

**NEW TECHNOLOGIES IN TEACHING BUSINESS SUBJECTS IN PUBLIC
SECONDARY SCHOOLS IN ONITSHA EDUCATION ZONE,
ANAMBRA STATE**

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Abstract

The need to ensure improved teaching of business subjects necessitated this study. The study ascertained the use of new technologies in teaching business subjects in public secondary schools in Onitsha Education zone, Anambra State. Two research questions and two null hypotheses guided the study. Descriptive Survey design was used for the study and 183 business subjects teachers were studied without sampling. Structured questionnaire containing 20 items was used for data collection and face and content validity of the instrument was established using three experts in the field of education. The internal consistency of the instrument was established using test retest and data collected was calculated using Cronbach alpha formula and coefficient values of 0.66 and 0.94 obtained for clusters B1 and B2 respectively with overall index of 0.80. One hundred and seventy four (174) out of 183 copies of questionnaire administered were duly completed and retrieved with the help of five research assistants. Mean, standard deviation and t-test were used for data analysis. Findings revealed that business subjects' teachers in secondary schools in Onitsha Education Zone used power point and smart board classroom in teaching business subjects to a low extent. Gender and school location did not significantly influence respondents' mean ratings on the extent of use of power point and smart board classroom in teaching business subjects in public secondary schools. Based on the findings of the study, the researcher concluded that business subjects teachers do not adequately use power point and smart board classroom in teaching business subjects in secondary schools in Onitsha education zone of Anambra State. It was recommended that state government should provide secondary schools in the State with power point and smart board classroom technologies to enable teachers use them for effective teaching of business subjects.

Key Words: New Technologies, Power Point, and Smart Board Classroom and Business Subjects

Introduction

In all spheres of life, new technologies have become a common occurrence, and their usage has not only connected the entire world, but also influenced practically all human endeavors, in the areas of Agriculture, Engineering, Education, Medicine, Law, Architecture, Aviation, Commerce, Insurance, Banking and Finance, Maritime activities,

and particularly education. In the past, education was mainly teachers-centered; as a result, teachers deliver concepts or subjects while students only listened without contributing much to the instructional processes. New technologies however, in education, have given students opportunities to participate more in their classroom processes. The use of new technologies in education is becoming increasingly significant as nations shift fast to digitalization, and its importance will continue to expand and evolve in the twenty-first century.

New business technologies are ICT facilities used for teaching and learning. UNESCO (2019) defined new technologies as the use of scientific knowledge, gadgets, and systems to enhance information/communication-driven activities. They are scientific means of leveraging modern equipment to achieve educational goals and objectives (Wole, 2016). New technologies include; computers, scanners, printers, internet/intranet, teleconferencing facilities, Wireless Application Protocol (WAP), instructional radio and television, and multimedia projectors among others that can be applied in the field of education. Others according to the United Nations (2018) are internet, personal computers, telecommunications, scanner, mobile phones, digital cameras and multimedia facilities that can enhance teaching at all levels of education

Teaching is the process of showing somebody how to perform a task so that they can carry it out successfully (Hornby, 2018). It also entails giving students' information about a particular subject to help them learn. According to Nwaukwa (2015), teaching is a cluster of activities that are noted about teachers such as explaining, deducing, questioning, motivating, talking attendances, keeping record of works, students meet predetermined learning goals. It is an intentional or purposeful act by a mature or experienced individual to transmit knowledge or skills to a younger or inexperienced person. Adunola (2011) noted that in order to create desired changes in students, teachers must use the most relevant teaching methodologies as well as instructional technologies for each topic. Teaching, as it relates to this study entails imparting of new technological knowledge from the business subjects teachers to students of business subjects.

Business subjects are occupational subjects given at the senior high school level, according to the Federal Republic of Nigeria (FRN, 2013), and include Financial Accounting, Economics, Commerce, Computer Studies/Keyboarding, Shorthand, Office Practice, and Marketing. NERDC (2012) stated that business subjects also elude Salesmanship, Data Processing, Store Keeping and Home Economics which are among newly introduced thirty-four (34) trade/entrepreneurship subjects in secondary school curriculum. In addition, Nwaukwa (2015) viewed business subjects as part of business education subjects taught at the senior secondary schools with the objective of bequeathing the students with relevant job skills, knowledge and necessary attitudes for paid or self-employment as well as for higher education in business-related courses. Adeoye and Nwokeji (2016) noted that business subject teachers have the onerous task of inculcating in their students' employability skills that are very germane and critical to the 21st century workforce which includes: goal attainment, communication, marketing, interpersonal, basic management, system thinking, self-reliance and self-motivation skills.

In teaching business subjects, there are some prospects that could be derived in using new technologies in delivering instruction (Ukor, 2019). Using new technologies in teaching business subjects according to Inije (2017), facilitates interaction between teachers and students; and enhances effective storage and retrieval of information and

makes information easily accessible at a very fast rate. Trucano (2015) noted that using new technologies in teaching business subjects leads to quick access to academic information by connecting to the internet and surfing through Web pages. Ezenwafor (2016) listed new technologies that aid teaching of business subjects to include; smart board, flipped class room, virtual reality, power point, internet browsing using search engine, multi-media projector, broadcast materials or CD ROM for information collection and storage, micro-computers with software applications, skillful keyboard, and emailing and messaging. Others are windows, messenger, yahoo, chat room, computer software applications such as word processors, desktop publishers, graphics, power-point, spreadsheet, mimeo boards, teleconferencing, video conferencing, e-book, microphone, and streaming videos.

Power-point presentation is an innovation in education which enables business subject teachers to prepare and make presentations to their students during instruction and beyond. Power point is a slide show presentation program developed by Microsoft in 1987. It is commonly used as a digital aid when presenting topics to an audience. It is similar to a word processor, except that it is geared toward creating presentations rather than document. It is a program that allows teachers including business subject teachers to present instructions in a more innovative manner than simply adopting traditional method of speaking and writing on the chalk black. It provides business subject teachers the ability to equip their presentations with different types of media including images, sounds and animations. This enhances students' abilities to retain what they are being taught, especially those who are visual learners.

A Smart board is an interactive white board that displays images from the computer monitor with the surface being used as a giant touch screen (Mowbray and Preston, 2013). The computer can be controlled from the Smart board by touching the Smart board screen with the finger or one of the electronic pens incorporated with the board. The ability of the Smart board technology allows the teacher to present information within a group arrangement, in which all students can see the images on the board due to the large interactive screen (Gast, Krupa and Mechling, 2012). It gives students the chance to collaborate with one another to create projects and ideas, while being able to present them to the entire class. The Smart board offers numerous applications to students to help create an engaging and motivating atmosphere where students feel comfortable to participate. Gast, Mechling, and Thompson (2013) indicated that students are more engaged and intrigued to be able to read words off of an interactive white board rather than traditional flash cards.

For Business subjects to serve the purpose of providing the needs of the learners and the society at large, continuous improvement in the implementation of above mentioned new technologies by the schools offering the subject in order to ensure that the quality of education is in tandem with societal demands is required. Although these technologies are not new in many advanced countries but they are relatively new in Nigeria. While some of them are already being utilized in some schools, however, they are yet to be used in many of Nigeria's secondary schools. Many secondary schools do not give adequate priority and attention to the acquisition and utilization of new instructional technologies needed for teaching. The dearth of these facilities makes it difficult to teach and prepare business subjects students for the use of new technologies now and in future world of work. For business subjects to achieve its mandate of equipping students with

skills to enable them meet the needs of individuals and the society, business subjects must embrace current trends in new technologies that are required for academic pursuits and societal economic demands. The current developments in Nigeria have made it even more pertinent for the use of new technological devices such as power point and smart board in teaching business subjects in secondary school level, however, gender and school location can be an influencing factor to the extent of the use of power point and smart board in teaching business subjects in public secondary schools.

Gender effects could be factors in determining the level of usage of new technologies in business education, according to Nwaukwa (2015), who found that male business subject teachers have greater technological abilities and employ them in instructional delivery than female colleagues. Male instructors have greater technological cum ICT abilities and utilize them in instructional delivery than female teachers, according to Jimoyiannis and Komis (2017). This means that the gender of the instructor, as well as the location of the school, might influence the amount to which new technologies are used in the teaching of business subjects. Location plays significant role in all human endeavors, for instance, the location of a market affects buying and selling, location of a church affects its attendance and participation, location of a hospital measures the extent to which it serves the needs of both the users and the operators and same is applicable to school system. Therefore, schools located in an urban area will have environment-based activities peculiar to its environment and will adopt new technologies in teaching than those in rural area. Again, there is a great difference between the physical and demographic characteristics of rural and urban areas. The rural areas are characterized by lack of infrastructures; power supply, dilapidated buildings, most of the public secondary school buildings in this area had no roof, windows or doors, and the walls of some had cracked and as result some lack basic instructional materials such as new technologies and quality teachers whereas the urban areas are characterized by increasing industrialization, availability of modern infrastructures and technologies needed for teaching is relative to school. Given this, it is vital to investigate the extent to which new technologies are used in the teaching of business subjects in public secondary schools in Anambra State's Onitsha Education Zone.

Statement of the Problem

The call for the integration of new technologies in teaching is to infuse and inject efficiency and effectiveness in the education system. This is due to the many advantages associated with it, which include easy work presentations, easy information access, easy monitoring and evaluation among others yet teachers in public secondary schools do not give adequate priority and attention to the use of these digital tools in their teaching processes in despite of their great potentials in enhancing teaching processes. Inadequate use of new technologies by business subjects teachers in instructional delivery implies producing students lacking relevant practical skills required of business subjects' school leavers for gainful employment or self-reliance in the modern day business world. Effective use of new technologies by business subject teachers is dependent on teachers' level of training and re-training on the use of new technologies in teaching and acceptability of new technologies as a tool for enhancing instructional delivery among others. Experts have called for business subjects studios and laboratories to be equipped with new technologies such as power point and smart board devices to equip students with relevant new technological skills expected of them in the field of work. However, it is worrisome that

despite many technological advancements and introduction of new pedagogical concepts, majority of today's business subjects' teachers are over-reliance on traditional teaching methods and instructional materials such as chalkboard, papers and typewriters among others. The problem of this study, therefore, is that the secondary school business subjects' leavers are not employed due to lack of necessary skills required in the present innovated offices. Therefore, this study was specifically designed to (1) determine the extent power point is used in the teaching of business subjects in secondary schools in Onitsha Education Zone (2) ascertain the extent smart board classroom is used in the teaching of business subjects in secondary schools in Onitsha Education Zone.

Research Questions

The following research questions were formulated to guide the study.

1. To what extent is power point used in the teaching of business subjects in secondary schools in Onitsha Education Zone?
2. To what extent is smart board classroom used in the teaching of business subjects in secondary schools?

Hypotheses

The following null hypotheses are formulated to guide the study and will be tested at .05 level of significance.

- H01:** There is no significant difference in the mean responses of male and female business subjects' teachers on the extent power point is used in the teaching of business subjects in secondary schools.
- H02:** There is no significant difference in the mean responses of urban and rural business subjects' teachers on the extent smart board classroom is used in the teaching of business subjects in the secondary schools.

Method

Descriptive survey design was adopted for this study. The study was carried out in 26 public secondary schools that offer business subjects in Onitsha Education Zone of Anambra State. The population of 183 business subject teachers in Onitsha education Zone was studied without sampling. The instrument for data collection was a-20 item self-structured questionnaire titled "Extent of Use of New Technologies in the Teaching of Business Subjects Questionnaire (EUNTIT-BSQ)". The instrument contains two sections: A and B. Section A is structured to elicit data on demographic information of the respondents while section B contains is structured on a five point rating scale of Very High Extent (VHE) - 5, High Extent (HE) - 4, Moderate Extent (ME) - 3, Low Extent (LE) - 2 and Very Low Extent (VLE) - 1.

Face and content validity of the instrument was determined using two experts were from the field of Vocational Education while one expert was from Measurement and Evaluation, all from Chukwuemeka Odumegwu Ojukwu University, Anambra State. The reliability of the instrument was established using a pilot test and data collected were calculated using Cronbach Alpha formula and Coefficient values of 0.66 and 0.94 were obtained for clusters B1 to B2 with an overall reliability value of 0.80. This high reliability value indicated that the instrument was reliable for the study. The researcher personally administered copies of the questionnaire to the respondents in their schools with the help

of five research assistants. On the spot completion was used but those who did not meet up were re-visited for retrieval. Out of 183 copies of questionnaire distributed, 174 were retrieved and used for data analysis.

Mean rating and standard deviation were used to answer the data related to the research questions and determine the homogeneity of respondents' views while t-test was used to test the five null hypotheses. For the hypotheses testing, where p-value is less than the significant value of 0.05, it means that the variable does not significantly affect respondents mean ratings then the null hypothesis was accepted. Conversely, where the p-value is greater than or equal to the value of .05, it mean the variable has a significant effect on the respondents' mean rating and the null hypothesis was rejected.

Results

Research Question 1

To what extent is power point used in the teaching of business subjects in secondary schools?

Table 1: Mean Ratings on the extent power point is used in Teaching of Business Subjects N=183

S/N	To what extent:	Mean	SD	Remark
1	Do you use power point during creative writing in the class	2.51	.71	Moderate Extent
2	Do you use power point to present information to entire class	2.65	.65	Moderate Extent
3	Do you use power point to create graphically enhanced information and instructions	2.43	.51	Low Extent
4	Do you use power point to choose from a variety of presentation types	1.96	.74	Low Extent
5	Do you use power point to create presentation that containing text while teaching	1.26	.82	Very Low Extent
6	Do you use power point to capture the students' attention and keep them interested	1.49	.58	Very Low Extent
7	Do you use power point to add or delete slides within a presentation	2.53	.86	Moderate Extent
8	Do you use power point to create original designs and layouts	2.56	.66	Moderate Extent
9	Do you use power point to create tutorials quizzes for individual student's work	1.29	.91	Very Low Extent
10	Do you use power point to choose from a variety of presentation and layout	1.41	.76	Very Low Extent
Average of Scores		2.00		

Data in Table 1, shows that out of 10 power point uses listed, business subjects' teachers indicated that they used items 1, 2, 7 and 8 in teaching business subjects in secondary schools at a moderate extent with mean scores ranging between 2.51 to 2.65, items 3 and 4 are used at very extent with mean scores ranging between 1.96 to 2.43 while the remaining four items are used at a very low extent in teaching business subjects. The average scores of 2.00 shows that business subjects teachers used power point in teaching of business subjects at a low extent. The standard deviation for all the items are within the same rang meaning that the respondents are not wide apart in their mean ratings.

Research Question 2

To what extent is smart board classroom used in the teaching of business subjects in secondary schools?

Table 2: Respondents’ mean ratings on the extent smart board classroom is used in the teaching of business subjects (N=183)

S/N	To what extent:	Mean	SD	Remark
11	Smart boards enhance students’ learning Experience	3.18	.57	Moderate Extent
12	Reduces classroom costs	2.54	.44	Moderate Extent
13	Enhances literacy	2.41	.68	Low Extent
14	Improves student involvement and knowledge retention.	2.40	.71	Low Extent
15	Stimulates students’ interest while teaching.	3.16	.59	Moderate Extent
16	Boosts attentiveness	2.50	.62	Moderate Extent
17	Promotes students interaction and collaboration	2.55	.80	Moderate Extent
18	Makes lesson revision more convenient	1.87	.72	Low Extent
19	It makes the teaching flexible and dynamic	1.94	.45	Low Extent
20	Accommodate different learning styles	1.71	.87	Low Extent
Average of Scores		2.43		

Data in table 2 shows that out of 10 smart board classroom uses listed, business teachers indicted that they used items 11,12,15,16 and 19 in teaching of business subjects to a moderate extent with mean scores ranging from 2.50 to 3.46 while the remaining five items are used to a very low extent with mean scores ranging between 1.71 to 2.41. The average scores of 2.43 shows that business subjects teachers used power point in teaching of business subjects to a low extent. The standard deviation for all the items are within the same rang meaning that the respondents are not wide apart in their mean ratings.

Testing of Hypotheses

Hypotheses 1

There is no significant difference in the mean responses of male and female business subjects teachers on the extent power point is used in the teaching of business subjects in secondary schools

Table 3: T-test analysis of mean scores of male and female business subjects’ teachers on the extent power point is used inthe teaching of business subjects

Gender	N	Mean	SD	df	t-cal	P-value	Decision
Male	75	2.08	.25	181	.50	.62	Not-Sig
Female	108	2.06	.27				

The results in table 3 shows that the mean score for male business subject teachers ($M=2.08$, $SD=.25$) was not significantly greater than that of female business teachers ($M=2.06$, $SD=.27$); $t=.50$, $p=.62$. This means that there no significant difference between the two groups on the extent power point is used in the teaching of business subjects in secondary schools. Therefore the null hypothesis is acceptable.

Hypotheses 2

There is no significant difference in the mean responses of urban and rural business subjects teachers on the extent smart board classroom is used in the teaching of business subjects in the secondary schools.

Table 4: T-test analysis of mean scores of urban and rural business subjects teachers on the extent smart board classroom is used in the teaching of business subjects

School Location	N	Mean	SD	Df	t-cal	P-value	Decision
Urban	114	2.95	.30	181	.87	.39	Not-Sig
Rural	69	2.99	.31				

The results in table 4 shows that the mean score for urban business subject teachers ($M=2.95$, $SD=.30$) was not significantly less than that of rural business teachers ($M=2.99$, $SD=.31$); $t=.87$, $p=.39$. This means that there no significant difference between the two groups on the extent smart board classroom is used in the teaching of business subjects in the secondary schools. Therefore the null hypothesis is acceptable.

Discussion of Findings

The findings of the study shows that business subjects teachers in Onitsha Education Zone used power point in the teaching of business subjects to a low extent. The findings of this study could be attributed to poor training of business subject on the use of new technologies in teaching due to lack of computer facilities in secondary schools which prevent teachers from using them in instructional delivery. The findings of this study agree with that of Onwugboke et al (2015) which revealed thatmost teachers lack pre-requisite computer knowledge to use power point in instructional delivery. Gachinu(2016) reported that the number of teachers with computer knowledge in secondary schools was low. Nwaukwa (2015) found out that business subjects teachers in secondary schools used power point at small extent.Nwaukwa regretted that, even though power point is one of the

many tools that can enhance the presentation of business subjects' contents and convey information to students, yet majority of business subjects teachers lack the skills required to integrate it for successful instructional delivery. The findings of the study also showed that male and female business subjects teachers in secondary schools in Onitsha education zone did not differ significantly in their mean ratings on the extent they used power point in teaching business subjects. This agrees with the findings of Ajayi et al (2009) and Gambari, et al (2014) who reported that there is no significant difference in male and female teachers' on the extent of use of new technologies in teaching. The findings could be attributed to the fact that both male and female business subjects' teachers have not been adequately trained on power point which may have informed their uniformity in the mean ratings. Nwaukwa (2015) reported that gender did not significantly affect the business subjects' teachers' mean ratings on the extent they integrate computer facilities (power point) in instructional delivery.

This study found that business subjects teachers in secondary schools in Onitsha education zone used smart board to a low extent. The findings of the study is in line with that of Ibelegbu (2013) which found that business studies teachers were not trained with modern technologies and facilities and therefore do not apply it in instructional deliver. Ibelegbu pointed out that business subjects teacher are required to adopt smart board so that they would be able to train students who can function effectively in their career and even advance in it. Igbongidi (2018) observed that most business studies teachers in junior secondary schools in the zone have some difficulties in teaching new technologies component of the curriculum. Mingaine (2013) found that most of the teachers employed to teach in secondary schools lack basic computer skills and thus did not use them in instructional delivery. The findings of the study further revealed that business subjects teachers in urban and those in rural secondary schools in Onitsha education zone differ significantly in their mean ratings on the extent they used smart board in teaching business subjects. In agreement, Nwaukwa (2015) reported that most schools in rural areas lack basic technology gadgets which negatively affect their use in instructional delivery by business subjects' teachers. Nwaukwa revealed school location significantly therefore affect business subjects teachers' mean ratings on the extent they use smart board in instructional delivery.

Conclusion

Based on the findings this study, the researcher concludes that business subjects teachers do not adequately use power point and smart board classroom in teaching business subjects in secondary schools in Onitsha education zone of Anambra State.

Recommendations

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

1. The Ministry of Education should organize training and retraining programmes for business subjects' teachers as to familiarize and sensitize them with a wide range of instructional technology and their potentials. This could trigger their creativity and innovation in the use of instructional technologies in teaching and learning process.
2. The state government should provide secondary schools in the State with power point and smart board classroom facilities to enable teachers use them for effective teaching of business subjects.

3. Institutions of higher learning where business subjects teachers are being trained should fully equip business education department with new technologies so as to give them necessary training that would enable the teachers have full knowledge they would transfer to their students when posted to secondary schools.
4. Principals of secondary schools should ensure that business subject teachers use power point and smart board classroom available in their instructional delivery.

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