application of hypermedia technologies in the teaching and learning of business education courses

### Method

This study adopts a survey research design, which was used to assess the application of multimedia and hypermedia technologies in the teaching of business education in Nigeria universities. The population of the study comprised 174 lecturers from South-South and South-West Nigeria, which also serve as the sample for the study. A 36 item questionnaire was used for data collection. The questionnaire was validated by 3 experts from business education department and 3 experts from measurement and evaluation department, all from Delta State University Abraka. A copy of the questionnaire was given to these experts to ensure the face and content validity. In order to ensure that the instrument is reliable, it was administered to 7 lecturers of business education Department of NnamdiAzikiwe University, Awka. The data collected was analysed using Cronbach Alpha reliability coefficient, which yielded a high score of 0.87. The mean and standard deviation was used to answer the research questions while t-test was used to analyse the hypotheses at 0.05 level of significant.

## RESULTS

### Research Question 1

To what extent do business education lecturers utilize multimedia technologies in the teaching of business education?

**Table 1.** Mean rating of business educators on the extent to which they utilize multimedia technologies in the business education classroom (N=174)

S/N	Utilization of the following multimedia technologies in the classroom	X	SD	Remarks
1	Apple's Keynote	1.68	0.44	Low extent
2	Camcorders	1.52	0.43	Low extent
3	CD/DVD read/record drive	1.87	0.34	Low extent
4	Digital cameras	2.00	0.51	Low extent
5	Digital probes	1.57	0.38	Low extent
6	DVD players	2.23	0.58	Low extent

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7	Electronic chalkboards	1.75	0.43	Low extent
8	Email	2.53	0.68	High extent
9	External hard drives	2.42	0.54	Low extent
10	Flash drives	2.62	0.60	High extent
11	Flat Screen monitors	2.01	0.48	Low extent
12	Headset	2.31	0.52	Low extent
13	Interactive Tv	1.87	0.43	Low extent
14	Internet Access	2.48	0.57	Low extent
15	Keyboard	1.34	0.34	Low extent
16	LCD Projectors	1.45	0.46	Low extent
17	Microsoft's PowerPoint	2.34	0.64	Low extent
18	Mobile Telephony	2.84	0.82	High extent
19	Mouse	1.64	0.34	Low extent
20	Video conferencing	2.15	0.64	Low extent
21	Digital Microscopes	1.96	0.54	Low extent
	<b>Total</b>	<b>2.03</b>	<b>0.51</b>	<b>Low extent</b>

Table 1 showed that apart from Email/File Transfer, flash drives and mobile telephony, all other multimedia technologies are not being utilised by business education lecturers. The grand mean 2.02 attest to the claim that business education lecturers do not utilise multimedia technologies in the teaching of business

education courses.

### Research Question 2

To what extent do business lecturers utilize hypermedia in the teaching of business education?

**Table 2.** Respondents' mean ratings on the extent to which they utilize hypermedia in business education programme (N=174)

S/N	Utilization of the following hypermedia technologies in the classroom	X	SD	Remarks
1	Blogging	2.01	0.48	Low extent
2	Browsing	2.76	0.67	High extent
3	Clipboards	1.58	0.57	Low extent
4	Contents	1.34	0.34	Low extent
5	Electronic portfolios	1.46	0.50	Low extent
6	Glossary	1.64	0.64	Low extent
7	Hyper studio	1.57	0.46	Low extent
8	Hypercard stacks	1.61	0.46	Low extent
9	Hypertext	1.35	0.37	Low extent
10	Interactive videodisc system	1.84	0.52	Low extent
11	Microworlds project builder	1.86	0.34	Low extent
12	Multimedia slideshows	1.85	0.39	Low extent
13	Multimedia tool book	1.68	0.40	Low extent
14	Paging	1.06	0.34	Low extent
	<b>Mean of Means</b>	<b>1.69</b>	<b>0.46</b>	<b>Low extent</b>

Table 2 revealed that apart from browsing, business education lecturers do not utilise hypermedia technologies. This is because all the items except browsing have a mean score below 2.50. The grand mean of 1.69 attest to this claim.

### Hypothesis 1

There is no significant difference in the mean responses of male and female business education lecturers on the extent of application of multimedia technologies in the teaching and learning of business education courses

**Table 3.** t-test of the mean score of perception of male and female lecturers on the extent of application of multimedia technologies in the teaching and learning of business education courses

Variables	N	Mean	SD	Df	t-cal	t-crit	Remark
Male Lecturers	103	2.88	0.79	172	0.94	1.96	NS
Female Lecturers	71	2.46	0.83				

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On table 3, the calculated t-value of 0.94 is less than the t-critical value of 1.96. The null hypothesis is therefore retained. This means that there is no significant difference in the mean responses of male and female business education lecturers on the extent of application of multimedia technologies in the teaching and learning of business education courses

### Hypothesis 2

There is no significant difference in the mean responses of male and female business education lecturers on the extent of application of hypermedia technologies in the teaching and learning of business education courses

**Table 4.** *t-test of the mean score of perception of male and female business education lecturers on the application of hypermedia technologies in the teaching and learning of business education courses.*

Variables	N	Mean	SD	Df	t-cal	t-critical	Remark
Male Lecturers	103	2.97	0.68	172	1.37	1.96	NS
Female Lecturers	71	2.80	0.65				

On the table, the calculated t-value of 1.37 is less than the t-critical value of 1.96. The null hypothesis is therefore retained. This means that there is no significant difference in the mean responses of male and female business education lecturers on the extent of application of hypermedia technologies in the teaching and learning of business education courses.

### Hypothesis 3

There is no significant difference in the mean responses of lecturers in South-South and South-West on the extent of application of multimedia technologies in the teaching and learning of business education courses

**Table 5.** *t-test of the mean score of perception of lecturers in South-South and South-West on the extent of application of multimedia technologies in the teaching and learning of business education courses*

Variables	N	Mean	SD	Df	t-cal	t-critical	Remark
South-South Lecturers	103	2.64	0.64	172	0.99	1.96	NS
South-West Lecturers	71	2.59	0.70				

Result in table 5 reveal that South-South Lecturers recorded a mean score of 2.64 and standard deviation of 0.64 while South-West Lecturers recorded a mean score of 2.59 and standard deviation of 0.70. The t-calculated value of 0.99 is less than t-critical value of 1.96 at 172 degree of freedom and 0.05 level of significance. Since the t-calculated value of 0.99 is less than t-critical value of 1.96, the hypothesis is therefore retained. This means that there is no significant difference in the mean responses of

lecturers in South-South and South-West on the extent of application of multimedia technologies in the teaching and learning of business education courses.

### Hypothesis 4

South and South-West on the extent of application of hypermedia technologies in the teaching and learning of business education courses

**Table 6.** *t-test of the mean score of perception of lecturers in South-South and South-West on the extent of application of hypermedia technologies in the teaching and learning of business education courses*

Variables	N	Mean	SD	Df	t-cal	t-critical	Remark
South-South Lecturers	103	2.73	0.80	172	0.97	1.96	NS
South-West Lecturers	71	2.65	0.75				

Result in table 6 reveal that South-South lectures recorded a mean score of 2.73 and standard deviation of 0.80 while South-West lecturers recorded a mean score of 2.65 and standard deviation of 0.75. The t-calculated value of 0.97 is less than t-critical value of 1.96 at 172 degree of freedom and 0.05 level of

significance. Since the t-calculated value of 0.92 is less than t-critical value of 1.96, the hypothesis is therefore retained. This therefore means that there significant difference in the mean response of lecturers in South-South and South-West on the extent of application of hypermedia

technologies in the teaching and learning of business education courses.

## **DISCUSSION**

This study has shown that apart from Email/File Transfer, flash drives and mobile telephony, the following multimedia technologies are utilised to a low extent by business education lecturers: Apple's Keynote, Camcorders, CD/DVD read/record drive, Digital cameras, Digital probes, DVD players, Electronic chalkboards, External hard drives, Flat Screen monitors, Headset, Interactive Tv, Internet Access, Keyboard, LCD Projectors, Microsoft's PowerPoint, Mouse, Video conferencing and Digital Microscopes. However, the study revealed that Email/File Transfer, flash drives and mobile telephony are utilised to a high extent. This finding is in line with the finding of Vin-Mbah (2016), which identified similar multimedia technologies that are not being utilised in tertiary business education classrooms. The result of the hypotheses revealed that there is no significant difference in the mean responses of male and female business education lecturers on the extent of application of multimedia and hypermedia technologies in the teaching and learning of business education courses.

The study also showed that business education lecturers utilised the following hypermedia technologies to a low extent: Blogging, Clipboards, Contents, Electronic portfolios, Glossary, Hyper studio, Hypercard stacks, Hypertext, Interactive videodisc system, Micro worlds project builder, Multimedia slideshows, Multimedia tool book and Paging. The study however, revealed that browsing is utilised to a high extent. This finding is consistent with the earlier study of Vin-Mbah (2016), which identified similar hypermedia technologies that are not being utilised in tertiary business education classrooms. The result of the hypotheses tested revealed that there is no significant difference in the mean responses of lecturers in South-South and South-West on the extent of application of multimedia and hypermedia technologies in the teaching and learning of business education courses.

## **CONCLUSION**

Multimedia and hypermedia technologies are not fully utilised in the teaching and learning of business education programme in Nigerian universities. This will cause a great harm to the graduate of this programme, since they will not have the required skills that are expected in the world of work, in the application of sophisticated modern technologies.

## **RECOMMENDATIONS**

- Policies on the integration of multimedia and hypermedia technologies should be formulated by NUC and business education planners
- The policies on multimedia and hypermedia formulated in business education curriculum should be fully implemented
- Training and retraining of business education lecturers on how to use multimedia and hypermedia should be carried out by university authorities
- Government should make adequate funding in available so that adequate multimedia and hypermedia facilities can be procured

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