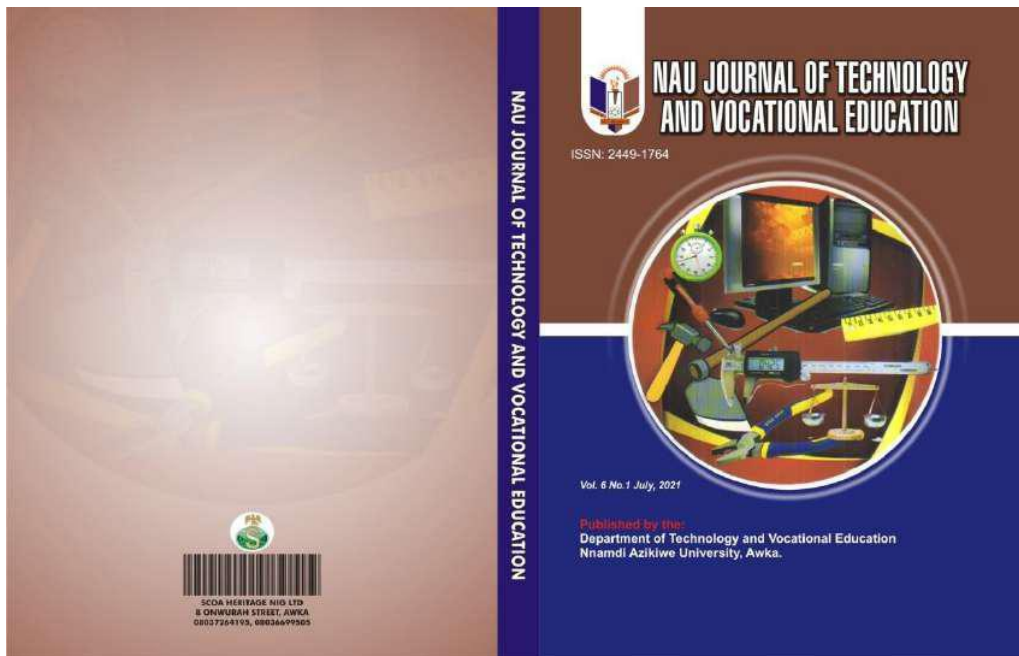


# NAU JOURNAL OF TECHNOLOGY & VOCATIONAL EDUCATION

Vol. 6 No.1 July, 2021



Published by the  
**Department of Technology and Vocational Education**  
Nnamdi Azikiwe University, Awka.

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ISSN: 2449-1764

**NAU Journal of Technology & Vocational Education**

**Vol. 6 No.1, July 2021**

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Website <http://www.nauhtved.com.ng>

Journal website developed by [Myrosoft Systems Ltd](#). Email: [myrosoftsystems@gmail.com](mailto:myrosoftsystems@gmail.com)  
Phone: 08062926794, 08039328555

Printed By:

**SCOA Heritage Nig. Ltd**

No 8 Onwurah Street, Awka, Anambra State

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## FROM CHOICE OF CONCEPTS TO DESIGNING STATISTICALLY TESTABLE MODELS: ON THE CENTRALITY OF DEVELOPING CONCEPTUAL FRAMEWORKS IN RESEARCH

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### Abstract

*The divergence in the application of nomological network of concepts, constructs or variables in the report of conceptual frameworks at different levels of research is a concern to intellectual, skilled, and experienced research scholars. Sometimes, conceptual framework is erroneously reported as a collection of operational definition of concepts or even as a research design. This study is, therefore, in two folds: to x-ray the practical examples of more realistic and statistically testable conceptual models to foster less experienced researchers' knowledge in developing and reporting conceptual framework in research; and to investigate students' abilities in reporting conceptual framework in their research. The study adopted literature review approach with a mixed method design. This study sampled postgraduate (PG) students (N = 21), drawn from a faculty in Nnamdi Azikiwe University from 2019 to 2021, as well as PG students' certified and approved theses/dissertations (N = 125). Observation checklist was used for the quantitative data collection, while a semi-structured interview was used for the qualitative data collection. Percentage was employed to analyze the quantitative data, while thematic analysis was applied for the qualitative data. Reviews demonstrated practical guides and examples of conceptual models. Findings revealed poor students' skills in designing and reporting acceptable conceptual frameworks. Hence, recommendations were made for improvement.*

**Keywords:** Conceptual model, definition of concepts, educational research, interrelations, nomological network

### Introduction

To advance knowledge, skills, theory, and practice in vocational and general education, research outcomes are perhaps the most valuable sources of drawing conclusions. Although educational research involves a planned, careful, and systematic study of a phenomenon towards solving a problem to advance

theory and practice in any field (Anyakaoha, 2009; Gay et al., 2011), it involves a collection of variables, concepts, or constructs that would be tested to address such a problem. These variables, concepts or constructs are investigated such that their interrelations are quite understood to give a study a meaning. The interrelations of the variables, concepts or constructs

dovetail to a conceptual framework or a conceptual model (Adom et al., 2018; Chukwuedo & Uko-Aviomoh, 2015). Nonetheless, it is sometimes difficult for less experienced and beginning research scholars to determine and design the nomological network of these

constructs/variables for a comprehensive study. Hence, poor conceptual frameworks often surface in PG students' thesis and dissertations and other "low level" research publications. Similarly, some researchers tend to avoid the presentation of conceptual framework (Leshem & Trafford, 2007) because of lack of or insufficient knowledge or skills in designing the model; while others tend to argue erroneously on what makes up the model or how the model should be designed in a study. Additionally, there seem to be paucity of research publications or text books that elucidate the approaches to designing a conceptual model in details (Chukwuedo & Uko-Aviomoh, 2015; Eboh, 2007; Leshem & Trafford, 2007). These concerns often create problems in the understanding of the framing of a study and its concepts. This study, therefore, provides valuable insights into the practical steps to understanding and designing a conceptual framework for a study.

Although a concept, a construct and a variable are not exactly the same in research, this paper approximates the three entities as very similar in order facilitate the approach to designing a conceptual model. A conceptual framework is created "when concepts are contextually linked in a research" (Chukwuedo & Uko-Aviomoh, 2015, p.95). It is a schematic description and illustration of the causative mechanism and relationships or interactions deducible from the research problem (Adom et al., 2018; Eboh, 2009; Jabareen, 2009). According to Imenda (2014), a conceptual framework is an end result of bringing together a number of related concepts to explain or predict a given event, or give a broader understanding of the phenomenon of interest or simply, of a research problem. In a nut shell, a conceptual framework should show, with diagram (pictorial), the nexuses of the research variables/concepts/constructs. It should also spell out the context or form of relationships or interactions between phenomena, as well as the process or flow associated with the interactions (Chukwuedo & Uko-Aviomoh, 2015, p.95).

In modelling or designing a conceptual framework for a study, its elements or constituents should include the (*primary*) *independent or predictor variables, moderator or secondary independent variables, dependent or outcome variables, mediator or intervening variables, and control variables* of the study (e.g., Eboh, 2009; Gotschi et al., 2017). Some other measurable variables that the researcher intends to study can be included in the conceptual model. Sometimes, (but not often), a conceptual framework contains very few unmeasured variables/concepts/constructs in the study; but must directly enhance the understanding of the study's network. However, caution must be exercised in including unmeasured variables/concepts/constructs (a) for a meaningful flow of information while interpreting the framework, (b) to foster the development of hypotheses of the study, or (c) to provide justifiable discussion of the findings of the study. By and large, an ideal or a good conceptual framework has links with the study's theories, objectives, research questions and hypotheses, as well as statistical-analytical pathways and the findings of the study (see Haider et al., 2020; Ogbuanya & Chukwuedo, 2017; Ogbonnaya & Babalola, 2020; Van Wingerden et al., 2017).

Within the context of a study, a conceptual framework can be *designed/developed, adapted or adopted* by the researcher. From the theories so far, this study conceives a conceptual framework as a depiction of *nomological network* of a study's concepts, variables, or constructs that (a) are deducible from the theory(ies) of the study, (b) foster hypotheses development or formulation, (c) give insights into the design of the study, (d) promote effective discussion of the findings. Although the network can be represented in any form of schematic diagram that depicts the logical reasoning of the study, a path analytical model (e.g. Chukwuedo et al., 2021;

Ogbonnaya & Babalola, 2020) is preferable because it helps to design a testable conceptual framework or model, as well as depicts the variables, concepts, or constructs that are appropriately measured in the study. Though a conceptual model may be best represented with a schematic diagram, it may be discussed in prose (without a diagram) but must explicitly describe the perceived network of the concept (c.f., Gotschi et al., 2017; Rocco & Plakhotnik, 2009; Stenbacka & Forsberg, 2020).

### **The Delusion in Schematic Illustrations of Conceptual Framework versus the Design of a Study**

While a research design or design of the study refers to the overall approach employed to incorporate the different aspects of a study, a conceptual model depicts the interrelations among concepts, constructs or variables of the study. In research, there are situations where a researcher may use schematic diagram to represent the research design for a better understanding of the study (e.g., Chukwuedo et al., 2021; Ogbuanya & Chukwuedo, 2017; Ogbuanya et al., 2018; Van Wingerden et al., 2017). However, the use of such diagrams to represent the research design is often misconceived by beginning or less experienced researchers as being a conceptual framework. Whereas the schematic representation of the design of a study gives more details about the research (links the research variables, aspects of its research questions/hypotheses, information about the participants and/or instrument, research process such as experimental procedure, e.t.c.), the schematic diagram of a conceptual framework succinctly depicts the measured variables with little or no emphasis on other unmeasured variables (Rocco & Plakhotnik, 2009; Van Wingerden et al., 2017). There is, therefore, a significant difference between the meaning, content, and schematic representation of conceptual frameworks and research designs. A research design is not the same as the conceptual model, and as such, the schematic representation of a research design should not be taken as the conceptual framework of the study. Thus, caution must be exercised in adding “junks” to a conceptual model. To design a conceptual model, the researchers hereby made attempt to guide beginning or less experienced researchers on the steps required for such a task:

1. Identify the concepts, constructs and/or variables of the study.
2. Decide and identify the concepts, constructs, or variables to be measured in the study. Then, consider which of the constructs are latent. Where necessary, identify any unmeasured variable,
3. The variables should have brief names - written as a word, few words or codes.
4. Formulate the links between variables or constructs. Ensure you know the variable that leads to the other. Be very sure of the predictor, criterion, moderator, mediator, or control variables.
5. Understand and decide the kinds of shapes (e.g., arrow, text box, rectangle, circle, oval, line, block arrows, callouts, stars, banners, flowcharts, e.t.c.) that will be used to design the diagram.
6. Begin the sketching of the diagram with the desired shapes (e.g., blocks, arrows, ovals, e.t.c.), ensuring that the names/codes of the variables are used. Similarly, illustrations may be attached to the arrows, especially where it is not necessary to use blocks to show such illustrations.
7. The direction of the arrows must be such that it agrees with the theoretical reasoning of the links between the variables.

8. Revise the diagram and ensure its validity by giving it to experts or colleagues for review.

### Statement of the Problem

Research (project, thesis or dissertation) is a mandatory requirement for a student's graduation from the undergraduate to doctorate levels. No student is expected to successfully graduate at these levels without meeting the minimum requirements in research. This obligation gives an insight into the importance of research for a student's graduation. Thus, a good student is expected to be able to give a clear framing of their research/study by demonstrating acceptable conceptual framework. Since conceptual frameworks help the researcher to give a study a meaning and enhance the readers' understanding, it is expected that no research (especially quantitative study) should be presented without a conceptual model. Yet, from the researchers' experiences, many students appear to ignore or misconceive the presentation of the conceptual framework in their study. The researchers, therefore, presume that students inability to report conceptual model in their study may be hinged on some inherent factors (e.g., lack of knowledge, not being taught, e.t.c.). This study, therefore, intend to fill the gap by providing exemplary approach to designing and reporting conceptual models, and to determine how PG students' 'precipitate' and report the aspects of conceptual frameworks.

### Research Questions

Two research questions were answered in this study.

1. How do PG students' present conceptual framework in their research works?
2. Do PG students' possess the skills in designing and presenting conceptual frameworks in their research works?

### Methods

This study (partly a case-study of a faculty in Nnamdi Azikiwe University) is a two-fold research design. First, relevant literature was reviewed to provide a practical guide in designing and reporting conceptual frameworks. Second, the study employed the mixed method design – quantitative and qualitative designs (Creswell, 2014). In this study, the quantitative design involved the collection of data via observational checklist; while the qualitative design involved the collection of data via semi-structured interview. The sample of the study were 125 PG students' theses and dissertations (M.Sc;  $n = 77$ , and Ph.D;  $n = 48$ ) and 21 PG students (M.Sc;  $n = 7$ , and Ph.D;  $n = 14$ ) from a faculty in Nnamdi Azikiwe University, Awka, Anambra State, Nigeria. An observational checklist and a semi-structured interview were used as the instruments for data collection. The checklist consists of seven items with a 2-response option of present (1) and absent (0). The instruments were validated by three experts.

For data collection and reporting, ethical practices were taken into consideration. Although the data were obtained from PG students' completed and certified theses and dissertations from a faculty in Nnamdi Azikiwe University, the researchers did not report the results based on the faculty or departments in the faculty where the information were obtained because there was no written permission from the faculty or departments to report their identity. In collecting the qualitative data, triangulation was adopted to validate and put the data into a more meaningful context (Kelle et al., 2019). In all, data were collected by the researchers between October 2019 and April 2021. For the qualitative data analysis, thematic analysis was employed (Nowell et al., 2017); while simple percentage was used for the qualitative data analysis.

**Results**

The results of this study are reported in two aspects – the literature reviewed and self-developed evidence of designing and reporting conceptual frameworks, and the results of the mixed method design.

**Exemplifying practical conceptual models**

Succinctly, a conceptual framework illustrates what you expect to find through your study - depicts the relevant variables for your study and maps out how the variables might relate to each other. Hence, in this paper (as named by the researchers), practical examples of conceptual model are presented in two classes: **Class A Models** - models with measured and unmeasured variables (see Figure 1), and **Class B Models** (see Figure 2) - models with measured variables only (e.g., predictor, criterion, moderator, control, and mediator variable). Although the representation of models for both classes are obtainable in research literature, **Class B Models** is herein conceived as better models because the models depict more meaningful framework, reflect more precision about the study, are often verified or statistically tested, give better insights into the structural and measurement models, and promote better writing and understanding of discussion, implication and limitations of a study. Moreso, Class B models that have been tested over time with consensus results can possibly lead to development theories. Now, practical examples of Class A and Class B models are hereby presented.

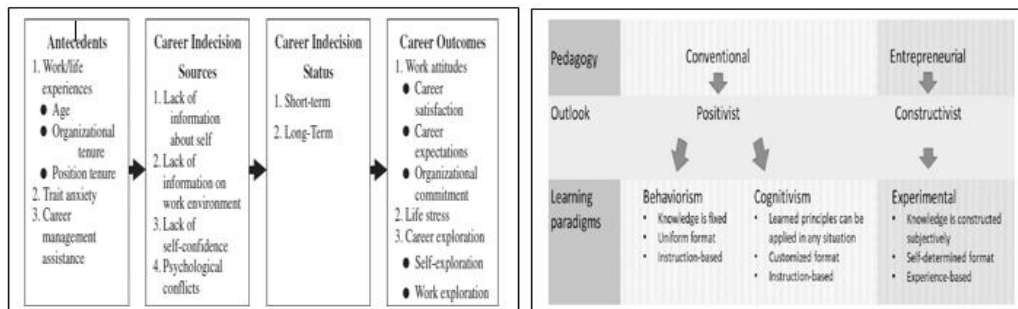


Figure 1a: Employee career indecision model

Figure 1b: Paradigms of active/passive pedagogy model

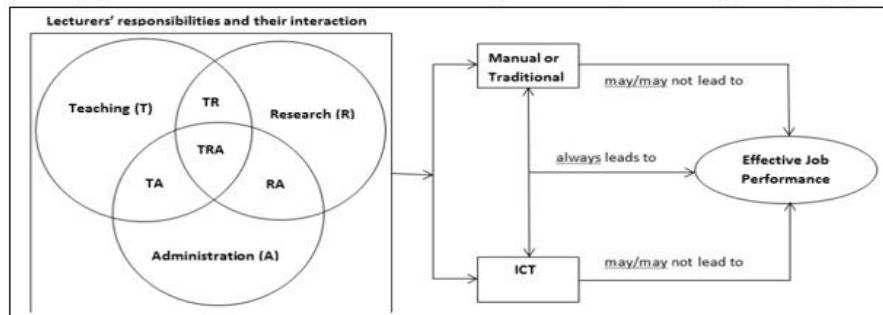


Figure 1c: Lecturers' responsibilities-performance model

**Figure 1. Class A Conceptual Models (All the variables were not measured)**

The models presented in Figure 1 were adopted from previous studies, and are herein categorized as **Class A Models** because the models are made up of variables/constructs that were

not measured. Figure 1a is a conceptual model of employee indecision model (Tsai et al., 2017). The study was carried out to develop career anxiety scale for college students. The research established the need to measure students' career anxiety before transiting from school to work. Its hypotheses were derived from potential reasons why employee career indecision increases. The researchers presumed that there are antecedents that lead to indecision which in turn affects career outcomes. Hence, Tsai et al. adopted the employee career indecision model to explain the reason for anxiety scale development for college students. Figure 1b is a model of paradigms underlying passive and active pedagogy (van Ewijk, et al, 2020) which adopted a mixed method approach to investigate the effects of passive and active pedagogy on entrepreneurial intentions. The study theorized its passive and active pedagogy from theories upon which it is hinged. Hence, the conceptual model embedded the theories and related variables and constructs. However, the test of the hypotheses did not directly address all the constructs/variables that appeared in the conceptual model; but the presence of the constructs/variables in the model helped to understand the theories from which passive and active pedagogy were derived.. The model of Figure 1c is a conceptual framework of lecturers' responsibilities-performance model (Chukwuedo & Igbinedion, 2014). The study determined technical and vocational education lecturers needs in the use of ICTs for effective job performance, implicitly taking into account the responsibilities of the lecturers and the interrelation of the responsibilities. Three research questions were answered in the study but only the variables of ICTs were used to ascertain the opinion of the lecturers as it helps them to perform their duties. Thus, the model was not statistically tested as presented.

For a practical guide on how to report a conceptual model, Figure 1c is used. A researcher may describe the model as follows: The TVE lecturers' responsibilities are basically in three folds (teaching, research, and administrative tasks), hence, there is need to enhance the lecturers' ICT skills for effective job performance. The conceptual framework shows that pairs of responsibilities of the lecturers interact while performing their duties. Although it is possible to perform their jobs without ICT skills, it is presumed that effective job performance can be attained if the lecturers' ICT skills are enhanced. Hence, the need to determine their ICTs capacity building needs.

Note that where hypotheses need to be developed for such a study, it would be better that a detailed theoretical argument or reasoning is used to theorize the hypotheses in relation to the links in the model; but this illustration is beyond the scope of this study. However, readers may consult the studies used for Class B Models.



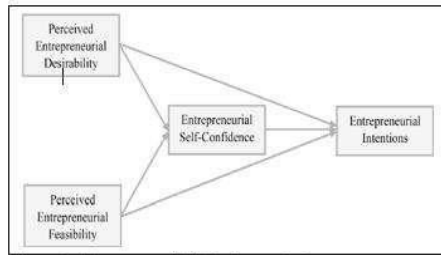


Figure 2a: Entrepreneurial behaviors model

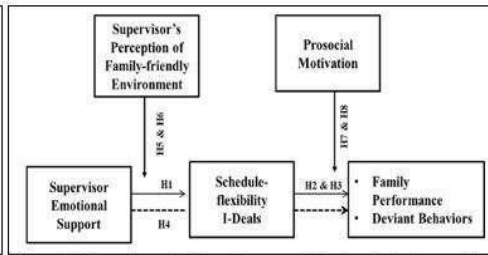


Figure 2b: Supervisor, family performance & deviant behavior model

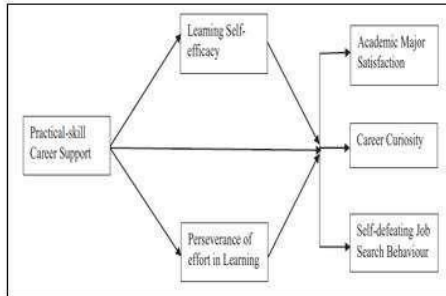


Figure 2c: Career support and behaviours model

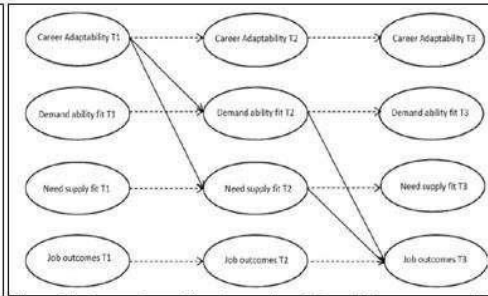


Figure 2d: Career adaptability, demand/need fit and job outcome model

Figure 2. Class B Conceptual Models (All the variables were measured)

The models shown in Figure 2 depict conceptual frameworks of studies whereby all the variables in the model were measured. The models are herein termed Class B conceptual models. Figure 2a is a conceptual model that tested hypothesized mediation of the relationship between perceived entrepreneurial desirability and feasibility (predictor variables) and entrepreneurial intentions as the criterion variable via entrepreneurial self-confidence (Otache et al., 2021). The elements of the conceptual framework are tenets of the theories that guided the study, and the development of the hypotheses for the study was discussed in tune with the conceptual model. The model in Figure 2b depicts a moderated mediation of the association between supervisor emotional support and family performance and deviant behaviours (Kelly et al., 2020). The constituents of the model were derived from the theories that supported the study. In a similar vein, the development of the hypotheses was discussed in relation to the reasoning and design of the model. From the model, schedule flexibility ideals is the mediator variable; while perceived family-friendly environment as well as prosocial motivation serve as the moderator variables. Figure 1c shows the conceptual model of the effect of a practical-skill career support on career behaviours via learning self-efficacy and perseverance of effort in learning such that the variables were measured three times (Chukwuedo & Ogbuanya, 2020). The model is in line with the hypotheses of the study, and its reasoning was hinged on the theories upon which the variables were derived. Finally, Figure 1d represents a conceptual model of the investigation into a three-wave longitudinal study of the relationship between career adaptability and job outcomes via fit perceptions (Kaur & Kaur, 2020). The model showed two approaches of mediation test, and the directions of the model arrows depict the different hypotheses developed for the study.

As a practical guide to reporting a conceptual framework, Figure 1c is used as an example. Hence, a researcher may succinctly report it as follows: Figure 2c shows the conceptual framework of this study. It represents the pathways of the development of the study's research questions and the hypotheses. The model shows that practical-skill career support is the

independent or predictor variable, while academic major satisfaction, career curiosity and self-defeating job search behaviour are the dependent or the criterion variable. In this model, learning self-efficacy and perseverance of effort in learning are the mediator variables. Hence, the conceptual framework is a parallel mediation model that test effect of practical skill career support on academic and career outcomes.

**Outcome of the quantitative and qualitative investigations**

The results are presented in themes, but the quantitative data are presented first, followed with the qualitative data.

**Table 1: Percentage Practices of Conceptual Frameworks Designs in PG Students Theses**

Sn	Design Practices of Conceptual Models	Ph.D 2019-2021		M.Ed, 2019-2021		Total, 2019-2021	
		Present n (%)	Absent n (%)	Present n (%)	Absent n (%)	Present n (%)	Absent n (%)
1	Use of definitions of variables, concepts or constructs only	48 (100)	-	77 (100)	-	125 (100)	-
2	Use of schema/diagrams only, to show the nexus of variables, concepts or constructs	7 (14.6)	41 (85.4)	5 (6.5)	72 (93.5)	12 (9.6)	113 (90.4)
3	Use of explanations (without diagram) to demonstrate the nexus of variables, concepts or constructs	-	48 (100)	-	77 (100)	-	125 (100)
4	Application of items 1 and 2 of this table simultaneously	7(14.6)	41(85.4)	5 (6.5)	72 (93.5)	12 (9.6)	113 (90.4)
5	Application of items 1 and 3 of this table simultaneously	-	48 (100)	-	77 (100)	-	125 (100)
6	Application of items 2 and 3 of this table simultaneously	-	48 (100)	-	77 (100)	-	125 (100)
7	Application of items 1, 2 and 3 of this table simultaneously	-	48 (100)	-	77 (100)	-	125 (100)

Table 1 shows the observational results of the approach PG students adopt in the presentation of conceptual framework in their study in a faculty in Nnamdi Azikiwe University. The table shows that majority of the students adopt the approach of a collection of definitions of

concepts as a conceptual framework, with very few schematic diagrams. This implies that majority of the research works lack the use of schematic diagrams to represent a conceptual model.

Data was collected for the qualitative design via a semi-structured interview to determine if the results will agree with the quantitative data and to be able to establish 'how' in the research questions of this study. From the semi-structured interview, the following findings emerged:

I know conceptual framework as definition of concepts that appear in the title of my thesis. First, the definitions should be as I found in previous studies, and then create my own definitions of the concepts as they apply to my study. This is how I know what a conceptual framework is, and that's how I have reported it in my thesis (*MSc Student 5*).

In my own view, the use of diagram is good but I don't know what and what should be in the diagram. I, therefore, prefer the use of definition of concepts because that is what I know and I think it is good and easier (*Ph.D Student 4*).

I don't have sufficient skills to develop a conceptual model, though I presented it in my Ph.D dissertation with a diagram. I used all the concepts I have in the title of my dissertation and the variables in my hypotheses to design the schema. I also included the research design (pretest posttest quasi-experimental) in the diagram, showing the control and experimental groups (*Ph.D Student 8*).

No one taught me that a conceptual framework involves the use of a model. I thought models are only shown when reporting a theoretical framework. Infact, I did not use any diagram in my work. I just provided definitions of concepts, and then added my own definitions for each concepts I reviewed (*M.Sc Student 1*).

I have actually seen works that use diagram to show a conceptual framework, but I have always used definition of concepts in my M.Sc and Ph.D works to explain conceptual framework. I actually do not know how to develop the diagram but if I am taught I would use it in my future research (*Ph.D Student 12*).

These reports show that the students have been using a collection of definitions and operational definitions to represent conceptual models. In a similar vein, it can be inferred that the students were not taught how to design a conceptual framework using a schematic diagram. Thus, majority of the students lack the skills in designing and reporting a conceptual framework. Hence, the results are in consensus with the quantitative data.

### **Discussion of Findings**

The outcomes of this study showed that the PG students sampled in this study have erroneously reported conceptual frameworks as collections of operational definitions because they were not rightly guided on the approach to developing conceptual frameworks. It, therefore, implies that the students lack the necessary skills for designing a conceptual framework. Another reason for this lack of skills among the students may be as a result of insufficient publications that properly addressed concerns on conceptual frameworks and then literature could not provide adequate guideline to developing statistically testable conceptual models. These outcomes agree

with the notion of Leshem & Trafford, (2007) who affirmed that conceptual framework is often overlooked in some levels of research. In another perspective, the outcomes of this study have shown that conceptual framework is necessary in every study and should not be misconceived or neglected (Adom et al., 2018; Chukwuedo & Uko-Aviomoh, 2015; Leshem & Trafford, 2007). Similarly, a conceptual framework is better understood, hypothesized and tested if it is schematically presented (c.f. Kaur & Kaur, 2020; Ogbuanya & Chukwuedo, 2017; Otache et al., 2021).

### **Limitations and Future Research Direction**

With keen interest, the researchers of this study acknowledge that the findings of this study are of value. However, the study has some limitations. Since this study is relatively a case study design, caution must be exercised in generalizing the findings to other categories of students in other faculties and institutions. Hence, further studies should be conducted in other institutions to compare the findings about the skills possessed by PG students in developing a conceptual model. It is also important to note that this study focused more on quantitative research in explaining and showing schematic illustrations of conceptual framework. Thus, more studies should be conducted about conceptual framework for qualitative design.

### **Implications of the Study**

The findings of this study have implications for theory and practice. This study has added in the expansion of knowledge on conceptual frameworks. The study has shown practical steps for developing conceptual models. Hence, this study can serve as a resource for research scholars to teach conceptual framework in research and statistics. There is no doubt that this study can help students to develop the fundamental skills in designing conceptual frameworks for their projects, theses or dissertations.

### **Conclusion**

There is obvious insufficient or lack of skills among PG students in developing more meaningful conceptual frameworks for their theses and dissertations. Thus, such lack may hamper the ability of the students to develop better testable hypotheses and develop a comprehensive and meaningful discussion of the findings. In a nutshell, conceptual framework should be properly taught in research to foster appropriate application of theories, developments of hypotheses, selection of appropriate design and statistics, and a more robust discussion of findings.

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## RELATIONSHIP BETWEEN KNOWLEDGE DISSEMINATION, LEARNING SELF-EFFICACY AND TASK PERFORMANCE OF BUSINESS EDUCATORS

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### Abstract

*This study determined the relationship between knowledge dissemination, learning self-efficacy and task performance of business educators in tertiary institutions in South-south Nigeria. A correlational survey design was adopted. The study population was 137 business educators from universities in South-South Nigeria, which also made up the sample size. The instrument used for data collected was a questionnaire which was face validated by three experts. Its reliability was measured using Cronbach alpha method and an overall alpha value of 0.892 was obtained. Data collected were analyzed using, mean, standard deviation and regression with bias corrected bootstrap. The study found that knowledge dissemination does not predict learning self-efficacy of business educators. However, knowledge dissemination and learning self-efficacy separately predict task performance of business educators in South-South universities in Nigeria. Based on the findings it was recommended that, universities management should encourage knowledge dissemination as this will lead to high task performance of business educators in institutions, and business educators should make effort to improve on themselves by attending academic workshops and seminars as this will make them efficacious and optimally enhance their task performance.*

**Keywords.** Business education, knowledge dissemination, learning self-efficacy, task performance

### Introduction

Business Educators are saddled with the responsibility of making the objectives of business education programme a reality. These objectives are to equip the students with necessary knowledge, understanding, attitude and skills needed for them to secure employment in their professional sub disciplines (Accounting, Marketing and Office Technology and Management), or related fields in industry and also to advance further in their professions. Additionally, the objectives of business education as opined by Njoku (2006) are: to empower individuals with desirable knowledge, skills and values to perform specific functions so as to become self-reliant, and for them to appreciate the world around them and contribute maximally to the social and economic development of the nation. If business educators performed their tasks as contained in business education programme, it will enhance the achievement of the objectives that would promote the nation's economic growth and recipient's wellbeing.

The tasks performed by business educators in higher education (e.g., universities) include classroom teaching, course advising, research. teaching practice supervision, SIWES supervision, examination supervision, results computation and presentation, as well as functioning as internal and external examiners among other administrative duties (c.f.

Chukwuedo & Igbinedion, 2014). Carrying out these assigned duties especially the instructional aspects involve pedagogical innovativeness. The task performance in itself can be described as a multi-dimensional construct. Campbell (1990) has proposed a hierarchical model of eight performance factors. Among these eight factors, five of them refer to task performance: job-specific task proficiency; non-job-specific task proficiency; written and oral communication proficiency; supervision, in case of leadership position; and partly management/administration. Each of these five factors consists of sub factors which are linked to various jobs aspects of a business educator, and these include classroom teaching, course advising and result computation (job specific task proficiency); creativity, job crafting and mentoring (non-job specific task proficiency); research publication and result presentation (written and oral proficiency); teaching practice supervision, SIWES supervision and examination supervision (supervision proficiency) and functioning as internal and external examiners (administrative proficiency).

For Business educators to perform according to their job description they need to be well-equipped with the appropriate knowledge for the job because knowledge is a core performance determinant. In other words, individuals with high cognitive abilities through good knowledge management practices are more successful in acquiring job relevant knowledge that in turn help them to accomplish their job tasks. In relation to such value, effective task performance adds to educational institution, knowledge dissemination is emphasized to enhance business educators' task performance for the overall benefit of the institutions. Effective task performance is predicated upon the knowledge, skills and abilities available to the workers. If knowledge (whether tacit or explicit) is properly disseminated, the worker (business educator) is likely to perform well.

Knowledge dissemination entails how knowledge is passed from one person or group to others. Nonaka and Takeuchi (1995) provide an approach to knowledge dissemination with their knowledge creation spiral in which four categories of knowledge dissemination are identified: socialization, externalization, combination and internalization. Socialization is a situation where individuals acquire knowledge directly from others (tacit-to-tacit); Externalization involves the articulation of knowledge into tangible form through dialogue (tacit-to-explicit); Combination involves combining forms of explicit knowledge, such as that in documents or databases (explicit-to-explicit); Internalization involves learning by doing, where individuals internalize knowledge from documents into their own body of experience (explicit-to-tacit). Effective knowledge dissemination could lead to business educators' task performance. That is to say that the extent to which knowledge management practices could lead to business educators' task performance is hinged on their learning self-efficacy. For instance, if knowledge dissemination exists in an institution and the workers are not willing to learn to add to their knowledge it might not translate to successful employee's task performance. Essentially learning self-efficacy may help to elucidate the effect of knowledge dissemination on business educators' task performance. Learning self-efficacy also has a bearing on the level and type of goals people decide to strive for (Latham & Locke, 1991) as well as the accompanying goal-striving processes (Bandura, 1986; Bandura, 1989, 1997; Schunk & Ertmer, 2000; Zimmerman, 2000). Self-efficacy is one's belief in one's ability to accomplish a task successfully. Thus learning self-efficacy is one's belief in the ability to successfully acquire specific learning competence within a particular context. Being that knowledge dissemination involves the transmission of information from a more experienced faculty to a less experienced faculty for successful task performance, it is



presumed in this study that the relationship between knowledge dissemination and task performance will be attained via learning self-efficacy of a business educators.

Business education programme is expected to have manpower that would manage both human and material resources in a school and other organizational settings. However, there seem to be cases of business educators not having quality teaching in the classroom and laboratories, not paying good attention to the students they course advised, not able to assess students effectively during teaching practice, not able to prepare and present students sessional results, also not able to supervise students project writing. In order to curb the assumed problem of poor task performance of Business educators as this may lead to low level of Business Education graduates and poor academic success of their students, this study seeks to determine the role of knowledge dissemination and learning self-efficacy may play on business educators task performance.

The theoretical framework of the study was hinged on Prosser's seventh theorem, of the sixteen theorems propounded by Prosser in 1949. The seventh theorem states that "Vocational education will be effective in proportional as the instructor has had successful experience in the application of skills and knowledge to the operations and processes he undertakes to teach." The implication in this case is that the teacher cannot teach that which he does not know, and this implies that business educators cannot perform beyond the knowledge they have acquired. As regards this, the need for, knowledge dissemination and learning self-efficacy for business educators task performance.

The purpose of this study was to determine the relationship between knowledge dissemination and learning self-efficacy and task performance of business educators in tertiary institutions in South-South Nigeria.

### **Research Questions**

The following research questions were answered in this study.

1. What is the relationship between knowledge dissemination and learning self-efficacy?
2. What is the relationship between knowledge dissemination and task performance?
3. What is the relationship between learning self-efficacy and task performance?

### **Hypotheses**

The null hypotheses were tested at alpha level of .05

1. There is no significant relationship between knowledge dissemination and learning self-efficacy.
2. There is no significant relationship between knowledge dissemination and task performance.
3. There is no significant relationship between learning self-efficacy and task performance.

### **Method**

This study determined the relationship between knowledge dissemination, learning self-efficacy and task performance of business educators in tertiary institutions in South-South Nigeria. A correlational survey design was adopted since the study aimed at determining the relationship between variables (Gay, Mills, & Airasian, 2011). Hence, correlational survey is considered appropriate because the relationship between knowledge dissemination, learning self-efficacy and task performance was established among business educators in universities. The study population consisted of 137 business educators from universities in South-South, Nigeria, which were also used as the sample of the study because of the manageable size.

A face validated questionnaire, which was made of two adopted and one adapted scales, was used for data collected. The three scales measured the three main variables of this study (i.e. knowledge dissemination, learning self-efficacy and task performance). Knowledge dissemination was measured with a 10-item sub-scale adopted from Darroch (2003) knowledge management scale (e.g., My institution encourages employees with similar interests to work together to solve problems), Learning-self-efficacy was measured with a 7-item scale adapted from Lim and Chan, 2003 (e.g., I may not be able to keep pace with any of my institution’s skills upgrading schedules for staff). Task performance was measured with a 10-item sub-scale adopted from Goodman and Svyantek, (1999) job performance scale (e.g., I could manage more responsibility than usually assigned to me). The reliability coefficients, obtained with Cronbach’s alpha method, yielded alpha values of .879, .756, and .903 for knowledge dissemination, learning self-efficacy and task performance respectively. While the overall alpha value of 0.892 was obtained.

Data were collected by the researchers with the help of three research assistants. All administered questionnaire were carefully completed and retrieved. Hence, there were no missing data. The data were, therefore, analyzed using mean, standard deviation as well as bivariate correlation and simple linear regression with 2000 resample bias corrected bootstrap method. The 2000 resample bootstrap approach was employed to determine results for potential generalizable findings. Thus, bivariate correlation with bootstrap was used to answer the research questions, while regression with bootstrap was used to test the hypotheses at .05 level of significance.

**Results**

The results of the data analyses are presented in the order of research question followed with the corresponding hypothesis.

**Research Question 1.** What is the relationship between knowledge dissemination and learning self-efficacy?

**Table 1:** Mean, Standard Deviation, Bootstrap and Correlation between Knowledge Dissemination and Learning Self-efficacy

Variables	M	SD	2000 Resample Bootstrap Iterations			r
			Bias: M(SD)	BCa 95% Confidence Interval		
				Lower: M(SD)	Upper: M(SD)	
Knowledge Dissemination	2.604	.487	-.0002(-.00216)	2.522(.434)	2.685(.535)	.094
Learning Self-efficacy	2.857	.461	.0005(-.00162)	2.7781(.40870)	2.937(.510)	

Note. BCa = bias-corrected and accelerated estimates, M = mean, SD = standard deviation

Table 1 reveals the results of the correlation between knowledge dissemination and learning self-efficacy among business educators. The table shows the mean responses on knowledge dissemination (M = 2.604) and learning self-efficacy (M = 2.857). Hence, the 2000-resample bootstrap mean responses were relatively negligible, and this implies that a larger sample size of up to 2000 business educators’ mean responses on knowledge dissemination and learning self-efficacy will cluster around the mean responses of 137 respondents. The correlation

coefficient ( $r = .094$ ) reveals low correlation between knowledge dissemination and learning self-efficacy.

**Hypothesis 1.** There is no significant relationship between knowledge dissemination and learning self-efficacy

**Table 2:** Regression Estimates of Knowledge Dissemination predicting Learning Self-efficacy

Model	MS	F	Coefficients			Bootstrap with BCa 95% CI			
			Beta	t	P	Bias	P	Lower	Upper
Knowledge Dissemination	-		.094	1.096	.275	.001	.389	-.125	.298
Regression	.255	1.202							
Residual	.212								
Summary	R Square = .009, Adjusted R Square = .001, df = 1, 135								

Note. BCa = bias-corrected and accelerated estimates, CI = confidence interval

Data presented in Table 2 depict the prediction of knowledge dissemination on learning self-efficacy. The results reveal that knowledge dissemination do not significantly predict learning self-efficacy:  $F(1, 135) = 1.202$ ,  $\beta = .094$ ,  $t = 1.096$ ,  $p > .05$ . The result of the 2000-resample bootstrap coefficients is also not significant (bias = .001,  $p > .05$ ) with a relatively negligible bias. Thus, there is no significant relationship between knowledge dissemination and learning self-efficacy among business educators.

**Research Question 2.** What is the relationship between knowledge dissemination and task performance?

**Table 3:** Mean, Standard Deviation, Bootstrap and Correlation between Knowledge Dissemination and Task Performance

Variables	M	SD	2000 Resample Bootstrap Iterations				r
			Bias: M(SD)		BCa 95% Confidence Interval		
			Lower: M(SD)	Upper: M(SD)			
Knowledge Dissemination	2.604	.487	-.0013(-.00323)	2.526(.440)	2.679(.530)	.346	
Task Performance	3.339	.401	.0008(-.00137)	3.272(.367)	3.410(.428)		

Note. BCa = bias-corrected and accelerated estimates, M = mean, SD = standard deviation

Data shown in Table 3 represent the correlation between knowledge dissemination and task performance among business educators. The results show the mean responses on knowledge dissemination ( $M = 2.604$ ) and task performance ( $M = 3.339$ ). The table shows that the 2000-resample bootstrap mean responses were relatively negligible, and this implies that a larger sample size of up to 2000 business educators' mean responses on knowledge dissemination and task performance will cluster around the mean responses of 137 respondents. The correlation coefficient ( $r = .346$ ) reveals moderate relationship between knowledge dissemination and task performance.

**Hypothesis 2.** There is no significant relationship between knowledge dissemination and task performance.

**Table 4:** Regression Estimates of Knowledge Dissemination predicting Task Performance

Model	MS	F	Coefficients			Bootstrap with BCa 95% CI			
			Beta	t	P	Bias	P	Lower	Upper
Knowledge Dissemination	-		.343	4.286	.000	-.002	.000	2.316	2.895
Regression	2.619	18.369							
Residual	.143								
Summary	R Square = .120, Adjusted R Square = .113, df = 1, 135								

Note. BCa = bias-corrected and accelerated estimates, CI = confidence interval

Table 4 depict the results of knowledge dissemination predicting task performance. The table reveal that knowledge dissemination significantly predicts task performance:  $F(1, 135) = 18.369$ ,  $\beta = .346$ ,  $t = 4.286$ ,  $p < .001$ . Consequently, the adjusted R-square of 113 indicates that knowledge dissemination accounts for 11.3% of variation in task performance among business educators. Additionally, the result of the 2000-resample bootstrap coefficients is also significant (bias = -.002,  $p < .001$ ) with a relatively negligible bias. Thus, there is a significant relationship between knowledge dissemination and task performance among business educators.

**Research Question 3.** What is the relationship between learning self-efficacy and task performance?

**Table 5:** Mean, Standard Deviation, Bootstrap and Correlation between Learning Self-efficacy and Task Performance

Variables	M	SD	2000 Resample Bootstrap Iterations				r
			Bias: M(SD)	BCa 95% Confidence Interval			
				Lower: M(SD)	Upper: M(SD)		
Learning Self-efficacy	2.857	.461	.0001(-.00266)	2.782(.410)	2.933(.508)		.547
Task Performance	3.339	.401	.0002(-.00219)	3.275(.373)	3.406(.426)		

Note. BCa = bias-corrected and accelerated estimates, M = mean, SD = standard deviation.

Table 5 represent the correlation between learning self-efficacy and task performance among business educators. The table shows the mean responses on learning self-efficacy ( $M = 2.857$ ) and task performance ( $M = 3.339$ ). The table also shows that the 2000-resample bootstrap mean responses were relatively negligible, indicating that a larger sample size of up to 2000 business educators' mean responses on learning self-efficacy and task performance will cluster around the mean responses of 137 respondents. The correlation coefficient ( $r = .547$ ) reveals moderate relationship between learning self-efficacy and task performance.

**Hypothesis 3.** There is no significant relationship between learning self-efficacy and task performance.

**Table 6:** Regression Estimates of Learning Self-efficacy predicting Task Performance

Model	MS	F	Coefficients			Bootstrap with BCa 95% CI			
			Beta	t	P	Bias	P	Lower	Upper
Learning Self- efficacy	-		.547	7.590	.000	-.002	.000	.391	.554
Regression	6.540	57.612							
Residual	.114								
Summary	R Square = .299, Adjusted R Square = .294, df = 1, 135								

Note. BCa = bias-corrected and accelerated estimates, CI = confidence interval

Table 6 depicts the results of learning self-efficacy predicting task performance. The table reveal that learning self-efficacy significantly predicts task performance:  $F(1, 135) = 57.612$ ,  $\beta = .547$ ,  $t = 7.590$ ,  $p < .001$ . Accordingly, the adjusted R-square of .294 indicates that learning self-efficacy accounts for 29.4% of variation in task performance among business educators. The result of the 2000-resample bootstrap coefficients is also significant (bias = -.002,  $p < .001$ ) with a relatively negligible bias. Thus, there is a significant relationship between learning self-efficacy and task performance among business educators.

### Discussion of Findings

The study investigated relationship between knowledge dissemination, learning self-efficacy and task performance of business educators in Universities in South-South Nigeria. The result on knowledge dissemination-learning self-efficacy link revealed that there exist low correlation between knowledge dissemination and learning self-efficacy. Similarly, the result of the corresponding hypothesis one revealed that there is no significant relationship between knowledge dissemination and learning self-efficacy among business educators. Therefore, knowledge dissemination does not predict learning self-efficacy of business educators of South-South universities in Nigeria. The finding corroborates the studies of Stone, (2012); Vancouver, Thompson, Tischner, & Putka, (2014) who stated that “more is better” seems to apply to much of the findings on the effects of learning self-efficacy, “overconfidence” may sometimes lead to inaccurate appraisals or unrealistically high goals thereby leading to inability for learning self-efficacy to predict knowledge dissemination.

The result on the association between knowledge dissemination and task performance revealed that moderate relationship between knowledge dissemination and task performance. Similarly, the result of the corresponding hypothesis two revealed that there is a significant relationship between knowledge dissemination and task performance among business educators. Therefore, knowledge dissemination predicts task performance of business educators. The study corroborates the study of (Kohli & Jaworski, 2012; Narver & Slater, 2012; Kohli et al., 2017; Ng et al., 2012; Wei & Wang, 2011) who found that knowledge dissemination allows organizations to learn, reflect, unlearn, relearn, build, maintain and replenish its core competencies thereby increasing their task performance.

The result on learning self-efficacy-task performance relation revealed that reveals moderate relationship between learning self-efficacy and task performance. Similarly, there is a significant relationship between learning self-efficacy and task performance among business

educators. Therefore, learning self-efficacy predicts the task performance of business educators. The finding is in line with the study carried out by Pajares, (2008) which stated that learning self-efficacy originates in the inferential process concerning one's prior performance, and influence performance by boosting persistence, resiliency, and sustained effort, especially in a challenging and changing circumstances. Also, the finding corroborates with the work of Fred, (2011), which stated that the main sources of change in learning self-efficacy include performance accomplishments and emotional arousal progress in the task is expected (i.e., increases in accomplishments). The implication of the findings is that knowledge dissemination and learning self-efficacy both leads to enhanced task performance of business educators in universities in South-South, Nigeria.

### Conclusion

Based on the findings of this study, it was concluded that knowledge dissemination and learning self-efficacy are significant predictors of task performance of business educators in south- south Nigeria. This is to say that organizations, with greater knowledge dissemination success will tend to be better in responding to a changing environment for performance improvement. However, successful knowledge dissemination will to some extent depend on the employees' capability to organize the knowledge resources that they received through a network of relationships. Furthermore, learning self-efficacy improves the quality of engagement by broadening one's thought-action tendencies, strengthening commitment, and enhancing attention and persistence, it is also likely that positive changes in self-efficacy during a task may contribute to enhanced task performance of business educators.

### Recommendations

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

1. Universities management should encourage knowledge dissemination as this will lead to high task performance of business educators in institutions.
2. Business educators should make effort to improve on themselves by attending academic workshops and seminars as this will make them efficacious and optimally enhance their task performance.

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## EXTENT OF ACQUISITION OF DIGITAL SKILLS BY OFFICE TECHNOLOGY AND MANAGEMENT STUDENTS IN TERTIARY INSTITUTIONS IN BENUE STATE

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### Abstract

*This study investigated the extent of acquisition of digital skills by Office Technology and Management (OTM) students in tertiary institutions in Benue State. Two research questions guided the study and two null hypotheses were tested. Survey research design was used. The population of the study was 515 office technology students drawn from four tertiary institutions in Benue State. Simple random sampling was used to get a sample size of 51 students for the study. Instrument used for data collection was a 5- point rating scale structured questionnaire. Data collected were analyzed using mean and standard deviation to answer the research questions while t-test and ANOVA were used to test the hypotheses at 0.05 level of significance. The overall result showed that the acquisition of these digital skills by OTM students in tertiary institutions in Benue State was at a moderate extent. The result of the hypotheses test showed that there was no significant difference in the mean ratings of OTM students in universities, polytechnics and colleges of education on the extent of acquisition of skills in the two digital applications. Similiary, gender was significant. It was concluded that, OTM students in tertiary institutions in Benue State did not have enough of the two digital skills applications to meet the challenges of competitive nature of office work today. It was recommended that tertiary institutions should try to provide adequate digital facilities for better training of students to enhance mastery of the needed skills upon graduation.*

**Keywords:** Digital Skills, Office, Students, Tertiary Institutions and Gender

### Introduction

In this modern world, fast changes have taken place in all facets of human life including the office environment due to global technological advancement. Modern business offices (government or private) require effective and efficient information for better decision making. The processing of information and management functions in various offices rest mainly on the secretaries who are office information managers. Therefore, the management of any organization expects office technology management graduates in their domain to possess relevant digital skills to perform the office functions effectively and efficiently. In the ame vein, the management of today's tertiary institutions requires relevant digital skill to perform effectively.

Tertiary institutions play critical role in the digital transformation of the societies, particularly equipping the office technology and management (OTM) students with relevant digital skills that will enable the students fit evenly into the labour market. The labour force is changing drastically as new technologies are evolving each day. Therefore, if OTM students are familiar with new technologies, they will be able to use these technologies in their future place



of work which will be of great benefit to the students and the nation at large. Tertiary institutions comprise universities, colleges of education and polytechnics, monotecnics, colleges of agriculture, enterprise initiative institutions among others. Tertiary institutions are higher education institutions beyond the secondary school level, especially education and training at colleges of education, universities, polytechnics, monotecnics and research institutions. University is the highest educational institution in all nations of the world. It is the highest level or final resort for knowledge acquisition hence it is termed the citadel of learning. For this obligation it is expected that the use of digital tools must be used in today's university.

According to Jorgensen (2019) digital tools are machines that are used to ease today's office work. To operate these digital tools, there is need for OTM students to acquire digital skills to operate in the present 21<sup>st</sup> century office work. Coward, (2019) opined that the world is living in the mist of digital revolution, that more people are connected to the internet than ever before, using digital devices and services for work and all aspects of their life. Coward also asserted that new technologies have proliferated over the past decade such as artificial intelligence, big data, block chain, cloud computing, internet of things, machine learning, mobile applications, nanotechnology and 3D printing among others. This shows that presently every aspect of human activities is being done digitally.

Office managers and administrative assistants are employed in organizations of every type. They are employed in firms providing services ranging from education and health to legal and business services. Others work for firms engaged in manufacturing, construction, wholesale and retail trade, transportation, and communication. Banks, insurance companies, investment firms, and real estate firms are also important employers, as well as Federal, State, and local government agencies. This non-restrictive nature of office managerial services provides its recipients with a lot of access to job employment opportunities. Habila (2013) opined that, from the pervasive nature of office managerial services, it is clear that virtually all spheres of life need office technology and management intervention. All organizations need good information management systems, good record keeping for effective competitiveness and profit making. Secretarial education has been evolving and developing with the advancement in office work and technology. As a response many tertiary institutions in Nigeria have now changed the nomenclature from Secretarial Education/Studies to Office Technology and Management (OTM). It has provided job opportunities for both men and women. In the past secretarial studies were dominated by women but of recent, with the changes in the nomenclature to office technology and management (OTM), many men have found comfort in the profession.

Like any other profession, there is often gender disparity in OTM, even though the course of study is for both men and women. There should be no gender bias, but in the real life situation, men are likely to have access to information and communication technology (ICT) than their female counterpart as the men used the internet more often. A reduced digital gender gap will have significant economic implication if office technology and management students acquired the needed digital skills irrespective of their gender for optimal performance.

The UNESCO (2018) stated that there are major inequalities in digital skills in both developing and developed countries along a number of lines, notably socio-economic status, race, gender, geography, age and educational background. Gender divides in digital skills are severe. Women are 1.6 times more likely than men to report lack of skills as a factor impeding their use of the internet. The proportion of women using the Internet is 12% lower than the proportion of men using the Internet, and the gender gap in Internet usage has widened between 2013 and 2017, especially in least developed countries. Without policy interventions, ongoing

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technological developments threaten to exacerbate the inequalities between those with and without digital skills. Integrated and comprehensive responses are urgently needed. Government and state actors need to play pivotal role in setting up the fundamental principles for inclusive and equitable digital skills development, providing programmes and capacity development initiatives for disadvantaged groups, and re-skilling adults at risk of job displacement. Ensuring that everyone has relevant digital skills helps to promote inclusive and equitable education and lifelong learning for all.

### **Statement of the Problem**

Secretaries are the mainstay of every organization whether public or private. In the past, graduate secretaries secured employment easily and succeed rapidly especially those with requisite skills and knowledge. Today however, the reverse seems to be the case probably because of dearth of appropriate knowledge and skills. For instance many graduates of the programme are seen roaming the streets in Benue State where this study was conducted with their certificates in search of employment when they are supposed to be self-employed and employers of labour.

Azih (2016) observed that most graduates of OTM programme of some universities seem to be lacking in skills related to skills in some modern office applications needed for employment and effective performance in today's offices and business environment dominated by technology. This means that where students fail to adequately acquire knowledge and relevant skills while in school, it will be very difficult for them to apply them to effectively manage any modern office on graduation. This puts a question mark on the quality of service such OTM graduates that are not well exposed to relevant digital skills will render to prospective employers. Currently, there is a high demand for technologically trained and skilled workers but, regrettably, most OTM graduates seem to possess only theoretical knowledge which does not match the demands of the modern workplace.

Office work and business activities today have gone digital replacing the manual and technical procedures of the past. Today's office manager (secretary/OTM graduate) is required to apply digital skills in office and business activities and need to be adequately equipped with them in the course of training as students but the reverse appears to be the case.

### **Purpose of the Study**

The main purpose of this study was to ascertain the extent of acquisition of digital skills by OTM students of tertiary institutions in Benue State. Specifically, the study ascertained the extent of acquisition of:

1. Microsoft word processing application skills by OTM students in tertiary institutions in Benue State.
2. Microsoft Excel application skills by OTM students in tertiary institutions in Benue State.

### **Research Questions**

The following research questions guided the study:

1. What is the extent of acquisition of Microsoft word processing application skills by OTM students in tertiary institutions in Benue State?

2. What is the extent of acquisition of Microsoft Excels application skills by OTM students in tertiary institutions in Benue State?

### **Hypotheses.**

The following null hypotheses were tested at 0.05 level of significance.

1. There is no significant difference between the mean ratings of OTM students in universities, polytechnics and colleges of education on the extent of acquisition of Microsoft word processing application skills.
2. Gender does not significantly influence the mean ratings of OTM students on their extent of acquisition of Microsoft word processing application skills.
3. There is no significant difference between the mean ratings of OTM students in universities, polytechnics and colleges of education on the extent of acquisition of Microsoft excel application skills.
4. Gender does not significantly influence the mean ratings of OTM students on their extent of acquisition of Microsoft excel application skills.

### **Theoretical framework**

The Theory on which this study is based was Theory of Skill Acquisition.

The theory of skill acquisition was propounded in 1986 by Hubert and Stuart. The theory postulated that the formal system of education is a process that involves the development of skills which will make it possible for individuals to deal with different activities. The theory went further to said that 'Knowing what or "Knowing that" and "Knowing how" are acquired through formal education and training. According to the theory, people are born as novice, and expertise is acquired through instruction and experiences that leads from "Knowing that" to "Knowing how". The theory stated more that skill acquisition or skill development is important for effective and efficient operation of everyday activities which can be social, economic, political or technological.

### **Method**

The researcher adopted descriptive survey research design for the study. The population of the study comprised 513 Office Technology and Management (OTM) students in all tertiary institutions offering the programme in Benue State. Out of the population of 513 and sample size of 51 was taken using proportionate strata random sampling technique to ensure that the subgroup (colleges of education, polytechnic and university) of the population participated in the study in the same proportion. The sample used for this study comprised 153 OTM students drawn from the 513 OTM students from four tertiary institutions under study using simple random sampling technique.

The instrument used for data collection was a structured questionnaire developed by the researcher in line with the purpose of the study. The instrument has two main sections:- A and B. Section A contained two items on the respondents' bio-data such as gender and institution type, while Section B had two clusters B1 – B2 which contain 16 and 14 items respectively. The questionnaire was structured on a five point rating scale. VGE (Very Great Extent), GE (Great Extent), ME (Moderate Extent), SE (Small Extent), VSE (Very small Extent)

One hundred and fifty-five copies of the questionnaire were distributed to the respondents personally by the researcher with the help of two research assistants who work in

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the office of the Heads of Department in the institutions. The two assistants covered College of Education, Katsina/Alla in Benue State and Benue State Polytechnic, Ugbokolo, respectively while the researcher personally covered College of Education, Oju, and Benue State University (BSU) Makurdi. All copies of the questionnaire were returned.

Descriptive and inferential statistical tools were used in analyzing data collected. Mean scores were used to answer the research questions and determine the spread of the respondents' views. ANOVA and t- test were used to test the hypotheses. Where the For t computed was equal or greater than the p-value at 0.05 level of significance, the null hypothesis was rejected and where For t computed was less than p-value, the null hypothesis was not rejected.

### Results

Data collected with respect to the research questions and hypotheses were analyzed and presented in Tables 1- 4

#### Research Question 1

What is the extent of acquisition of Microsoft word processing application skills by OTM students in tertiary institutions in Benue State?

**Table 1**

**Respondents' mean ratings on the extent of acquisition of Microsoft word processing application skills by OTM students in tertiary institutions in Benue State**

S/N	item statement	$\bar{X}$	SD	Remark
	<b>Ability to</b>			
1.	Insert text	4.25	0.95	GE
2.	Cut, copy and paste for edit document	3.88	0.89	GE
3.	Save document in the primary storage device	3.99	1.01	GE
4.	Save document in the secondary storage device	3.59	1.06	GE
5.	Retrieve files from the primary storage	3.82	1.09	GE
6.	Create and edit tablets	3.52	0.99	GE
7.	Cut, copy and paste icons	3.74	1.11	GE
8.	Insert borders and shade in document	3.45	1.03	ME
9.	Use the correct fingers on the keyboard	3.67	1.17	GE
10.	Adjust margins	3.41	0.96	ME
11.	Retrieve files from a secondary storage	3.62	1.11	GE
12.	Suitably align text in a document (left align, right align, centre align and justify)	3.22	1.11	ME
13.	Change font type, style and size	3.71	1.04	GE
14.	Insert page numbers and symbols in a document	3.39	0.99	ME
15.	Print document	3.82	1.12	GE
16.	Preview a document before printing	3.58	1.14	GE
<b>Cluster Mean</b>			<b>3.67</b>	<b>GE</b>

Data in Table 1 show that the respondents rated items 8, 10, 12, and 14 as moderately acquired while the remaining items are rated as greatly acquired. The cluster mean value of 3.67 indicates that on the whole, Microsoft word processing application skills is rated by OTM students in tertiary institutions in Benue State as greatly acquired digital skill. However, the small standard deviation value of the items shows that the values in the statistical data are more concentrated around the mean.

**Research Question 2**

What is the extent of acquisition of Microsoft excel skills by OTM students in tertiary institutions in Benue State.

**Table 2: Respondents’ mean ratings on the extent of acquisition of Microsoft excel skills by OTM students in tertiary institutions in Benue State**

S/N	Item Statement (Ability to ...)	X	SD	Remark
17	Create new workbook	3.66	1.18	GE
18	Navigate a worksheet	3.31	1,02	ME
19	Find text and numbers in a workbook	3.44	1.29	ME
20	Insert and delete sheets	3.29	1.12	ME
21	Create a formula	3.09	1.29	ME
22	Perform calculations	3.14	1.21	ME
23	Edit cell contents	3.18	1.27	ME
24	Insert rows and columns in a worksheet	3.26	1.17	ME
25	Insert blank cells in a worksheet	3.08	1.34	ME
26	Group and ungroup data	3.05	1.31	ME
27	Prepare stock inventory	3.01	1.36	ME
28	Prepare bank statements	2.94	1.37	ME
29	Create result sheet	3.17	1.42	ME
30	Create budget consolidation	2.92	1.43	ME
	Cluster	3.18		ME

Data in Table 2 show that the respondents rated item 17 as greatly acquired while the remaining items are rated as moderately acquired. The cluster mean value of 3.18 indicates that on the whole, Microsoft excel skills is rated by OTM students in tertiary institutions in Benue State as moderately acquired digital skill. However, the small standard deviation value of the items shows that the values in the statistical data are more concentrated around the mean.

**Hypothesis 1:** There is no significant difference in the mean ratings of OTM students in universities, polytechnics and colleges of education on the extent of acquisition of Microsoft word processing skills.

To test this hypothesis, the mean of the three groups were computed to obtain the p-value at 0.05 level of significance. The result of the computation is shown in Table 3.

**Table 3: ANOVA Result on the extent, of acquisition of Microsoft word processing skills**

Sources of Variance	Sum of squares	of df	Mean Squares	of F	p-val	Decision
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Between Groups	2052.2	2	1026	110.4	0.00	Significant
Within Groups	14453.8	150	96.4			
Total	16506	152				

Data in Table 3 show that the *p*-value is less than  $F=10.6$ ,  $P=.001$ . This result indicates that there is a significant difference in the mean ratings of OTM students in universities, polytechnics and colleges of education on the extent of acquisition of Microsoft word processing skills. Therefore, the null hypothesis is rejected.

**Hypothesis 2:** Gender does not significantly influence the mean ratings of OTM students on their extent of acquisition of Microsoft word processing skills.

To test the first hypothesis, the mean of the two groups were computed to obtain the *p*-value at 0.05 level of significance. The result of the computation is shown in table 4 **Table 4: T-test Result on the extent** of acquisition of Microsoft word processing skills

Source of variation	Gender	N	Mean	SD	tf	p- value	Decision
Microsoft word processing skills	Male	78	57	11.1	151	0.05	Significant
	Female	75	60.3	9.4			

Data in Table 4 show that *p*-value is equal to the chosen significance level  $\alpha = 0.05$ ,  $p(0.05) = 0.05$ , at 151 degree of freedom. This suggests that there is no significant difference in the mean ratings of male and female OTM students on their extent of acquisition of Microsoft word processing skills. Therefore, the null hypothesis is not rejected.

**Discussion of findings**

The findings of this study relating to Microsoft word processing skills revealed that OTM students in tertiary institutions in Benue State greatly acquired Microsoft word processing application. However few of the items such as insert borders and shade in document, adjust margins, suitable align text in a document (left align, right align, centre align and justified) and insert page numbers and symbols in a document were rated moderately acquired. Since Microsoft word processing is greatly acquired by most OTM students in tertiary institutions in Benue State, it means that the students will be able to handle any document that might come their way. This can be linked with the definition of word processing as stated by Ezenwafor (2012) that word processing assists OTM graduates in producing different types of office based documents such as memos, reports, letters and many more. In the same vein, Ogbonna, Ibezin and Obi in Jorgensen, (2019) posited that Word processing skills are crucial as they constitute the basic skills that will usher students into effective use of other software applications.

The finding also conforms to the views of Uzochukwu (2017) who held that skill acquisition is like a key used in opening door of fortune. Therefore, the acquisition of Microsoft word processing skill in great extent by OTM students will lead to greater performance upon graduation which will motivate employers to employ them or be self employed. The study also found out that there was a significant difference in the mean ratings of OTM students in the

universities, polytechnics and colleges of education on the extent of acquisition of Microsoft word processing skills.

Therefore, with the rejection of the null hypothesis, it means that institution type influence the extent of acquisition of Microsoft word applications. The result also showed no significant difference in the mean ratings of male and female OTM students on their extent of acquisition of word processing skills. This means that gender did not significantly influence the extent of acquisition of word processing skills.

The findings of the study revealed that the acquisition of Microsoft Excel application skill by OTM students of tertiary institution in Benue State was moderate, with only one item in great extent; the remaining items were acquired moderately. This finding can be linked to the view of Otowe and Amiaya in Bako (2015) which asserted that employees with digital technology skills are today's business rock-stars and that employers in every industry need them, but most do not have enough of them and demand for them is growing daily. If the need for digital technology is increasing, then there is need for OTM students to acquire these skills at a very great extent not just the moderate aspect of these skills.

The findings further revealed that there was a significant difference in the mean ratings of OTM students in the universities, polytechnics and colleges of education. The rejection of the null hypothesis showed that the extent to which OTM students in the universities, polytechnics and colleges of education have acquired digital skills in Microsoft Excel Application differs. This could be linked to the views of Edokpolor (2017) that OTM in polytechnics are more competent than the OTM students in the universities. This might be true because most of the universities concentrate more on the theoretical aspect while polytechnics and colleges of education have more practical. Gender therefore, did not significantly influence the mean ratings of OTM students on the extent of acquisition of Microsoft Excel application skills in tertiary institutions in Benue State.

### **Conclusion**

The findings of the study implied that the extent of acquisition of word processing application skills were greatly acquired while Microsoft Excel application, skills were moderately acquired. The findings of the study therefore, have shown that acquisition of digital skills by OTM students in tertiary institutions was at a moderate extent. This implies then that the acquisition of digital skills by OTM students in tertiary institutions is not enough to meet the current challenges of competitive work environment. These calls for drastic action by these institutions to lay more emphasis on practical skill acquisition to enable the OTM students meet the demands of the labour market upon graduation.

### **Recommendations**

On the basis of the findings of the study, the following recommendations were made:

1. Tertiary institutions in Benue State should provide adequate equipment for the training of the students by equipping the computer laboratory for better performance.
2. The OTM students should try to work extra to improve their digital skills in the area of Microsoft Excel, applications for better performance in work place.
3. Students should be more proactive towards their studies by giving lots of time to practical skills to enable them achieve the aims of the programme.

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## EFFECTS OF TWO METACOGNITIVE STRATEGIES ON ACHIEVEMENT OF JUNIOR SECONDARY SCHOOL STUDENTS IN ALGEBRA IN ONITSHA EDUCATION ZONE

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### Abstract

*This study investigated the effect of graphical organizer and metacognitive reading on Junior secondary school two (JSS2) students' academic achievement in algebra in Onitsha Education Zone of Anambra State. One research question guided the study and one null hypothesis were tested at 0.05 alpha level A quasi experimental research design, specifically, pre-test, post-test non-equivalent control design was used. The population of the study consists of 4,433 JSS2 students while 150 students formed the sample size. The sample technique employed was multi-stage sampling. The research instrument used for data collection was the mathematics achievement test. The instrument was validated by three experts and Kuder Richardson Formula 20 was used to ascertain the reliability coefficient at 0.87. Mean, standard deviation and analysis of covariance were used for data analysis. The findings of the study showed that students taught algebra using Graphic Organizer and metacognitive reading strategies significantly achieved more than those taught with traditional method and students taught algebra using graphic organizer achieved significantly higher than those taught using conventional method of teaching. It was recommended among others that in-serving mathematics teachers should be trained by government and ministry of education on the use of graphic organizer and metacognitive reading strategies through workshops, seminars.*

**Key words:** Algebra, Achievement, metacognitive, strategies.

### Introduction

Mathematics is one of the core subjects at both the primary and secondary school education system in Nigeria. According to the National Policy on Education (NPE, 2013), Mathematics is a compulsory subject taught at the primary and secondary levels of education in Nigeria. Its function and relevance to education and the society makes it to be regarded as the bedrock of science and technological development. In view of this, Okafor (2015) argued that no nation can develop scientifically and technologically without proper foundation in mathematics.

Mathematics is extensively employed in all areas of life to resolve computation problems. It is a language in which scientific ideas are expressed and the means by which other science subjects including Physics, Chemistry, Biology and disciplines like Engineering, Geology are understood. Mathematics enables the various sciences to draw the implications of their observational and experimental findings. Thus, Mathematics has become so valuable that there is nothing in all human endeavours that does not apply mathematics knowledge (Martins, 2010). Therefore, scientific knowledge is impossible without a sound knowledge of mathematics.

Mathematics is made up of many branches like probability, statistics, algebra, geometry, trigonometry, number numeration and so on (Onuorah, 2016). This study specifically covers algebra. Algebra is an aspect of mathematics which deals with using of alphabets to represent

numbers. Algebra, which is one of the basic principles of mathematical learning, still maintains its importance in mathematics programmes. It is critically important because it is often viewed as a gatekeeper to higher-level mathematics which make it a required course for virtually every post-secondary school program (Kurumeh, 2006). It simplifies the solution of problems and indicates what is valid and what is not for every set of mathematical objects and the operations defined for them (Okafor, 2015). For example, in secondary schools, algebra of real numbers studies the properties of real numbers under the operation of addition, multiplication (repeated addition) and powers (repeated multiplication). To generalize those properties, algebra uses letters to represent numbers so  $x$ ,  $y$ ,  $z$  etc are symbols used instead of numbers.

In spite of the importance and usefulness of algebra in mathematics learning and uses, Adeleke (2007) observed that one particular aspect of mathematics which students' problems are dominant is algebra. In the same line, Martin (2010) observed that algebra is also one of the branches of mathematics that many secondary school students find difficult to understand. Perhaps this is so because historically, algebra has represented students' first sustained exposure to the abstraction and symbolism that mathematics is powerful. Earlier, Kurumeh (2006) reported that students achieved poorly in public examination especially in the aspect of algebra. In addition, the summary results of students at credit pass and above reported from Anambra State Ministry of Education (AMSMOE) Examination in mathematics in 2014 to 2018 were 48.93%, 47.84%, 47.35% and 48.47% respectively. The report also indicated that the most difficult aspect of mathematics experienced by students is algebra.

Okafor (2011) reported that poor academic achievement of students in algebra is as a result of poor and ineffective instructional skills and methodologies by mathematics teachers. Azuka (2009) earlier asserted that mathematics classes where algebra is taught in the state secondary schools are overcrowded, most times one may find a single teacher teaching in a class of about 100 students. There are other factors which also contribute to poor achievement in algebra such as students attitude towards mathematics in general, inadequate number or qualified teachers to handle the algebra concepts in mathematics particularly at the junior secondary school level, and incompetency among teachers in teaching algebra concepts very well (Antoine, 2013). The major factor is that of teachers not being able to teach algebra using new innovations and strategy to stimulate students' interest. The incompetency among teachers exposes the students to solve algebra problem anyhow and thus have a notion that it is very difficult to handle. The students thus might develop a dislike for algebra.

Eraikhuemen (2003) noted that students dislike algebra because, they feel that the topics are difficult and could not be understood easily. Some teachers lack techniques and materials in teaching some topics to the extent that if they have a choice, they will not teach such topics, also the teachers believe that these topics are difficult and are not easy to teach. For these reasons many students in secondary schools experience difficulties in learning some aspects of mathematics in the curriculum (Okafor, 2011). Azuka (2009) opined that teachers also experience difficulties in achieving effective teaching in the school system. In the light of the above it becomes necessary to consider other alternative teaching strategies like graphical organizers and metacognitive-reading strategies.

Graphical organizer is a visual display that demonstrates relationships between facts, concepts or idea (Antoine, 2013). Sometimes it is referred to as knowledge maps, concepts maps, story maps, flow diagram, sequence chart, compare/contrast, venn diagram, cause and

effect diagram, main idea and details chart. Graphic organizer can be used at any point in the course of learning for effective understanding of concepts (Eraikhuemen, 2003). However they can be presented prior to learning to enable students organize and interpret new incoming information. According to Onuorah (2016) graphical organizers are some of the most effective visual learning strategies for students and are applied across the curriculum to enhance learning and understanding of subject matter content and it facilitate students' learning by helping them identify areas of focus within a broad topic aspect of algebra. They also help the learner make connections and structure thinking; students often turn to graphical organizers for writing projects. Okafor (2015) noted that graphic organizers have the capabilities to enhancing learning because graphic organizes are visual-spatial displays used to organize knowledge and represent relationships among pieces of information. The effectiveness of graphic organizers in improving mathematics comprehension has therefore prompted its usage in teaching algebra and other concepts in mathematics (Eissa, 2012). The process for using graphic organizers in the classroom involves, students brain storm and write down what they currently know about a given subject. It also involves students' ability to write down what they would like to learn about the subject and students record what they have learned about the subject.

Metacognitive reading involves the use of several repeated reading of a given concept during lesson presentation to improve students' understanding of that concept. Teong (2003) reported that metacognitive reading is classified into the following clusters: planning, monitoring and evaluating reading activities (Onuorah, 2016). Planning reading activities are used in activating learner's background knowledge to get prepared for reading (Amesi, 2003). Reading activities such as title, picture, illustration, heading and subheading can help readers grab the over view, or the general information in the text. Its structure such as cause and effect, question and answer, compare and contrast sub-concepts in a topic. Azuka (2009) stated that metacognitive reading activities are employed when reading a concept, learners may think about how to apply what they have read to other situation. To solve mathematical problem, one needs to repeatedly read mathematics textbooks, instruction, formulae and steps involve in solving mathematics problems.

In review of empirical studies on graphic organizer Eissa (2012) find significant improvement in the achievement of students exposed to graphic organizer than their counterparts in the traditional teaching method. Githua and Nyabwa (2008) also find out there is improvement on the student learning achievement through the use of graphic organizer in mathematics. Teong (2003) find that there is significant improvement in the achievement of students exposed to metacognitive reading strategy than their counterparts in other group. This study hope to find out the effectiveness of graphical organizer and metacognitive reading strategy on students' achievement in Algebra.

### **Statement of the problem**

Literature (Amesi, 2003; Eissa, 2012; Githua&Nyabwa, 2008, Okafor, 2015) have shown that one of the major problems facing the teaching and learning of mathematics (algebra inclusive) in junior secondary school is the teaching method adopted by mathematics teachers. This is evident in the poor performance of students in both internal and external algebra mathematics examinations. Results from Anambra State Ministry of Education (AMSMOE) examination division reveal that from 2104 to 2018, majority of the students performed poorly in mathematics and the report also indicated that the most difficult aspect of mathematics for students is algebra. The problem of the study is: 'What would be the effects of graphical

organizer and metacognitive reading strategy on academic achievement of JSS 2 students in algebra?

**Purpose of the study**

The study determined the effect of graphical organizers and metacognitive reading strategy on achievement of JSS students in algebra in Onitsha Education Zone of Anambra State. Specially, it sought to determine the:

1. Differences between the prê-test and post-test mean achievement scores of students taught algebra with graphic organizer, metacognitive reading and traditional teaching method.

**Research Questions**

1. What are the differences in the pre-test and post-test mean achievement scores of students taught algebra with graphic organizer, meta-cognitive reading strategies and the traditional teaching method?

**Hypothesis**

1. There is no significant difference in the posttest achievement scores of students taught algebra with Graphic Organizer, Metacognitive reading Strategies and traditional teaching method

**Method**

The design for this study is quasi-experimental. This study adopted a quasi-experimental research design using 3x4 factorial types. According to Susan and Thomas (2012), a 3 x 4 factorial design is an experiment with two factors (independent variables), one factor (independent variable) with 3 levels, while the other factor (independent) with 4 levels. The main advantage of this design is that it allows researchers to look for and control for the influence of most extraneous variables. Figure 2 presents the research design.

E <sub>1</sub>	O <sub>1</sub>	X <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>
-----	-----	-----	-----	-----
E <sub>2</sub>	O <sub>1</sub>	x <sub>2</sub>	O <sub>2</sub>	O <sub>3</sub>
-----	-----	-----	-----	-----
C	O <sub>1</sub>	-x	O <sub>2</sub>	O <sub>3</sub>

**Figure 2:** Design of the Study

Where E<sub>1</sub> and E<sub>2</sub> represent the experimental groups 1 and 2, while C represent the control group. O<sub>1</sub> represents the test administered on the subject before treatment and O<sub>2</sub> administered after treatment. X<sub>1</sub> and X<sub>2</sub> the treatment groups 1 and 2. O<sub>3</sub> represents retention test or delayed posttest. -x means no treatment (Tg with TTM), ----- represent nonrandomized group. The population for this study counts of all junior secondary year two (JSS2) students in all the 16 public secondary schools in Onitsha Education Zone of Anambra State. The population is 14433 JSS2 students. This population comprises 8571 females and 5862 males.

The sample for the study comprised three intact classes of 50 JSS2 students each making it 150 students. The sample was obtained through multistage sampling procedure. Three co-educational secondary schools were purposively drawn from 16 secondary schools in Onitsha education zone based on accessibility to the researchers. Using sample random sampling

technique (balloting with replacement), three schools were selected. With picking of folded paper, two schools were assigned to experimental group and the other school assigned to control group.

The instrument for data collection was Mathematics Achievement Test (MAT) developed by the researchers. The MAT consists of 50 items. The MAT was subjected to content validation with table of specification. The content validation was done by submitting the instrument together with the purpose of the study, scope, research questions and hypotheses to three experts. One in Measurement and Evaluation of Educational Foundation Department, one in Science Education Department of NnamdiAzikiwe University and a Mathematics Teacher. Trial testing of the MAT was done by administering the instrument to 20 JSS2 students from co-educational secondary school in Onitsha South Local Government Area of Anambra State. (School not in Onitsha Education zone). The data were used to estimate the reliability of the instrument using Kuder Richardson formula 20 (KR-20); of internal consistency of 0.87, hence the instrument was considered reliable for the study (Nworgu, 2015). The MAT were given to the students by their regular class teacher before the commencement of the lesson and after the lesson, the MAT are collected back from the students by their class teacher and the scores were used for data analysis.

#### **Control of Extraneous Variables**

The following procedures were adopted to control potential extraneous variables:

**Experimenter Bias:** One of the major sources of effect on the study is the experimenter bias which is introduced when the experimenter becomes the investigation. To control this, the researcher would make use of researcher assistants for the study. Also to reduce the effect the same units of instruction will used for the two groups would be the inclusion of the various strategies involved in the implementation of the metacognitive instrumental strategies for the experimental group as an experimental variable.

**Initial Group Differences:-** In the selection of the subject for this study, intact classes would be used because of administrative inconveniences of disrupting normal class setting as practiced in the schools. This therefore would create a non-randomization effect. To control this initial group differences the subject in the group, an analysis of covariance (ANCOVA) will be applied in analysing the data from the study using the pre-test scores as covariates to the post-test scores.

**Teacher Variable:** To control the teacher variable for this study, the researcher will organize training for the three research assistants so that differences in the effectiveness of individual teachers would be made to follow the lesson plans strictly.

**Hawthorne Effect;** Hawthorne effect is said to occur where the subject become aware that they are being observed or used in a study and could result in gaps or difference in normal study. Hawthorne effect was controlled in this study by using the regular teachers known to the student.

**Class interaction:** The schools for the study have considerable distance from each other since the researcher is aware of possible interaction between the students in the experimental groups and control group.

**Novelty Effect:-** Novelty effect is created when a new teaching or instructional material is introduced in the teaching-learning endeavour. This effect may be positive or negative in nature. The presence of an experimenter for instance, would create this novelty effect on the students, in order to minimize that, the mathematics teachers of the students would be used for the study.

The data collected were analysis using statistical package for social science (SPSS) version 21, mean and standard derivation were used to analyzed the research questions. The null hypotheses for the study were tested using Analysis of covariance (ANCOVA) at 0.05 level of significance.

**Results**

**Research Question 1:** What are the differences in the mean pretest and post test scores of the students taught algebra with graphical organizer, metacognitive reading strategy and traditional lecture method.

**Table 1: Difference in the mean pretest and posttest achievement scores of students taught algebra using graphic organizer, metacognitive reading strategies and traditional teaching method**

Method	N	Pretest		Posttest Mean Gain		
		Mean	SD	Mean	SD	
GO	50	24.04	6.27	63.62	9.27	39.58
MRS	50	23.64	7.43	55.98	8.49	32.34
TTM	50	22.36	6.26	49.48	5.93	27.17

Table 1 shows various means on achievement pretest and post test scores of the students taught algebra with graphical organizer, metacognitive reading strategy and traditional teaching method. From the table, the gain in mean of the achievement showed that Graphic organizer has 39.58, the gain in mean of the achievement showed that Metacognitive reading strategies has 32.34 while traditional method group gained 27.17. The mean difference between the Graphic organizer, Metacognitive reading strategies and traditional method groups revealed that Graphic organizer was effective in improving the achievement of students exposed to it more than other methods.

**Hypotheses 1:** There is no significant difference in the posttest achievement scores of students taught algebra with Graphic Organizer, Metacognitive reading Strategies and traditional teaching method

**Table 2: Analysis of Covariance (ANCOVA) test of significant difference in the post-test achievement scores of students taught algebra with graphic organizer, metacognitive reading strategy and traditional teaching method**

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Squared	Rmk
Corrected Model	5015.599 <sup>a</sup>	3	1671.866	25.805	.000	.347	
Intercept	34424.095	1	34424.095	531.339	.000	.784	
Pretest	6.279	1	6.279	.097	.756	.001	
Method	4921.791	2	2460.895	37.984	.000	.002	S
Error	9458.961	146	64.787				
Total	490942.000	150					
Corrected Total	14474.560	149					

Table 2 shows that there is a significant difference between the mean achievement scores of students taught mathematics using graphic organizers, metacognitive reading strategies and those taught using traditional method with  $F(2,146) = 37.984, P = 0.000 < \alpha = 0.05$ . The null hypothesis which states that there is no significant difference in the post-test achievement scores of students taught algebra with graphic organizer, metacognitive reading strategies and traditional teaching method was rejected. The post hoc pairwise comparisons is presented in table 3 to obtain the directions of the differences.

**Table 3. Pairwise comparison of the significant difference in the mean achievement scores of students taught with graphic organizers, metacognitive reading strategy and traditional teaching method**

(I) method	(J) method	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
GO	MRS	8.027 <sup>**</sup>	1.652	.000	4.762	11.293
	TTM	14.555 <sup>**</sup>	1.678	.000	11.239	17.871
MRS	GO	-8.027 <sup>**</sup>	1.652	.000	-11.293	-4.762
	TTM	6.528 <sup>*</sup>	1.660	.000	3.246	9.809
TTM	GO	-14.555 <sup>**</sup>	1.678	.000	-17.871	-11.239
	MRS	-6.528 <sup>*</sup>	1.660	.000	-9.809	-3.246

Table 3 shows that there is a statistically significant difference between the group that took the graphic Organizer teaching approach and the metacognitive reading strategies ( $p = 0.000$ ), as well as between the graphic Organizer teaching approach and traditional teaching method ( $p = 0.000$ ). Furthermore, there is a statistically significant differences between the group that took the metacognitive reading strategies teaching approach and traditional teaching method ( $p = 0.00$ ). The two experimental groups are significantly different from the control. Further, there is also a significant difference between the two experimental groups.

**Discussion**

The findings from research question 1 revealed that students taught algebra with graphic organizer and metacognitive reading strategies achieved higher than those taught with traditional teaching method. This corroborated with the findings of Eissa (2012) that, there is significant improvement in the achievement of students exposed to graphic organizer than their counterparts in the traditional teaching method. The finding from also showed that the mean achievement scores of students taught algebra with graphic organizer achieved higher than those taught with metacognitive reading strategies. This is in line with Githua and Nyabwa (2008) finding that there is improvement on the student learning achievement through the use of graphic organizer in mathematics.

Table 2, formulated based on hypotheses I revealed that there in significant difference between three groups (graphic organizer, metacognitive reading strategies and traditional teaching method. The findings agrees with the earlier findings of Teong (2003) who reported that there is significant improvement in the achievement of students exposed to graphic organizer and metacognitive reading strategies than their counterparts. Finally, the findings from table 3, therevealed that there is a statistically significant difference between the group that took

the graphic organizer teaching approach and the metacognitive reading strategies. The collaborate with the findings of Eissa (2012) that there is significant improvement of student exposed to graphic organizer than their counterparts.

### Conclusion

The study found that students taught algebra with graphic organizer and metacognitive reading strategies achieved higher than those taught with traditional teaching method.

### Recommendations

Based on the findings, the following recommendations were made.

1. Mathematics teachers should use graphic organizer and metacognitive reading strategies to facilitate their students' understanding and achievement in algebra branch of mathematics.
2. Authors of mathematics textbooks should integrate appropriate graphic organizers and metacognitive reading strategies in their textbooks which could be used for teaching and learning of algebra in junior secondary school.
3. School management board and administrators should provide teachers with resources that will enable them to achieve their stated goals in teaching and learning algebra.

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## **BUSINESS EDUCATION STUDENTS' RATING OF FACTORS INFLUENCING CAREER CHOICE IN UNIVERSITIES IN EDO AND DELTA STATES**

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### **Abstract**

*This study investigated business education students rating of factor influencing career choice in universities in Edo and Delta States. The theory of this study was hinged on Krumboltz' theory of social learning and career decision making. The descriptive survey research design was employed and the population for the study consist of 802 Business education undergraduate students from University of Benin and Delta State University. The sample size comprised 100 Business education undergraduate students selected through a proportionate sampling technique. The instrument used for data collection was structured questionnaire. The reliability of the instrument was 0.71. The data collected were analyzed using mean ( $\bar{x}$ ), standard deviation and two sample independent t-test. The findings revealed that gender and students interest play a significant influence on students' choice of business education programme. Furthermore, there is no significant difference between male and female students on their choice of option in business education in universities. It was recommended, among others, that both male and female business education students should be encouraged to enrol into business education programmes through the activities of their professional bodies and beneficiaries of the programmes.*

**Keywords.** Business education, career choice, students' interest, university

### **Introduction**

The general goal of education is to provide young people with the appropriate knowledge and skills to realistically plan for their future career. Business education being an aspect of the general education programme provide students with knowledge, skills, understanding and attitudes needed to do well either as self-employed or in paid-employment industries. It is a norm that business education prepares the individual for the acquisition of practical skills and applied skills as well as different occupations (Ezeani & Ogundola, 2016). This was supported by the National Policy on Education which lay emphasis on the acquisition of appropriate skills and the development of mental, physical and social abilities and competencies as equipment for the individual to live in and contribute to the development of the society (Federal Republic of Nigeria, 2013). Therefore, schools are being challenged to produce students who are knowledge producers, problem-solvers and creative thinkers who can apply their skills to enrich their lives and communities. Consequently, it has become imperative for the nation to rethink her educational delivery practices in order to enhance the competitive ability of her teeming graduates. As a step in this direction, Nigeria government sees Business education as an essential programme to help foster the creative

thinking skills in students. According to Ezeani and Ogundola (2016) business education as a programme is offered at different levels of educational system (such as the primary, junior and senior secondary schools, three-years colleges of education, two-years ordinary diploma (OND) and higher diploma (HND) in colleges of technology or polytechnics, and in the four-year undergraduate programmes of Universities), is spiced with a lot of lofty objectives.

Njoku (2006) gave the objectives of Business Education at the universities level as follows; to empower individuals with desirable skills, knowledge and value to perform specific functions so as to become self-reliant, to help individuals appreciate the world around them and contribute maximally to the social and economic development of the nation, to empower individuals in such a way that they will develop their intellectual capability that would help them to make informed decisions in all sphere of life, to help individuals become judicious spender and develop proper values for the achievement of healthy living and growth of the nation and to understand the political framework of a nation so that they can contribute to national economic development of their country. Towards the attainment of these goals, secondary school graduates must have the right incentives towards choosing business education programme as a career course as a result of the fundamental and ubiquitous benefits that are inherent in the programme.

Choice involves making a psychological decision, judging the outright advantage of multiple options and selecting the best or more of them. Career choice is one of the major dilemma and challenge facing Nigerian students. It involves the chemistry of many factors which are intricately intertwined. It is not a direct task and involves a difficult process of decision making (Meddour, Abdo, Majid, Auf & Aman, 2016). Sometimes, the selection made, may be disproportionate with the personal traits. The selection made may be over ambitious or too low compared to the innate ability, skills, understanding and strength, or turnover that exists in individuals themselves. This may lead to resultant failure and disappointment (Kazi & Akhlaq, 2017). It is difficult for everyone to make a decision regarding their career. This individual action is manifested on a larger scale in the economic prosperity of a nation. Individuals who are misfits in their workplace tend to be less productive and efficient, and therefore are unable to achieve their goals.

In most cases, the choice of careers, subjects, and courses of study and the subsequent career paths to follow are a nightmare for prospective undergraduate students (Issa & Nwalo, 2008). Most often, choosing the right subject combination leading to the right profession can make the difference between enjoying and disliking the career in future. In other words, choice is considered to be something that is worthwhile in itself and is a fundamental indicator of the freedom of a student in choosing his/her course of study. Every student at a certain juncture in their life has to make a choice regarding their career. It is important that students make the correct choice (Nyarko-Sampson, 2013). This will make them more poised, stable, and endowed with a pleasant countenance which will lead to knitting a better fabric for the society. Unfortunately, career choices are made with little awareness of the real world (Bright, Pryor, & Harpham, 2005). Students make crucial decisions at a stage when they may not be fully informed of their choices, or else unavoidable circumstances prevent them from pursuing their goals.

The eminence of career choice may be determined using different yardsticks, to which many persons attach different weights. For instance, the employment opportunities the course can offer, talents, skills, societal perception and academic achievement exert an influence on

career choice of students (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001). Ngunjiri, (2013) found that poor financial background of students from disadvantaged communities deter choices of appropriate educational programmes and careers. Studies have also shown factors that influence career choice by high school students (Hashim & Embong, 2015; Mudhovozi & Chireshe 2012). For instance, Mudhovozi and Chireshe (2012) found that the participants who attended rural-situated public schools made delayed career decisions. The same study also found that participants were mainly influenced by parents, teachers and friends to choose psychology as a career. Therefore, making a good choice of career such as business education should be a major concern of students, parents and governments since the aim of education is to help the individual develop occupational and vocational competences that will help them to be gainfully employed and self-employed (Federal Republic of Nigeria, 2013). In choosing a career, it is vital to know how students develop their choices for one occupation or the other, and how these choices are applied. Thus, parents, teachers, and counsellors ought to be conversant with major factors which influence occupational and vocational development of individuals. This is essential because career theorists believe that individuals have certain abilities, interests, personality traits and other characteristics that inform one's career choice.

The theoretical framework of this study was hinged on Holland (1992) theory of vocational personalities and work environments. Holland's theory has been the foundation of several assessment devices designed to help individuals make career and education choices that are compatible with their interests, skills, and abilities. Holland's major viewpoint is that a person's choice of a vocation is an expression of his personality and that interest inventories are expression of personality and their preferred work environments. According to the theory, people search for environment that will allow them to exercise their skills and abilities, express their attitudes and values and to take on agreeable problems and avoid those found to be disagreeable. Again, it states that a person's behaviour is determined by an interaction between his personality and the characteristics of his environment. Holland (1992) examined factors which influence career choices. Influences found to be important include: family; peers, teachers and other adult role models; school, work, and leisure experiences; and socio-economic status and ethnic background.

This theory is suitable for this study in that, through one's personality and characteristics of his environment, career choice can be made. In other words, for students to choose business education as a career course, they take into consideration their interests, skills, societal acceptance and abilities to succeed. But the extent to which these students are able to match their interest, abilities and skill with their career path appear to be worrisome.

Ekpenyong (2005) asserted that those concerned with vocational education and, in particular, career teachers, are aware that it is only a small fraction of youths that can on their own solve their career and identity problems. These identity and career problems seem to be more peculiar to many business education students since business education appear not to be their first choice of study. Nyamwange (2016) found that many youths made wrong career choices due to ignorance, inexperience, peer pressure, advice from friends, the types of books the students read, the school they attend, the students subject teachers, passion, interest, ethnic factor, gender, student's performance in a subject area, parents role, or as a result of prestige attached to certain jobs without adequate vocational guidance and career counseling.

Student's interest may be the most influencing factor in selecting a career choice among the generation of students all over the world (Biju, 2012). Interest exists within the individual rather than rely on external pressures or a desire towards decision making. Some studies affirm

the fact that personal interest is one of the leading elements in the selection of course by students in the tertiary institution (Ahmed, Sharif & Ahmad, 2017; Bubic, 2014). Owie (2003) argued that the principal reason why an individual chooses a specific career is that the person has inherent interest in the field. Students therefore, choose their course upon a 'match with their interests and abilities, which implies that students have a solid knowledge of the interests or abilities required to be successful in a particular course of study and the subsequent job (Humayon, Khan&Ansari, 2018).While this may be extremely predisposed by previous academic achievement, it must, however be noted that, intrinsic interest of an individual remain a fundamental force that energizes and spur individual decision, if the person is expected to be effective, fulfilled and excel in the career. A situation, where intrinsic interest is missing, no amount of training, motivation or satisfaction would positively increase the person's academic performance and professional effectiveness (Ahmed, 2014).

The influence of gender in student's career choice cannot be underplayed. When considering gender, irrespective of the socio-cultural background, male students are more likely to be motivated by money and status in their choice of career than female students. Therefore, students who think they should be financially endowed will select a business major. This is because making money is extremely paramount for business major students. Similarly, Kazi and Akhlaq (2017) that reported financial prospects influence the career choice of men as they have to meet household expenses, whereas women show more concern for social values and utility. Some studies have shown significant relationship between gender and occupational aspirations, preference and choice (Igbinedion, 2011). In our modern-day society, boys and girls typically, go through different socialization processes and they have a propensity to learn different gender roles and behaviour patterns and this therefore expose them to different interests. However, these roles and interests later become the principal factors in their career choice, specifically in a course like business education. In Nigeria for instance, there is this perception that, career aspirations that lead to teaching job, ordinarily should be meant for the female student while that of male should be engineering, accounting and so on. The findings of Igbinedion (2011) however revealed that there is a significant difference between male and female business education students with regard to their perception of parents as a factor that influenced their choice of secretarial studies programmes.

In addition, the types of books the students read, the school they attend, culture, the student's subject teachers, ethnic factor, media influences, prospective levels of income, employment opportunities, the social acceptability of profession, recognition, work satisfaction and student's performance in a subject area among others also play a significant role in choosing a career (Kazi & Akhlaq, 2017). Therefore, it has been observed that for students to choose business education as a career course, it can be influenced by a number of factors.

The major turning point in the life of an adolescent involves the career choice that they make while in school. Student's interest in business subjects plays a crucial role in affecting the choice of business education as a career course. Students who performed well in business related subjects in their junior and senior secondary school certificate examination who are supposed to apply for business education as a career course in tertiary institution are often seem to be advised otherwise. This is because choosing the right subject combination leading to the right profession can make the difference between enjoying and detesting the career in future. However, the role of gender and the interest of the students in choosing business education programme as a career

course appear to be worrisome, this is because students interest appear to be tinted towards course like medicine, accounting, engineering and other professional courses. This is because they see business education as a non-professional course and that it may offer their wards less job opportunities after graduation, therefore, they tend to advice themselves against choosing business education as a career course. According to Igbinedion (2011) there is a low enrolment into business education programmes across the universities and college of education. The reasons for these difficulties are not yet clear to the researcher. Could it be as a result of parental influence? Is it as a result of peer group influence? Is it as a result of student's interest? Could it be as a result of gender of the students? Therefore, the main purpose of this study was to determine the factors influencing Edo and Delta State student's choice of business education.

### **Research Questions**

The study was guided by the following research questions:

1. To what extent does students' interest in business subjects influences their career choice in business education in universities in Edo and Delta States?
  2. To what extent does gender influence students career choice in business education in universities in Edo and Delta States?
- 
1. There is no significant difference between gender and students choice of business education in Edo and Delta State tertiary institutions.

### **Methodology**

This study employed a descriptive survey research design. According to Aggarwal (2008), descriptive survey research is devoted to the gathering of information about prevailing conditions or situations for the purpose of description and interpretation. The population of the study was 802 students offering business education in University of Benin, Benin City and Delta State University, Abraka. University of Benin had 376 and Delta State University had 426 totally 802 students. The sample was 100 business education undergraduate students selected through a proportionate sampling technique. The instrument that was used for data collection was a structured questionnaire titled Business Education Students Rating of Factor Influencing Career Choice (BESRFICC). The questionnaire was divided into two sections: A and B. Section A captured the demographic characteristics of the respondents which comprised the name of the institution, gender and area of specialization while section B consisted of 12 items drawn from the research questions. The respondents were requested to select the most appropriate options. The items of the questionnaire were measured on a four-point rating scale ranging from 4-1; Very High Extent (VHE) =4; High Extent (HE) = 3; Low Extent (LE) =2 and Very Low Extent (VLE) =1. The instrument for data collection was face validated by the researcher's supervisor and one expert from the Department of Vocational and Technical Education, from the University of Benin, Benin City. To establish the reliability of the instrument for the study, the internal consistency of the items were measured. This was determined by using the Cronbach's alpha statistic which gave an alpha value of 0.71. The data collected were analyzed using mean ( $\bar{x}$ ), standard deviation (SD) and two sample independent t-test. The mean and standard deviation were used to answer the research questions while and two sample independent t-test was used to test hypotheses at 0.05 level of significance. Decision rule for research question was based on mean value of 2.50, such that any calculated mean ( $\bar{x}$ ) equal or greater than 2.50 was regarded as

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high extent (HE) while any mean ( ) less than 2.50 was regarded as low extent (LE). For the hypothesis, the probability value (p) was used. Where the p-value is less than or equal to 0.05, the null hypothesis was not retained, but where the p-value is greater than 0.05, the null hypothesis was retained.

**Results**

The results are presented in the order of the research questions and hypothesis.

**Research Question 1:** To what extent does students’ interest in business subjects influence Edo and Delta student’s choice of business education?

**Table 1: Mean and Standard Deviation of Influence of Subject Interest**

S/N	Item Statement		SD	Remarks
1	I chose this field because I am fully confident that I will give my best here.	3.89	.34	HE
2	I chose this field because I was inherently inspired to do so.	2.94	.94	HE
3	I chose this field because my teachers made me feel that I could succeed in this occupation.	3.26	.70	HE
4	I chose this field because its working conditions suit me well.	2.63	.99	HE
5	I choose this programme because it best fit my personality	3.04	.93	HE
	Cluster	3.15		HE

HE: High Extent

Data presented in Table 1 reveal that the mean responses range from 2.63 to 3.89, while the standard deviation range from 0.34 to 0.99. With these mean responses, it is revealed that the extent students’ interest influence their choice of business education in universities is high. The cluster mean’ therefore, shows that students’ interests influence their choice of business education in universities to a high extent.

**Research Question 2:** To what extent does gender influence students choice of business education in Edo and Delta State tertiary institutions?

**Table 2: Mean and Standard Deviation of Influence of Students Gender**

S/N	Item Statement		SD	Remarks
1	Male students like business education as a career course because it involves calculation.	3.29	.82	HE
2	Female students do NOT like business education as a career course because it involves calculation.	2.89	.81	HE

3	Female students like business education as a career course because it involves teaching.	2.88	.92	HE
4	Male students do NOT like business education as a career course because they see it as feminine course.	2.91	1.04	HE
5	Female students like business education because it prepares them as future secretaries.	2.93	.94	HE
6	Male students choose business education as a career course because it involve skills acquisition programme.	3.06	.76	HE
<b>S/N</b>	<b>Item Statement</b>		<b>SD</b>	<b>Remarks</b>
7	Female students like business education as a career course because it prepares them for easy access to employment either as a teacher or business woman.	3.25	.99	HE
	Cluster	3.03		HE

HE: High Extent

Table 2 indicate that the mean response ranges from 2.88 to 3.29, while the standard deviation range from 0.76 to 1.04. With these results, the above mean responses revealed that the extent gender influence choice of business education in universities is high. The cluster mean' therefore, shows that gender influence on students' choice of business education in universities is of high extent.

### Hypothesis 1

There is no significant difference between gender and students choice of business education in Edo and Delta State tertiary institutions.

**Table 3: The t-test Analysis of Students' Choice of Business Education Based on Gender**

Variable	Gender	N	Mean	SD	df	t-val.	Sig. (p)	Decision
Students, choice of Business Education	Male	57	3.17	.237	99	.758	.450	NS
	Female	44	3.13	.358				

The result presented in Table 3 show that the aggregate mean responses for male and female respondents are 3.17 and 3.13 respectively, while the corresponding standard deviations are .237 and .358. The t-value is .758 at df = 99, while the p-value is .450. Testing at a significant level of .05, it was found that the p-value is greater than the alpha value. Hence, the null hypothesis which states that there is no significant difference between gender and students choice of business education in Edo and Delta State tertiary institutions is accepted.

### **Discussion of Findings**

The findings from research question one revealed that students' interest influence their choice of business education in universities to a high extent. This was supported by the findings of Owie (2003) who asserted that the most important reason why a person chooses a particular career is that the person has intrinsic interest in the field. This simply means that when students choose careers, they should consider their personal interests because: 1) they believed they will do better in the field that interests them; 2) People who choose careers which match their personal interests are usually successful; and 3) People could get greater satisfaction and happiness when working in the field of interest. To this end, many students believed that interest is extremely paramount when choosing a career course.

Research question two findings showed that the extent gender influence choice of business education in universities is high. This finding is however in line with that of Kazi and Akhlaq (2017) who reported that financial prospects influence the career choice of men as they have to meet household expenses, whereas women show more concern for social values and utility. The result suggests that male naturally like to choose a course that could potentially fetch them more money when they eventually graduate while the female also prefer courses that will give them time to take care of their family. For instance teaching job, which business education readily provide for is recipients. The ubiquitous benefits of business education programme also provide ample opportunities for both male and female to choose business education as a career course. This is because, students eventually graduates as an accountant or teacher.

The findings of the study with regards to hypothesis three indicated that, there is no significant difference between male and female students on their choice of business education in tertiary institutions. The findings of this study was however supported by that of Igbinedion (2011) who revealed that there is no significant difference between male and female students in their perception of peer group as a factor that influenced their choice of business education.

### **Conclusion**

This study has shown that different factors contribute to student's choice of business education in universities in Edo and Delta States. However, based on the above findings, it can be concluded that variables such as student's gender and interest contribute to the determinants influencing career choice of business education students. To this end, student's low preference for business education at the tertiary level is as a result of their inadequate awareness of the relevance and prospects of the skills acquired in business education. Consequently, this has resulted in the attrition rate of business educationist in primary, post primary and tertiary institutions of learning and business professionals in office occupation respectively.

### **Recommendations**

Based on the findings of the study, the following recommendations are considered imperative:

1. Students orientation programmes such as seminars, workshops, conferences should be organize by the management of business education programme so as to equip them with the opportunities that are inherent in the programme.



2. Guidance and counselling unit should also be provided by the department of business education, because this unit which will be charged with the responsibility to counsel the students on appropriate career choice in business education.
3. Management of the department of business education should contact non-governmental organizations to sponsor media-charts and professionals be invited to create awareness to the students on the relevance, prospects and lucrativeness of business education in secondary schools in preparation for entry into universities and its corresponding usefulness and importance in the world of works.
4. Both male and female business education students should be encouraged to enrol into business education programmes through the activities of their professional bodies and beneficiaries of the programmes. This is because the result of this study showed that there was no gender inequality in students' choice of business education.

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## UTILIZATION OF MODERN INSTRUCTIONAL MATERIALS FOR TEACHING BUSINESS SUBJECTS IN SECONDARY SCHOOLS IN ANAMBRA STATE, NIGERIA

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### Abstract

*The need to improve the teaching of business subjects necessitated this study to ascertain the level of utilization of modern instructional materials for teaching business subject in secondary schools in Anambra State, Nigeria. One research question guided the study and three null hypotheses were tested. Descriptive survey research design was adopted and 249 male and female business subjects teachers were studied without sampling. A structured questionnaire was used for data collection. The questionnaire was validated by three experts in the field of business education and measurement and evaluation from the Faculty of Education, Nnamdi Azikiwe University, Awka. A total of 249 copies of questionnaire were distributed to the respondents, 241 copies were correctly filled, retrieved and used for data analysis. Data collected was analyzed using mean and standard deviation to determine the homogeneity of the respondents' ratings while t-test was used to test the null hypotheses at 0.05 level of significance. Findings revealed that business subjects teachers rarely utilized modern instructional materials for teaching business subjects. The findings also showed that school location and gender were significant factors on respondents' ratings of level of utilization of modern instructional materials while years of experience was not a significant factor. The researchers recommended among others that business subjects teachers should endeavour to utilize available modern instructional materials in the teaching of business subjects to enable students acquire relevant skills and competencies for gainful employment or self-employment.*

**Key Words:** Business Subjects Teachers, Utilization, Modern Instructional Materials

### Introduction

Education is an essential element of human development and existence. Universally, education is an instrument for social, political, scientific and technological development. It empowers young people with knowledge and skills, which in turn provide them with access to productive employment and meaningful contribution to national development. As affirmed by Ubulom and Ogwunte (2017), education is the most powerful agent for social transformation, national stability, security, unity, and prosperity. This is why the Nigerian Government sees education as an instrument per excellence for individual and national development. Therefore, it is important to give secondary education a solid foundation through effective teaching and learning.

In Nigeria, secondary education curriculum is designed to meet the national objective of preparing individuals for useful living within the society and higher education (Federal Republic of Nigeria (FRN, 2013). The FRN provides for secondary education in two stages - the upper basic also known as Junior secondary level and post basic secondary also known as senior

secondary level. At the junior secondary level, typewriting, shorthand, book keeping, office practice and commerce are integrated as business studies while at senior secondary level, business subjects offered include financial accounting, keyboarding, economics, commerce, insurance, marketing, salesmanship, office practice among others, out of which students choose two or three business subjects in addition to other areas to make up for West African School Certificate Examination. The main aim of business education whether at junior level or senior level is to bequeath students with relevant job skills, knowledge and necessary attitudes for paid or self-employment as well as for higher education in business-related areas (FRN, 2013).

In order to equip students with vocational skills and competencies required in modern offices and schools, teaching of business subjects requires the use of appropriate instructional resources. In agreement, Monsuru (2015) stated that teaching in this modern period is increasingly becoming more complex and technological to be teaching with traditional tools (such as chalkboard, textbooks, chart, pictures, and map among others) alone. Monsuru further stated that, developments in modern technology has made available a wide range of instructional materials to supplement teachers' effort in teaching-learning process. Nwagwu and Azih (2016) posited that vocational education which is the vehicle through which business subjects hope to accomplish their objectives is susceptible to changes with innovations in technologies especially those used in modern offices and schools. This is why business subjects teachers are expected to utilize appropriate modern instructional materials in teaching so that students can have opportunity to see, touch and manipulate them.

Modern instructional materials are technology-based teaching aids that make teaching easier for teachers and learning more effective and enjoyable for students. Modern instructional materials are collections of materials and equipment that help the teacher to effectively deliver instruction to the students. According to Amali (2014), modern instructional materials refer to visual, audio and audio-visual category in that help to make abstract concepts and ideas concrete in the teaching and learning process. They include overhead projectors, films, white board, digital camera, television and computers. Onah and Okoro (2010) stated that modern instructional materials for teaching business subjects include personal computers, scanners, digital cameras, phones, faxes, modems, teleconferencing, compact disks, projectors and digital video disk player. Incorporating these materials in teaching can present, support and reinforce the teaching of business subjects in senior secondary schools.

Modern instructional materials have motivational value to develop the interest of students and can promote retention. They save time and energy because what someone will explain in ten minutes will be possible in less time with the use of modern instructional materials. The creative use of a variety of modern instructional materials will increase the probability that students would learn more, retain better and acquire the skills they are expected to perform (Uzuegbu, Mbadiwe & Anulobi, 2013). Modern instructional materials according to Usman (2016) form a vital aspect of teaching and learning of business subjects in secondary schools. Without these materials, the teaching and learning of business subjects in secondary schools might not yield the expected results. This means that effective teaching of business subjects could be achieved by ample utilization of modern instructional materials.

Utilization entails making use of available resources at an individual's disposal. Ogbu (2016) viewed utilization of modern instructional materials as the process of using procured and accessible modern materials, component materials and appliances to make the teaching and

learning process easier, interesting and rewarding. Utilization of instructional materials in the teaching of business subjects would promote meaningful communication between the teachers and students, enhance effective teaching and motivate individualized instruction through which learning is assured (Ugwuanyi, 2013). Proper utilization of instructional facilities serves a useful purpose in promoting understanding of concepts and principles of business subjects (Ugwu, 2016). According to Muhammed (2017) low utilization of instructional materials by teachers is due to factors such as unavailability, non-functionality of few available ones, inability and inadequate time to apply them in teaching and irrelevance to subject matter. Similarly, Ubulom and Ogwunte (2017) noted that due to Nigeria's present economic predicaments, many teachers in secondary schools that offer vocational subjects lowly utilize modern instructional materials for effective teaching. As a result of this, business subjects seem to operate at a pseudo level, a situation that negates the basic tenets of vocational education.

The situation is not different in Anambra State as Ugwu (2016) revealed that the high rate of poor performance of students in business subjects in both internal and external examinations could be attributed to inadequate utilization of instructional materials by teachers. According to Chukwuka (2017) there are various factors responsible for the poor performance of students in business subjects one of which is low utilization of instructional materials by business subject teachers in the teaching process.

Utilization of modern instructional materials by business subject teachers could be influenced by school location, gender and years of teaching experience. It could be that secondary schools in urban areas have more modern instructional materials than those in rural areas which could make business subject teachers in urban areas to utilize the materials in teaching more than their rural counterparts. However, Usman (2016) revealed no significant difference between urban and rural teachers' responses regarding the utilization of instructional materials for teaching. Similarly, male teachers could utilize instructional materials for teaching more than their female counterparts. In relation to this, Ngeru (2015) found out that a significant difference existed between male and female teachers on the extent of utilization of instructional materials for teaching. Furthermore, years of experience could influence business subject teachers' responses on the utilization of modern instructional materials. Experienced business subject teachers (above 5 years) could differ significantly with their inexperienced counterparts (0 – 5 years) on level of utilization of modern instructional materials for instructional delivery. Amuzu (2018) revealed that years of experience of teachers influence their utilization of instructional materials for teaching. It is against this background that this study assessed the utilization of modern instructional materials in the teaching of business subjects in Anambra State.

### **Statement of the Problem**

Business subjects are generally skill-based which cannot be effectively taught using only traditional instructional materials but also with modern instructional materials. Considering the need for technological development, coupled with the fact that business subjects are skill-oriented subjects, their teaching and learning as well as students' academic performance in the subjects have become a source of concern to stakeholders especially the parents and employers.

The problem of poor achievement of students in internal and external examination has remained unsolved. This poor performance has been attributed to many factors including poor method of teaching, lack of laboratories, non-availability and non-utilization of instructional materials in most secondary schools in Nigeria. The consequence is that the teaching of business subjects is faced with challenges of producing the needed manpower for the world of

work as well as preparing students for higher education in business related courses. Hence, the need to ascertain the level of utilization modern instructional materials for teaching business subjects in secondary schools in Anambra State.

### **Purpose of the Study**

The main purpose of this study was to ascertain the level of utilization of modern instructional materials for teaching business subjects in secondary schools in Anambra State. Specifically, this study determined the:

1. level of utilization of modern instructional materials by business subjects teachers in secondary schools in Anambra State.

### **Research Questions**

The following research questions guided the study:

1. What is the level of utilization of modern instructional materials by business subjects teachers in secondary schools in Anambra State?

### **Null Hypotheses**

The following null hypotheses were tested at 0.05 level of significance:

1. There is no significant difference in the mean ratings of urban and rural business subjects teachers on the level of utilization of modern instructional materials for teaching business subjects in secondary schools in Anambra State.
2. Male and female business subject teachers in secondary schools in Anambra State do not differ significantly in their mean ratings on the level of utilization of modern instructional materials for teaching business subjects.
3. There is no significant difference in the mean ratings of business subjects teachers on the level of utilization of modern instructional materials for teaching business subjects in secondary schools in Anambra State based on years of experience (0-5 years and above 5 years).

### **Literature Review**

For effective utilization of modern instructional materials, business subject teachers should have knowledge the of various types of modern instructional materials because it is believed that this kind of knowledge can influence positively, attitude and efficiency in the selection of, and utilization of instructional materials (Chukwuka, 2017). Also, Apagu and Wakili (2015) stated that business education as a discipline requires adequate modern instructional materials such as the ICT so as to make teaching and learning more effective. Teaching of business subjects involves the use of modern instructional materials such as laptop computer, mobile phone, multimedia projector, smart board, interactive television, internet, e-banking/ commerce facilities, internet facilities, e-mail facilities, computer software among others (Usman, 2016). The use of instructional materials provides the teacher with interesting and compelling platforms for conveying information since they motivate learners to learn more. Furthermore, the teacher is assisted in overcoming physical difficulties that could have hindered effective presentation of a given topic. The use of instructional materials in secondary schools

has been widely researched and the findings indicate that the benefits of using them are immense.

However, Ugwu (2016) noted that the utilization of instructional materials in the teaching and learning of business subjects is not only the issue, but the appropriateness of the selected materials by the teacher to the topic at hand, which sometimes make the lesson lose effectiveness.

Diosur and Igyuve (2013) investigated the use of audio-visual materials in the teaching and learning processes in colleges of education in Benue State. The results of the survey indicated that lecturers in the college of education rarely used audio visual resources in teaching. Another survey was conducted by Aina and Ademola (2013) in Abakaliki Education Zone. The finding revealed that audio-visual resources are lowly utilized by teachers. According to Mbah (2016), most ICT facilities were not utilized in the teaching and learning.

In another study conducted by Jeptanui (2011) in public primary school on the efficiency use of instructional resources in Wareng district, Kenya. It was found that chalkboard and textbooks were widely used while other instructional resources were not utilized. Nwafor and Eze (2014) in their study on availability and utilization of instructional materials in teaching and learning of basic science in selected junior secondary school in Abakaliki education zone of Ebonyi State-Nigeria. They also revealed that teachers did not effectively and frequently use instructional materials to facilitate their teaching.

According to Uwaifo in Ugwu (2016), proper utilization of instructional materials serves a useful purpose in promoting understanding to concepts and principles. In relation to that Ugwu posited that proper utilization of relevant equipment, materials tools or instructional facilities in teaching business subjects facilitates learning and enhances student's achievement. Utilization of instructional modern instructional materials by business subjects teachers will improve more the standard of teaching and learning of business subjects in secondary schools. It is therefore important that the business subjects teachers should be conversant with different modern instructional materials and effectively utilize them while teaching. Ngeru (2015) posited utilization of these materials promotes meaningful communication, enhance effective teaching, encourages the interest of learners and motivates individualized instruction in which learning is assured.

## **Method**

The design adopted for this study was the descriptive survey. The population of the study comprised 249 business subjects teachers in the 261 public secondary schools in Anambra State where business subjects are taught both in rural and urban secondary schools. There was no sampling since the population was not too large. The instrument for data collection for the study was a 30-item structured questionnaire titled "Level of Utilization of Modern Instructional Materials for Teaching Business Subjects (LUMIMTBS)". The questionnaire was structured on a five-point scale, with response categories as Very Greatly Utilized (VGU), Greatly Utilized (GU), Moderately Utilized (MU), Rarely Utilized (RU) and Not Utilized (NU) with assigned weighted values of 5, 4, 3, 2, and 1 respectively. The face validity of the instrument was established using the opinions of experts in business education and measurement and evaluation from the Faculty Education Namdi Azikwe University, Awka. The reliability of the instrument was established using trial test and data collected were analyzed using Cronbach alpha which yielded coefficient value of 0.81. Mean and standard deviation were used to answer the research question while t-test was used to test the hypotheses at 0.05 level of significance. A hypothesis was rejected where

the p- value was less than the level of significance value. Otherwise, the hypothesis was accepted. The data analysis was carried out using Statistical Package for Social Sciences (SPSS) version 23.0

**Results**

**Analysis of Research Question**

**Research Question 1**

What is the level of utilization of modern instructional materials by business subjects teachers in secondary schools in Anambra State?

**Table 2: Respondents’ mean ratings and standard deviation on the level of utilization of modern instructional materials for teaching business subjects**

**N=241**

S/N	Items on Utilization	$\bar{X}$	SD	Remarks
1	Laptop computer	2.38	1.06	Rarely Utilized
2	Cell phones	2.76	1.10	Moderately Utilized
3	Printer	1.68	1.08	Rarely Utilized
4	Interactive television	1.47	.66	Not Utilized
5	Photocopier	1.30	.81	Not Utilized
6	Computer set	1.41	.71	Not Utilized
7	Scanner	1.33	.54	Not Utilized
8	Facsimile machine	1.20	.43	Not Utilized
9	Laminating machine	1.34	.71	Not Utilized
10	Interactive white board (IWB)	1.30	.66	Not Utilized
11	Multimedia projector	1.31	.55	Not Utilized
12	Internet Facilities	1.21	.77	Not Utilized
13	Teleconferencing protocol	1.36	.65	Not Utilized
14	E-banking/commerce facilities	1.48	.81	Not Utilized
15	Quick books software	1.31	.72	Not Utilized
16	E-mail facilities	1.22	.43	Not Utilized
17	Virtual Lib	1.20	.49	Not Utilized
18	Video camera	1.45	.80	Not Utilized
19	CD-ROM accounting software	1.43	.94	Not Utilized
20	Tape recorder	1.33	.72	Not Utilized
21	Display boards	1.74	1.01	Rarely Utilized
22	Bulletin boards	1.33	.81	Not Utilized
23	Computer simulation	1.35	.65	Not Utilized
24	DVD Rom	1.44	.72	Not Utilized
25	Computer software	1.82	.93	Rarely Utilized
26	Compact disc	2.40	1.03	Rarely Utilized
27	Computer assisted instruction	1.31	.82	Not Utilized
28	Filmstrips	1.41	.58	Not Utilized
29	Flash drive	1.89	1.07	Rarely Utilized
30	Video tape instruction	1.22	.97	Not Utilized



<b>Cluster Mean</b>	<b>1.51</b>	<b>Rarely Utilized</b>
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Data in Table 1 reveal that out of the 30 items listed on utilization of modern instructional materials for teaching business subjects, item 2 with mean score of 2.76 is moderately utilized for teaching business subjects, six items with mean scores ranging from 1.68 to 2.40 are rarely utilized while the remaining 23 items are not utilized. The cluster mean score of 1.51 indicates that on the whole, modern instructional materials are rarely utilized for teaching business subjects in secondary schools in Anambra State. The standard deviation for all the items range within 0.43 to 1.10. This shows that the respondents are not wide apart in their ratings. The analysis shows that responses to items 1,2, 3, 21, 26 and 29 have the highest deviation between 1.01 and 1.10 among respondents. This suggests that the respondents are quite divided in their opinions as to whether cell phones, printers, display boards, compact discs and flash drives are rarely utilized for teaching business subjects. Other items show homogeneity in the respondents' responses.

**Test of Null Hypotheses**

**Hypothesis 1**

There is no significant difference in the mean ratings of urban and rural business subjects teachers on the level of utilization of modern instructional materials for teaching business subjects in secondary schools in Anambra State.

**Table 2: Summary of t-test analysis of mean ratings of urban and rural business subjects teachers on level of utilization of modern instructional materials for teaching business subjects**

School Location	N	$\bar{X}$	SD	Df	P-value	Decision
Urban	130	48.09	7.26	239	0.04	Significant
Rural	111	47.26	7.98			

Table 2 shows that there is a significant difference in the mean ratings of business subjects teachers on the level of utilization of modern instructional materials for teaching business subjects in secondary schools in Anambra State based on school location. This is shown by the p-value of 0.04, which is less than the significance level of 0.05. The null hypothesis of no significant difference between the two groups is therefore rejected.

**Hypothesis 2**

Male and female business subject teachers in secondary schools in Anambra State do not differ significantly in their mean ratings on the level of utilization of modern instructional materials for teaching business subjects.

**Table 3: Summary of t-test analysis of mean ratings of male and female business subjects teachers on level of utilization of modern instructional materials for teaching business subjects**

Gender	N	$\bar{X}$	SD	df	P-value	Decision
Male	65	45.63	6.99	239	0.01	Significant
Female	176	48.48	7.66			

Table 3 shows that there is a significant difference in the mean ratings of male and female business subjects teachers on the level of utilization of modern instructional materials for teaching business subjects in secondary schools in Anambra State. This is shown by the p-value of 0.01, which is less than the significance level of 0.05. The null hypothesis of no significant difference between the two groups is therefore rejected.

**Hypothesis 3**

There is no significant difference in the mean ratings of business subjects teachers on the level of utilization of modern instructional materials for teaching business subjects in secondary schools in Anambra State based on years of experience (0-5years and above 5 years).

**Table 4: Summary of t-test analysis of mean ratings of business subjects teachers on level of utilization of modern instructional materials for teaching business subjects based on years of experience**

Years of Experience	N	$\bar{X}$	SD	df	P-value	Decision
0-5 years	41	49.36	9.74	239	0.23	Not Significant
Above 5 years	200	47.39	7.07			

Table 4 shows that there is no significant difference in the mean ratings of business subjects teachers on the level of utilization of modern instructional materials for teaching business subjects in secondary schools in Anambra State based on years of experience. This is shown by the p-value of 0.14, which is greater than the significance level of 0.05. The null hypothesis of no significant difference between the two groups is therefore accepted.

**Discussion of Findings**

Findings of the study disclosed that modern instructional materials were rarely utilized by business subjects teachers for teaching business subjects in secondary schools in Anambra State. The finding corroborates that of Kiarie (2014) which revealed that the extent of utilization of instructional materials by secondary school teachers was very low. Kiarie further found that some instructional materials were available for utilization, but teachers rarely utilized them in the classroom during instructional delivery. Similarly, Wakili (2015) reported that instructional materials for effective teaching and learning in Nigerian secondary schools are rarely utilized by teachers and students. Ezeani and Ishaq (2013) stated that poor performance of students in the field of business education could be as a result of teachers’ low utilization of modern instructional materials in classroom instruction. In corroboration, Amuchie (2015) posited that ICT facilities were not greatly utilized in Nigerian schools. This is because there is a correlation between availability of modern instructional materials and their utilization. This implies that modern instructional materials can only be utilized in teaching and learning if they are available. Mbah (2016) affirmed that most ICT facilities for teaching and learning were not available and consequently not utilized.

Furthermore, the fact that business subjects teachers do not utilize modern instructional materials in teaching to a suitable level could be as a result of non-availability of instructional materials. According to Diosur and Igyuve (2013), teachers rarely utilized modern instructional materials for teaching due to non-availability, lack of technical support, unstable power supply and lack of ICT skills. This buttresses the assertions by Aina and Ademola (2013) that the low level of utilization of instructional materials was attributable to inadequate funding, irregular power supply, non-provision of instructional resource centers, non-appointment of professionals to man instructional resource centers and lack of teachers' competency in the use of ICT facilities.

Additionally, the findings showed that school location and gender significantly influenced business teachers' level of utilization of modern instructional materials for teaching business subjects while no significant difference was found in respect of years of experience. The years of experience is in line with Ngeru (2015) who revealed that years of experience did not influence teachers' level of utilization of instructional materials. Ngeru, however, revealed that gender and school location did not significantly influence teacher's level of utilization of instructional materials for instructional delivery. But, Manyilizu and Gilbert (2015) revealed that there was a significance difference between gender and teachers' utilization of instructional materials.

### **Conclusion**

The benefits of utilization of modern instructional materials in the field of education and especially in equipping business-related students with relevant skills and competencies for gainful employment or self-employment have been stressed by educational professionals. However, despite these benefits, the findings of this study revealed that business subjects teachers rarely utilized modern instructional materials during the instructional delivery. The findings also showed that school location and gender are determinant factors on the utilization of these materials while years of experience was a not significant factor in this regard. Based on these findings, the researchers conclude that more efforts are needed to ensure that modern instructional materials are very greatly utilized by business subjects teachers to enhance their professional practices and as well improve students academic performance and competitiveness in the labour market.

### **Recommendations**

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

1. Business subjects teachers should endeavour to utilize available instructional materials in the teaching of business subjects to enable students acquire relevant skills and competencies for gainful employment or self-employment.
2. Ministries of Education, both at State and Federal levels should sponsor teachers' in-service courses on teaching with modern instructional resources. This would help business subjects teachers to be more competent and literate in the operating principles of the technological resources.
3. The government should use the services of various bodies like Association Business Educators of Nigeria (ABEN) and others to organize seminars, workshop and conferences to inform and train business subjects teachers on the utilization of modern instructional materials in teaching and learning. This will help business subjects teachers to utilize these materials to a very great extent for instructional delivery.

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## EMPLOYABILITY SKILLS REQUIRED OF OFFICE TECHNOLOGY AND MANAGEMENT GRADUATES BY MANAGERS OF SMALL-SCALE ENTERPRISES IN ANAMBRA STATE

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### Abstract

The study was conducted to ascertain the employability skills required of office technology and management (OTM) graduates by small scale enterprises in Anambra State. The study adopted a descriptive Survey design. Two research questions guided the study, while two hypotheses were tested at 0.05 level of significance. Population of 980 managers of small scale enterprise was used for the study. Proportionate stratified sampling techniques were used to sample 294 small scale enterprise managers in Anambra State. The questionnaire was validated by experts in business education. The reliability method was used to determine the reliability of the instrument was established using Cronbach alpha formula to determine the internal consistency of the instrument which yielded Correlation coefficient values of 0.93, 0.97, 0.98, and 0.96 for the four clusters of the questionnaire, with the overall coefficient value of 0.96. Mean was used to answer the research questions while the null hypothesis were tested at 0.05 level of significance using Z-test. Data collected were analyzed using arithmetic mean and standard deviation to answer the research questions. Findings from the study revealed that problem solving skill, and database administration skills, are highly required of OTM graduates by small scale enterprises in Anambra State.

**Keywords:** Employability Skill, Skills, Office Technology, Office Technology and Management Graduates and Small-Scale Enterprises.

### Introduction

Nigeria is a country so much blessed with abundant human and natural resources which include petroleum, natural gas, uranium, tin, coal and so on. Inegbenebor, K. S. (2008) reported that at a time, Nigeria earned over US \$ 300 billion from oil sales, this has not in any way improved the standard of living of her citizens. Today, Nigeria remains among the poorest countries of the world and still carries the tag of a "developing" or worse still "underdeveloped" nation.

The high rate of poverty and unemployment among the youths with its attendant manifestations such as kidnapping, armed robbery, terrorism and other social vices have been an epidemic and a clog to progress and national development. It is an obvious fact that graduates of our tertiary institutions often spend years roaming about the street in search of employment opportunities which are in most cases not even in existence. Okoye, E.M. (2014) reported that every year, about 150,000 students obtain their university degrees and other tertiary education

certificates ready to be employed by the government and private business organizations but are unable to secure placements.

The present economic reality in the country shows that the situation has not improved in any way. Osinem, E.C and Nwoji, (2005) buttressed the above point by opining that the high rate of unemployment in the country could be attributed to lack of employment opportunities, as well as the unemployable nature of Nigerian graduates. It seems that Nigeria graduates are not exposed to qualitative education that would empower them through entrepreneurship towards becoming self-reliant.

To improve the employability status of Nigerian graduates and thereby reducing unemployment and poverty among the youths, Obi, C.A. (2005) asserted that the place of youth education and entrepreneurial programs that would genuinely address and encourage youths acquire relevant entrepreneurial and workplace skills are what the nation needs at this time. Thus, the only way to empower the youth is to provide them with adequate and qualitative education in order to make them self-employed, job creators and to eradicate poverty in their various communities. Many countries of the world including Nigeria have considered Office Technology and Management (OTM) as relevant in equipping young people with necessary skills and competencies that would enable them engage in skill acquisition and productive livelihoods (Ezeani, P. 2014).

Office technology and management according to Okoro and Amagoh (2008) is an efficient, effective, productive and functional educational programme which leads itself to self-employment, self-reliance and consequently self-actualization. It is expected that OTM students upon graduation have acquired relevant skills that could enable them employable in various small-scale enterprises that operates in the country. Mcquaid, C. (2015) defined employability skills as the transferable skills needed by an individual to make them 'employable'. Along with good technical understanding and subject knowledge, employers often outline a set of skills that they want from an employee, Mcquaid further identified four major employability skills required by graduates for effective job performance in the contemporary offices. These employability skills according to Mcquaid include problem-solving skills, database management skills, interpersonal skills and communication skills.

Small-scale enterprise can be defined as one having an investment and working capital not exceeding N750, 000. The World Bank (2013), on its own part, defined small-scale industry as an industry whose working capital including land does not exceed N2.5million and with a turnover of N12.5 million annually. The National Economic Reconstruction Fund (NERFUND) in Etebefia and Akinkumi (2013) defined small-scale enterprises as those industries whose fixed asset and cost of new investment does not exceed N10million. The Central Industrial Research and Development (IRD) of Obafemi Awolowo University, Ile-Ife cited by the authors defined small-scale enterprises as those industries whose working capital is not exceeding N250, 000 and employing on full time basis 50 workers or less. Small scale enterprises in the context of this study, refer to those industries whose total fixed assets excluding working capital does not exceed N10million with total number of employees ranging from 5-25.

Problem solving is a broad term for a skill that is required of individuals in a wide variety of positions and fields. Any time one is presented with a difficult situation in a professional context, and it is one's responsibility to find a solution, one is engaged in problem solving. While problem solving is a skill required in jobs across all sectors and levels of experience, it can be difficult to quantify.

According to Mayer and Wittrock (2006) problem solving occurs internally and thus can only be inferred indirectly by the person's actions; Problem solving is a process – It involves representing and manipulating knowledge in the problem solver's cognitive system. Problem solving is directed – that is, the problem solver's processing is guided by set goals. Problem solving is personal – The solver's individual knowledge and skills help determine the difficulty or ease with which obstacles to solutions can be overcome. In order to succeed in the system, the OTM graduates needs to be able to evaluate information or situations, break them down into key components, consider various ways of approaching and resolving them, and decide which is the most appropriate. These problem-solving skills include recognizing long-term consequences of solutions to problems and probing, devising, implementing, and evaluating a plan of action for problem resolution (Brewer, 2013). Ability to solve problem is more relevant in automated environment. Thus there is need for problem-solving skills in business sector.

Database skills have brought a lot of improvement in the work of many organizations, which will equally be helpful to the retail business. The Bureau of Labor Statistics (BLS) (2015) opined that Database Administrators (DBAs) use specialized software to store and organize data. Therefore, there is need for database administrators to have some skills in order to perform the special roles required. According to Osuala (2004), database skills have to do with the ability to handle information from simple manual processes to a sophisticated modern computer. Osuala further explained that, database skills involve the manipulation of raw and unorganized fact (data) in a computer to generate information. Thus, data processing is the conversion of data into meaningful information which involves series of activities and the use of technological equipment.

Gender could be a factor within the context of employability skills requirement of OTM graduates in small-scale enterprises. Gender here simply refers to the sex of an individual either male or female. However, OTM graduates are male and female students of OTM programme that have successfully fulfilled the requirement of award of a Bachelor of Science degree as in the university or Higher National Diploma from the polytechnics. Aghenta, F. C. (2012) who reported that gender effect could be a factor in determining the skills of OTM graduates, as preferred by small-scale business managers. Therefore, considering gender in this study could yield useful practical information to the study.

Location is another important factor in the issue of employability requirement of OTM graduates in small-scale enterprises. Location in this study could either be urban or rural areas. Obviously, the location in which entrepreneurs operate their businesses will have considerable influence on the management of the businesses and their expectations from employees.

### **Statement of the Problem**

The high rate of unemployment among OTM graduates in Anambra State has been attributed to lack of skills required for the world of work. Thus, Onyebu, C.M. (2014) agrees that one of the main causes of unemployment among OTM graduates is lack of employable skills. Many unemployed youths seem not to possess the necessary skills which the modern economy demands. Secretarial studies was changed to OTM so as to bridge that gap by providing a functional training that would help the graduates of OTM make a career in office management. However, it's quite unfortunate that many students choose to study office technology and



management as their career and yet they refuse to work hard enough to acquire adequate skills expected of them. Soludo, C.C. (2012) describing the Nigerian situation said, unemployment is not a problem in Nigeria rather Nigerian graduates lack the required skills and they are misfit for today's workplace. Many of the OTM graduates in Anambra State suffer unemployment today because they are presumed to have very poor attitudes towards the skills and competencies inherent in the OTM courses during school days. In fact, a gap exists between the expectations of skills required by organizations from OTM graduates.

### **Purpose of the Study**

The main purpose of the study was to determine the rating of employability skills required of OTM graduates by managers of small-scale enterprises in Anambra State. Specifically, the study sought to determine the extent to which:

1. Problem-solving skills are required for employability of OTM graduates by managers of small-scale enterprises in Anambra State.
2. Database management skills are required for employability of OTM graduates by managers of small-scale enterprises in Anambra State.

### **Research Questions**

The following research questions guided the study.

1. To what extent are problem-solving skills required for employability of OTM graduates by managers of small-scale enterprises in Anambra State?
2. To what extent are database management skills required for employability of OTM graduates by managers of small-scale enterprises in Anambra State?

### **Hypotheses**

The following null hypotheses were tested at 0.05 level of significance: Male and female managers do not differ significantly in their mean ratings on the extent problem-solving skills are required for employability of OTM graduates in small-scale enterprises in Anambra State.

1. There will be no significant difference in the mean ratings of respondents on the extent problem-solving skills are required for employability of OTM graduates in small-scale enterprises in Anambra State based on location.
2. Male and female managers do not differ significantly in their mean rating on the extent database management skills are required for employability of OTM graduates in small-scale enterprises in Anambra State.
3. There will be no significant difference in the mean ratings of respondents on the extent database management skills are required for employability of OTM graduates in small-scale enterprises in Anambra State based on location.

### **Method**

The study adopted a descriptive survey research design. The population for this research consists of 980 managers of small-scale enterprises registered with the Anambra State Ministry of Trade, Commerce and Industry. The instrument for data collection in this study was a structured questionnaire titled "Employability Skills Required of Office Technology and Management Graduates by Managers of Small-Scale Enterprises in Anambra State". The instrument was structured on a 5-point rating scale of very highly required (VHR), highly required (HR), moderately required (MR), lowly required (LR) and very lowly required (VLR).

Face validity of the instrument was established using the opinion of three experts. Two of the experts are in business education from the Department of Technology and Vocational Education and the one expert in measurement and evaluation from the Department of Educational Foundations in the Faculty of Education, Nnamdi Azikiwe University, Awka. To establish the internal consistency of the instrument, the Cronbach Alpha formula was used to analyze the data using the statistical package for social science (SPSS) version 21 and obtain overall reliability coefficient values of 0.96 which indicates a high reliability coefficient for the instrument in accordance with George and Mallterry (2013). A period of two weeks was used for the distribution and collection of the questionnaire. The copies of the questionnaire successfully retrieved were used for data analysis. However, out of the 294 copies of the questionnaire distributed, 283 copies were actually retrieved from the respondents which represented about 96 percent retrieval. Arithmetic mean and standard deviation was used to test hypotheses at 0.05 level of significance. Where the calculated F-value was equal or greater than the F-table value at 0.05 level of significance, the null hypothesis was rejected but where the F-calculated was less than F-table value, the null hypotheses would be accepted.

**Results**

The results of the data analyses are presented as follows

**Table 1:** Mean ratings of managers of small-scale enterprises on the extent problem-solving skills are required of OTM graduates

S/N	Item Statement	Mean	SD	Remark
1	Identify reasons for the discrepancies in products	4.52	.77	Very Highly Required
2	Develop critical thinking to turn problem into opportunities	4.22	.87	Highly Required
3	Understand the line of business involved	4.34	.82	Highly Required
4	Team up with experts in solving problems	4.35	.85	Highly Required
5	Provide solutions for every problems	4.30	.87	Highly Required
6	Implement a plan of action to resolve problem	4.29	.96	Highly Required
7	Carefully analyze data collected to enhance the business	4.23	.92	Highly Required
8	Take extreme measures to identified problem	4.22	.97	Highly Required
9	Evaluate and monitor progress	4.22	.92	Highly Required
10	Recognize and identify problems	4.25	.88	Highly Required
	Grand	4.29		Highly Required

Data presented in Table 1 revealed that the respondents rated item 1 very highly required with the mean value of 4.52. The other nine items had mean ratings ranging from 4.21 to 4.35 which mean that they are highly required by managers of small-scale enterprises in Anambra State for employability of OTM graduates. However, the cluster means of 4.29 shows that problem-solving skills are highly required of OTM graduates for employability in small-scale enterprises in Anambra State. The standard deviation for all the items is within the same range which implies that the respondents were cohesive in their ratings.

**Table 2: Mean ratings of managers of small-scale enterprises on the extent database management skills are required of OTM graduates in Anambra State**

S/N	Item Statement	Mean	SD	Remark
11	Maintain database security	4.20	.82	Very Highly Required
12	Restore data from back-up files	4.30	.76	Highly Required
13	Knowledge of data programming	4.30	.70	Highly Required
14	Retrieve information from database	4.45	.55	Highly Required
15	Control data access	4.40	.64	Highly Required
16	Create a database records	4.30	.60	Highly Required
17	Knowledge of systems of system implementation	4.30	.64	Highly Required
18	Recover database after failures	4.20	.87	Highly Required
S/N	Item Statement	Mean	SD	Remark
19	Present information from database	4.40	.75	Highly Required
20	Manipulate computer keyboard	4.35	.64	Highly Required
	Grand	4.32		Highly Required

The data in Table 2 shows that all the items have mean ratings ranging from 4.20 to 4.45 meaning that all the database management skills are highly required for employability of OTM graduates. The cluster mean score of 4.32 indicate that, in the opinion of the respondents, database management skills are highly required for employability of OTM graduates in small-scale enterprises in Anambra State. The standard deviation of 0.55 to 0.87 shows that the respondents were homogenous in their responses.

**Table 3: Summary of t-test between male and female mean ratings on the extent problem-solving skills are required for employability of OTM graduates in small-scale enterprises**

Gender	N	$\bar{X}$	SD	df	p-value	Decision
Male	187	2.06	.13	281	.060	Not Significant
Female	96	2.14	.16			

Data in Table 3 show that male and female respondents do not differ significantly in their mean ratings on the extent problem-solving skills are required for employability of OTM graduate in small-scale enterprises in Anambra State with mean scores of .06 and 2.14 while the corresponding standard deviations are .13 and .16. The Table indicated p-value of .067, at degree of freedom of 281. Testing at alpha level of 0.05, the p-value is not significant, since the p-value is greater than the alpha value (0.05). Therefore, the null hypothesis is accepted hence, male and female managers do not differ significantly in their mean ratings on the extent problem-solving skills are required for employability of OTM graduate in small-scale enterprises in Anambra State. Therefore the null hypothesis was accepted.

**Table 4: Summary of t-test between urban and rural means on the extent problem-solving skills are required for employability of OTM graduates in small-scale enterprises**

Location	N	$\bar{X}$	SD	df	t-cal	p-value	Decision
Urban	195	4.12	.15	281	.63	.067	Not Significant
Rural	88	4.10	.10				

Data in Table 6 show that respondents in urban and rural areas do not differ significantly in their mean ratings on the extent problem-solving skills are required for employability of OTM graduate in small-scale enterprises in Anambra State with mean scores of 4.12 and 4.10 while the corresponding standard deviations are .15 and .10. The Table indicated a t-value of .067, at degree of freedom of 281 and a p-value of .067. Testing at alpha level of 0.05, the p-value is not significant, since the p-value is greater than the alpha value (0.05). Therefore, the null hypothesis is not rejected; hence, there was no significant difference in the mean ratings of respondents on the extent problem-solving skills are required for employability of OTM graduates in small-scale enterprises in Anambra State based on location. Therefore the null hypothesis was not rejected.

**Table 5: Summary of t-test between male and female respondents on the extent database management skills are required for employability of OTM graduates in small-scale enterprises**

Gender	N	$\bar{X}$	SD	df	t-cal	p-value	Decision
Male	187	3.50	.12	281	-1.43	.067	Not Significant
Female	96	3.52	.13				

Data in Table 5 show that male and female managers do not differ significantly in their mean ratings on the extent database management skills are required for employability of OTM graduate in small-scale enterprises in Anambra State with mean scores of 3.50 and 3.52 while the corresponding standard deviations are .12 and .13. The Table indicated a t-value of -1.43, at degree of freedom of 281 and a p-value of .067. Testing at alpha level of 0.05, the p-value is not significant, since the p-value is greater than the alpha value (0.05). Therefore, the null hypothesis is not rejected; hence, male and female managers do not differ significantly in their mean ratings on the extent database management skills are required for employability of OTM graduate in small-scale enterprises in Anambra State. Therefore the null hypothesis was not rejected.

### Discussion of Findings

The findings of the study revealed that problem-solving skills are highly required of OTM graduates for employability in small-scale enterprises in Anambra State. Ajaero (2016) also supported the findings by stating that problem-solving skills for entrepreneurial development involve critical thinking, understanding of the business, team spirit, decisiveness and courage. The results revealed the major aspects of problem-solving skills which the respondents indicated that are highly required of OTM graduates for employability in small-scale enterprises. These include ability to recognize and identify problems ability to identify reasons for the discrepancies in products, ability to develop critical thinking to turn problem into opportunities, ability to understanding of the line of business involved, ability to team up with experts in solving problems and so on. This finding is in consonance with Okoli and Binuomote (2015) that carried out a study to determine the entrepreneurship competencies needed by business education students for successful entrepreneurship in colleges of education in South-

East, Nigeria. The findings of the study revealed that problem-solving competencies were needed for successful entrepreneurship. The findings also revealed that male and female respondents do not differ significantly in their mean ratings on the extent problem-solving skills are required for employability of OTM graduate in small-scale enterprises in Anambra State. The findings of the study further revealed that respondents in urban and rural areas do not differ significantly in their mean ratings on the extent problem-solving skills are required for employability of OTM graduate in small-scale enterprises in Anambra State. This means that location is not a factor influencing the level of problem-solving skills required of OTM graduates for employability in small-scale enterprises in Anambra State. Supporting the above findings, Azubuike in Ezenwafor and Olaniyi (2018) asserted that entrepreneurs who develop and maintain good customer relationship will excel in business.

Furthermore, the study found that male and female managers do not differ significantly in their mean ratings on the extent database management skills are required for employability of OTM graduate in small-scale enterprises in Anambra State. This means that gender is not a factor affecting the extent of database management skills required for employability of OTM graduates in small-scale enterprises in Anambra State. Thus, OTM graduates irrespective of gender should endeavor to acquire requisite database management skills so as to be employable in small-scale enterprises and beyond. The findings also revealed that respondents in urban and rural areas differed significantly in their mean ratings on the extent database management skills are required for employability of OTM graduate in small-scale enterprises in Anambra State. This means that location is a factor influencing the level of database management skills required of OTM graduates for employability in small-scale enterprises in Anambra State. This could be attributed to the fact that small-scale enterprises located in the urban areas may have greater access to ICT facilities than their counterparts in the rural areas. This finding is in agreement with Agbamu (2015) whose study on database competencies needed for employability of NCE business education graduates revealed that database competencies were generally required for employment in both the public and private sectors of the economy.

### **Conclusion**

Based on the findings of this research, it was concluded that managers of small-scale enterprises in Anambra State are of the opinion that problem-solving skills, database management skills are highly required of OTM graduates for effective job performance. It was also concluded that gender do not significantly affect the opinion of respondents on the extent of employability skills required of OTM graduates in small-scale enterprises in Anambra State. This implies that OTM graduates irrespective of gender required adequate employability skills for effective job performance.

### **Recommendations**

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

1. OTM lecturers should use suitable methods and resources to ensure that their students adequately acquire problem-solving, database management, to be able to secure and succeed in their employment upon graduation.
2. OTM students should do their students' industrial work experience scheme (SIWES) in these small-scale enterprises so as to be familiar with these employability skills before they get employed.
3. Government should encourage retraining of OTM lecturers to acquire requisite employability skills since they cannot give what they do not have.

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## AVAILABILITY OF INFRASTRUCTURAL FACILITIES FOR THE ESTABLISHMENT OF ENTREPRENEURSHIP CENTRES IN UNIVERSITIES IN SOUTH EAST NIGERIA

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### Abstract

*The study investigated the availability of infrastructural facilities for the establishment of entrepreneurship centres in universities in South East Nigeria. One research question guided the study with two hypotheses tested at 0.05 level of significance. Descriptive survey research design was adopted. The population was 116 employees from eight Entrepreneurship Centres in South East Nigeria. A researcher-developed questionnaire comprising 11 items and validated by experts in the field was used to collect data. A pilot test was conducted with the instrument and the application of the Cronbach Alpha on the data collected yielded co-efficient value of 0.76. Mean ratings and standard deviation were used to analyze data in respect of the research questions while z-test was used to test the null hypotheses. The findings revealed that infrastructural facilities needed for the smooth operation of Entrepreneurship Centres in universities were available in line with the NUC guideline. It was recommended among others, that Government and other stakeholders in education should continue to provide infrastructural facilities and equipment in all entrepreneurship centres. It was also recommended that a review of the state of infrastructure and equipment in the centres should be carried out on a regular basis so as to avoid dilapidation and spoilage.*

**Keyword:** Availability, Infrastructural facilities, Entrepreneurship, Study, Centres

### Introduction

The need to improve the human capital of a nation and reduce the rate of unemployment among graduates of tertiary institution in Nigeria has increased government call for the promotion and integration of entrepreneurship education. According to Oyetola (2010), entrepreneurship education is a better approach to the eradication of poverty and unemployment in any nation. For Oyetola through entrepreneurship education youths are empowered to be self-reliant and job creators. Adesanya (2017) identified entrepreneurship as a means of providing employment and income generation in the country. Izedonmi and Okafor (2010) further noted that entrepreneurship education brings about entrepreneurship in a country. This is so because through entrepreneurship education individuals are trained and educated on the benefits and gains of entrepreneurship. In support of the views of Izedonmi and Okafor (2010) who asserted that entrepreneurial training develops skills and capacity for employment and wealth creation which leads to national development.

This is why the Federal Government of Nigeria introduced entrepreneurial education in institutions of higher learning in 2007/2008 academic session so as to equip the youth with necessary skills to be self-sufficient and self-reliant (Izedonmi & Okafor, 2010). It is in light of this, that the Department of Student Support Services (DSSS) (n.d) asserted that for students to imbibe entrepreneurship principles and the requisite skills for achievements in real and

concrete terms, it is important that the entrepreneurship principles be inculcated in them. This can be as part of the entrepreneurial training process which can only be achieved if Entrepreneurship Study Centres (ESCs) are established to put theory into practice. Adejimiola and Olufunmilayo (2009) further noted that a draft entrepreneurship curriculum has been designed for full implementation as part of university programmes. Also, centres for entrepreneurship development and knowledge transfer are to be established through clear directives from the National Universities Commission (NUC).

According to the National Universities Commission (NUC) through its Department of Student Support Services (DSSS), the vision of the Entrepreneurship Study Centres (ESCs) is to serve as a nerve centre or a hub for the education, research, growth and development of sustainable entrepreneurial culture among university students for the creation of wealth and socio-economic growth through value addition. The DSSS stated that the mission of the ESCs is to provide facilities and expertise that will propel the growth and development of entrepreneurial mindsets in students and faculty through sustainable quality, effective and dynamic entrepreneurial activities on campus, networking with industry and similar organizations world-wide.

The National University Commission (NUC) through the Department of Student Support Services (DSSS) stated that the provision of infrastructure is a very important criterion required for the establishment of entrepreneurship centres (ESCs) in universities in Nigeria. The Department of Students Support Services (DSSS) (n.d.) stipulated that for any entrepreneurship study centre in any Nigerian university to exist, there should be the presence of infrastructure in the form of a constructed separate building or a renovated existing building which will accommodate fifty students and personnel at a time. The DSSS further asserted that entrepreneurship centres will consist of the following infrastructures:

1. Physical facilities: DSSS noted that to ensure the centres are functional and the training is more meaningful to the students and faculty, the following facilities must be acquired: multi-purpose foyer, halls, seminar rooms and staff offices
2. Library Facilities: to achieve the objective of the centre, the library services must be continually improved to respond to the needs of the students through Information and Communication Technology for optimum utilization. The DSSS document specifically noted that there shall be an e-library which must be directly linked to the NUC resource and knowledge centre for the use of available resources.

For Afolabi, Yusuf, Ogunjobi and Idowu (2014), architectural services are very pertinent to the establishment of entrepreneurship education centres. According to Afolabi et al (2014), the architect plays a prominent role in the procurement of suitable plans for the entrepreneurship education centre. Furthermore, Onyesom and Okolocha (2013) noted that the importance of infrastructures like offices in the training of students for the demands of the real world. Onyesom and Okolocha opined that infrastructures like the model offices in business education are a working prototype of operations which reflect the real environment of a business office as closely as is practically possible. This can also be said of entrepreneurship laboratories; they should reflect the real business environment. This will enable students get used to the situation in school before graduation.



Unfortunately, there have been reports that most entrepreneurship study centres have failed to meet the infrastructural budgeting and human resources requirements expected for its establishment in most universities in Nigeria (Adejimola & Olufunmilayo, 2009). According to Aja, Onoh and Igwe (2018), level of infrastructural development provided by the government is still very low therefore affecting to a very high extent the level of productivity and entrepreneurial activities in the country. This seems to have resulted in high rate of many business enterprises winding up prematurely as a result of lack of possession of appropriate entrepreneurial skills by educated and uneducated youths. However, the level of infrastructural provision in the entrepreneurship study centres in south east Nigeria is still not clear. It is against this background that the study determined the availability of infrastructural facilities provided for the establishment of entrepreneurship centres in universities in South East Nigeria.

### **Statement of the Problem**

Over the years, the rate of unemployment among graduates in Nigeria has risen astronomically. This has increased the call for the institutionalization of entrepreneurship education in universities in 2007/2008 session. However, over ten years now the rate of unemployment in Anambra State in particular and Nigeria in general has not ceased. The researcher is worried that the entrepreneurship study centres seem to have failed in meeting the targets for which they are established. This is evident in the high number of graduates' unemployment in the zone. This situation has been blamed for the increased rate of crime and violent activities among youths in the zone. Scholars like Aja, Onoh and Igwe (2018) have blamed the failure of entrepreneurship centres to adequately prepare students for self-employment on the lack of availability of infrastructural facilities in some centres. The researcher wonders if this assertion is true. Thus the study is aimed at determining the availability of infrastructural facilities for the establishment of entrepreneurship centres in universities in South East Nigeria.

### **Purpose of the Study**

The main purpose of the study was to determine the availability of infrastructural facilities for the establishment of entrepreneurship centres in universities in South East Nigeria.

### **Research Question**

What is the availability of infrastructural facilities for the operation of Entrepreneurship Study Centres (ESCs) in universities relative to the NUC stipulations?

### **Hypotheses**

The following null hypotheses were tested at 0.05 level of significance.

1. There is no significant difference in the mean ratings of the respondents regarding the availability of infrastructural facilities for the operation of Entrepreneurship Study Centres (ESCs) in universities based on gender (Male/Female).
2. There is no significant difference in the mean ratings of the respondents regarding the availability of infrastructural facilities for the operation of Entrepreneurship Study Centres (ESCs) in universities as a result of ownership of institution (Federal and State).

**Method**

The study was conducted in South East Nigeria. The descriptive research design was adopted for the study. The population of this study comprised 116 employees of the Entrepreneurship Centres from eight (8) universities with functional Entrepreneurship Centres in the zone. The instrument for data collection was a questionnaire developed by the researcher based on the reviewed literature and research questions guiding the study. The instrument is titled "Questionnaire on Implementation of Guidelines for Entrepreneurship Centres in Universities" and has two main sections- A and B. Section A contained three items on respondents' background information covering gender and ownership of institution while Section B contained 11 items on a 5- point rating scale. The instrument was validated by three experts in the Faculty of Education, Nnamdi Azikiwe University, Awka. The reliability of the instrument was ascertained through a pilot test. The instrument was administered to a sample of ten (10) employees of the Centre for Entrepreneurship Studies, Delta State University, Abraka who were not included in the population of the study. The application of Cronbach Alpha reliability method on the obtained data yielded a score of 0.76 for internal consistency which was deemed high for the study.

The data collected from the respondents was analyzed using descriptive statistics such as mean and standard deviation. The mean value was used to answer the research questions while the standard deviation was used to ascertain the homogeneity or otherwise of the respondents' ratings. Items with mean ratings between 2.50 and above were regarded as available while those items with mean ratings below 2.50 were regarded as not available.

For the hypotheses testing, where the calculated t value is less than the critical value of t, it meant that the variable does not significantly affect respondents' mean ratings and the hypothesis was accepted. Conversely, where the calculated t value is greater than or equal to the critical t value, it meant that the variable has a significant effect on the respondents' mean ratings and the hypothesis was rejected.

**Results**

**Research Question:** What is the availability of Infrastructural facilities for the operation of Entrepreneurship Study Centres (ESCs) in universities relative to the NUC stipulations?

**Table 1: Respondents Mean ratings on the extent to which infrastructure are provided for the operation of entrepreneurship centres in universities N=108**

S/N	Items on Infrastructure	Mean	SD	Remarks
1.	Multi-purpose Foyer	4.39	0.69	Available
2.	Lecture Halls	4.20	0.84	Available
3.	Board rooms	4.20	1.00	Available
4.	Seminar rooms	4.00	1.03	Available
5.	Staff offices	4.22	0.89	Available
6.	Workshops	4.11	1.02	Available
7.	Laboratories	3.76	1.08	Available
8.	Computer center	3.96	0.92	Available
9.	Separate entrepreneurship center building	4.05	1.05	Available
10.	ICT facilities	4.06	0.98	Available
11.	Electricity	3.94	1.18	Available
	<b>Grand Mean</b>	<b>4.08</b>		<b>Available</b>

Data in Table 1 reveal that the respondents opined that infrastructural facilities are available for the Entrepreneurship Study Centres with mean scores ranging from 3.76 to 4.39. The grand mean of 4.08 indicates that items of infrastructures are available for the operation of the entrepreneurship study centres in universities in South.

**Hypothesis 1:** There is no significant difference in the mean ratings of the respondents regarding the availability of infrastructural facilities for the operation of Entrepreneurship Study Centres (ESCs) in universities based on gender (Male/Female).

**Table 2: t-test analysis of respondents' mean ratings on the availability of infrastructure for the operation of entrepreneurship centres in universities based on gender**

Variable	N	$\bar{X}$	SD	Df	$\alpha$	t-cal	t-crit	Decision
Male	56	4.07	0.88	106	0.05	-0.06	1.96	NS
Female	52	4.08	0.98					

Data in Table 2 show that the calculated t-value of -0.26 at 106 degree of freedom at 0.05 level of significance is less than the critical value of 1.960. This shows that there is no significant difference in the mean ratings of respondents based on gender, therefore the hypothesis was accepted.

**Hypothesis 2:** There is no significant difference in the mean ratings of the respondents regarding the availability of infrastructural facilities for the operation of Entrepreneurship Study Centres (ESCs) in universities as a result of ownership of institution (Federal and State).

**Table 3: t-test analysis of respondents' mean ratings on the availability of infrastructure for the operation of entrepreneurship centres in universities based on ownership of institution**

Variable	N	$\bar{X}$	SD	Df	$\alpha$	t-cal	t-crit	Decision
Federal Uni.	58	3.57	1.04	106	0.05	0.89	1.96	NS
State Uni	50	3.64	1.01					

Data in Table 3 show that the calculated t-value of 0.89 at 106 degree of freedom at 0.05 level of significance is less than the critical value of 1.960. This shows that there is no significant difference in the respondents mean ratings as a result of ownership of universities, therefore the hypothesis was accepted.

### Discussion

Findings indicated that infrastructures are available for the operation of the entrepreneurship study centres in universities in South East. This is in line with the guideline of the Department of Students Support Services (DSSS) (n.d.) which stipulated that for any entrepreneurship study centre in any Nigerian university to exist, there should be the presence of infrastructure in the form of a constructed separate building or a renovated existing building which will accommodate fifty students and personnel at a time. The importance of infrastructure to the entrepreneurship centres was highlighted in Onyesom and Okolocha (2013) who noted the importance of infrastructures like offices in the training of students for the demands of the real world. Onyesom and Okolocha further opined that infrastructures like the model offices are a working prototype of operations which reflect the real environment of a business office as closely as is practically possible. This can also be said of entrepreneurship laboratories; they should reflect the real business environment. This will enable students get used to the situation in school before graduation.

The test of the first hypothesis revealed that there was no significant difference in the mean ratings of the respondents on the availability of infrastructure for the operation of entrepreneurship study centres (ESCs) in universities based on gender and ownership of institution. This might have been as a result of the adherence to the guidelines for establishment of entrepreneurship centres by the management of tertiary institutions in the zone and the strict monitoring and supervision of the NUC on its implementation.

### Conclusion

Based on the findings of the study, the researcher concludes that infrastructural facilities are available for the establishment of entrepreneurship study centres in universities in Nigeria. This indicates that structures and facilities are in place for the entrepreneurial development of students in the universities in the south East. It is imperative that measures are put in place to facilitate that the facilities provided are put into good use.

### Recommendations

Based on the findings of the study, the researcher makes the following recommendations:

1. Government and other stakeholders in education should continue to provide infrastructural facilities and equipment in all entrepreneurship centres.
2. A review of the state of infrastructure and equipment in the centres should be carried out on a regular basis so as to avoid dilapidation and spoilage.
3. The administrators of the entrepreneurship study centres should ensure that proper inventory of the infrastructural facilities are kept. For example the number of office chairs and tables, air conditions, fans etc should be known and recorded to prevent theft.

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## GOVERNMENTAL AND MANAGERIAL FACTORS HAMPERING THE GROWTH OF SMALL SCALE ENTERPRISES IN ENUGU, NIGERIA

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### Abstract:

*The persistent failure of small scale businesses in Nigeria is alarming and needs timely intervention particularly in Enugu State. This, however, informed the present study to determine governmental and managerial factors hampering the growth of small scale enterprises in Enugu State. Two purpose statements, two research questions and four hypotheses guided the study. The research design was descriptive survey. Simple random technique was used to select 120 registered entrepreneurs for the study. The instrument for data collection was a structured questionnaire. The questionnaire was tested for validity and reliability. Using Cronbach's alpha, the overall reliability coefficient was 0.82. Descriptive statistics of mean and standard deviation were used to answer the research questions. The t-test for non-correlated data was used to test the hypotheses at 0.05 level of significance. Findings from the study revealed among others that governmental and managerial factors hamper the growth of small scale enterprises in Enugu State. The findings revealed that the respondents differ significantly in their mean ratings on governmental and managerial factors that hamper the growth of SSEs based on location. Similarly, the findings revealed that the respondents do not differ significantly in their mean rating on governmental factor that hamper the growth of SSEs in Enugu State based on location. However, the respondents differed significantly in their mean rating on governmental factor that hamper the growth of SSEs based on years of experience. Similarly, the respondents do not differ significantly in their mean rating on managerial factor that hamper the growth of SSEs in Enugu State based on years of experience. Based on the findings, it was recommended among others that Enugu state should be consistent in her policies and regulations with regards to the affairs of small scale enterprises. Entrepreneurs in Enugu State should strive to employ competent managers to their enterprises as that will enhance enterprise growth and development among others.*

### Introduction

Globally, the up-shoot of unemployment has become an all reaching concern. It is a challenge that most economies are facing under the current economic circumstances (Oppong & Sachs, 2015). Even the developed nations have not shown exception to this frightful social problem, although the up-surge is more pronounced in the developing countries. The present high rate of unemployment in Nigeria has made majority of citizens to be self-employed and one way of being self-employed is to start a small scale enterprise. Eni (2010) defined small scale enterprises as any business that is owned, managed and controlled by a sole proprietor or partners of about two persons, has total assets of less than four million naira and a relatively small share of the market with not more than fifty employees for its growth. In the view of

Gbandi and Amissah (2014), classification of SSE in Nigeria is based on capital employed, turnover and number of employees.

Small scale businesses play a pivotal role in development of economy of developing countries and are seen as an engine of growth and development of many nations (Robert & Michael, 2012). Similarly, Fatal (2011) averred that SSEs are very vital spring board for growth, job creation and the socio-economic development of any nation. These enterprises are seen as the engine through which the growth objectives of developing countries can be achieved. It upgrades indigenous technologies through exploration of locally available raw materials. SSEs are essential promoters of sustainable economy and national development such as job creation, improvement of standard of living, encouraging local industrialization and others.

Nigerian governments through its economy regulatory agencies have recognized the importance of small scale enterprises in the provision of employment to its citizens. According to Small and Medium Enterprise Development Agency of Nigeria (2013), small businesses employed 80% of the Nigerian workforce. Shehu, Oni, Adeyinka and Omage (2013) stated that 97% of the Nigerian economy are small businesses and are contributing up to 70% of the country's job opportunities. Because of the importance of small businesses in the Nigerian economy, local, states, and federal governments recognizes the need to stimulate small businesses to provide employment, reduce poverty rate, and improve economic growth.

Consequently, the survival and growth of these widely acknowledged and all important SSEs is at stake in Nigeria particularly in Enugu State. The growth of SSEs can be hampered by several factors but this study is delimited to governmental and managerial factors.

Governmental policies are one of the factors that can hamper the growth of SSEs in Enugu State. No business can thrive in a hostile environment with unfavourable government policies. Government efforts in creating enabling environment for SSEs to thrive are inevitable. According to Olorunshola (2008) the contribution of government at all levels towards the management of enterprises in terms of development of small scale businesses have been considered to be below expectation. The survival of most small scale enterprises depends mainly on good government policies but bad government policies will affect the operation of the small scale enterprises and expected growth. In spite of policies put in place by government, small scale enterprises is often struggling for survival in a hostile environment thereby affecting their growth and management in Nigeria in general and Enugu State in particular.

However, the Nigerian Government have been initiating programs like People's Bank of Nigeria and National Economic Reconstruction Fund (NERFUND) aimed at subsidizing the cost of capital and increased access to small businesses in the Nigerian economy (Dugguh, 2015). Dugguh, however, observed that most of such initiatives have not altered the problem of inadequate access to finance on the part of small business owners in the Nigerian economy.

Management is another factor that can hamper the growth of SSEs and it is expressed in the view of Obi (2011) as the process by which those in authority plan, organize and control a business in an effort to make it successful. With regard to the foregoing, Bennett (2014) indicated that, for SSEs to perform competently and grow, its management should exhibit good knowledge of the industry on how to position the SSEs within the industry. This has to do with management ability to mobilize start-up capital, satisfy customers and network with suppliers and competitors. In retrospect to this scenario, SSEs owner/managers being the driving force of the firm should seek necessary techniques, strategies and skills that will enable the firm to

achieve a competitive edge over their rivalry firms. Contributing, Mahadea and Youngleson (2013) averred that lack of effective leadership and weak general skills, financial and marketing planning are pertinent factors that hamper business growth. However, since many small businesses operate on a basis of sole decision making, one can say that the entrepreneur/manager becomes the most important element in the operation of the business and therefore poor management performance is fatal as it can lead to business failure.

Arguably, the most important factor of entrepreneurship and small business development is location which could include the nearness to raw material, accessibility to business premises, good road network, busyness of the area of the business and others. Kala and Guanghua (2010) defined location as the choice of where a business is to be located, be it small, medium and large cities or urban or rural locations. This definition is in line with Esteban, Yancy and Christian (2010) who referred to location as the choice of locating your business either in the rural or urban centre and they also linked location with the type of product or service the firm tend to offer.

The entrepreneurs to be used in this study include entrepreneurs with different years of experience operating in urban and rural areas. Years of experience of an entrepreneur are very paramount to the success of the enterprise. This is because, if the small scale enterprises are owned and handled by well experienced individuals, the likely resultant effect will be business boom and success. According to McElwaine (2014), experience is the process or fact of personally observing, encountering, or undergoing something. Experience here can be categorized based on the number of years spent in operating a business outlet and could be grouped into experienced (10yrs and above) and less experienced (0-5yrs/6-10yrs/). It is possible that experienced entrepreneurs will handle different factors that hamper the growth of SSEs much better due to longer years of business experience than those with lesser experience.

### **Statement of the Problem**

Small scale enterprises (SSEs) do not only represent the country's major opportunity for industrialization but also contributes enormously to sustainable growth and socio-economic development in the areas of tax generation, provision of raw materials and creation of employment opportunities as well as poverty alleviation. Dearth of growth and closure of small scale enterprises in Nigeria particularly in Enugu state is a threat to socio-economic development of the state.

Specifically, the persistent high failure rate of SSEs in Enugu State has become a major threat to the socio-economic development of the state. This rate of failure may not be unconnected to the way entrepreneurs perceive different factors that hamper the growth of SSEs in Enugu State which is not clearly known. Where entrepreneurs see these factors as insurmountable or lack adequate knowledge of how to handle them, the ugly trend will persist. This study is, therefore conceived to empirically determine managerial and governmental factors hampering the growth of SSEs in Enugu State as a major step in addressing the persistent high failure rate to enhance socio-economic development of the state.

### **Purpose of the Study**

The main purpose of this study is to determine managerial and governmental factors hampering the growth of small scale enterprises in Enugu State. Specifically, the study will determine;

1. governmental factors that hamper the growth of small scale enterprise in Enugu State
2. Managerial factors that hamper the growth of small scale enterprises in Enugu State

### **Significance of the Study**

The findings of this study will be beneficial to owners/managers of small scale enterprises, business education students, government and future researchers.

The findings of this study would be relevant to business education students as it would add to their existing knowledge and help to expose the need to prepare students adequately to face the world of work.

The findings of this study would be beneficial to the government. Successive governments in Nigeria have always had a policy programme for SSEs but most of lacks worthwhile implementation. The findings of this study is expected to inform policy makers regarding the direction of further research into interventionist programmes for SSEs in Nigeria. The study is expected to help the government to validate or reject the choice of microfinance as the main source of financing SSEs in Nigeria and also suggest ways of improving the existing financing arrangements, if need be.

It is also hoped that these findings would contribute to the body of knowledge and stimulate more researcher's interest in this field of study.

### **Research Questions**

The following research questions will guide the study;

1. What are the governmental factors that hamper the growth of small scale enterprise in Enugu State?
2. What are the managerial factors that hamper the growth of small scale enterprises in Enugu State?

### **Hypotheses**

The following null hypothesis will be tested at 0.05 level of significance

1. Entrepreneurs do not differ significantly in their mean ratings on governmental factors that hamper the growth of small scale enterprises in Enugu State based on location.
2. Entrepreneurs do not differ significantly in their mean ratings on governmental factors that hamper the growth of small scale enterprises in Enugu State based on years of experience (0-5yrs/6-10yrs/ above 10yrs)
3. Entrepreneurs do not differ significantly in their mean ratings on managerial factors that hamper the growth of small scale enterprises in Enugu State based on location.
4. Entrepreneurs do not differ significantly in their mean ratings on managerial factors that hamper the growth of small scale enterprises in Enugu State based on years of experience (0-5yrs/6-10yrs/ above 10yrs)

### **Method**

The descriptive survey research design was adopted for this study. Descriptive survey according to Nworgu (2015) is aimed at collecting data on, and describing in a systematic manner the characteristics, features or facts about a given population.



The study was conducted in Enugu State. The people of the area are industrious and enterprising. The population for this study consisted of 400 owners of small scale enterprises registered with cooperate Affairs Commission (CAC) Enugu. Purposive sampling technique was used to select 120 entrepreneurs drawn from two senatorial zones out of three existing ones in Enugu State. The sample size drawn represents thirty percent of the entire population; this is a good representative of the entire population. According to Brumeister and Aitken (2012), 30 percent sample size from a large population distribution of above 100 respondents is considered appropriate of the entire population.

Questionnaire was the instrument used for data collection. The questionnaire was validated by three experts in business education and measurement and evaluation from the Faculty of Education, Nnamdi Azikiwe University, Awka. The questionnaire has two sections, Section A and Section B. Section A contains items on the demographic data of the respondents while section B consists 2 clusters, B1 to B2. Cluster B1 contains 10 items while cluster B2 contains 9 items. Cluster B1 measured governmental factors hampering growth of small scale enterprise while cluster B2 measured managerial factors hampering growth of small scale enterprises. Section B is structured on a four point rating scale with response options of Strongly Agreed (SA), Agreed (A), Disagreed (D), and Strongly Disagreed (SD).

The reliability of the instrument was established using Cronbach Alpha statistics. This procedure according to Nworgu (2015) applies to instrument that are scored on multiple bases (polytomously). Data collected and analyzed yielded reliability coefficients of 0.81, 0.78 respectively, with an overall reliability coefficient of 0.82, indicating a high level reliability of the items in the instrument. According to Agu (2012), reliability of 0.672 and above is deemed reliable.

The instrument was administered to the study sample personally by the researchers with the help of research assisted who were briefed on the purpose of the study. Descriptive and inferential statistics were used in data analysis. Specifically, mean was used in answering the research questions, while standard deviation was used to determine the homogeneity or otherwise of the respondents' mean ratings. Null hypotheses were tested using t-test statistics for non-correlated data. The probability alpha level for rejecting or accepting the null hypotheses was set at 0.05 level of significance, If the significant value is equal to or greater than the alpha value, the null hypothesis will not be rejected; otherwise, it will be rejected. The statistical analysis was done using the Statistical Package for Social Sciences (SPSS) version 23.

## Results

**Table 1: Mean responses of respondents on governmental factors that hamper the growth of small scale enterprise in Enugu State**

S/N	Governmental Factors	Mean	SD	Remark
1	High cost of levies	3.32	0.77	Agree
2	High cost of taxes	3.34	0.81	Agree
3	Policy inconsistency	3.51	0.59	Strongly Agree
4	Government instability	3.09	0.82	Agree
5	High cost of compliance with government regulations	3.31	0.76	Agree
6	Inability of government to execute favourable fiscal policies	3.41	0.64	Agree
7	Baltic power supply	3.39	0.63	Agree

8	Multiple taxes at various levels of government	3.30	0.67	Agree
9	Poor implementation of government policies	3.58	0.63	Strongly Agree
10	Insecurity of lives and properties	3.28	0.63	Agree
	<b>Grand Mean</b>	<b>3.35</b>		<b>Agree</b>

Table 1 show respondents mean rating on governmental factors that hamper the growth of small scale enterprises in Enugu State. From the result, the respondents strongly agreed to item 3 and 9, and agreed to other items stated, a grand mean of 3.35 indicates that the respondents agreed that governmental factors hamper the growth of SSEs in Enugu State. The standard deviation reported indicated homogeneity of the respondent's response.

**Table 2: Mean responses of respondents on managerial factors that hamper the growth of small scale enterprise in Enugu State**

S/N	Managerial Factors	Mean	SD	Remark
11	Autocratic leadership	2.21	0.77	Disagree
12	Poor communication	3.13	0.76	Agree
13	Poor staff development plan	3.18	0.77	Agree
14	Low acceptance of innovative performance policies	3.72	0.79	Strongly Agree
15	Poor marketing plan	2.23	0.77	Disagreed
16	Non-delegation of responsibilities to subordinates	3.81	0.74	Strongly Agree
17	Lack of managerial experience	3.18	0.73	Agree
18	Unmotivated staff	3.21	0.72	Agree
19	Poorly educated workforce	2.04	0.88	Disagree
	<b>Grand Mean</b>	<b>2.96</b>		<b>Agree</b>

Table 2 show respondents mean rating on managerial factors that hamper the growth of small scale enterprises in Enugu State. From the result, the respondents strongly agreed with two items, agreed with five items and disagreed with three items. On the whole, the grand mean of 2.96 indicates that the respondents agreed that managerial factors hamper the growth of SSEs in Enugu State. The standard deviation reported indicated homogeneity of the respondent's response.

**Table 3: t-test summary of the mean rating of respondents on governmental factors that hamper the growth of small scale enterprises in Enugu State based on location**

Variable	N	Mean	SD	df	t-value	Sig. value	Decision
Urban	80	32.66	4.10	118	1.098	0.276	Not significant
Rural	40	33.52	4.03				

Data presented in Table 3 reveals the t-test summary on respondents mean ratings on governmental factors that hamper the growth of small scale enterprises in Enugu state based on location. The result reveals that the significant value (0.276) is greater than the alpha value (0.05), this implies that the respondents do not differ significantly in their mean ratings of

governmental factors that hamper the growth of small scale enterprises in Enugu State based on location ( $t = -$ ,  $df = 118, p > .05$ ). Hence the null hypothesis will not be rejected.

**Table 4: t-test summary on the mean rating of respondents on governmental factors that hamper the growth of small scale enterprises in Enugu State based on years of experience**

Variable	N	Mean	SD	df	t-value	Sig. value	Decision
0-5 years	81	32.76	4.17	118	0.501	0.016	Significant
6 years and above	68	33.14	4.04				

Data reported in Table 4 shows the t-test summary on the mean rating of respondents on governmental factors that hamper the growth of small scale enterprises in Enugu state based on years of experience. The result revealed that significant value (0.016) is lesser than the alpha value (0.05), this implies that the respondents differ significantly in their mean ratings on governmental factors that hamper the growth of small scale enterprises in Enugu State based on years of experience ( $t = -$ ,  $df = 118, p > .05$ ). Hence the null hypothesis is rejected.

**Table 5: t-test summary of the mean response of respondents on managerial factors that hamper the growth of small scale enterprises in Enugu State based on location**

Variable	N	Mean	SD	df	t-value	Sig. value	Decision
Urban	80	28.45	4.33	118	0.149	0.002	Significant
Rural	40	28.32	4.33				

Data presented in Table 5 reveals the t-test summary on respondents mean ratings on managerial factors that hamper the growth of small scale enterprises in Enugu state based on location. The result reveals that the significant value (0.002) is lesser than the alpha value (0.05), this implies that the respondents differ significantly in their mean ratings of governmental factors that hamper the growth of small scale enterprises in Enugu State based on location ( $t = -$ ,  $df = 118, p > .05$ ). Hence the null hypothesis is rejected.

**Table 6: t-test summary of the mean response of respondents on managerial factors that hamper the growth of small scale enterprises in Enugu State based on experience**

	N	Mean	SD	df	t-value	Sig. value	Decision
0-5 years	81	28.01	4.35	118	0.929	0.345	Not significant
6years and above	68	28.76	4.29				

Data reported in table 7 shows the t-test summary on the mean rating of respondents on managerial factors that hamper the growth of small scale enterprises in Enugu state based on years of experience. The result revealed that significant value (0.345) is greater than the alpha value (0.05), this implies that the respondents do not differ significantly in their mean ratings on managerial factors that hamper the growth of small scale enterprises in Enugu state based on years of experience ( $t = -$ ,  $df = 118, p > .05$ ). Hence the null hypothesis is not rejected.

**Discussion**

The findings from this study revealed that governmental factors such as high cost of levies, high cost of taxes, policy inconsistency, frequent change of government, high cost of compliance with government regulations among others hamper the growth of SSEs in Enugu State. This finding is supported by Onwukwe and Ifeancha (2011) whose study revealed that despite several specialized institutions in charge of micro credit and policy instruments

established to enhance development of small scale enterprises, SSEs are being inhibited by the gap between policy development and implementation in contributing effectively to sustainable development.

On the other hand, the hypothesis tested revealed that the respondents did not differ significantly in their mean rating on governmental factors that hamper the growth of SSEs in Enugu state based on location. This finding disagrees with the findings of Adeusi and Aluko (2014) which revealed that there exist a positive correlation between government role and small scale business promotion and that the government plays a significant role on small scale businesses in Nigeria through their various actions. With regards to years of experience, the findings of this study revealed that the respondents differ significantly in their mean rating on governmental factors that hamper the growth of SSEs in Enugu state. This finding agrees with that of Akawu, Agum and Olanrewaju (2018) which revealed that government capacity building programmes has significantly impacted on the development of SSEs in the study area.

Findings from this study revealed that, poor communication, poor staff development plan, low acceptance of innovative performance policies, non-delegation of responsibilities to subordinates, lack of managerial experiences were rated to be the factors that hamper the growth of SSEs in Enugu State. This finding is in line with findings of Eze (2012) which revealed that there is evidence to prove that poor planning affects the management of small-scale business.

Similarly, the hypothesis tested based on location reveals that the respondents differ significantly in their mean ratings on managerial factors that hamper the growth of small scale enterprises in Enugu State. This findings disagrees with the findings of Okeke, Onuorah and Jakpa (2016), which shows that external environment was the most important and influential variable. It further revealed that management can make use of different strategies and policies to improve SSEs work settings and performance, but different strategies and policies would have different performance impact on diverse SSEs. More so, the respondents did not differ in their mean ratings on managerial factors that hamper the growth of SSEs based on years of experience. This finding agrees with the finding of Ikupolati, Adeyeye and Oni (2017) which found that entrepreneurs' conceptual and technical skills contribute to the managerial skills of the entrepreneurs which have brought about growth in SSEs in Nigeria.

### **Conclusion**

Small scale enterprise has been influential in bringing about economic transformation by providing goods and services to a large group of populace in Nigeria and Enugu State in particular. This has paved way for job creation, improving the standard of living, exploration of locally available materials, generation of taxes for government among others. Based on the result of the findings, it could be concluded that governmental and managerial factors hamper the growth of small scale enterprises in Enugu State.

### **Recommendations**

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

1. Entrepreneurs in Enugu State should as a matter of urgency embark on capacity building programmes geared towards educating their members on financial institutions requirement for loan and collateral issues. This could be achieved by collaborative efforts with the relevant educational institutions, government agencies and consultants through the

organization of seminars, workshops conferences and training programmed for the entrepreneurs and the staff of financial institutions.

2. Enugu state should be consistent in her policies and regulations with regards to the affairs of small scale enterprises. This could be achieved through collaborative effort of the state government, the ministry of commerce and industry and small and medium enterprises development agency of Nigeria (SMEDAN) in formulating long term policies concerning SSEs in the state as this will attract foreign investors which will lead to economic development of the state.
3. Entrepreneurs in Enugu State should strive to employ competent managers to their enterprises as that will enhance enterprise growth and development. This could be achieved through formal recruitment of the would be managers of the enterprises.
4. Government should improve on their funding system to help and reduce the collateral security charges on the entrepreneurs in the state.

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## GENDER-RELATIVE EFFECT OF PROJECT-BASED LEARNING METHOD ON ACADEMIC ACHIEVEMENT AND RETENTION OF TECHNICAL COLLEGE STUDENTS IN BASIC ELECTRICITY

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### Abstract

The gender-related controversies associated with effects of various teaching methods gave rise to this study. This study was conducted to ascertain the gender-relative effect of project-based learning method on academic achievement and retention of technical college students in Basic Electricity. The study was carried out in Anambra state and adopted the quasi-experimental research design. This was precisely, pretest, posttest, delayed posttest non-randomized control group design which involved groups of students in their intact classes. A sample of 92 NTC II students was drawn from a population of 179 students of state owned technical colleges in Anambra state. Two research questions and two null hypotheses tested at 0.05 level of significance guided the study. Basic Electricity Achievement Test (BEAT), a 40-item multiple choice test which was based on the units covered in the study, served as the instrument used for data collection. The BEAT and lesson plans for both control and experimental groups were all validated by three experts from the faculty of education, Nnamdi Azikiwe University Awka. The reliability coefficient of the instrument was found to be 0.82 using KR-20. Mean and standard deviation were used to answer the research questions, while Analysis of Covariance (ANCOVA) was employed to test the hypotheses. Findings revealed that male and female technical college students taught Basic electricity using project-based learning method had higher achievement and retention scores than those taught using the conventional teaching method. Also findings revealed that there was no significant difference in the mean achievement and retention scores of the male and female students taught basic electricity using PBLM. Based on the findings of this study, it was concluded that PBLM has the potential to improve male and female technical college students' academic achievement and retention in Basic electricity. Consequently, it was recommended among others that Basic electricity teachers should use PBLM in the teaching of Basic electricity and grant students equal opportunity during classroom instructions irrespective of gender so as to enhance students' academic achievement and retention in the subject.

**Keywords:** Gender, Project-based learning, Academic achievement, Retention, Basic Electricity, Technical colleges

### Introduction

The controversies on gender in the school achievement and classroom behavior have continued to be inconclusive. Review of literature reveals that there have been diverse opinions on the effect of teaching methods on particular genders in different subjects. These variations could be attributed to sex-role stereotype. Based on our socio-cultural background, certain vocations have been regarded as men's (engineering, agriculture, etc) while others as women's (catering, nursing, etc) (Eze, Ezenwafor & Obidile, 2016). The effect of gender on the academic

achievement and retention of students has in recent times been attracting attention from researchers and psychologists.

Gender is the state of being male or female. According to Adigun, Irunokhai, Sada & Adesina (2015), gender is the range of physical, biological, mental and behavioral characteristics pertaining to and differentiating between the feminine and masculine population. Worthy of note is the reality that most technical classes comprise both male and female students. Controversies exist as to the performance of gender groups in technical subjects. This is because it is being perceived as a male dominated area. Sex/gender stereotypes has led to certain vocations being attributed to a particular gender. Ogbonna in Oludipe (2012) is of the view that male students perform better than their female counterparts while Ojikutu in Ezeudu (2014) is of the opinion that there are no differences in academic achievement of gender groups in technical subjects. This study is concerned with the variations in performance of gender groups in technical subjects with particular reference to Basic Electricity.

Basic electricity is one of the fundamental subjects offered in electrical installation and maintenance practice, radio and television (RTV) and electronic trades (Amadike, 2015). This is because The National Business and Technical Examination Board (NABTEB) syllabus outlined basic electricity as one among the trade-related subjects to be offered at the Technical Colleges level (NABTEB, 2011).

A technical college is an institution where one can study science and technical subjects often as part of the qualifications and training required for a particular job. Training at technical colleges can take from less than two years up to four years to complete and typically a certificate, diploma, or associate's degree is awarded. Technical Colleges (TC) in Nigeria are established to produce craftsmen at (secondary) level and master craftsmen at the advanced craft (post secondary) level (Federal Ministry of Education, 2013). The performance of students in subjects taught in the technical colleges is measured via their academic achievement and concept retention thereafter.

Academic achievement connotes performance in school subjects as symbolized by a score on an achievement test (Jimoh, 2010). Achievement is quantified by a measure of the student's academic standing in relation to those of other students of same academic level and age limit. Thus, the researcher defines academic achievement as the performance outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in technical colleges. Sustainability of this accomplishment is an evidence of retention.

Retention is the ability to keep or retain the knowledge of what is learnt and be able to recall it when it is required (Hon-Hau, 2015). For the purpose of this study, retention is viewed as the ability to remember or recall what is taught at the time it is needed. Many researchers for example, Okoro, (2013) and Obidile (2017) have in the past carried out studies on retention in one field or the other in relation to teaching methods. They all viewed retention as important in sustenance of achievement. In the quest towards modern technological advancement, Nigeria needs nothing short of good performance at all levels of schooling. Unfortunately, low academic achievement demonstrated by recurrent failure has been recorded in the electrical/electronic trades in the May/June NABTEB examinations as revealed by NABTEB External examiner's reports from 2006 to 2010 (Fakorede, 2010). In Anambra state technical colleges, the issue of low academic achievement or performance still persists as revealed by NABTEB results



(NABTEB, 2018). This low academic achievement has affected the products of technical colleges adversely both in Anambra state and the nation in general. Researchers such as Ali (2013) and Ganai and Muhammad (2013) observed that students' academic achievement is affected by a host of factors including teaching methods. Research over the years has shown that teachers have been depending on excessive use of words to convey ideas and facts, otherwise referred to as the conventional teaching method, in the teaching and learning process.

The conventional method of teaching is the traditional teaching method otherwise referred to as the talk-chalk method of classroom teaching. It is a teacher-centered approach to instruction. Tella et al., (2010) averred that teacher-centered methods are associated with inadequate stimulation of students' innovative capacities, shallow intellectual thinking, cramming of facts, poor knowledge, poor retention and dependency of students on their teachers. These inadequacies of this teaching method which is currently in use could be responsible for the recurrent low academic achievement being recorded. It is therefore the opinion of the researcher to try out other student-centered teaching methods such as project-based learning method to ascertain its effect.

Project-based learning (PBL) is an innovative, systematic teaching method that promotes student engagement through deep investigations of complex questions. Bako (2017) defined project-based learning method as one of the modern methods of teaching in which the students' point of view is given importance in designing the curricula and content of studies. This approach is based on the philosophy of pragmatism and the principle of learning by doing. In the opinion of Proulx (2014), project-based learning method is a systematic process which facilitates acquisition and transfer of learning, anticipation, planning, and implementation individually or paired under the supervision of a teacher. It emphasizes a process where learners plan their own learning processes individually or in a group to reach certain goals, developing their skills of collaboration, responsibility, collecting information, and organization of collected information. Project-based learning is defined by Erdem and Akkoyunlu (2012) as a learning approach based on project development, imagination, planning and construction. PBLM is selected for this study because it concentrates on hand dexterity which is of great essence in basic electricity based on its objectives. PBL could enhance students understanding of basic electricity, keep students busy and active in the class and give teachers opportunity to build stronger relationship with their students by acting as their hands-on learning facilitator. Students here refer to both genders.

The controversies on gender in the school achievement and classroom behavior have continued to be inconclusive. The effect of gender on the academic achievement of students has in recent times been attracting attention from researchers and psychologists. Eze, Ezenwafor & Obidile (2016), Owodunni & Ogundola (2013) among other researchers have carried out studies on the effect of teaching methods on gender groups but there has not been any study done to determine the effects of project-based learning method on male and female technical college students in Basic electricity. This prompted the researcher to carry out this study.

### **Statement of the Problem**

Recent NABTEB results show that the issue of low academic achievement for male and female technical college students in Basic electricity persists. This trend has been attributed to teaching methods. Gender awareness in recent times has militated against gender stereotypes, thus giving room for more females to have equal educational opportunities as their male counterparts. Despite the recent events and developments, it is evident that there has been continual inconsistency in the recent research findings on the academic achievement and

retention of gender groups. It is also clear that there is no consensus on which of the gender group achieves more or higher than the other. Hence, there is therefore a need to investigate the effect of a student-centered instructional strategy (in this case project-based learning method) on academic achievement and retention of gender groups in basic electricity.

#### **Purpose of the Study**

The main purpose of this study was to determine the relative effect of project-based learning method on academic achievement and retention of technical college students in Basic electricity. Specifically, the study seeks to determine the:

1. Effect of project-based learning method on the mean achievement scores of technical college students in basic electricity based on gender.
2. Effect of project-based learning method on the mean retention scores of technical college students in basic electricity based on gender.

#### **Research Questions**

The following research questions will guide the study:

1. What are the mean achievement scores of technical college male and female students taught basic electricity using project-based learning method?
2. What are the mean retention scores of technical college male and female students taught basic electricity using project-based learning method?

#### **Null Hypotheses**

The following hypotheses guided the study and were tested at 0.05 level of significance:

1. There is no significant difference in the mean achievement scores of male and female technical college students taught basic electricity using project-based learning method.
2. There is no significant difference in the mean retention scores of male and female technical college students taught basic electricity using project-based learning method.

#### **Method**

The design of this study is quasi-experimental research design of pretest, posttest non-randomized control group. The study was carried out in Anambra state. The population of the study is 179. These are the National Technical College (NTC) II students who offer Basic Electricity in state owned technical colleges in Anambra state. This is according to the available records at the Post Primary Schools Service Commission (PPSSC) Awka as at July 2019. The sample is made up of 92 NTC II students. Purposive sampling technique was used to select two schools for the study. There was a random selection of one class from each school making a total of two intact classes. A simple random sampling technique (balloting) was adopted to select the Technical College that will be in the experimental and the control group respectively. The students in each of the intact class constituted the sample used for the study. The intact classes were therefore randomly assigned to the treatment conditions. The experimental group had 49 students comprising of 34 males and 15 females while the control group had 43 students comprising of 36 males and 7 females respectively. Instrument for data collection is the Basic Electricity Achievement Test (BEAT). The Basic Electricity Achievement Test (BEAT) comprises of two sections. Section A is an enquiry on the students' personal data while section B has 40 multiple choice items, with each item having four options lettered A to D. The instrument covered the content areas of the two topics (transformers and capacitors) selected for the study and were developed by the researcher from NABTEB examination past questions and

curriculum content for Basic electricity. The same test items were used for pretest, posttest and delayed posttest (retention test). For post-test and delayed post tests, adjustment was made in the numbering and the options were equally interchanged. This was to reduce the effect of posttest on the retention test. The content and face validity of the instrument was established using the opinion of 3 experts in the faculty of Education, Nnamdi Azikiwe University. In order to establish the reliability of the BEAT, a pilot test was administered to 40 NTC II students from a government technical college Issele uku in Delta state (this is because they are not part of the population under study). The reliability of the instrument was computed from the data collected using Kuder- Richardson formula 20 and a coefficient of 0.82 was obtained

Permission to carry out the experiment was sought by the researcher from the school authorities of the technical colleges to be involved in the research. The duration of the study was eight weeks. The first week was used to conduct the pre-test; from the second week to the fifth week lessons were carried out, sixth week was for the post test while the retention test was on the eight week. Students were taught once each week, with every lesson lasting for 80 minutes. The six weeks period between the pre-test and post-test was long enough to disallow the pre-test from affecting the post-test. To prevent class interaction, during the test administration, the male students were separated from the females to ensure that the results gotten could solely be attributed to the gender the data emanated from. Project-based learning method is the instructional technique that was used for the experimental groups while conventional teaching method (lecture and demonstration) was used for the control groups with appropriate lesson plans. From the data collected, research questions were answered using means and standard deviation. Research hypotheses were tested using Analysis of covariance (ANCOVA) at significance level of 0.05. ANCOVA was used to check initial group difference since intact classes were used.

**Results**

**Research Question 1:** What are the mean achievement scores of technical college male and female students taught basic electricity using project-based learning method?

**Table 1: Mean achievement scores of technical college male and female students taught basic electricity using project-based learning method**

Gender (Experimental)	N	Pre-test X	Post-test X	Mean gain	Remark
Male	38	23.67	71.56	47.89	More effective
Female	11	21.11	66.93	45.82	

Data analyses in Table 2 reveals that the male students taught using project-based learning method had a pretest mean score of 23.67 with a posttest mean score of 71.56 while the female students taught using project-based learning method had a pretest mean score of 21.11 with a posttest mean score of 55.93. The gain in mean (47.89) of male students was higher than that of their female counterpart (45.82). This means that the mean achievement scores of male students taught using project-based learning method is higher than their female counterparts taught using project-based learning method.

**Research Question 2:** What are the mean retention scores of technical college male and female students taught basic electricity using project-based learning method?

**Table 2: Mean Retention Scores of Male and Female taught using Project-based Learning Method**

Gender (Experimental)	N	Post-test $\bar{X}$	Retention $\bar{X}$	Mean difference	Remarks
Male	38	71.56	76.10	4.54	Retained more
Female	11	66.93	69.02	2.09	

Table 2 shows that the male students taught using project-based learning method had a posttest mean score of 71.56 with a retention score of 76.10 while the female students taught using project-based learning method had a post mean score of 66.93 with a retention score of 69.02. The mean difference of 4.54 shows that male student retained more than their female counterpart having a difference in mean of 2.09. The analysis therefore revealed that mean retention scores of male students taught using project-based learning method is higher than their female counterparts.

**Null Hypothesis 1:** There is no significant difference in the mean achievement scores of male and female technical college students taught basic electricity using project-based learning method.

**Table 3: ANCOVA test on significant difference in the mean achievement scores of male and female technical college students taught basic electricity using project-based learning method**

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	78.437 <sup>a</sup>	2	19.609	3.691	.007
Intercept	98.331	1	98.331	18.507	.000
Achievement	.068	1	.068	.013	.910
Gender	.629	1	.629	.118	.731
Treatment	7.982	1	7.982	1.502	.223
Error	600.385	47	5.313		
Total	23057.000	49			
Corrected Total	678.822	48			

a. R Squared = .116 (Adjusted R Squared = .084)

Table 3 reveals that the p-value of 0.731 is greater than 0.05 alpha level at 47 degree of freedom. Therefore, the null hypothesis is accepted, thus, the difference in the mean achievement scores of male and female technical college students taught basic electricity using project-based learning method is not significant.

**Null Hypothesis 2:** There is no significant difference in the mean retention scores of male and female technical college students taught basic electricity using project-based learning method.

**Table 4: ANCOVA test on significance of difference in the mean retention scores of male and female technical college students taught basic electricity using project-based learning method**

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	6356.390 <sup>a</sup>	1	6356.390	276.005	.000
Intercept	644403.000	1	644403.000	27981.086	.000
Gender	6.614	1	6.614	1.245	.267
Treatment	6356.390	1	6356.390	276.005	.000
Error	2671.474	47	23.030		
Total	655788.000	49			
Corrected Total	9027.864	48			

a. R Squared = .704 (Adjusted R Squared = .702)

The result in Table 4 shows that the p-value of 0.267 is greater than the alpha level of 0.05 at 47 degree of freedom ( $0.267 > 0.05$ ,  $df\ 47$ ). This implies that gender effect on retention is not significant. Therefore, the null hypothesis is accepted, thus, the difference in the mean retention scores of male and female technical college students taught basic electricity using project-based learning method is not significant.

### Discussion of Findings

Research question one revealed that the mean achievement scores of male students using project-based learning method is higher than their female counterparts taught using project-based learning method. The finding supported the finding of Bako (2017) that male students significantly performed better than female in the use of project teaching methods to teach brooding skills. Also, the finding aligned with the finding of Lihan (2014) that male students who participated in the PBL environments not only enriched and expanded their knowledge but also achieved academically higher than their female counterpart. This could be owing to the opinion that males are more practically-oriented than females. Result from hypothesis one revealed that the difference in the mean achievement scores of male and female technical college students taught basic electricity using project-based learning method is not significant. This finding agreed with the finding of Lihan (2014) that as regards gender, there was no significant difference in the mean achievement scores in the efficacy of project-based learning approach on social studies education. This finding was contrary to the finding of Bako (2017) that there was a significant difference in the male and female students' acquisition of brooding skills in facilitating agricultural education. This variation in the finding could be as a result of geographical change, and use of different subject coverage.

Result in research question two revealed that the mean retention scores of male students taught using project-based learning method is higher than their female counterparts. This finding opposed the finding of Okoro (2013) that female students retained more than their male counterpart in Home Economics class when taught using project-based learning method. This variation could be as a result of different subject coverage because it is generally believed that Home Economics is a female dominated subject compared to basic electricity that is considered a male inclined subject. The result analyzed in hypothesis two revealed that the difference in the mean retention scores of male and female technical college students taught basic electricity using project-based learning method is not significant. Gokhan (2011) agreed with this finding that there is no significant difference in the mean retention scores of both male and female

students taught using project-based learning method. Similarly, the finding also supported the finding of Okoyefi (2014) that there was no significant difference in the mean retention scores of male and female students exposed to project-based learning method. This could be because although there may be varied opinions on the performance of particular genders in technical subjects, both genders' level of retention was averagely the same owing to the effect of project-based learning method on them.

### Conclusion

This study has revealed that project-based learning method had a lot of significant effect on technical college students' achievement and retention ability in technical college subjects such as basic electricity. Also, there is no significant difference in the mean achievement and retention scores of male and female students taught Basic electricity. This implies that project-based learning method brought about improvement in academic achievement and retention of both genders.

### Recommendations

Based on the findings of the study, the following recommendations were made;

1. Basic electricity teachers should not introduce gender discrepancies in the classroom. They should as much as possible eliminate instructional techniques and materials that may bring about gender differences in the classroom.
2. The curriculum planners should modify basic electricity curriculum to include the use of innovative teaching method like the project-based learning method in order to enhance the participation and achievement of students in Basic electricity.
3. The ministry of education in Nigeria should organize seminars, workshops and conferences for Basic Electricity teachers on how to use project-based learning method in teaching Basic electricity.
4. The ministry of education should also provide sufficient tools and materials required for implementation of project-based learning instructional technique.

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## GENDER INTERACTION EFFECT WITH MOTHER TONGUE MODEL OF INSTRUCTION ON BLOCKLAYING STUDENTS' ACHIEVEMENT AND RETENTION IN TECHNICAL COLLEGES

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### Abstract

*This study examined the interactive effect of gender and mother tongue for instruction on technical college students' achievement and retention in blocklaying in Oyo central senatorial district technical colleges. Two research questions were raised, and were hypothesized and tested at 0.05 level of significance. Quasi-experimental research design involving a pre-test post-test non-equivalent control group design was adopted for the study. The population of the study was 461 parts 1 to 3 students offering blocklaying in the three technical colleges across the senatorial district. Sample of 83 students was drawn for the study, using purposive sampling technique. The instrument used to collect data was a Blocklaying Achievement Test (BCAT), which was validated by three experts. Kuder Richardson 20 was used to establish the reliability coefficient of 0.82 for the BCAT. For the test of hypotheses, ANCOVA was employed. Findings revealed significant interaction effects of mother tongue medium of instruction and gender on the students' achievement and retention.*

**Keywords.** Blocklaying, achievement, retention, Yoruba, English, mother tongue, gender

### Introduction

Achievement is the measure of what a person had accomplished after exposure to educational programme (Adamu, 2016). According to Adedoyin (2013), achievement is defined as the outcome of the extent to which a student, teacher or institution has achieved their educational goals. This is further explained that achievement is accomplishing whatever goals you have set for yourself, not necessarily earning a lot of money. Achievement is the positive level of attainment by an individual in a prescribed set of standardized knowledge/course of study for the purpose of acquiring permanent skill or development in an individual (Akinlabi, 2014). Owing to the fact that achievement covers a wide range of educational outcomes, its definition therefore depends on the indicators being used to measure it. Hence, achievement is operationally explained as the extent to which students attain mastery of the objectives of the blocklaying practices they are exposed to learn both in the classroom and on the site.

Retention can be described as the ability of a learner to keep the memories of the facts and knowledge he has acquired in the classroom over a long period of time. According to Houghton (2017), retention is the ability of the mind to remember information acquired from reading, observation or other processes. To the psychologist, this is the ability or power of the mind to store the past experiences of learning and utilizing them at a later stage (Khejeni, 2014).



Similarly, retention is the repeated achievement by a learner of behavior earlier acquired, elicited after an interval of time (Kara, 2008).

Oladele (2010) posited that a learner who repeats an acquired piece of knowledge with less error is said to have retained the material learnt. It is affected by a degree of reinforcement, the method of learning and the learners' memory capacity among others. Since it is presumed that usage of mother tongue for instruction in classroom could assist students to learn, it is equally important to determine its ability to enforce learning and retention. Retention, therefore, is someone's ability to retain and recall past experiences or recognize what has been learnt or experienced in class over a period of time.

Blocklaying is a trade offered at both intermediate and advanced levels in technical colleges. The curriculum of intermediate blocklaying in addition to what may be termed general education subjects such as mathematics, English language, physics, chemistry, social studies, and others has the core trade subjects to include, introduction to building construction, concreting, blocklaying, land surveying, quantity surveying, technical drawing, building drawing and construction management. At the end of the programme, the students are registered to take one or all of the technical certificate examinations. NABTEB Examination in Blocklaying consists of written examinations and practical tests in the above mentioned papers with the exception of English Language, Mathematics, Social Studies and Construction Management which are purely based on written examination. In each level of the examination, the candidates are expected to pass in the written paper(s) as well as the practical test to earn a certificate.

Blocklaying operations in the technical college involve the skills required in accomplishing given tasks in mixing of mortars by hand, molding of blocks, laying of blocks, rendering of walls, wall tiling, pointing top walls and laying of curved walls (arches). It also involves workability test on concrete, slump test, placing of concrete, application of mixture to concrete, compaction, curing of concrete and fixing of concrete joint materials. The students will perform these operations using tools and necessary equipment. Blocklaying operations are based on actual jobs and not pseudo jobs. The training should be carried out to the extent, where it gives the trainee, a productive ability with which he can secure and hold employment and be able to profit by it. To achieve such level, proper instructional/training materials and skills as well as a proper and simple language of communication such as mother tongue must be utilized in the course of instruction. The use of training materials and language as Thelma (2015) posited, involves using materials and skills that are most appropriate and commonly available in communicating the concepts of technology more correctly and practically to the students through their mother tongues.

Mother tongue can be described as a child's first language ever, it is the language of a child's environment or society, or language used in a child's native environment. Igbaji (2016) explained that mother tongue is the language of a child's ancestral means of communication, a language developed naturally by a child without being taught. Jannina and Mark (2014) stressed that the introduction of education by the colonial masters was not in the best interest of Nigeria but their interest was to impart knowledge that will help the interest of the colonial people and so the mother language was regarded as inferior to that of the colonial masters. Akinbote and Ogunsanwo (2013) also believed that a citizen that is literate even only in the mother tongue will be sufficiently equipped to live a useful life in the fast changing world.

For permanent literacy to be promoted in Nigerian schools, the use of the mother tongue as the medium of instruction in schools ought to be encouraged. Although English language retains its dominant position in the education delivery system in Nigeria, the thrust of education

language policy is the use of mother tongue, the language of the immediate community in elementary, primary and tertiary education. Unfortunately, English is the exclusive medium of instruction at the primary, junior and senior secondary school education and tertiary education (Ivowi, Okebukola, Oludotun & Akpan in Adekunle, 2008).

In some countries, such as Kenya, India, and various East Asian countries, mother is used to indicate the language of one's ethnic group. Also, in Singapore, mother tongue refers to the language of one's ethnic group regardless of actual proficiency, while the first language refers to the English language that was established on the island through British colonisation, which is the lingua franca for most post-independence Singaporeans due to its use as the language of instruction in government schools and as a working language (Akinlabi, 2014). It is expected that every child should be required to learn one of the three major Nigerian languages which are, Yoruba, Igbo or Hausa. It is not surprising that many children cannot speak any of the mother languages (Oginni & Owolabi, 2013). They further stressed that the challenges of teaching in mother tongue may remain irresolvable unless Nigerian education system is free of colonialism.

In the context of this study, mother tongue is the language of a child's origin, which is commonly used by the child's families and neighbors. It is a language a child learns naturally by observation from parents and household, a language that classifies and distinguishes one's ethnic/origin background, for example an Awka indigene is expected to have Igbo language as mother tongue. The National Policy on Education as reviewed by the federal government, affirmed that government recognizes the importance of language as a means of promoting social interaction, national cohesion and preservation of our culture (FRN, 2013).

One of the most topical issues in the current debate all over the world has been that of gender differences and achievement among students in schools. Certain cultures restrict particular gender to certain professions like farming, engineering and trading (Dania, 2014). Over the years, there has been a growing awareness of the role of women at home, school, and community in general. Certain vocations and professions have traditionally been regarded as men's (medicine, engineering, architecture) and others as women's (nursing, catering, typing, and arts) (Oludipe, 2012). However, there have been conflicting findings on how gender influences achievement. It seems the influence of gender varies according to school subjects. For instance, Kolawole (2007) revealed that male students performed better than female students in the cognitive, affective and psychomotor skill achievements when using their mother tongue while Abubakar and Adegboyega (2012), reported that gender was insignificant in the academic performance of students in Mathematics. Salami (2013) and Adamu (2016), posited that factors resulting from gender differences such as the rate at which male students learn practical skills may be different from the rate at which their female counterparts learn. Likewise, it is believed that gender also contributes to the differences in students' academic achievement rate. However, a key factor is the teacher and the medium of instruction used (Olanrewaju, 2013).

A critical question to ask at this juncture is, as the language used for teaching has significant impact on student achievement in relation to gender? To provide a possible answer to this question, Gin (2011) observed that in a contemporary context, men and women classification is a world where patriarchal values predominate. It is a world where there are general sets of belief that women are inferior to men and therefore, the power relations attached to the ideas, and beliefs, give men more power, opportunities and more advantage over women

in the society. Nwona and Akogun (2015), noted imbalances against women in science, technology and mathematics as these subjects are perceived as masculine subjects. They are often compulsory in technical colleges.

### **Statement of the Problem**

Technical colleges is an institution of learning saddled with the responsibility of producing skillful individual as craftsman and meddle level artisans, so students, upon graduation, are expected to secure employment in industries, pursue higher certificate in higher institutions or start up their own business in their trained fields and become self-employed. To achieve this in blocklaying trades government have doubled their efforts to ensure that quality education is delivered but unfortunately this goal is not achieved in blocklaying at technical colleges. However, the unsatisfactory achievement among blocklaying students, especially, in Oyo central senatorial district technical colleges has become a serious concern to all.

This poor achievement of students as revealed by the results of students' in NABTEB exams between 2015 and 2020 may be attributed to the language of instruction used by the teacher to teach blocklaying students among others. The persistent poor achievement in blocklaying skills acquisition exhibited by the students in examinations and work places leave no doubt about the ineffectiveness of both the procedure and medium regularly used by the teachers to teach students. The Osungbemiro, Olaniyan, Sanni, and Olajuyigbe (2014) study revealed that among the many factors contributing to poor achievement of blocklaying students is the medium of instruction used by the teachers to teach and this plays a predominant role on the achievement of students in technical colleges. Hence, would the use of mother tongue as the medium of instruction in blocklaying yield appreciable result on students' academic achievement and also improve students' retention ability.

### **Purpose of the Study**

1. Interaction effect of mediums of instruction and gender on academic achievement of technical college students in blocklaying/bricklaying and concreting.
2. Interaction effect of mediums of instruction and gender on the retention ability of technical college students in blocklaying/bricklaying and concreting.

### **Research Questions**

The following research questions guided the study:

1. What is the interaction effect of medium of instruction and gender on the achievement of technical college students in blocklaying in Oyo central senatorial district?
2. What is the interaction effect of medium of instruction and gender on the achievement of technical college students in blocklaying in Oyo central senatorial district?

### **Hypotheses**

The following null hypotheses were tested at 0.05 level of significance:

1. There is no significant interaction effect of mediums of instruction and gender in the students' achievement in blocklaying.
2. There is no significant interaction effect of mediums of instruction and gender in the students' retention ability in blocklaying.

**Methods**

Pre-test, post-test quasi-experimental research design was adopted for this study. Quasi-experiment is a process where random assignment of subjects to experimental and control group is not possible (Nworgu, 2015). In this case, intact or pre-existing groups were used. The population was 461 part 1-3 students offering blocklaying in the three government technical colleges in Oyo central senatorial district of Oyo State, in the 2020/2021 academic session. The sample of the study consisted of 83 Part 2 blocklaying students of two technical colleges, drawn using the purposive sampling technique. The essence of purposive sampling is that two intact classes were selected and that the two classes selected from the colleges possess the characteristics of the entire population. The part 2 students were chosen for the study because these categories of students were in the main stream of their study.

The instrument used for this study was Blocklaying Achievement Test (BAT). The instrument consists of 45 objective questions, adopted from past examination questions between 2018 and 2020. The BCAT consists of pre-test, post-test and retention test questions. The pre-test, post-test and retention test questions are made of up of the same items. The instrument was validated by three experts, one from the department of technology and vocational education, faculty of education, Nnamdi Azikwe University, Awka, Anambra State, one from the department of foundations of Education, faculty of education, Nnamdi Azikwe University, Awka, Anambra State and one from Yoruba department, school of languages, Emmanuel Alayande College of Education, Oyo State .BCAT and lesson plans were given out together with the title of the study, purpose, research questions and hypotheses to the experts to check whether the instrument has both face and contents validity. Corrections, recommendations and suggestions of the experts were effected in the final draft. Kuder-Richardson formula 20 (KR-20) was used to determine the reliability of the instrument, and a reliability coefficient of 0.82 was obtained.

The Blocklaying Achievement Test (BCAT) was administered three times to students in both groups by the subject teachers, to ascertain the pretest, post-test retention scores, but test was reshuffled and the colour of the paper changed before administering it as post-test retention test. Each test lasted for a period of 60 minutes and scored in the answer sheet provided. One question carried one mark to make a total of 45 marks. The data, as the test scores, were analyzed using Analysis of Covariance (ANCOVA) at 0 .05 level of significance. The p-value was used to determine the rejection or acceptance of hypotheses, such that null hypothesis is rejected when p-value is less than or equal to 0.05; but when the p-value is greater than 0.05, null hypotheses is accepted (Dallal, 2002).

**Data Analysis**

Since the research questions were hypothesized, the results of the hypotheses are presented as follow>

**Hypothesis 1**

**Table 1: Interaction Effect of Medium of Instructions and Gender on the Students' Achievement in Blocklaying**

Source of Variation	Type III Sum of Squares	Df	Mean Square	F	Sig value
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Corrected Model	887.654 <sup>d</sup>	4	121.431	6.667	.000
Intercept	102.504	1	102.504	9.345	.008
Achievement	946.939	1	946.939	31.436	.000
Gender	4.822	1	4.822	.432	.568
Treatment	41.915	1	41.915	1.999	.341
Gender * Treatment	15.93	1	15.93	.549	.000
Error	1231.742	112	19.286		
Total	18001.011	114			
Corrected Total	1505.553	113			

Table 1 shows that there is a significant interaction effect of medium of instruction and gender on the students' achievement in blocklaying,  $F(1, 113) = .549, p < 0.05$ . This indicates that there is a significant interaction effect of medium of instruction and gender on the students' achievement in blocklaying. Therefore, the null hypothesis that says there is no significant interaction effect for instruction and gender on the students' achievement in blocklaying is rejected.

### Hypothesis 2

**Table 2, Interaction Effect of Medium of Instructions and Gender on the Students Retention in Blocklaying**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	38245.665 <sup>a</sup>	4	9561.416	22.781	.000
Intercept	39769.078	1	39769.078	94.753	.000
Retention	7143.386	1	7143.386	17.020	.000
Gender	.486	1	.486	.014	.906
Treatment	4191.55	1	4191.55	119.51	.000
Gender * Treatment	8588.387	3	2862.796	6.821	.000
Error	96114.062	112	419.712		
Total	869080.000	114			
Corrected Total	134359.726	113			

Table 2 shows that there is a significant interaction effect for instruction and gender on students' retention in blocklaying,  $F(1, 113) = .549, p < 0.05$ . This indicates that there is a significant interaction effect for instruction and gender on students' retention in blocklaying. Therefore, the null hypothesis that says there is no significant interaction effect in the medium of instruction and gender on students' retention in blocklaying is rejected.

### Discussion of Results

The findings revealed that there is a significant interaction effect of medium of instruction and gender on students' achievement in blocklaying. This implies that usage of mother tongue for instruction has significant interaction with gender for effective and potential ways of improving students' achievement in blocklaying. The finding is in line with Eze, Ezenwafor and Obidile (2016), which reported that medium of instruction and gender of the student interacted significantly.

The findings revealed that there is a significant interaction effect of medium of instruction and gender on students' retention in blocklaying. These findings was in agreement with the finding of Osungbemi, Olaniyan, Sanni and Olajuyigbe (2014), that there is a significant

interaction effect on the use of indigenous language as a medium of instruction in teaching Biology on students' retention in Ondo West Local Government Area of Ondo State.

### Conclusion

Based on the findings of the study, it was concluded that the use of mother tongue for instruction is an effective means of improving students' achievement as well as retention in blocklaying. Irrespective of the gender, the use of mother tongue for instruction showed a significant interaction between mother tongue as a medium for instruction, gender and academic achievement and retention of blocklaying students at the technical colleges in Oyo central senatorial district.

### Recommendations

The following recommendations were made:

1. Teachers\instructors of blocklaying most acquire the knowledge and skills for the use of mother for instruction through educational means like training, conference and seminars.
2. Government at all levels should approve and encourage the use of mother tongue to teach skill courses like blocklaying in technical colleges.
3. Curriculum planners should incorporate the usage of mother tongue for instruction in technical colleges to teach blocklaying/bricklaying.

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## EXTENT OF ADOPTION OF ELECTRONIC RECORDS PROCESSING PRACTICES IN POLYTECHNICS IN EDO AND DELTA STATES

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### Abstract

Nigerian tertiary institutions seem to have embraced electronic record-keeping procedures in order to make records available at the right time and at the right place but the extent to which secretaries of polytechnics in Edo and Delta States have adopted electronic record processing practices is not empirically known. In order to execute this study, one research question was raised and two null hypotheses were tested at 0.05 level of significance. The study adopted the descriptive survey design. Population of 188 secretaries in polytechnics in the two states were used for the study without sampling and the size was not too large. A validated questionnaire by experts was used for data collection. Cronbach alpha method was used to establish the reliability of the instrument which yielded coefficients of 0.75. Mean and standard deviation were used to answer the research question and determine the homogeneity of respondents' means while t-test was used to test the hypotheses at 0.05 level of significance. The findings of the study revealed that electronic records processing practices were adopted in managing records in polytechnics in Edo and Delta States to a high extent. The findings also revealed that secretaries do not differ significantly in their mean ratings on their extent of adoption of electronic records processing practices in managing records in their institutions as a result of gender and years of working experience. The study concluded that secretaries in polytechnics in Edo and Delta States need further retraining exercises to enable them acquire new digital skills that will facilitate the art of utilizing modern electronic records processing activities for effective and efficient management of records. It was recommended among others that polytechnics should ensure that adequate, functional and modern facilities are available for secretaries and administrative staffs to enable them perform electronic record processing practices effectively and efficiently.

**Keywords:** Records, record management, electronic records processing practices

### Introduction

Records are documents that provide information about the past or present activities of an individual, group or organization. According to Nnaji (2010), records are documentary evidences of transactions made or received in pursuance of legal obligations regardless of the physical form or characteristics of the media. Records can be in form of inward correspondence, reports, inventory, estimate and notes, tangible objects or digital information. Since records are at the heart of an organization operations, they require effective and efficient management.

Records management refer to the way official and non-official records are systematically and meaningfully organized for continuous usage. Elendu and Elendu (2010) defined record



management as the creation, supervision and control of records to ensure that the system works satisfactorily. It is aimed at preparing, arranging and keeping records in the most convenient manner so that they can easily be located when required. During the past decades, the record keeping practices in both public and private organizations including educational institutions have been revolutionized due to the enlargement of organizational activities and inter-connectivity of modern office management systems. Looking at the Nigerian society, academic institutions seem to have become bigger, more complex and inter-connected in nature that the predominant traditional record management system with its cumbersome mechanisms seem to be insufficient.

The traditional record management system of filing, classifying, securing, dispatching and in some cases, archival presentation and other data processing activities are becoming inadequate for handling information networks needs in today's contemporary academic sector. Various higher institutions including polytechnics in Nigeria are now moving from the traditional to electronic record management systems. According to Kamatula (2010), electronic records are computer-based or digital records created by use of electronic technologies. Organizations use electronic record management systems to manage the creation, use, maintenance and disposal of records created electronically for the purpose of providing evidence of organizational activities (McLeod, 2010). Duranti (2010) defined electronic records management system as computer systems used for the management of electronic and non-electronic records contained in an information technology using computer hardware and software. According to Franks (2013), electronic records management consist of software, hardware, policies and processes that automate the organization, regulate the use, maintenance and dissemination of records regardless of media.

The adoption of electronic records in organizations demand the use of electronic records processing practices. Effy (2012) explained that electronic records processing practices primarily involve the use of a software based methodology to manage all organizational records, regardless of the format over the entire records life cycle. Electronic record processing practices cover activities involved in the creation and preparation of office documents such as using a word processor to enter and edit texts accurately; manipulate information; using spreadsheet application to organize and analyze data into lists and tables, preview, print and save documents among others. The essence of electronic records processing or creation is to make sure that only user-required records are reproduced by the organisation. Muhenda and Lwanga (2012) posited that electronic record processing practices are majorly required in preparing letters, memo, circular, reports and similar documents in every office.

The category of staff who are saddled with the task of maintain electronic records processing in tertiary institutions are male and female secretaries with different years of experience. These differences seem to influence the extent to which they adopt various electronic records management practices. However, the extent to which electronic records processing practices are adopted by secretaries in polytechnics in Edo and Delta States has remained uncertain as there is no empirical evidence for it. Therefore, it becomes imperative to conduct this study on extent of adoption of electronic records processing practices in polytechnics in Edo and Delta States to provide empirical evidence for objective actions by stakeholders.

### **Statement of the Problem**

The traditional approach to records management system adopted in higher institutions for ages was described by Adeyemi (2008) as "high data redundancy" that wastes space,

money and is very ineffective and inefficient to the point that students' records and academic results often get lost. It is very common for secretaries and students to search for documents or files containing confidential matters in the wrong office or office cabinets. The resultant effect is that the affected students of the misplaced documents may be prevented or delayed from moving to the next academic level or even graduate due to the inflexible nature of traditional records management system in the institutions. The penetration and acceptance of Information Communication and Technologies in Nigerian educational systems has motivated tertiary institutions to embrace electronic record-keeping practices. However, the extent of adoption of electronic records management practices by secretaries in polytechnics in Edo and Delta States is not clearly known. It is this gap in knowledge that this study sought to fill.

### **Purpose of the Study**

The study sought to determine the extent to which secretaries in polytechnics in Edo and Delta States adopt electronic records processing practices in managing records

### **Research Question**

One research question guided the study, thus

1. To what extent do secretaries in polytechnics in Edo and Delta States adopt electronic records processing practices in managing records?

### **Hypotheses**

The following hypotheses were tested at 0.05 level of significance

1. Male and female secretaries do not differ significantly in their mean ratings on their extent of adoption of electronic records processing practices in managing records in polytechnics in Edo and Delta States
2. Secretaries do not differ significantly in their mean ratings on their extent of adoption of electronic records processing practices in managing records in polytechnics in Edo and Delta States as a result of years of working experience (1 – 10 years, 11 years & above)

### **Method**

This study adopted a descriptive survey design. This study was carried out in Edo and Delta States which are part of the south-south zone in Nigeria. The population of 188 secretaries in polytechnics in Edo and Delta States was studied without sampling because the size was manageable. A structured questionnaire titled "Adoption of Electronic Records Processing Practices Questionnaire (AERPPQ)" was used for data collection. The questionnaire contained 14 items and structured on a 5-point rating scale of Very High Extent (VHE), High Extent (HE), Moderate Extent (FE), Low Extent (LE) and Very Low Extent (VLE). The questionnaire was validated by three experts, two experts from Business Education programme, Department of Technology and Vocational Education and another from Measurement and Evaluation Unit in Department of Educational Foundations, all in the Faculty of Education, Nnamdi Azikiwe University Awka. A pilot test was conducted to establish the reliability of the questionnaire by administering it to 20 secretaries from polytechnics in Bayelsa State which were not part of the study and Cronbach Alpha was used to measure the internal consistency which yielded an

overall reliability co-efficient of 0.75. Copies of the questionnaire were distributed personally to the secretaries involved in the study with the help of three research assistants drawn from the polytechnics in the area of the study. Mean and standard deviation were used to analyze data relative to the research question as well as determine the homogeneity of the respondents' ratings. The t-test statistical tool was used to test the null hypotheses at 0.05 level of significance. A hypothesis was accepted where the p-value is equal to or greater than the alpha level of 0.05 ( $p > 0.05$ ) at a degree of freedom, otherwise, the null hypothesis was rejected. The analysis was carried out using SPSS version 23.0.

**Result**

**Research Question 1:** To what extent do secretaries in polytechnics in Edo and Delta States adopt electronic records processing practices in managing records?

**Table 1: Mean Rating and Standard Deviation of Secretaries on Record Processing Practices**

S/N	Items	Mean	SD	Remark
1	Using of a word processor to enter and edit text and images	3.56	0.25	High Extent
2	Using word processor to format to text and control margin	3.51	0.27	High Extent
3	Creating attractive layouts and table using a word processor	3.75	0.88	High Extent
4	Printing and retrieving document via word processor	3.52	0.34	High Extent
5	Creating and organizing computer files and folders in window environment	3.84	0.33	High Extent
6	Use of Microsoft Access for file creation of management reports	3.98	0.41	High Extent
7	Use of spreadsheet to enter Data	4.42	0.30	High Extent
8	Use of spreadsheet to format cells into tables	4.39	1.21	High Extent
9	Inserting pictures and symbols into a document with correct margin and layouts	4.47	0.38	High Extent
10	Changing font type, style and size of a text	3.84	0.30	High Extent
11	Using Word Art to create and shape text	4.20	0.43	High Extent
12	Keying-in text speedily and accurately paginating documents	3.88	0.51	High Extent High Extent
13	Applying suitable formats to types of documents	4.39	1.11	
14	Previewing and printing documents	3.75	0.98	High Extent
<b>Cluster Mean</b>		<b>3.96</b>	<b>0.55</b>	High Extent

Data in Table 1 shows that all the items with mean ratings ranging from 3.51 to 4.47 were adopted by respondents to a high extent. The cluster mean of 3.96 indicates that secretaries adopted record processing practices in managing records in polytechnics in Edo and Delta States

to a high extent. The range of standard deviation (0.25 – 1.21) revealed that the respondents are not far apart in their ratings. This therefore means that secretaries adopt electronic record processing practices to a high extent in managing records in polytechnics in Edo and Delta States.

**Hypothesis 1:** Male and female secretaries do not differ significantly in their mean ratings on their extent of adoption of electronic records processing practices in managing records in polytechnics in Edo and Delta States

**Table 2: Summary of t-test analysis of male and female secretaries mean ratings on the extent of adoption of electronic records processing practices in managing record**

S/N	Item Statement	Male		Female		t-cal	Sig.	Decision
		X <sub>1</sub>	SD <sub>1</sub>	X <sub>2</sub>	SD <sub>2</sub>			
1	Using of a word processor to enter and edit text and images	3.72	.27	4.01	.59	1.73	.28	NS
2	Using word processor to format text and control margin	4.13	.35	3.86	.22	1.45	.14	NS
3	Creating attractive layouts and table using a word processor	4.01	.51	3.84	.76	1.06	.57	NS
4	Printing and retrieving document via word processor	3.93	.19	4.01	.40	.88	.10	NS
5	Creating and organizing computer files and folders in window environment	4.22	.47	3.85	.26	1.41	.23	NS
6	Use of Microsoft Access for file creation of management reports	2.98	.53	3.31	.71	1.19	.60	NS
7	Use of spreadsheet to enter data	3.22	.82	3.83	.56	1.19	.60	NS
8	Use of spreadsheet to format cells into tables	3.53	.46	2.27	.79	2.21	.01	S
9	Inserting pictures and symbols into a document with correct margin and layouts	2.75	.31	2.90	.48	3.55	.00	S
10	Changing font type, style and size of a text	4.22	.50	4.04	.36	1.63	.47	NS
11	Using Word Art to create and shape text	4.06	.18	3.90	.31	.90	.13	NS
12	Keying-in text speedily and accurately paginating documents	4.29	.72	3.85	.63	.18	.26	NS
13	Applying suitable format to types of documents	3.65	.40	4.02	.71	1.46	.54	NS
14	Previewing and printing	2.92	.29	3.16	.48	1.09	.77	NS

documents

**Key:**  $X_1$ = Mean of male secretaries;  $X_2$  = Mean of female secretaries;  $SD_1$ = Standard Deviation of male secretaries;  $SD_2$ = Standard Deviation of female secretaries); **Sig.** = probability value; **t-cal**= calculated values; **S**= significant; **NS**= Not Significant; **df** = 134

Data in Table 2 presents the summary of mean ratings of secretaries on the extent of adoption of electronic records processing practices in managing records in polytechnics in Edo and Delta States based on their gender. The data revealed that two items with p-values of .00 and .01 are less than the significant value of 0.05 at 134 degree of freedom. This indicates that there is significant difference in the mean ratings of secretaries on the extent of adoption of electronic records processing practices in managing records in polytechnics based of their gender. Therefore, the hypothesis of no significant difference in the mean ratings of secretaries on items 8 and 9 were rejected. On the other hand, hypothesis of no significant difference for items 1, 2, 3, 4, 7, 10, 11, 12, 13 and 14 were accepted since the sig values of these items, ranging from .10 to .77 are greater than 0.05. Therefore, the null hypothesis of no significant difference in the mean ratings of secretaries based on their gender on the extent of adoption of electronic records processing practices in managing records in polytechnics was accepted.

**Hypothesis 2:** Secretaries do not differ significantly in their mean ratings on their extent of adoption of electronic records processing practices in managing records in polytechnics in Edo and Delta States as a result of years of working experience (1 – 10 years, 11 years & above)

**Table 3: Summary of t-test analysis of secretaries mean ratings on the extent of adoption of electronic records processing practices in managing records in polytechnics based on years of experience**

S/N	Item Statement	$X_1$	$SD_1$	$X_2$	$SD_2$	t-cal	Sig.	Decision
1	Using of a word processor to enter and edit text and images	4.51	.29	4.17	.57	1.64	.05	NS
2	Using word processor to format text and control margin	3.32	.64	4.01	.32	1.07	.52	NS
3	Creating attractive layouts and table using a word processor	3.84	.23	4.02	.43	.89	.18	NS
4	Printing and retrieving document via word processor	4.89	.54	4.90	.73	1.72	.46	NS
5	Creating and organizing computer files and folders in window environment	4.31	.61	4.08	.44	1.28	.27	NS
6	Use of Microsoft Access for file creation of management reports	4.38	.87	3.99	.52	1.53	.13	NS
7	Use of spreadsheet to enter data	3.29	.33	2.86	.75	1.64	.32	NS
8	Use of spreadsheet to format cells into tables	2.87	.39	3.18	.60	2.06	.01	S
9	Inserting pictures and symbols into a document with correct margin and layouts	4.61	.61	4.13	.58	.96	.55	NS
10	Changing font type, style and size of a text	3.37	.27	4.02	.49	1.70	.16	NS
11	Using Word Art to create and shape	3.01	.52	3.84	.83	3.02	.00	NS

	text							
12	Keying-in text speedily and accurately paginating documents	3.06	.80	4.68	.32	1.03	.10	NS
13	Applying suitable format to types of documents	4.12	.35	4.04	.51	1.66	.49	NS
14	Previewing and printing documents	3.90	.45	3.86	.64	2.48	.00	S

**Key:**  $X_1$ = Mean of secretaries (1-10years);  $X_2$  = Mean of secretaries. (11 & above years);  $SD_1$ = Standard Deviation of secretaries (1-10 years);  $SD_2$ = Standard Deviation of secretaries (1 and above years);**Sig.** = probability value; **t-cal**= calculated values; **S**= significant; **NS**= Not Significant; df = 134.

Data in Table 3 presents the summary of mean ratings of secretaries on the extent of adoption of electronic records processing practices in managing records in polytechnics in Edo and Delta States based on their years of working experience. The data revealed that the hypothesis of no significant difference for items 1, 2, 3, 4, 7, 9, 10, 12 and 13 were accepted since the sig values of these items ranging from .09 to .55 are greater than 0.05. The data revealed that three items with p-values of .00, .00 and .01 are less than the significant value of 0.05 at 134 degree of freedom. This indicates that there is significant difference in the mean ratings of secretaries on the extent of adoption of electronic records processing practices in managing records in polytechnics based of their years of working experience. Therefore, the hypothesis of no significant difference in the mean ratings of secretaries on items 8, 11 and 14 were rejected

#### Discussion

Findings of the study revealed that secretaries adopted record processing practices for managing record in polytechnics in Edo and Delta States at a high extent. This finding is consistent with Mbaegbu (2015) who reported that many institutions in Nigeria have gradually adopted electronic records processing practices in most of their official functions because of the many advantages it offers. This finding implies that secretaries in polytechnics in Edo and Delta States are not aware but are actively utilizing electronic records processing practices in managing records.

The findings further showed that male and female secretaries do not differ significantly in their mean ratings on their extent of adoption of electronic records processing practices in managing records in polytechnics in Edo and Delta States. Similarly, it was found that secretaries do not differ significantly in their mean ratings on the extent of adoption of electronic records processing practices in managing records in polytechnics in Edo and Delta States as a result of years of working experience. These findings agree with Dwoya (2014) who discovered that the application of electronic records processing operations and procedures in managing students' records in tertiary institutions remain the absolute solution to records management problems in tertiary institutions in Nigeria. It, therefore, implies that secretaries in these polytechnics were adequately exposed to the skills of electronic record processing activities perhaps in the course of their secretarial training from various institutions of higher learning.

## Conclusion

The study revealed that electronic record processing practices were adopted in managing records in polytechnics in Edo and Delta States to a high extent. Based on this finding, the researchers concluded that secretaries in polytechnics in Edo and Delta States may not need further training or retraining on electronic records processing activities for effective and efficient management of records.

## Recommendations

1. Polytechnics should ensure that adequate, functional and modern facilities are available for secretaries and administrative staff to enable them perform electronic record processing practices effectively and efficiently.
2. Government and ICT manufacturing companies should support office technology and management programmes in Nigeria by providing affordable technological tools and software that could facilitate the acquisition of electronic records management skills among secretarial students for effective management of records as secretaries upon graduation
3. Workshops, seminars and retraining exercises should be organized for secretaries and administrative staff to acquire new digital skills that will facilitate the art of utilizing modern electronic records processing activities for effective and efficient management of records in the polytechnics.

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## PERFORMANCE APPRAISAL AND COMPENSATION COMPETENCIES REQUIRED BY ADMINISTRATORS FOR EFFECTIVE MANAGEMENT OF TERTIARY INSTITUTIONS IN SOUTH-SOUTH NIGERIA

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### Abstract

The study investigated performance appraisal and compensation competencies required by administrators for effective management of tertiary institutions in South-South Nigeria. The study answered two research questions while two hypotheses were tested at 0.05 level of significance. Descriptive survey research design was adopted in carrying out the study. The population of the study comprised 1,736 administrators from the existing public tertiary institutions in the six South-South states of Nigeria. The sample of the study was 868, representing 50% of the population. The instrument that was used for data collection was a questionnaire titled Human Resource Management Questionnaire (HRMQ) that was face-validated by three experts. The reliability of the instrument was ascertained using Cronbach Alpha reliability method which yielded a coefficient of 0.84 for employee performance appraisal and 0.87 for employee compensation. Out of the 868 copies of the questionnaire that were administered, 844 copies (97.24%) were completely filled and retrieved. Data collected were analyzed using mean to answer the research questions and analysis of variance (ANOVA) was used to test the hypotheses. Based on the data collected and analysed, the study identified 21 human resource management competencies in employee performance appraisal and employee compensation that are highly required by administrators of tertiary institutions in South-South, Nigeria. There is no significant difference ( $p < 0.05$ ) in the mean ratings of the administrators in universities, polytechnics and colleges of education on the human resource management competencies required for employee performance appraisal and employee compensation in tertiary institutions in South-South, Nigeria. The study therefore recommends, among others, that there should be unified and codified guidelines and rubrics on employee performance appraisal and employee compensation for implementation in the tertiary institutions studied.

**Keywords:** Determinants, Institutional Growth, Metrics, Organizational Commitment, Productivity, Reciprocate, Remuneration, Symbolic

### Introduction

The Nigerian education system is broadly categorized into elementary/primary, secondary and tertiary education/institution. Tertiary institution is the organized form of learning activities at the higher education level. Tertiary institutions are third-tier of learning which provide training in an ever-increasing number of specializations necessary for the modern society (Okute & Agomuo, 2010). Tertiary institutions are established and charged with the



mandate of providing knowledge, skills and training to students who have successfully completed their secondary education and desirous of pursuing a chosen discipline for future career through education of higher learning. Tertiary institutions include universities, polytechnics, colleges of education and monotechnics (FRN, 2014). In order to realize the potency of tertiary education in human capital development, Nigerian government unequivocally spelt out the goals of tertiary education (Ofogbu & Alonge, 2017). The goals and aims of tertiary institutions are to contribute to national development through relevant high-level manpower training, develop and inculcate proper values for the survival of the individual and society, develop the intellectual capability of individuals to understand and appreciate their local and external environment (FRN, 2014). Others are to acquire both physical and intellectual skills which will enable individuals to be self-reliant and useful members of the society; promote and encourage scholarship and community services, forge and cement national unity and promote national and international understanding and interaction. The achievement of these goals and objectives cannot be realized without the effective management of available human and material resources in Nigerian tertiary institutions.

Effectiveness which derives from the concept of effective can be regarded as the capability to produce an acceptable result (Wikipedia, 2019). It can also be regarded as the ability of an individual to produce the desired result. The Latin word “*effectivus*” is the origin of the word “*effective*”, meaning being creative, productive or effective. The word termed effective emerged in the Middle English era between 1300 and 1400 A.D. (Douglas, 2011). In this context, the subject of being effective or effectiveness which deals with the ability to achieve the desired result is at the heart of performance, especially in the workplace.

Management can be said to consist of five functions which are planning, organizing, leading, co-ordinating and controlling organizational resources for the achievement of organizational objectives (Onyishi, Eme & Emeh, 2012). Management functions can be regarded as all efforts towards planning, organizing, leading or motivating, co-ordinating and controlling human and material resources of an organization (Ogbuanya, Nweke & Ugwoke, 2017). Management can also be described as the process by which those in authority plan, organize and control human and material resources of a business in an effort to make it successful (Obi, 2002). As it is in other sectors, the ability of tertiary institutions in Nigeria to achieve their goals and objectives depend largely on being able to attract and manage competent employees or human resources (Gberevbie, Osibanjo, Adeniji & Oludayo, 2014). The report of the Chartered Institute of Personnel Development (CIPD) (2014) observed that human resources consisted of employee attributes that can contribute to organizational performance. Human resources are individuals that are responsible for decision-making and planning of activities in any programme (Onipede, 2013).

In Nigerian tertiary institutions, administrators are the management teams and the various officers that are charged with the responsibilities of managing the day to day affairs of the institutions. These administrators are both academic and non-academic staff of tertiary institutions possessing different backgrounds and belonging to different professional bodies. They are made up of directors, heads of departments, heads of units, deans of schools or colleges, principal officers, provosts, rectors, vice chancellors and their deputies. The administrators co-ordinate and manage various aspects of human resources among which are employee performance appraisal and employee compensation (Encarta, 2009), requiring appropriate competencies on the part of the administrators. Competency is the ability of an individual to successfully perform a task; competency can also be referred to as the state of

being functionally adequate in the performance of one's duties (Alawa, Abanyam & Okeme, 2010).

Performance appraisal is used as the basis for a decision about employees' work conditions, including promotions, termination and compensation/rewards. Performance appraisal means evaluating an employee's current and/or past performance relative to the performance standard (Dessler, 2007). Performance appraisal is a process involving deliberate stock taking of the success which an individual or organization has achieved in performing assigned tasks or meeting set goals over a period of time. It calls for serious approach to knowing how the individual is doing in performing assigned tasks for organizational success (Obisi, 2011). A successfully appraised staff attracts compensation in the form of promotion and increase in entitlement, among others.

Compensation of human resources is a useful instrument in management. It motivates human resources to contribute to organizational effectiveness and can impact positively on the behaviour and productivity of employees (Greene, 2014). Compensation, also referred to as reward by some theorists, is used to reciprocate employees for performing organizational or institutional work through pay, incentives and benefits (Akafo & Boateng, 2015). Employees regard compensation as transcending economic issues to include trust, work-relationships and ethics; even though compensation makes it possible for employees to exchange their labour for economic benefits, it nevertheless plays the vital social and symbolic functions in any organizational or tertiary institutional setting (Ami, Boaten & Yamoah, 2015).

### **Statement of the Problem**

The success, growth and development of any tertiary institution, undoubtedly, depend, to a great extent, on the proper management of available human resources by the administrators. Some problems that lead to poor performance by tertiary institutions resulting from the management of human resources could be linked to the administrators. Therefore, appropriate competencies are required by the administrators in employee performance appraisal and employee compensation considered as some of the major functions of human resource management. The incessant industrial action and crisis in Nigerian tertiary institutions is a pointer to the fact that some of the administrators may be deficient in the required human resource management competencies with regard to employee performance appraisal and employee compensation. It was based on this background that this study was carried out to determine the extent employee performance appraisal and employee compensation competencies are required by administrators for effective management of tertiary institutions in South-South Nigeria.

### **Purpose of the Study**

The purpose of this study was to determine the extent employee performance appraisal and employee compensation competencies are required by administrators for the effective management of tertiary institutions in South-South Nigeria. Specifically, the study identified:

1. The human resource management competencies required by administrators for employee performance appraisal in tertiary institutions in South-South, Nigeria.
2. The human resource management competencies required by administrators for employee compensation in tertiary institutions in South-South, Nigeria.

### Research Questions

Based on the specific purposes of the study, the following research questions were raised:

1. What is the extent human resource management competencies are required by administrators for employee performance appraisal in tertiary institutions in South-South, Nigeria?
2. What is the extent human resource management competencies are required by administrators for employee compensation in tertiary institutions in South-South, Nigeria?

### Hypotheses

The following null hypotheses were tested at 0.05 level of significance:

1. There is no significant difference in the mean ratings of the administrators in universities, polytechnics and colleges of education on the extent human resource management competencies are required by administrators for employee performance appraisal in tertiary institutions in South-South, Nigeria.
2. There is no significant difference in the mean ratings of the administrators in universities, polytechnics and colleges of education on the extent human resource management competencies are required by administrators for employee compensation in tertiary institutions in South-South, Nigeria.

### Method

The study was carried out in South-South geo-political zone of Nigeria. The South-South zone is made up of six states, namely, Akwa Ibom, Bayelsa, Cross River, Delta, Edo and Rivers states respectively. The design adopted for this study is descriptive survey research design. Survey research design as one in which a group of people or items is studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group (Nworgu, 2015). The design is suitable for this study because it involves the collection of needed information on human resource management competencies in the areas of employee performance appraisal and employee compensation required by administrators for the effective management of tertiary institutions in South-South Nigeria. The population of the study comprised 1,736 administrators from the existing public tertiary institutions in the six South-South States of Nigeria (Establishment Division of the Tertiary Institutions, 2018). The population is made up 796 administrators from public universities (federal and states), 382 administrators from public polytechnics (federal and states) and 558 administrators from public colleges of education (federal and states), totalling 1,736. The sample of the study is 868; representing 50% of the population. The sample was drawn from the study population of 1,736 administrators. Okorodudu (2013) argued that a sample size of 50% of a given population was not only in order, but was quite representative enough of a finite population.

The instrument that was used for data collection was a structured questionnaire titled: Human Resource Management Questionnaire (HRMQ). The questionnaire was structured on a 5-point rating scale of Very Highly Required (VHR), Highly Required (HR), Moderately Required (MR), Less Required (LR) and Not Required (NR) with corresponding values of 5, 4, 3, 2 and 1 respectively. The instrument was face-validated by three experts. These included two academic staff of Michael Okpara University of Agriculture, Umudike, Abia State and a measurement and evaluation expert in Nnamdi Azikiwe University, Awka, Anambra State, all in

South-East Nigeria. Their observations/suggestions were incorporated into the final copy of the questionnaire before it was administered on the respondents for data collection.

For the purpose of obtaining the reliability of the instrument, Cronbach Alpha reliability method was used in which a coefficient of 0.84 was obtained for employee performance appraisal and 0.87 was obtained for employee compensation. The reliability test was carried out using a similar group of respondents in University of Nigeria, Nsukka, Enugu State. Out of the 868 copies of the questionnaire administered, 844 copies (97.24%) were completely filled and retrieved. The retrieved copies were collated by the researcher and subjected to data analysis. The data collected for the study were analyzed using mean scores and standard deviation to answer the research questions and also show the relative merits of the response opinions of the respondents around the mean scores. Analysis of variance (ANOVA) was employed to test the null hypotheses at 0.05 level of significance. The 5-point response options were assigned scale values as follows:

Response Category	Values	Real Limit of Numbers
Very Highly Required (VHR)	5	4.50 – 5.00
Highly Required (HR)	4	3.50 – 4.49
Moderately Required (MR)	3	2.50 – 3.49
Less Required (LR)	2	1.50 – 2.49
Not Required (NR)	1	0.50 – 1.49

Based on this adoption, any competency item with mean values of 4.50 - 5.00 was regarded as Very Highly Required and mean values of 3.50 - 4.49 was regarded as Highly Required. Competency item with mean values within the range of 2.50 - 3.49 was regarded as Moderately Required and competency item with mean values of 1.50 - 2.49 was regarded as Less Required while items with mean values within the range of 0.50 - 1.49 was regarded as Not Required. The hypothesis of no significant difference was accepted for items whose F-calculated (F-cal) values were less than the critical table (F-tab) value of 3.00 at 0.05 level of significance. On the other hand, the hypothesis of no significant difference was rejected for those items whose F-calculated (F-cal) values were greater than or equal to the cri

**Results**

**Research Question One:** What is the extent human resource management competencies are required by administrators for employee performance appraisal in tertiary institutions in South-South, Nigeria?

The data for answering research question one is presented in Table 1.

**Table 1: Mean Ratings of Administrators on the Extent Human Resource Management Competencies are Required for Employee Performance Appraisal**

SN	Competencies required for employees performance appraisal	$\bar{X}_U$	$\bar{X}_P$	$\bar{X}_C$	$\bar{X}_G$	SD	Rmks
1	Evaluating employees in terms of their job performance.	4.11	4.21	4.14	<b>4.16</b>	0.96	<b>HR</b>
2	Making performance appraisal a necessary ingredient for increased job performance	4.44	4.53	4.50	<b>4.50</b>	0.56	<b>VHR</b>

3	Generating a sense of efficiency in the use of human resources as qualification for promotion	4.30	4.31	4.28	<b>4.30</b>	0.60	<b>HR</b>
4	Developing strategies to identify areas of employees' strengths and weaknesses	4.67	4.67	4.65	<b>4.66</b>	0.47	<b>VHR</b>
5	Setting targets for employees to achieve within the overall corporate objectives of the institution.	4.13	4.12	4.17	<b>4.13</b>	0.83	<b>HR</b>
6	Providing opportunities for individual employees to realize their potentials and decide what aspect they need to consider carefully	4.51	4.45	4.55	<b>4.49</b>	0.61	<b>HR</b>
	<b>Competencies required for employees performance appraisal</b>	$\bar{X}_U$	$\bar{X}_P$	$\bar{X}_C$	$\bar{X}_G$	<b>SD</b>	<b>Rmks</b>
SN 7	Getting information on what the individual employee wants from appraisal	4.16	4.27	4.25	<b>4.24</b>	0.87	<b>HR</b>
8	Rewarding employees adequately using proper appraisal for career development	4.61	4.65	4.59	<b>4.62</b>	0.48	<b>VHR</b>
9	Setting standard for performance appraisal to help employees evaluate themselves where necessary.	4.76	4.46	4.48	<b>4.54</b>	0.61	<b>VHR</b>
10	Giving room for employees to appraise themselves for institutional growth.	4.69	4.70	4.70	<b>4.70</b>	0.45	<b>VHR</b>

*Note:  $\bar{X}_U$  = Mean of Universities;  $\bar{X}_P$  = Mean of Polytechnics;  $\bar{X}_C$  = Mean Colleges of Education;  $\bar{X}_G$  = Grand Mean; **VHR** = Very Highly Required; **HR** = Highly Required*

The data presented in Table 1 show that the grand mean ratings of the respondents on items 2, 4, 8, 9 and 10 are 4.50, 4.66, 4.62, 4.54 and 4.70 respectively which all fall within the real limit of 4.50 – 5.00 on a five-point rating scale. This indicates that the five competency items of employee performance appraisal are very highly required by administrators in tertiary institutions in South-South, Nigeria. The grand mean ratings of the remaining five items, specifically items 1, 3, 5, 6 and 7 are 4.16, 4.30, 4.13, 4.49 and 4.24 respectively are within the real limit of 3.50 – 4.49 on a five-point rating scale. This indicates that the five competency items of employee performance appraisal are highly required by administrators in tertiary institutions in South-South, Nigeria. The standard deviation values of the 10 items range from 0.45 - 0.96 which implies that the respondents are close to one another and the overall mean.

**Hypothesis One:** There is no significant difference in the mean ratings of the administrators in universities, polytechnics and colleges of education on the human resource management competencies required by administrators for employee performance appraisal in tertiary institutions in South-South, Nigeria.

The data for testing hypothesis one is presented in Table 2:

**Table 2: Summary of Analysis of Variance (ANOVA) of Mean Ratings of Administrators in Universities, Polytechnics and Colleges of Education on the Human Resource Management Competencies Required for Employee Performance Appraisal**

Sources of	Sum of	df	Mean	F-cal.	F-tab.	Decision
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Variance	Squares	df	Mean Square	F	Sig.	
Between Groups	0.330	2	0.165	0.28	3.00	NS
Within Groups	385.928	840	0.46			
Total	386.258	842				

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

The data presented in Table 2 show that F-calculated (F-cal) value of 0.28 is less than the F-critical value of 3.00 at 0.05 level of significance. This implies that there is no significant difference in the mean ratings of administrators from universities, polytechnics and colleges of education on the human resource management competencies required for employee performance appraisal in tertiary institutions in South-South, Nigeria. Therefore, the null hypothesis of no significant difference in the mean ratings of the three groups of respondents is accepted on hypothesis one.

**Research Question Two:** What is the extent human resource management competencies are required by administrators for employee compensation in tertiary institutions in South-South, Nigeria?

The data for answering research question two are presented in Table 3:

**Table 3: Mean Ratings of Administrators on the Extent Human Resource Management Competencies are Required for Employee Compensation**

SN	Competency Required for Compensating Employee	$\bar{X}_U$	$\bar{X}_P$	$\bar{X}_C$	$\bar{X}_G$	SD	Rmks
1	Motivating employees to show effectiveness in management as an administrator.	4.44	4.50	4.50	<b>4.48</b>	0.61	<b>HR</b>
2	Providing adequate benefits to make workers contribute better to the attainment of institutional growth.	4.49	4.60	4.66	<b>4.59</b>	0.60	<b>VHR</b>
3	Fulfilling the social responsibility of the employees by improving the quality of work life.	4.41	4.53	4.51	<b>4.50</b>	0.50	<b>VHR</b>
4	Providing all forms of employees' financial returns and tangible services that will increase their performance.	4.36	4.33	4.37	<b>4.35</b>	0.57	<b>HR</b>
5	Providing an attractive remuneration package which both attracts and retains high quality employees.	4.44	4.50	4.46	<b>4.47</b>	0.49	<b>HR</b>
6	Providing employment security for workers' safety.	4.29	4.35	4.31	<b>4.32</b>	0.47	<b>HR</b>
7	Using the right strategies in employee institutional growth.	4.62	4.65	4.61	<b>4.63</b>	0.54	<b>VHR</b>
8	Using sharing profit to instil a sense of institution.	4.52	4.58	4.60	<b>4.57</b>	0.55	<b>VHR</b>
9	Encouraging hard work and employee incentives and	4.35	4.39	4.31	<b>4.36</b>	0.59	<b>HR</b>

bonuses.

10	Introducing group incentives as a means of compensation to the employees for improved productivity.	4.56	4.63	4.63	<b>4.61</b>	0.48	<b>VHR</b>
11	Ensuring motivating incentives to employees in the institution.	4.85	4.85	4.84	<b>4.85</b>	0.35	<b>VHR</b>

**Note:**  $\bar{X}_U$  = Mean of University;  $\bar{X}_P$  = Mean of Polytechnics;  $\bar{X}_C$  = Mean College of Education;  $\bar{X}_G$  = Grand Mean; **VHR** = Very Highly Required; **HR** = Highly Required

The data presented in Table 3 reveal that the grand mean ratings of the respondents on items 2, 3, 7, 8, 10 and 11 are 4.59, 4.50, 4.63, 4.57, 4.61 and 4.85 respectively which all fall within the real limit of 4.50 – 5.00 on a five-point rating scale. This indicates that the six competency items of employee compensation are very highly required by administrators in tertiary institutions in South-South, Nigeria. The grand mean ratings of the remaining five items, specifically items 1, 4, 5, 6 and 9 are 4.48, 4.35, 4.47, 4.32 and 4.36 respectively are within the real limit of 3.50 – 4.49 on a five-point rating scale. This implies that the five competency items of employee compensation are highly required by administrators in tertiary institutions in South-South, Nigeria. The standard deviation values of the 11 items range from 0.35 - 0.61 which indicates that the respondents are close to one another and the overall mean.

**Hypothesis Two:** There is no significant difference in the mean ratings of the administrators in universities, polytechnics and colleges of education on the human resource management competencies required by administrators for employee compensation in tertiary institutions in South-South, Nigeria.

The data for testing hypothesis two are presented in Table 4

**Table 4: Summary of Analysis of Variance (ANOVA) of Mean Ratings of Administrators in Universities, Polytechnics and Colleges of Education on the Human Resource Management Competencies Required for Employee Compensation**

Sources of Variance	Sum of Squares	df	Mean Square	F-cal	F-tab	NS
Between Groups	0.279	2	0.73	0.32	3.00	NS
Within Groups	420.389	840	0.69			
<b>Total</b>	<b>420.668</b>	<b>842</b>				

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

The data presented in Table 4 show that F-calculated (F-cal) value of 0.32 is less than the F-critical value of 3.00 at 0.05 level of significance. This implies that there is no significant difference in the mean ratings of the administrators from universities, polytechnics and colleges of education on the human resource management competencies required for employee compensation in tertiary institutions in South-South, Nigeria. Therefore, the null hypothesis of no significant difference in the mean ratings of the three groups of respondents is accepted on hypothesis two.

**Discussion of Results**

This study, with regard to research question one, identified 10 human resource management competency items that are highly required by administrators for employee performance appraisal in tertiary institutions in South-South Nigeria, some of which are evaluating employees in terms of their job performance, making performance appraisal a

necessary ingredient for increased job performance, generating a sense of efficiency in the use of human resources for qualification for promotion and developing strategies to identify areas of employee strengths and weaknesses. Other competency items are setting targets for employees to achieve within the overall corporate objectives of the institutions, getting information on what the individual employee wants from appraisal, rewarding employees adequately using proper appraisal for career development and giving room for employees to appraise themselves for institutional growth, among others. The findings agreed with that of Ugwu and Onuka (2016) who studied performance appraisal and assessment of employees in Nigerian Bottling Company Plc where the findings identified areas of skill interest in employee performance appraisal such as assessment of job performance of individual employees, generating a sense of efficiency in assessing employees and setting targets for individual employees upon which the assessment or appraisal will be based. Other findings were rewarding employees adequately after successful appraisal and assessment and giving periodic opportunity for employees to appraise themselves using the organization appraisal guidelines. In addition, Akinyele (2010) investigated the purpose of performance appraisal in private universities and identified relevant factors for achieving an effective performance appraisal system/exercise and found that performance appraisal system was the only tangible metric way by which an organization can know the level of performance of its diverse members of staff.

This study on research question two identified 11 human resource management competency items that are highly required by administrators for employee compensation in tertiary institutions in South-South Nigeria, some of which are motivating employees to show effectiveness in management as an administrator, providing adequate benefits to make workers contribute better to the attainment of institutional growth and fulfilling the social responsibility of the institutions to the employees by improving the quality of work life. Others are providing an attractive remuneration package which both attracts and retains high quality employees, providing employment security for workers' safety, using appropriate strategies in employee compensation for institutional growth, using profit sharing to instil a sense of commitment to the institutions, encouraging hard work and employee commitment through incentives and bonuses and ensuring motivating incentives to employees in the institutions, among others. Yamoah (2013) reported that employee compensation in the form of its packages is defined as consisting of some fundamental characteristics that make employees satisfied on the job such as salaries, bonuses, incentives, allowances, promotion and recognition that have significant impact on employee performance.

In agreement with the findings of this study, O'Brien (2014) identified skills needed for employee compensation to include providing social responsibility to employees, providing attractive remuneration packages to members of staff, supporting and motivating employees for personal development, providing adequate benefits to employees on the job, stimulating a sense of commitment among employees and encouraging hard work among employees. Corroborating the findings of this study, Ami, Boaten and Yamoah (2015) investigated assessment of compensation determinants and its impact on employee commitment in private tertiary institutions in Ghana and found that there is significant relationship between what constituted compensation packages on the one hand and job title, job description and employee organizational commitment, on the other hand, of academic staff of private universities in Ghana.



## Conclusion

Effective human resource management is vital for the achievement of the stated objectives of public tertiary institutions in the country. However, public tertiary institutions in South-South and Nigeria in general seem not to effectively accomplish their stated objectives due to low productivity of employees resulting from poor management of human resources, especially in the areas of employee performance appraisal and employee compensation of the institutions. This situation has negative effect on the quality of operations of tertiary institutions. To address this challenge, therefore, this study was carried out to identify the competencies that are required by administrators of public tertiary institutions to effectively manage employee performance appraisal and employee compensation in tertiary institutions, using South-South Nigeria as a case study. Based on the data collected and analysed, the study identified 21 human resource management competencies with regard to employee performance appraisal and employee compensation that are highly required by administrators for the effective management of tertiary institutions in South-south, Nigeria. The study found no significant difference ( $p < 0.05$ ) in the mean ratings of the administrators in universities, polytechnics and colleges of education on the human resource management competencies required for employee performance appraisal and employee compensation in tertiary institutions in South-South, Nigeria. By this finding, the study concluded that the adoption of the identified human resource competencies by administrators of public tertiary institutions in South-South Nigeria will result in improved morale of employees and boost their service delivery for higher productivity at work.

## Recommendations

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

1. The administrators should be provided with a uniform and codified employee performance appraisal functions that will serve as a guide. The implementation of the guide should be able to nib in the bud, issues that negatively affect employees, especially academic staff. The guide should be regularly updated to keep abreast with current trends locally and globally. The preparation, evaluation and monitoring of the implementation of the guide should be carried out by NUC, NBTE, NCCE, federal and state ministries of education; the workers' unions of ASUU and SSAU should not be left out in this regard.
2. There should be uniform rubrics on what employee compensation in tertiary institutions in the area should be; its components and domiciliation, taking into consideration, the peculiarity of the area where the institutions are located. In this connection, the administrators are to ensure that the recurring issue of non-payment and delayed payment of employee salaries as at when due as well as delayed and/or non-payment of promotion and incremental arrears should be treated in such a way that is beneficial to the employees. The federal and state governments together with government agencies responsible for tertiary institution and education in Nigeria such as NUC, NBTE and NCCE are to ensure that this recommendation, as it relates to employee compensation is implemented with active government support, and the active involvement of employee unions of ASUU and SSANU.
3. Tertiary institutions' administrators should be made to undergo regular training and retraining as well as participation in conferences, symposia and workshops to enhance the implementation of credible and effective employee performance appraisal and employee compensation metrics. This is very important as tertiary institutions also implement a marriage of human resource management practices prevalent in both the public and private sectors of the Nigerian economy.

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## NATIONAL DIRECTORATE OF EMPLOYMENT BASIC NATIONAL OPEN APPRENTICESHIP SCHEME TRAINEES' RATINGS OF THEIR EMPLOYABILITY IN ANAMBRA STATE

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### Abstract

The study determined National Directorate of Employment Basic National Open Apprenticeship Scheme trainees' ratings of their employability in Anambra State. Two research questions and two null hypotheses guided the study. The descriptive survey design was adopted. All the population, which was 240 NDE B-NOAS 2021 trainees from three Local Governments in Anambra State, was used as the sample. A 63-item questionnaire was used for data collection, which were validated by three experts. Test re-test reliability method was employed, and Pearson Product Moment Correlation Co-efficient was used to determine the reliability of the instrument, which yielded an overall co-efficient of 0.87. Mean and standard deviation were used to answer the research questions, while analysis of variance (ANOVA) was used to test the hypothesis. The findings revealed that NDE B-NOAS trainees possessed high technical and ICT skills after their training for employability in Anambra State. There was a significant difference in the mean ratings of graduates of tertiary institutions and school leavers of lower level of education on their technical skills and ICT skills for employability after NDE B-NOAS training in Anambra State. It was, therefore, concluded that that adoption of technical skills and ICT skills will go a long way to increase the quality of manpower and reduce the rate unemployment or dependence on government for job. Based on the findings, it was recommended among others, that effective instructional technique and strategies should be adopted by trainers to achieve employability skills necessary for the world of work for their trainees.

**Keywords:** Unemployment, National Directorate of Employment, Basic National Open Apprenticeship Scheme, Employability.

### Introduction

The mass unemployment of qualified and able-bodied men and women has generated much concern all over the world. The International Labour Organisation (2012) noted that despite the rapid recovery in the global economy that took place, unemployment remained elevated. The above scenario propels Nigerian government to take some practical steps towards alleviating unemployment by the establishment of National Directorate of Employment (NDE). However, in spite of the desperate efforts toward eradication of this phenomenon, it is sad to note that Nigeria continues to experience increase in unemployment rate among youths.

According to NDE (2015), unemployment especially among graduates of tertiary institutions (PhD, M.Sc/M.Ed, PGD, B.Sc/B.Engr/B.Ed, HND, OND, NCE) and school leavers of lower level of education (NABTEB, SSCE, NECO, JSSCE, FSLC) has remained one of the fundamental challenges threatening the economic development of Nigeria. It continued to worsen with the implementation of economic reform policies such as currency devaluation, deregulation, trade liberalization, privatization and the enthronement of market forces. This

resulted in low capacity utilization in industries, the collapse of various businesses, and massive staff rationalization in both government and private agencies.

The Nigerian government has continued to strive to contain the contagious effect of unemployment in the country by providing various empowerment and skill acquisition programmes to develop the youths. However, the results have remained terribly unimpressive despite the efforts of government, stakeholders and economic players in establishing a programme such as NDE. The philosophy of NDE is self enterprise, which emphasizes self-employment and self-reliance in preference to wage employment. This philosophy is pursued through policy planning and well articulated programme of Vocational Skills Development (VSD) Programme. These programme are set up across the 36 states and Federal Capital Territory in an effort to alleviate unemployment crises in the nation (Adebisi & Oni, 2012).

The VSD training programme has Basic National Open Apprenticeship Scheme (B-NOAS) whose aim is to train people on technical and vocational skills in different fields of trade for certain duration (Ekpenyong, 2011). The scheme is designed to empower and equip unemployed graduate of tertiary institutions, unskilled school leavers and school dropouts through skill acquisition training in Anambra State. The scheme offers technical and vocational training in computer operation and repairs, computer programming, electrical installation, electronics repairs, refrigerator and air-conditioning repairs, cosmetology, hair dressing, catering, confectionery, tailoring, satellite dish installation and tracking, bead making, hat making, shoe making, and battery charging (NDE, 2015).

In addition, the scheme is executed within budgetary provisions or collaborative initiatives as provided in the NDE Act. These collaborative ventures have proven to be veritable strategies in imparting skills at the grass roots. The NDE state offices recruit persons without formal education, school leavers and graduates of tertiary institutions who desire to acquire functional and marketable skills. These youths are posted to master craftsmen and women in informal sector operators for skills acquisition training. In the case of rural areas with no informal sector outlets, NDE provides a well-equipped mobile workshop to train the youths for period of three months. The aim of the NDE skill acquisition training is to promote the development of skills by the trainees at the completion of the training. The graduate trainees are expected to be equipped with employability skills useful in the world of work (NDE, 2015).

Employability skills are skills required in securing and retaining a job (Shafie & Nayan, 2010). These are essential skills for acquiring, keeping and performing well on a job. According to Amadi (2019), refer to employability skills as the ability of graduates to possess and exhibit the knowledge, attributes and attitudes needed to attain and maintain jobs in which they can be successful and fulfilled not only in their occupations but in life as well. Such skills include managing resources, communication and interpersonal skills, team work and problem-solving skills among others. In addition, Ezedum (2011) stated that employability skills are transferable skills needed by an individual such as information and communication technology (ICT) and technical skills.

Technical skills are referred to as the technical competence or industry based skills embedded in the training curriculum (Okorie, 2010). According to Osinem & Nwoji (2010), refer to technical skills as the theoretical knowledge and practical skills required by the trainees in the course of their training. Osuala in Tongshuwal (2015) defined technical skills as the ability to do or perform an activity in relation to some meaningful work. Tongshuwal further stated that

these skills are needed to perform specific tasks through proper procedures. These skills would help an individual possess such qualities as interest, ability, aptitude, patience, practice, personality characteristics and other human physical qualities. Also, these skills would enable an individual to succeed in the present rapid global change and ICT driven economy.

ICT skills are those skills related to the use of computers and other technologies such as the ability to transmit stored information through fixed or wireless phone networks (Attwell in Odede & Enakerakpo, 2013). ICT skills deal with application of ICT for specific purposes. It is not about the use of software package, operating system and keyboarding knowledge rather it is the ability to use ICT to find, develop and present information. These skills constitute a set of practices that form ICT packages such as spreadsheet processing, word processing, data base management, web designing, graphics designing and power point presentation (Haywood in Odede & Enakerakpo, 2013). ICT skills should be of great importance to the individuals who desire to get engaged in wage employment or self employment.

However, the possession of these employability skills by graduate trainees of B-NOAS scheme would go a long way to increase the quality of manpower, reduce the rate of dependence on government for job and contribute to the national economic growth and development. It is therefore, against this background that the study sought to determine the NDE B-NOAS trainees' ratings of their employability skills in Anambra State.

### **Statement of the Problem**

Unemployment is a socio-economic problem and every nation deals with it within their respective capacities. As could be seen from individual research reports and other government statement, the situation in Nigeria has gone out of hand as about 75 percent of those who are willing to work cannot find gainful employment especially among graduates of tertiary institutions and school leavers of lower level of education. As a result, many youth have taken to various crimes ranging from militancy, robbery, kidnapping, drug and child trafficking and armed banditry all in a bid to earn their living. It does not matter anymore whether the means is legitimate or not. The situation appears to have gone beyond remedy.

Every year, new set of graduates of tertiary institutions and school leavers are added to the stock of unemployed youths resulting to increased frustration and aggression against the society that have refused to provide for them. Successive governments have made several efforts to combat the menace of unemployment and its after effect through the NDE. However, the impact has not been significant on the level of employment. The problem of this study therefore, is that unemployment is persisting. Its resultant ills are persisting in Nigeria generally and Anambra State in particular despite the huge investment of government into NDE.

### **Research Questions**

The following research questions guided the study:

1. What are the ratings of technical skills for employability of participants of NDE B-NOAS training in Anambra State?
2. What are the ratings of ICT skills for employability of participants of NDE B-NOAS training in Anambra State?

### **Hypotheses**

The following null hypotheses were tested at 0.05 level of significance:

Ho1: There is no significant difference in the mean ratings of graduates of tertiary institutions and school leavers of lower level of education on their technical skills for employability after NDE B-NOAS training in Anambra State.

Ho2: There is no significant difference in the mean ratings of graduates of tertiary institutions and school leavers of lower level of education on their ICT skills for employability after NDE B-NOAS training in Anambra State.

**Method**

This study adopted descriptive survey design. Descriptive survey is one in which a group of people or items is studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group using questionnaire or interview (Nworgu, 2015). The population of the study was 240 2021 NDE B-NOAS trainees from three Local Governments (Awka-South, Nnewi-North and Onitsha-North) in Anambra State. The entire population was used because the size was manageable. A structured questionnaire titled “National Directorate of Employment Basic National Open Apprenticeship Scheme Questionnaire” (NDEBNOASQ) developed by the researcher with the insight gained from literature review was used for data collection. The instrument was structured on five (5) point rating scale of Very High (VH), High (H), Moderate (M), Low (L), and Very Low (VL). The instrument was face validated by three experts: two from Department of Technology and Vocational Education and one from Measurement and Evaluation both in Nnamdi Azikiwe University, Awka. To determine the reliability of the instrument, test re-test method was used on 10 respondents (trainees) each from electrical installation, electronics repairs, refrigerator and air-conditioning repairs and satellite dish installation and tracking skill in NDE skill acquisition training center in Enugu state. Data collected were analyzed using Pearson Product Moment Correlation reliability co-efficient which yielded 0.87 for the two sub-sections of the instrument. Copies of the questionnaire were personally administered to the respondents by the researcher with the help of three research assistants. The data collected were analyzed using mean and standard deviation to answer the research questions and analysis of variance (ANOVA) to test the null hypotheses at 0.05 level of significance. The null hypothesis was not rejected where calculated f value was less than the table value but was rejected where calculated f value was greater than or equal to the table value.

**Result**

The results were discussed based on the trades such as electrical installation, electronics repairs, refrigerator and air-conditioning repairs and satellite dish installation and tracking.

**Research Question 1:** What are the ratings of technical skills for employability of participants of NDE B-NOAS training in Anambra State?

**Table 1: Mean ratings of the respondents on technical skills (electrical installation trade) for employability after NDE B-NOAS training in Anambra State**

S/N	Technical Skills (Electrical Installation): Ability to...	X	SD	Remark
1	Trace open circuit faults (no power inputs/outputs)	4.00	0.781	H
2	Trace conduit wiring obstructions (improper conduit pipes laying)	3.60	1.291	H

3	Trace short circuit faults (abnormal flow of high current through equipments or transmission)	3.80	1.176	H
4	Solve problems of unsymmetrical fault (unbalanced flow of current due to improper connections)	3.50	1.372	H
5	Trace fault caused by power surge	3.70	1.239	H
6	Identify wires/cables needed according to the current rating	4.20	0.755	H
<b>S/N</b>	<b>Technical Skills (Electrical Installation): Ability to...</b>	<b>X</b>	<b>SD</b>	<b>Remark</b>
7	Lay conduit in the building	3.50	1.444	H
8	Install cables from distribution board to lighting points	4.00	0.864	H
9	Use tools for electrical installation	4.20	0.840	H
10	Install lights, ceiling fans and switches	4.50	.504	VH
11	Install junction boxes for connections of wires/cables	4.60	0.527	VH
12	Install ceiling roses and sockets	4.50	0.504	VH
13	Install distribution board and main switches	4.60	0.527	VH
14	Know the spacing for wire clips in surface wiring	4.20	0.819	H
	Cluster	4.06	0.903	H

Data in Table 1 show that out of the 14 items listed on technical skills (electrical installation trade) for employability after NDE B-NOAS training in Anambra State, 4 items were rated very high with the mean score of 4.50 to 4.60, 10 items were rated high with the mean score of 3.50 to 4.20. The cluster mean scores for technical skills (electrical installation trade) were 4.06. These indicate that the respondents possess high technical skills for employability after NDE B-NOAS training in Anambra State. The standard deviations for all the items are within the same range indicating that the respondents were homogenous in their opinions.

**Table 2: Mean ratings of the respondents on technical skills (electronics repairs trade) for employability after NDE B-NOAS training in Anambra State**

S/N	Technical skills (Electronics repairs) Ability	$\bar{X}$	SD	Remarks
1.	Trace fault of power button/power input in a radio or television	3.80	1.176	H
2.	Trace fault of signal/receiver in a radio or television	3.60	1.343	H
3.	Trace sound fault (audio output/no sound)	3.80	1.246	H
4.	Trace fault of synchronization separation in a television	3.50	1.444	H
5.	Trace bandwidth separation fault in a radio	3.40	1.487	M
6.	Trace fault of picture tears into segment in a television	3.50	1.408	H
7.	Trace fault of no picture in a television	3.80	1.176	H
8.	Trace fault of noise in a radio or television	3.60	1.304	H
9.	Use soldering lead and soldering iron very well	4.20	0.898	H
10.	Use multimeter very well to measure resistors, capacitors, inductors, diodes, transistors, relays and integrated circuits	4.00	0.864	H
11.	Trace fault caused by power surge	3.80	1.213	H
12.	Trace short circuit faults (abnormal flow of high current through equipment)	3.80	1.176	H
13.	Use other tools foe electronics repairs	4.20	0.819	H

14.	Detect when the fuse, transformer, capacitor, resistor, diode and integrated circuits are bad	3.60	1.291	H
<b>Cluster Mean</b>		<b>3.76</b>	<b>1.203</b>	<b>H</b>

Data in Table 2 show that out of the 14 items listed on technical skills (electronics repairs trade) for employability after NDE B-NOAS training in Anambra State, 13 items were rated high with the mean score of 3.50 to 4.20, 1 item was rated moderate with the mean score of 3.40. The cluster mean scores for technical skills (electronics repairs trade) were 3.76. These indicate that the respondents possess high technical skills for employability after NDE B-NOAS training in Anambra State. The standard deviations for all the items are within the same range indicating that the respondents were homogenous in their opinions.

**Table 3: Mean ratings of the respondents on technical skills (refrigerator and air-conditioning repairs trade) for employability after NDE B-NOAS training in Anambra State**

S/N	Technical skills (Refrigerator and air-conditioning repairs) Ability to:	X	SD	Remarks
1.	Trace fault caused by power surge	3.80	1.176	H
2.	Ability to trace fault of humming sound but not cooling	4.00	0.939	H
3.	Ability to detect when the refrigerator or air-condition has low gas	4.60	0.527	VH
4.	Ability to solder condenser or compressor pipe very well	4.20	0.898	H
5.	Ability to detect faulty condenser or compressor	4.50	0.504	VH
6.	Ability to refill gas in a refrigerator or air-condition	4.60	0.527	VH
7.	Ability to detect faulty relay or capacitor in a refrigerator or air-condition	4.20	0.819	H
8.	Ability to use multimeter very well to measure relay or capacitor	4.40	0.643	H
9.	Ability to use other tools for refrigerator and air-condition repairs	4.00	0.863	H
10.	Ability to recoil copper pipe inside the refrigerator for proper cooling	3.60	1.291	H
<b>Cluster Mean</b>		<b>4.19</b>	<b>0.819</b>	<b>H</b>

Data in Table 3 show that out of the 10 items listed on technical skills (refrigerator and air-conditioning repairs trade) for employability after NDE B-NOAS training in Anambra State, 3 items were rated very high with the mean score of 4.50 to 4.60, 7 items were rated high with the mean score of 3.60 to 4.40. The cluster mean scores for technical skills (refrigerator and air-conditioning repairs trade) were 4.19. These indicate that the respondents possess high technical skills for employability after NDE B-NOAS training in Anambra State. The standard deviations for all the items are within the same range indicating that the respondents were homogenous in their opinions.

**Table 4: Mean ratings of the respondents on technical skills (satellite dish installation and tracking trade) for employability after NDE B-NOAS training in Anambra State.**

S/N	Technical skills (Satellite dish installation and tracking) Ability to:	X	SD	Remarks
1.	Trace fault caused by decoder power surge	4.00	0.864	H



2.	Detect no signal when the satellite dish is bend	3.80	1.176	H
3.	Detect low signal when the satellite dish is rust	3.80	1.172	H
4.	Detect no signal due to satellite dish improper position	4.20	0.755	H
5.	Detect signal loss due to F-type connector tread wear	4.40	0.643	H
6.	Detect low signal due to improper position of low noise block (LNB)	4.50	0.504	VH
7.	Detect no signal due to coaxial cable cut	4.60	0.527	VH
8.	Mount different satellite dish pan	4.20	0.840	H
9.	Track different satellite dish channels	4.60	0.527	VH
10.	Use tools for satellite dish installation and tracking	4.40	0.643	H
<b>Cluster Mean</b>		<b>4.25</b>	<b>0.765</b>	<b>H</b>

Data in Table 4 show that out of the 10 items listed on technical skills (satellite dish installation and tracking trade) for employability after NDE B-NOAS training in Anambra State, 3 items were rated very high with the mean score of 4.50 to 4.60, 7 items were rated high with the mean score of 3.80 to 4.40. The cluster mean scores for technical skills (refrigerator and air-conditioning repairs trade) were 4.25. These indicate that the respondents possess high technical skills for employability after NDE B-NOAS training in Anambra State. The standard deviations for all the items are within the same range indicating that the respondents were homogenous in their opinions.

**Research Question 2:** What are the trainees ratings of their ICT skills for employability after NDE B-NOAS training in Anambra State?

**Table 5: Mean ratings of the respondents on ICT skills for employability after NDE B-NOAS training in Anambra State.**

S/N	ICT skills: Ability to:	$\bar{X}$	SD	Remarks
1.	Send e-mail	4.20	0.814	H
2.	Manipulate the keyboard accurately	3.60	1.050	H
3.	Store and retrieve documents	4.00	0.969	H
4.	Access e-mail	4.00	0.915	H
5.	Use video conferencing	4.00	1.084	H
6.	Access data and information through the internet	4.20	0.844	H
7.	Operate e-banking	4.00	0.915	H
8.	Use web browser such as opera mini, google chrome, etc	3.60	1.050	H
9.	Use passwords for data security	4.00	1.082	H
10.	Use search engine such as google	4.20	0.814	H
11.	Download files	4.50	0.501	VH
12.	Use internet to buy different products	3.80	1.208	H
13.	Use chat rooms such as yahoo messenger, whatsapp, etc	4.50	0.614	VH
14.	Compose and attach files in e-mail	4.40	0.626	H
15.	Create a web page for business purpose	3.60	1.050	H
<b>Cluster Mean</b>		<b>4.04</b>	<b>0.902</b>	<b>H</b>

Data in Table 5 show that out of the 15 items listed on ICT skills for employability after NDE B-NOAS training in Anambra State, 2 items were rated very high with the mean score of 4.50, 13 items was rated high with the mean score of 3.60 to 4.20. The cluster means score of

4.04 shows that the respondents possess high ICT skills for employability after NDE B-NOAS training in Anambra State. The standard deviations for all the items are in the same range indicating that the respondents were homogenous in their opinions.

**Hypothesis 1:** There is no significant difference in the mean ratings of graduates of tertiary institutions and school leavers of lower level of education on their technical skills for employability after NDE B-NOAS training in Anambra State.

**Table 6: Summary of ANOVA on difference in educational attainment respondents' mean ratings on their technical skills (electrical installation trade) for employability after NDE B-NOAS training**

Sources of variance	SS	df	MS	F-value	p-value	Decision
Between Groups	2.034	3	0.678	6.388	0.001	Significant
Within Groups	5.943	56	0.106			
Total	7.977	59				

Table 6 shows the degree of freedom of 59 at 0.05 level of significance with p-value of 0.001. The p-value is significant since p-value of 0.001 is equal to or less than 0.05, hence the null hypothesis is rejected This means that there is a significant difference in the mean ratings of graduates of tertiary institutions and school leavers of lower level of education on their technical skills (electrical installation trade) for employability after NDE B-NOAS training in Anambra State.

**Table 7: Summary of ANOVA on difference in educational attainment respondents' mean ratings on their technical skills (electronics repairs trade) for employability after NDE B-NOAS training**

Sources of variance	SS	df	MS	F-value	p-value	Decision
Between Groups	3.862	2	1.931	6.734	0.002	Significant
Within Groups	16.344	57	0.287			
Total	20.206	59				

Table 7 shows the degree of freedom of 59 at 0.05 level of significance with p-value of 0.002. The p-value is significant since p-value of 0.002 is equal to or less than 0.05, hence the null hypothesis is rejected This means that there is a significant difference in the mean ratings of graduates of tertiary institutions and school leavers of lower level of education on their technical skills (electronics repairs trade) for employability after NDE B-NOAS training in Anambra State.

**Table 8: Summary of ANOVA on difference in educational attainment respondents' mean ratings on technical skills (refrigerator and air-conditioning repairs trade) for employability after NDE B-NOAS training**

Sources of variance	SS	df	MS	f-value	p-value	Decision
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Between Groups	0.875	2	0.437	4.184	0.020	Significant
Within Groups	5.595	57	0.105			
Total	6.834	59				

Table 8 shows the degree of freedom of 59 at 0.05 level of significance with p-value of 0.020. The p-value is significant since p-value of 0.020 is equal to or less than 0.05, hence the null hypothesis is rejected This means that there is a significant difference in the mean ratings of graduates of tertiary institutions and school leavers of lower level of education on their technical skills (refrigerator and air-conditioning repairs trade) for employability after NDE B-NOAS training in Anambra State.

**Table 9: Summary of ANOVA of difference in educational attainment respondents’ mean ratings on their technical skills (satellite dish installation and tracking trade) for employability after NDE B-NOAS training**

Sources of variance	SS	df	MS	f-value	p-value	Decision
Between Groups	0.772	2	0.386	4.106	0.022	Significant
Within Groups	5.358	57	0.094			
Total	6.130	59				

Table 9 shows the degree of freedom of 59 at 0.05 level of significance with p-value of 0.022. The p-value is significant since p-value of 0.022 is equal to or less than 0.05, hence the null hypothesis is rejected This means that there is a significant difference in the mean ratings of graduates of tertiary institutions and school leavers of lower level of education on their technical skills (satellite dish installation and tracking trade) for employability after NDE B-NOAS training in Anambra State.

**Hypothesis 2:** There is no significant difference in the mean ratings of graduates of tertiary institutions and school leavers of lower level of education on their ICT skills for employability after NDE B-NOAS training in Anambra State.

**Table 10: Summary of ANOVA of difference in educational attainment respondents’ mean ratings on their ICT skills for employability after NDE B-NOAS training**

Sources of variance	SS	df	MS	F-value	p-value	Decision
Between Groups	9.646	3	3.215	53.029	0.000	Significant
Within Groups	14.309	236	0.061			
Total	23.955	239				

Table 10 shows the degree of freedom of 239 at 0.05 level of significance with p-value of 0.000. The p-value is significant since p-value of 0.000 is equal to or less than 0.05, hence the null hypothesis is rejected This means that there is a significant difference in the mean ratings of graduates of tertiary institutions and school leavers of lower level of education on their ICT skills for employability after NDE B-NOAS training in Anambra State.

### **Discussions**

The findings revealed that NDE B-NOAS trainees possessed high technical skills for employability after their training in Anambra State. Their responses showed that the NDE B-NOAS training programme is practical oriented necessary for effective employment in an occupation. The key factor in NDE B-NOAS training depends on the quality, efficiency and effective individual skill development and experience after the training programme. Furthermore, findings of the study indicated that there is a significant difference in the mean ratings of graduates of tertiary institutions and school leavers of lower level of education respondents on technical skills for employability in Anambra State. This result is in line with the findings of Consultancy, Research & Information Technology Department in Adibe (2019) that the inculcation of the right attitude is necessary for entry and progress in an occupation irrespective of the certificate one possesses.

The findings revealed that NDE B-NOAS trainees possessed high ICT skills for employability after their training in Anambra State. Their responses showed that after NDE B-NOAS training programme, graduate trainees are equipped with the necessary employability skills to enable them enter specialized occupations. Furthermore, findings of the study indicated that there is a significant difference in the mean ratings of graduates of tertiary institutions and school leavers of lower level of education respondents on ICT skills for employability in Anambra State. This result is in line with the findings of Bassey & Ofre (2013) that the training on ICT skills for students improves their application of ICTs in their various job areas. The training centered on operational skills of how to use the ICT devices confidently and efficiently.

### **Conclusion**

Based on the findings of the study, it was concluded that the adoption of technical and ICT skills on the NDE B-NOAS training will go a long way to increase the quality of manpower and reduce the rate unemployment or dependence on government for job.

### **Recommendations**

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

1. The study recommends that effective instructional technique and strategies such as demonstration, project, experiment and assignment should be adopted by trainers to achieve employability skills necessary for the world of work for their trainees.
2. The study also recommends that the government should provide soft loans or start-up tools and equipment at subsidize cost for all the graduate trainees between one to three months after training and certification.
3. The study also recommends that the NDE should sponsor the trainers for in-service training, seminars and workshops necessary for effective performance in their respective trades.
4. The study also recommends that the government should provide adequate funds to NDE for proper execution of NDE B-NOAS training and remuneration of trainers and trainees.
5. The study also recommends that the NDE should create a forum for beneficiaries to be meeting on regular basis to discuss their challenges and way-forward on a quarterly or at least bi-annual basis. Regular contact with the graduated trainees by the NDE is important so as to know if they are doing fine or not.

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**ASSESSMENT OF THE ADEQUACY OF BUSINESS  
EDUCATION CURRICULUM CONTENT FOR THE  
ACQUISITION OF OFFICE TECHNOLOGY AND  
MANAGEMENT AND ENTREPRENEURSHIP SKILLS  
ACQUISITION IN COLLEGES OF EDUCATION IN EDO  
AND DELTA STATES**

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**Abstract**

*The study sought to assess the adequacy of business education curriculum content for the acquisition of office technology and management and entrepreneurship skills acquisition in colleges of education in Edo and Delta States. Two research questions were raised and four null hypotheses were tested. Descriptive survey research was adopted for the study. The entire population of 120 business educators were studied without sampling. A structured and validated two-point checklist was used for data collection. Since, the National Commission for Colleges of Education (NCCE) Benchmark inventory is a standard checklist, the checklist was not subjected to reliability procedures because the checklist is already validated and standardized. Mean and standard deviation were used to answer the research question, while t-test and Analysis of Variance (ANOVA) were used to test the null hypotheses. Findings of the study revealed that 68 contents of the curriculum are adequate and 46 contents are not adequate for the acquisition of office technology and management skills. 11 contents of business education curriculum are adequate and four contents are not adequate for the acquisition of entrepreneurship skills. The study further disclosed that business educators based on their years of experience and location did not differ significantly on their mean ratings on the adequacy of business education curriculum content for the acquisition of office technology and management skills and entrepreneurship skills among students. It was recommended among others that business educators in Colleges of education should periodically invite office technology and management experts and successful entrepreneurs to provide business education students with first hand business experiences and practical workplace skills required in the business world.*

**Keywords:** Assessment, College of Education, Business education, Office technology and management skills, and Entrepreneurship skills

**Introduction**

Colleges of education are specialized tertiary institutions concerned with the training of teachers for the teaching profession in Nigeria. Colleges of education are "train-the-trainers" institutes established to train and equip teachers for classroom instruction and management (Arikawei & Torubeli, 2015). The programmes offered in Nigerian Colleges of Education are Agricultural Education, Home Economics Education, Social Science Education, Arts Education, Science Education, Special Education, General Education and Business Education

among others. Business education is a programme of study designed for the actualization of self-employment and industrialization (Oluwasina, Onokpaunu & Durojaye, 2018). According to Onojetah (2012), business education which is offered at the universities and colleges of education is concerned mainly with the development of relevant and saleable skills and knowledge that would enable an individual to function effectively in the world of work.

The objectives of business education in colleges of education as outlined in the National Commission for Colleges of Education (2012:18) include: to produce well qualified and competent NCE graduates in business subjects who will be able to teach business subjects in the secondary schools and other related educational institutions; to produce NCE business teachers who will be able to inculcate the vocational aspects of business education into the society; to produce NCE business teachers who will be involved in the much desired revolution of vocational development right from primary and secondary schools; to equip students with necessary competencies so as to qualify them for a post-NCE degree programme in business education and to equip graduates with the right skills that will enable them to engage in a life of work in the office as well as for self-employment. Holistically, Nwazor and Onokpaunu (2016) asserted that business education programme which is not one of the glamorous courses of study in Nigeria, is built on making its recipients become job creators, wealth providers, workplace ICT consultants, entrepreneurs of small and medium enterprises and executive managers of business entities.

The achievement of the objectives of business education programme stems from effective implementation of its curriculum (Ezenwafor&Onokpaunu, 2017). Blenkin (2012) defined curriculum as a body of knowledge contents and subject matters. That is, curriculum is the process by which knowledge and skills of a subject matter are delivered to learners. In their view, Maduwesi and Okoro (2013) asserted that, curriculum is an instructional document used for facilitating teaching and learning towards the realization of desirable changes in learners under the guidance and supervision of the school. Specifically, Okoro (2015) opined that business education curriculum entails educational training which an individual receives in order to acquire adequate attitudes, concepts, knowledge, understanding and skills in business activities for vocational usage in careers as an administrator, a manager, business subject teacher or wherever he may find himself in the business world.

In practical terms, business education provides a window of opportunity for students to gain insight into the actual operations and acquire relevant professional skills of the business world. One common theme deduced from the description of business education programme in colleges of education is practical skill acquisition. According to Idoko (2014), skill acquisition can be defined as the form of training by individuals or group of individuals that lead to acquisition of knowledge for self-sustenance. Skill acquisition involves the development of new skill-set of doing things gained through persistent training or exposure. Lofquist and Darwin in Adeyemo (2010) outlined the process of skill acquisition into the following stages; comprehension of the task, a temporal storage which gives time for more permanent, long term training to form, passing material of long term store, retention in long term store and retrieval for use. Beach in Eze (2016) opined that skill acquisition is the process of facilitating an individual ambition for a long, healthy and progressive life through acquisition of new knowledge.

The skills embedded in business education programme include teaching methodology, office technology and management, entrepreneurship, information communication and technology and accounting. However, this study focused on Office Technology and

Management (OTM) and entrepreneurship skills. Office Technology and Management (OTM) formerly referred to as Secretarial Studies in Nigeria evolved out of the urgency to meet the numerous technological and managerial procedures of the 21<sup>st</sup> century workplace. Office Technology and Management (OTM) according to Aina (2019), is a subset of business education programme designed to prepare students who are interested in developing careers in keyboarding operations, stenography, office administration, establishment of business training schools, computer centres, data analysis, small or medium business enterprises operations through the acquisition of appropriate skills, knowledge abilities and attitude that will make them enter and progress in the world of work. Igbinoba (2008) and Aina (2019) opined that OTM courses include shorthand, keyboarding, office practice, record-keeping, word processing, secretarial duties, business methods, office practice, business law, computer appreciation and application, consumer education, office management, small business management, and entrepreneurship education.

Office Technology and Management skills in business education curriculum, according to Ezenwafor (2012) ensured that graduates can quickly access data or information, and process, disseminate, store and retrieve it for future use as demanded by their employers or supervisors in the workplace. Udo and Bako (2014) outlined the following OTM skills in business education curriculum content as follows; ability to perform general office work by relieving executives and other company officials of minor executive and clerical duties, ability to take down dictation from the boss using shorthand or stenotype machine, ability to transcribe dictation or the recorded information reproduced on a transcribing machine, ability to make appointments for the executive and reminding him or her of them, ability to interview people coming into the office, and directing to other workers those who do not need to see the chief executive, ability to handle personal and important mails, writing routine correspondence on his/her own initiatives, ability to make and answer telephone calls, ability to supervise other clerical workers and ability to keep personnel records of events in the offices.

The acquisition of office technology and management and entrepreneurship skills in the business education curriculum prepare students for the challenges of unemployment. Esene (2010) defined entrepreneurship as the willingness and ability of an individual to seek out investment opportunities, establish and run an enterprise successfully. More so, Jain (2013) defined entrepreneurship as behaviour, attitude and an approach to the way people create new values in the market, technology consumption and build sustainable institutions and organizations. Business education students must acquire the necessary entrepreneurial skills before establishing any business enterprise. Therefore, entrepreneurial skills are the knowledge, attitudes and behaviours that empowers an individual to search for business opportunities and transform creative ideas into legal monetary activities in the business world. Ezeani (2012) outlined the following entrepreneurship skills in business education curriculum content to include the; ability to set appropriate business goals, ability to identify opportunities, ability to generate ideas suitable to the opportunities, ability to make a decision and act upon it, ability to manage time and meet job schedules, ability to make appropriate use of feedback, ability to cope with uncertainty, ability to plan and think strategically, ability to work under pressure and ability to learn and accept responsibility.

As a result of the modernization of office technology and management and entrepreneurship skills in today's business environment, business educators must regularly



assessed the curriculum content of business education to maintain its relevancy to employers of labour. Accordingly, Omeje in Iro (2016) defined assessment as a process of identifying objectives to assess, formulating a design to carry out the assessment, carrying out measurement, reporting and documenting the results of the measurement usually in measurable term. Assessment is the systematic basis for making inferences about the learning and development of students. It is the process of defining, selecting, designing, collecting, analysing, interpreting, and using information to increase students' learning and development (Erwin, 2011).

In the context of this study, assessment is the process of obtaining information from business educators about the strengths and weaknesses of business education curriculum content for skills acquisition. Business educators' assessment of the adequacy of office technology and management and entrepreneurship curriculum content of business education for skills acquisition in colleges of education can be affected by their years of experience and location of their institutions. Given the number of years and location of colleges of education, business educators in Edo and Delta State are expected to have in-depth understanding of the strengths and weakness of the curriculum content. However, these assumptions need empirical confirmation. Upon this fulcrum, a study on business educators' assessment of the adequacy of office technology and management and entrepreneurship curriculum content of business education for skills acquisition in colleges of education in Edo and Delta States was conceived.

#### **Statement of the Problem**

Graduates of business education programme at the colleges of education level are not making the needful impact in the business world in Nigeria. It seems that graduates of the programme are not utilizing the Office Technology and Management (OTM) and entrepreneurship skills embedded in business education curriculum content in the world of work. The problem of the study is that, it seems that there is a defect in the curriculum content of business education due to the un-employability of business education graduates in the labour market. Hence, the need to explore this ugly menace from the curricular perspective. Hence, the study sought to assess the adequacy of business education curriculum content in colleges of education for skill acquisition among business education students in Edo and Delta States.

#### **Purpose of the Study**

The major purpose of this study was to determine assess the adequacy of business education curriculum content for the acquisition of office technology and management and entrepreneurship skills acquisition in colleges of education in Edo and Delta States. Specifically, the study would determine the adequacy of curriculum content of business education for the acquisition of:

1. Office technology and management skills relative to NCCE minimum standards
2. Entrepreneurship skills relative to NCCE minimum standards.

#### **Research Questions**

In the opinion of business educators in Edo and Delta States, how adequate is:

1. Business education curriculum content for the acquisition of office technology and management skills relative to NCCE minimum standards?
2. Business education curriculum content for the acquisition of entrepreneurship skills relative to NCCE minimum standards?

#### **Hypotheses**

The following null hypotheses were tested at 0.05 level of significance:

1. There is no significant difference in the mean ratings of business educators on the adequacy of business education curriculum content for the acquisition of office technology and management skills based on years of experience (1 – 5, 6 – 10, above 10 years).
2. Business educators in Edo and Delta State do not differ significantly in their mean ratings on the adequacy of business education curriculum content for the acquisition of office technology and management skills.
3. There is no significant difference in the mean ratings of business educators on the adequacy of business education curriculum content for the acquisition of entrepreneurship skills based on years of experience (1 – 5, 6 – 10, above 10 years).
4. Business educators in Edo and Delta State do not differ significantly in their mean ratings on the adequacy of business education curriculum content for the acquisition of entrepreneurship skills.

### **Method**

This study adopted a descriptive survey design. The study was carried out in colleges of education in Edo and Delta States. The population of this study comprised 120 business educators from the Department of Business Education in the five government owned colleges of education in Edo and Delta States. The entire population was studied without sampling as the researchers felt the population was manageable. A structured and validated two-point rating scale checklist was used for data collection. Since, the National Commission for Colleges of Education (NCCE) Benchmark inventory is a standard checklist required for business education programmes at the colleges of education in Nigeria, the instrument used for this study was not subjected to reliability procedures because the checklist (instrument) is already standardized. The checklist contained 129 items on a two-point rating scale of adequate and not adequate. The instrument for data collection was subjected to face validity by three experts. Two experts in business education and one expert in measurement and evaluation all from the Faculty of Education, Nnamdi Azikiwe University, Awka. The data collected were analyzed using mean and standard deviation to answer the research questions and determine the homogeneity or otherwise of the respondents' views. Decisions on the research questions were based on the grand mean in relations to the real limits of numbers. Therefore, items with mean ratings of 1.50 - 2.00 are rated Adequate and those with 0.50 - 1.49 are rated Not Adequate. Inferential statistics of t-test and Analysis of Variance (ANOVA) were used to test the null hypotheses at 0.05 level of significance. The t-test was used to test hypothesis 2 and 4 while ANOVA was used to test hypothesis 1 and 3. A hypothesis was accepted where the p-value is greater than 0.05 ( $p > 0.05$ ), at a degree of freedom, because the variable did not significantly influence respondents' mean ratings. Conversely, where the p-value is lesser than 0.05 ( $p < 0.05$ ), at a degree of freedom, it means that, the variable has a significantly influence on respondents' mean ratings and the hypothesis was rejected. The analysis was carried out using SPSS version 23.0.

### **Results**

#### **Research Question 1**

How adequate is business education curriculum content for the acquisition of office technology and management (OTM) skills relative to NCCE minimum standards?

Data relating to this research question are analysed and presented in Table 1.

**Table 1: Business educators' mean ratings on the adequacy of business education curriculum content for the acquisition of OTM skills**

S/N	OTM Course Titles and Curriculum Content	X	SD	Remarks
<b>Office Practice I</b>				
1	Meaning, important and components of business studies	2.00	.62	Adequate
2	Careers opportunities in office management	1.96	.41	Adequate
3	Structure, functions and different offices in an organization	2.00	.30	Adequate
4	Meaning, function and qualities of clerical staff	1.95	.39	Adequate
<b>S/N OTM Course Titles and Curriculum Content</b>				
<b>Office Practice I</b>				
5	Confidentiality of office information	2.00	.26	Adequate
6	Various departments and their functions in an organization	1.97	.73	Adequate
7	Meaning, functions and qualities of a receptionist	1.93	.50	Adequate
8	Types of communication in the office	1.98	.39	Adequate
	Aggregate Mean Score	1.97	.45	Adequate
<b>Shorthand I</b>				
9	Meaning, historical development and systems of shorthand	1.99	.36	Adequate
10	The 24 consonants of shorthand	1.66	.59	Adequate
11	The 12 vowels of shorthand	1.61	.62	Adequate
12	The two forms of R	1.50	.84	Adequate
13	Diphthongs	1.43	.65	Not Adequate
14	S circle studies	1.18	.70	Not Adequate
15	ST circle and STR loops	1.32	.43	Not Adequate
16	Ses and SW circles	1.06	.51	Not Adequate
17	Vowel indication	1.29	.28	Not Adequate
	Aggregate Mean Score	1.45	.55	Not Adequate
<b>Keyboarding I</b>				
18	Parts and uses of typewriter	2.00	1.01	Adequate
19	Care and maintenance of typewriter	1.97	1.13	Adequate
20	Paper sizes and their uses	1.68	.94	Adequate
21	Sitting and fingering positions	1.92	.69	Adequate
22	Starting with home/guide keys board exercise	1.84	1.06	Adequate
23	Tabulator key and bars	1.77	.82	Adequate
24	Vertical and horizontal centring	1.61	.77	Adequate
25	Speed development	1.24	.55	Not Adequate
	Aggregate Mean Score	1.75	.87	Adequate
<b>Office Practice II</b>				
26	Imprest accounting control	1.55	.32	Adequate
27	Duplication process	1.97	.61	Adequate
28	Office supplies	2.00	.76	Adequate
29	Office equipment and machines in common use	2.00	.44	Adequate

30	Office behaviours	1.76	.39	Adequate
31	Model office arrangement and layout	1.93	.57	Adequate
	Aggregate Mean Score	1.87	.52	Adequate

**Shorthand II**

32	Halving and its principles	1.53	.87	Adequate
33	Downward L	1.67	.64	Adequate
34	Double consonants: PL and PR series	1.79	.77	Adequate
35	Double consonants - Curves	1.81	.61	Adequate
36	Additional forms	1.36	.44	Not adequate
37	Omission of consonants and intersections	1.25	.82	Not Adequate
38	F/V hooks	1.14	.55	Not Adequate
39	N hook	1.10	.88	Not Adequate
40	Shun hooks	0.67	.73	Not Adequate
41	Compound consonants	0.84	.92	Not Adequate
42	Tick and dot H	1.31	.69	Not Adequate
	Aggregate Mean Score	1.32	.72	Not Adequate

**Keyboarding II**

43	Printers' signs and abbreviation	2.00	.26	Adequate
44	Words and figure	1.72	.51	Adequate
45	Layout of business letters	1.87	.63	Adequate
46	Layout of memos	1.69	.40	Adequate
47	Main and columns headings	1.83	.29	Adequate
48	Speed and accuracy development	1.32	.58	Not Adequate
	Aggregate Mean Score	1.74	.45	Adequate

**Word Processing I**

49	Alphabetic sentence drills and remedial exercises	1.39	.61	Not Adequate
50	Procedure and layout of business, personal and official letters and memos	1.20	.83	Not Adequate
51	Preparation of manuscript and insertion of matters	1.17	.33	Not Adequate
52	Speed and accuracy development in passages	1.36	.65	Not Adequate
53	Additional forms	0.98	.89	Not Adequate
	Aggregate Mean Score	1.22	.66	Not Adequate

**Shorthand III**

54	Doubling and its principles	1.91	.27	Adequate
55	Prefixes	1.84	.61	Adequate
56	Suffixes and word endings	1.73	.50	Adequate
57	Note taking and transcription	1.86	.24	Adequate
58	Essential vowels	1.40	.59	Not Adequate
59	Short forms and contractions	1.89	.17	Adequate
60	Advanced phraseography	1.27	.32	Not Adequate

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61	Speed and accuracy in passages	1.18	.48	Not Adequate
	Aggregate Mean Score	1.64	.40	Adequate

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**Word Processing II (35 WPM)**

62	Production of display work	1.22	.61	Not Adequate
63	Three-four columnar work	1.43	.83	Not Adequate
64	Speed development	1.17	.51	Not Adequate
65	Business letter, enclosures and attention line	1.29	.47	Not Adequate
66	Stencil cutting, proof-reading and correction of errors	1.08	.22	Not Adequate
	Aggregate Mean Score	1.24	.53	Not Adequate

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**Principles of Management**

67	Definition, principles and functions of management	2.00	.83	Adequate
68	The basis of the structure and character of organization	1.97	.59	Adequate
69	The basis and dynamics of human behaviours in an organization	1.93	1.05	Adequate
70	The significance, modes and problems of communication in an organization	2.00	1.09	Adequate
71	The dynamics and methods of management of change in institutions	1.28	.72	Not Adequate
72	Conflict management	1.89	.90	Adequate
73	Introduction to personnel management	1.92	.83	Adequate
	Aggregate Mean Score	1.86	.86	Adequate

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**Business Communication**

74	General overview of business communication	2.00	.43	Adequate
75	Methods and principles of effective communication	2.00	.76	Adequate
76	Barriers and remedies of effective communication	1.96	.61	Adequate
77	The impact of information technology	1.78	.80	Adequate
	Aggregate Mean Score	1.94	.65	Adequate

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**Business Communication I**

78	Guidance for composing letters	1.28	.74	Not Adequate
79	Audience and style	0.92	.92	Not Adequate
80	General format of a letter	1.89	.63	Adequate
81	Personal/informal letter	1.68	.41	Adequate
82	Types of business letters	1.10	.55	Not Adequate
83	Application, replies to offer of appointments and queries	1.33	.86	Not Adequate
84	Writing inferences	0.98	.47	Not Adequate
85	Invitation to interviews and communications	1.41	.78	Not Adequate
86	Curriculum Vitae (CV)	1.86	.82	Adequate
	Aggregate Mean Score	1.38	.69	Not Adequate

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<b>Business Communication II</b>			
87	Advertising	1.93	.56 Adequate
88	Writing on the job	0.97	.72 Not Adequate
89	Memorandum	1.32	.45 Not Adequate
90	Briefs	1.13	.64 Not Adequate
91	Minutes	1.42	.82 Not Adequate
92	Reports writings and meetings	1.17	.79 Not Adequate
	Aggregate Mean Score	1.32	.66 Not Adequate
<b>Shorthand IV</b>			
93	Circles and strokes	1.20	.17 Not Adequate
94	Loops- Stee and Ster	1.00	.43 Not Adequate
95	Triphones and Diphones	1.36	.51 Not Adequate
96	Abbreviation device	1.95	.19 Adequate
97	Speed development	1.06	.24 Not Adequate
98	General consolidation	0.98	.60 Not Adequate
	Aggregate Mean Score	1.26	.36 Not Adequate
<b>Word Processing II (50 WPM)</b>			
99	Layout of documents	1.90	1.19 Adequate
100	Speed development/consolidation	1.22	.96 Not Adequate
101	Advanced display work and tabulations	1.84	.71 Adequate
102	Advanced literacy and itinerary work	1.15	.87 Not Adequate
103	Advanced keyboarding skills and accuracy	1.88	.90 Adequate
104	Active printer and print documents	2.00	.78 Adequate
	Aggregate Mean Score	1.67	.90 Adequate
<b>Office Management</b>			
105	Office management	2.00	1.01 Adequate
106	Office planning and layout	1.95	.64 Adequate
107	Management processes and functions	1.89	.56 Adequate
108	Filing and indexing	1.70	.82 Adequate
109	Record management	1.89	.90 Adequate
110	Personnel management	1.92	.59 Adequate
111	Staff recruitment	2.00	1.08 Adequate
112	Wages and salaries administration	1.93	.73 Adequate
113	Staff training and development	1.74	.67 Adequate
114	Work management and standards	1.67	.89 Adequate
	Aggregate Mean Score	1.87	.79 Adequate
	Grand Mean	1.59	.63 Adequate

The result in Table 1 shows the responses of business educators on the adequacy of business education curriculum content for the acquisition of office technology and management among students in colleges of education in Edo and Delta States. Sixty-eight (68) curriculum contents of the business education curriculum are rated adequate by business educators for the acquisition of office technology and management skills and forty-six (46) curriculum contents are not adequate for the acquisition of office technology and management skills among students in colleges of education in Edo and Delta States. Based on the aggregate mean scores, nine course titles and their curriculum contents were found to be adequate for the acquisition of office technology and management skills while the remaining seven course titles and their curriculum contents were found not adequate for the acquisition of office technology and management skills among students in colleges of education in Edo and Delta States. The result on the table equally showed that the standard deviation of all the course titles and curriculum contents for the acquisition of office technology and management skills range from 0.17 to 1.19 with an overall standard deviation of 0.63 showing that the standard deviation for all course titles are within the same range indicating that the respondents are not wide apart in their mean ratings.

**Research Question 2:** How adequate is business education curriculum content for the acquisition of entrepreneurship skills relative to NCCE minimum standards? Data relating to this research question are analysed and presented in Table 2.

**Table 2: Business educators’ mean ratings on the adequacy of business education curriculum content for the acquisition of entrepreneurship skills**

<b>Entrepreneurship Education Course Titles andX</b>			
<b>S/N</b>	<b>Curriculum Contents</b>	<b>SD</b>	<b>Remarks</b>
<b>Introduction to Entrepreneurship</b>			
1	Introduction of entrepreneurship	2.00	.96 Adequate
2	Types of entrepreneurs	2.00	.64 Adequate
3	Entrepreneurial theories	1.74	.82 Adequate
4	Types of risks and risk management	1.37	.45 Not Adequate
5	Conditions for establishing forms of business ownership	1.95	.33 Adequate
6	Issues and problems of business and technology	1.86	.90 Adequate
7	Old, new and innovative techniques of financing business	1.97	.71 Adequate
8	Site selection and location of business	1.81	.79 Adequate
9	Consumer behaviour	1.68	.86 Adequate
10	Human resource management	1.39	.55 Not Adequate
	Aggregate Mean Score	1.78	.70 Adequate
<b>Entrepreneurship II</b>			
11	Management and administration of SMEs	2.00	.49 Adequate
12	Business future and succession issues	1.32	.81 Not Adequate
13	Pilot study and feasibility report	1.22	.35 Not Adequate
14	Elements of marketing	2.00	.74 Adequate
15	Functions of management	1.98	.56 Adequate
	Aggregate Mean Score	1.70	.59 Adequate
<b>Grand Mean</b>		1.74	.65 Adequate

The result in Table 2 shows the responses of business educators on the adequacy of business education curriculum content for the acquisition of entrepreneurship skills among students in colleges of education in Edo and Delta States. Eleven (11) curriculum contents of the business education curriculum are rated adequate by business educators for the acquisition of entrepreneurship skills and four (4) curriculum contents are not adequate for the acquisition of entrepreneurship skills among students in colleges of education in Edo and Delta States. Based on the aggregate mean scores, the two course titles and their curriculum contents were found to be adequate for the acquisition of entrepreneurship skills among students in colleges of education in Edo and Delta States. The result on the table equally showed that the standard deviation of all the course titles and curriculum contents for the acquisition of entrepreneurship skills range from 0.33 to 0.96 with an overall standard deviation of 0.65 showing that the standard deviation for all course titles are within the same range indicating that the respondents are not wide apart in their mean ratings.

**Hypothesis 1:** There is no significant difference in the mean ratings of business educators on the adequacy of business education curriculum content for the acquisition of office technology and management skills based on years of experience (1 – 5, 6 – 10, above 10 years).

**Table 3: ANOVA comparison of the summary of respondents’ mean ratings on the adequacy of business education curriculum content for the acquisition of OTM skills based on experience** N=101 (1-5 =16; 6-10 = 49; above 10 =36)

S/N	Curriculum conten	tX <sub>1</sub>	SD <sub>1</sub>	X <sub>2</sub>	SD <sub>2</sub>	X <sub>3</sub>	SD <sub>3</sub>	df	F-cal	Sig.	Remarks
1.	Office Practice	1.68.	.51	1.91	.71	1.86	.60	98	1.67	.45	NS
2.	Shorthand	1.04.	.22	1.26	.43	1.17	.38	98	1.56	.26	NS
3.	Keyboarding I	1.51.	.43	1.80	.32	1.64	.57	98	1.65	.12	NS
4.	Office Practice II	1.64.	.76	1.94	.58	1.88	.44	98	1.28	.55	NS
5.	Shorthand II	1.09.	.34	1.25	.61	1.39	.45	98	1.99	.03	S
6.	Keyboarding II	1.53.	.87	1.92	.64	1.68	.70	98	1.71	.41	NS
7.	Word Processing I	0.96	.22	1.33	.50	1.12	.31	98	4.36	.00	S
8.	Shorthand III	1.70.	.36	1.52	.21	1.84	.76	98	2.07	.00	S
9.	Word Processing II	0.89.	.52	.98	.37	1.12	.81	98	3.77	.02	S
10.	Principles of Management	1.64	.77	1.96	1.04	1.89	1.11	98	1.83	.74	NS
11.	Business Communication	1.70	1.01	1.92	1.12	1.84	.97	98	1.18	.46	NS
12.	Business Communication I	1.46	1.16	1.37	1.02	1.22	1.00	98	1.35	.33	NS
13.	Business Communication II	.89	.14	.94	.19	.72	.26	98	1.85	.21	NS
14.	Shorthand IV	1.01	.63	1.27	.72	1.15	.50	98	1.14	.58	NS
15.	Word Processing II	1.96	.25	1.78	.40	1.88	.19	98	1.68	.63	NS
16.	Office Management	2.00	1.14	1.94	1.01	1.86	.79	98	1.94	.80	NS



The result in Table 3 shows the summary of mean ratings of business educators on the adequacy of business education curriculum content for the acquisition of office technology and management skills based on their years of experience. The data revealed that four items with a range of p-values from .00 to .03 are less than the significant value of 0.05 at 98 degree of freedom. This indicates that there is significant difference in the mean ratings of business educators on the adequacy of business education curriculum content for the acquisition of office technology and management skills based on their years of experience. Therefore, the hypothesis of no significant difference in the mean ratings of business educators on items 5, 7, 8 and 9 was rejected. On the other hand, hypothesis of no significant difference for items 1, 2, 3, 4, 6, 10, 11, 12, 13, 14, 15 and 16 was accepted since the Sig values of these items, ranged from .12 to .80 are greater than 0.05. Therefore, the null hypothesis of no significant difference in the mean ratings of business educators based on their experience on the adequacy of business education curriculum content for the acquisition of office technology and management skills was accepted.

**Hypothesis 2:** Business educators in Edo and Delta State do not differ significantly in their mean ratings on the adequacy of business education curriculum content for the acquisition of office technology and management skills.

**Table 4: t-test comparison of the summary of mean ratings of business educators in Edo and Delta States on the adequacy of business education curriculum content for the acquisition of OTM skills**

		N=101 (Edo=13; Delta =88)							
S/N	Curriculum content	X <sub>1</sub>	SD <sub>1</sub>	X <sub>2</sub>	SD <sub>2</sub>	df	t-cal	Sig.	Remarks
1.	Office Practice	1.89	.63	2.00	1.02	99	1.94	.67	NS
2.	Shorthand	1.18	.50	1.47	.39	99	1.33	.25	NS
3.	Keyboarding I	1.61	.24	1.82	.42	99	1.51	.10	NS
4.	Office Practice II	1.70	.61	1.98	.53	99	1.86	.36	NS
5.	Shorthand II	1.10	.49	1.24	.36	99	1.17	.93	NS
6.	Keyboarding II	1.76	.83	1.90	.92	99	1.09	.22	NS
7.	Word Processing I	0.82	1.01	1.35	.84	99	1.83	.61	NS
8.	Shorthand III	1.57	.93	1.86	.78	99	1.05	.16	NS
9.	Word Processing II	.56	.32	.99	.56	99	.77	.85	NS
10.	Principles of Management	1.80	.67	1.93	.41	99	1.68	.22	NS
11.	Business Communication	1.63	.85	1.90	.64	99	1.57	.51	NS
12.	Business Communication I	1.14	.62	1.31	.43	99	2.22	.00	S
13.	Business Communication II	1.03	.32	1.29	.50	99	3.61	.02	S
14.	Shorthand IV	1.29	.53	1.47	.69	99	2.38	.00	S
15.	Word Processing II	1.72	.90	2.00	1.06	99	1.86	.26	NS
16.	Office Management	1.81	.23	2.00	.73	99	1.59	.65	NS

The result in Table 4 shows the summary of mean ratings of business educators in Edo and Delta States on the adequacy of business education curriculum content for the acquisition of office technology and management skills. The data revealed that five items (item 12, 13 and 14) with p-values ranging from .00 to .02 are less than the significant value of 0.05 at 99 degree of freedom. This indicates that there is significant difference in the mean ratings of business educators in Edo and Delta States on the adequacy of business education curriculum content for the acquisition of office technology and management skills. Therefore, the hypothesis of no significant difference in the mean ratings of business educators in Edo and Delta States on items 12, 13 and 14 was rejected. On the other hand, hypothesis of no significant difference for items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 15 and 16 was accepted since the Sig values of these items, ranging from .10 to .93 are greater than 0.05. Therefore, the null hypothesis of no significant difference in the mean ratings of business educators in Edo and Delta States on the adequacy of business education curriculum content for the acquisition of office technology and management skills was accepted

**Hypothesis 3**

There is no significant difference in the mean ratings of business educators on the adequacy of business education curriculum content for the acquisition of entrepreneurship skills based on years of experience (1 – 5, 6 – 10, above 10 years).

**Table 5**

**ANOVA comparison of the summary of respondents’ mean ratings on the adequacy of business education curriculum content for the acquisition of entrepreneurship skills based on experience N=101 (1-5 =16; 6-10 = 49; above 10 =36)**

S/N	Curriculum content	X <sub>1</sub>	SD <sub>1</sub>	X <sub>2</sub>	SD <sub>2</sub>	X <sub>3</sub>	SD <sub>3</sub>	df	F-cal	Sig.	Remarks
1.	Introduction to Entrepreneurship	1.89	.43	2.00	.68	1.93	.75	98	1.94	.54	NS
2.	Entrepreneurship II	2.00	1.06	1.97	1.14	1.90	.86	98	1.67	.65	NS

The result in Table 5 shows the summary of mean ratings of business educators on the adequacy of business education curriculum content for the acquisition of entrepreneurship skills based on their years of experience. The data revealed that the two items with a range of p-values from .54 and .65 are greater than the significant value of 0.05 at 98 degree of freedom. This indicates that there is no significant difference in the mean ratings of business educators on the adequacy of business education curriculum content for the acquisition of entrepreneurship skills based on their years of experience. Therefore, the hypothesis of no significant difference in the mean ratings of business educators on items 1 and 2 was accepted.

**Hypothesis 4**

Business educators in Edo and Delta State do not differ significantly in their mean ratings on the adequacy of business education curriculum content for the acquisition of entrepreneurship skills

**Table 6**

**t-test comparison of the summary of mean ratings of business educators in Edo and Delta States on the adequacy of business education curriculum content for the acquisition of entrepreneurship skills N=101 (Edo=13; Delta =88)**

<u>S/N Curriculum content</u>	<u>X<sub>1</sub></u>	<u>SD<sub>1</sub></u>	<u>X<sub>2</sub></u>	<u>SD<sub>2</sub></u>	<u>df</u>	<u>t-cal</u>	<u>Sig.</u>	<u>Remarks</u>
1. Introduction to Entrepreneurship	2.00	.84	1.97	.61	99	1.59	.67	NS
2. Entrepreneurship II	1.77	.32	1.94	.48	99	1.86	.83	NS

The result in Table 6 presents the summary of mean ratings of business educators in Edo and Delta States on the adequacy of business education curriculum content for the acquisition of entrepreneurship skills. The hypothesis of no significant difference for items 1 and 2 was accepted since the Sig values of these items .67 and .83 are greater than 0.05 at 99 degree of freedom. Therefore, the null hypothesis of no significant difference in the mean ratings of business educators in Edo and Delta States on the adequacy of business education curriculum content for the acquisition of entrepreneurship skills was accepted.

**Discussion of findings**

Outcome of the study disclosed that 68 curriculum contents of the business education curriculum are adequate for the acquisition of office technology and management skills and 46 curriculum contents are not adequate for the acquisition of office technology and management skills among students in colleges of education in Edo and Delta States as rated by business educators. In a nutshell, nine course titles out of the 16 courses of the curriculum contents are adequate for the acquisition of office technology and management skills. The courses include Office Practice I, Keyboarding I, Office Practice II, Keyboarding II, Shorthand III, Principles of Management, Business Communication, Word Processing II (50 WPM) and Office Management. This finding indicates that business educators generally considered these course titles and their curriculum contents as adequate for students’ acquisition of OTM skills needed in the contemporary secretarial profession. This finding is in agreement with Olukemi and Boluwaji(2014) who reported that OTM curriculum in tertiary education institutions in Nigeria are adequate for skills acquisition. Perhaps, the expansion of the old secretarial education to office technology and management by the National Board for Technical Education (NBTE) is responsible for the adequacy of curriculum content of Office Practice I, Keyboarding I, Office Practice II, Keyboarding II, Shorthand III, Principles of Management, Business Communication, Word Processing II (50 WPM) and Office Management for skills acquisition among students.

Unfortunately, the study revealed that eight curriculum contents were found not adequate for the acquisition of office technology and management skills among students in colleges of education in Edo and Delta States. The courses are Word Processing I, Word Processing II (35 WPM), Shorthand I, Shorthand II, Shorthand IV, Business Communication I and Business Communication II. Perhaps, these courses failed to capture the current realities of the dynamic workplace conditions. This supports, the findings of Olawole (2013) who reported that there is need to enrich the curriculum by adding the teaching of modern courses in the curriculum so that the job prospects of OTM graduates can be enhanced.

In addition, the study disclosed that business educators in colleges of education in Edo and Delta State based on their years of experience did not differ significantly on their mean ratings on the adequacy of business education curriculum content for the acquisition of office technology and management skills among students. Furthermore, the study also revealed no

significant difference in the mean ratings of business educators in Edo and Delta States on the adequacy of business education curriculum content for the acquisition of office technology and management skills among students. This implies that OTM graduates of business education programme can cope with the changes and challenges going on in today's modern offices. This finding tallies with Esene (2014) who reported that majority of business educators agreed that OTM curriculum should be constantly reviewed, revised and adjusted by specialists in the academic and industries to enable graduates fit properly and competently in the workplace.

Findings of the study disclosed that 11 curriculum contents of the business education curriculum are adequate for the acquisition of entrepreneurship skills among students in colleges of education in Edo and Delta States. The 11 curriculum contents are introduction of entrepreneurship, types of entrepreneurs, entrepreneurial theories, conditions for establishing forms of business ownership, issues and problems of business and technology, old, new and innovative techniques of financing business, site selection and location of business, consumer behaviour, management and administration of SMEs, elements of marketing and functions of marketing. This finding is in tandem with Ibrahim (2014) who reported that business education have enough theoretical contents to propel students for entrepreneurial and vocational activities. Finding of this study clearly indicates that business education curriculum content is designed to achieve the aforementioned objectives in colleges of education in Nigeria.

The study also discovered that four curriculum contents are not adequate for the acquisition of entrepreneurship skills among students in colleges of education in Edo and Delta States. The four curriculum contents are types of risks and risk management, human resource management, business future and succession issues and pilot study and feasibility report. This finding is in agreement with Hafiz and Sa'ad (2015) which reported that some components of entrepreneurship curriculum content must be responsive enough to address shortcomings in the school system. In a nutshell, all the two course titles and their curriculum contents were found to be adequate for the acquisition of entrepreneurship skills among students in colleges of education in Edo and Delta States. This generally means that, the business education curriculum is adequate for the facilitation of entrepreneurial skills and entrepreneurial vision of among students for self-employment upon graduation. This finding was supported by the earlier study of Okolocha and Ile (2011) which noted that the contents of entrepreneurship education curriculum are adequate enough to equip business education graduates acquire the necessary entrepreneurial skills needed for self-employment in the competitive world of work.

In addition, findings of the study revealed that business educators in colleges of education in Edo and Delta State based on their years of experience did not differ significantly on their mean ratings on the adequacy of business education curriculum content for the acquisition of entrepreneurship skills among students. This finding is in agreement with Esene (2015) who reported that the adequacy of the contents of the entrepreneurship education curriculum is adequate towards meeting entrepreneurial skills of business education (office technology and management) graduates. More so, the study revealed no significant difference in the mean ratings of business educators in Edo and Delta States on the adequacy of business education curriculum content for the acquisition of entrepreneurship skills among students. This implies that business education graduates are adequately exposed to the entrepreneurial skills needed in setting up small and medium scale enterprises and other forms of business units. This finding is in tandem with Ibrahim (2014) who reported that business educators agreed that

business education have enough instructional contents to propel students to acquire entrepreneurship skills.

### Conclusion

Business education is specialised educational programme tailored to the requirements of world of work. Based on the findings of study, the curriculum content of the business education in colleges of education is adequate in equipping graduating students with office technology and management and entrepreneurship skills. Thus, the researchers concluded that business education curriculum content was adequate for the acquisition of office technology and management and entrepreneurship skills acquisition among students in colleges of education in Edo and Delta.

### Recommendations

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

1. Business educators in Colleges of education should periodically invite office technology and management experts and successful entrepreneurs to provide business education students with first hand business experiences and practical workplace skills required in the business world
2. Curriculum developers of business education programme should consider removing outdated office technology and management and entrepreneurship curriculum content and integrates professional course contents that will prepare business education students for employment in today's paperless office and improve their entrepreneurial engagements in the business world.
3. The National Commission for Colleges of Education should ensure that the office technology and management and entrepreneurship skills that were not adequate in the curriculum content of business education programmes in colleges of education should be reviewed and revamped to meet the demands of the business world

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## ACCOUNTING STUDENTS' PERCEPTION ON ADOPTION OF SELF-EVALUATION LEARNING STRATEGIES FOR ENHANCED ACADEMIC PERFORMANCE IN COLLEGES OF EDUCATION IN SOUTH -EAST NIGERIA

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### Abstract

Adoption of innovative pedagogical practices to improve students' learning and academic performance has remained a crucial factor in educational programmes. The study ascertained the perception of accounting students on the adoption of self-evaluation learning strategies for enhanced academic performance in colleges of education in South East Nigeria. The design of the study was a descriptive survey conducted with 520 final year accounting students in colleges of education in South East Nigeria. A sample size of 226 (77 males and 149 females) was drawn for the study using Taro Yamane formula. One research question guided the study and one null hypothesis was tested at 0.05 level of significance. A validated structured questionnaire was used for data collection. Cronbach alpha method was used to establish the internal consistency of the instrument. Data collected were analyzed using arithmetic mean and t-test statistic. The findings of the study revealed that students agreed they adopt eight out of the nine listed self-evaluation learning strategies for enhancing their academic performance in financial accounting. They disagreed that they prepare a short quiz at the end of each financial accounting lecture to evaluate their understanding of the course content. Gender did not significantly influence respondents' mean ratings of self-evaluation learning strategies they adopt for enhanced academic performance in financial accounting. Based on the findings, the researchers recommended among others that accounting educators should emphasize the teaching of all the self-evaluation learning strategies such as students assessing themselves at the end of each accounting lecture to evaluate their understanding of the course content, to improve their academic performance in financial accounting.

**Key Words:** Self-evaluation Learning Strategy, Financial Accounting, Academic Performance

### Introduction

Education is an instrument for economic and social transformation, technological development and economic sustainability of nations. Federal Republic of Nigeria FRN, (2013) noted education as an instrument "par excellence" for effecting national development. It is a tool for adequate manpower development, economic growth and enhancement for democratic awareness. The need to equip individuals with functional education for national development led to the institution of business education, at all levels of Nigeria educational system from secondary to tertiary levels.

Business education is a programme of study that equip individuals with skills, competencies, attitudes and values in different specialty areas as accounting education, office technology management, marketing and cooperative economics management and education. Majorly, business education aims at empowering its graduates with desirable skills,

knowledge and values to become gainfully employed, paid or self upon graduation (Okoli & Ibeh, 2017). Business education consists of two parts, office education and general education. General business courses consist of skill and non-skill courses. Skill courses transients bookkeeping, accounting, shorthand, typewriting, office practice, computer education, marketing, to recordkeeping. Non-skill general business courses include economics, business mathematics and business communications among others.

Accounting education as an aspect of business education programme offered in colleges of education provides financial information about the financial transactions of organizations to enable users make informed decisions. It equips graduates of business education programme with skills and knowledge for gainful employment as accounting teachers and as office workers. Accounting courses taught in the colleges of education include principles of accounting, financial accounting, advanced financial accounting, cost accounting, taxation and auditing among others. These courses lead to the award of Nigerian Certificate in Education (NCE) in accounting on completion of the programme (Nigerian Commission for Colleges of Education NCCE, 2012).

Eze, Ezenwafor and Obidile (2016) highlighted that financial accounting is classification and recording of monetary transactions and presentation of financial results of the activities of an entity for decision making. Annand (2015) also viewed financial accounting as the field of study concerned with the summary, analysis and reporting of financial transactions to external users for decision making purposes. The topics covered in financial accounting courses from NCE I to NCE III classes include: evolution of bookkeeping, importance of bookkeeping, distinction between bookkeeping and accounts, subsidiary books and methods of keeping them, the ledger and its classifications, records in the ledger/principles of double entry, balancing of accounts and extraction of trial balance, the cash book (including simple, double and three column entries petty cash book), and preparation of elementary final account.(i.e. trading and profit and loss Accounts and balance sheet, year- end adjustments).

Financial accounting at colleges of education has been plagued by high failure rates. Agboh (2015) reported that many NCE students in the seven South East colleges of education perform poorly in financial accounting compared with their performance in other business education courses especially within the first and second years of the three year Nigerian Certificate in Education programme. Eze (2014) observed that the NCE business education students' performance in financial accounting is poor when compared with their performance in other business education courses especially within the first two years of the three year Nigerian Certificate in Education programme. Eze also noted that between 20 and 30 percent of the students in each first year and second year financial accounting course failed financial accounting in colleges of education in South East, Nigeria.

This persistent poor performance of students in financial accounting is very worrisome as it affects the quality of NCE business education graduates in Nigeria. It worsens their employability status and increases the current unemployment rate among Nigeria graduates. This poor academic performance could be attributed to a lot of factors including poor learning strategy. De Zoysa, Chandrakumara and Rudkin (2014) emphasized that the learning strategies adopted by most accounting students in learning accounting courses are the cause of high failure rates in the course as they do not allow students to meet their diverse learning needs. Financial accounting is a skill-based course and requires activity-related learning strategies instead of



traditional rule-based, textbook bound and mechanical approach in learning it. Oparaji and Nwaukwa (2019) called for the adoption of innovative learning strategies such as self-regulated learning strategies to make the teaching and learning of accounting courses more attractive and which will motivate students and improve their academic performance as accounting majors. There is also need for this new learning strategies to reduce stress for both the teachers and students.

Self-regulated learning refers to learning that is guided by meta-cognition and motivation to learn. Zimmerman (2008) described self-regulated learning as individuals' self-generated thoughts, and actions that are systematically designed to affect learning of knowledge and skills. It is critical for success in teaching and learning in academic life and beyond. Self-regulated learning strategies include self-evaluation learning strategies among others (Zimmerman, 2008). Self-evaluation is a process in which individuals make judgment about the adequacy and effectiveness of their own knowledge, performance, beliefs, or effects for the purpose of self-improvement (Morgan, 2010). It is the student who frames the criteria and standards to judge the adequacy of his beliefs, knowledge and skills in self-evaluation process. It is also the student that decides on the nature of learning activities to be undertaken. The student is at the center of his self-evaluation process and responsible for examining and improving his learning. Students are more likely to become self-regulated learners when they are able to evaluate their own learning, independent of teacher-issued summative assessments. This practice enables students to evaluate their learning strategies and make adjustments for similar tasks in their future (Chatzistamatiou & Dermizaki, 2013).

Teachers can promote self-evaluation in the classroom by helping students monitor their learning goals and strategy use, and then make changes to those goals and strategies based upon learning outcomes (Zimmerman, 2008). Self-regulated learners are able to employ multiple learning strategies and adjust those strategies as needed. However, low self-regulated students usually have difficulties adapting to this kind of learning required in problem based instruction as a result of lack of self-regulation skills. When they have low perceived ability, it influences the process of regulation as well as the motivation to learn, and as a result have detrimental consequences for their performance. Students therefore need to be assisted by their teachers to develop self-evaluation learning strategies which involve a level of engagement that is often more demanding in terms of time and effort than their normal study approach. Moreover, teacher's ability to cultivate self-regulated learning skills among learners is subject to the teachers own use of self-learning strategies in instruction. By doing this student are encouraged and motivated to improve in their academic performance.

Academic performance as used in this study refers to the performance of individuals in the objectives related to various types of knowledge and skills, characterized by performance in tests, course works and examinations of undergraduates. It is the extent of an individuals' educational outcomes accomplished successfully, as a result of learning at school. Individual differences in academic performance have been linked to differences in intelligence and personality. Students with higher mental ability as demonstrated by IQ tests and those who are higher in conscientiousness as linked to effort and achievement motivation such as in application of self-evaluation learning strategies tend to achieve highly in academic settings (Rada, 2017).

Bandura (1977) in his social cognitive theory believes that social and cognitive factors, as well as behavior, play important roles in learning. The adoption of self-evaluation learning strategy by students is in line with this theory as learners set goals for themselves, direct their behaviours accordingly and regulate their own learning behavior for improved academic

performance. Airasian and Gullickson (2009) discovered that self-evaluation makes students aware of the strengths and weakness of their learning, gives students voice that is a stake and control over their own learning, encourages ongoing students' development and can improve students' moral and motivation. It encourages student interaction and discussions about learning.

Magdeleine and Schmidt (2011) revealed that students self-regulate in three general categories related to their learning: critical review, learning strategies, and summaries of what have been learned. Elias (2010) also reported that students identified self-evaluation as one of the top six activities to promote their learning and academic performance. Elias further pointed out that students' adoption of self-evaluation strategy helps to create a culture of intrinsic motivation to succeed as well as promotes their approaches to completing assignments for the sake of growth and learning. Donald and David (2010) revealed a significant difference between the performance of high school students trained on how to develop self-evaluation skills and their counterpart not giving self-evaluation skill training. The finding was in favour of those trained in self-evaluation skill in each curriculum area. However, Brown and Harris (2013) reported that students' lack of adoption of self-evaluation strategy was a common issue. Guillory and Blankson (2017) agreed that students struggle with the task of self-evaluating of their learning progress.

Adoption of self-evaluation learning strategies by students for enhancing their academic performance could be influenced by gender (Remali, Ghazali, Kamaruddin, & Kee, 2013). Yukselturk and Bulut (2009) reported that gender effect can be a factor in determining the adoption of self-evaluation learning strategies. It could be possible that male students adopt self-regulated learning strategies more than their female counterparts in the learning process or vice versa. Research evidence from international context shows that self-evaluation learning strategies have been effective in improving students' academic achievement in most subjects (Wiginton, 2013). However, there is dearth of research on its effect on colleges of education students' performance in accounting in Nigeria especially in South East Nigeria. This study therefore ascertained students' adoption of self-evaluation learning strategies for enhanced academic performance in financial accounting in colleges of education in South East Nigeria.

### **Research Question**

The study is guided by this research question:

1. What are the self-evaluation learning strategies adopted by students for enhanced academic performance in financial accounting in colleges of education in South East Nigeria?

### **Hypothesis**

One null hypothesis was tested at 0.05 level of significance:

1. There is no significant difference in the mean ratings of male and female students on the self-evaluation learning strategies they adopt for enhanced academic performance in financial accounting.

### **Method**

This study was a descriptive survey research design and was carried out in South East Nigeria. The population of the study consisted of 520 accounting students in the seven public colleges of education offering accounting education in south East Nigeria. A sample size of 226 (77 males and 148 females) 2017/2018 final year accounting education students was used for the

study. The sample size was determined using the Taro Yamane formula. The proportionate random sampling technique was employed in selecting the sample. The instrument for data collection was a structured questionnaire titled "Questionnaire on Self-evaluation Learning Strategies for Enhanced Academic Performance (QSLSEAP)". The instrument was structured on a four-point rating scale of: Strongly Agreed (SA) = 4, Agreed (A) = 3, Disagreed (D) = 2, and Strongly Disagreed (SD) = 1.

The face validity of the instrument was established using two experts in the field of business education and one in measurement and evaluation unit of Education Foundations Departments in NnamdiAzikiwe University Awka. The internal consistency of the instrument was ascertained with Cronbach Alpha method which yielded coefficient value of 0.91 and which was adjudged reliable. Data collected were analyzed using arithmetic mean and t-test.

A null hypothesis was rejected where the P-value associated with the t-cal is less than or equal to 0.05 level of significance. Whereas the null hypothesis was not rejected where the calculated P-value associated with the t-cal is greater than 0.05 level of significance.

**Results**

**Research Question:** What are the self-evaluation learning strategies adopted by students for enhanced academic performance in financial accounting in colleges of education in South East Nigeria?

**Table 1: Mean ratings and standard deviation on the self-evaluation learning strategies adopted by students for enhanced academic performance in financial accounting**

S/N	Self-evaluation strategy	$\bar{X}$	SD	Remarks
1	I always examine my work to know if the objectives I have set in financial accounting course objective are met	3.25	.63	Agreed
2	I self-assess my capacity to solve financial accounting problem	3.06	.74	Agreed
3	I seek for feedback from my fellow students to know my level of progress in financial accounting	3.00	.64	Agreed
4	I compare my progress against required learning	3.04	.65	Agreed
5	I using feedback from my financial accounting lecturers to know my level of progress in financial accounting	2.98	.70	Agreed
6	I check my ability to prepare trial balance at the end of teaching the course	2.85	.80	Agreed
7	I check my ability to prepare bank reconciliation account at the end of the course	2.98	.77	Agreed
8	I seek for prompt feedback from my course mates on the progress on financial accounting	2.70	.77	Agreed
9	I prepare a short quiz at the end of each financial accounting lecture to evaluate my understanding of the course content	1.85	.82	Disagree
	Cluster Mean			Agree
	2.86			

Table 1 shows that the respondents agree to eight items (27, 28, 29, 30, 31, 32, 33 and 34) out of nine listed items as the self-evaluation learning strategies adopted by students for enhanced academic performance in financial accounting. Their mean ratings for the eight items ranged between 2.85 and 3.25. The respondents however disagree with the remaining item (item

25) as being part of the self-evaluation strategies they adopt for enhanced academic performance in financial accounting with mean rating of 1.85. The standard deviation scores for all the items fell within .63 to .82. This shows that the respondents are not wide apart in their ratings. With 2.86 it was confirmed that accounting education students in colleges of education in South East Nigeria agreed they adopt self-evaluation learning strategies for enhanced academic performance.

**Hypothesis:** There is no significant difference in the mean ratings of male and female students in colleges of education in South East Nigeria on the adoption of self-evaluation learning strategy for enhanced academic performance in financial accounting.

**Table 2: Summary of t-test analysis of mean ratings of respondents on their adoption of self-evaluation learning strategies for enhanced academic performance in financial accounting based on gender**

Gender	N	$\bar{X}$	SD	df	t-cal	P-value	Decision
Male	75	26.05	2.97	218	1.15	.22	Significant
Female	145	25.20	3.41				

Table 2 reveals the mean ratings of male students ( $\bar{X}=26.05$ ,  $SD = 2.97$ ) and female students ( $\bar{X}= 25.20$ ,  $SD = 3.41$ )  $t(218) = 1.15$ ,  $P = .22$ . This means that there is no significant difference in the mean ratings of male and female students in colleges of education in South East Nigeria on their adoption of self-evaluation learning strategies for enhanced academic performance in financial accounting. Therefore, the null hypothesis was not rejected.

**Discussion of Findings**

Findings of the study revealed that accounting education students in colleges of education in South East Nigeria agreed that they adopt the following self-evaluation learning strategies: Always examining their work to know if the objectives they have set in financial accounting course objective are met, self-assess their capacity to solve financial accounting problems, seek for feedback from fellow students to know their level of progress in financial accounting, compare their progress against required learning, using feedback from their financial accounting lecturers to know their level of progress in financial accounting. Others are checking their ability to prepare trial balance at the end of teaching the course, checking their ability to prepare bank reconciliation account at the end of the course and seeking for prompt feedback from course mates on their progress in financial accounting. They however disagreed that they prepare a short quiz at the end of each financial accounting lecture to evaluate their understanding of the course content.

The finding of this study corroborates with Magdeleine and Schmidt (2011) who revealed that students self-regulate in three general categories related to their learning: critical review, learning strategies, and summaries of what have been learned. Elias (2010) reported that students identified self-evaluation as one of the top six activities to promote their learning and academic performance. Elias also pointed out that students’ adoption of self-evaluation strategy helps to create a culture of intrinsic motivation to succeed as well as promotes their approaches to completing assignments for the sake of growth and learning. However, in contrast, Brown and

Harris (2013) reported that students' adoption of self-evaluation strategy is doubtful and that students' lack of adoption of self-evaluation strategy was common issue. Similarly, Guillory and Blankson (2017) agreed that students struggle with the task of self-evaluating their learning progress making it an issue in students learning. This is equally in line with the findings of this study of students not preparing a short quiz at the end of each financial accounting lecture to evaluate their understanding of the course content which could be a more serious issue among others. Students after the other self-evaluation learning activities may think they understand the lesson without confirming with an assessment to determine their level of understanding.

The findings of the study also discovered that gender did not significantly influence respondents' mean ratings on students' adoption of self-evaluation strategy for enhanced academic performance in financial accounting.

### Conclusion

Based on these findings, the researchers conclude that students in colleges of education in South east Nigeria adopt most of the self-evaluation learning strategies for enhanced academic performance in financial accounting. The high rate of failures among accounting education students in colleges of education in South East Nigeria therefore could not be solely attributed to non-adoption of self-evaluation learning strategies. There are other self-regulated learning strategies as goal-setting, planning and self-monitoring which the students should also adopt for better academic performance.

### Recommendations

Based on the findings of this study, the researchers recommended that

1. Accounting educators should emphasize the teaching of all the self-evaluation learning strategies such as students assessing themselves at the end of each accounting lecture to evaluate their understanding of the course content, to improve their academic performance in financial accounting.
2. Accounting educators should look at other factors and other self-regulated learning strategies such as goal-setting, planning and self-monitoring which the students should also adopt for better academic performance. Efforts should also be directed to remedy these areas that could be responsible to NCE students' poor academic performance in financial accounting and address them.
3. Administrators of colleges of education should organize in-service programmes such as workshops for accounting educators in their institutions to enable them up-date their skills for effective teaching of self-evaluation learning skills to students.
4. Federal and state governments should develop and provide enabling teaching and learning environment which can engage students to learn and support their progress in financial accounting.

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## HUMAN RESOURCE RECRUITMENT AND TRAINING COMPETENCIES REQUIRED BY ADMINISTRATORS FOR EFFECTIVE MANAGEMENT OF TERTIARY INSTITUTIONS IN SOUTH-SOUTH NIGERIA

Onojetah, S. O

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### Abstract

The study examined human resource recruitment and training competencies required by administrators for effective management of tertiary institutions in South-south Nigeria. Two research questions were answered while two hypotheses were tested at 0.05 level of significance. Descriptive survey research design was adopted in carrying out the study. The population and sample of the study comprised 1,736 administrators from the existing public tertiary institutions in the six South-South States of Nigeria. The sample of the study is 868; represents 50% of the population. The instrument that was used for data collection was a structured questionnaire titled: Human Resource Recruitment and Training Questionnaire (HRRTO) face-validated by three experts. The reliability of the instrument was ascertained using Cronbach Alpha reliability method which yielded a coefficient of 0.85 for human resource recruitment competencies and 0.91 for human resource training competencies. Data collected were analyzed using mean for answering the research questions while analysis of variance (ANOVA) was used for testing the hypotheses. Based on the data collected and analysed, the study identified 11 human resource recruitment competencies and 11 human resource training competencies required by administrators for effective management of tertiary institutions in South-south, Nigeria. There are no significant ( $p < 0.05$ ) difference in the mean ratings of the responses of administrators in universities, polytechnics and colleges of education on the human resource management competencies required for employees recruitment and training in tertiary institutions in South-South, Nigeria. Hence, the study among others recommended that the findings of this study should be packaged into a pamphlet and made available to all categories of administrators in tertiary institutions to serve as a guide in their human resource management and conduct of their duties in the school.

**Keywords:** Recruitment, Training, Tertiary Institution, Administrators, Human Resource.

### Introduction

The success of any educational institution to a large extent depends on the competencies of the administrators who are charged with the responsibilities of managing the day to day affairs of the institutions. Competency as defined by Abu (2008) is the successful performance of a task through the acquisition of knowledge, skills, attitude and judgment. The authors emphasized that competency can also be referred to as the state of being functionally adequate in performance of one's duty. Isiwu (2015) posited that competency is the ability to do something well, measured against a standard especially the ability acquired through experience or training. To be competent according to Olaitan (2003) means that the individual has acquired the knowledge, skills, attitude and judgment he required in performing successfully at a specific level in a given work and could perform such a work. In the context of this study, competencies

are well-developed abilities of administrators to recruiting and training employees for effective management of tertiary institutions in south-south Nigeria.

Recruitment is a process of finding and attracting the potential resources for filling up the vacant positions in an organization. It sources the candidates with the abilities and attitude, which are required for achieving the objectives of an organization. According to TutorialPoint (2020) recruitment is a process of identifying the jobs vacancy, analyzing the job requirements, reviewing applications, screening, short-listing and selecting the right candidate. Zirra, Ogbu and Ojo (2017) viewed the recruitment as the discovering of potential candidates for actual or anticipated organizational vacancies. It can also be seen as act of linking/bringing together those with jobs vacancy and needs to fill the vacant with those seeking for the vacant job. The ideal recruitment effort will attract a large number of qualified applicants. It should also provide information so that unqualified applicants can self-select themselves out of job candidacy. A good quality recruiting program advert should catch the attention of the qualified and not the unqualified through effective job specification and explanation. Sangeetha (2010) opined that recruitment process involves the sourcing, advertising and interviewing of future employees, however the selection process entails the staffing and training of new employees on the roll of their new job. Successful recruitment of employees is followed by training of the employees for the success of the organization or institutions.

Training and development of personnel in an organization is the process of developing qualities in human resources to be more productive and thus contribute more to an organization's goals and objectives. Training, in the opinion of Ezeani and Oladele (2013) is effort aimed at equipping individuals with the necessary skills and competencies to enable recipients find employment, gain promotion and have reasonable expectation of redeployment in the event of being made redundant. Training is an exercise for developing employees' affective, cognitive and psychomotor skills; and assisting organizations to have a crucial method of developing the employees towards enhancing productivity. Armstrong (2012) defined training as the use of systematic and planned instruction activities aimed at promoting learning; the approach, in the author's view, can be summarized as "learner-based training" which organizations/institutions. Olaniyan and Ojo (2008) noted that before training or development programmes are organized efforts are being made through individuals and organizational appraisals to identify the training needs. After the training and development programmes, an evaluation is carried out to ascertain the effectiveness of the programme in line with the need, which had been identified. It is worthy of mention that organization development follows the development of individual who form the organization.

Training both physically, socially, intellectually and mentally are very essential in facilitating not only the level of productivity but also the development of personnel in any organization. Therefore, training can be put in a contact relevant to school administrators. However, knowledge is the ability, the skill, the understanding, the information, which every individual requires acquiring in order to be able to function effectively and perform efficiently in Nigerian tertiary institutions system. Tertiary institution is organised form of learning activities at the higher education level. According to Okute and Agomuo (2010), tertiary institutions are third tier of learning which provide training in an ever-increasing number of specialization necessary for the modern society. Tertiary institutions are established and charged with the mandate of providing knowledge, skills and training to students who have successfully



completed their secondary education and desirous of pursuing a chosen discipline for future career through education of higher learning. The Federal Republic of Nigeria (2014) described tertiary institution to include, universities, colleges of education, polytechnics and monotechnics. Ofoegbu and Alonge (2017) noted that, in the realization of the potency of tertiary education in human capital development, Nigeria government unequivocally spelt out the goals of tertiary education. Federal Republic of Nigeria (2014) in her National Policy on Education described the goals and aims of tertiary institutions as: to contribute to national development through high-level relevant manpower training, develop and inculcate proper values for the survival of the individual and society, develop the intellectual capability of individual to understand and appreciate their local and external environment, acquire both physical and intellectual skills which will enable individuals to be self reliant and useful members of the society, promote and encourage scholarship and community services, forge and cement national unity; and promote national and international understanding and interaction. The achievement of these goals and objectives cannot be realized without effective management of available human and material resources in Nigerian tertiary institutions to ensure that competent employees are recruited and relevant training giving to enhance their productivity on the job.

Unfortunately, there is increase case of institutional crisis in Nigeria resulting from poor management of personnel. For instance, Zirra, Ogbu and Ojo (2017) observed that, in Nigeria, there has been increase in the rate of failure, crisis and poor institutions and organizational performance due to low productivity of employees. Despite the conflict between the stakeholders and the employees, employees have critical roles to play in ensuring the organizations achieve competitive advantage over the competitors for the achievement of goals and objectives. It was based on this background that this study was carried out to determine the human resource recruitment and training competencies required by administrators for effective management of tertiary institutions in South-south Nigeria.

### **Purpose of the Study**

The broad purpose of this study was to determine human resource recruitment and training competencies required by administrators for effective management of tertiary institutions in south-south Nigeria. The study specifically identified:

3. human resource recruitment competencies required by administrators for effective management of tertiary institutions in South-South, Nigeria.
4. human resource training competencies required by administrators for effective management of tertiary institutions in South-South, Nigeria.

### **Research Questions**

In line with the above specific purposes, the study answered the following research questions:

1. What are human resource recruitment competencies required by administrators for effective management of tertiary institutions in South-South, Nigeria.
2. What are human resource training competencies required by administrators for effective management of tertiary institutions in South-South, Nigeria.

### **Hypotheses**

The following null hypotheses were formulated to guide this study and were tested at 0.05 level of significance.

3. There is no significant difference in the mean ratings of the administrators in universities, polytechnics and colleges of education on the human resource recruitment

competencies required by administrators for effective management of tertiary institutions in South-South, Nigeria.

4. There is no significant difference in the mean ratings of the administrators in universities, polytechnics and colleges of education on the human resource training competencies required by administrators for effective management of tertiary institutions in South-South, Nigeria.

**Method**

The study was carried out in South-South geopolitical zone of Nigeria. The South-South zone is made up of six states, namely, Akwa Ibom State, Bayelsa State, Cross River State, Delta State, Edo State and Rivers State. The design adopted for this study is descriptive survey research design. Descriptive survey research design according to Check and Schutt (2012) is the collection of information from a sample of individuals through their responses to questions. Ponto (2015) stated that survey research can use quantitative research strategies using questionnaire with numerically rated items, qualitative research strategies using open-ended questions, or both strategies for data collection. The design is suitable for this study because it involves the collection of needed information on human resource management competencies required by administrators for effective management of tertiary institutions. The population and sample of the study comprised 1,736 administrators from the existing public tertiary institutions in the six South-South States of Nigeria (Establishment Division of the Tertiary Institutions, 2018). The population is made up 795 administrators from public universities (federal and states), 382 administrators from public polytechnics (federal and states) and 558 administrators from public colleges of education (federal and states), totalling 1,736. The sample of the study is 868; represents 50% of the population. The sample was drawn from the study population of 1,736 administrators.

The instrument that was used for data collection was a structured 22-item questionnaire titled: Human Resource Recruitment and Training Questionnaire (HRRTQ). The questionnaire was structured on a 5-point rating scale of Very Highly Required (VHR), Highly Required (HR), Moderately Required (MR), Less Required (LR) and Not Required (NR) with corresponding values of 5, 4, 3, 2 and 1 respectively. The instrument was face-validated by three experts (validates). These included two academic staff of Michael Okpara University of Agriculture, Umudike, Abia State and a measurement and evaluation expert in Nnamdi Azikiwe University, Awka, Anambra State, all in South-East Nigeria. Their observations/suggestions were incorporated into the final copy of the questionnaire for the supervisor’s approval before it was administered to the respondents for data collection.

For the purpose of obtaining the reliability of the instrument, Cronbach Alpha reliability method was used in which a coefficient of 0.85 was obtained for human resource recruitment competencies while 0.91 was obtained for human resource training competencies. Out of the 868 copies of the questionnaire administered, 844 copies were completely filled and retrieved representing 97.2% rate of return. The retrieved 844 copies were collated by the researcher and subjected to data analysis. The data collected for the study were analyzed using mean scores and standard deviation to answer the research questions while analysis of variance (ANOVA) was employed to test the null hypotheses at 0.05 level of significance. The 5-point response options were assigned scale values as follows:

<b>Response Category</b>	<b>Values</b>	<b>Boundary Limit</b>
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Very Highly Required (VHR)	5	4.50 – 5.00
Highly Required (HR)	4	3.50 – 4.49
Moderately Required (MR)	3	2.50 – 3.49
Less Required (LR)	2	1.50 – 2.49
Not Required (NR)	1	1.00 – 1.49

Based on this adoption, any competency item with mean values of 4.50 - 5.00 was regarded as Very Highly Required and mean values of 3.50 - 4.49 was regarded as Highly Required. Competency item with mean values within the range of 2.50 - 3.49 was regarded as Moderately Required and competency item with mean values of 1.50 - 2.49 was regarded as Less Required while items with mean values within the range of 1.00 - 1.49 was regarded as Not Required. The hypothesis of no significant difference was accepted for items whose F-calculated (F-cal) values were less than the critical table (F-tab) value of 3.00 at 0.05 level of significance. On the other hand, the hypothesis of no significant difference was rejected for those items whose F-calculated (F-cal) values were greater than or equal to the critical table (F-tab) value of 3.00 at 0.05 level of significance.

**Results and Interpretations**

**Research Question One:** What are human resource recruitment competencies required by administrators for effective management of tertiary institutions in South-South, Nigeria.

**Table 1: Mean Ratings of the Responses of Respondents on Human Resource Recruitment Competencies Required by Administrators for Effective Management of Tertiary Institutions in South-south Nigeria**

SN	Competency required for human resource recruitment and selection	$\bar{X}_U$	$\bar{X}_P$	$\bar{X}_C$	$\bar{X}_G$	SD	Rmks
1	Accessing relevant information about the recruiting and selection process for institutional growth	4.45	4.44	4.50	<b>4.46</b>	0.50	<b>HR</b>
2	Making good attempt to obtain an adequate pool of applicants for more choices.	4.71	4.74	4.71	<b>4.72</b>	0.46	<b>VHR</b>
3	Developing strategies to recruit those individual possessing the skills needed by the institution.	4.28	4.25	4.27	<b>4.26</b>	0.64	<b>HR</b>
4	Using employment process of finding qualified applicant/potential employees.	4.73	4.74	4.75	<b>4.74</b>	0.43	<b>VHR</b>
5	Identifying the gender of employee that is required if necessary.	4.46	4.51	4.51	<b>4.50</b>	0.50	<b>VHR</b>
6	Gathering accurate information from which selection decision is made through interviewing process.	4.25	4.26	4.47	<b>4.33</b>	0.53	<b>HR</b>
7	Using the interview process to get useful information on the candidate's reaction to the work for institutional growth.	4.32	4.36	4.34	<b>4.34</b>	0.69	<b>HR</b>
8	Involving effective human resource planning to identify the institutional human resource needs.	4.32	4.34	4.37	<b>4.35</b>	0.47	<b>HR</b>
9	Informing the candidates about job vacancies through relevant communication means promptly.	4.81	4.81	4.82	<b>4.81</b>	0.38	<b>VHR</b>
10	Specifying the future jobs requirements to form the basis for workplace training and developments.	4.46	4.47	4.45	<b>4.46</b>	0.55	<b>HR</b>

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11 Making contact with selected employees on terms and condition of service for institutional growth.	4.14	4.20	4.39	<b>4.25</b>	0.79	<b>HR</b>
<b>Cluster Summary</b>	<b>4.45</b>	<b>4.47</b>	<b>4.50</b>	<b>4.47</b>	<b>0.54</b>	<b>HR</b>

*Note:  $\bar{X}_U$  = Mean of University;  $\bar{X}_P$  = Mean of Polytechnics;  $\bar{X}_C$  = Mean College of Education;  $\bar{X}_G$  = Grand Mean; **VHR** = Very Highly Required; **HR** = Highly Required*

The data presented in Table 1 showed that the grand mean ratings of the responses of the respondents on items 2, 4, 5 and 9 are 4.72, 4.74, 4.50 and 4.81 respectively which all fell within the boundary limit of 4.50 – 5.00 on five point rating scale. This indicated that the four competency items of employees’ recruitment and selection are “Very Highly Required” by administrators in tertiary institutions in South-South, Nigeria. On the other hand, the grand mean ratings of the remaining seven items, specifically items 1, 3, 6, 7, 8, 10 and 11 are 4.46, 4.26, 4.33, 4.34, 4.35, 4.46 and 4.25 respectively which are within the boundary limit of 3.50 – 4.49 on five point rating scale. This indicated that the seven competency items of employees’ recruitment and selection are “Highly Required” by administrators in tertiary institutions in South-South, Nigeria.

The cluster means for universities administrators was 4.45, polytechnics was 4.47 and colleges of education was 4.50 while the overall grand mean for the three groups of administrators was 4.47 which implied that employees recruitment competencies are generally “Highly Required” for human resource management by administrators in tertiary institutions in South-South, Nigeria. The standard deviation values of the 11 items in the table ranged from 0.38 - 0.79 which shows that the responses are close to one another and the mean.

**Research Question Two:** What are human resource training competencies required by administrators for effective management of tertiary institutions in South-South, Nigeria.

**Table 2: Mean Ratings of the Responses of Respondents on Human Resource Training Competencies Required by Administrators for Effective Management of Tertiary Institutions in South-south Nigeria**

SN	Competency required for human resource training and development	$\bar{X}_u$	$\bar{X}_p$	$\bar{X}_c$	$\bar{X}_g$	SD	Rmks
1	Providing employees with learning opportunities designed to help them grow for future use	4.46	4.45	4.49	<b>4.46</b>	0.49	<b>HR</b>
2	Specifying to the employees what to do and how to do it	4.70	4.67	4.67	<b>4.68</b>	0.60	<b>VHR</b>
3	Giving orientation to new employees of their responsibilities in an effort to ease their transition to the institution	4.55	4.51	4.54	<b>4.56</b>	0.44	<b>VHR</b>
4	Giving proper orientation about the institution to the employees	4.35	4.23	4.53	<b>4.37</b>	0.81	<b>HR</b>
5	Designing training programme to meet the goals of the institutional while simultaneously meeting the goals of the individual employee	4.47	4.53	4.57	<b>4.53</b>	0.49	<b>VHR</b>
6	Carrying out training programmes for employees to increase competency in their job	4.49	4.51	4.47	<b>4.50</b>	0.56	<b>VHR</b>
7	Developing qualities in human resource that will enable them to be more productive	4.36	4.33	4.32	<b>4.33</b>	0.47	<b>HR</b>

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8	Equipping individual with activities to enable them gain promotion	4.69	4.70	4.73	<b>4.71</b>	0.57	<b>VHR</b>
9	Determining training needs of individual for further development in increasing the productivity of that individual	4.38	4.46	4.50	<b>4.45</b>	0.49	<b>HR</b>
10	Developing training experience that helps administrators to plan and design employees' goals.	4.02	4.10	4.32	<b>4.16</b>	0.84	<b>HR</b>
11	Communicating the conditions for training and development to employees	4.47	4.56	4.52	<b>4.54</b>	0.49	<b>VHR</b>
<b>Cluster Summary</b>		<b>4.44</b>	<b>4.46</b>	<b>4.51</b>	<b>4.48</b>	<b>0.57</b>	<b>HR</b>

*Note:  $X_U$  = Mean of University;  $X_P$  = Mean of Polytechnics;  $X_C$  = Mean College of Education;  $X_G$  = Grand Mean; **VHR** = Very Highly Required; **HR** = Highly Required*

From the data presented in table 2 above, it was revealed that the grand mean ratings of the responses of the respondents on items 2, 3, 5, 6, 8 and 11 are 4.68, 4.56, 4.53, 4.50, 4.71 and 4.54 respectively which all fell within the boundary limit of 4.50 – 5.00 on five point rating scale. This indicated that the six competency items of employee training and development are “Very Highly Required” by administrators in tertiary institutions in South-South, Nigeria. The grand mean ratings of the remaining five items, specifically items 1, 4, 7, 9 and 10 are 4.46, 4.37, 4.33, 4.45 and 4.16 respectively which are within the boundary limit of 3.50 – 4.49 on five point rating scale. This indicated that the five competency items of training and development are “Highly Required” by administrators in tertiary institutions in South-South, Nigeria.

The cluster means for universities administrators was 4.44, polytechnics was 4.46 and colleges of education was 4.51 while the overall grand mean for the three groups of administrators was 4.48 which signified that employees training competencies are generally “Highly Required” for human resource management by administrators in tertiary institutions in South-South, Nigeria. The standard deviation values of the 11 items in the table ranged from 0.44 - 0.84 which signified that the responses of the respondents are close to one another and the overall mean.

**Hypothesis One:** There is no significant difference in the mean ratings of the administrators in universities, polytechnics and colleges of education on the human resource recruitment competencies required by administrators for effective management of tertiary institutions in South-South, Nigeria.

**Table 3: Analysis of Variance (ANOVA) Test of Significant Difference in the Mean Ratings of Administrators in Universities, Polytechnics and Colleges of Education on the Human Resource Recruitment Competencies required by Administrators.**

Sources of Variance	Sum of Squares	DF	Mean Square	F-Cal	F-Tab	Sig	Decision
Between Groups	0.842	2	0.47	0.36	3.00	0.05	NS
Within Groups	449.245	840	0.42				
Total	450.087	842					

**Note:** NS = Not Significant

The result of analysis of variance (ANOVA) in Table 3 showed that F-calculated (F-cal) value of 0.36 is less than the F-critical value of 3.00 at  $p < 0.05$  level of significance. This indicates that there is no significant ( $p < 0.05$ ) difference in the mean ratings of the responses of administrators in universities, polytechnics and colleges of education on the human resource recruitment competencies required for effective management of tertiary institutions in South-South, Nigeria. Hence, the null hypothesis of no significant ( $p < 0.05$ ) difference in the mean ratings of the three groups of respondents is accepted on hypothesis one.

**Hypothesis Two:** There is no significant difference in the mean ratings of the administrators in universities, polytechnics and colleges of education on the human resource training competencies required by administrators for effective management of tertiary institutions in South-South, Nigeria.

**Table 4: Analysis of Variance (ANOVA) Test of Significant Difference in the Mean Ratings of Administrators in Universities, Polytechnics and Colleges of Education on the Human Resource Training Competencies required by Administrators.**

Sources of Variance	Sum of Squares	DF	Mean Square	F-Cal	F-Tab	Sig	Decision
Between Groups	1.067	2	0.34	0.43	3.00	0.05	NS
Within Groups	453.572	840	0.29				
Total	454.639	842					

**Note:** NS = Not Significant

The result of analysis of variance (ANOVA) in Table 3 showed that F-calculated (F-cal) value of 0.36 is less than the F-critical value of 3.00 at  $p < 0.05$  level of significance. This indicates that there is no significant ( $p < 0.05$ ) difference in the mean ratings of the responses of administrators in universities, polytechnics and colleges of education on the human resource recruitment competencies required for effective management of tertiary institutions in South-South, Nigeria. Hence, the null hypothesis of no significant ( $p < 0.05$ ) difference in the mean ratings of the three groups of respondents is accepted on hypothesis one.

### Discussion of Results

This study in respect to research question one identified 11 human resource management competencies highly required by administrators for recruiting and selecting potential employees in tertiary institutions in South-South, Nigeria to include: accessing relevant information about the recruiting and selection process for institutional growth, making good attempt to obtain an adequate pool of applicants for more choices, developing strategies to recruit those individual possessing the skills needed by the institution, using employment process of finding qualified applicant/potential employees, identifying the gender of employee that is required if necessary, gathering accurate information from which selection decision is made through interviewing process, using the interview process to get useful information on the candidate's reaction to the work for institutional growth and involving effective human resource planning to identify the institutional human resource needs among others. The findings corroborated Omisore and Okofu (2014) who noted that the recruitment and selection of staff in

any public or private organization is of paramount importance to the organization. Gamage (2014) equally reported that recruitment and selection are vital functions of human resource management for any type of organization or tertiary institution. The findings of this study agreed with that of Kanyemba, Iwu and Allen-He (2015) investigated the impact of recruitment and selection on organizational productivity, evidence from staff of a university in the Western Cape province of South Africa and found that about 77.4% of the respondents agreed that indeed recruitment and selection had a huge impact on organizational productivity. The findings of this study supported the report of International Labour Organization (2018) which identified basic activities in recruitment and selection of employees to include: searching for appropriate information about the qualities of personnel to recruit, making good effort to obtain an adequate pool of applicants for selection of competent ones, generate accurate information from which selection is made through consultation and interview and hiring experts or competent human resource managers for effective planning and identification of quality employees from the applicants.

This study as regard to research question two identified 11 human resource management competency items that are highly required by administrators for employees' training and development in tertiary institutions some of which include: providing employees with learning opportunities designed to help them grow for future use, specifying to the employees what to do and how to do it, giving orientation to new employees of their responsibilities in an effort to ease their transition to the institution, giving proper orientation about the institution to the employees, carrying out training programmes for employees to increase competency in their job, developing qualities in human resource that will enable them to be more productive, developing training experience that helps administrators to plan and design employees' goals and communicating the conditions for training and development to employees among others. In agreement with the findings of this study, Ezeani and Oladele (2013) reported that training and development is a course of diet and exercise for developing employees' affective, cognitive and psychomotor skills to assist organizations have a crucial method of developing employees towards enhancing productivity. Kossivi, Xu and Kalgora (2016) training and development is mutually inclusive; it has become an important factor in the business world today because it increases the efficiency and effectiveness of both employees and organizations. The findings of this study agreed with that of Ajayi (2017) who investigated staff training and development needs in Ondo State public service and found that management bodies in public establishment should be well equipped with skills in giving adequate job orientation to new staff intake, helping to adequately specify employees' job to avoid duplication of duties, subjecting public employees to adequate and constant development training for effective service delivery.

## **Conclusion**

Human resource management is vital to the overall performance of all organization, institutions and enterprises in both developed and developing countries. The increase in the rate of crisis, failure, unrest, industrial action and employees' poor performance in terms of productivity in Nigeria public institutions is alarming. For organizations or institutions to be sustained, employees have crucial roles to play in order to ensure that institutions attain competitive advantage over the competitors across the globe. This study therefore examined human resource recruitment and training competencies required by administrators for effective management of tertiary institutions in South-south Nigeria. Based on the data collected and analysed, the study identified 11 human resource recruitment competencies and 11 human

resource training competencies required by administrators for effective management of tertiary institutions in South-south, Nigeria. There are no significant ( $p < 0.05$ ) differences in the mean ratings of the responses of administrators in universities, polytechnics and colleges of education on the human resource recruitments and training competencies required by the school administrators for effective management of tertiary institutions in South-South, Nigeria. By this finding, the study concluded that, the adoption of the identified human resource recruitment and training competencies by administrators of public tertiary institutions will result to boost the morale of employees and boost their service delivery for higher productivity at work.

### Recommendations

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

4. The findings of this study should be packaged into a pamphlet and made available to all categories of administrators (Heads of Department, Deans, Directors, Vice Chancellor, Provost, Rectors and their Deputies) in tertiary institutions to serve as a guide in their human resource management and conduct of their duties in the school.
5. There should be a periodic assessment of the administrators in both human and material resource management for effective management of tertiary institutions in south-south Nigeria and the nation at large.
6. There should be regular workshop and conference on modern practices for human resource recruitments and training for administrators of tertiary institution in south-south geopolitical zone and the nation in general.

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## DETERMINATION OF EMPLOYEE RELATION PRACTICES OF MANAGERS OF SMALL AND MEDIUM ENTERPRISES IN ANAMBRA STATE

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### Abstract

*This study determined the employee relation practices of managers of small and medium enterprises in Anambra State. One research question guided the study and two null hypotheses were tested at 0.05 level of significance. Descriptive survey research design was adopted using a population of 2, 610 managers of SMEs in Anambra State. A sample size of 347 was selected. A structured questionnaire developed by the researcher was used for data collection. The instrument was validated by three experts in Business Education Department. Cronbach alpha was used to establish the reliability of the instrument. The reliability index obtained was  $r = 0.76$ . Data were analyzed using mean, standard deviation, t-test and ANOVA. Mean was used to answer the research question and standard deviation used to explain how the responses of the respondents varied. t-test and ANOVA were used to test the hypotheses at 0.05 level of significance. The results showed that managers agreed on the employee relation practices adopted in their small and medium scale enterprises in Anambra State. The results also showed that there was no significant difference in the mean responses of managers on the employee relation practices adopted in their small and medium scale enterprises in Anambra State based on size of enterprise and years of experience. Based on the findings, the researchers recommended among others, that the management of SMEs should value the contribution and ideas shared by employees and empower employees to maximize their individual talents in order to make effective decisions.*

**Keywords:** Employee relation, managers and small and medium enterprises.

### Introduction

Small and Medium Scale Enterprises (SMEs) leads to the growth and development of any forward thinking nation. SMEs are seen as agents of economic development and the most important sector contributor in developing countries (Nigeria inclusive). This is because of the role SMEs play in the creation of wealth and employment generation in a nation. Muogbo (2013) opined that SMEs are very important because they are the key drivers of employment and economic growth. According to Ahmeti and Marmullaku (2015), SMEs constitute 90 to 95 percent of all enterprises worldwide and account for more than 70 percent of the products and services in the world. SMEs are seen also as key factors in employment and account for approximately 60 percent of private sector employment worldwide.

Small and medium scale enterprises (SMEs) comprises of a variety of undertakings. The definition of small and medium scale enterprises varies from one country to another and from one time to another in the same country depending upon the pattern and stage of development,

government policy and administrative set up of the particular country. In Nigeria, different government agencies have applied different definitions of small and medium scale enterprises due to differences in policy focus. The Nigeria Bank for Commerce and Industry (NBCI) (2014) defined small and medium scale enterprise as a business with total capital not exceeding ₦750,000 (excluding cost of land but including working capital). The Federal Ministry of Industry's guidelines to NBCI defined a small and medium scale enterprises as a business with a total cost not exceeding ₦500,000 (excluding cost of land but including working capital). The Nigerian Industrial Development Bank (NIDB), (now Bank of Industry) defined small and medium scale enterprises as a business with investment and working capital not exceeding ₦750,000. In the present day Nigeria given the higher operational costs of business, the criteria of small and medium scale business have been modified. Small and medium enterprises are largely present in Anambra State.

Anambra State is a State where a large percentage of her citizens are entrepreneurs or owners of SMEs. The presence of small and medium scale enterprises has increased economic activities in the State and has helped to improve the revenue base of the State. SMEs have been a major engine of economic growth and technological progress. Eniola (2014) stated that the characteristics of SMEs not only reflect the economic patterns of a country but also the social and cultural dimensions. Small and medium scale enterprises engage in different types of activities ranging from construction, agro-allied, information technology, manufacturing, educational establishment, business services, tourism and leisure. Some of these enterprises are overseen by managers employed by the business owners. According to Okolo (2014), business owners are people who have the ability to see and evaluate business opportunities, put together the necessary resources to take advantage of them and to initiate appropriate actions to ensure success. The business owners employ and contract the managers to oversee the running of their businesses. A manager is the person that makes plans and decisions, organizes, supervises and controls human, financial and information resources of business enterprises.

According to Gorgievski, Ascalon and Stephan (2011) a manager is the person employed in an administrative position, who has comprehensive knowledge necessary for leading people and managing an organization in order to achieve optimal realization of set tasks in confined conditions. Managers are encouraged to allow a high degree of employee relation and autonomy, which are intended to increase workforce commitment and to humanize the workplace with the intention of improving work performance and good citizenship behavior. The performance and competitiveness of any organization including small and medium scale organizations are determined by the effective organization and operation of resources including human, financial, technological and organizational capital. These also depend on the various organizational and business strategies/action plans including employment relations.

Employee relations are significant aspects of human resource management (HRM), this is aimed at maintaining a peaceful working environment in small and medium enterprises (SMEs) (Enis, Xhavit & Nagip, 2015). Employees need to be involved in the management of human resources that affects their interests. A well thought-out structure of employee participation system, grievance system, dispute resolutions management, disciplinary system and labour representation system maintain conducive labour relations in organizations which will ultimately ensure uninterrupted operations, progress and prosperity of the firm. It appears that the productivity of SMEs is closely related to their ability to adopt suitable human resource management practices in handling their employees.

Employee or labour relations are significant aspects of human resource management (HRM) to maintain a peaceful working environment in small and medium enterprises (SMEs). Employee relations processes consist of the approaches and methods adopted by business owners or entrepreneurs to deal with employees either collectively through their trade unions or individually (Armstrong & Stephen, 2014). They are usually based on the organizations articulated or implied employee relations policies and strategies. Employee relation processes are those aspects of employee relations that are concerned with the dealings between employers, individual, employees and workers' bodies or human consist of approaches to recruiting, selecting, appraisals recognizing or de-recognizing trade unions, formal methods of collective bargaining, partnership as an approach to employee relations. It is also formal day-to-day contacts on employment issues that take place in the workplace between management representatives or officials, and features of the industrial relations scene such as union membership in the workplace, among others.

The International Labour Organization (ILO) (2010) understands that employee or industrial relations are the relationships between the state on the one hand and the employers' and employees' organizations on the other or are the relationships among the occupational organizations themselves. It involves freedom of association and the right to organize; and the application of the principles to the collective bargaining, conciliation, arbitration, and the machinery for cooperation between the authorities and the occupational organizations at various levels of the economy. Labour or industrial relations are an integral aspect of social relations arising out of employer- employee interaction in modern industries, which are regulated by the state in varying degrees, in conjunction with organized social forces and influenced by the existing institutions. Ivancevich (2011) opined that labour relation is the continuous relationship between a defined group of employees and management. This involves the negotiation of a written contract concerning pay, hours, and other terms and conditions of employment as well as the interpretation and administration of this contract over its period of coverage.

According to Kayode, Olawale and Tugbobo (2016), employee relations policies have been identified by industrial relations literature, they include first, adversarial: the organization decides what it wants to do, and employees are expected to fit in. employees only exercise power by refusing to cooperate. Secondly, the approach is traditional: a good day-to-day working relationship but management proposes. Thirdly, partnership in which the organization involves employees in the drawing up and execution of organization policies, but retains the right to manage. Fourthly, in power sharing the employees are involved in both day-to-day and strategic decision making of the small, medium or large-scale organizations. Creating and maintain a good employee relations climate in an organization may be the ultimate responsibility of top management, advised by personnel specialists.

However, certain factors like size of business enterprise and years of experience of SMEs managers could influence their human resource practices in the management of the business. The ability of SMEs to adopt HRM practices is dependent on their size. According to Muhammad (2009), medium scale enterprises have better capacity to adopt HRM practices in their ventures than small scale enterprises. In support, Saravanan and Vasumathi (2015) opined that the size of a business could influence the adoption of HRM practices by managers of SMEs. Years of experience could also be another variable that could influence the SMEs managers' human resource practices in organizations. Years of experience in this study refers to field of

knowledge acquired over months or years of actual practice and which, presumably, has resulted in superior understanding or mastery. It is believed that ninety percent (90%) of business failures are associated with management inadequacy, which consists of either management inexperience or incompetence (Perry and Pendleton in Mugo, 2012). Mugo further observed that many SMEs owners or managers lack managerial training and experience.

Experience is the best predictor of business success, especially when the new business is related to earlier business experiences. Managers with vast experiences in managing business are more capable of finding ways to open new business compared to employees with different career pathways. It is possible that successful SMEs are handled by experienced managers who personally observe the day to day activities of their enterprises and also involve the employees in decision making process to increase productivity. However, the extent to which these assertions apply in Anambra State demands an empirical investigation, hence, the need to determine the human resource management practices of small and medium scale enterprises in Anambra State.

### **Statement of the Problem**

Small and medium scale enterprises (SMEs) are agents of national and economic growth hence individuals, government and other stakeholders exert much efforts to achieve personal, organizational and national economic growth and development through sustainable SMEs. Though small and medium scale enterprises are making positive contributions to economic growth and development in Nigeria, the rate of failure is high. According to West and Wood (2012), 90 percent of all these business failures result from lack of experience and competence. West and Wood also added that inefficiency in overall business management and poor record keeping is also a major feature of most SMEs and have always led to funds misappropriation, wrong and costly decision making. Other possible contributory factor could be human resource management practices of these SMEs such as inconsistent and equitable employee compensation policy, lack of training and development plans for employees, lack of trust, inadequate working conditions, poor communication and among others. Therefore, adoption of human resource management practices by managers in small and medium scale enterprises is thus imperative because these firms are the economic drivers of the future through employment creation and utilization of indigenous resources.

### **Purpose of the Study**

The purpose of this study was to determine the employee relation practices of managers of small and medium scale enterprises in Anambra State. Specifically, the study determined the:

1. Employee relation practices of managers of small and medium scale enterprises in Anambra State.

### **Research Question**

This research question guided the study.

1. What are the employee relation practices of managers of small and medium scale enterprises in Anambra State?

### **Hypotheses**

The following null hypotheses were tested at 0.05 level of significance:

1. There is no significant difference in the mean responses of managers of small and medium enterprises in Anambra State on the employee relation practices they adopt in their enterprises.

- There is no significant difference in the mean responses of managers of small and medium enterprises in Anambra State on the employee relation practices they adopt in their enterprises based on years of experience (5 years and below, 6-10 years and above 10 years).

### Method

The design that was adopted in this study is a descriptive survey. According to Nworgu (2015), descriptive survey is a design which aims at collecting data on, and describing in a systematic manner, the characteristics, features or facts about a given population. The study was carried out in Anambra State of Nigeria. The population of the study comprised 2,610 SME managers (1,732 small scale and 878 medium scale) of enterprises in Anambra State who are registered with the State Ministry of Commerce, Industry and Technology as at 2018. The sample size of 347 SME managers (230 small scale managers and 117 medium scale managers) was used for the study. The sample size was derived using the Taro Yamani formula. The instrument used for data collection in this study was a structured questionnaire titled "Questionnaire on Employee Compensation Practices of Small and Medium Scale Enterprises (QECPSME)". The questionnaire was structured on a 5- point rating scale of Strongly Agree (SA), Agree (A), Moderately Agree (MA), Disagree (D) and Strongly Disagree (SD). The instrument designed for this study was subjected to face validation by three experts in Business Education Department. Cronbach Alpha was used to establish the reliability of the instrument. The reliability index obtained was  $r = 0.76$ .

Data was collected with the aid of six research assistants who were briefed by the researchers. Out of the 347 copies of the questionnaire administered, a total of 298 (85.88%) were returned and used for the study. Mean was used to analyze data related to the research questions while the standard deviation was used to ascertain the homogeneity or otherwise of the respondents' ratings. For the hypotheses, t-test and one way analysis of variance (ANOVA) were used to test the null hypotheses at 0.05 level of significance. P-value was used for decision making for the hypotheses. Where the calculated p-value is less than the stipulated level of significance 0.05 ( $p < 0.05$ ), it implies that there was significant difference between respondents' mean scores. Under this condition, the null hypothesis of no significant difference is rejected. On the other hand, if the p-value is greater than or equal to the alpha level of 0.05 ( $p \geq 0.05$ ), the null hypothesis of no significant difference is accepted.

### Results

**Research Question:** What are the employee relation practices of managers of small and medium scale enterprises in Anambra State?

**Table 1: Mean responses of Managers on the employee relation practices adopted in SMEs.**

S/No Employee Relations	Mean	SD	Decision
1. Involve employees in the decision making process of the business.	3.40	.68	Moderately agreed
2. Maintain an inclusive communication network in the enterprise where employees are made aware of decisions concerning them.	4.51	.50	Strongly agreed
3. Encourage cordial relations among employees.	4.53	.50	Strongly agreed

4. Encourage team work among employees.	3.81	.65	Agreed
5. Organize social events such as end of the year party for employees	4.53	.50	Strongly agreed
6. Acknowledge the input of experienced employees when making decisions.	4.48	.55	Agreed
7. Show concern about issues that affect employees.	3.93	.69	Agreed
8. Respect employees' opinions in their areas of operations	3.84	.69	Agreed
9. Regularly holding meetings where grievances' are shared and resolved.	3.83	.69	Agreed
<b>Cluster Mean</b>	<b>4.10</b>		<b>Agreed</b>

Data analysis in Table 1 shows a cluster mean of 4.10 which indicate that the managers agreed on all the employee relation practices applied in small and medium scale enterprises in Anambra State. Item by item analysis shows that items 2, 3 and 5 with mean scores ranging from 4.51 to 4.53 are the employee relation practices strongly agreed to by managers of SMEs, while items 1, 4, 6, 7, 8 and 9 with mean scores ranging from 3.83 to 4.48 are the employee relation practices agreed to by managers of SMEs. Only item 38 with mean score of 3.40 is the employee relation practices moderately agreed to by SME managers'. The standard deviations of 0.50 to 0.69 are within the same range showing that SME managers' are not wide apart in their responses.

**Hypothesis 1:** There is no significant difference in the mean responses of managers of small and medium enterprises in Anambra State on the employee relations practices they adopt in their enterprises.

**Table 2: Summary of t-test result on the employee relation practices of managers of small and medium enterprises**

Employee relations	N	$\bar{X}$	SD	df	P-value	Decision
Small	202	4.15	0.23	296	.826	Not significant
Medium	96	4.16	0.24			

Result in Table 2 shows that there is no significant difference in the mean responses of managers of small and medium enterprises in Anambra State on the employee relation practices they adopt in their enterprises. This is shown by the p-value of .826, which is greater than the significant level of 0.05. This shows that there is no significance difference in the mean responses of SMEs managers. Therefore, the null hypothesis of no significant difference between the two groups is accepted.

**Hypothesis 2:** There is no significant difference in the mean responses of managers of small and medium enterprises in Anambra State on the employee relations practices they adopt in their enterprises based on years of experience.

**Table 3: Summary of analysis of variance on the mean responses of SME's managers on the employee relation practices adopted based on years of experience**

Source of variance	Sum of Squares	df	Mean Square	F	P-value	Decision
Between Groups	9.477	2	4.779	1.072	.344	Not significant
Within Groups	1308.474	295	4.455			
Total	1318.032	297				

Data analysis presented in Table 3 shows that there is no significant difference among the three groups in terms of their mean responses on the employee relation practices they adopt in their enterprises based on years of experience (5 years and below, 6 -10 years and above 10 years), as the F-ratio (2, 295) is 1.072 and *P-value* (.344) is greater than the stipulated 0.05 level of significance. Therefore, the null hypothesis is accepted.

### Discussion

The results of the study revealed that managers agreed on the employee relation practices they adopted in their small and medium scale enterprises in Anambra State. The findings of the study agrees with the findings of Saira (2016) who stated that employee involvement show a positive relationship which implies that managers of SMEs agreed that human resource practices had an impact on employees performance. Also Awe, Shabi and Tugbobo (2016) reported that managers agreed that employee relation and involvement have important role to play in. productivity, innovations, performance, growth and competitiveness of SMEs sector. Employee relation and contribution influence employee’s performance positively. Empowering the employees by involving them in decision making contribute to the success of organization as it increases the productivity, saves time for decision making, lowers the gap between supervisor and subordinates, encourages a strong sense of teamwork among workers.

The results of the first hypothesis indicated that there was no significant difference in the mean responses of managers of small and medium enterprises in Anambra State on the employee relation practices they adopted in their enterprises. Also the second hypothesis revealed that there was no significant difference in the mean responses of managers of small and medium enterprises in Anambra State on the employee relation practices they adopted in their enterprises based on years of experience. This disagrees with the findings of Saira (2016) and Awe, Shabi and Tugbobo (2016) which indicates that there is significant difference at employee performance in organization.

### Conclusion

Based on the findings of the study, it is clear that Human Resource Management (HRM) practices (employee relations) increases the employee’s performance and productivity, so the managers of SMEs should implement these practices to achieve the desired goals. The organizations should utilize a variety of reward and recognition programs to drive behavior that promotes high performance. SME managers should revise their human resource policies by keeping in view the above factors in order to attain the targeted goals.

### Recommendations

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



1. Management of SMEs should value the contribution and ideas shared by employees and empower employees to maximize their individual talents in order to make effective decisions.
2. Managers of SMEs' in Anambra State should embark on capacity building of members to ensure better understanding of the relevance of human resource practices on organizational growth and performance. This could be achieved by collaborative efforts with relevant educational institutions, government agencies and consultants through the organization of seminars, workshop, conferences and training programmes for both the managers and employees of the organizations.

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## IMPLEMENTERS' RATINGS OF RESOURCE CHALLENGES FACING OFFICE TECHNOLOGY AND MANAGEMENT PROGRAMME IN POLYTECHNICS IN SOUTH-EAST, NIGERIA

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### Abstract

*This study on implementer's ratings of resource challenges facing Office Technology and Management (OTM) programme in polytechnics in South-East, Nigeria, was necessitated by the need to enhance the quality and product of the programme. Four research questions guided the study and four hypotheses were tested. The study adopted a descriptive survey research design. The population of the study comprised 92 OTM lecturers in all the six polytechnics offering OTM programme in South-East, Nigeria. The entire population was used for the study because the size was small and manageable; therefore, there was no sampling. A self structured questionnaire was developed by the researcher titled "Questionnaire on Resource Challenges facing Office Technology and Management Programme". The instrument was face validated by three experts. The instrument was trial tested using Cronbach Alpha to calculate the internal consistency of the instrument and an overall reliability index of 0.83 was obtained. Arithmetic mean and standard deviation was used to answer the research questions, while t-test was used to test the null hypotheses at 0.05 level of significance. The findings of the study revealed that the implementers strongly agreed that resource challenges facing OTM programme in the South-East, Nigeria include: ICT, material, human and instructional resources. Furthermore, institution ownership significantly influenced implementers' ratings on human resource challenges only. Based on these findings, it was recommended among others that modern ICT equipment and facilities required in teaching Office Technology and Management courses should be adequately provided to enhance teaching and learning in OTM programme.*

**Key Words:** implementers, ratings, resource challenges, office technology & management, programme

### Introduction

Office Technology and Management Programme (OTM) as a course of study in polytechnics is recognized as a tool for economic and social empowerment of any nation. Office Technology and Management (OTM) was designed to replace the Secretarial Studies offered in Nigerian polytechnics (FRN, 2013). Office Technology and Management (OTM) became the new name for the former Secretarial Studies programme offered in Nigerian polytechnics as approved in 2004 by the National Board for Technical Education (NBTE) which is the supervisory body for polytechnics in Nigeria.

Sequel to the change in the programme title, the Secretarial Studies curriculum was reviewed and improved upon based on developments in technology and the need for improvement in the way things are done for societal development. It was based on these needs that the NBTE embarked on a comprehensive review of all minimum guide curricula from 2001 which sought to radically transform the polytechnic programmes to meet new technological and socio-economic trends and demands of the world of work. In this regard, Ojukwu (2009) observed that the objectives, theoretical and practical contents of the current OTM curriculum aim at making graduates of the programme fit for effective work performance in this present world of technology.

Following the changes in the curriculum and the nomenclature of the programme, more emphasis and importance is now placed on the skill acquisition as the focal point in word processing, spreadsheet and other ICT-related skills (Baba & Akarahu, 2012). OTM is used as a comprehensive term referring to those aspects of the educational process involving general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life.

Office Technology and Management programme is run at National Diploma (ND) and Higher National Diploma (HND) levels. The aim is to equip students with vocational skills in the field of socio-psychological work skills for employment in various areas of endeavour. This is in line with FRN (2013) which provided that education has the aim of equipping students with appropriate skills, abilities and competencies both mental and physical to enable them to live in and contribute to the development of the society. In the same vein, Adelakin (2009) posited that the OTM programme was designed for two major reasons; first, as a response to the yearnings of the secretarial studies students and practitioners on the need to change the name of the programme which seem to make only suitable for the traditional office environment. Secondly and most importantly, as a result of the change in the curriculum with more emphasis on Information and Communication Technology (ICT) and management in order to enrich students' knowledge and equip them with skills needed in today's office environment.

The aim of the OTM programme, according to Dolor in Ogheneovo, (2013), is to impart skills, knowledge and competencies, which make the beneficiaries self-reliant. However, polytechnics in Nigeria and South-East in particular still seem to fail in the actualization of this over-arching programme. The goal of the government is to make efforts to ensure high quality delivery system in polytechnic education for the benefit of the learners and the larger society. Polytechnics in Nigeria in general and South-East Nigeria in particular are not merely a different set of institution of higher learning, as they are not just the hub of learning and research but also institutions where technological knowledge and skills are acquired for direct application in solving the problems of the society (Azuka in Okey-Colbert, 2017). However, it seems that these polytechnics are still far from achieving the goals and objectives of OTM programme as stipulated in the Federal Republic of Nigeria (FRN 2013) due to different implementation challenges.

Implementers are a group of persons that are assigned to guide written document that stipulate methods that could be used to attain intended goals at the end of the programme (Jadhav & Patankar, 2013). Carl (2009) viewed programme implementers as designated people that are usually involved in the process of creating planned syllabus, teaching, training and exhibition modes. In the context of this study, programme implementers are a set of knowledgeable, experienced and competent persons that take the responsibility of introducing

the curriculum in the classroom. They are OTM educators in polytechnics responsible for teaching and learning delivery. According to Ejiofor in Amaiya (2014), the teachers as the implementers of curriculum, innovators and custodians of knowledge always require appropriate training, facilities, tools and motivation for effectiveness and technological advancement. Where these resources are lacking or inadequate the implementers may not function as required for effective implementation, hence, the realization of programme objectives will be limited by these resource challenges.

Resources are basic requirements that aid and facilitate effective teaching and learning. According to Ibitoye in Ogundele (2015), resources are those types of human and financial variables that are put in place towards enhancing effective instructional delivery. Examples of resources in OTM programme according to Ogundele include computer facilities, consumable materials and infrastructure (classrooms, lecture theatres, libraries, and workshops). Furthermore, Onyesom and Okolocha (2013) posited that resources are those basic requirements that aid and facilitate effective teaching and learning. More so, resources are those materials or services that facilitate teaching and learning in schools. Unavailability or inadequacy of resources poses a great challenge to OTM programme implementation.

Challenge refers to issues bedeviling pre-determined goals and objectives (Manabete & Makinde, 2016). This is why Ugwuanyi and Eze in Ogheneovo (2013) asserted that OTM as an academic programme can only be effectively implemented with adequate resources. Ugwuanyi and Eze further held that the major resource challenge facing OTM programmes in polytechnics in Nigeria include ICT and human resources. Others include instructional, infrastructural and material resources.

Resource challenges are impeding factors to the development of OTM programmes. Resources are fundamental and potent factors in any organization. According to Owueye and Tara (2011), resources are seen as educational resources that are vital determinant of academic achievement. Resources in education are those basic requirements that aid and facilitate effective teaching and learning. Resource challenges are obstacles that hinder both human and non-human materials such as site buildings, machines, laboratory and its equipment, learner's tools for the purpose of administration, teaching and learning and research processes (Mmou & Olutola, 2000).

According to Onyesom and Okolocha (2013), resource challenges are those basic requirements that are lacking to aid and facilitate effective teaching and learning. In the view of Manabete and Makinde (2016), resources are those materials or services that are not in place so as to facilitate teaching and learning in schools. This suggests that resources are very important in view of its role in the achievement of educational objectives and goals. In the context of this study, resource challenges refer to lack or inadequacy of all forms of instructional resources (human, equipment and materials) that could aid OTM instructors/lecturers in effective curriculum implementation.

Office Technology and Management (OTM) is defined as a programme of instruction aimed at developing skills, knowledge and understanding that are necessary to facilitate business information control and processing (Osuala, 2009). According to Eneche and Audu (2014), OTM is an educational programme that imparts the skills of planning, organizing, directing and controlling office activities to ensure that various resources (human and materials) are put into optimal utilization so as to achieve the aim of an organisation. OTM is a new nomenclature for

secretarial studies programme in polytechnics in Nigeria. This change and new design was an initiative of the National Board for Technical Education (NBTE) (2004) to replace the Secretarial Studies programme offered in Nigerian polytechnics.

Office Technology and Management (OTM) is used as a comprehensive term referring to those aspects of the educational process involving general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life (Atueyi, 2010). In the context of this study, OTM is education designed to develop skills, abilities, understanding, attitudes, work habits and appreciation encompassing knowledge and information needed by workers to enter and make progress in employment on a useful and productive basis.

### **Statement of the Problem**

The new OTM programme in Nigerian polytechnics is an improvement of the old Secretarial Studies programme. The ND and HND programmes were expanded with the inclusion of professional courses which are computer-based with higher practical units. Following the development of OTM, lecturers are expected to equip students with relevant competencies to assure quality in the programme. This would enable graduates to effectively and efficiently produce office documents and reports using such applications as word processor, spreadsheet, graphics, access and internet for office operations and communication through the knowledge of web pages, among others.

The researcher's personal experience in form of observations and interactions with OTM stakeholders which included: lecturers, instructors, students, and OTM graduates as well as employers of labour in South-East, Nigeria, in her more than ten years of working as a Secretary, indicated that the performance of OTM graduates in the world of work are below expectation. Majority of the OTM graduates will not produce a mailable or useable document with little or no supervision. Some of them have great phobia for computer. They lose their courage whenever there is need to use Microsoft Excel, PowerPoint, PDF, internet, etc to process, store, share and distribute information, knowledge and ideas. This situation of OTM graduates in South-East, Nigeria could be as a result of diverse resource challenges in the implementation of the curriculum. Such resources could be technological, human material, instructional and among others. In a situation where all or some of these resources are inadequately supplied quality of teaching and learning will be compromised and graduates will lack requisite competencies for success in employment. The situation on resource challenges for OTM programme implementation in polytechnics in South-East, Nigeria is not clear, hence this study on implementers' rating of resource challenges facing OTM programme in polytechnics in South-East, Nigeria. This will reveal the areas of inadequacy to provide relevant stakeholders with empirical evidence for objective remedial actions.

### **Objectives of the Study**

The main purpose of the study is to ascertain the ratings of implementers on resource challenges facing OTM programme in polytechnics in South-East, Nigeria. In specific terms, the study seeks to determine OTM programme implementers' rating of:

1. Information and Communication Technology (ICT) resource challenges facing Office Technology and Management programme in polytechnics in South-East, Nigeria.
2. Material resource challenges facing Office Technology and Management programme in polytechnics in South-East, Nigeria.

3. Human resource challenges facing Office Technology and Management programme in polytechnics in South-East, Nigeria.

### **Research Questions**

The following research questions guided the study.

4. What is the rating of implementers on Information and Communication Technology (ICT) resource challenges facing Office Technology and Management programme in polytechnics in South-East, Nigeria?
5. What is the rating of implementers on material resource challenges facing Office Technology and Management programme in polytechnics in South-East, Nigeria?
6. What is the rating of implementers on human resource challenges facing in the Office Technology and Management programme in polytechnics in South-East, Nigeria?

### **Hypotheses**

The following null hypotheses were tested at 0.05 level of significance:

1. There is no significant difference between the mean ratings of implementers from federal and state owned polytechnics on Information and Communication Technology (ICT) resource challenges facing Office Technology and Management programme in polytechnics in South-East, Nigeria.
2. There is no significant difference between the mean ratings of implementers from federal and state owned polytechnics on material resource challenges facing Office Technology and Management programme in polytechnics in South-East, Nigeria.
3. There is no significant difference between the mean ratings of implementers from federal and state owned polytechnics on human resource challenge faced in Office Technology and Management programme in polytechnics in South-East, Nigeria.

### **Methodology**

The study adopted descriptive survey research design. This is considered appropriate for the study because it involves gathering the opinions of a given population with the use of a questionnaire to arrive at the decision on resource challenges facing Office Technology and Management (OTM) programme. The study was carried out in the polytechnics in the South-East region of Nigeria. The choice of this area for the study was informed by the widespread reports of resource challenges affecting the standard of education especially in the polytechnics. The population of the study comprised of ninety two (92) OTM lecturers in all the six (6) polytechnics offering Office Technology and Management programme in the South-East, Nigeria namely: Abia State Polytechnic 14, Imo State Polytechnic 14, Federal Polytechnic Oko 22, Federal Polytechnic Uwana 16, IMT 7 and Federal Polytechnic Nekede 19.. The entire population was used for the study because the size is small and manageable; therefore, there was no sampling.

Data for the study was collected by using a structured questionnaire developed by the researcher, after extensive review of literature and consultation with experts in the field. The instrument was titled "Questionnaire on Resource Challenges facing Office Technology and Management Programme". It has two main sections of A and B. Section A contained two items on the personal data of the respondents, while Section B was split into clusters B1-B4, with 39

questionnaire items. This section was also structured on a four point scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). The face validity of the instrument was established using the opinions of three experts, two were Business Educators from the Department of Technical and Vocational Education; and one in Educational Measurement and Evaluation from the Department of Educational Foundations, all in the Faculty of Education, Nnamdi Azikiwe University, Awka. The reliability of the instrument was ascertained by administering the instrument to twenty (20) OTM lecturers in Delta State Polytechnic, Ogwashi-Uku, which was not part of the population of the study. Cronbach Alpha was used to calculate the internal consistency of the instrument and reliability values of 0.89, 0.78, and 0.74 were obtained for clusters B1 – B3 respectively. The overall reliability index of was 0.80 which considered high enough.

Copies of the questionnaire were administered personally by the researcher with the help of four research assistants. A total of 88 copies of the questionnaire were retrieved, this represented a return rate of 96 percent. Arithmetic mean was used to answer the research questions and standard deviation was used to determine the homogeneity or otherwise of the respondents' mean scores. However, t-test was used to test the null hypotheses at 0.05 level of significance. Where the p-value is less than the alpha level ( $p < 0.05$ ), the null hypothesis was rejected but where it is equal to or greater than the alpha level ( $p \geq 0.05$ ), the null hypothesis was accepted. The analysis was done with the Statistical Package for Social Sciences (SPSS) version 23.

**Results/Findings**

**Research Question 1:** What is the rating of implementers on Information and Communication Technology (ICT) resource challenges facing Office Technology and Management (OTM) programme in polytechnics in South-East Nigeria?

**Table 1: Respondents' mean ratings on Information and Communication Technology (ICT) resource challenges facing Office Technology and Management (OTM) programme in polytechnics in South-East Nigeria**

S/N	Item Statements	X	SD	Remarks
1	Poor utilization of e-learning	3.63	0.49	Strongly Agree
2	Inadequate number of computer systems	3.47	0.50	Agree
3	Inadequate ICT facilities	3.36	0.48	Agree
4	Inadequate ICT infrastructures	3.45	0.50	Agree
5	Non functional ICT equipment	3.51	0.47	Strongly Agree
6	Insufficient printers	2.41	0.61	Disagree
7	Lack of internet access for students and lecturers	3.39	0.59	Agree
8	High cost of acquisition and maintenance of ICT facilities	3.57	0.53	Strongly Agree
9	Inadequate time allocated for ICT-related instructions, training and practice	3.07	0.67	Agree
10	Haphazard integration of ICT into OTM curriculum	3.35	0.55	Agree
<b>Cluster Mean</b>		<b>3.32</b>		<b>Agree</b>

Table 1 revealed that the respondents disagreed with only one item with the mean score of 2.41. This means that printers are sufficiently available and is not a resource challenge facing Office Technology and Management (OTM) programme in polytechnics in South-East, Nigeria.

The remaining nine items with mean ratings ranging between 3.07 and 3.63 indicated that the respondents agreed that they were ICT resource challenges facing Office Technology and Management programme. The cluster mean of 3.32 indicate that OTM programme in polytechnics in South-East, Nigeria is faced with several ICT resource challenges. The standard deviation scores ranging from 0.47 – 0.67 are within the same range showing that the respondents are homogenous in their views.

**Research Question 2:** What is the rating of implementers on material resource challenges facing Office Technology and Management (OTM) programme in polytechnics in South-East Nigeria?

**Table 2: Respondents’ mean ratings on material resource challenges facing Office Technology and Management (OTM) programme in polytechnics in South-East Nigeria**

S/N	Item Statements	X	SD	Remarks
11	Dearth of modern equipment like photocopy machines, stapler, stapling pin etc	3.45	0.54	Agree
12	Insufficient provision of white board marker in classrooms	2.32	0.64	Disagree
13	Insufficient computer ink and paper	3.06	0.72	Agree
14	Insufficient provision of white boards in classrooms	3.39	0.66	Agree
15	Inadequate laboratories and classrooms	3.46	0.59	Agree
16	Consumable materials are not supplied	3.50	0.64	Strongly Agree
17	Epileptic power supply	3.52	0.71	Strongly Agree
18	Inadequate supply of office machine equipment	3.47	0.79	Agree
19	High cost of purchasing material resources	3.15	0.68	Agree
20	High cost of maintaining material resources	3.36	0.65	Agree
<b>Cluster Mean</b>		<b>3.27</b>		<b>Agree</b>

Data in Table 2 revealed the respondents disagreed with only one item with the mean score of 2.32. This means that white board marker is sufficiently available and not a resource challenge facing Office Technology and Management (OTM) programme in polytechnics in South-East Nigeria. The remaining nine items with mean ratings ranging between 3.06 and 3.52 indicated that the respondents agreed that there were material resources facing Office Technology and Management programme. The cluster mean of 3.27 indicate that Office Technology and Management programme in polytechnics in South-East, Nigeria is faced with several material resource challenges. The standard deviation scores ranging from 0.54 – 0.79 are within the same range showing that the respondents are homogenous in their views.

**Research Question 3:** What is the rating of implementers on human resource challenges faced in the Office Technology and Management (OTM) programme in polytechnics in South-East, Nigeria?

**Table 3: Respondents’ mean ratings on human resource challenges faced in the Office Technology and Management (OTM) programme in polytechnics in South-East, Nigeria**

S/N	Item Statements	X	SD	Remarks
21	Inadequate number of qualified academic staff	3.53	0.50	Strongly Agree



22	Poor system of staff recruitment	3.50	0.71	Strongly Agree
23	Inadequate leadership skills	3.38	0.61	Agree
24	Shortage of qualified computer technologists	3.29	0.73	Agree
25	Absence of orientation for newly recruited academic staff	2.36	0.98	Disagree
26	Inadequate number of academic staff	3.19	0.80	Agree
27	Shortage of skilled ICT technologists	3.44	0.68	Agree
28	Poor supervision	3.43	0.65	Agree
29	Lack of required competencies in the utilization of ICT resources	3.36	0.73	Agree
30	Lack of motivation for ICT instructors	3.34	0.64	Agree
31	Lack of incentives for ICT instructors	3.37	0.66	Agree
32	Poor mentoring on ICT usage	3.34	0.64	Agree
<b>Cluster Mean</b>		<b>3.29</b>		<b>Agree</b>

Table 3 revealed that the respondents disagreed with only one item with the mean score of 2.36. This means that there is sufficient orientation for newly recruited academic staff and is not a resource challenge in Office Technology and Management (OTM) programme in polytechnics in South-East, Nigeria. The remaining eleven items with mean ratings between 3.19 and 3.53 indicated that the respondents agreed that there were human resource challenges facing Office Technology and Management programme. The cluster mean of 3.29 indicated that Office Technology and Management (OTM) programme in polytechnics in South-East, Nigeria is faced with several human resource challenges. The standard deviation scores ranging from 0.50 – 0.98 are within the same range showing that the respondents are homogeneous in views.

#### Hypothesis 1

**Table 5: Summary of t-test analysis of the significance of difference in the mean ratings of respondents from federal and state owned polytechnics on Information and Communication Technology (ICT) resource challenges facing Office Technology and Management programme in polytechnics in South-East, Nigeria**

Variables	N	X	SD	Df	p-value	α-value	Remark
Federal	49	34.86	1.99	86	0.876	0.05	Not significant
State	39	34.92	1.94				

Data in Table 5 showed that the p-value of 0.876 with 86 degree of freedom and  $\alpha$  - value of 0.05. Since the p-value of 0.876 is greater than the alpha level of 0.05 ( $0.876 > 0.05$ ), This indicates that there is no significant difference between the mean ratings of respondents from federal and state owned polytechnics on Information and Communication Technology (ICT) resource challenges facing Office Technology and Management programme in polytechnics in South-East, Nigeria. Therefore, the null hypothesis is not rejected.

#### Hypothesis 2

**Table 6: Summary of t-test analysis of the significance of difference in the mean ratings of respondents from federal and state owned polytechnics on material resource challenges facing Office Technology and Management programme in polytechnics in South-East, Nigeria**

Variables	N	X	SD	Df	p-value	α-value	Remark
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Federal	49	34.55	3.11	86	0.439	0.05	Not significant
State	39	35.05	2.85				

Data in Table 6 showed that the p-value of 0.439 is greater than the alpha level of 0.05 ( $0.439 > 0.05$ ). This indicates that there is no significant difference between the mean ratings of respondents from federal and state owned polytechnics on material resource challenges facing Office Technology and Management programme in polytechnics in South-East, Nigeria. Therefore, the null hypothesis is not rejected.

### Hypothesis 3

**Table 7: Summary of t-test analysis of the significance of difference in the mean ratings of respondents from federal and state owned polytechnics on human resource challenges facing Office Technology and Management programme in polytechnics in South-East, Nigeria**

Variables	N	X	SD	Df	p-value	α-value	Remark
Federal	49	40.86	4.47	86	0.782	0.05	Not significant
State	39	40.59	4.49				

Data in Table 7 showed that the p-value of 0.782 is greater than the alpha level of 0.05 ( $0.782 > 0.05$ ). This indicates that there is no significant difference between the mean ratings of respondents from federal and state owned polytechnics on human resource challenges facing Office Technology and Management programme in polytechnics in South-East, Nigeria. Therefore, the null hypothesis is not rejected

### Discussions of Findings

#### Information and Communication Technology (ICT) resource challenges facing Office Technology and Management (OTM) programme in polytechnics

The findings revealed that implementers agreed that several ICT resource challenges are facing the programme in polytechnics in South-East, Nigeria. This finding implies that there still exists dearth of ICT resource challenges in OTM programme in polytechnic. These challenges include poor utilization of e-learning, inadequate computers, ICT facilities, infrastructure and equipment. This finding supported that of Amiya (2013) that ICT resources such as projector, teleconferencing, cybercafé, lack of access to ICT resources, shortage of skilled ICT educators among others were challenges for effective utilization of ICT in teaching and learning in OTM programme. The researcher believed that the reason why this situation is still as it was in 2013 when it comes to ICT resource challenges facing OTM programme in polytechnics could be as a result of the management of the polytechnics not been able to implement the budgetary allocation meant to procure these ICT resources.

Furthermore, findings revealed that gender did not significantly influence the mean ratings of the implementers on ICT resource challenges facing OTM programme in polytechnics in South East Nigeria. This finding agrees with that of Amiaya (2015) that there was no significant difference between the mean responses of male and female OTM educators on the challenges that hinder the effective utilization of ICT in the programme in polytechnics in South-South, Nigeria. On this aspect, the issue of gender did not affect the resource availability and utilization, but rather the leadership styles of the implementers of the programme can only be the determinant. So, the issue of gender is not a critical aspect of the programme implementation.

The finding, however, disagrees with Amiaya (2015) that there was significant difference in the mean response of OTM educators on the challenges that hinder the effective utilization of ICT in the programme in polytechnics in South-South based on institution ownership (federal and state). The variation in the difference could be as a result of different opinions of OTM educators based on geographical location. This could be as a result of fact the federal owned polytechnics receive more budgetary allocation and higher priority placed on making sure that these ICT resources are evenly distributed among the states in the federation than in the state owned institutions where ICT resources are provided by the state government where the polytechnic is situated.

#### **Material resource challenges facing Office Technology and Management (OTM) programme in polytechnics**

The findings revealed that implementers agreed that several material resource challenges are facing OTM programme in polytechnics in South-East, Nigeria. This means that material resource such as modern equipment, computer facilities, maintenance of material resources are lagging in OTM programme in polytechnics. This therefore calls for the need of these resources to be adequately catered for. This finding supports that of Tetty (2016) that most community secondary schools in Rombo District suffered shortage of essential teaching and learning materials such as inadequate supply of office equipment, insufficient provision of white boards in the classrooms, low maintenance culture of materials. This finding also supported the finding of Chonjo (2014) that performance could be attributed to adequate teaching and learning materials and equipment that are in school. In order words, the findings could be interpreted to mean that most primary schools that possess adequate teaching and learning materials such as textbooks, charts, pictures, real objects for students to see, stand a better chance of performing well in examination. Based on these findings, it is noteworthy that teaching and learning process at different cadre faces dearth of materials that are required for effective teaching delivery.

Furthermore, the findings revealed that gender did not significantly influence the mean ratings of the implementers on material resource challenges facing OTM programme in polytechnics in South-East, Nigeria. This finding also disagrees with the finding of Tetty (2016) that there is a significant difference in the mean ratings of male and female on the role of material resources in academic performance in community secondary schools in Rombo District, Tanzania. Similarly, this finding was not in line with the finding of Chonjo (2014) that there is a significant difference in the mean ratings of male and female teachers on physical facilities and teaching and learning materials in primary schools in Tanzania. The opposition in both finding could be as a result of change of respondents and geographical location.

More so, the finding revealed that institution ownership did not significantly influence the mean ratings of implementers on material resource challenges facing Office Technology and Management programme in polytechnics in South-East, Nigeria. This finding disagrees with the

finding of Chonjo (2014) that physical facilities and teaching and learning materials in primary schools in Tanzania significantly differ in terms of public and private schools in primary school in Tanzania. One of the major reasons for the variation in the finding could be as a result of change in location.

### **Human resource challenges faced in the Office Technology and Management (OTM) programme in polytechnics**

The finding revealed that implementers agreed that several human resource challenges are facing OTM programme in South-East, Nigeria. This finding implies that manpower challenges such as poor recruitment process, inadequate number of academic staff, lack of motivation, lack of required competencies in the utilization of ICT resources and others still persist in OTM programme in Polytechnics. These challenges therefore call for proper attention on policies for recruitment, leadership skills of staff, skilled ICT personnel, supervisory levels, and proper remuneration of ICT usage. This finding supports that of Chukwuma (2015) that human resources management practices in Innoson Motors were not adequate; staff did not receive training on the job they are doing; the company has not developed a system and process to disseminate knowledge to its local (Nigerian) staff. Moreover, this finding supports the finding of Ologunde and Ajao (2013) that lack of competitive and performance based compensation packages by management and low level of organizational commitment by employees were the prominent challenges encountered in the application of human resource management practices by firms in the agro-allied sector.

Furthermore, this finding revealed that gender significantly influenced the implementers' mean ratings on human resource challenges facing Office Technology and Management programme in polytechnics in South-East, Nigeria. This finding disagrees with that of Okoli and Okeke (2018) that there is no significant difference in the mean ratings of male and female owners of SMEs on the extent they adopt human resource management for business success. The variation of both findings could be as a result of different respondents of both studies. Finally, the finding revealed that institution ownership significantly influenced the mean responses of implementers on human resource challenges facing Office Technology and Management programme in polytechnics in South-East Nigeria. It is the view of the researcher that federal owned institutions seem to employ the best human resources from different parts of the federation to handle the OTM programme in the institutions thereby improving efficiency and effectiveness. Meanwhile, in the state owned institutions, it could be seen that the best human resources are not engaged to handle the OTM programme, as a result of sentiments, parochial interest and favouritism arising from political party loyalty.

### **Conclusion**

Findings of the study showed that Office Management and Technology programme in polytechnics in South-East, Nigeria are faced with several ICT, material and human resource challenges. Based on these findings, it was concluded that the government and other stakeholders are not paying sufficient attention to the programme to enhance the quality of its products.

### Recommendations

Based on the finding and conclusion of the study, the researcher proffers the following recommendations:

1. OTM implementers should enroll for training and retraining programmes, conferences, seminars, workshops and academic programmes in institutions to update and upgrade themselves as well as gain relevant knowledge on human resource practices for effective implementation of the OTM Curriculum.
2. Management of polytechnics in the South-East Nigeria should ensure that qualified OTM staff and skilled ICT technologist are employed; opportunity for further training should be available to programme implementers. Moreover, institutions should ensure that available resources are properly maintained.
3. Government should adequately provide modern ICT resources required to teach OTM courses to enhance teaching and learning. This is critical because the courses are ICT resource-based and cannot be effectively taught without the relevant resources in the right quantity and quality.
4. National Board for Technical Education (NBTE) as the body charged with the responsibility of accrediting and de-accrediting programme of study in the polytechnics should insist on adequate provision of material resources before OTM programme is accredited.

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## OFFICE EQUIPMENT MANIPULATION AND HUMAN RELATIONS SKILLS TRAINING NEEDS OF SECRETARIES OF PUBLIC ESTABLISHMENTS IN ANAMBRA STATE

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### Abstract

*The study determined office equipment manipulation and human relations skills training needs of secretaries of public establishments in Anambra State. Two research questions guided the study and six hypotheses were tested at 0.05 level of significance. The descriptive survey design was used in the study. The population of the study comprised 89 secretaries in public establishments in Anambra State. The instrument for data collection was a structured questionnaire. The instrument was validated by three experts. A pilot test was conducted to ascertain the reliability of the instrument. Test of reliability on the instrument with Cronbach Alpha yielded coefficient values of 0.75 and 0.77. The data collected were analyzed using mean and standard deviation and inferential statistics (ANOVA and t-test). Findings revealed that the respondents needed training in equipment manipulation skills and human relations skills. Furthermore, the findings revealed that gender, educational qualifications and years of experience of the respondents did not significantly influence their mean ratings on the training needs of secretaries in public establishments in Anambra State. The researcher concludes that secretaries public establishments in Anambra State need training to develop their equipment manipulation and human resource skills. It was recommended among others, that administrators of public establishments should ensure that office equipment tools and facilities are readily made available for secretaries.*

**Keywords:** Office Equipment Manipulation, Human Resource, Skills, Secretaries, Public Establishment

### Introduction

The advent of technology has revolutionised the way business activities are conducted; this has brought about drastic changes in the conduct and processes in a modern office which has created a gap in the abilities of secretaries to meet up with the demands of the modern office environment. This has necessitated the need for secretaries to keep abreast with current technology as it affects office procedures and operations. The emergence of sophisticated office technology equipment like computers, word processors and other information technology resources coupled with new management techniques have completely changed the nature and scope of office work and business operations. Atakpa (2010) observed that secretarial functions everywhere in the world have experienced a lot of changes as functions that were previously done manually have been digitalized and automated. It is expected that secretaries are equipped with skills to meet with the demands of the modern office.

A secretary is as an individual who has undergone general education and has passed through a prescribed programme of training with appropriate skills, attitudes and competencies required for assuming roles in an office (Obi, 2012). Ugiagbe in Okpokwasili (2018) defined a

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secretary as an assistant to an executive, possessing an impressive mastery of office skills and ability to assume responsibility without direct supervision and who displays initiative and exercises judgement and makes decisions within the scope of his/her authority. This means that secretaries are required to use sophisticated office machines/equipment in setting up an information system architecture that would enable them to carry out their office duties efficiently and productively. Owen (2011) opined that every secretary has the responsibility of up-dating and acquiring appropriate skills that are relevant for office information development and dissemination. However, it has been suggested that some secretaries might lack the competencies needed for the operation of a printing machine, using fax machines and using online processing systems to carry out office tasks (Onamade & Adebayo, 2012). The lack of office manipulation competencies among secretaries seem to have resulted from mismatch between the provisions of the curriculum and office practices.

According to Ezenwafor (2013), the curriculum of office education programme is deficient in tertiary institutions in Nigeria. This curriculum deficit according to Ezenwafor (2013) seems to have resulted in the production of half-baked and poor graduates who cannot perform effectively and efficiently in the world of work. The above situation may have risen because of the mismatch between what is taught in school and what is expected at work. Ezenwafor and Okeke (2011) averred that for secretaries to be able to adapt to the current changes in the modern office they need to possess office equipment manipulation skills and human relations skills. It is therefore imperative that the office equipment manipulation and human relations skills training needs of secretaries in public establishments in Anambra State are assessed so as to determine the areas they need training.

Office equipment manipulation skills involve the ability of secretaries to use office gadgets and machines in carrying out office works. Office equipment manipulation skills according to Ezenwafor and Okeke (2011) have to do with the use of Information and Communication Technology (ICT) tools and gadgets in carrying out office works. Similarly, Okpokwasili (2018) averred that ICT is an umbrella of interconnected technological components that are used to collect, process, and store as well as disseminate information to support decision making in any organization. The information systems technically are a set of interrelated components that are used to collect (or retrieve), process, store, and distribute information to support decision making, coordination and control, in any organization. According to Okeke (2013), a secretary in a modern office is expected to be a professional in the use of information technology tools which includes the ability to manipulate hardware, software, database and communication to insert, process, bring out and manage information needed for efficient work. In essence the secretary is expected to be a very professional individual who has the appropriate human relation skills necessary for effective and efficient work process.

Human relations skills or interpersonal relation skills are those skills a secretary needs in order to communicate effectively with other staff or a group of people. These skills are usually referred to as 'soft skills' which help people work willingly in a team (Hagie & Dickson cited in David, 2015). Human relations skills is defined as being associated with a person emotional intelligence which represents the personal trait, social, grace, friendliness and optimism that characterize relationship with other people. Human relations skills complement the hard skills (office equipment manipulation skills) and they are used mostly for the success of any institution. Similarly, it has been suggested that the training needs of secretaries in public



establishment could be dependent on factors relating to their gender, educational qualifications and their years of experience on the job.

According to Onamade and Adedayo (2012), there is significant difference between the mean scores of male and female respondents on the skills need of secretaries. Similarly, Okolocha and Baba (2017) stated that the level of educational attainment could significantly influence the training needs of secretaries. This situation can also be influenced by years of experience. According to Emeasoba (2014), years of experience did not influence secretaries training needs. However, Sarwoko et al (2013) noted that years of experience can influence the acquisition of skills and competences. However, these views are theoretical assumptions and have not been empirically proven to be the case with secretaries in Anambra State. It is against this background that the researcher assessed the office equipment manipulation and human relations skills training needs of secretaries in public establishment in Anambra State.

### **Statement of the Problem**

The inability of some secretaries to demonstrate the requisite office management skills appear to slow down the work process in most public establishments. This seems to be evident in cases where secretaries in some of the establishment address visitors rudely, ignore greetings and in some cases curse or abuse aggrieved clients/visitors. This points to lack equipment manipulation and interpersonal relations skills among the secretaries in public establishments in the State.

### **Purpose of the Study**

The main purpose of the study is to determine the office equipment manipulation and human relations skills training needs of secretaries in public establishment in Anambra State. Specifically, the study determined the level of training:

1. Secretaries in public establishments in Anambra State need training in office equipment manipulation skills.
2. Secretaries in public establishments in Anambra State need training in office human relations skills.

### **Research Questions**

The following research questions guided the study:

1. What level of training do secretaries in public establishment in Anambra State need in office equipment manipulation skills?
2. What level of training do secretaries in public establishment in Anambra State need in human relations skills?

### **Hypotheses**

The following null hypotheses were tested at 0.05 level of significance:

1. Male and female secretaries in public establishments in Anambra State do not significantly differ in their mean ratings on the level of training they need in office equipment manipulation skills.
2. There is no significant difference in the mean ratings of secretaries in public establishments in Anambra State on the level of training they need in office equipment manipulation skills based on educational qualification (OND/NCE, HND/Bachelor degree, and Higher degree qualifications)

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3. There is no significant difference in the mean ratings of secretaries in public establishments in Anambra State on the level of training they need in office equipment manipulation skills based on years of working experience (Below 5 years, 5-10 year, Above 10 years)
4. Male and female secretaries in public establishments in Anambra State do not significantly differ in their mean ratings on the level of training they need in human relations skills.
5. There is no significant difference in the mean ratings of secretaries in public establishments in Anambra State on the level of training they need in human relations skills based on educational qualification (OND/NCE, HND/Bachelor degree, and Higher degree qualifications)
6. There is no significant difference in the mean ratings of secretaries in public establishments in Anambra State on the level of training they need in human relations skills based on years of working experience (Below 5 years, 5-10 year, Above 10 years)

### **Method**

The study adopted descriptive survey research design. The study was carried out in Anambra State of Nigeria. The population of the study comprised 89 secretaries in public establishments in Anambra State. The entire population was studied without sampling because the size is manageable. The instrument for data collection was a questionnaire developed by the researchers. The instrument was titled Questionnaire on Equipment Manipulation and Human Relations Training Needs of Secretaries in Public Establishments in Anambra State (QEMHRTNSPEAS).

The instrument is made up of three Sections; "A-C", Section A contains personal data of the respondents such as gender, years of experience and educational qualification. Section B deals with office equipment manipulation skills training needs of secretaries in Public establishments in Anambra State with 30 items. Section C sought information on human relations skills training needs of secretaries in Public establishments in Anambra State. The instrument is on a 5-point rating scale of Very Highly Needed (VHN), Highly Needed (HN), Needed (N), Moderately Needed (MN) and Not Needed (NN). The instrument was validated by three experts. To establish the instrument's reliability, a pilot test was conducted. Copies of the questionnaire were administered on 10 secretaries in Federal College of Education (Technical), Asaba, Delta State who are not included in the population of the study. Using Cronbach Alpha reliability test on the data collected from the pilot study, coefficient values of 0.75 and 0.77 for cluster B and C respectively.

The instrument was administered with the help of three research assistants. Copies of the questionnaires was administered personally by the researcher and three research assistants who were briefed and guided on the modalities for the administration and collection of the questionnaire. A period of four weeks was used for the distribution and collection of the instrument. Out of the 89 copies of questionnaires distributed, 81 were returned in good condition. The copies of questionnaire successfully retrieved were used for data analysis. The data collected for the study were analyzed using mean, standard deviation, ANOVA and t-test. The mean score was used to answer the research questions while the standard deviation was used

to ascertain the homogeneity or otherwise of the respondents’ responses. The decision rule was based on real limits of numbers on a 5-point rating scale as shown below:

Response option	Values	Real Limit
Very Highly Needed	5	4.50-5.00
Highly Needed	4	3.50-4.49
Needed	3	2.50-3.49
Moderately Needed	2	1.50-2.49
Not Needed	1	1.00- 1.49

Analysis of variance (ANOVA) and t-test was used to test the null hypotheses at 0.05 level of significance, when p-value is less than or equal to 0.05 ( $P \leq 0.05$ ), the null hypothesis was rejected otherwise, the null hypothesis was not rejected.

**Results**

**Research Question 1:** What level of training do secretaries in public establishment in Anambra State need in office equipment manipulation skills?

**Table 1: Respondents Mean Ratings on Office Manipulation Skills Needs of Secretaries in Public Establishments**

S/N	Office Manipulation Skills Needs	Mean	SD	Remarks
1.	Formatting secondary storage devices like flash drives	4.10	0.71	Highly needed
2.	Using compact disks to save documents from the computer	4.25	0.76	Highly Needed
3.	Using the flash drives to share documents	3.68	0.81	Highly Needed
4.	Using the monitor to view information on the screen	2.15	0.61	Moderately Needed
5.	Printing saved documents from the computer using the printer	3.23	0.54	Needed
6.	Using the Microsoft word application to edit documents	3.45	0.61	Needed
7.	Using the Corel Draw application to design graphics	2.50	0.74	Needed
8.	Using the computer to edit videos	3.04	0.60	Needed
9.	Using digital camcorders to record office meetings	3.50	0.70	Highly Needed
10.	Using emails to send correspondence	3.79	0.56	Highly Needed
11	Surfing the world wide web using web browsers	3.85	0.71	Highly Needed
12	Uploading information on the web using web browsers	3.52	0.64	Highly Needed
13	Installing softwares in the computer	3.73	0.67	Highly Needed
14	Uninstalling programmes from the computers	3.82	0.72	Highly Needed
15	Networking computers in the office	4.05	0.86	Highly Needed
16	Trouble shooting computers when	3.67	0.70	Highly Needed

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17	necessary Producing documents with the desktop publisher	3.56	0.75	Highly Needed
18	Setting up the projector for presentations in meetings	3.69	0.67	Highly Needed
19	Using the scanning machines to get documents in soft copies	3.78	0.74	Highly Needed
<b>Ground</b>		<b>3.55</b>		<b>Highly Needed</b>

Data in Table 1 reveal that the respondents rated items, 1, 2, 3, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19 as highly needed with mean ratings ranging between 3.50 to 4.25 and standard deviations of 0.56 and 0.86. Furthermore, they rated items, 5, 6, 7 and as needed with mean ratings ranging between 2.50 to 3.23 and standard deviations of 0.54 and 0.74 respectively. The cluster mean of 3.54 indicates that secretaries in public establishment in Anambra State need training in office equipment manipulation skills. The standard deviations scores of 0.54 to 0.81 show that the respondents' opinions are closely related.

**Research Question 2:** What level of training do secretaries in public establishment in Anambra State need in human relations skills?

**Table 2: Respondents Mean Ratings on Human Relations Skills Needs of Secretaries in Public Establishments**

S/N	Human Relations Skills	Mean	SD	Remarks
20.	Building team work among colleagues	3.55	0.76	Highly Needed
21.	Developing cheerful attitude about work and about life	3.51	0.70	Highly Needed
22.	Employing tact and initiative in dealings with the public	3.63	0.69	Highly Needed
23.	Acknowledging successful task accomplished by colleagues or subordinates	3.80	0.79	Highly Needed
24.	Respecting the feelings of other colleagues and customers	3.57	0.76	Highly Needed
25.	Being courteous and respectful	4.04	1.06	Highly Needed
26.	Communicating clearly to avoid misunderstanding	3.74	0.82	Highly Needed
27.	Receiving and screening office visitors for the chief executives	3.83	0.79	Highly Needed
28.	Striving to make his/her boss succeed by working hard and being loyal to his/her boss	3.62	0.85	Highly Needed
29.	Offering professional advice when necessary	3.50	0.81	Highly Needed
30.	Promoting harmony between people of different culture	3.54	0.72	Highly Needed
<b>Ground</b>		<b>3.67</b>		<b>Highly Needed</b>

Data in Table 2 reveal that the respondents rated all 11 items as highly needed with mean ratings ranging from 3.50 to 4.04 and standard deviations ranging from 0.69 to 1.06. The nearness of the standard deviation scores shows that the respondents' opinions were close. The cluster mean of 3.67 indicates that secretaries in public establishment in Anambra State highly need training in human relations skills. The standard deviations show that the respondents' ratings are closely related.

**Hypothesis 1:** Male and female secretaries in public establishments in Anambra State do not significantly differ in their mean ratings on the level of training they need in office equipment manipulation skills.

**Table 3: t-test Analysis of Respondents' Means Ratings on the training level they need in Office Manipulation Skills based on Gender**

Variable	N	Mean	SD	df	α	Sig.	Decision
Male Secretaries	22	3.73	0.72	79	0.05	0.003	Not Significant
Female Secretaries	59	3.67	0.67				

Data in Table 3 show that the p-value of 0.003 is less than 0.05 level of significance. This shows that the respondents did not significantly differ in their mean ratings on the level of training secretaries in public establishments in Anambra State need in office equipment manipulation skills based on gender. Therefore, the hypothesis was not rejected.

**Hypothesis 2:** There is no significant difference in the mean ratings of secretaries in public establishments in Anambra State on the level of training they need in office equipment manipulation skills based on educational qualification (OND/NCE, HND/Bachelor degree, and Higher degree qualifications)

**Table 4: Summary of Analysis of Variance (ANOVA) of the Mean Ratings of Respondents on the Extent They Need Training In Office Equipment Manipulation Skills based on Educational Qualification**

Source	Sum of squares	Df	Mean Square	Sig	Remark
Between groups	192	2	.096		
Within groups	240.091	79	.861	.001	NS
Total	240.283	81			

Data in Table 4 reveal that the p-value of .001 is less than 0.05 level of significance. Since the p-value of .001 is less than the 0.05 level of significance, the null hypothesis was not rejected. Thus, secretaries in public establishment in Anambra State do not differ significantly in their mean rating on the level of training they need in office equipment manipulation skills based on educational qualification.

**Hypothesis 3:** There is no significant difference in the mean ratings of secretaries in public establishments in Anambra State on the level of training they need in office equipment

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manipulation skills based on years of working experience (Below 5 years, 5-10 year, Above 10 years).

**Table 5: Summary of Analysis of Variance (ANOVA) of the Mean Ratings of Respondents on the Level of Training they Need In Office Equipment Manipulation Skills based on Years of Experience**

Source	Sum of squares	df	Mean Square	Sig.	Remark
Between groups	.187	2	.088		
Within groups	223.010	79	.812	.017	NS
Total	223.283	81			

Data in Table 5 reveal that the p-value of 0.017 is less than 0.05 level of significance, the null hypothesis was not rejected. Thus, secretaries in public establishment in Anambra State do not differ significantly in their mean rating on the level of training they need in office equipment manipulation skills based on years of experience.

**Hypothesis 4:** Male and female secretaries in public establishments in Anambra State do not significantly differ in their mean ratings on the level of training they need in human relations skills.

**Table 6: t-test Analysis of Respondents' Means Ratings on the level of Training they need in Human Relations Skills based on Gender**

Variable	N	Mean	SD	df	α	Sig	Decision
Male Secretaries	22	3.89	0.70	79	0.05	0.03	Not Significant
Female Secretaries	59	3.75	0.72				

Data in Table 6 show that the calculated p-value of 0.03 is less than 0.05 level of significance. This shows that the gender of the respondents did not significantly influence respondents mean ratings on the level of training secretaries in public establishments in Anambra State need in office human relations skills. Therefore, the hypothesis was not rejected.

**Hypothesis 5:** There is no significant difference in the mean ratings of secretaries in public establishments in Anambra State on the level of training they need in human relations skills based on educational qualification (OND/NCE, HND/Bachelor degree, and Higher degree qualifications).

**Table 7: Summary of Analysis of Variance (ANOVA) of the Mean Ratings of Respondents on the level of Training Secretaries need in Office Human Relations Skills based on Educational Qualification**

Source	Sum of squares	df	Mean Square	Sig.	Remark
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Between groups	.232	2	.188		
Within groups	267.001	79	.901	.002	NS
Total	267.233	81			

Data in Table 7 reveal that the p-value of 0.002 is less than 0.05 level of significance. Thus, the null hypothesis was not rejected. This implies that secretaries in public establishment in Anambra State do not differ significantly in their mean rating on the level of training they need in human relations skills based on educational qualification.

**Hypothesis 6:** There is no significant difference in the mean ratings of secretaries in public establishments in Anambra State on the level of training they need in human relations skills based on years of working experience (Below 5 years, 5-10 year, Above 10 years).

**Table 8: Summary of Analysis of Variance (ANOVA) of the Mean Ratings of Respondents on the Level They Need Training on Human Relations Skills based on Years of Experience**

Source	Sum of squares	df	Mean Square	Sig.	Remark
Between groups	.245	2	.108		
Within groups	284.221	79	.745	.001	NS
Total	284.446	81			

Data in Table 8 reveal that the p-value of 0.001 is less than 0.05 level of significance. Thus, the null hypothesis was not rejected. Thus, secretaries in public establishment in Anambra State do not differ significantly in their mean rating on the level of training they need in human relations skills based on years of working experience.

**Discussion**

Findings revealed that secretaries in public establishment in Anambra State need training in office equipment manipulation skills. The respondents opined training in office equipment manipulation skills on formatting secondary storage devices like flash drives, using compact disks to save documents from the computer, using the computer to edit videos and using emails to send correspondence among others were highly needed. These findings is in agreement with Okpokwasili (2018) who found that computer operation skills as well as the ability to use the Microsoft office suits as highly needed by secretaries. In the same vein, Emeasoba (2014) found that computer operation competencies, networking, telecommunication and media competencies are competencies that are highly required by secretaries. Okolocha and Baba (2017) found that secretaries lacked skills in the use of electronic gadget. This thus emphasizes the need for the improvement on the equipment manipulation skills possessed by secretaries in Anambra State. Okpokwasili (2018) recommended that secretaries in the public service should be given awareness by their employers on the need to acquire equipment manipulation skills and Training institutions should develop programmes that would assist secretaries update their skills and confidence. Similarly, Okolocha and Baba (2017) suggested that training programmes should be organized by government or employers of labour for secretaries in the area of equipment manipulation skill.

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Furthermore, findings on the hypotheses revealed that gender, educational qualification and years of experience did not significantly differ the respondents mean ratings on the level of training secretaries in public establishments in Anambra State need in office equipment manipulation. This shows that all the respondents irrespective of their gender, educational qualification and years of experience agreed that secretaries need training in office manipulation skills in Anambra State. This is in line with Emeasoba (2014) who found no significant difference in the mean ratings of respondents on the office manipulation skills required by secretaries in public establishment. This may have resulted because office manipulation skills are very integral to the effective functioning of the organization. Hence, with the advent of more innovative office machines and softwares, it is important that secretaries are updated on their use and application in carrying out their jobs.

Findings revealed that secretaries in public establishment in Anambra State need training in human relations skills. The respondents opined that they need training on acquiring skills in building team work among colleagues, skills in entertaining official enquiries, skills in employing tact and initiative in dealings with the public, skills in respecting the feelings of other colleagues and customers and friendly and helpful skills among others. The findings are in agreement with Obi (2012) who found that secretaries of public establishments lacked interpersonal skills and resource skills to a high extent. According to Obi secretaries in public establishments do not have proper human relations skills because of the way in which they treat clients in their offices. Similarly, Onamade and Adedayo (2012) also found that secretaries in public organization lacked human relations and interpersonal skills. According to Onamade and Adebayo secretaries in some public establishment are unruly and rude when addressing visitors. This informed the call by researchers Obi (2012) to call for the training and retraining of office secretaries on the expected human relations skills needed by secretaries in the 21<sup>st</sup> century office. Onamade and Adebayo (2012) also recommended that the curriculum of tertiary institutions offering secretarial studies are updated in line with the current trends and employees demand to make their graduates more professionally inclined and competitive in the labour market like their counterpart trained in public institutions.

Furthermore, findings on the hypothesis revealed that gender, educational qualification and years of experience did not significantly differ the respondents mean ratings on the level of training secretaries in public establishments in Anambra State need in human relations skills. This shows that all the respondents irrespective of their gender, educational qualification and years of experience agreed that human relations skills training is highly needed by secretaries in public establishments in Anambra State. This is in line with Onamade and Adedayo (2012) who found no significant difference in the mean ratings of respondents on the human relations skills required by secretaries in public establishment. This may have resulted because human relations skills are important competences required for the smooth functioning of an organization. Thus, secretaries need to possess these competences so as to achieve organizational objectives.

### **Conclusion**

Based on the findings of this study, it was concluded that there is need to adequately train secretaries in public establishment on appropriate office equipment manipulation and human relations skills so that they can effectively carry out office tasks. It is therefore imperative that measures are put in place that will facilitate and improve secretaries' office equipment



manipulation and human relations skills.

### Recommendations

Based on the findings of this study, the researcher proffers the following recommendations:

1. Administrators of public establishments should ensure that office equipment tools and facilities are readily made available for secretaries. This will help to improve the secretarial effectiveness of secretaries in the public establishments.
2. The federal and state governments should fund the training and re-training of secretaries in the public establishments on the need to have proper human relations skills. This will improve secretaries on the need to be courteous and respectful towards visitors and colleagues.
3. Secretaries should invest in their professional and personal development through reading of books on human relations and following current trends in human relations practices.

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## LEVEL OF APPLICATION OF BLENDED LEARNING PEDAGOGICAL DESIGN BY BUSINESS EDUCATORS IN TERTIARY INSTITUTIONS IN ANAMBRA STATE

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### Abstract

*Instructional delivery has been under series of modifications since the advent of Information and Communication Technology (ICT). Particularly, with the need to shape classrooms to match the 21<sup>st</sup> century job demands, the use of technology has become compulsory for teachers to incorporate in the classroom. This study ascertained the level of application of blended learning pedagogical design by business educators in tertiary institutions in Anambra State. One research question guided the study and two null hypotheses were tested. Descriptive survey research design was adopted for the study. The population of the study comprised 99 business educators from public tertiary institution in Anambra State. No sampling was done due to the relatively small size of the population. The instrument for data collection was a structured questionnaire titled "Level of application of Blended-learning Pedagogical Design Questionnaire" (LABPDQ) which was validated by three experts. Cronbachalpha was used to determine the reliability of the instrument and it yielded reliability coefficient of 0.89. The researchers together with two research assistants collected data for the study using direct approach method and 91% return rate was recorded. Mean and standard deviation were used to answer the research question while t-test was used in testing the hypotheses at 0.05 level of significance. The findings of the study revealed among others that business educators apply blended learning pedagogical design at a moderate level in tertiary institutions in Anambra State. Based on the findings, it was recommended among others that administrators of business education programmes should regularly organize in-service training for lecturers on current trends in the application of blended learning pedagogical design in the classrooms. Lecturers should from time to time avail themselves the opportunity to get acquainted with the state-of-the-art technology by attending the training programmes, workshops and seminars.*

**Key words:** Blended learning, pedagogical designs, business education, business educators

### Introduction

Education is a veritable tool for human and national development. National development relies strongly on educational advancement, which in turn could rely on technological development. As an aspect of vocational education, business education plays a vital role in national development. Business education is an academic program offered in tertiary educational institutions geared towards the acquisition of knowledge and skills needed in the place of work (Oladunjoye, 2016). One crucial need in the current business world is the ability to use computer programs for different purposes. This implies that business educators must ensure quality teaching in line with the current global technological changes. To promote business

education in general for effective acquisition of appropriate e-skills, business educators need to change their conventional way of instructional delivery. Interestingly, the 21<sup>st</sup> century is characterized by technological innovations that are applicable in education one of which is blended learning.

Blended learning is a term used to represent both teaching and learning processes that combine online learning with in-class learning. Blended learning is a learning encounter in which face to face or the traditional teacher-learner instruction is combined with technology mediated instruction. (Bupo, 2019; Lalima&Dangwal 2017, Noni, Abdullahi&Ismail, 2017). Blended learning may be in the form of a flipped classroom where students learn content online by watching video, lectures, usually at home and homework is done in class with teachers and students discussing and solving questions (Adirika&Ikwuka, 2020). Blended learning has various models which includes rotation model, flex model, self-blend model and enriched-virtual model. The integration of technology into educational system has brought blended learning to the limelight as its gaining popularity among business educators. Studies have also shown that blended learning has a positive effect on students' academic performance as it has been proven to be student-centered, increase students' engagement with learning process, enhance critical thinking and improve learning outcomes (Lopez-Perez, Perez-Lopez & Rodriguez-Ariza, 2013 &Kiviniemi, 2014). Therefore students should be exposed to blended learning approach in order to improve their learning outcomes. Proper adoption and application of blended learning as an important factor in this information age, holds a great promise for improving teaching and learning in educational institutions.

In educational institutions, the application of blended learning entails the use of a whole range of technologies involved in information processing and electronic communication such as computers, internet, e-mail, computer software, satellite, mobile communication gadgets and other allied electronic devices for dissemination of knowledge and information. According to Eze, Okoliand Ehushie (2017), the gains derivable from the utilization of these facilities and technologies in teaching and learning are innumerable. It focuses on the use of ICT in teaching and learning and requires that instructors or teachers must have a clear understanding of the tools used in creating the content and developing components of online courses. This includes knowledge of pedagogical design, process analysis design as well as development and implementation of these designs in the classroom. Pedagogical Design (PD) is the process of analyzing learning goals, specifying the expected learning outcomes and organizing both the learning content and resources in a manner to ensure the achievement of the stated goals (Akudolu, 2012). Pedagogical design simply means the interactive process between teachers and learners through the planning or working out of ICT resources. This implies that blended learning pedagogical design aims at bridging the gap between the learning content and technology to ensure effective learning. It is the platform through which learning occurs as the learner comes in contact with both the content and the technologies.

In Nigeria, the awareness to advance online learning started gaining momentum two decades ago (Ahmad 2012). Today, many tertiary institutions have set up their ICT centers having Local Area Network (LAN) in their libraries, finance departments, MIS units, and some faculties/departments, among others (Ilechukwu and Njoku 2014). With these developments, it has become imperative to holistically look at applying blended learning pedagogical design in tertiary institutions particularly where today's learners are surrounded with digital media and are used to the digital world. Recent developments brought about by globalization and changing demands for new skill sets in the job market have necessitated the adoption of a new teaching

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and learning paradigm. Obidile, Obi and Ikpat (2019) opined that varying modes of delivery options should be accessible to every Nigerian so as to equip them with the necessary skills needed for self-reliance. However, since the field of ICT continues to evolve, new and sophisticated technologies are emerging and this makes associated activities of online learning complex to delve into (Odoi, Ussiph&Panford 2019). Nevertheless, it is recommended that the application of blended learning pedagogical design in tertiary institutions should be done gradually because it involves several groups of interest like students, lecturers, technicians and policy makers among others. Furthermore, several salient issues concerning costs, quality assurance and organizational culture among others always emerge during the process.

Fadare (2015) argued that one of the major problems facing successful application of blended learning pedagogical design is the incompetence of the educators to utilize the ICT infrastructure to impart the required knowledge to the students. Most business educators are not trained with modern office equipment and technologies and thus still depend only on traditional methods for delivering their lessons to students even when learning topics are suitable for e-learning approach. Overtime, business educators have predominantly delivered instructions using only the conventional/face to face teaching method. This teaching method subjects students to passive learners rather than active learners where they contribute to knowledge. This unsatisfactory state of affairs has far-reaching consequences for business education programme and its graduates as they might lack technological competencies required to perform effectively in the current era. Consequently, students might lack the requisite digital skills needed for jobs in the 21<sup>st</sup> century labour market because they were not exposed to modern technologies in the teaching/learning process. Personal observation of the researchers revealed that course materials are presented to students in hard copies and students are made to be physically present in the classroom for learning to take place. This ugly situation seems to put doubt on the level of business educators' application of blended learning pedagogical design for instructional delivery which in most cases seems to be non-existence. Hence, the need for the study.

#### **Research Question**

1. What is the level of application of blended learning for instructional delivery by business educators in tertiary institutions in Anambra State?

#### **Hypotheses**

The following null hypotheses were tested at 0.05 level of significance:

1. Male and female business educators in tertiary institutions in Anambra State will not differ significantly on their level of application of blended learning for instructional delivery.
2. Business educators in tertiary institutions in Anambra State will not differ significantly on their level of application of blended learning for instructional delivery as a result of age (35yrs and below, and above 35yrs).

#### **Method**

Descriptive survey research design was utilized for the study. According to Nworgu (2015), a survey design is one in which a group of people or items are studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group. The design was deemed appropriate, since the researchers collected data from the population of the study and draw inferences on business educators' level of application of blended-learning pedagogical designs for instructional delivery in tertiary institutions in

Anambra State. The study was carried out in public tertiary institutions in Anambra State. The population of the study comprised all the 99 business educators in all four public tertiary institutions in Anambra State. This is according to data collected from Academic Planning Unit of each institution. There was no sampling due to the relatively small size of the population of the study. A 16-items researcher developed questionnaire titled “Level of Application of Blended learning Pedagogical Design Questionnaire (LAEPDQ)” was used for data collection. The questionnaire is divided into two sections of A and B. Section A sought to elicit respondents’ personal data such as gender and age while section B consisted of 8 items on blended learning. Respondents were required to indicate their opinions on a five point rating scale of Very High Level (VHL); High Level (HL); Moderate Level (ML), Low Level (LL) and Very Low Level (VLL) weighed 5, 4, 3, 2 and 1 respectively.

Face and content validity of the instrument (LAEPDQ) was determined. To ascertain this, the researchers presented the title, purpose of the study, research question, hypotheses and the copies of the questionnaire to three experts who are lecturers, two in the field of business education in the Department of Technology and Vocational Education and one in measurement and evaluation unit of the Department of Educational Foundations, in the Faculty of Education, NnamdiAzikiwe University, Awka. The experts were requested to examine and scrutinize the items in terms of content, relevance, suitability, clarity and coverage of the dimensions of the study. The experts made several corrections that led to modification of the items and restructuring of the lead statements in all the tables. The Cronbach Alpha was used to check the internal consistency of the instrument and reliability coefficient value of 0.89 was obtained. The coefficient value was adjudged high enough for the instrument usability in line with the recommendations of Nworgu (2015) that coefficient value of 0.82 or above is adequate for any research work.

The researchers with the help of two research assistants who are lecturers in tertiary institutions in Anambra State collected the data for the study. The two research assistants were briefed on the modalities for the administration of the questionnaire. Copies of the questionnaire distributed were 99 and only 90 copies were properly filled and retrieved indicating 91 percent return rate. Thus, 90 copies of the questionnaire successfully retrieved were used for data analysis. Mean and standard deviation were used for answering the research question and decision was based on the real limits of numbers on a five-point rating scale. The null hypotheses were tested using t-test. Where the t-calculated is equal to or greater than the t-critical at 0.05 level of significance at a given degree of freedom, the null hypothesis was rejected, but where otherwise, is was not rejected.

**Results**

**Research Question 1**

What is the level of application of blended learning for instructional delivery by business educators in tertiary institutions in Anambra State?

Analysis of data relating to this research question is presented in Table 1

**Table 1: Mean responses of Business Educators on level of application of blended learning pedagogical design**

S/No	Items on Blended Learning	Mean	SD	Decision
1.	Delivering pre – work online	2.88	1.40	Moderate level
2.	Rotating the students on a teacher-set	2.80	1.34	Moderate level

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S/No	Items on Blended Learning	Mean	SD	Decision
3.	fixed schedule and online instruction Allowing students to choose one or more contents entirely online and supplementing classic face to face teaching of other contents	2.83	1.37	Moderate level
4.	Delivering entire content on an online platform but in the classroom.	2.90	1.46	Moderate level
5.	Delivering entire content on an offline platform (pre-recorded videos, audio and video conferencing) but in the classroom	2.84	1.36	Moderate level
6.	Putting assessment/reviews online	2.79	1.39	Moderate level
7.	Online lab (delivering lab or field components of course online)	2.70	1.31	Moderate level
8.	Putting reference materials on web	2.91	1.36	Moderate level
<b>Cluster Mean</b>		<b>2.83</b>		<b>Moderate level</b>

Table 1 shows a cluster mean of 2.83 indicating that business educators in tertiary institutions in Anambra State apply blended learning for instructional delivery at a moderate level. Item by item analysis in Table 1 shows that business educators apply all the items 1 – 8, with mean scores for all the items ranged between 2.70 – 2.91 which means that all of them are applied at a moderate level. The standard deviations of 1.31 to 1.46 showed homogeneity in business educators’ responses indicating greater consensus of opinion.

**Table 2: Summary of t-test result on the level of application of blended learning by male and female business educators in tertiary institutions in Anambra State.**

Blended learning	N	$\bar{X}$	SD	Df	P-value	Decision
Male	33	2.77	1.07	88	0.171	Not significant
Female	57	2.87	1.30			

Table 5 shows that male and female business educators in tertiary institutions in Anambra State do not differ significantly on their level of application of blended learning for instructional delivery. This is shown by the p-value of 0.171 which is greater than the significant level of 0.05. This shows that there is no significant difference in the mean responses of business educators. Therefore, the null hypothesis of no significant difference between two groups is accepted.

**Table 3: Summary of t-test result of significant difference in respondents’ mean scores on their level of application of blended learning pedagogical design.**

Blended learning	N	$\bar{X}$	SD	df	P-value	Decision
35yrs and Below	33	2.66	1.20	88	0.924	Not significant
Above 35yrs	57	2.92	1.22			

Table 6 shows that business educators in tertiary institutions in Anambra State do not differ significantly on their level of application of blended learning in instructional delivery as a result of age. This is shown by the p-value of 0.924 which is greater than the significant level of 0.05. This shows that there is no significant difference in the mean responses of business educators as a result of age. Therefore, the null hypothesis of no significant difference between two groups is accepted.

### Discussion

The results of the study indicated that business educators in tertiary institutions in Anambra State moderately applied blended learning in instructional delivery. Business educators applied all the items which includes; delivering pre – work online, rotating the students on a teacher-set fixed schedule and online instruction, allowing students to choose one or more contents entirely online and supplementing classic face to face teaching of other contents, delivering entire content on an online platform but in the classroom, delivering entire content on an offline platform (pre-recorded videos, audio and video conferencing) but in the classroom, putting assessment/reviews online, online lab (delivering lab or field components of course online) and putting reference materials on web, at a moderate level.

The findings agrees with that of Ng Ling Ying and Yang (2017) who reported that most academics were new to blended learning and had never implemented blended learning initiatives in their units. Ng Ling Ying and Yang further stated that the implementation of blended learning was certainly a new challenge for most educators as they have to change their delivery method to accommodate the use of technology. In support of this Schutte, Cronje, Mokoena, Barkhuizen and Mokoto (2017) held that lecturers perceived training in blended learning approaches as positive but however, many challenges were identified that can limit the effective implementation of blended learning such as resistance to change, lack of infrastructure, lack of computer literacy among others. However, findings disagree with Jeffery, Milne, Suddaby and Higgins (2014) who revealed that despite teachers’ resistance to the use of technology in education, blended learning has increased rapidly, driven by evidence of its advantages over either online or classroom teaching alone.

### Conclusion

Based on the findings of the study, it is clear that blended learning pedagogical design discussed in the study is still at its early stage of adoption and application among business educators. This is a sad development bearing in mind that ICT is not a new topic in Nigeria. The popularity of ICT technologies among business education students has increased their expectations to see these technologies used in the teaching learning process. Unfortunately, business educators are still lagging behind in the application of these pedagogical designs for instructional delivery. Also the new normal as a result of Covid-19 pandemic requires the full adoption and application of these pedagogical designs for instructional delivery in tertiary institutions.

### Recommendations

1. Administrators of business education programmes should regularly organize in-service training to train and re-train business educators on current trends in the application of blended-learning pedagogical designs in the classrooms. Lecturers should from time to time avail themselves the opportunity to get acquainted with the state-of-the-art technology by attending the training programmes, workshops and seminars.
2. Government and business education curriculum planners should make policies on the integration of blended learning pedagogical design into the curriculum of business education programme in tertiary institutions compulsory.
3. The school administrators should ensure adequate provision of infrastructure like electricity, internet connections and buildings that support the application of blended-learning pedagogical designs.

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## RELATIVE EFFECTIVENESS OF COOPERATIVE AND INQUIRY LEARNING METHODS ON STUDENTS' ACADEMIC ACHIEVEMENT AND RETENTION IN BASIC ELECTRICITY

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### Abstract

The study investigated the relative effectiveness of cooperative and inquiry learning methods on students' academic achievement and retention in Basic Electricity. Cooperative learning is an active learning method where students are arranged in pairs or small groups to help each other learn assigned material, while Inquiry learning is also a form of active learning method where progress is assessed by how well students develop experimental and analytical skills rather than how much knowledge they possess. Two research questions guided the study while two null hypotheses were tested at 0.05 level of significance. Quasi-experimental research design was adopted for the study, specifically, non-equivalent experimental group design. The study was carried out in Awka and Aguata Education Zones of Anambra State. The population consisted of all the 413 NTC II students offering Basic Electricity in the 12 technical colleges in Anambra State. The sample for the study comprised 60 National Technical College year II (NTC II) students from two intact classes in two Technical Colleges in two Education Zones, drawn using multi-stage sampling procedure. Basic Electricity Achievement Test (BEAT) was the instrument used for data collection. The instrument was validated by the experts and reliability test was conducted using Kuder- Richardson 21 formula. The reliability index was established at 0.80. The experimental group 1 were taught Basic Electricity using cooperative learning method, while experimental group 2 was taught using inquiry learning method. The treatments lasted for five weeks. Data collected were analysed using mean, standard deviation and Analysis of Covariance (ANCOVA). The results revealed that cooperative learning method was more effective than inquiry learning method in facilitating students' academic achievement and retention in Basic Electricity. Based on the findings of the study, it was recommended among others, that cooperative learning method should be formally adopted in technical colleges, secondary and vocational schools for instruction in Basic Electricity to improve the academic achievement and retention ability of students.

**Keywords:** Cooperative learning method, Inquiry learning method, Basic Electricity, Academic achievement, retention.

### Introduction

Technical education, which appears to be the foundation of nation's wealth and development, is a form of education involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life. Technical

Colleges (TC) in Nigeria are established to produce craftsmen and to equip students with the necessary basic knowledge, skills and attitude to be self-reliance. Thus, in contemporary Nigeria, greater emphasis is currently placed on industrial and technological development of the citizenry. Consequently, students are being encouraged to take up science and engineering related subjects in technical colleges.

One subject that cuts across the entire engineering and related technical subjects is basic electricity (BE). The National Business and Technical Examination Board (NABTEB) syllabus outlined basic electricity as one among the trade-related subjects offered at the Technical Colleges. However, this subject cannot be taught and learnt successfully based on mere theoretical knowledge without proper use of learning strategies and practical skills. The best way to make learning more concrete is to fully involve the learner.

Unfortunately, it is apparent that there is a steady decline in students' academic achievement in the technical subjects such as Basic Electricity. For instance, an analysis of the May/June results of National Business and Technical Education Board (NABTEB) examination from year 2006 to 2010 by Olatunde (2011), the then NABTEB registrar/chief executive, revealed that students performed poorly in Basic Electricity across the nation and Anambra State in particular. Various stakeholders have advanced reasons for this negative development in education in the state among which include; over years, teachers and students have been depending on excessive use of one particular learning method or the other to express and convey ideas, or fact in teaching and learning process (Onasanya, Adegbija, Olumoriin&Daramola, 2009). This monotony in practice calls for diversification in the utilization of teaching methods to see if students' academic achievement could improve in teaching and learning of Basic Electricity in Anambra State. Therefore, cooperative and inquiry learning methods were introduced.

Cooperative learning method of instruction is where students are arranged in pairs or small groups to help each other learn assigned material (Wael, 2014). While Inquiry learning is a form of active learning where progress is assessed by how well students develop experimental and analytical skills rather than how much knowledge they possess. Evidence from previous studies indicated that academic achievement and retention is influenced by students' learning methods. Ajaja (2013) concluded that the adoption of cooperative learning method should be appropriate for the teaching and learning of biology. Also, Ugwu (2014) recommended that science teachers, and science teacher educators should adopt inquiry instructional and learning method when teaching in order to enhance students' academic achievement and interest in basic sciences.

This study was therefore propelled by the very interesting discoveries from literature that cooperative and inquiry learning methods significantly affect students' academic achievement and retention in science and technology related subjects. However, a question may be asked as whether these two learning methods will produce the same effects on students in their study of Basic Electricity trade. Thus, within the domain of this study, what is the relative effectiveness of cooperative and inquiry learning methods on students' academic achievement and retention in Basic Electricity?.

### **Research Questions**

- 1 What is the relative effect of Cooperative and Inquiry learning methods on academic achievement mean scores of students taught Basic Electricity in Technical Colleges?
1. What is the relative effect of Cooperative and Inquiry learning methods on retention ability of students taught Basic Electricity in Technical Colleges?

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### Research Hypotheses

**Ho<sub>1</sub>:** There is no significant difference in the academic achievement means scores of students taught Basic Electricity using Cooperative learning method and that of those taught with Inquiry learning method.

**Ho<sub>2</sub>:** There is no significant difference in the retention ability of students taught Basic Electricity using cooperative learning method and that of those taught with Inquiry learning method.

### Literature Review

#### *Basic Electricity*

Electricity is the flow of electrons from one place to another. Basic Electricity (BE) is the fundamental subject of study in the fields of electricity and electronics at all levels of Education (Ogbu, 2010a). It deals with all the fundamental issues of current-electricity, static-electricity and electrons as studied in schools and colleges. Basic Electricity is so important that students' academic achievement in it is so crucial and major determinant of their performance in other electronics/electricity (E/E) subjects (Ogbu, 2010b). This demands competence, efficiency and effectiveness on the part of the teacher in order for students to achieve maximally in Basic Electricity.

This subject is offered by technical colleges, science and technical schools, etc. at NTC 1, 2 and 3. The examination syllabus for BE has been evolved from the Senior Secondary School Basic Electricity Curriculum. It is designed to test candidates' knowledge and understanding of electrical and electronic principles, maintenance and repair of domestic and industrial equipment and safe working procedures.

#### *Cooperative Learning Method (CLM)*

Cooperative learning method is the umbrella term for a variety of educational approaches involving joint intellectual effort by students, students and teachers together (Furtak, 2010). It requires a small number of students to work together on a common task, supporting and encouraging one another to improve their learning through interdependence and cooperation with one another (Wael, 2014). The cooperative learning groups usually comprises two to five students in a group that allows everyone to participate in a clearly designed task (Sarah & Cassidy, 2006; Wendy, 2005). Students within small groups' cooperative learning are encouraged to share ideas and materials and divide the work when appropriate to complete the task. Small group competitive learning provides students with opportunity to explore and discuss topics with peers in a Bonds-on interactive environment. Haliru (2015) affirmed that students benefit academically and socially from cooperative small group learning.

Cooperative learning method cannot be taught through verbal instruction. Students can adopt cooperative learning method through a process that involves working together in groups, developing a product at the end and examining both the product and cooperative learning skills. "Cooperative learning method" (CLM) emerges in the literature as a method that assists instructors in carrying out this process. CLM emerges when students gather in order to reach a common goal (Johnson & Johnson, 2009). Each member of the group reaches his goal only if all the other members reach their own learning goals. Altun (2015) defines cooperative learning as working of students in small groups and helping each other in the learning process.

### ***Inquiry Learning Method***

Inquiry means more than simply answering questions or getting right answers and emphasizing it. It is an innovative teaching and learning method which encourages active participation of students in the learning process (Akçay&Yaggar, 2010). Inquiry is an approach to learning whereby students find and use a variety of sources of information and idea to increase their understanding of a problem, topic or issue (Kuhlthau, 2007). Inquiry requires more than simply answering questions or getting right answers, and emphasizes discovery rather than telling (Guisti, 2008). The word inquiry, according to Ugwu (2014) loosely means 'an investigation' but its meaning in the realm of education is much more complex. It includes questioning, designing, conducting and experiment and communicating the result to others or the society which mirrors scientists. Inquiry also espouses investigation, exploration, search, quest, research pursuit and study (Saskatchewan, 2010). Inquiry is a natural introduction to the branch of epistemology known as 'Nature of science' which deals with the characteristics of scientific knowledge (Kirshner, Sweller, &Clark, 2006). Thus Guisti maintains that in classroom the term used most often to refer to students – centred approach is inquiry. Inquiry engages interest and challenges students to connect their world with the curriculum (Kuhlthau, 2007). Ugwu (2014) views inquiry as a set of behaviours involved in the struggle of human beings for reasonable explanation of phenomena about which they are curious, involving activity and skill, with focus on the active search for knowledge or understanding to satisfy a curiosity'.

Adejo (2015) maintained that learning becomes more effective and long lasting when learners plan their own question, analyse and discuss their findings and finally construct their understanding. ILM is not only concerned with the preparation for long life learning but also extends knowledge beyond the classroom doors (Campell, 2006). Inquiry is focused on using and learning content as a means to develop information processing and problem solving skills and enables students to experience classroom events like real scientists. Inquiry is an integral part of the learning experience and can be used in both traditional class room problems and laboratory experience. The essence of inquiry is to ask questions that stimulate students to think critically, construct knowledge using scientific processes such as observing, classifying, measuring, inferring, predicting, formulating models, interpreting data, hypothesizing and experimenting which help students to build knowledge and communicate what they have learned thereby improve on their academic achievement.

### ***Academic Achievement***

It is evident that poor academic achievement of students in Technical Colleges in Nigeria affects all subject areas, BE inclusive. The major challenge is how to effectively teach the students in order to improve on their academic achievement.

Academic achievement, according to Igweh (2012) refers to some methods of expressing a students' scholastic standing. This can be regarded as a source or subject grade, an average for a group of courses/subjects in a programme of study for example in Basic Electricity. Good academic achievement leads to success while poor academic achievement leads to failure. Each of these two academic achievements is experienced by students in one form or the other.

In this study, any student who scores between 50 and 100 out of the obtainable 100 marks is considered to have good academic achievement while those who scores between 0 and 49 are considered to have poor academic achievement.

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### **Retention**

Retention is viewed as the ability to remember or recall what is taught at the time it is needed. According to Safo, Ezenwa and Wushishi (2013), retention is seen as the ability to keep or retain the knowledge of what is learnt and to be able to recall it when it is required. Horby in Safo, et al also defined retention as the ability of a person to remember something. This implies that for one to talk about retention, one must have been exposed to certain experiences or activities such as teaching. In the same vein, retention can only take place when something has been taught.

Retention is usually measured in collaboration with academic achievement. In agreement to this, Obodo in Iji (2010) asserted that retention is measured in collaboration with achievement. It is often seen as the achievement on a subject after a certain period of time. For instance, if a group of students are exposed to classroom instruction on a particular subject after which a test is given, such test only reveals the extent of the content of that subject learnt by the students. If another test is given (say two weeks or more) after the instruction, one can infer from the result of the test how much of the content of the instruction the students retained. Also, a student is considered to have good retention ability if after being taught a psychomotor skill such as conduit wiring, is able to perform the conduit after a month of being taught. However, the student's retention ability is poor if the student is unable to carry out conduit installation when called to do so.

### **Methodology**

Quasi experimental research design was used for the study. Specifically, pre-test post-test non-equivalent experimental group were used. Quasi experimental research design was used because there was no random assignment of the subjects to treatment conditions. Nworgu (2015) agreed that in a situation where there is no randomization in the assignment of individual participants to treatment conditions, quasi experimental method is most suitable. This design is adopted because it is not possible for the researcher to randomly sample the subjects and assign them to groups without disrupting the academic programme and the timetable of the technical colleges involved in the study. Hence, the design is considered quite suitable for conducting this study. The population of the study consisted of all the 413 NTC II students offering Basic Electricity in the 12 technical colleges in Anambra State. The sample size for this study was 60 NTC II students from two technical colleges, which consist of 36 students from Federal Science and Technical College (FTSC), Awka in Awka Education Zone and 24 students from Government Technical College (GTC) Umunze in Aguata Education Zone, drawn using multi-stage sampling procedure.

The instrument used for data collection was Basic Electricity Achievement Test (BEAT) which was adapted from NABTEB past questions on Basic Electricity by the researcher based on the contents of the topics that were taught. BEAT has 50 items multiple choice objective questions. BEAT was used to obtain data in respect to pre-test, post-test and retention test. The pre-test, post-test and retention test are made up of the same items but differ among each other by reshuffling of the items, font size of the letters and colour of the paper used. Validation of the instrument used for data collection was done by three experts, one from Department of Educational Foundations and two from Technology and Vocational Education all in the Faculty of Education, Nnamdi Azikiwe University, Awka. The reliability of the instrument for this study

was established using Kuder-Richardson 21 method. Manual computation of the scores for BEAT yielded a reliability coefficient of 0.80. The data collected in respect of research questions were analysed using mean and standard deviation while ANCOVA statistical tool was used to test the null hypotheses at 0.05 level of significance.

The decision is to use the difference in the academic achievement mean scores of students to determine the relative effectiveness of cooperative and inquiry learning methods and to reject Ho if the calculated F-ratio is greater than or equal to the critical F-ratio and accept Ho if the calculated F-ratio is less than the critical F-ratio.

**Results**

**Research Question 1:** What is the relative effect of Cooperative and Inquiry learning methods on academic achievement mean scores of students taught Basic Electricity in Technical Colleges?

Answer to this research question is presented in Table 1.

**Table 1: Pre-test and post-test Mean scores and Standard Deviation of academic achievement of students taught Basic Electricity with cooperative and those taught with inquiry learning methods**

Source of variance	N	Pre-test mean	SD	Post-test mean	SD	Mean gain	Effect
Cooperative Learning Method	36	13.72	3.326	41.11	3.353	<b>27.39</b>	Positive
Inquiry Learning Method	24	13.17	3.497	30.75	5.534	<b>17.58</b>	Positive
<b>Difference in mean gains</b>						<b>9.81</b>	

The data in Table 1 show positive effect for both experimental group 1 and 2. However, the mean gain of 27.39 (41.11 - 13.72) for the experimental group 1 is higher than that of the experimental group 2 which is 17.58 (30.75 - 13.17). The standard deviation scores range from 3.35 – 5.53 for cooperative and inquiry learning methods respectively indicate that the respondents’ responses are homogeneous. This shows that Cooperative learning method is more effective in enhancing students’ academic achievement in Basic Electricity than Inquiry learning method of instruction.

**Research Question 2:** What is the retention ability of students taught Basic Electricity using cooperative learning method and that of those taught with Inquiry learning method in Technical Colleges?

Answer to this research question is presented in Table 2.

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**Table 2: Mean scores and Standard Deviation of retention ability of students taught Basic Electricity with cooperative and those taught with inquiry learning methods**

Source of Variance	N	Pre-test mean	Retention mean	SD	Mean gain	Effect
Cooperative Learning Method	36	13.72	38.47	5.609	24.75	Positive
Inquiry Learning Method	24	13.17	26.83	6.070	13.17	Positive
<b>Mean Difference</b>			<b>11.64</b>		<b>11.09</b>	

Table 2 reveal that the experimental group 1 with retention mean of 38.47 retained Basic Electricity concepts taught more than the experimental group 2 with 26.83 retention mean. Hence, with the mean retention difference of 11.64 between the experimental group 1 and experimental group 2, Cooperative learning method is more effective in enhancing retention ability of students in Basic Electricity than inquiry learning method of instruction. The standard deviation scores which range between 5.61 and 6.07 for cooperative and inquiry learning methods respectively show that their responses are concentrated and this indicate homogeneity in their responses.

**Hypothesis 1**

Ho: There is no significant difference in the academic achievement mean scores of students taught Basic Electricity using Cooperative learning method and that of those taught with Inquiry learning method

The statistical test for this hypothesis is presented in Table 3.

**Table 3: ANCOVA on academic achievement mean scores of students taught Basic Electricity using Cooperative learning method and those taught using Inquiry learning method**

Source of Variance	Type III of Squares	Sum Df	Mean Square	F-Calculated	F-Critical	Sig.
Corrected Model	1570.427 <sup>a</sup>	2	785.213	41.693		.000
Intercept	3866.571	1	3866.571	205.303		.000
PRETEST	24.549	1	24.549	1.303		.258
Learning Methods	1504.274	1	1504.274	<b>79.872</b>	<b>3.17</b>	<b>.000</b>
Error	1073.506	57	18.833			
Total	84636.000	60				
Corrected Total	2643.933	59				

a. R Squared = .594 (Adjusted R Squared = .580); Significant at 0.05 alpha level; df= 2 & 57.

The data presented in Table 3 show that the calculated F-value of 79.87 is greater than 3.17 F-critical value. Also, the p-value (p = 0.00), is less than 0.05 alpha level. Hence the null



hypothesis (Ho) was rejected at 0.05 alpha level of significance and, 2 and 57 degree of freedom. This implies that there is significant difference in academic achievement of students taught Basic Electricity using cooperative learning method and those taught using inquiry learning method of instruction in favour of cooperative learning method.

**Hypothesis 2**

**Ho:** There is no significant difference in the retention ability of students taught Basic Electricity using cooperative learning method and that of those taught with Inquiry learning method The statistical test for this hypothesis is presented in Table 4.

**Table 4**  
**ANCOVA on mean retention ability of students taught Basic Electricity using cooperative learning method and that of those taught with inquiry learning method**

Source of Variance	Type III Sum of Squares	Sum Df	Mean Square	F-Calculated	F-Critical	Sig.
Corrected Model	1950.678 <sup>a</sup>	1	1950.678	58.071		.000
Intercept	61413.344	1	61413.344	1828.242		.000
Learning Methods	1950.678	1	1950.678	<b>58.071</b>	<b>4.02</b>	<b>.000</b>
Error	1948.306	58	33.591			
Total	72513.000	60				
Corrected Total	3898.983	59				

a. R Squared = .500 (Adjusted R Squared = .492); Significant at 0.05 alpha level; df = 1 & 58

The data presented in Table 4 show that the calculated F-value of 58.07 is greater than 4.02 F-critical value. Also, the p-value (p = 0.00), is less than 0.05 alpha level. Hence the null hypothesis (Ho) was rejected at 0.05 alpha level of significance and, 1 and 58 degree of freedom. The implication of this is that there is significant difference in retention ability between the students taught Basic Electricity using cooperative learning method and those taught using inquiry learning method in favour of cooperative learning method.

**Discussion**

Findings in Tables 1 and 3 revealed that the academic achievement of students taught Basic Electricity using cooperative learning method differed significantly from that of the students taught same lesson content using inquiry learning method in favour of the cooperative learning method. Specifically, the differences in performance might have been because of the fact that the students were required to work in small groups, generate their own solution, analyse and discuss their findings and finally construct their understanding, thereby imbibing the scientific and technological processes involved in learning Basic Electricity, which enabled them to perform better than their counterparts taught Basic Electricity using inquiry learning method.

This finding is in agreement with Haliru (2015) who found that students taught Geography using cooperative learning strategy achieved academically more than those taught same lesson using traditional lecture method in senior secondary schools in Sokoto State. In the same vein, this finding is supported by that of Altun (2015) that students taught Science and Technology Course in Kartal district of Istanbul, Turkey using Cooperative learning method performed

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significantly better than those taught same lesson using lecture method. Christian and Peple (2012) in their study on ‘‘Effects of Cooperative and Individualized Learning Strategies on Students’ Academic Achievement in Chemistry in Rivers State’’ also found out that the use of cooperative learning strategy in teaching Chemistry students improved their academic achievement in the subject than the students taught same with Individualised learning strategy.

The similarities between the findings of these studies and the current study reveals that the use of Cooperative learning method in teaching trade subjects/courses and some career areas can improve students’ academic achievement.

The findings in tables 2 and 4 also revealed that the students in the cooperative learning method retained Basic Electricity concepts taught more than those using inquiry learning method. Table 4 indicated that this difference is significant hence cannot be attributed to chance.

These findings agreed with the findings of some related empirical literatures reviewed on effect of cooperative learning on retention ability of students in Basic Electricity. For instance, Altun (2015) found that students taught Science and Technology Course in Kartal district of Istanbul, Turkey using cooperative learning method performed significantly better in retention test than those taught same using conventional lecture method. Also, Ajaja (2013) found that the mean retention scores of the students taught Biology using cooperative learning strategy significantly differed from that of the students taught using Concept Mapping teaching method in favour of the cooperative learning group.

The significant improvement in retention ability of students exposed to Cooperative Learning Method (CLM) of instruction as found in this study could be attributed to certain features such as working together in groups in order to solve a problem. Also, CLM creates multi-sensory channels for learning thereby increasing students’ participation in the learning process. Therefore, CLM creates platforms for students’ active participation in the learning process rather than being mere recipients hence increasing their retention ability.

### **Conclusion**

Based on the findings of this study, a number of conclusions can be drawn: CLM is an innovative and more effective mode of instruction with the capacity to improving students’ academic achievement and retention ability in Basic Electricity.

### **Recommendations**

The following recommendations were proffered based on the findings of this study.

1. CLM should be formally adopted in technical colleges, secondary and vocational schools for instruction in Basic Electricity to improve the academic achievement and retention ability of students.
2. Training programmes on effective utilization of CLM for instruction should be organized periodically for teachers of Basic Electricity and other trade related courses/subjects in the technical colleges, secondary and vocational schools.
3. The schools (technical colleges, secondary and vocational schools) should be provided with enabling and conducive learning environment and internet facilities to enable students maximize the benefits of CLM.

4. The ministries of Education through the curriculum planners should ensure that they incorporate cooperative learning method in Basic Electricity curriculum, as it will help to promote students' academic achievement and retention in the subject.

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## INFLUENCE OF STAFF DEVELOPMENT PROGRAMMES ON JOB PERFORMANCE OF OFFICE TECHNOLOGY AND MANAGEMENT LECTURERS IN POLYTECHNICS IN NORTHWEST, NIGERIA

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### Abstract

*The study investigates the influence of staff development programmes on job performance of Office Technology and Management (OTM) lecturers in polytechnics in Northwest, Nigeria. Two research questions guided the study, while two hypotheses were tested. Descriptive survey research design was used for the study. The population of the study was 177 OTM lecturers from public polytechnics in North West, Nigeria. The entire population was used. A structured 4-point sealed questionnaire containing 20 items in two clusters was used for data collection. Data were analyzed using mean and standard deviation to answer the research questions, while t-test was used in testing the hypotheses at 0.05 level of significance. Findings revealed that OTM lecturers in polytechnics in North-West Nigeria agreed that staff development programmes influenced their job performance. It was, therefore, recommended among others that, Tertiary Education Trust Fund (Tetfund), in collaboration with other educational stakeholders should make staff development programmes more accessible to OTM lecturers which will help them to improve their instructional planning.*

**Key words:** Influence, Staff development, OTM, Lecturers, Polytechnic

### Introduction

Staff development as viewed by Okunade, (2016) is the core human resource management (HRM) function in organisations and it is a process of expanding the knowledge, productivity, programmes that will enhance workers optimal performance. Human resource development is very fundamental in every organization, has to do with the education, skills levels, and problem solving abilities that will enable an individual to be a productive worker in the global economy of the 21<sup>st</sup> century.

Staff development programmes obtainable in Nigerian polytechnics include but not limited to study fellowship, conference attendance, book development, research and journal publication which are mostly sponsored by Tertiary Education Trust Fund (Tetfund). The fund was set up to administer and disburse education tax collections to the public tertiary institutions in Nigeria, which include universities, polytechnics and colleges of education (Tetfund, 2019).

Staff development refers to all policies, practices, and procedures used to develop the knowledge, skills, and competencies of in order staff to improve the effectiveness and efficiency both of the individual and the organisation. Staff development according to Armstrong (2012) can be seen as the most valuable and indispensable element of an organisation. It is the pivot upon which all other resources, such as structures, finances, machines and facilities rely on to function. Pemida, (2017) opined that staff development refers to a variety of education and

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training activities which are designed purposely to give staff additional knowledge, skills, attitude, experiences and understanding needed to perform up to required standard. Organisations can be public or private and could be business or academic institutions. Tertiary academic institutions in Nigeria include Universities, Colleges of Education and Polytechnics.

The polytechnic is an academic institution designed to offer post-secondary technical education programmes leading to the award of diplomas/certificates such as the National Diploma (ND) and Higher National Diploma (HND). Polytechnics are normally being regulated by the National Board for Technical Education (NBTE). Polytechnics in Nigeria are owned either by Federal, State government or Private individuals or even by organisations. In the case of north-west, private polytechnics are not there.

The graduates of these polytechnics are usually equipped with entry level employment skills to function as technicians/technologists or professionals, depending on their level of training, in their fields of specialization. A polytechnic may also be involved in applied research and to perform any other functions that its Council may require it to perform from time to time (NBTE, 2004). There are many academic programmes offered in the polytechnics, which include Office Technology and Management (OTM).

According to Oyinkoye and Oluwalola cited in Ejeka and Mgbonyebi (2016) Office Technology and Management is relatively a new nomenclature that emerged to replace the former secretarial studies programme in Nigerian Polytechnics. The programme was introduced by the National Board for Technical Education (NBTE) in 2004 to make the recipients fit into the world of work appropriately, especially in this modern age of globalization, where new technological and digital equipment and machines are emerging daily (Ejeka & Mgbonyebi, 2016).

The OTM curriculum lays much emphasis on ICT related courses such as Management Information System (MIS), Desktop Publishing, Data Based Management System (DBMS) among others, in line with what operates in the modern day business world. Komolafe and Olubato (2018) asserted that OTM can be said to be a work oriented educational program, it is designed to develop skills, abilities, understanding, attitudes, work habits and appreciation of encompassing knowledge, and information needed by individuals to enter and advance in employment. The employment could be paid-employment or self-employment in useful and productive bases. OTM Programme draws its body of contents from the world of work and provides for a comprehensive understanding of the world of work which is a societal institution as well as the development of competencies related to various elements of the work.

The objectives of OTM programme, according to NBTE (2004) is to equip the students with the abilities to fit properly into the office of any organisation and perform professionally the functions of the secretary which among others include: relating the functions of the office to the whole organisation, attending meetings and providing information as may be required, making accurate records of proceedings, filing and retrieving information. The OTM students are also expected to acquire an in-depth knowledge of office administration and management, particularly knowing the concepts, office procedures, office machines and equipment, word processing, desktop publishing, researching, general services, managing personnel, planning and controlling, both in private and public sectors of the Nigerian economy. These functions can be achieved convincingly where there are adequate number of lecturers with vast knowledge and skills needed to impart the knowledge and skills on the students. These knowledge and skills

can be acquired by lecturers through different staff development programmes which may lead to enhanced lecturers' job performance.

Afshan, Sobia, Kamran, and Nasir (2012) viewed performance as the achievement of specified task measured against predetermined or identified standards or accuracy, completeness, cost and speed. Vuong, Phuong, & Tushar (2021) defined job performance as the achievement of goals or standards based on the expectations set forth by the organisation. Whetten and Cameron (2020), sees job performance as an outcome of personal competence resonating with being motivated. To sum it up, job performance is the accomplishment of a given task measured against the standard of accuracy. In polytechnics, some specific tasks of OTM lecturers' includes: instructional planning and instructional delivery.

Instructional planning means the ability of a lecturer to clearly plan instruction in a manner that will enable the objectives set out to be accomplished. It involves selection of appropriate instructional resources and strategies that will suit the learners understanding capacity (Okey-Colbert and Aliyu 2017). Zulueta, (2006) sees instructional planning as the ability of the teacher to visualize and forecast into the future of what, why and how of the teaching-learning process. Instructional planning is therefore, one of the major things polytechnic lecturers need to do before the teaching and learning process commenced (Auta & Egwu, 2020). It is an essential feature that is used by the lecturers to transfer knowledge to the learners in the teaching-learning process (Dambo, and Enyekit, 2019).

Instructional delivery means the interaction among the students, the lecturer, the contents and the knowledge/skills/dispositions. Akwesi, (2012) asserted that instructional delivery is the practical application of theory into practice in a way that the eventual outcome is evidenced through the learners' performances in and outside the classroom. The process of instructional delivery involves applying a repertoire of instructional strategies to communicate and interact with students around academic content and to support student engagement.

Despite the staff development programmes enjoyed by OTM lecturers, Okey-Colbert and Aliyu (2017) noted that there seems to be gap between what the lecturers are teaching the students and the current labour market requirement. It is against this background that the researcher is prompted to determine the influence of staff development programmes on job performance of OTM lecturers in polytechnics in North-West, Nigeria.

### **Statement of the Problem**

Most of the higher institutions have very few qualified ICT personnel and experts needed for effective implementation of the ICT based OTM curriculum (Ejeka & Mgbonyebi, 2016). They further added that, most instructors and lecturers currently in the business of training professional secretaries were trained with the old secretarial studies curriculum and some lecturers have phobia for change which affects the much needed enthusiasm and commitment required for effective implementation of the OTM curriculum.

This resulted in the in-flow of non OTM experts but computer literate personnel from Computer Science to engage in instructional responsibilities in OTM. The engagement of non OTM experts into the programme aggravated confusion in the programme philosophy and objectives since they lack the prerequisite knowledge of the programme.

With the establishment of Tertiary Education Trust Fund (Tetfund) in 2011, OTM lecturers battled to improve their competencies through acquiring scholarships both at local and international Universities. This was to enable them acquire higher qualifications that would provide them with requisite knowledge and skills to enrich their job performance to meet the current OTM demand.

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If staff development programmes are not provided to OTM lecturers in the polytechnics, they may continue to demonstrate deficiencies in instructional planning and instructional delivery. These will eventually result to poor job performance, inefficiency and wastage of resources. Consequently, OTM graduates will continue to lack the necessary knowledge and skills required to discharge office work effectively as a result of the existence of wide and clear gap between the training given in the polytechnics and what is required at the work place. These issues raised constitute the problem of this study, and thus prompted the researchers to investigate the influence of staff development programmes on job performance of Office Technology and Management (OTM) Lecturers in polytechnics in north-west, Nigeria.

### **Purpose of the Study**

The main purpose of this study is to determine the influence of staff development programmes on Job performance of office technology and management lecturers in polytechnics in North-west, Nigeria. Specifically, this study sought to determine:

1. The influence of staff development programmes on OTM lecturers' instructional planning in polytechnics in north-west, Nigeria.
2. The influence of staff development programmes on OTM lecturers' instructional delivery in polytechnics in north-west, Nigeria.

### **Research Questions**

The following research questions guided the study:

1. What is the influence of staff development programmes on OTM lecturers' instructional planning in polytechnics in north-west, Nigeria?
2. What is the influence of staff development programmes on OTM lecturers' instructional delivery in polytechnics in north-west, Nigeria?

### **Hypotheses**

The following null hypotheses were tested at 0.05 level of significance.

1. There is no significant difference in the mean responses of respondents on the influence of staff development programmes on OTM lecturers' instructional planning based on years of experience in polytechnics in north-west, Nigeria.
2. There is no significant difference in the mean responses of respondents on the influence of staff development programmes on OTM lecturers' instructional delivery based on years of experience in polytechnics in north-west, Nigeria.

### **Method**

The study adopted a descriptive survey research design. The researchers decided to adopt this design because it allows views of the respondents to be collected from a sample of a large population. The area of the study was North-West, Nigeria consisting of seven states namely; Kano, Katsina, Kaduna, Kebbi, Jigawa, Sokoto and Zamfara States. The population of this study comprised 177 OTM lecturers from Nine (9) public polytechnics in North-West, Nigeria. There was no sampling technique, because the population is manageable, therefore, the entire population was studied. The instrument used for data collection was a structured questionnaire titled ISDPJPOL Questionnaire. The instrument was structured on a 4 point Likert type rating scale. The questionnaire has options of Strongly Agree = 4, Agree = 3, Disagree = 2 and Strongly Disagree = 1. The instrument was validated by three experts; two lecturers from the



Department of Technology and Vocational Education and one from Educational Foundations Nnamdi Azikiwe University, Awka. The instrument was subjected to reliability test to determine the internal consistency and reliability co-efficient value of 0.79 and 0.78 were obtained, with an overall co-efficient of 0.79. Data were collected through the distribution and retrieval of questionnaires to OTM lecturers in polytechnics in north-west, Nigeria. A total number of 144 (81.3%) questionnaires were retrieved out of the 177 administered. The data collected from the respondents were analyzed using mean and standard deviation in answering the research questions, and t-test was used in testing the null hypotheses at 0.05 level of significance. Decision on items and cluster means were used to take decisions regarding the research questions based on the real boundary limit. A null hypothesis was rejected where the p-value is equal to or less than the level of significance ( $\alpha = 0.05$ ) and accepted when p-value is greater than level of significance ( $\alpha = 0.05$ ).

**Results**

**Research Question 1:** What is the influence of staff development programmes on OTM lecturers’ instructional planning in polytechnics in north-west, Nigeria?

**Table 1: Mean and Standard Deviation on the influence of staff development programmes on OTM Lecturers’ instructional planning.**

N=144				
S/N	Items on Instructional Planning and Staff Development Programmes:	X	SD	Remarks
1	Equip me to keep abreast with recent development in discharging my duties.	2.83	0.64	Agree
2	Assist me in identifying learning objectives to be taught.	3.21	0.57	Agree
3	Assist me in setting instructional goals.	3.20	0.70	Agree
4	Assist me in planning specific learning activities.	3.45	0.52	Agree
5	Assist me in planning instructional timeline appropriately.	3.30	0.62	Agree
6	Provide me with appropriate skills for selecting appropriate instructional resources.	3.24	0.60	Agree
7	Assist me in understanding learners’ behaviours.	3.38	0.64	Agree
8	Assist me in selecting appropriate teaching method.	3.47	0.63	Agree
9	Assist me in designing appropriate learning content that matched the objectives.	3.17	0.80	Agree
10	Assist me in identifying gaps between actual and expected performance of students.	3.18	0.67	Agree
<b>Cluster mean</b>		<b>3.24</b>		<b>Agree</b>

Source: Questionnaire administered, 2021

As displayed in Table 1, the cluster mean of 3.24 shows that OTM Lecturers in polytechnics in North Wests, Nigeria agreed that staff development programmes has influence on instructional planning. The item by item analyses with mean ratings ranging from 2.83 to 3.47 agrees that staff development programmes influenced instructional planning. Standard deviations for all the items were within the same range showing that the respondents are homogenous in their responses.

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**Research Question 2:** What is the influence of staff development programmes on OTM lecturers’ instructional delivery in polytechnics in north-west, Nigeria?

**Table 2: Mean and Standard Deviation on the influences of staff development programmes on OTM Lecturers’ instructional delivery**

S/N	Items on Instructional Delivery and Staff Development Programmes:	X	SD	Remarks
11	Assist me in making class room pleasant a friendly place.	3.34	0.58	Agree
12	Assist me in identifying individual differences of the learners.	3.17	0.58	Agree
13	Assist me in observing classroom rules and procedures and consistently reinforcing them.	3.24	0.53	Agree
14	Assist me in making appropriate use of instructional materials.	3.26	0.64	Agree
15	Assist me in providing simple and step-by-step instructions.	3.31	0.61	Agree
16	Assist me in varying the use of instructional methods and strategies.	3.27	0.57	Agree
17	Assist me in providing guided practice to students.	3.28	0.56	Agree
18	Assist me in maintaining students’ attention during instructional delivery.	3.20	0.61	Agree
19	Assist me in effective classroom management and control.	3.26	0.55	Agree
20	Assist me in developing in students the spirit of enquiry and creativity.	3.22	0.54	Agree
<b>Cluster mean</b>		<b>3.26</b>		<b>Agree</b>

Source: Questionnaire administered, 2021

Data presented in Table 2 reveal that the mean ratings of the responses of the respondents on the entire 10 items range from 3.17 to 3.34 which are within the boundary limit of 2.50 3.49 on 4-point rating scale. This indicates that OTM Lecturers agreed that staff development programs have influence on their instructional delivery. The cluster mean score of 3.26 indicates that OTM lecturers agreed that staff development programmes had influence on instructional delivery. Standard deviations for all the items are within the same range showing that the respondents were homogenous in their responses.

**Testing Hypotheses**

The null hypotheses were tested with t – test at  $\alpha = 0.05$ .

**Hypothesis 1:** There is no significant difference in the mean responses of respondents on the influence of staff development programmes on OTM lecturers’ instructional planning based on years of experience in polytechnics in north-west, Nigeria.

**Table 3: Summary of t-test analysis based on years of experience.**

Experience	N	X	SD	df	t-cal	P-value	Decision
Below 15 years	86	3.22	0.25	142	-1.44	.153	Not significant
Above 15 years	58	3.27	0.25				

Data in Table 3 shows that there is no significant difference in the mean responses of respondents on the influence of staff development programmes on OTM lecturers' instructional planning based on years of experience in polytechnics in north-west, Nigeria. This is shown by the p-value of 0.15, which is greater than the significance level of 0.05. The null hypothesis of no significant difference between the two groups is therefore accepted.

**Hypothesis 2:** There is no significant difference in the mean responses of respondents on the influence of staff development programmes on OTM lecturers' instructional delivery based on years of experience in polytechnics in north-west, Nigeria.

**Table 4: Summary of t-test analysis based on years of experience**

Experience	N	X	SD	df	t-cal	P-value	Decision
Below 15 years	86	3.22	0.30	142	-1.39	.169	Not significant
Above 15 years	58	3.31	0.41				

Data in Table 4 shows that there is no significant difference in the mean responses of respondents on the influence of staff development programmes on OTM lecturers' instructional delivery based on years of experience in polytechnics in north-west, Nigeria. This is shown by the p-value of 0.17, which is greater than the significance level of 0.05. The null hypothesis of no significant difference between the two groups is therefore accepted.

**Discussion of Findings**

The findings of the study showed that OTM lecturers in the polytechnics in the North-West Nigeria agreed that staff development programmes influenced their instructional planning and delivery. This finding supports the findings of Musa (2016), who found that lecturers' performance was positively impacted through regular in-service training, workshops, seminars and mentoring. It is also in agreement with the findings of Jalam (2015), who reveals that there is significant impact of in-service training and mentoring on the job performance of lecturers. This finding agrees with Daniel, Agbe, Odeh and Tyokyaa (2019), who reveal that orientation and mentoring variables of staff development has a significant influence on job performance. It is also in agreement with the findings of Yakubu (2018), who reveals that sponsoring lecturers for staff development has influence on their performance. The findings imply that OTM lecturers in North West, Nigeria were exposed to staff development programmes and it helped them in identifying learning objectives to be taught, prepared them for greater responsibilities and motivated them to put more efforts on their job performance.

**Conclusions**

Office technology and management lecturers in Nigerian polytechnics have crucial roles to play in bringing about improved learning in students. Their ability to effectively carryout these roles would be determined largely by the quality of staff development programmes made

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available to, and utilised by them. Staff development efforts in the polytechnics should consider the complex relationship between staff development and improvement in lecturers' job performance. Based on the findings of this study, it is concluded that staff development programmes influenced the job performance of OTM lecturers in the polytechnics in the North-West, Nigeria but need to be improved for better efficiency.

### Limitation of the Study

In carrying out this study, the limitations encountered in the execution of this study were; time needed to complete the study was short and difficulty in accessing and gathering reliable literature.

### Recommendations

In line with the findings and conclusions, the following recommendations are hereby proffered:

1. Tertiary Education Trust Fund (TETFund), in collaboration with other educational stakeholders should make staff development programmes more accessible to OTM lecturers which will help them to improve their instructional planning.
2. Governing council, polytechnic management and senior lecturers in OTM department should see themselves more as mentors by providing guidance and counseling services, and offering professional advice to staff to enhance their instructional delivery competency.

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## MANAGERS' RATING OF HUMAN RELATION SKILLS NEEDED BY BUSINESS EDUCATION GRADUATES FOR SUSTAINABILITY OF SMALL AND MEDIUM ENTERPRISES IN IMO STATE

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### Abstract

*This study ascertained human relation skills needed by business education graduates for sustainability of SMEs in Imo State. One research question guided the study while two null hypotheses were tested. The descriptive survey research design was adopted for the study. The study was carried out in Imo State. The population of this study comprised 130 SMEs registered with the Imo State chamber of Commerce and Industry as at 2019. The entire population of 130 registered SMEs was used for the study since the size is considered manageable. Data for the study was collected using a validated research questionnaire. Cronbach Alpha was used to determine the internal consistency of the instrument which yielded a reliability coefficient value of 0.81. Arithmetic mean and standard deviation was used to answer research questions and determine the homogeneity or otherwise of the respondents' ratings. The t-test and Analysis of Variance (ANOVA) was used to test the null hypotheses. The findings of the study revealed among others that applying positive reinforcement when relating with others, developing good customer orientation for effective operation, persuading customers and stakeholder as expected were highly needed human relations skill. The finding also revealed that there was no significant difference in the mean responses of SME managers on human relation skills needed by business education graduates for sustainability of SMEs based on their years of experience. Based on the findings, it was recommended among others that business education graduates should attend more workshops, seminars, and conferences that emphasizes on the importance of human relations skills for sustainability of SMEs.*

**Keywords:** Human Relations, Skills, Sustainability, Business Education

### Introduction

Business education is a branch of vocational education concerned with exposing its recipients to the functioning of business and the workplace. Business education as a discipline is expected to expose its recipients to diverse curricula, hence, it is that type of education that inculcates in its recipients attitudes, knowledge, skills, values that are required in the business world. It is a means of producing healthy, literate, self-reliant citizens that would create wealth for human development thereby helping in sustaining the nation's development at large (Kaegon, 2009). Succinctly, business education is that aspect of general education that prepares students foremployment and advancement in a broad range of office occupations, accounting professions, marketing occupations, teaching profession and entrepreneurship ventures.

Operationally, business education is the type of education that equips one to carry out some of the business practices both in the office and other business ventures irrespective of the person's profession.

According to Federal Republic of Nigeria (FRN, 2013), the objectives of business education includes: (i) to empower the individual with desirable skills, knowledge and values to perform specific functions so as to become self-reliant; (ii) to empower the individual in such a way that the individual will develop his intellectual capacity that would help him to make informed decisions in all spheres of life; (iii) to understand the political framework of a nation and contribute to national economic growth and development. Therefore, the success of business education graduates in the global business world lies on the content of the business education programme (Obi & Otamiri, 2010). It is however expected that business education programme provides requisite knowledge and entrepreneurial skills needed to compete and survive in the global business world.

According to Okoli and Ibeh (2017), skills encompass the abilities, capabilities, aptitude and expertise acquired through deliberate, systematic and sustained training, and necessary to adaptively perform job functions effectively. These skills are regarded as generic because they are readily transferable across different work settings. In the context of this study, skill means the ability to carry out specific functions which is gained through training or experience. It is important to note that when business education graduates are empowered through the acquisition of entrepreneurial skills, there is the possibility that the skills are used to create new avenues for wealth (Ihebereme (2010). Ihebereme defined entrepreneurial skills as the process of acquiring or gaining effective and ready knowledge in developing ones' aptitude and ability in a particular field. Also, Okoli and Osi (2019) defined entrepreneurial skills as competency based resourceful skills that are capable of making an individual self-reliant, independent and productive in meeting life's challenges. Okoli and Osi further noted that these skills provide the graduates with enhanced competence which makes them productive entrepreneurs. Therefore, graduates of business education need different skills such as human relation skills, problem solving skills, managerial skills, marketing skill and ICT skills to run any kind of business enterprise (Adeniji, 2016). In a similar fashion, Egwanyenga and Ranor (2012) enumerated entrepreneurial skills for business operation as follows: accounting and financial competency skills, marketing skills, problem-solving skills, and general business skills. But for the purpose of this study, human relation skills will be put into consideration because it is a key skill needed by a business owner to interact with others and create sustainable business relationship which in turn brings about the sustainability of the business.

The possession of human relation skills is an advantage for graduates who wish to successfully own and run their private business and prove their mettle in the world of business. Human relation skills involve the ability to work with, understand and motivate others (Jaja (2015). In doing this, graduates who establish and run their own business stand a better chance of business growth and sustainability.

Sustainability involves reducing waste and unnecessary energy, fuel and other inputs and all other actions taken to improve a business. According to Ben-Eli (2018), sustainability means maintaining good relationship with customers, suppliers and the immediate environment of the business. When this is achieved, the business stands a better chance of success and growth and can equally save SMEs cost

Adeusi (2015), noted that SMEs occupy a place of pride in virtually every country or state. They play a significant role in the development and growth of various economies, as a

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result of which they are aptly referred to as the engine for growth and catalyst for socio-economic transformation of any country. SMEs are seen as catalysts in economic development and plays a major role in employment generation, rural development, and national income growth and even produces for exports to attract foreign exchange, Eze and Nwogo (2017). According to a survey conducted by the National Bureau of statistic and Small and Medium Enterprises Development Agency of Nigeria, MSMEs in Nigeria account for 48 percent of our GDP, constituting about 96 percent of registered businesses and employ about 84 percent of the labour force SMEDAN (2021). This is so because government alone can no longer create enough jobs which will absorb these graduates and successfully keep them away from all forms of social vices associated with unemployment. Deen (2013) observed that entrepreneurial skills are capable of equipping graduates of business education with requisite skills needed for productivity hence achieving economic growth. This can be done by the establishment of small and medium enterprises. More so, Onyeoke and Owenbiugie (2021) maintained that to ensure entrepreneurship survival which in turn aids the growth of the Nigerian economy, it requires an energetic private sector driven by entrepreneurship and basic people skills which are also a very important aspect of entrepreneurial skills.

Unfortunately, all efforts by handlers of business education programme seem not to have affected the sudden collapse of businesses. Kanu (2015) and Oroka (2013) revealed SMEs experience minimal growth rate and that some have closed down in the first five years of operation. This is a worrisome development for everyone concerned. This could be traced to the lack of human relations skills which is a key skill that will help business education graduates relate very well with their customers thereby ensuring continuous patronage of their business which will in turn grow and survive. The study therefore ascertained the human relations skills needed by business education graduates for sustainability of SMEs in Imo State.

### **Theoretical Framework**

This study hinged on the human capital theory propounded by Theodor Schultz in early 1961. Schultz (1961) states that as the global economy shifts towards more knowledge based sectors, skills and human capital development becomes a central issue for policy makers and practitioners engaged in economic development, both at the national and regional levels. According Schultz (1961), a more educated/skilled workforce makes it easier for a firm to adopt and implement new technologies, thus reinforcing returns on education and training. Theory of human capital views schooling and training as investment in skills and competencies. This theory is related to this study in that it emphasizes the need for business education graduates to acquire human relations skills to be able to handle business challenges that they may encounter in carrying out business activities and achieve success.

### **Purpose of the Study**

The study sought to determine;  
SME managers' ratings of human relation skills needed by business education graduates for sustainability of Small and Medium Enterprises in Imo State.



### **Research Question**

What are the human relations skills needed by business education graduates for sustainability of SMEs in Imo State?

### **Hypotheses**

The following null hypotheses were tested at 0.05 level of significance.

1. There is no significant difference in the mean responses of SME managers on human relation skills needed by business education graduates for sustainability of SMEs based on their years of experience.
2. There is no significant difference in the mean responses of SME managers in rural and urban areas regarding human relation skills needed by business education graduates for sustainability.

### **Review of Related Literature**

#### **Human Relation Skills Needed for Sustainability**

Human beings live and work together and they need some skills to be highly productive. Human relations try to find out what behavior and attitudes that encourage people to work, do business together and be productive. Human relation is the interaction and integration of people into a work or business situation that motivates them to work together productively, co-operatively and with economic, psychological and social satisfaction (Nwosu & Maben, 2008). Human relations can be said to be the ability to get along with others. This skill is expected of entrepreneurs, office managers, directors, supervisors and foremen.

Human relation skills are integral personal characteristics in relations and interactions between an individual with other people which helps in resolving social situations efficiently. Constantin (2020) stressed that it allows for successful achievement of several significant professional goals. It helps to adapt to new environment, be ready for inner and international professional mobility, work in teams, efficiently collaborate with peers, be a good team leader, manage people and innovations, be self-aware, know personal strengths and weaknesses, manage self-development and life-long learning process. Human relation skills can be basically classified as interpersonal and intrapersonal skills.

Interpersonal skill is the ability of an individual to relate with co-workers, inspire others to participate, and mitigate conflict with co-workers (Etonyeaku, 2009). This skill is essential given the amount of time spent at work each day. Interpersonal skills are life skills one uses every day to relate and interact with other people, both individually and in groups. Organizations often seek to strengthen relations with their customers to achieve sustainability. Owing to global competitions, cultural diversity, latest technologies and process of new management, interpersonal skills is critical in the business environment if meaningful interaction and business must take place. Cameron and Pickering (2012) noted that interpersonal skills in a professional setting are individuals' ability to get along with others while getting through a business transaction. It is how people express their confidence, ability to listen and understand, solve problems, decision making, personal stress management and many others. Developing good interpersonal for business begins with personal appearance, non-verbal communication, verbal communication, clarifying, reflection, decision making and thinking are core interpersonal skills. It is creating an authentic, appropriate, attractive, and affordable image. Intelligence, knowledge, ability, initiative, and effort are vital to the success of any kind, but regardless of whom one is, how old, and what ones role or goal, ongoing image management can give one the

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personal/professional presence one needs. Graduates must come to terms with the need of the business world in terms of personal appearance. They must be prepared to create an image that is in conformity with the need of the industry.

Non-verbal cues as described by Hall (2012) are potentially informative behaviors that are not purely linguistic in content. It includes facial expressions, head movements, posture, body and hand movements, self and other-touching, leg positions and movements, interpersonal gaze, directness of interpersonal orientation, interpersonal distance, and synchrony or mimicry between people. Rush (2013) noted that non-verbal communication encompasses numerous modes such as posture, gesture, eye contact, touch among others. The authors further stated that the knowledge of non-verbal skills in business plays two roles. Managers use non-verbal communication to effectively lead other employee and team members. Team members in business, whether they realize it or not also use non verbal cues to communicate information to individuals within and outside the business. Business education students must be fully equipped with necessary nonverbal cues that project them as positive and ready for the world of work and business. Non-verbal communication in business occurs on a daily basis. Rush further noted that crossed legs or folded arms during a business meeting may signify relaxation or resistance to the idea being presented, eye contact with the speaker during a business meeting communicates interest, and a manager in a company may maintain eye contact more than a subordinate employee does. A firm handshake might be interpreted as confidence while other physical touches such as a lingering touch on the shoulder might be seen as invasive of personal space. Business education students must be familiar with various non-verbal cues so as not to present themselves as offensive before their potential employers, customers and partners.

Verbal Communication is an activity that people view with concern particularly in the public. Few people feel entirely comfortable standing in front of an audience to speak; even fewer actually enjoy it. In fact, a survey carried out in America on common fears, suggested that fear of speaking in front of a group was rated higher than fear of death (Rasberry & Lemoine, 2012), The reasons behind this are simple, People fear that public speaking may result in humiliation, embarrassment or loss of dignity. Even the most adept speakers recognize feelings of fear in anticipation of and during delivery of a presentation. In a very general sense, varying the tone, pitch, rate and other vocal features can communicate enthusiasm and can create a sense of interest in the listener. This can be of importance when giving a presentation or when pitching for a business.

Effective listening is a specific skill that can be consciously developed and practiced in various workplace situations, whether a meeting, supervision session, telephone conversation or chance meeting in the corridor. Listening is not simply a matter of hearing, it is an active psychological process which enables us to attach meaning to all the information we receive.

Intra-personal skills are the foundations of a successful career. Kowald (2014) described intrapersonal skills as another term for self-awareness or introspection. Intrapersonal skills are talents or abilities that reside within the individual and aid the individual in problem solving. The National Research Council (2010) identified two broad skills that fall within this cluster; adaptability and self management. Adaptability is the ability and willingness to cope with uncertain, new, and rapidly changing conditions in business, including responding effectively to emergencies or crisis situations and learning new tasks, technologies, and procedures. Adaptability also includes handling work stress, adapting to different personalities,

communication style and cultures and physical adaptability to various indoor or outdoor work environments. On the other hand, self-management is our ability to manage our behaviours, thoughts and emotions in a conscious and productive way. Knowing what to do and how to act in different situations also forms an integral part of self-management.

**Method**

The descriptive survey research design was adopted for the study. The study was carried out in Imo State. The population of this study comprised 130 SMEs registered with the Imo State chamber of Commerce and Industry in 2019. The entire population of 130 registered SMEs will be used for the study since the size is considered manageable. Therefore, there will be no sampling for the study. Data for this study will be collected using a structured questionnaire developed by the researcher. The instrument is titled “Questionnaire on Human Relation Skills Needed for Sustainability” (QHRSNS) which has two sections, A and B. Section A contains information on the personal data of the respondents while section B contains 10 items on human relation skills. The instrument is structured on a 5 point scale of; Very Highly Needed (VHN); Highly Needed (HN); Moderately Needed (MN); Slightly Needed (SI); Not Needed (NN) with values of 5, 4, 3, 2 and 1 respectively. The instrument was face validated by two experts. The reliability of the instrument was determined by administering the instrument to 40 registered SMEs in Abia State which was not part of the study. Cronbach Alpha was used to determine the internal consistency of the instrument which yielded a reliability coefficient value of 0.81 which was considered high enough to judge that the instrument is reliable. Arithmetic mean was used to analyze data related to the one research question posed and standard deviation was used to determine the homogeneity or otherwise of the respondents’ ratings. The t-test and Analysis of Variance (ANOVA) was used to test the null hypotheses. The mean ratings will be interpreted using the real limit of numbers of: Very Highly Needed (VHN) 4.50 – 5.00; Highly Needed (HN) 4.50 – 4.49; Moderately Needed (MN) 2.50 – 3.49; Slightly Needed (SN) 1.50 – 2.49; Not Needed (NN) 0.50 – 1.49.

**Results**

**Research Question**

What are the SME managers’ ratings of human relation skills needed by business education graduates for sustainability in Imo State?

**Table 1: Respondents’ Mean and Standard Deviation Ratings of Human Relation Skills Needed by Business Education Graduates for Sustainability**

S/N	Item Statements	X	SD	Remarks
1	Apply positive reinforcement when relating with others	3.38	0.77	Highly needed
2	Develop good customer orientation for effective operation	3.70	0.59	Highly needed
3	Persuade customers and stakeholder as expected	4.55	0.58	Very highly needed
4	Organize customer meetings to improve their buying behavior	3.47	0.82	Highly needed
5	Establish linkages with other businesses and stakeholders for mutual learning and collaborative	4.71	0.52	Very highly needed

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	undertaking			
6	Demonstrate genuine regards to customers	3.69	0.69	Highly needed
7	Recognize the behavioral style of customers	3.23	0.88	Moderately needed
8	Apply basic ideas to motivate customers	4.39	0.49	Highly needed
9	Respond promptly to customers' needs	4.32	0.44	Highly needed
10	Ability to listen, understand and solve problems	3.69	0.51	Highly needed
<b>Cluster mean</b>		<b>3.91</b>		<b>Highly needed</b>

Table 1 shows that out of 10 items rated by SME managers on human relation skills needed by business education graduates for sustainability of SMEs in Imo State, eight were highly needed, one was moderately needed, and one was very highly needed. With the cluster mean of 3.91, it is confirmed that human relations skills are highly needed by business education graduates for sustainability of SMEs in Imo State.

### Test of statistical Hypotheses

#### Hypothesis 1

There is no significant difference in the mean responses of SME managers on human relation skills needed by business education graduates for sustainability based on their years of experience.

**Table 1: ANOVA Analysis of the significant difference among SME Managers on Human Relation Skills Needed by Business Education Graduates for Sustainability based on their Years of Experience**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	66.599	2	33.300	2.515	0.85
Within Groups	1681.832	127	13.243		
Total	1748.431	129			

Data in Table 1 show that there is significant difference among SME managers on human relation skills needed by business education graduates for sustainability based on their years of experience. The analysis result revealed that  $p$ -value (0.85) is greater than the alpha level  $\alpha = 0.05$ ,  $p(0.67) > 0.05$ . This result indicates that the null hypothesis is not rejected.

#### Hypothesis 2

There is no significant difference in the mean responses of SME managers in rural and urban areas regarding human relation skills needed by business education graduates for sustainability.

**Table 2: t-test analysis of the significant difference in the mean responses of SME managers in rural and urban areas regarding human relation skills needed by business education graduates for sustainability**

Variables	N	$\bar{X}$	SD	Df	t-value	p-value	Remark
Urban	100	33.82	3.72	128	1.961	0.52	Not significant
Rural	30	32.33	3.36				

Data presented in Table 2 show the significant difference in the mean responses of SME managers in rural and urban areas regarding human relation skills needed by business education graduates for sustainability. The result shows a p-value of 0.052 with 128 degree of freedom and  $\alpha$  -value of 0.05. Since the p-value of 0.52 is greater than the  $\alpha$ -value of 0.05 ( $0.52 > 0.05$ ), the null hypothesis is accepted. This means that there is no significant difference in the mean responses of SME managers in rural and urban areas regarding human relation skills needed by business education graduates for sustainability.

### Discussions of Findings

The findings of the study revealed that the human relation skills that are needed by business education graduate for sustainability include- applying positive reinforcement when relating with others, developing good customer orientation for effective operation, persuading customers and stakeholder as expected, organizing customer meetings to improve their buying behaviour, establishing linkages with other businesses and stakeholders for mutual learning and collaborative undertaking, demonstrating genuine regards to customers, recognizing the behavioural style of customers, responding promptly to customers' needs and ability to listen, understand and solve problems.

This finding agrees with the finding of Okoli and Ibeh (2017) that business education graduates need skills for interactions with people and interpersonal relationship. These skills will help graduates of business education in persuading customers and stakeholder as expected, organizing customer meetings to improve their buying behaviour, establishing linkages with other businesses and stakeholders for mutual learning and collaborative undertaking as human relation skills for employability. The finding supported the views of Jaja and Arugu (2015) that human relation skills are required of manager of businesses at various stages of business transaction for growth and sustainability of their businesses. This also aligned with the finding of Ezenwafor and Olaniyi (2017) that human relation skills as highly needed by business education graduates for handling of business enterprise in south west Nigeria. Equally, the finding supported Banabo, Ndiomu and Koroye (2011) that human relation skills are required of tertiary administrators in the Niger Delta States for relating with others at the workplace. With all indications from the findings, it is pertinent that human relation skills play vital role in the sustainability of SMEs managed by business education graduates which will translate to business success..

The findings of the study also discovered no significant difference in the mean responses of SME managers on human relation skills needed by business education graduates for sustainability of SMEs based on their years of experience and location.

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## Conclusion

Based on the findings of the study, it was concluded that graduates of business education need human relations skills to enable them maintain relationships with customers, business partners and others they come in contact with during the process of business transactions. These skills include: applying positive reinforcement when relating with others, developing good customer orientation for effective operation, persuading customers and stakeholder as expected and organize customer meetings to improve their buying behavior among others. When human relation skills are practiced in business, it will bring about increased patronage on goods and services rendered and customer retention which will lead to business success and sustainability of the SMEs.

## Recommendations

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

3. Institutions of higher learning should organize workshops, seminars, and conferences for business educators in order for them to gain more knowledge on human relation skills that will help them to teach and impart the knowledge to the students which will in turn help the students manage businesses to achieve success and sustainability of SMEs owned by them.
4. Business education curricula in universities should be reviewed at all levels by programme developers and curriculum planners to further stress and emphasize on the importance of human relation skills that contributes to sustainability of SMEs.
5. Business education undergraduates should practice during training using businesses established by the institution operating within the school environment for them to gain firsthand knowledge and experience on human relation skills which will help them during business activities of their own.

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## LEVEL OF ACQUISITION OF ENTREPRENEURIAL INNOVATION SKILLS BY POSTGRADUATE BUSINESS EDUCATION STUDENTS FOR SELF-SUSTAINABILITY IN RIVERS STATE

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### Abstract

*The study ascertained the level of acquisition of entrepreneurial innovation skills by post-graduate business education students for self-sustainability in Rivers State. One research question aided the study and one hypothesis was tested at 0.05 level of significance. The design of the study was descriptive survey. A total of 298 business education postgraduate students in two Rivers State universities made up the population. 44 postgraduate business education students in Rivers State University and 254 postgraduate business education students in Ignatius Ajuru University of Education in Rivers State. The instrument for data collection was a structured questionnaire titled: Entrepreneurial Innovation Skills Acquisition Questionnaire (EISAQ). Three experts validated the instrument and a reliability test using Cronbach Alpha method yielded an internal consistency index of 0.86. Mean ratings and standard deviation were used to answer the research question while t-test for large group mean was used to test the hypothesis at a significance at 0.05. The findings of the study revealed that business education postgraduate students acquired moderate level of entrepreneurial innovation, skills for self-sustainability. The findings of the study also revealed that postgraduate business education students in Rivers State University and Ignatius Ajuru University of Education did not differ significantly regarding the level of acquisition of entrepreneurial innovation skills for self-sustainability. Based on the findings, conclusion was drawn that entrepreneurial innovation skills acquired by postgraduate business education students for self-sustainability was necessary. Lack or absence of these skills negatively affected graduates embarking on any business ventures was led to business failures. It was recommended among others that graduate students of business education must be able to maintain entrepreneurial characteristics and traits by finding solution to problems that arise when operating business ventures. The courage to continue the business will lead to success and self-sustainability. Entrepreneurship centres in universities or other tertiary institutions in Nigeria must be equipped and utilized to assist institutions to bridge the gap created by the theoretical nature of entrepreneurial programmes in institutions.*

**Keywords:** Skills, Entrepreneurial innovation skills, Business education, Acquisition, Self-sustainability



## **Introduction**

An entrepreneur should be able to effectively manage people, budgets, operations and in some instances, investors. This requires someone with a multi-tasking innovative work style, who can plan for both short-term and long term goals of business. Iheanacho (2011) asserted that potential entrepreneurs can be trained to sharpen their innovative skills to:

1. identify a need that can be satisfied with a product or service;
2. analyze trends in the economy which will enable the potential entrepreneur to project the prospects of the business and anticipated threats;
3. develop a viable business plan focusing on the details of activities required to market the product, source for resources and programme of action needed for the implementation of projects;
4. assembling of resources;
5. recognize that adversity and crisis facts of business life and developing the capacity to deal with events as they occur;
6. develop effective management skills especially planning, coordinating and controlling.

Similarly, Momoh (2012) identified the following categories of innovative skills that make successful entrepreneurs: personal skills, interpersonal skills, critical and creative thinking skills, practical skills, vision to drive, persistence, initiative, risk tolerance, resilience (ability to recover from failure), self-determination, control and commitment, team work, leadership and motivation, communication skills and listening skills, conflict resolution, personal relations, negotiation and ethics. All these skills can be learned and developed. Entrepreneurs need a well-developed set of critical thinking skills encapsulated in: problem solving, opportunity identification and creative thinking. Okpara (2007) saw innovation as the process of changing ideas into reality that triggers creative ideas to generate series of innovative events. In line with this, Okolie and Ogbakirigwe (2014) asserted that innovative skills involve the consolidation of fresh ideas or accumulation of knowledge. Thus, innovative skills are skills acquired by individuals that empower the individuals to introduce new things capable of ensuring self-employment and self-sustainability in the society. This class of skills allows individuals to take cognizance of untapped business opportunities in the environment and propel them into taking advantage of such opportunities.

According to Hassan (2013) innovative entrepreneurs usher in new products, inaugurate new processes of production and discern new markets for economic products. To Thom-Otuya and Thom-Otuya (2008) innovative entrepreneurs usher in new ideas, new products, new technologies and methods and are interested in re-organizing enterprises for profit maximization. Organization for Economic Co-operation and Development (OECD) (2005) asserted that innovative entrepreneur have initiative for production innovation, process innovation and organizational innovation. OECD further gave detailed explanation of their assertions expressing that, innovative entrepreneurs with product innovation introduce products that are new or significantly improved with respect to intended uses. This includes improvements in material and technical specifications, incorporation of software that is user friendly and other functions that involve activities, such as research and development, acquisition of patents and technology licenses, trademarks and industrial engineering.

Process innovative entrepreneurs implement fresh or expressively improved production or delivery process that includes significant changes in equipment usage, techniques and software.

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Marketing innovation entrepreneurs implement fresh marketing processes that involve significant change in product design and packaging, product promotion and pricing with the aim of introducing new products or increasing sales. Organization innovation entrepreneurs implement new organizational policies with intention of boosting firm's performance by reducing administrative costs, gaining access to non-tradable assets, improving work satisfaction and reducing costs of supplies.

It can be concluded here that an individual with innovative skills acquired through business education will contribute positively to the nation's economic development and self-sustainability. This will contribute positively to hunger and poverty reduction thereby vaulting the economic and social status of the nation.

In order to be able to understand the concept of business education, it would be necessary to look at the definition of business education. Evans (2011) viewed business education as an essential part of the preparation of youth for life and living. Godfrey (2013) postulated that business education is a programme of instruction which consists of two parts: office education - a vocational programme for office careers through initial, refresher and upgrading education and the other as general business education, a programme to provide students with information and competencies, which are needed by all in managing personal business affairs and in using the services of the businesses Cross (2010) posited that the concept of business education in the American context is a field of study and training in business practices and in specific skills such as accounting, information processing, keyboarding/typewriting techniques and record keeping. It also covers business management, business communication and distributive trade practices.

To Agbola (2015), business education is a form of education that is concerned with the acquisition of skills. Ubulom (2012) described business education as a collaborative programme in which educational and industrial sectors of any economy form partnership thereby preparing individuals to adequately fit into both industry and the classroom as professionals. Consequently, business education can simply be defined as that aspect of educational programme designed to provide an individual understanding knowledge, values, attitudes and skills needed in the business world, thereby producing responsible, productive and self-reliant citizens. For the purpose of this study, business education is defined as a programme designed to produce manpower that possess the required knowledge, skills and attitude for harnessing other resources, bringing them into goods and services demanded by the society for the satisfaction of wants

Skill acquisition is defined as the ability to be trained on a particular task or function. (Mike, 2014). Mike emphasized that the importance of skill acquisition includes self-employment, diverse job opportunities, employment generation, effective function and crime reduction. Idoko (2014) defined skill acquisition as the form of training by individuals or group of individuals that can lead to acquisition of knowledge for self-sustenance. It involves the training of people in different fields of trade under a legal agreement between the trainers and the trainees for certain duration and under certain conditions. Ochiagha (2011) defined skill acquisition as the process of demonstrating the habit of active thinking or behaviour in a specific activity. Ochiagha further stated that skill acquisition is seen as the ability to do or perform an activity that is related to some meaningful exercise, work or job. Ochiagha maintained that for skills to be acquired, appropriate knowledge, attitudes, habit of thought and qualities of character are learnt to enable

the acquirer develop intellectual, emotional and moral character which prepares the individual for a brighter future.

Self-sustainability is defined as the social and economic ability of an individual, household or a community to meet essential needs (including protection, food, water, shelter, safety, health, business and education) in a sustainable manner and with dignity (Anukan, 2013). Ogbonna (2017) pointed out that self-sustainability refers to dependence on one's abilities, judgment and resources to do whatever should be done. It is a state in which a person or an entrepreneur needs little or no help from or interaction with others.

An individual is said to be self-sustained when the individual can depend less on other people and family in the management of human and material resources. Citizens of a nation will be self-sustained when they have possible cause to access and utilize the essentials of life which includes good food, clothing, shelters, medications, transportations and functional education (Ofoye, 2015). For one to be sustainable, one must be enterprising. One is enterprising when there is attributes of verbal skills for selling, dominating, leading, seeing oneself as a strong, masculine leader (Ugwuda, 2014). There are evidences from developed societies that shows a positive relationship between entrepreneurial skill acquisition and self-sustainability (Agbeze, 2012).

### **Statement of the Problem**

Most business education graduates in Rivers State constantly face the problem of unemployment and failure of businesses before their fifth year in operation as a seeming of lack of entrepreneurial innovation skill acquisition. It seems most disappointing and frustrating when an entrepreneur who has been long unemployed before starting his own business is forced out of business because of lack of entrepreneurial innovation skills. The failure of these entrepreneurs is not because they do not have the necessary capital and machines to stay afloat, but they seem to lack requisite entrepreneurial skills needed to grow from a small business positions to bigger ones and as well to remain in business. On the strength of this, this study analysed the level of acquisition of entrepreneurial innovation skills by post graduate business students for self-sustainability in Rivers State.

### **Purpose of the Study**

The main purpose of this study was to ascertain the level of entrepreneurial innovation skills acquired by postgraduate business education students for self-sustainability in Rivers State.

### **Research Question**

One research question guided the study.

What is the level of acquisition of entrepreneurial innovation skills by postgraduate business education students for self-sustainability in Rivers State?

### **Hypothesis**

One null hypothesis was tested at 0.05 level of significance.

There is no significant difference in the mean ratings of postgraduate business education students of Rivers State University and Ignatius Ajuru University of Education on the level of acquisition of entrepreneurial innovation skill for self-sustainability.

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**Method**

The study was carried out in Rivers State University and Ignatius Ajuru University of Education, Port Harcourt, Rivers State. The design of the study was descriptive survey. One research question guided the study and one hypothesis was tested at 0.05 level of significance. The population of the study was 298, which made up 44 postgraduate business education students in Rivers State University and 254 postgraduate business education students in Ignatius Ajuru University of Education in Rivers State. The instrument for the study was a structured questionnaire titled: Entrepreneurial Innovation Skills Acquisition Questionnaire (EISAQ). Three experts validated the instrument and a reliability test using Cronbach Alpha method yielded an index of 0.86. Data collected were analysed using mean ratings and standard deviation for the research question and t-test for large group mean was used to test the hypothesis at 0.05 level of significance. The decision rule was: if the calculated p-value was greater than 0.05, the hypothesis was rejected and if the calculated p-value was less than the critical value, the hypothesis was accepted

**Results**

**Research Question:** What is the level of acquisition of entrepreneurial Innovation skills by postgraduate business education students for self-sustainability in Rivers State?

**Table 1: Mean and Standard Deviation on the Level of Acquisition of Entrepreneurial Innovation Skills by Postgraduate Business Education Students for Self-Sustainability in Rivers State**

s/n	Item	RSU (N=44)			IAUE (N=236)		
		$\bar{X}$	SD	RMKS	$\bar{X}$	SD	RMKS
1	Identify and exploit new technological trends to ensure self-sustainability	3.41	1.23	ML	3.80	1.32	ML
2	Introduce new goods or services that meet people’s needs and promotes self-sustainability	3.41	1.25	ML	3.19	1.29	ML
3	Identify available business opportunities that guarantees self –sustainability	3.39	1.23	ML	3.73	1.10	ML
4	Improve production and delivery methods to guarantee self-sustainability	3.29	1.22	ML	4.43	1.15	HL
5	Implement new marketing strategies for self-sustainability	3.34	1.33	ML	3.95	1.14	ML
6	To recover from failure	3.52	1.09	ML	2.90	1.39	ML
7	To develop capacity to deal with adversity and crises when they occur	3.54	1.17	ML	3.61	1.89	ML
8	Identify a need that can be satisfied with a product or service	3.39	1.26	ML	3.29	1.32	ML

9	Develop a viable business plan that focused on details required to market a product	3.39	1.26	ML	3.67	1.11	ML
<b>Grand Mean &amp; SD</b>		<b>3.41</b>	<b>1.23</b>	<b>ML</b>	<b>3.61</b>	<b>1.30</b>	<b>ML</b>

*ML= Moderate Level, HL= High Level*

*Source: Field Survey (2021)*

Data in Table 1 indicated that all the ten items had mean ratings ranging between 2.90 to 4.43 which means that business education postgraduate students in both above named universities in Rivers State have High Level (HL) and Moderate Level (ML) of acquisition of entrepreneurial innovation skills for self-sustainability.

**Hypothesis:**

There is no significant difference in the mean ratings of postgraduate business education students of Rivers State University and Ignatius Ajuru University of Education on the level of acquisition of entrepreneurial innovation skill for self-sustainability.

**Table 2: t-test Analysis of the Mean Responses of postgraduate Business Education Students in RSU and IAUE on the level of acquisition of entrepreneurial innovation skill for self-sustainability.**

Respondents	N	X̄	SD	DF	Alpha	t-cal	t-crit	Decision
IAUE	236	3.61	1.30	278	0.05	1.00	1.96	Accepted
RSU	44	3.41	1.23					

t-cal (t-calculated), t-crit (t-critical).

The result of the hypothesis testing as shown in Table 2 indicate that when the mean ratings of postgraduate business education students in RSU (mean = 3.41, SD = 1.23) and IAUE (mean = 3.61, SD = 1.30) on the level of acquisition of entrepreneurial innovation skill for self-sustainability is tested for difference using t-test, a t-calculated value of 1.00 is obtained which is less than the t-critical value of 1.96 at 0.05 level of statistical significance. This result therefore indicates that there is no significant difference in the mean rating of postgraduate business education students in RSU and IAUE and the null hypothesis is therefore accepted and retained.

**Discussion**

The findings of the study indicated that entrepreneurial innovation skills for self-sustainability included identification of a need that can be satisfied with a product or service, analyzing trends in the economy which will enable potential entrepreneurs to project the prospects of the business and anticipated threats, development of a viable business plan focusing on the details of activities required to market the product, sourcing for resources and programmes of action needed for the implementation of the projects, assembling of resources and capacity to deal with adversities and crisis as they occur. This findings agrees with the assertions of Organization for Economic Co-operation and Development (OECD)(2005) which asserted that innovative entrepreneurs have initiative for production innovation, process innovation and organizational innovation. OECD further gave detailed explanation of their

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assertions saying that: innovative entrepreneurs with product innovation introduce products that are new or significantly improved with respect to intended uses. This includes improvements in material and technical specifications, incorporation of software that is user friendly and other functions that involve activities, such as research and development, acquisition of patents and technology licenses, trademarks and industrial engineering. In agreement with the above, Thom-Otuya and Thom-Otuya (2008) remarked that innovative entrepreneurs usher in new ideas, new products, new technologies and methods and are interested in re-organizing enterprises for profit maximization. Hassan (2013) buttressed that innovative entrepreneurs usher in new products, inaugurate new processes of production and discern new markets for economic products. Okolie and Ogbaekirigwe (2014) asserted that innovative skills involve the consolidation of fresh ideas or accumulation of knowledge lasting comprehensive set for the discovery of possible opportunities. Thus, innovative skills are skills acquired by individuals that empower individuals to introduce new things capable of ensuring self-employment in the society. This class of skills allows individuals to take cognizance of untapped business opportunities in the environment and propel them into taking advantage of such opportunities.

Test of the hypothesis indicated that there was no significant difference in the mean ratings of postgraduate business education students of Rivers State University and Ignatius Ajuru University of Education on the level of acquisition of entrepreneurial innovative skills for self-sustainability. Based on the respondents view, the researcher is of the opinion that entrepreneurial innovative skills improve self-sustainability of postgraduate business education students.

### **Conclusion**

The conclusion reached from this study actually established that entrepreneurial innovation skills are necessary for postgraduate business education students for self-sustainability. These skills are veritable tools that prepare business education graduates for the world of work and to become self-sustainable as operators of business ventures. Lack or absence of these skills negatively affects graduates embarking on business ventures.

### **Recommendations**

Sequel to the findings of this study, it was recommended that:

- 1 The graduate students of business education must be able to maintain entrepreneurial characteristics and traits by finding solutions to problems that arise when operating business ventures. The courage to continue the business will lead to success and self-sustainability.
- 2 Entrepreneurship centres in universities or other tertiary institutions in Nigeria must be equipped and utilized to assist these institutions to bridge the gap created by the theoretical nature of entrepreneurial programmes in institutions.

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