



Yaba Multidisciplinary Journal (YAMUJO)



**Maiden Edition
November 2018**

A bi-annual double-blind peer reviewed research journal published by the Academic Staff Union of Polytechnics domicilled in Yaba College of Technology, Yaba, Lagos, Nigeria.

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	Contents	Page
1.	Title Page	
2	Influence of Resource Management in Academic Libraries and Implications on Educational Development – <i>Adeyanju et al</i>	4-10
3	Interactional Attitudes of Youth Behaviour in Nigeria – <i>Ajiboye and Ogunjirin</i>	11-17
4	Self Awareness and Achievement Motivation Among Youths In Nigeria - <i>Ajiboye & Adebayo</i>	18-28
5	Training Needs Assessment Of Microsoft Office Competencies Of Office Technology And Management Lecturers In Public Polytechnics In Lagos And Edo State – <i>Akhademe and Ojo</i>	29-37
6	Office Technology And Management Students' Perception of The Challenges Encountered During SIWES Exercise In Public Polytechnics In Lagos State – <i>Ojo and Akhademe</i>	38-46
7	Job Stress On Employee Satisfaction And Commitment In The Manufacturing Sector Using Cadbury, Nestle And Pz Cussons Nigeria – <i>Akindele and Akindamola</i>	47-57
8	Mathematical Model on Investment and Profitability Using Swiss Gold as A Case Study - <i>Bakre and Ige</i>	58-62
9.	The Inadequate Knowledge of Concord as a Major Cause of Wrong Sentence Constructions in the Context of a Nigerian – English Bilingual. – <i>Ehuwa . M. F.</i>	63-68
10.	Deterrents to Ease Of Book Publishing Business In Nigeria - <i>Elonye et al</i>	69-74
11.	The Inevitability of Information Communication Technology (ICT) Utilization for Improved Librarian's Job Performance (A Case study of Tertiary Institutions in Lagos State Nigeria) – <i>Fadimu et al</i>	75-82
12.	Effect of Improvised Materials on Student's Achievement and Retention of the Concept of Simple Machine – <i>Aluko and James PhD</i>	83-87
13.	Information Sources Availability and Utilization for Entrepreneurial Skills Acquisition among School of Business and Management Studies Students, Yaba College of Technology, Lagos - <i>Onyenania et al</i>	88-97
14.	Literature As A Viable Accompaniment In The Teaching Of English In Polytechnics - <i>Flavian-Obasi, Jacqueline N</i>	98-103
15.	Importance of Organizational Culture as a Factor for Employee Commitment: A Study of 9mobile Plc. - <i>Rasheed Olusola et al</i>	104-109
16.	Effect Of Corporate Social Responsibility (Csr) On Organisational Corporate Image In First Bank Nigeria Plc. – <i>Ossisanya et al</i>	110-120
17.	Corruption as a Major Menace in Nigeria Civil Service; The Analysis on the Precedence — <i>Lere-Oyeleye Oluwayemisi E</i>	121-126
18	Problems of CBT Exams in Nigeria Tertiary Institutions: Emphasis on English Language Courses - <i>Ehuwa M. F</i>	127-130
19.	Application of Green's Functions in Solving Non-Homogenous Differential Equations Using Initial and Boundary Value Conditions	131-147

Influence of Resource Management in Academic Libraries and Implications on Educational Development

**ADEYANJU Elkana Oyetunde, ELONYE, Gloria, GEORGE, Lukmon Abolaji,
ADEYOKUN, Beatrice Oluwakemi**

Yaba College of Technology
yanjutunde@yahoo.com

Abstract: The paper examines the influence of using resources in academic libraries in the most effective and efficient way possible for solving problems in our educational development. These resources can include tangible resources such as electronics, human and financial resources like, Information and Communication Technology, employees and capital (funding system). However, the study also identifies various resources to be adequately managed in academic libraries and their effectiveness generally in libraries. Also, an overview of resource management in academic libraries is fully discussed in the paper. The study also points out some of the challenges of resource management in academic libraries and its implications for the educational sector. Further, some of the remedies are critically enumerated in this study.

*Keywords: Resource management, (E-resources, Human resource and Budgeting and Financial management)
Academic library and Educational sector*

1. Introduction

One major objective of tertiary institutions establishing is for the promotion of scholarly learning and research activities in all fields. The Federal Republic of Nigeria while commenting on the “National Policy on Education (NPE, 2004)”, expressed that one main goal of tertiary institutions is to obtain both physical and intellectual skills which will enable an individual be self-reliant and become a useful member of the society in which he lives. A fundamental section in the “mission and vision of tertiary education/learning, is the academic library”, meant to serve the institution such as the university, polytechnic and colleges of education’s community.

Akpohonor (2005:64) posits that academic libraries are those devoted to tertiary institutions’ functions such as the “universities, polytechnics and colleges of education, colleges of agriculture and technology as well as research institutes”. Academic libraries according to Yusuf and Iwu (2010:433), act as the “nerve centre” upon which scholarly education revolves. Thus, academic libraries are seen as indispensable instruments for intellectual capacity development since as repositories of knowledge that users such as staff and students visit or access for academically verified information. Hence academic libraries are often at the forefront of information services’ provision to varying categories of users in an academic community in support of their teaching, learning and research needs.

Singh and Kaur (2009:433), explained that “preservation/access to information and knowledge is the major responsibility of academic libraries” that supports the mission of their parent institutions. Academic libraries in carrying out supportive roles in their attached institutions usually help in providing necessary information resources especially in our present day knowledge driven era. These responsibilities or functions enable academic libraries in meeting the needs of patrons. Such information resources, ranges from print to non-print and electronic resources in line with Yusuf and Iwu (2010:433) assertion that “different users in academic library environment utilize different print information resources available in the library such as reference sources, textbooks, journals, past projects, theses and dissertations, as well as their electronic versions such as electronic journals etc.

Resource management

Resource management plays a vital role in academic libraries, however, for all these functions and roles of academic library to be effective in our educational system, the issue of resource management should be put into proper consideration and management, such as”

- i. Ensuring an effective human resource functions

- ii. Proper budgeting and financial planning system
- iii. Improvement on information and communication technologies (ICTs) utilization

Considering library users as an essential component of academic library/institutions' set up, has from inception been regarded as the major reason for academic library existence as staff in most cases have minimum usage compared to students who usually have maximum use of academic libraries. Thus, Agboola and Bamigboye (2011:432) maintained that "the quality and strength of any educational/academic programme, is dependent on the library and how its resources are planned and managed irrespective of their demands; and not to see the library as a magnificent building but the use of its information resources". Ajibero (1995:1) therefore sees an "academic library as the heart of any tertiary institution" using the human, financial and information resources at its disposal to effectively support teaching, learning and research objectives of the institution.

Statement of problem

There is no doubt, that no meaningful educational/academic system could achieve its teaching and learning objectives, without sound information resource management system for adequate and efficient information services delivery. Such resources management areas include: information and Communication Technology, human resource management and adequate financial system. Although, many Nigerian academic libraries are striving/making efforts to provide relatively adequate information resources to their respective increasing user population, certain problematic factors exist in such areas as: inadequate ICT trained manpower etc. are still posing great challenges to these libraries thereby hindering their effective provision and delivery of library and information services. Thus, the paper is designed to examine the impact of well trained skilled manpower (human resources) and appropriate use of up to date electronic and ICT resources in the educational sector.

Objectives of the study

The objectives of this study are:

- i. To critically measure the impact of using organizational resources in the most effective and efficient way possible for solving academic libraries problems in the education sector
- ii. To identify various resources to be adequately managed in academic libraries.
- iii. To point out some of the impact of resource management in academic libraries and its implications for the educational sector
- iv. To find out the challenges faced by academic libraries in Nigeria and their remedies.

2. Literature Review on Resource Management

Pinfield (2001:26) emphasizes that effective resources management of electronic information tools demands expertise in managing information systems. He added that such library management systems require setting priorities on staff with required expertise and time who would be in position to decide how and who presides over the functionality of all electronics required for library resource management. It also involves providing library users with more specialized and convenient ways to access information resources and the provision of library staff with necessary tools to keep track of them.

Today, no individual library centre would be capable of providing or making available all information resources required by their patrons rather than in access provision to their users' needs. Thus, demand for information access is on the growing side upon which library management has to accommodate in order to meet users' demand for information. In this direction, interlibrary co-operation management approach becomes the most effective way of financing this effort simply because of the rapid increase in prices charged for information materials/resources and access. Organized efforts among libraries involving networks, unions, and other information networks/consortiums are becoming the most common forms of co-operation which has in no little measure contributed to the development of academic libraries in Nigeria.

Ogunsola (2004:1) describes academic libraries as the heart of the university, which is expected to sustain books' standards as well as journals and audio-visual collections. Academic libraries in Nigeria were adequately funded before now as a result of the oil boom. It was therefore easy for them to acquire varied information resources, which were processed and organized according to their coverage in relation to the needs of the different category of users. Today, universities are not left out in the economic crunch, which

has eaten deep into the Nigerian economy. The result is gross under funding which is manifested in all areas of the university activities and programmes. The library is not left out. The library budget is so meager that acquisition of materials becomes a herculean task. Odogwu (2008:2) quoting Isaak (2002) posits that the problems that weaken African tertiary institutions' libraries "include financial constraints, lack of human resources, outdated materials and poor utilization or use". Odini (1991) cited by Ilo (2008:2) avers that low budget is making it very difficult for libraries in Africa to provide optimum resources for their patrons. The government inability to adequately provide libraries with essential and relevant materials has a great implication for teaching, learning, research and development. Omekwu (2004) cited by Ilo (2008:2) maintains that it is difficult for a single library to have all the resources it requires to meet the information needs of its actual and potential clientele. He therefore proffers solution through resource sharing.

2.1. Overview of Resource Management in Academic Libraries

- a) Human resource management
- b) Budgeting and Financial management
- c) Information/electronic resources management

(a) Human Resource Management

It is essential for any academic library wishing to attain its objectives successfully, to manage human resources as its most valuable assets efficiently that would enhance their optimal utilization. Hence, academic Library's human resource has to be managed under difficult financial conditions, changing users' needs and technological challenges. Employees in the academic library find themselves in three environments in the work place and a variety of factors can influence their utilization in these environments in which they have to fulfill their task. Empirical studies of the academic libraries in African countries identified four factors that can positively or negatively influence employees' attitudes in the academic library; these include: general attitude of the employee to the profession, training and development, information technology and career management. However, Szilagyi & Wallace (1990) cited in Barrington and Franco (2010:1), expressed that employees find themselves within the following three environments in the work place: the job content environment, the job context environment and the external environment.

Barrington and Franco (2010:1) explains further that varieties of factors can influence the performance and utilization of employees that is present in these work environments. Such factors are: recruitment, employment compensation, position Administrators and Staff Training or Staff development etc. Besides, most countries in the world are gradually being saturated with information technology gaps. The wonders of computers and related facilities such as the internet and their astounding functions in the information systems environment are being propagated in the educational, social-political and economic circle. Obviously, advancement in information technology is reshaping all sphere of the human socio economic, political and technological landscape of human endeavours. The inevitable/unavoidability of information technologies application to library information system has therefore remained incontestable and incontrovertible. This is one major reason why academic institutions' libraries in Africa are making frantic efforts to automate their functions. The challenge(s) that this innovation and automation pose for human resource management and development in the Information Industry and other details on staff/human capital development practices would be discussed.

(b) Budgeting and Financial Management in Academic Libraries

According to Emojo (2004:30), "library and information services have been recognized as having an important role to play in higher education; and academic institutions for a long time now, have been responsible for providing information materials for purposes of learning, teaching and research"; noting that all these important roles of library are being endangered by inadequate funding. In the event of government budget's cut, most higher institutions such as the universities financial adjustment systems have targeted the so called "non-political sensitive areas" like library and information services as recipient of the budget cut effects. Libraries, like other organs of the government, prepare annual budget estimates that are usually integrated into the tertiary institutions' budget submitted to government. Thus, for many years, libraries have not received their allocations at the time of budget approval, implementation and preparation as they are not political areas of priority in the country. Put differently, Nigerian academic libraries' requirements to advance library services are considered, but the budget estimate does not survive the various stages of approval. Budgets are usually highly and adversely scrutinized on library paths of growth and development

or unfavorably reviewed since there are always reductions before their actual approval. The inadequacy of library budget allocation is a source of worry from the beginning of the budget implementation for libraries in Nigerian higher education. Tertiary education in Nigeria is a post-independence conceptualization. The Nigerian government recognized the importance and need to invest in higher education. The universities and other higher institutions in Nigeria, were therefore “established to train high level human resource to meet the challenges society is facing in our society” as well as in tertiary institutions and those considered to be generational, which refers to the period during which the university was established (Emojorho, 2004:30).

(c) Information/Electronic Resources Management

Information resources management in available academic library literature, have revealed that “the use of computers and communication technologies in information handling and processing has arisen because of increased workload involved in coping with information explosion”. In order to keep pace with the need for information, an increased number of information carriers such as computers are increasingly utilized to manage information processing with greater speed and accuracy than manual processing. Further research on libraries, academic Libraries in particular have consistently reported inadequate levels of Information and Communication technology (ICT) literacy as one of the major problems facing Libraries in Nigeria as they move into 21st Century. ICT Infrastructural development and poor funding have been identified as problems, followed by poor ICT skill among employees (Oduwole, 2005:1). These are the same problems confronting libraries in most developing countries as Amekuedee (2005:443) reports for Ghana. What are the implications of this lack of ICT skills and other identified factors on human resource development efforts and programmes of developing countries such as Nigeria and other countries in Africa?

2.2. Influence of Resource Management on Academic Libraries in Nigeria

An academic library has long been described as a library that is established in tertiary institutions in order to meet the needs of students/users, staff/researchers and the community patrons in the area of information needs and accessibility. An academic Library comprises of 3 levels of staff/personnel to perform its function. This includes:

- (a) Professional staff
- (b) Supportive (administrative)
- (c) Supporting (technical/Para-Professional)

(a) Professional staff: consists of those who are employed on professional jobs and possess degrees in library science as well as in some other discipline. These are further classified into professional senior, professional junior and professional assistant. The following is the list of the jobs which are usually performed by professional staff: Book selection, Book order, Classification, Cataloging, Indexing, Abstracting, Reference service/information service and Planning.

(b) Supporting Staff (technical or Para-professional): can be compared to Para-medical staff employees in hospitals e.g., nurses, x-ray technicians etc. These play an important role in the working of a library. They should possess a Library qualification of the level of certificate in Library Science. In addition, one should be a matriculate. The following responsibilities are carried out by supporting staff (technical): Preparation of book slips after the items have been marked, accessioning of books, registration of periodicals, volumes of catalogue cards, volumes numbering work (Jacket, inside tag and date table numbering) charging and discharging of books, maintenance of issue- records, typing of bibliographies, documentation list etc., interlibrary loan work, shelving of books and periodicals for binding stock taking etc.

(c) Supporting Staff (Administrative): The nature of jobs carried out by supporting staff is usually associated with administrative functions in relation to library operations. The following is the list of jobs, which are usually performed by supporting staff (Administrative)

- Secretarial assistance to the Librarian.
- Maintenance of personnel records (appointment, personnel services booking confidential records etc.).

- Maintenance of accounts and stores (Salaries of staff, purchase of stores, maintenance of stock registers of both consumable, and non-consumable, articles, payment of bills etc. Typing (except that of catalogue cards, bibliographic, documentation lists) and keeping of janitorial duties.

3. Impact of Budgeting and Financial Management in Academic Libraries

A good financial resource management performs the following roles in institution libraries. Budget serves as a Contract, Management Tool, Motivator, Financial Control Mechanism, Plan, Major Policy Tool, Communication Mechanism, Operations Guide, Reform and Evolution, and Instrument of Democracy.

(a) Challenges of resource management in academic libraries and its implications for the educational sector

The following can be the possible challenges of resource management in academic libraries.

- i. Inflation
- ii. Increase in exchange rate
- iii. Economic constraints (economic instability)
- iv. Inadequate funding
- v. Misuse of fund released for library collection development.
- vi. Lack of skilled manpower
- vii. Bureaucracy/Bottleneck
- viii. Political instability
- ix. Nepotism/Favoritism
- x. Logistics/Environmental factors

It is important to recognize that economic reality is already here and since no person or institution can be isolated, libraries are the first system to be affected whenever there is an economic constraint. Continuing economic constraints together with inflation, increase in exchange rate will bring about cuts in funding which will lead to shrinking of books and other library resources, few staff and insufficient space, as well as the difficulties caused by prices of foreign books and journals rising faster than the general inflation rate. Also in some cases funds released by government are not properly managed by academic librarians, hence there should be accountability and performance measurement on funds allocated.

(b) Remedies

Sequel to the problems listed, the following remedies are preferred:

- Training more librarians who will manage both the human resource and the library resource to enable them offer quality library services toward development of the economy.
- For academic libraries to take their pride of place in society, the library needs to be properly and effectively funded. There should be no compromise on the funding of academic libraries.
- Standard National Policy and norms for library establishment should be designed and measure should be developed for evaluating the policies from time to time with regards to the changing needs and nature of our society.
- Library consortium building should be properly coordinated for resource sharing as no library is too rich in terms of material resources and human resources. There is need to depend on each other for exchange of resources,
- Our Government must understand and have foresight on the relevance of libraries to the whole system. All the above-mentioned challenges must be catered for in our academic libraries.

4. Conclusion

Resource management is fundamental in a library system. In fact, the degree of financial adequacy, would to an extent determine the degree at which human and information resource management is attained. It ultimately determines the effectiveness of such library. Hence, this paper, in line with the idea of Ndekwa (1991:1), "remarks that it has become a common knowledge that institutions of higher learning in Nigeria are inadequately funded, thus many services especially in the electronic platforms can no longer be adequately provided in such institutions". Library managers therefore need to evaluate the nature of HR

functions and management in their institutions. Put differently, library management should view human and material resources management as strategic; because putting limited resources into core library administration is fundamental to its survival and sustenance. If the complexities of the ever-changing Human and material resources in higher institutions seem to keep the library in disarray, or if the service provided by the institutional HR department is not as responsive as required, then the library management team may wish to look at alternative resource management strategies in making some contributing factors workable to this regard. Ballard and Lang (2007:3) posit that “effective management of electronic resources means getting the right information to the right people at the right time. Effective management requires planning”. Moreover, planning starts with “libraries developing a prioritized list of goals for electronic resources to guide their work (Bothmann & Holmberg, 2010) cited by Okoye and Ugwuanyi (2012:6) noting that creating a small electronic resource committee of key players in a library's electronic resource management work is the first step”. Therefore, the key players should come from various divisions of the library. By putting all these resources together accordingly, considering their usefulness and effectiveness a meaningful academic library is created.

Recommendations

From this paper discourse, the following recommendations are put forward:

- Academic libraries are the central organ of their parent institutions, it follows that, they must be properly supported financially for their effective development. The following measures are recommended to assist academic library resolve its financial difficulties.
- Academic library management must involve itself in interlibrary co-operation through the formation of different levels of local and international library consortia. This is one area of development to affect cost savings as well as to expand the participating libraries' access to resources.
- Library management must insist on adequate funding for the effective development of academic libraries by academic institutions in compliance with the National Universities Commission recommended ten percent of the university budget. Library leaders/management, need to evaluate the nature of the HR and library related resources functions in their organizations.
- Also academic libraries in this digital age must be fully automated and all the facilities needed to carry out these electronic operations and services must be duly provided in all our institutions.

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Interactional Attitudes of Youth Behaviour in Nigeria

¹AJIBOYE Remi S. and ²OGUNJINRIN Kunle

¹Department of Social Sciences

²Centre for Entrepreneurship Development
Yaba College of Technology, Lagos, Nigeria

Abstract: An empirical analysis of youth attitudes in Nigeria was carried out in this study to determine the prevailing attitudes types among youth and the impact of interactional attitudes on their behaviour. Sample of 390 students were drawn from the university system, polytechnic system and colleges of education system. In each system are 130 respondents of two separate institutions. It was hypothesized that more youth will favour commercial attitude and that there will be a significant difference between groups. Findings from this study clearly revealed that differences between groups are significant and that all categories of youth are favourably disposed to social attitude. Specifically university system youth are in favour of economic attitude, polytechnic system in favour of commercial attitude and the colleges of education system youth are in favour of moral attitude. Nigerian youth are subscribed to relationship thinking and interactional sensitivity collectively but differently on territoriality sensitivity (university), competitiveness sensitivity (polytechnics) and ethicality sensitivity (colleges of education). The findings show clearly that youth could have common ground on attitudinal matters and can equally enjoy specific ground.

Keywords: Attitudes, Economic, Commercial, Social, Moral and Sensitivity

1. Introduction

Attitudes have become phenomena of concern to all human societies globally because of the role played by attitudes on individuals activities and corporate establishments operations. Attitudes to a high degree correlate near perfectly and positively with the quantity and quality of individuals' behaviours. Several authors are of the opinion that attitudes are made up of three components which are cognitive, affective and behavioural. In recent years it has become apparent that forming attitudes do not include all three components (Olson and Zanna, 1993). Looking at the cognitive component of attitude we may say that it is made up of the beliefs of people against object of an attitude. Affective is about emotional feelings while behavioural is about the pre dispositions to act in a way toward an attitude object. Somehow attitudes vary along some crucial dimensions, including their strength, accessibility, and ambivalence (Olson and Zanna, 1993).

Definitions of strength defers, but they generally suggest that strong attitudes as those that are firmly held (durable) and that have a powerful impact on behaviour (Kresnick and Petty, 1993). The accessibility of attitudes refers to how often one thinks about it and how quickly it comes to mind. Highly accessible attitudes are quickly and readily available (Fazio, 1995). Meanwhile there is a correlation between attitude accessibility and attitude strength, for a highly accessible attitude tends to be equally strong. Ambivalent attitudes are conflicted evaluation that include both positive and negative feelings about an object of thought (Thompson, et al 1995). When ambivalence is low an attitude tends to be more predictive of behaviour and less pliable in the face of persuasion (Armitaz and Conner, 2000).

In this study attitude is defined as the tendency to response either positively or negatively to a phenomenon in a consistent and evaluative manner. Individuals are either forming attitudes toward their choice of phenomenon positively or negatively. In attitude formation the place of cognitive processes, effective dispositions and connotive orientations cannot be played down to have attitude formed of an object. Attitudes therefore involved strongly individual's thoughts, feelings and actions concerning phenomenon of choice. This process is greatly influenced by the choice of who, where, when, how and why of the propensity for interactions. Who should we interact with, where should the interaction take place, when should the interaction be staged, how should the interaction be measured, monitored and assessed, and why should we engage in the interaction. Sincerely, these are questions that are assumed to be difficult for the youth to provide answers to in the process of forming attitude of the phenomenon of choice.

The objectives of this study are to:

- i. empirically analyse the four categories of interactional attitudes among youth
- ii. reveal the youth choice of interactional attitudes
- iii. link the youth interactional attitudes with territoriality, sensitivity, competitiveness sensitivity, interactional sensitivity and ethicality sensitivity.

Hypothetical statement for this study is that interactional attitudes will have significant impact on youth sensitivities along the dimensions of productivity, marketing, relationship and civility.

The four categories of interactional attitudes are:

- a. Economic Attitude
- b. Commercial Attitude
- c. Social Attitude
- d. Moral Attitude

These categories of attitudes in this study are the four independent variables that are used to suit the purpose and objectives of the study.

(a) Economic Attitude is defined as the tendency to respond positively or negatively to productivity stimuli in a consistency and evaluative manner. Productivity stimuli could be said to be land, capital, resource, market forces, distribution channels and means and the forces of demand and supply. Decisions on the productivity stimuli are influenced greatly by some economic concepts such as opportunity cost, scale of preference, choice, wants and diminishing return. Economic attitude to a large extent determines the type, quality and quantity of interactions the individuals are involved: Every individual highly disposed to productivity concerns has high propensity for territoriality consciousness. It is a well established fact that it is part of human nature to pay attention to chances of ownership at different levels for different reasons. Infact, individuals that are territorially sensitive do not target the cost consciousness of their interactions because economic territories are critical to the availability of productivity stimuli.

Territoriality sensitivity obviously goes with the sense of ownership and the sense of belonging for every individual will want to lay claim to his or her properties that are sincerely offshoots of productivity processes. When attitudes are formed based on productivity stimuli availability, demarcation and control of territory becomes easier, clearer and more purposeful than when they are formed based on accidental circumstances. If the youth are forming economic attitudes then the acquisition and utilization of wealth becomes purposeful, profitable and with less violation of legal implications.

(b) Commercial Attitude may be defined as the tendency to respond positively or negatively to marketing stimuli in a consistent and evaluative manner. Marketing stimuli could be said to be price, place, promotion and product. Decisions on marketing stimuli are influenced greatly by market forces, consumers, customers, communication, logistics, policies, balanced score card, balance sheet, profit, risks, transportation, supply-chain, technology (IT) and so on. Every individual favourably disposed to marketing concerns has high propensity for competitiveness consciousness. Competitiveness sensitivity propels individuals into the thoughts of value, worth, standards, quality, satisfaction and delivery logistics. Youth that are competition conscious are likely to be achievement driven with high level respect for self esteem.

Competitiveness sensitivity correlates with entrepreneurial orientation and the quest for commercial independence. In addition, competitiveness sensitivity goes with the drive for superiority and high level taste for product or service of choice. Infact, youth that are doing great in their various careers are found to be competitive in most of their approaches to commercial and career issues. Sometimes, competitiveness sensitivity goes with futuristic potentiality for people that are competitive are extremely conscious of the trend and the future of their present commercial engagements so that they can remain within the range of competitive advantage. Commercial attitude makes individual to begin to see himself or herself as a “market” where profitable exchange is derived. Indirectly saying that you can buy from or sell to the individual who now stands in the place of a market facilitator.

(c) Social Attitude may be defined as the tendency to respond positively or negatively to human relationship stimuli in a consistent and evaluative manner. Human relationship stimuli could be physical appearance, similarity, reciprocity, proximity, complimentary, communication, friend, spouse, colleague, communal

orientation, and so on. Every individual that is favourably disposed to relationship concerns certainly has high propensity for transformational consciousness. Transformational sensitivity propels individuals into the thoughts of progress, ethics, friendliness, association, togetherness, collectivism, group, team, cooperation and collaboration. Youth that are transformational conscious are likely to be progress driven with high respect for emotional stability.

Transformational sensitivity correlates with emotional intelligence orientation and the quest for objectivity. In addition, transformational sensitivity goes with the drive for harmony and high level of attention on sense of direction and belonging. With transformational sensitivity every, human activity becomes observable, measurable, predictive and controllable. This sensitivity is at variance with stagnation and redundancy particularly on career matters.

(d) Moral Attitude may be defined as the tendency to respond positively or negatively to civility stimuli in a consistent and evaluative manner. Quality stimuli could be said to be ethics, norms, standards, regulations, rules, laws, respect, honour, compliance, values, beliefs and senses of significance and urgency. Decisions on civility stimuli are influenced greatly by societal dispositions, trends, fashion, history, culture, religious, dialectical orientations, language and tradition. Every individual who is favourably disposed to civility concerns has high propensity for ethicality consciousness. Somehow ethicality sensitivity propels individuals into thoughts of consequences, punishment, standards, conventionalism, purposefulness, mutuality, complementarity, uniqueness, distinctiveness and neatness on all matters.

Youth that are ethnically conscious are likely to be orderliness driven with high level respect for intrinsic values. Ethicality sensitivity in a way correlates with innovation orientation and the quest for qualitative independence, an individual known for a certain quality approach. Ethicality sensitivity provides a large room respect and honour for whom honour is due. This sensitivity is surely an anti recklessness orientation, and it is favourably disposed to the rules of engagement. From the operational definitions of the four interactional attitudes it could be seen vividly that attitudes facilitate interactions and make interactions not only to be meaningful but to possess propensities for personal development and growth on one hand and harmonious coexistence on the other hand.

The grand purpose of this study is to determine the prevailing attitude type(s) among youth in Nigeria. Meanwhile the specific objectives of the study is to examine youth attitudes in Nigeria, find out the impact of interactional attitudes on the behaviour of Nigerian youth and evaluate possible differences existing among the youth in terms of their dispositions to different types of interactional attitudes. It was hypothesized that more youth will favour commercial attitudes than other attitudes types and that the between groups' differences will be significant.

2. Review of Literature

The literature reviewed the conceptual framework have of classical conditioning and observational learning, and theoretical perspectives of persuasion theory and attraction theory. The beautiful thing about attitudes is that they are evaluative much more objectively than behaviour because of the possibility of consistency assessment. Critical to attitude is about how attitude could be formed or changed because of the communicative tendency of attitude. Several theorists have made significant contributions on attitude formation and change. Attitude formation and change from learning theory's perspective.

The affective component in an attitude can be created through classical conditioning, just as other emotional responses can (Olson and Fazio, 2001, 2002). Agreement from other people generally functions as a reinforce, strengthening your tendency to express a specific attitude (Bohner and Schwarz, 2001). Another person's attitudes may rub off on you through observational learning (Oskamp, 1991). Studies suggest that the central route to persuasion leads to more enduring attitude change than the peripheral route (Petty and Weganer, 1998). They also suggests that attitudes changed through central processes predict behaviour better than attitudes changed through peripheral processes (Petty, Wegener, & Fabrigar, 1997). Group influence on individual with regard to attitude formation and change cannot be over emphasized. Like individuals groups often display a conformation bias, as they tend to seek and focus on information that supports their

initial views (Schulz-Hardt 2000). The evidence on group think consists mostly of retrospective case studies of major decision making fiascos (Eaton, 2001).

From various contributions of several experts on attitude as a subject we could deduce that attitudes are permanent to our everyday actions on subject of choice particularly the youth the way and manner they go about forming attitudes of different phenomenon will go a long way on their productivity and performance ability. The necessity for a change of attitude is another critical issue for the youth in Nigeria. It is important for every youth to grow independent mind with high propensity of prolificity. Interactional attitudes are rampant among youth than the elderly ones so more and scientific attention need be paid to their interactional phenomena because of the tendency possesses in terms of attitude for nation and change.

3. Methodology

In this empirical study's methodology are the issues of design, sample, data collection instrument, procedure and the tools of data analysis.

(i) Design

Survey design was used in this study in which the population of the study are students of six higher institutions of learning in Nigeria. University of Lagos (UNILAG), Lagos State University (LASU), Yaba College of Technology (YCT), Lagos State Polytechnic (LASPOLY), Federal College of Education (FCE) Technical and Adeniran Ogunsanya College of Education (LACOED).

(ii) Sample

With the use of multi-stage sampling technique (stratified and systematic techniques a total of 390 respondents (students) were drawn from the students' population (65 students from each institution). The students are in their final year of study (NCE III, HND II & four hundred level of UNILAG and LASU).

(iii) Data Collection

A questionnaire in the pattern of Likert Scale was constructed, validated and used to gather data from the respondents (the students). The questionnaire was of twenty (20) items, and divided into sections A and B with section A containing demographic information of respondents and section B was of the specific questions on the four categories of interactional attitudes as identified by the researcher of this study.

(iv) Procedure

Questionnaire were taken to the respondents in their various institutions, and were given two days to react to the items of the questionnaire after which they were retrieved from them (respondents). The weights allotted to the items of the questionnaire were on the grades of Strongly Agree (SA) 4, Agree (A) 3, Undecided (D) 0, Disagree (D) 2, and Strongly Disagree (SD) 1.

(v) Tools of Data Analysis

For precise and accurate discussion simple percentage analysis was used to analyse dispositions of the respondents toward the four types of interactional attitudes. T-analysis was done to determine the between groups differences whether they are significant or not.

4. Discussion

The discussion is based on the perspective of the purpose of the study and from the perspective of the study's hypotheses. For the purpose of this study it was stated that the study will determine the types of attitudes prevalent among youth in Nigeria and the impact of the attitudes on youth's behaviour. It was hypothesized that more youths will favour commercial attitude as against their attitude types and secondly that the between groups differences will be significant.

Table 1: Sample Percentage Analysis of Attitudes

Groups & Attitudes	X ₁ - University		X ₂ - Polytechnic		X ₃ - Colleges of Education	
	UNILAG	LASU	YCT	LASPOLY	FCE	LACOED
Economic Attitude	69	65	50	50	52	51
Commercial Attitude	54	53	71	69	48	51
Moral Attitude	52	53	49	51	68	67
Social Attitude	62	61	61	59	60	60

Interpretation

Respondents from the University system have 67% on economic attitude, 53% on commercial attitude, 52% on moral attitude and 61% on social attitude. These set of youth (students from university system) are favourably disposed to productivity thinking and territoriality sensitivity, and relationship thinking and transformational sensitivity. Respondents from the polytechnic system have 50% on economic attitude, 70% on commercial attitude, 50% on moral attitude and 60% on social attitude. From the polytechnic system the respondents (students) are favourably disposed to marketing thinking and competitiveness sensitivity, and relationship thinking and transformational sensitivity.

Respondents from colleges of education system have 51% on economic attitude, 50% on commercial attitude, 67% on moral attitude and 60% social attitude. These set of youth (students) from the colleges of education system are obviously favourably disposed to civility thinking and ethicality sensitivity, and relationship thinking and transformational sensitivity. From the three (3) categories of respondents (youth) all are favourably disposed to social attitude university, polytechnic, college of education having 61%, 60% and 60% respectively.

4.1 Specific Findings**(a) University**

From the simple percentage analysis it was found that university students essentially are in favour of economic attitude which is the tendency to respond positively or negatively to productivity stimuli in a consistent and evaluative manner. With this result it shows that students of university system have high propensities for territorial consciousness.

(b) Polytechnic

Students of polytechnic system favour commercial attitude which is the tendency to respond positively or negatively to marketing stimuli in a consistent and evaluative manner. With this result it shows that students of polytechnic system have high propensities for competitiveness consciousness. Competitiveness sensitivity propels individuals into the thoughts of value, worth, standards, quality, satisfaction and delivery logistics.

(c) Colleges of Education

Students of colleges of education system favour moral attitude which is the tendency to respond positively or negatively to civility stimuli in a consistent and evaluative manner. With this result it shows that students of the colleges of education have high propensities for ethicality consciousness. Ethicality sensitivity propels individuals into thoughts of consequences, standards, norms, politeness, complementarity, distinctiveness and neatness.

Table 2: T-test Analysis between Group Difference

Groups	Σx	X	Df	α	tcal	ttab	Remark
University (X ₁) and Polytechnic (X ₂)	390	6	128	0.05	2.541	1.660	Null rejected
	220	3.38					
University (X ₁) and colleges of Education (X ₃)	390	6	128	0.05	3.619	1.660	Null rejected
	250	3.85					

Interpretation

Between X₁ and X₂, df 128, α 0.05, tcal 2.541 and ttab 1.660. With this calculated t is greater than the table t the hypothesis of no difference is rejected because the difference between the two groups is significant to support the hypothesis of this study that there will be significant difference between groups. Between X₁ and X₃, df 128, α 0.05, tcal 3.619 and ttab 1.660. This equally shows that t cal > t tab to reveal a significant difference between university group and colleges of education group, still in support of the study hypothesis.

Incidental findings

It was discovered that each system has it specific attitude in which the youth from the group are favourably disposed. University system is for economic attitude, polytechnic system for commercial attitude and colleges of education system is for moral attitude. Meanwhile all the groups are disposed to social attitude.

5. Conclusion

It is clear that attitudes have significant impacts on individuals behaviour particularly the youth and of essential note Nigerian youth. Youth in Nigeria cultivate different types of attitudes to improve and enhance their potentials for purposeful interactions and highly rewarding transformational activities. It can be seen that youth in Nigeria have social attitude collectively and specific attitudes such as economic, commercial and moral individually. In the final analysis the systems individuals belong in terms of educational system obviously have significant influence on the youth choice and development of attitudes towards their environment. This research study is obviously a new area of empirical study that calls for more studies along the dimensions of age differences, sex, sociology of different locations and administrative structure of the institutions of higher learning.

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Self Awareness and Achievement Motivation among Youths in Nigeria

¹AJIBOYE Remi S. and ²ADEBAYO Moses Segun

¹Department of Social Sciences

²Centre for Entrepreneurship Development

Yaba College of Technology, Lagos, Nigeria

Abstract: An analysis of the impact of self-awareness and achievement motivation among youths in Nigeria was carried out empirically. Survey design was used with a questionnaire of 20 items on the four platform of interactions (impact of individuals on individuals, impact of groups on individuals, impact of individuals on Groups, and impact of Groups on Groups) to collect data from the primary source. There were 100 respondents (male = 62 & female = 38) from working class youths, 30 respondents (male = 17 & female = 13), and from students' youths, 70 respondents (male = 45 & female = 25) all residing in Lagos, South West Nigeria. The hypothesis tested in this study is (i) there is a significant difference between working class youths and students' youths on their level of self-awareness. Findings from the study show clearly that youths in Nigeria are more of idiocentric and individualistic particularly the students' youths unlike the working class youths that are substantially of allocentric and collectivistic. The findings equally show a significant difference ($df = 98$, $\alpha = 0.05$, $t_{cal} = 8.155$, and $t_{tab} = 1.984$) between working class youths and students' youths. It was concluded that self awareness and achievement motivation are critical concepts in every young person's life. And for an individual to be able to desire excellence he or she must have been aware of himself or herself to a reasonable degree.

1. Introduction

Self awareness and achievement motivation have become critical independent and dependent variables research studies across cultures. Motivation is of intrinsic and extrinsic perspectives and depending on the self that is, playing the domineering impact the individual that now influences the individual drives toward motivation particularly the achievement motivation. A sense of self is critically important and integral to determining our own thoughts, feelings and actions, and to how we view the world and ourselves and others in that world, including our relationships with other people, places, things and events. Self is a bounded, unique, more or less integrated motivational and cognitive universe, a dynamic center of awareness, emotion, judgement, and action organized into a distinctive whole and a social and natural background (Gectz, 1975). Some of the internal attributes of self are needs, abilities, motives and rights.

The self is shaped, bound and molded by cultural milieu in which the individual grows so that the self concept can make sense within the cultural milieu. Infact, self is honestly an important concept that helps us understand much of our psychological compositions. Unfortunately most people particularly our youths are not always cognizant of its (self) influence on ourselves. Self awareness is correlated to a great degree with achievement motivation on intrinsic perspective. Achievement motivation is an intrinsic need satisfied through self awareness. And one of the ways in which people maintain their self awareness and self adequacy that will lead to self esteem is obviously through self-enhancement. Self enhancement is a collection of psychological processes by which individual, reinforce their self esteem.

People all over the globe, regardless of culture, religious, gender, race or background, are certainly motivated to positively assert themselves. Somehow, the way they do so varies depending on some specific sociocultural factors and the society they live. Ben (1972) proposed that the way we come to know ourselves is not all that different from the way we come to know others. Achievement motivation is obviously the desire for excellence and extra ordinary performance. This motivation attempts to provide solutions to intrinsic problems (nonmaterial problems), a solution of constant and consistent display of excellent results of activities. It has been observed that youths are more engaged in the satisfaction of extrinsic needs (material problems) than intrinsic needs courtesy of self inadequacy and outright lack of self awareness. The levels of self consciousness, self awareness and self enhancement have been found to be very low among young people particularly in Nigeria.

Everyone seems subscribing to shortcut to success no one is fully ready to go through the rigours of success. The concept of self has become paramount to the issue of achievement motivation. And to be aware of self, interactions at all the stages of critical platforms of interactions have become absolute because it is upon these platforms that the self is actually developed and the individual becomes more aware of himself or herself. These platforms of social and occupational interactions are:

the impact of individuals on individuals - platform I
the impact of groups on individuals - platform II
the impact of individuals on groups - platform III and
the impact of groups on groups - platform IV

These are the areas exploited and adequately assessed in this empirical study of self awareness and achievement motivation among youths in Nigeria.

2. Review of Literature

Obviously people are not always busy analyzing and evaluating themselves for one reason or the other. Recent studies in psychology have begun to look at the factors that increase or decrease our focus on ourselves. There are personality tests designed to identify people who are high or low in chronic or trait, self-consciousness (Fenigstein, Scheier & Buss, 1975). People usually attempt to escape from self-awareness, some by throwing themselves into mindless activities, others by immersing themselves in hobbies or distractions that focus their attention away from themselves. The use of drugs and alcohol (Hull, 1981), certain sexual practices (Berumeister, 1989), and even suicide (Berumeister, 1990) have all been seen as ways of escaping the self. Jones & Bergles (1978) said that the use of tactic to minimize the implications of our failures or maximize the implications of our successes is self-handicapping.

2.1 Self

Markus and Kitayama (1991b) used these notions to describe two fundamentally different senses of self, contrasting the Western or individualistic construal of self as an independent, separate entity with a composite construal of self more common in many non-western, collectivistic cultures, in which the individual is viewed as inherently connected or interdependent with others and inseparable from a social context. In addition to the above position is the controversy between independent self and interdependent self. Consistent with this analysis, Triandis and have shown that individuals from interdependent cultures (for example, China, Japan and Korea) generate many more social categories relationships, and groups to which they belong. In a study done in the People's Republic of China, as many as 80% of all the respondents given to the self description task were about their memberships in a variety of different groups. Dhawan, Roseman, Maid, Komilla and Rettek (1995) reported similar tendencies in self-description in a study comparing American and North Indian participants.

Another study by Bochner (1994) compared self-description statements made by Malaysian, Australian, and British participants. The responses were coded according to whether they were idiocentric (individualistic), allocentric (collectivistic), or group self references, and weighted according to the order in which they were reported. As predicted, Malaysians produced more group and fewer idiocentric references. Cousins (1981), provided evident to support this analysis. He actually used the Twenty Statements Test (TST) to ask American and Japanese respondents to write down who they were in various specific social situations. Miller (1984) examined patterns of social explanation in Americans and Hindu Indians.

Both Hindu and American respondents were asked to describe someone they now well who either did something good for another person or did something bad to another person. After describing such a person, the respondents were asked to explain why the person committed that good or bad act. American respondents typically explained the person's behaviour in terms of general dispositions (for example, "he is very irresponsible"). The Hindus however, were much less likely to offer dispositional explanations. Instead, they tended to provide explanations in terms of the actor's duties, social roles, and other situation-specific factors (Shweder & Bourne, 1984). A later study by Miller (1994), found that these differences in self-construals were linked to cultural differences duty-centered (Hindu culture)

versus individual-centered (American culture) moral codes. Oysterman, Gant, & Ager (1995), supported the existence of multiple concepts of self. In this study, they examined the effects of multiple, contextualized

concepts of the self on school persistence in European American and African American youths. They found that different self-concepts were predictive of achievement-related strategies for European Americans and African Americans. Equally found was the balance between different achievement-related self-concepts predicted school achievement, especially for African American males.

Rogers (1970b), our psychological well-being depends on the gap between our actual self (how we see ourselves) and our ideal self (how we would like to be). If the gap is large, the result is psychological distress. Higgins (1989), proposed a self-discrepancy theory based on the idea that we have more than one ideal-the ideal imposed by ourselves and the ideal imposed by others, the ideal that is desirable and the ideal that we "should" want. Rosenfield (1991), everything breathes, blooms, creates, wants to grow and the drive is toward self-actualization the fulfillment of all our capacities and the achievement of our potential-begins with basic requirements of nourishment, safety and comfort.

2.2 Motivation

Ordinarily, achievement motivation may seem to be a desire for excellence. Such a desire according to Machr & Nichocls (1980) is found quietly widely across cultures. The desire for excellence in recent literature has been conceptualized as individually based rather than interpersonally rooted. In the work of (Akinson, 1964: Maclelland, 1961), the desire for excellence is closely linked with an individual's tendency to push him or herself ahead and actively strive for and seek individual successes.

Certainly this position of achievement is congruent with the independent construal of the self widely shared in Western culture. Yang (1982) distinguished between two forms of achievement motivation: individually oriented and socially oriented (compare Marahr & Dicholla, 1980). In the Western cultures individually oriented achievement is common such as United States.

"It is for the sake of "me" personally that individual strives to achieve".

Socially oriented achievement is more common in Chinese society, "the individual strives to achieve for the sake of relevant others such as family members".

Bond (1986) assessed levels of various motivations among Chinese individuals and found that Chinese show higher levels of socially oriented rather than individually oriented achievement motivation. Yu (1974) said that the strength of the achievement motive in China is positively related to familism and filialpiety. Bradley (1978) in United States, people exhibit a self-serving bias, they attribute good deals and successes to their own internal attributes, but attribute bad deeds or failures to external factors. Apart from self-enhancement factor on achievement motivation, another factor of enhancing self-esteem in the United States is the false uniqueness effect.

Wylie (1979) found that American adults typically consider themselves to be more intelligent and more attractive than average. This effect is strongest among males than among females in the United States (Joseph et al, 1992). Emotion according to Kitayama, Markus & Matsumoto (1995) can be classified into those that encourage independence of the self from others and those encourage interdependence with others. Some emotions like feelings of superiority obviously occur when an individual have accomplished his or her goals or have desirable inner attributes such as intelligence and wealth.

3. Methodology, Interpretation and Discussion

3.1 Design

Survey design was used to collect data in this study for the purpose of analysis. A twenty (20) item questionnaire on the four platforms of interactions was used to gather data as primary source. The independent variable are individuals on individuals, groups on individuals, individuals on groups, and groups on groups interactions.

3.2 Participants

Working class youths from five commercial banks in Lagos Mainland, Lagos, Nigeria (Male = 17 & Female = 13) and students youths population (Male = 45 & Female = 25 from Yaba College of Technology, Yaba Lagos, Nigeria). In the students' youths categories were 30 National Diploma and 40 Higher National Diploma students. The participants ages range from 19 years to 35years Multiple sampling techniques of stratified and systematic techniques were used to select representatives for the study. In this study was a total of 100 participants. Questionnaire were administered directly to the respondents who were given enough time to respond to every item of the questionnaire. The responses were graded accordingly. Strongly (S) = 3, Mildly (M) = 2 and Not at all (N) – 1 for a better manner of data analysis. Simple percentages, measures of central tendencies and t-test analysis were carried out for proper data analysis and to discover the between groups differences.

Table 1: Percentages of Working Class Youths (30) (%)

S/N	Items	Male Respondents (17)			Female Respondents (13)		
		S	M	N	S	M	N
Impact of individuals on individuals							
1	I like my colleagues	76	18	06	38	46	15
2	I communicate with my friends	65	35	-	54	38	08
3	I enjoy persuasion	53	41	06	61	23	08
4	I enjoy cooperation	65	29	06	46	38	15
5	I like competition	53	35	06	38	38	23
Impact of Groups on individuals							
6	I keep to group norms	41	47	12	77	23	-
7	I like the group I belong	35	41	23	69	23	08
8	My conception of self depends on my group	47	41	12	69	31	-
9	My language skills is influenced by my group	47	35	18	69	15	15
10	I am a conformist	35	35	29	61	38	-
Impact of individuals on Groups							
11	I belong to a productive group	59	41	-	54	46	-
12	I participate in group risk taking process	53	41	06	69	31	-
13	Leadership in my group is effective	65	35	-	77	15	08
14	My group gives room for personal initiative	35	35	29	61	38	-
15	Members of my group are innovative	53	35	12	54	46	-
Impact of groups on groups							
16	My group enjoys friendly relationship with other groups	47	47	06	61	31	08
17	Territorial rights lead to intergroup conflict	59	35	06	54	38	08
18	My group encounters intergroup competition	53	47	-	77	23	-
19	Group stereotypes promotes hostility	53	35	12	61	54	-
20	My group enjoys other groups cooperation	47	29	23	54	31	15

3.3 Interpretation & Discussion on Platforms of Interactions Among Working Class Youths

3.3.1 Platform of the Impact of Individuals on Individuals

Male respondents seem to have closer and better interactions looking at it from the above stated platform basis. Male respondents of the working class youths enjoy about 65% interactions strongly on individual versus individual basis. Meanwhile, female respondents enjoy about 49% interactions strongly on the basis of individual versus individual. Working class youths (male) will prefer to interact with individuals at work rather than working in teams. This may further show that the male workers do not fancy conformity and socialisation tendencies derived from group membership. In addition, male workers obviously prefer excellent communication, enjoy persuasion, altruism and interpersonal sentiments. Above position is in contrary to the results of the study done in the People's Republic of China as many as 80% of all the respondents given to self-description task were about their memberships in a variety of different groups. Dhawan, Roseman, Naridu, Komulla and Rettek (1995), reported similar tendencies in self-perception in a study comprising American and North Indian participants. The male respondents are more of independent selves than their female counterparts who are more of interdependent selves than their female counterparts who are more of interdependent selves.

3.3.2 Platform of the Impact of Groups on Individuals

For male respondent groups do not have significant impact on their members. They are not interested in going through the calculations of groups subjecting them into regulations rules and norms of groups. The male respondents of the working class youths enjoy merely 41% strongly on groups versus individuals basis. Meanwhile, female respondents of the working class youths enjoy 69% interactions strongly on the basis of groups versus individuals. Female respondents see conformity and socialisation as veritable concepts of interactions in self-awareness building process. The female respondents are in support of interdependent selves as against independent selves. This position is in line with the work of Bond (1986) who assessed levels of various motivations among Chinese individuals and found that the Chinese show higher levels of socially oriented rather than individually oriented achievement motivation.

3.3.3 Platform of the Impact of Individuals on Groups

On the impact of individuals on groups male respondents support was marginally above average (53%). And the female respondents enjoy 63% interactions strongly on the same basis. Female respondents are more supporters of the influences individuals have on their groups of various backgrounds and structure. Male respondents have marginal support for group productivity, innovative change and the influence of individual initiative on the group. And as far as the female respondents are concerned leadership is built through groups and membership of the groups. As individuals attempt to influence their groups leadership qualities and tracts begin to develop. Above results are in support of the work of Bradley (1978) in United States, who said people exhibit a self serving bias; they attribute good deeds and successes to their own internal attributes but attribute bad deeds or failures to external factors.

3.3.4 Platform of the Impact of Groups on Groups

As far as the male respondents of working class youths are concerned groups have impact on groups at about 52% interactions strongly. For the female respondents of the same working class youths groups have significant impact on groups at about 61% interactions strongly. The male respondents are of the view that relationships between groups are usually hostile leading to intergroup conflict at least up to 52% strongly. Intergroups relationships spark up territorial rights and fight among groups. In the contrary, female respondents are of the view that relationships between groups bring about cooperation, healthy competition and better ways of resolving conflicts. The differences between male and female respondents on the impact of groups on groups are in line with the results of the study done by Yang (1982) who distinguished between two forms of achievement motivation, individually oriented and socially oriented (compare Nicholls, 1980) said that in Western cultures individually oriented achievement is common such as United States.

"It is for the sake of "me" personally that individual strives to achieve".

Socially oriented achievement is more common in Chinese society, "the individual strives to achieve for the sake of relevant others such as family members". While the male respondents are in support of Western cultures their female counterparts are in support of the socially oriented achievement.

Table 2: Percentages on Students Youths from Yaba College of Technology (70) (%)

S/N	Items	ND (30)						HND (40)					
		Male (20)			Female (10)			Male (25)			Female (10)		
		S	M	N	S	M	N	S	M	N	S	M	N
Impact of individuals on individuals													
1	I like my colleagues	40	30	30	40	30	30	44	32	24	33	33	33
2	I communicate with my friends	50	35	15	50	30	20	60	32	08	60	33	07
3	I enjoy persuasion	40	40	20	30	30	40	48	32	20	47	33	20
4	I enjoy cooperation	25	50	25	60	30	10	40	40	20	53	33	13
5	I like competition	35	35	30	50	30	20	40	60	-	20	40	40
Impact of Groups on individuals													
6	I keep to group norms	25	25	50	40	50	10	20	32	48	47	27	27
7	I like the group I belong	30	20	50	40	40	20	40	20	40	40	33	27
8	My conception of self depends on my group	25	20	55	30	30	40	32	48	28	33	33	33
9	My language skills is influenced by my group	20	40	40	40	30	30	40	32	28	27	17	27
10	I am a conformist	35	40	25	60	30	10	40	28	32	47	33	20
Impact of individuals on Groups													
11	I belong to a productive group	50	40	10	60	30	10	48	32	20	47	40	13
12	I participate in group risk taking process	35	15	50	30	40	30	20	40	40	40	27	33
13	Leadership in my group is effective	40	25	35	60	30	10	28	32	40	47	33	20
14	My group gives room for personal initiative	40	20	40	50	30	20	28	28	44	40	40	20
15	Members of my group are innovative	35	25	40	30	40	30	32	32	36	33	47	20
Impact of groups on groups													
16	My group enjoys friendly relationship with other groups	30	30	40	50	40	10	32	36	32	47	33	20
17	Territorial rights lead to intergroup conflict	35	40	25	40	30	30	28	40	32	40	33	27
18	My group encounters intergroup competition	45	40	15	50	40	10	32	36	32	47	33	20
19	Group stereotypes promotes hostility	40	20	40	50	30	20	28	32	40	40	40	20
20	My group enjoys other groups cooperation	35	25	40	40	30	30	32	36	32	47	33	20

3.4.1 Platforms of the Impact of Individuals on Individuals

From Table 2, the results of the data analysis, about 38% the male respondents at National Diploma level have about 38% strongly on the impact of individual on another individual and the female respondents have about 46% strongly. At Higher National Diploma level about 46% of male respondents and about 43% female respondents were for the platform of interactions. At lower level more female respondents interact well on the platform. Meanwhile at higher level we have more male respondents interacting on the platform. Individual against individual interactions among students' youths are at below average percentage. This situation translates to a situation of idiocentric position supported by some earlier studies Nigerian students are more of idiocentric and individualization individuals.

3.4.2 Platform of the Impact of Groups on Individuals

At National Diploma level about 27% male and 42% female respondents support the position of group influence on the individuals. And at Higher National Diploma level about 34% male and 39% female respondents were in line with the influence of groups on individuals. Above group of students' youths are of the opinion that one's conception of self does not depend largely on the influence of the group the individual belongs. The issues of language skills, shaping of knowledge and values are rooted in groups. But higher percentage of the male respondents are against the influence of groups on individuals (44% and 35% at ND and HND levels respectively said groups do not have influence at all on individuals).

3.4.3 Platform of the Impact of Individuals on Groups

About 40% male and 46% female respondents at National Diploma level believed strongly on the influence of individuals on the groups they belong. At the Higher National Diploma level about 31% male and 41% female respondents were of strong opinion that individuals have significant impact on their groups. The issues of group productivity, leadership, group performance, innovative change, risk taking ability and personal initiative are subjects of individual influence on group. Meanwhile about 36% male and 21% female respondents were totally against the impact of individuals on groups. They are of the view that individuals do not have significant impact on their groups. Nigerian youths particularly students population could not see the impact of groups on individuals, and the impact of individuals on groups. This is still in line with the earlier position of their opposite support for the impact of individuals on individuals. Majority of the Nigerian youths do not belong groups particularly social people.

3.4.4 Platform of the Impact of Groups on Groups

For National Diploma level respondents about 37% male and 46% female are of strong opinions that groups have significant impact on groups. And for Higher National Diploma respondents about 30% male and 44% female have strong support for the interactions between groups. These categories of youth respondents are indeed of the view that intergroup interactions bring about friendliness, cooperation and healthy competition. About 34% male and 21% female respondents reacted against intergroup interactions. They are of the opinion that intergroup interactions generate conflict and feelings of territorial rights and fight. But those in support are of the position that intergroup conflict can be resolved amicably through the impact of one group activities on the structure of another group.

From the four platforms under students youths population it is crystal clear that this category of youths have not been having qualitative as well as quantitative interactions on all the platforms and this situation strongly influenced their perception of selves. It is difficult to categories them into independent (idocentric) self or interdependent (allocentric) self. But for the issue of achievement motivation they are majorly socially oriented. They rest their successes or failures mainly on their roles or other socially related concepts.

Table 3: Measures of Central Tendencies and T-Test Analysis

Groups	n	Σ	X	Me	Mo	df	α	tcal	ttab	Remarks
Working Class Youths	30	255	9	9	9	98	0.05	8.155	1.984	T-calculated is greater than t-table. Null rejected
Students' Youths	70	285	4	3	3					

3.5 Interpretation and Discussion

From the measures of central tendencies analysis working class youths seem to be more homogenous ($x = 9$, $me = 9$, and $mo = 9$) than the students' youth ($x = 4$, $me = 3$ and $mo = 3$). This is a pointer to the fact that working class youth support the influence of groups on individuals. The working class youths recorded more support for the significant impact of individuals on individuals on like students youths. To the working class youth there are more advantages in interactions at the four platforms particularly the first platform that deals with the impact of individuals on individuals. Students youths in Nigeria have less regard for interactions on the platforms particularly the one on groups versus groups. From the above analysis working class youths in Nigeria are more socially oriented individuals on achievement motivation as against their student counterparts. On t-test analysis the result shows that calculated t is greater than the table t for hypothesis of no difference to be rejected. In other word the result shows a significant difference between working class youths and students youths in Nigeria, one may be able to say that working environment sociology is obviously different from students academic environment sociology

Differences in sociology of location may have some sort of influence on individual's perception of self concept and the society they belong. Infact, the result shows clearly that groups have influence on individuals and how they make efforts to strike a balance between actual self and ideal self as studied by Carl Rogers. Working class youths are more aware of the self than the students youths who are more idiocentric in most of their approaches. Students population in Nigeria are fast becoming highly individualistic with independent selves. And the cultural position of most of the ethnical groups in Nigeria is that of a socially oriented one. We now a big problem in our hands if our cultures in Nigeria support socially oriented writer dependent selves and our youths are going independent selves, there is the need for urgent and more empirical studies on this finding.

4. Conclusion

Self-awareness and achievement motivation are critical concepts in every young person's life. For individual to be able to strive or desire excellence he or she must have been aware of himself or herself to a reasonable degree otherwise the concept of achievement motivation remains meaningless to the individual. And more critical to self awareness are the issues of platforms of interactions for they have impact on the individuals and the groups they belong. Qualitative and quantitative interactions are to be ensured for the individual to be able to do proper and thorough assessment of self. With high level of self awareness the individual is more focused, determined and purposeful in his or her endeavour. And Nigerian youths are to be encouraged to belong to social and absolutely productive groups for us to be able to establish congruous position between our youths perception of self and our cultural milieu.

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Training Needs Assessment of Microsoft Office Competencies of Office Technology and Management Lecturers in Public Polytechnics in Lagos and Edo State

AKHADEME Abiose Ekpe & OJO Elizabeth Omone

Department of Office Technology and Management

Yaba College of Technology

akhademeabiose@gmail.com, Tel: +23408036120183

Abstract: The study is aimed at assessing the training needs of Microsoft Office competencies of Office Technology and Management lecturers in public polytechnics in Lagos and Edo State. The theory used to back up this study is known as Transposition of Competency and Learning which was propounded in 2005 by Azemikhah and supported by the hypothetical statement of Peter Drucker in 2001. Survey research design was adopted for the study. The population and sample size was 74 OTM lecturers. Data was collected by means of validated questionnaire. Split half method was used to determine the reliability of the instrument with reliability co-efficient of .845. Five research questions were raised and answered using simple percentage, means and standard deviation. The findings of the study reveal that some OTM lecturers at the polytechnic level were highly or averagely competent in Microsoft Word. The lecturers were slightly competent in Excel, PowerPoint, but most of them had very low competencies in Desktop Publishing and Web Page design. The study concluded that the level of competencies possessed by OTM lecturers generally apart from Microsoft Word was poor. Indeed, it should be understood that the emergence of ICT in OTM programme has serious implications for training and retraining of OTM lecturers in the polytechnics and other tertiary institutions. Many of the lecturers apparently do not understand the operation of Microsoft Office applications beyond Microsoft Word. It is recommended among others that since Microsoft Office skills are the major components of the core skill content in OTM department, there is need for OTM lecturers to update and upgrade their ICT skills so as gain relevance at work and be able to lecture their student effectively.

Keywords: Training, Assessment, OTM, Microsoft Office

1. Introduction

Training is the continuous process of imparting new skills, knowledge, abilities, attitudes and ideas to employees. It is important to organize further training for lecturers as their pre-service training may be insufficient for their lecturing career in today's contemporary world. This has a direct impact on the in-service training needs of lecturers, which include on-the-job training, refresher or maintenance training and career development training. Thus, assessing the training needs of lecturers from time to time becomes necessary. Assessment is one of the powerful educational tools, used to monitor the quality of lecturers' teaching achievement and the school system. According to MacGaw (2006), assessment helps to monitor the school progress, enable teachers to monitor their students and themselves. The factors that influence the assessment of lecturers include curricula change, pedagogy obsolescence, rapid changes in technology amongst others. As the technological demands of the society changes, it is expected that lecturers should be constantly trained and retrained to keep abreast of latest technological advancement.

One aspect of technology, which has greatly influenced almost every facet of life is information and communication technology (ICT). ICT has become an integral part of most organizations, businesses and schools. It has also influenced classroom activities as it provides opportunities for lecturers to learn to operate in this information age. Based on the relevance of ICTs, the United Nations Educational Scientific and Cultural Organization (UNESCO, 2012) specifies that, information and communication technology has great potential for knowledge transfer, effective teaching and the development of a well-organized education service, especially in developing countries of the world.

The above assertion of UNESCO, calls for emphasis on the lecturers' ability to unceasingly acquire knowledge, skills and competencies in this current environment of constant change. Competence is the

possession of required skills, knowledge, qualification or capacity to do something. British Broadcasting Corporation (2010) opined that competence is the ability to do something well, effectively and following professional standards. The success of any educational programme depends largely on the availability of an adequate number of professionally competent lecturers, Office Technology and Management (OTM) not being an exception. The ICT skilled courses that will be focused on in this paper is Microsoft Office Suit, which include Microsoft Word, Excel, PowerPoint, Desktop Publishing and Web Page Design. The fundamental question that forms the baseline for this study is, how competent are polytechnic OTM lecturers in teaching Microsoft Office Applications?

2. Theoretical Framework

This paper is built on a Competency Theory known as Transposition of Competency and Learning which was propounded by Azemikhah and supported by the hypothetical statement of Peter Drucker. The emphasis of the theory is that competency development involves three elements, the conceptual element (the mind), the physical element (the hand) and the balancing element (the equilibrium). The first element requires the learner to initiate and reflect on the key concepts. The second element involves practical application of the key concepts and the third element involves the combination of both theory and practical.

This theory is relevant to this study because the three elements which are: conceptual element (the mind), the physical element (the hand) and the balancing element (the equilibrium) are closely related to the content of Microsoft Office that is theory and practical based. In each course, there should be a balance of theory and practice in a ratio of 50:50 or 60:40. The theory aspects of Microsoft office applications are conceptual in nature because it requires working with the mind or reasoning. The practical aspects require working with the hands on computer keyboard which is related to physical element in the theory. The equilibrium is the balance between theory and practical that should not be isolated.

The above theory is supported by the hypothetical statement and predictions of Peter Drucker a management theorist. He predicted that like it was in the industrial revolution two centuries ago, information and communication technologies would transform processes that were here all along. He said that workers, who would be the engine of economic growth, are those who are computer literate and well-trained in handling data with electronics systems. The relevance of this theory to the present study, is the fact that, there is immense need for lecturers' professional growth and skill update to avoid becoming professionally obsolete and irrelevant in this era of knowledge economy.

Concept of Training and application

Training is otherwise known as human resource development, capacity re-engineering, professional learning, and continuing education. Oriazowanlan and Iyekekpolor (2010:4) opined that human resource development is aimed at improving the knowledge and skills necessary for effective and efficient job performance of employees both at present and in the future. Ogundele (2010) sees training as a process, which includes all developmental functions which are directed at the maintenance, updating and enhancement of professional competencies. Human resource development is the method that ensures continuous increases in knowledge, skills and competencies essential for effectively carrying out tasks and responsibilities. Hayble (2010) opines that human resource development refers to all the programmes designed for the continuing education of the school staff. Hayble added that it is designed to improve skills and job performance.

Training or human resource development upgrades the lecturer and the institution, for the purpose of improving their job performance, in order to achieve the objectives of the institution. In any higher education, lecturing quality is the most important factor in raising students' achievement. Good lecture is not an accident, effective lecture is the result of training and development. For lecturers to be effective in their work, they need to constantly expand their knowledge and skills, due to the changes in subject content, new instructional methods, and advances in technology. As the technological demands of the society change, it is expected that lecturers be constantly trained and retrained to keep abreast with latest technological advancement.

Training may be broadly categorized into two, namely, pre-service training and in-service training. Pre-service training is academic in nature and is usually offered by formal educational institutions. In-service training, on the other hand, is offered by organizations for the development of skills and knowledge of the workers. The training need of OTM lecturers emphasized in this study is in-service training. In-service training or human resource development is designed to fortify the competencies of lecturers, when they are on the job. In-service training may be broadly categorized into five different types, namely, induction or orientation training, which is offered after employment to develop the attitude of dedication to the service of people and the organization. Foundation training is made available to employees in order to strengthen the foundation of their service career. On-the-job training is a regularly scheduled training that is organized to enable lecturers to gain mastery of work related skills. Refresher or maintenance training is the type of training that is needed both to keep lecturers at the peak of their teaching and to prevent them from getting into rut. Career development training is a type of in-service training that is designed to upgrade the knowledge, skills, and ability of lecturers, to help them assume greater responsibility in higher positions. All of these types of training are needed for the professional development of lecturers.

In view of the relevance of professional development, UNESCO, working closely with one of its partners, Microsoft Corporation, in collaboration with the Federal Government of Nigeria through the Commission on Information and Communication Technology (CICT) developed a national working document titled “National Competency Standard for Teachers” which was first published in 2008. This document classified the ICT competencies of teachers into four domains, namely, pedagogical competencies, social and ethical competence, professional competencies and computers and communication competence. (UNESCO 2008). This competency standard draws attention to many ways in which ICT can transform education. The basic ICT competencies that OTM lecturers require, in today’s knowledge society are Microsoft Office Applications, which include Microsoft Word, Excel, PowerPoint, Microsoft Publisher, and Web Page Design. These packages are briefly discussed below:

Microsoft Word

Microsoft Word, popularly referred to as MS Word is a powerful software that is majorly used for typing text-based documents such as letters, memos, agreements, reports, minutes of meeting, circulars. Azuka, (2012:181) defines Microsoft Office as the use of computer to key in text and produce typed or printed documents. Okoye (2010), remarked that, with Microsoft word, an experienced teacher could effectively teach how to produce a clean and quality typed document. Some of the advantages of MSWord over manual typewriters include editing of text on the screen before printing. As many original copies as desired can be printed; documents can be saved on any external device and transferred from one device to the other and many more.

Microsoft Excel

MS Excel is a versatile ready-made spreadsheet application package used for accounting, budgeting and planning, banking operations, forecasting, statistics and many more. In other words, it can be used for the execution of functions that ordinarily require the lecturer to have pencil, eraser, pen, ruler, office calculator and big sheet of paper. Adigwe, (2006) defines Excel as a spreadsheet family that has gridded rows and columns that are used to produce financial estimates and reports. According to Dimoji, Benson and Oju (2010), Excel is used to key in data into rows and columns and to perform mathematics operations. The advantages of using Excel include working with numbers, data and carrying out calculations, the use of charts and graphs among others.

Microsoft PowerPoint

Ohakwe (2008:98) explains that PowerPoint is software that enables a user to create a powerful presentation to his audience. Ms PowerPoint is a powerful office presentation application that helps a user to create vivid onscreen or printed presentations that communicate the user’s ideas clearly and effectively. It is designed to help users to organize, illustrate, and present information in classrooms, conferences, and other functions. It is a versatile tool that is used by teachers and presenters (Beta Computers, 2011). It allows the user to include formatted text, graphics, pictures, sounds and animation in their presentations. It enables the lecturer to work with visual aids, animations, clip-arts, pictures, bullets and graphs in PowerPoint presentations.

Desktop Publishing

Agomuo (2005) maintains that Desktop Publishing is an application that may be used for carrying out all activities involved with the production of published documents such as books, and calendars. Azuka (2012:183), defines desktop publishing as the act of using a software to combine text, photographs and charts into printable documents. Desktop publisher is a computer application that is used to print artistic documents such as identity cards, calendars, complementary cards and other publications.

Web Page Design

David (2008) states that a Web Page is a single page that is created within a website. As a sheet of paper is to a notebook, so is a web page to a website. A website is a collection of related web pages. To design a web page, the software used are: Dream Weaver, Microsoft Expression Web, Share-Point Designer, FrontPage and many others. The most commonly used Web Page application is FrontPage and specifically, FrontPage is included in OTM course content. A common Web Page feature is Hyper Text Mark-Up Language (HTML) editor. It was designed to make it possible to easily create web pages and sites. Web page can be created either by web wizard or web template. FrontPage is a webpage design application that allows creating and formatting a web as well as hyperlinks. It is used for designing web pages for modern offices.

Training Gaps in OTM Lecturers' Microsoft Competencies

A world where technological advancement and professional growth ensue rapidly demands, that lecturers should react to such growth and continue to develop themselves during their professional careers. Azuka, (2010:183) acknowledges that ICTs are evolving technologies and so, the most fluent ICT teacher needs to incessantly upgrade their skills to keep abreast of the latest development and best practices. There are empirical evidences showing training gaps in OTM lecturers' competencies. Adesina (2006) in an article titled "unqualified polytechnic lecturers" laments that many of our teachers are not capable of teaching ICT subjects due to the shallow depth of computer skills they acquired in their teacher training institutions. The emergence of ICT has serious implications for the content and delivery of OTM programme in polytechnics. It seems most OTM lecturers are not able to operate Ms Office applications beyond Ms Word. In the words of Okoji (2008) in Barimon and Useni (2009), Ohakwe and Njoku (2010:78) argues that the present crop of OTM lecturers cannot effectively design Web Pages. An analysis of the present crop of lecturers in OTM departments in Nigerian polytechnics reveals that they were trained virtually without modern office equipment. Most of the lecturers were trained with manual office equipment before the emergence of ICTs in education.

3. Review of Related Empirical Studies

Some studies have been conducted by researchers on ICT competencies of OTM lecturers that are related to the present which are discussed below: Uteh, (2013) conducted a study on Assessment of ICT competencies possessed by polytechnic OTM lecturers in South Eastern States of Nigeria. The researcher adopted survey research design and the population was 122 OTM lecturers, which also constituted the sample. The instrument for data collection used was questionnaire. The findings reveal that OTM lecturers are moderately competent in Word Processing, Excel, and PowerPoint while majority of them have low level of competencies in Desktop Publishing and Web Page Design. Garba (2012) conducted a study on self-assessment on office applications proficiency by Office Technology and Management students in North-West polytechnics. Survey research design was used for the study and the sample was 231. The researchers used questionnaire to sample the opinion of the respondents. The findings of the study reveal, that the students are fairly proficient in the use of Word Processing applications and are barely proficient in Excel, Database, Desktop and Web Page

Research Questions

1. To what extent do OTM lecturers have competencies in Microsoft Word?
2. To what extent do OTM lecturers have competencies in Microsoft Excel?
3. To what extent do OTM lecturers have competencies in PowerPoint?
4. What level of competencies do OTM lecturers have in Desktop Publishing?
5. To what extent do OTM lecturers have competencies in Web Page Design?

Methods

The descriptive survey research design was engaged for this study. The population comprised 74 OTM lecturers in public polytechnics in Lagos and Edo state. The entire population was used for the study because of the small number of OTM lecturers in the institutions, therefore, there was no need to adopt any sampling technique and draw sample size. The instrument that was used for data collection, was a structured questionnaire, which was adopted by the researchers on OTM Lecturers' Microsoft Office Competencies Questionnaire from Okoro (2013) Uteh (2013) and Garba (2012) respectively. The instrument was duly validated by three experts, two of them are in Vocational and Technical Education Department and the third lecturer is from measurement and evaluation department, all of them are from University of Benin. A reliability coefficient of 0.843 was obtained using Cronbach alpha statistics. The data collected were analyzed using descriptive statistics of percentages, mean, and standard deviation. The decision rule was based on calculated kmean equal or greater than 2.50.

Results

The data that were collected to answer the research questions were analyzed by using percentage, mean, standard deviation and the results are shown in tables 1 – 5.

Research Question One: To what extent do OTM lecturers have competencies in Microsoft Word?

Table 1: Mean scores and standard deviation on Microsoft Word

S/N	Opinions on Microsoft Word	Mean	SD	Remarks
1	Open Word documents	3.92	0.26	Highly possessed
2	Create file and folder	3.92	0.26	Highly possessed
3	Manipulate information: copying, pasting, saving, deleting	3.85	0.46	Highly possessed
4	Select paper size and set margins	3.92	0.26	Highly possessed
5	Apply and adjust paragraphs, heading, spaces, fonts	3.92	0.26	Highly possessed
6	Create table	3.35	0.47	Averagely possessed
7	Align, delete and merge columns and rows	3.37	0.51	Averagely possessed
8	Mail merge letters	3.03	0.72	Averagely possessed
9	Insert page numbers, header and footer	3.89	0.31	Highly possessed
10	Use thesaurus to spell check	3.71	0.59	Highly possessed
11	Insert graphs and charts	3.18	0.06	Averagely possessed
12	Replace text	3.75	0.61	Highly possessed
13	Insert objects from other sources such as PowerPoint	3.12	0.59	Averagely possessed
14	Save and operate documents in external disks	3.89	0.31	Highly possessed
15	Apply borders and shadings	3.78	0.48	Highly possessed
16	Preview and print documents	3.81	0.58	Highly possessed

Significant Score > 2.50

Source: Computed from Field Work

Table 1 shows that 11 items with serial numbers (1, 2, 3, 4, 5, 9, 10, 12, 14, 15 and 16) had mean scores that ranged from 3.71 - 3.92 and standard deviation that ranged from 0.26 – 0.72, which indicates that OTM lecturers highly possess competencies in Microsoft Word. Also, 5 items with serial numbers (6, 7, 8, 11 and 13) whose means and standard deviation scores ranged from 3.03 - 3.37 and 0.06 – 0.72 respectively, indicates that OTM lecturers averagely possess competencies in Microsoft Word. This implies that OTM lecturers have Microsoft Word skills.

Research Question Two: To what extent do OTM lecturers have competencies in Microsoft Excel?

Table 2: mean scores and standard deviation on Microsoft Excel

S/N	Opinions on Microsoft Excel	Mean	SD	Remarks
1	Load/open Excel workbook and sheets	2.60	0.84	Averagely possessed
2	Create columns and rows	2.59	0.82	Averagely possessed
3	Adjust column and row width	2.54	0.78	Averagely possessed
4	Create arithmetic formulae and functions	2.32	0.68	Slightly possessed
5	Replicate formulae	2.23	0.72	Slightly possessed
6	Link data from workbook/work sheet to another	2.29	0.69	Slightly possessed
7	Create charts and graphs	2.25	0.72	Slightly possessed
8	Add, rename and delete worksheets	2.46	0.80	Slightly possessed
9	Apply special symbols	2.25	0.82	Slightly possessed
10	Insert objects from other sources such as Word	2.37	0.80	
11	Apply borders and shapes	2.46	0.76	
12	Apply background and colours	2.53	0.82	
13	Select paper size and adjust margins	2.65	0.86	
14	Sort/filter data	2.18	0.74	

Significant Score > 2.50

Source: Computed from Field Work

The table above shows that items with serial numbers (17, 18, 19, 28 and 29) had mean scores that ranged from 2.53 – 2.65 and standard deviation that ranged from 0.78 – 0.86, which indicates that OTM lecturers averagely possess competencies in Microsoft Excel while items with serial numbers (20, 21, 22, 23, 24, 25, 26, 27 and 30) whose mean scores and standard deviation values ranged from 2.18 - 2.46 and 0.68 – 0.82 respectively, indicates that OTM lecturers slightly possess competencies in Microsoft Excel. This indicates that OTM lecturers do not have enough skills in Excel.

Research Question three: To what extent do OTM lecturers have competencies in PowerPoint?

Table 3: Mean scores and standard deviation on PowerPoint

S/N	Opinions on Microsoft PowerPoint	Mean	SD	Remarks
1	Create slides, add, copy, paste, reset and delete texts			
2	Use interactive board, projector to display the content of slide	2.32	0.83	Slightly possessed
3	Change font style and size, justify, align change text direction	2.25	0.77	Slightly possessed
4	Apply colours to fonts, shapes, outlines	2.34	0.85	Slightly possessed
5	Insert number, movies and sound to slides	2.34	0.90	Slightly possessed
6	Insert table, picture, clip art, shapes, header/ footer, date/ time	2.20	0.75	Slightly possessed
7	Apply margins, paper size, apply layout designs	2.28	0.85	Slightly possessed
8	Search, spell check texts	2.39	0.84	Slightly possessed
9	View slide as normal, handout and others	2.37	0.83	Slightly possessed
10	Select, find and replace text or objects	2.18	0.84	Slightly possessed
11	Apply animations	2.29	0.82	Slightly possessed
12	Save slides into hard and floppy disks	2.26	0.85	Slightly possessed
13	Send slide e-mail messages	2.34	0.81	Slightly possessed
14	Apply slide show	2.12	0.80	Slightly possessed
15	Print slides	2.28	0.81	Slightly possessed
		2.34	0.85	Slightly possessed

Significant Score > 2.50

Source: Computed from Field Work

The data in table 3 shows that all the statements have mean scores that fell within 2.12 to 2.39 and standard deviation within 0.75 to 0.90, which shows that OTM lecturers slightly possess competencies in PowerPoint. This indicates that the lecturers do not have enough skills in PowerPoint.

Research Question Four: What level of competencies do OTM lecturers have in Desktop Publishing?

Table 4: Respondents' mean scores and Standard Deviation on Desktop Publishing

S/N	Opinions on Desktop Publishing	Mean	SD	Remarks
1	Create publications (letter head papers, fliers)	1.67	1.01	Slightly possessed
2	Select paper and set margins	1.71	1.08	Slightly possessed
3	Create text area/text frames	1.62	0.96	Slightly possessed
4	Save master page/template	1.56	0.93	Slightly possessed
5	Set up column width and spacing	1.59	0.96	Slightly possessed
6	Apply font style/size	1.67	1.04	Slightly possessed
7	Apply/edit colours	1.62	0.97	Slightly possessed
8	Import text, images	1.56	0.88	Slightly possessed
9	Align and justify text/images	1.64	1.03	Slightly possessed
10	Move and resize text/images	1.60	0.97	Slightly possessed
11	Create logo in publications	1.50	0.84	Slightly possessed
12	Import images from other sources	1.53	0.84	Slightly possessed
13	Saving publication into external disks	1.62	0.96	Slightly possessed
14	Print publications	1.68	1.02	Slightly possessed

Significant Score > 2.50 **Source: Computed from Field Work**

From the table above, the means scores ranged from 1.50 – 1.71 while the standard deviation ranged from 0.84 to 1.08, which shows that OTM lecturers slightly possess competencies in Desktop Publishing. This indicates that OTM lecturers do not have enough skills in this package.

Research Question Five: To what extent do OTM lecturers have competencies in Web Page Design?

Table 5: Respondents' mean scores and Standard Deviation on Web Page Design

S/N	Opinions on Web Page Design	Mean	SD	Remarks
1	Create Web Page with Web Wizard	1.46	0.91	Not possessed
2	Select paper size/margins	1.50	1.00	Slightly possessed
3	Save Web Page	1.48	0.99	Not possessed
4	Type a Hyper Text Mark-up Language (HTML) code to format web Page	1.35	0.83	Not possessed
4	Import, paste text and images	1.42	0.91	Not possessed
5	Align Web Page to the left, right, centre	1.40	0.89	Not possessed
6	Apply text/background colour	1.39	0.87	Not possessed
7	Link Web pages	1.31	0.76	Not possessed
8	Create hyperlink/e-mail link	1.35	0.85	Not possessed
9	Insert graphs, pictures, tables in Web Page	1.34	0.81	Not possessed
10	Launch website on a server	1.32	0.77	Not possessed
11	Insert scripts, logo, sound to Web Page	1.28	0.69	Not possessed
12	Publish Web Page in search engines	1.25	0.58	Not possessed
13	Download information from the internet	1.56	1.01	Slightly possessed
14	Print Web Page document	1.48	0.95	Not possessed

Significant Score > 2.50 **Source: Computed from Field Work**

The table above shows that OTM lecturers slightly possess competencies in selecting paper size, margins and downloading information from the internet as seen from items (61 and 73) with mean scores of 1.50 and 1.56 while the remaining items whose mean scores and standard deviation scores ranged from 1.25 – 1.48 and 0.58 – 0.99 respectively, which indicates that OTM lecturers do not possess competencies in Web Page Design.

3. Discussion of Results

The findings from research question one, which sought to assess the level of competencies OTM lecturers have in Microsoft Word revealed that most of the lecturers were highly competent in the application while others were averagely competent. The finding is in line with Okoye (2010), who remarks that with Microsoft Word, an experienced teacher could effectively teach how to produce a clean and quality typed document. Findings from research question two which looked at the extent to which OTM lecturers have competencies in Excel show that few of the lecturers are averagely competent in the elementary aspects of Excel which are not too complex to teach.

The remaining aspects of the application which include: creating arithmetic formulas, creating charts and graphs, sorting and filtering data among others indicated that the lecturers were slightly competent in them. This is in line with Dimoji, Benson and Oju (2010) who claimed that Excel, which can be used to organize data into rows and columns to perform Mathematics operations is difficult for OTM lecturers to operate. The findings from research question three which sought to assess the level of competencies OTM lecturers have in PowerPoint showed that they slightly possess competency in the application. It means they cannot effectively organize, illustrate and present information in classroom, conferences and other presentations using projector or any other devices.

The finding is in line with the words of Okoji (2008) in Marimom and Useni (2009) who claim that an analysis of the present crops of lecturers in OTM departments in Nigerian polytechnics revealed that they were trained virtually without modern office equipment. The findings of research question four which sought to assess the competencies of OTM lecturers in Desktop Publishing reveals that the lecturers are poor in Desktop Publishing operation. This is in line with Azuka (2008) who lamented that lecturers are incompetent and poor in Desktop Publishing operation. Findings from research question five which sought to assess the extent to which OTM lecturers possess competencies in Web Page Design show that the lecturers slightly possess competencies in the application. This is buttressed by Ohakwe and Njoku (2010:78) who argue that the present crop of OTM lecturers cannot effectively design Web Pages.

4. Conclusion

The findings of the study reveal that OTM lecturers at the polytechnic level highly and averagely possess competencies in Microsoft Word. Some of the lecturers have partial knowledge of Excel and PowerPoint but most of them have little or no competencies in Desktop Publishing and Web Page Design. Therefore, it is concluded that the level of competencies possessed by OTM lecturers in Microsoft office applications apart from Microsoft Word is poor. This implies that, the required skills are not adequate, hence, OTM lecturers need to constantly upgrade their skills to keep abreast of the latest technological development.

Recommendations

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

- i. It is obvious from the findings that OTM lecturers are more competent in Microsoft Word than in any other application. Therefore, the lecturers should acquire more skills in Excel, PowerPoint, Desktop Publishing and Web Page Design.
- ii. ICTs are swiftly evolving technologies so there is need for OTM lecturers to continuously update and upgrade their ICT skills through institutional or self-sponsored programmes.

- iii. Polytechnic Management in conjunction with organizations that are socially responsible to the institutions such as UNESCO, Microsoft Corporation, Commission on Information and Communication Technology (CICT), should support polytechnics by equipping their ICT labs and providing training opportunities for lecturers.

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Office Technology and Management Students' Perception of the Challenges Encountered During SIWES Exercise In Public Polytechnics in Lagos State

OJO Elizabeth Omone & AKHADEME Abiose Ekpe

Department of Office Technology and Management

Yaba College of Technology

ojoelizabeth03@gmail.com, Tel: +23408023045382

Abstract: The study focuses on Office Technology and Management students' perception of the challenges encountered during Students Industrial Work Experience Scheme (SIWES) exercise in public polytechnics in Lagos State. Descriptive survey research design was adopted. The population and sample size is 200 OTM students. Data was collected by means of validated questionnaire, split half method was used to determine the reliability of the instrument with reliability coefficient of 0.79. Three research questions were raised and answered, one hypothesis was formulated for the study. The data collected were analyzed with the use of mean, standard deviation and t-test statistical tool. The findings of the study reveal that OTM students are faced with the problem of securing placement for SIWES exercise. It is observed that OTM students are placed in offices or departments that are not related to their field of study thereby denying them the skills they are supposed to acquire. Also school based supervisors do not visit students on SIWES exercise as expected, making OTM students not to be serious with the SIWES exercise. It is concluded that to avoid the challenge of wrong placement, institutions should compile the list of relevant organizations where students could be sent to for the exercise. If this is done, it may not be difficult posting students to relevant places for attachment. Again, organizations that accept students for SIWES exercise should allow them to work with equipment and machines that would expose them to practical skills in order to bridge the skills gap between what is taught in the classroom and what is expected in the world of work. It is recommended among others that adequate supervision should be done by institution-based supervisors to review students' work progress and log books signed as and when due, so that students can take the exercise seriously.

Keywords: Students' perception, OTM, SIWES

1. Introduction

Office Technology and Management (OTM) is a nomenclature that was used to replace secretarial studies as it was formally called. The OTM programme is designed to equip students with office skills for employment in various fields of endeavours. According to Fadare (2015: 206), it is a course of study designed to develop skills, abilities, understanding, attitudes, work habits and appreciation of encompassing knowledge and information needed by individuals to enter and progress in employment (be it paid employment or self-employment) on a useful and productive bases. To ensure the effective and proper delivering of OTM programme in higher institutions, the Federal Government of Nigeria in its National Policy on Education (2004) stipulated that there should be interaction between institutions and industries. This is one of the strategies over the years that serve as collaboration between the school system and industries is SIWES

The Students Industrial Work Experience Scheme (SIWES) is a skill development training programme, which forms part of the approved academic criteria in the various institutions of higher learning in Nigeria. It was introduced by the Industrial Training Fund (ITF) in 1973, to bridge the gap between theory and practice. In tertiary institutions, students in engineering, technology, science, agriculture, medicine, management and other professional educational programmes engage in SIWES exercise respectively. The problem of the theoretical education provided by higher institutions, which does not meet with what is required in the world of work became a concern among Nigerian industrialist. It became necessary to match what is taught theoretically with practice.

To solve this problem, SIWES was established in order for students to practice what they have been taught theoretically in the classroom. It provides for on-the-job practical experience for students as they are exposed to professional work methods and techniques in handling equipment and machinery that may not be available in their institutions. The scheme is a tripartite programme, involving the students, tertiary institutions and the

industry (employers of labour) (Ugwuanyi, 2010: 32). The Duration of SIWES is four (4) months in polytechnics at the end of ND1, four (4) months in Colleges of Education at the end of NCE 11, and six (6) months in the university at the end of 300, 400 or 500 levels depending on the discipline and the institution involved. This condition must be met by all students of OTM in particular and other academic fields of study in general before graduation as stipulated by the National Board for Technical Education (NBTE, 2004). Students seem to face some challenges during SIWES exercise. Due to these challenges, students have different perception about the SIWES exercise. Perception can be seen as a person's view point or ideals about a particular thing or situation. Tanui (2003: 401) asserts that perception is how we see, understand and interpret the situation around us. Students' perception on the challenges they encountered during SIWES may vary, some might be of the view that despite the challenges they encountered during the exercise, it has improved their skills and enhance their academic achievement, while others may see it as a waste of time to part take in the exercise because of the challenges they faced during the exercise.

Concept of Students Industrial Work Experience Scheme

The Students Industrial Work Experience Scheme stands out as one ITF programme, which is of relevance to students in various areas of vocational education. ITF in 1973/1974 established SIWES to ensure the acquisition of relevant industrial work experience by university, polytechnic and colleges of education students to solve the problem of lack of adequate practical skills preparation for employment in industries by Nigerian graduates of tertiary institutions. Yenkw, (2004:153) asserted that SIWES is an educational programme that students participate in, while they are still in school as undergraduates. It gives the students the opportunity to be part of an actual work situation outside the classroom. The main idea for the establishment of the scheme is to equip students with the skills needed for employment in industries after graduation. The scheme is a training programme designed to expose and prepare students of universities, polytechnics, colleges of education and other tertiary institutions for the industrial work situation (Akerejola, 2008). Ugwuanyi (2010:32) and Okorie (2011) stresses that SIWES is a supportive industrial internship program that involves institutions of higher learning, industries, the government at both the federal and state levels, Industrial Training Fund (ITF), Nigerian Universities Commission (NUC) and NBTE/NCCEE respectively in Nigeria.

The aims of Students' Industrial Work Experience Scheme

The aims of SIWES exercise are briefly discussed below:

1. It provides avenue for students in tertiary institutions to acquire industrial skills and experiences in their appropriate course of study.
2. It exposes and prepares students for the industrial work situation they are likely to meet after graduation.
3. It exposes students to work methods and techniques in handling equipment and machinery that may not be available in educational institutions.
4. It gives the students the opportunity to apply the knowledge that they acquired in the classroom to real work situations, thereby bridging the gap between theory and practice.
5. It enlists and strengthens the employer's involvement in the entire educational process of preparing students for employment in industry.
6. It prepares the students for a business career by merging their analytical power with self-reliance (ITF 2004, Information and Guidelines for SIWES).

2. Challenges Encountered by OTM Students during SIWES

Industrial Work Experience Scheme is not without challenges, which arise from wrong placement of students in offices or departments not related to their areas of study, lack of exposure to related skills in areas of study, poor supervision by institution based supervisors, lack of financial assistance to students during SIWES exercise and lack of accommodation. Azubuike (2013) cited in Igbaji (2014:), reaffirm that about 60 percent of SIWES students go to their place of attachment to fulfil all righteousness, 30 percent according to him, attach themselves to organizations where their educational/course of study has no relevance, while only the remaining 10 percent get relevant places for their industrial attachment. Both male and female students

experience these challenges which limit the achievement of the objectives of the programme and invariably have implications on the perception of students about the exercise (Igbaji, 2014).

Wrong Placement of Students

It seems that most SIWES students are placed in units or departments that are not related to their field of study thereby sub-changing the skills the students are supposed to acquire. During SIWES students may be used as errand boys and girls instead of being placed in the appropriate departments that are related to their fields of study. Inyagu (2005) in (Igbaji, (2014) points out that there is scarcity of functional industries and companies with relevant equipment and facilities. According to Amoor (2010), most Secretarial students on SIWES are unfortunately not placed in offices and organizations related to their field of study and by so doing are not exposed to modern office technology and information systems and this is responsible for lack of commitment on the part of secretarial students during SIWES.

Lack of exposure to related skills

According to Ezechukwu (2006:47), many students do not secure placement in organizations where they would be exposed to the practical application of modern office technology and information systems. She stressed further that many students resorted to doing their SIWES in their parents' houses. In addition, Igbinoba (2002:25) says that SIWES has not delivered the desired results since many students on this scheme do not acquire the expected practical and managerial skills needed for today's modern office. According to Amoor, (2010), interactions with the students on SIWES revealed that most of the time secretarial students were not properly placed in offices where they would acquire the practical skills, knowledge and competencies in modern office technology and information systems to effectively meet the challenge of an ultra-modern office in the third millennium. Mafe (2010) discloses that some of the employers, who accept students for SIWES, are unwilling to allow students to handle equipment and machinery in the fear that students might damage them. Empowering office technology and management students with entrepreneurial skills through SIWES when they are still in school will be a positive way of empowering Nigerians who are now passing through horrible unemployment and economic challenges Okolocha and Okolocha (2012:101).

Poor supervision on the part of institutional based supervisors

Though the standard set for supervision prescribes three rounds of visits to each student in industry, only very few institutions are able to supervise students on SIWES even once, instead some of the supervisors may visit once or may not visit students at all, rather students take their log books to their supervisors in the office for them to append their signatures and by so doing review of work progress is not properly done. Some supervisors do not go to visit student-trainee at all but sign their log books in their offices (Wodi & Dokubo, 2009:46). (Uluoma & Akanwa, 2006:43). From the work of Ezewa (2009) it was discovered that students play truancy during SIWES exercise, this act by the students jeopardizes the objective of the programme and many students also have blamed their behaviour on poor supervision by the institutional based supervisors and lack of cordial relationship between supervisors and student-trainee.

Relevance of SIWES to Office Technology and Management students

One principle underlying the Students Industrial Work Experience Scheme in institutions of higher learning, which desires to relate classroom practice with the world of work is, striking a balance between theoretical learning and practical application. Ugwuanyi (2010:36) describes SIWES as a skill training programme designed for students in Vocational and Technical Education and other discipline that are involved in practical. SIWES is to expose and prepare students for industrial working situations, working methodology and experience that will be needed in handling machines, equipment and tools that may not be available in the schools. (Okolocha et al., 2012). Ekpenyong (2008:221) states that SIWES provides an avenue for evaluating participating students both as students and as prospective employees where defects are found in a student's job performance or attitude to work, he/she through proper supervision is guided to correct such defects prior to taking up permanent employment.

The following relates the relevance of the programme to Office Technology and Management training:

- i. Opportunity to apply theoretical knowledge in real life situations.
- ii. Acquisition of relevant skills and competencies

- iii. Practical expose students to work methods and techniques.
- iv. Preparation of students for the world of work/labour market after graduation
- v. Relating school environment to work place

Statement of the Problem

SIWES was introduced to expose students to more practical works and office machines that are not available in their institutions and the real work situations they are likely to face after graduation, which will make them adequately prepared for the world of work. The aim of exposing students to the industrial environment is to enable them develop occupational competencies. Despite the fact that SIWES was designed to provide a platform for students in institutions of higher learning, the opportunity to acquire these industrial skills in their course of study, which is supposed to influence their academic performance positively seems not to be realistic.

Products of office technology and management programme despite their involvement in SIWES before graduation appear not to display requisite skills in their field of study (Okebukola 2006 and Yahaya 2007). What would have been responsible? Could it be due to difficulty in securing placement for industrial attachment as some industries reject students for placement? Could it be wrong placement on the job? It seems that SIWES students are placed in units or departments not related to their field of study thereby sub-changing the skills the students are supposed to acquire. During SIWES students may be used as errand boys and girls. Poor supervision on the part of institutional based supervisor is another challenge faced by students on SIWES exercise. Supervisors are supposed to visit students on SIWES exercise twice or thrice but some supervisors do not visit the students at all and this could make some students not to be serious about the programme.

Objectives of the Study

The main purpose of this study is to investigate the challenges encountered by office technology and management students during their Students Industrial Work Experience Scheme. Specifically, the study seeks to assess:

1. The perception of OTM students in public polytechnics in Lagos State due to the challenges of not getting placement in relation to their course of study during SIWES exercise.
2. The perception of OTM students in public polytechnics in Lagos State with regards to the challenges of not acquiring relevant skills during SIWES exercise.
3. The perception of OTM students in public polytechnics in Lagos State with regards to poor supervision by institutional based supervisors during SIWES exercise.

Research Questions

The following research questions will guide the study:

1. What are the perceptions of OTM students with regards to placement challenges encountered during SIWES exercise in public polytechnics in Lagos State?
2. What are the perceptions of OTM students in public polytechnics in Lagos State on the challenges of acquiring related skills to their course of study during SIWES exercise?
3. What are the perceptions of OTM students in public polytechnics in Lagos State on the challenges of supervision by institutional based supervisors during SIWES exercise?

Hypothesis

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

H₀: There is no significant difference in the challenges encountered by male and female Office Technology and Management students during SIWES in public polytechnics in Lagos State.

3. Methodology

A descriptive survey design was adopted for this study. The population was 200 NDII students of Office Technology and Management in Yaba College of Technology and Lagos State Polytechnic in Lagos State. The population was manageable therefore the study adopted no sampling technique. A structured questionnaire

was used. Validation of the instrument was done by three lecturers from University of Benin, one from Measurement and Evaluation Department and two from Vocational and Technical Department. Cronbach alpha technique was used to determine the internal consistency of the questionnaire items and a coefficient reliability of 0.79 was obtained. The data collected from the study were analyzed using Mean, Standard Deviation (SD) and t-test. Mean and Standard Deviation were used to answer the research questions while t-test was used to test the hypotheses at 0.05 level of significance. Decision rule was based on any calculated mean equal or greater than 2.50 regarded as Agree while any mean lesser than 2.50 was regarded as Disagree. On the bases of the hypothesis, the probability value (p) was used. Since P-value of .519 is greater than 0.05, H_0 was retained.

Results

The biodata information of the respondents was analyzed using simple percentage as in table 1.

Table 1: Percentage Distribution of Public Polytechnics in Lagos State.

Polytechnics	Frequency	Percentage %
Yaba College of Technology	145	73.2
Lagos State Polytechnic	55	26.8
Total	200	100

Table 1: shows the percentage distribution of public polytechnics in Lagos State. From the table, 145 are OTM students from Yaba College of Technology and 55 OTM students from Lagos State Polytechnic who responded to the instrument. This indicates that 73.2 percent of the respondents are Yaba College of Technology OTM students and 26.8 percent are Lagos State Polytechnic OTM students.

Table 2: Gender Percentage Distribution of Respondents

	Frequency	Percentage %
Male	78	38.3
Female	122	61.7
Total	200	100

Table 2: indicates gender distribution of respondents. 78 out of 198 respondents (38.3%) are male OTM students while the remaining 122 respondents (61.7%) are female OTM students.

Research Question One

What are the perceptions of OTM students on wrong placement challenges encountered during SIWES exercise in public polytechnics in Lagos State? The data collected to address this research question are summarized in the table below:

Table 3: Descriptive statistics of perception of OTM students as regards wrong placement challenges

S/N	OTM student's perception on the challenge of not placed in the right office during SIWES exercise	\bar{X}	Std Dev
1	OTM students are placed in offices not related to their course of study during SIWES exercise.	3.00	1.00
2.	OTM students placement in offices not related to their course of study will affect the skill acquired during SIWES exercise.	3.22	0.81
3.	OTM student wrong placement during SIWES exercise will lead to lack of work attitudes and habits in job areas.	3.05	0.87
4.	Placing OTM students during SIWES exercise in offices not related to their area of study will make them to lack in-depth knowledge in their area of study.	3.15	0.91
5.	OTM student's wrong placement in the office will lead to lack of commitment during SIWES exercise.	2.99	0.90
		15.38	3.00

Table 3 shows a calculated mean of 15.38 and a standard deviation of 3.00. Since the calculated mean is higher than standard mean of 2.50, it shows that OTM students in Lagos State public polytechnics agree with all the items showing that OTM students have same perception as regards wrong placement challenges encountered during SIWES.

Research Question 2

What are the perceptions of OTM students on the challenges of acquiring related skills to their course of study during SIWES exercise in public polytechnics in Lagos State?

Data collected to address this research question 4 are summarized in the table below.

Table 4: Descriptive statistics of perception of OTM students on the challenges of acquiring related skills

S./N	OTM Student's Perception On the Challenge Of Not Being Exposed To Related Skills In Their Field Of Study During SIWES Exercise	\bar{X}	Std Dev
1	OTM students are not exposed to Information and Communication Technology (ICT) skills during SIWES exercise.	2.34	1.00
2.	OTM students are not exposed to the mastering of word processing packages skills during SIWES exercise.	2.39	1.02
3.	OTM students are not exposed to entrepreneurship skills during SIWES exercise.	2.89	1.00
4.	OTM students are not exposed to management skills during SIWES exercise.	2.48	0.99
5.	OTM students are not exposed to job/skills required for effective office administrative work of the 21 st century during SIWES exercise.	2.43	0.99
		12.53	3.75

Table 4 shows calculated mean of 12.53 and standard deviation of 3.75. Since the calculated mean is higher than the standard mean of 2.50, it implies that OTM students in public polytechnics in Lagos State agree with all the items, showing that OTM students have the same perception about the challenges of not acquiring related skills during SIWES.

Research Question 3:

What are the perceptions of OTM students on challenges of supervisor by institutional based supervisor during SIWES exercise in public polytechnics in Lagos State, Data collected to address this research question 5 are summarized in the table below.

Table 5: Descriptive statistics of perception of OTM students on challenges of supervision

S./N	OTM Student's Perception on the Challenge of Supervision on the Part of Institutional Based Supervisors	\bar{X}	Std Dev
1	OTM students are not visited 2 – 4 times as it ought to be during SIWES exercise by supervisors.	2.64	1.03
2.	Due to poor supervision by institutional based supervisors, reviews of work progress are not frequently done during SIWES exercise.	2.72	0.93
3.	Institutional based supervisors relationship with OTM students during SIWES exercise is not cordial.	2.67	0.88
4.	Poor supervision by institutional based supervisors makes review of work progress not to be frequently done during SIWES exercise.	2.79	0.92
5.	Poor supervision by institutional based supervisors discourages OTM student's interest during SIWES exercise.	2.63	1.06
		13.46	3.50

Table 5 shows calculated mean of 13.46 and standard deviation of 3.50. Since the calculated mean is higher than the standard mean of 2.50, it shows that OTM students in public polytechnics in Lagos State agree with all the items, showing that OTM students have the same perception about the challenges of poor supervision by institutional based supervisors during SIWES.

Testing of Hypothesis

There is no significant difference in the challenges encountered between male and female Office Technology and Management students during SIWES.

Table 6: t-test of independent samples of challenges encountered by OTM students by Gender

Gender	N	Mean	Std Dev	Df	T	Sig. (2-tailed)
Male	78	75.85	9.50	200	.646	.519
Female	122	75.00	8.73			

= 0.05

Table 6 shows a calculated t-value of .646 and a p-value of .519, testing at an alpha level of 0.5. Since the p-value is greater than the alpha level, the null hypothesis which states that there is no significant difference in the challenges encountered between male and female office technology and management students during SIWES is retained. Consequently, there is no significant difference in the challenges encountered between male and female office technology and management students during SIWES.

4. Discussion of Findings

The findings from research question one which looked at the perception of students as regards wrong placement revealed that most SIWES students are placed in units or departments not related to their field of study thereby sub-changing the skills the students are supposed to acquire. The finding is in line with Inyiagu (2005) in (Igbaji, (2014) who points out that there is scarcity of functional industries and companies with relevant equipment and facilities therefore students are only predisposed to some ailing industries, which after the training programme may not boast of reasonable skills in their area of study because they are not properly placed in the right offices. It was perceived by the students that wrong placement will lead to lack of work attitudes and habits in job areas. Amoor (2010), noted that Secretarial students on SIWES are unfortunately not placed in offices and organizations related to their field of study and by so doing are not exposed to modern office technology and information systems and this is responsible for lack of commitment on the part of the students.

Findings from research question two which looked at the perception of OTM students on the challenges of lack of related skills acquired during SIWES exercise showed that most OTM students are not exposed to practical skills during SIWES exercise. This is in agreement with Ezechukwu (2006:47), who claimed that many students do not secure placement in organizations where they would be exposed to the practical application of modern office technology and information systems. She stresses further that many students resorted to doing their SIWES in their parents' houses. Also Amoor (2010), lamented that interactions with the students on SIWES revealed that most of the time secretarial students were not properly placed in offices where they would acquire the practical skills, knowledge and competencies in modern office technology and information systems to effectively meet the challenge of an ultra-modern office in the third millennium.

Findings from research question three on the perception of OTM students on challenges of supervision show that OTM students are not visited 2-4 times during SIWES exercise by institutional based supervisors as it ought to be, and due to this challenge, reviews of work progress are frequently not done. This is buttressed by Wodi & Dokubo, (2009:48), who argue that though the standard set for supervision prescribes three rounds of visits to each student in industry, only very few institutions are able to supervise students on SIWES even once, instead some of the supervisors may visit once or may not visit students at all, rather students take their log books to supervisors in the office for them to append their signatures and by so doing review of work progress are not properly done. Ezewa, (2009:157), discovered that students play truancy during SIWES

exercise, this act by the students jeopardizes the objective of the programme and many students also have blamed their behaviour on poor supervision by the institution based supervisors and lack of cordial relationship between supervisors and student-trainee. According to Amoor, (2010) secretarial students on SIWES are not properly supervised and guided during SIWES attachment; this has discouraged their interest on the programme.

The finding of the hypothesis which states that there is no significant difference in the challenges encountered between male and female Office Technology and Management students during SIWES exercise showed that the null hypothesis is retained, which means that there is no significant difference in the challenges encountered between male and female Office Technology and Management students during SIWES exercise. This finding is in line with the finding of Igbaji (2014) who reported that there is no significant difference in the challenges encountered between male and female students during SIWES exercise. This implies that the challenges encountered by OTM students during SIWES exercise are not gender sensitive.

5. Conclusion

The findings of the study reveal that both male and female OTM students who go out for SIWES exercise claim that they were faced with challenges, such as, wrong placement, lack of related skills and poor supervision. It was observed from the findings that due to these challenges, majority of OTM students are not equipped with the skills required for the world of work. These problems have affected the perception of OTM students towards the exercise and have led to lack of concentration and commitment by the students towards the exercise.

Recommendations

Based on the findings the following recommendations are considered imperative:

1. To avoid the challenge of wrong placement, institutions should compile the list of relevant organizations where students could be sent to for the exercise. If this is done regularly, it may not be difficult posting students to relevant places for attachment.
2. Organizations that accept students for SIWES exercise should allow them to work with equipment and machines that would expose them to practical skills in order to bridge the skills gap between what is taught in the classroom and what is expected in the world of work.
3. Adequate supervision should be done by institution based supervisors to review students' work progress and log books signed as and when due, so that students can take the exercise seriously

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Job Stress on Employee Satisfaction and Commitment in the Manufacturing Sector Using Cadbury, Nestle and Pz Cussons Nigeria Plc.

AKINDELE, O.A. and AKINDAMOLA Saheed ²

¹ *Department of Social Sciences, School of Liberal Studies,*

Yaba College of Technology, Yaba, Lagos State

:

²*Saheed-matic Research Solutions, Yaba-Lagos*

Abstract: This study examines job stress and employee satisfaction and commitment and how it can engender industrial harmony. The study aims at environmental stress as it affects employee's satisfaction and commitment, the impact of employee's occupational stress on employee's satisfaction and commitment. The goal of the study is to examine the significant impact of job stress and employee's satisfaction and commitment. The research design employed was a survey research design and a questionnaire was used as the research instrument. Moreover, simple random sampling technique was used to select two hundred and forty (240) respondents among the staff of Cadbury Nigeria Plc, Nestle Nigeria Plc and PZ Cussons Nigeria plc while two hundred and ten (210) copies of the questionnaire were fully completed and returned. The analysis was carried out using simple percentage to analyze the responses of the questionnaire while regression and correlation statistics were used to test the hypotheses formulated with the aid of the statistical packages for social sciences (SPSS) VERSION 23.0. Findings show that there is a significant effect of environmental stress on employee job satisfaction and commitment, there is significant relationship between employee occupational stress and employee's job satisfaction and commitment and there is significant relationship between employee personal stress and employee's job satisfaction and commitment and there is significant relationship between employee professional stress and employee's job satisfaction and commitment as well. Based on the result above, it is concluded that the most frequently occurring stressor was related to the manufacturing industry and overall/total domain. It was therefore recommended that the management of the organization should make room for stress management courses and also organize stress management forum and campaign to help address stress among their employees

Keywords: Job Stress, Commitment, Employee Satisfaction, Environmental Stress, Occupational Stress, Personal Stress, Professional Stress

1. Background to the Study

Nowadays stress has become an integral part of jobs in every sector. Competition is growing day by day thus increasing the levels of stress among employees. The financial crisis and recession of 2008 around the world further contributed in mounting higher levels of stress among employees. The organizations, to make themselves efficient in the utilization of resources, have gone through restructuring, layoffs, downsizing, and mergers. This has resulted in unstable employee-employer relationship which has caused a great deal of stress among employees and research has shown that high levels of stress seriously affect employee job performance and commitment towards organization (Babajide & Akintayo, 2011:14).

Moreover, levels of stress among employees are increasing because of the growing competition. In addition, stress can have a positive influence on employees only if the employee's can handle it, however, mostly it exceeds tolerable limits and has a negative effect on employees. Therefore, job stress is one of the most important problems that companies have to deal with for employees to produce quality work comfortably (Ahsan, Abdullah, Fie & Alam, 2009:5). Job stress and job satisfaction are inter-related things. If a person is stressed in his job and is not satisfied he will not be able to deliver 100% so efficiently (Beehr, Walsh & Taber, 2014:7). Good organizations make sure that a stress free environment is provided to their employees, so that they remain satisfied and unstressed with the aim that their organizations excel to the maximum. Those organizations that do not care about their employees ultimately vanish from this global market of competition. There are various parameters which affect the employee – organization/employer relationship. Job timings, workload, number of employees verses load, less resources, employer attitude, pay, bonus, shares and holidays

are the few of the important factors which can lead to stressed job environment and less than 100% efficiency (Breugh & Colihan, 2014:2). This is a golden rule that until and unless the input is 100% output cannot be approaching 100% (Breugh & Colihan, 2014:15). Various surveys have been conducted nationally and internationally to assess employer-employee relationship, peers relationship, level of job satisfaction, with the aim to increase the satisfaction at the workplace and improve the efficiency of the organization which has lead to improvement in employee-employer relationship to some extent. It is also worth mentioning that sometimes stress from home complicates the job but that phase is usually temporary (Homburg & Stock, 2014:6). Most of the stressors come from job environment which has an impact on the job.

Job stress is an increasing problem for employees in industrialized African societies, most particularly in Nigeria because it is costly. Job stress can lead to increased health/medical costs, higher rates of absenteeism and labour turnover, more accidents, and worse performance (Akindamola, 2015:8). The term stress is basically from physical science where it means the force placed upon an object to cause damage, bending, or breaking. In the case of human beings stress is often used to describe the body's responses to demands placed upon it, whether these demands are favorable or unfavorable. Anything that causes stress is called a stressor. "Stress is a condition which happens when one realizes the pressure on them or requirements of the situation are wider than they can handle, and if these requirements are huge and continue for a long period of time without any interval, mental, physical or behavioral problems may occur." (Alexandros-Stamatios, Matilyn, and Cary, 2013:4).

Job stress is one of the most important workplace health risks for employees in developed and developing countries. There are a number of workplace factors, called job stressors that make jobs stressful and difficult for a number of employees in services as well as manufacturing industries. Additional stressors concern interpersonal relationships at work, such as hostile behaviour of supervisors, conflicts with colleagues, conflicts with subordinates and conflictual in management policies (Chan, Lai, Ko & Boey, 2010:29). Stress is an environmental situation in which a person is required to perform the tasks that threaten to exceed the person's ability and resources for meeting it, under conditions where he or she expects a large difference in the rewards from meeting the demand versus not meeting it. In work life, extreme stress is so aversive to employees that they will try to avoid it by withdrawing either psychologically (disinterest or lack of involvement in the job etc.), physically (frequent late coming, absenteeism, laziness etc.) or by leaving the job entirely (Fisher & Gitelson, 2013:31).

Job satisfaction has been the most frequently investigated variable in organizational behaviour (Nassab, 2008). Job satisfaction means how much people feel positive about their job and the difference of their jobs (Nassab, 2008:16). Low job satisfaction can be an important indicator of a decrease in employee productivity and can result in behavior such as absenteeism (Martin & Miller, 1986:89) and employee's turnover (Nassab, 2008:24). The previous studies suggest that a higher level of job stress causes less job satisfaction (Fisher & Gitelson, 2013:19).

Statement of Problem

For researchers and practitioners, stress in the workplace has been of growing concern. Stress may express itself differently, and affect workers differently, in different work contexts. Stress puts drastic effects on employees. Employees in stress cannot meet the expectations of their organization, because of facing physical, psychological and organizational burnouts (Siddiqui, 2012:5). Employees in the service organization are subjected to a high degree of work-related stress, which is the major reason for employees' poor performance at the job (Ismail & Hong, 2011:11). Job stress affects negatively on the female employee's well-being which creates dissatisfaction, and negative emotions towards work and ultimately their productivity decreases (Tsaur & Tang, 2012:17). Most of the employees in organizations feel that their job is stressful, which in return decreases their performance (Shahid, 2012:6).

The condition of "high demand and low control" is highly associated with cardiovascular and heart problems, anxiety, demoralization and depression, use of the drug (Alcohol) and susceptibility to a wide range of infectious diseases. The condition of "high effort and low control" is also associated with a high rate of

cardiovascular, anxiety, depression and conflict-related problems. Where both these conditions are present, high incidents of back pain and receptive strain injuries occur. Collectively both these conditions stifle the productivity of employees (Essiam, Mensah, & Gyamfi, 2015:5). Smoking is the result of stress. Mostly, people do smoke to reduce the stress. Tobacco smoke is associated with new-onset asthma in children (Essiam, Mensah, & Gyamfi, 2015:27). Employees having no control over their work, lack of financial rewards, unsupportive management system face serious physical problems, such as heart disease, increase in blood pressure and headaches. Through this employee's commitment to work decreases (Siddiqui, 2012:14).

At the job, stress affects the physical, psychological and financial balance of the employees. As a result of stress, employees are absent from the organization and lose working hours. Stress increases the employee turnover from a job, which influences the employees as well as organizational productivity. Many studies have been conducted on the subject of workplace stress. However, there are still uncertainties regarding the signs, symptoms, and interventions of workplace stress. In Nigeria, research relating to the effects and types of workplace stress, particularly within the manufacturing sector is limited. It is against this backdrop the study was undertaken to ascertain the effect of job stress on employee's job satisfaction and commitment using Cadbury, Nestle, and PZ Cusson Nigeria Plc. as study locations.

Objectives of the Study

The aim of the study is to ascertain the effect of job stress on employee's job satisfaction and commitment. The specific objectives of the study include:

1. To determine the effect of environmental stress on employee's job satisfaction and commitment.
2. To assess the effect of employees occupational stress on employee's job satisfaction and commitment.
3. To investigate the relationship between employees personal stress and employee's job satisfaction and commitment.
4. To examine the relationship between monetary stress and employee's job satisfaction and commitment

Research Hypotheses

Four hypotheses were formulated and tested in this study as follows:

H₀₁: There is no significant effect of environmental stress on employee's job satisfaction and commitment.

H₀₂: There is no significant relationship between employee's occupational stress and employee's job satisfaction and commitment.

H₀₃: There is no significant relationship between an employee's personal stress and employee's job satisfaction and commitment

K2H₀₄: There is no significant relationship between monetary stress and employee's job satisfaction and commitment.

The scope of the Study

This study is limited to ascertaining the effect of job stress on employee job satisfaction. The focus is on financial stress, occupational stress, professional stress and personal stress in Cadbury Nigeria Plc, Nestle Nigeria Plc, and PZ Cussons Nigeria plc to sample the staff opinion in order to make a comparison in the area of inquiry.

2. Literature Review

Theoretical Framework

This study is conducted under the guiding light of the following theories:

Transaction Theory of Stress

The Transaction Theory of stress was reformulated by Dienstbier (1989:4). According to the Transaction Theory of stress, the cognitive appraisal of stress is a two-part process which involves a primary appraisal and a secondary appraisal. Primary appraisal involves the determination of an event as stressful. During primary appraisal, the event or situation can be categorized as irrelevant, beneficial, or stressful. If the event is appraised as stressful, the event is then evaluated as a harm/loss, a threat, or a challenge. A harm/loss refers to an injury or damage that has already taken place. A threat refers to something that could produce harm or loss. A challenge event refers to the potential for growth, mastery, or some form of gain. Lazarus (2006:9) argues that

we cannot assess the origins of stress by looking solely at the nature of the environmental event; rather stress is a process that involves the interaction of the individual with the environment.

This theory helps to integrate both the motivational aspects of stress and the varying emotions that are associated with the experience of stress. Secondary appraisal occurs after an assessment of the event as a threat or a challenge. During secondary appraisal, the individual evaluates his or her coping resources and options. According to the theory of transactions, stress arises only when a particular transaction is appraised by the person as relevant to his or her well-being. In order for an event to be appraised as a stressor, it must be personally relevant and there must be a perceived mismatch between a situation's demands and one's resources to cope with it.

Beck's Cognitive Theory of Depression

In Beck's cognitive theory of depression (Beck, 1987:43), maladaptive self-schemata that include dysfunctional attitudes, involving themes of loss, inadequacy, failure, and worthlessness, constitute the cognitive vulnerability. These schemata consist of stored bodies of knowledge that affect encoding, comprehension, and retrieval of information. Consistent with vulnerability-stress models of depression, these dysfunctional attitudes are hypothesized to become activated following the occurrence of a negative life event, generating specific negative cognitions (e.g., negative thoughts about the self, world, and future), and lead to elevations of depressive symptoms. Depression arises as a result of inferences derived from distorted cognitions and schema-driven processes, whereas the inferences arrived at in non-depressives are based on the relevant situational information.

Given that BT is a vulnerability-stress theory, without the occurrence of stress, individuals who possess depressogenic self-schemata are hypothesized to be no more likely to become depressed than those who do not possess such schemata. In addition, Beck posits that these self-schemata are typically latent in individuals vulnerable to depression and must be activated by a relevant stressor to trigger biased information-processing tendencies. The activation of the schema subsequently influences how the individual perceives, encodes, and retrieves information regarding the negative life event.

Empirical Review

Many research studies have been conducted concerning the stress of employees in the organization and its consequences. In a study by Kemery, (2015:4), role conflict and role ambiguity were negatively related to job tension. Fogarty (2016:12) studied job stress of staff accountants working for international public accounting firms. He studied the relationship between job stress (role conflict, role ambiguity, and role overload) and job tension and concluded that role conflict and role ambiguity increased job tension. Malik, (2010) in a study among branch managers of private sector commercial banks in Pakistan revealed that role overload and role conflict directly and negatively influenced job satisfaction. Fogarty (2016:19) also stated that job stress and job satisfaction have a negative relation. He further revealed that bank officers in Malaysia revealed that there is a positive and significant correlation between sources of workplace stress and job satisfaction of respondents. Collins (2013:12) compared stress level and employee turnover for men and women in public accounting. According to her study female accountants experience more stress.

The result revealed that stress was associated with high-level turnover from public accounting. Role conflict is significantly correlated with the propensity to leave. Several studies confirmed that job stress leads to a high turnover rate of employees (Jimmieson, 2014; Fogarty, 2016). A study conducted by the American Institute of Stress (2015:17) reveals that 40 percent of turnover was caused by stress. Michael, (2015:5) aimed to examine the impact of job stress on the organizational commitment of a sample of coordinators in the Israeli educational mentoring organization PMP. It revealed that stress hinders the coordinators' sense of emotional commitment. As the stress level rises, the coordinators' sense of belonging decreases.

Fogarty (2016:19) also states that stress is negatively related to commitment. Burnout is a response to stress, especially when the individuals are troubled or having problems. Moore (2010:4) states that increased environmental stressors may cause employee burnout. Yunus and Mahajar (2009:2) in a study among nurses

in Malaysia find that that there is a relationship between work overload and emotional exhaustion, and there is also a relationship among the role overload and burnout. According to Rahman and Zanzi (2015) the workplace stress adversely affects employee productivity, it also indirectly affected the performance of employees in the organization. Several other factors also result from stress. In total, 60-80 percent of workplace accidents occur due to job stress (Moore, 2010). Tombaugh and White (2011) indicate that during organizational change, the employees have to take more of a workload, which caused employees' job stress. Absenteeism is yet another consequence of stress.

Boyland, (2011:29) examines job stress and coping strategies of elementary principals; questionnaires was used to elicit information from the respondents and a total of 193 principals from 79 counties in Indiana responded to the survey. This was a return rate of 67% and represents 86% of the counties in the state of Indiana. The study found out that a large majority of Indiana's elementary principal participants were experiencing moderate to high levels of job stress. In addition, most of the experienced principals indicate more stress now than previous years.

3. Methodology

The research design for this study is survey research design. The survey design advocated by Petty (1991) relies on observing phenomena in their natural setting and deriving theories that fit the analysis of the data. It is employed when the researcher is concerned with surveying responses from a sample of the population without any control on the elements of the sample and as such it is used extensively to collect information on numerous subjects of research (Nachmias and Nachmias, 2009). The population of the study comprises of management and non-management staff of Cadbury, Nestle and PZ Nigeria Plc. in their Lagos Headquarters offices. However, resulting from the practical difficulties of accessing the population, a subset regarded as a sample will be utilized. A sample of 240 respondents was selected from the selected organizations (Cadbury, Nestle and PZ Nigeria Plc. in their Lagos Headquarters offices). Primary data was used as the data source while the regression and correlation statistical technique was employed as the data estimation technique.

Analysis of Tested Research Hypotheses

In this aspect, Regression analysis and Spearman's man rank correlation test were used to achieve the validity of the hypotheses stated for the study

Hypothesis one:

H₀₁: There is no significant effect on employee's financial stress on employee's job satisfaction and commitment

H₁₁: There is a significant effect on employee's financial stress on employee's job satisfaction and commitment
The hypothesis is tested with the use of regression analysis. All the variables of employee's financial stress were merged into a dummy variable and enter the regression table as the independent variable. While an employee's financial stress and employee's job satisfaction and commitment variables entered into the regression table as the dependent variable and the outcome is presented below:

Regression analysis of the effect of employee's financial stress on employee's job satisfaction and commitment

Table 1: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.722	.176		15.455	.000
The effect of my job on me is too high	.177	.055	.208	3.233	.001

a. Dependent Variable: I enjoy my work most days , *Source: Field Survey, 2018*

From the above result, the p-value is lesser than 0.05 which indicates that employee's financial stress has a significant effect on employee's job satisfaction and commitment. The positive value implies that an employee's financial stress contributes largely to the employee's job satisfaction and commitment.

Hypothesis two:

H₀₂: There is no significant relationship between employee's occupational stress on employee's job satisfaction and commitment

H₁₂: There is a significant relationship between employee's occupational stress on employee's job satisfaction and commitment

My job makes me nervous * I care about the fate of this organization Crosstabulation

Table 2: Count

		I care about the fate of this organization					Total
		Strongly disagree	disagree	don't know	Agree	strongly agree	
My job makes me nervous	not important at all	0	0	0	9	1	10
	important to a little extent	0	0	1	15	2	18
	important to some extent	0	2	1	33	1	37
	important to a considerable extent	0	1	4	39	9	53
	important to a great extent	1	0	5	33	6	45
	important to a very great extent	0	1	2	36	8	47
Total		1	4	13	165	27	210

Table 3: Symmetric Measures

		Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Interval by Interval	Pearson's R	.610	.060	.389	.000 ^c
Ordinal by Ordinal	Spearman Correlation	.552	.064	.755	.000 ^c
N of Valid Cases		210			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Source: Field survey, 2018

Where R = Spearman's rank correlation coefficient, n = sample size, P – value = probability value, α = significance level.

Comment/Interpretation:

The above table showing spearman's rank correlation test on the null hypothesis that “there is no significant relationship between employee's occupational stress and employee's job satisfaction and commitment. The test revealed that the p-value is 0.000, the calculated value for Spearman's rank is 0.552 and the sample size is 210. We found from the above result that p-value (0.000) is less than the level of significance (0.05), hence the null hypothesis (H₀) is rejected at 95.0% confidence level. We, therefore, concluded that there is a significant relationship between employee's occupational stress and employee's job satisfaction and commitment.

Hypothesis three:

H₀₃: There is no significant relationship between employee's personal stress and employee's job satisfaction and commitment

H₁₃: There is a significant relationship between employee's personal stress and employee's job satisfaction and commitment

Sometimes when I think about my job I get a tight feeling in my chest* I am satisfied with my job

Table 4: Crosstabulation

		I am satisfied with my job				Total
		Neutral	Agree	Strongly agree	7	
Sometimes when I think about my job I get a tight feeling in my chest	Neutral	0	1	1	0	2
	Agree	0	12	9	0	20
	Strongly agree	0	7	188	0	186
	7	1	0	0	1	2
Total		1	18	191	1	210

Table 5: Symmetric Measures

		Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Interval by Interval	Pearson's R	.430	.060	.367	.000 ^c
Ordinal by Ordinal	Spearman Correlation	.319	.064	.825	.000 ^c
N of Valid Cases		210			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Source: Field Survey, 2018

Where R = Spearman's rank correlation coefficient, n = sample size, P – value = probability value, α = significance level.

Comment/Interpretation:

The above table showing spearman's rank correlation test on the null hypothesis that "there is no significant relationship between an employee's personal stress on employee's job satisfaction and commitment". The test revealed that the p-value is 0.000, the calculated value for Spearman's rank is 0.319 and the sample size is 210. We found from the above result that p-value (0.000) is less than the level of significance (0.05), hence the null hypothesis (H₀) is rejected at 95.0% confidence level. We, therefore, concluded that there is a significant relationship between employee's personal stress and employee's job satisfaction and commitment.

Hypothesis four:

H₀₄: There is no significant relationship between employee's professional stress on employee's job satisfaction and commitment

H₁₄: There is a significant relationship between employee's professional stress on employee's job satisfaction and commitment.

Table 4: Many times, my job becomes a big burden* I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be a successful cross tabulation

		I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful				Total
		Neutral	Agree	Strongly agree	7	
Many times, my job becomes a big burden	Neutral	0	1	1	0	2
	Agree	0	12	9	0	20
	Strongly agree	0	7	188	0	186
	7	1	0	0	1	2
		1	18	191	1	210

Table 7: Symmetric Measures

		Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Interval by Interval	Pearson's R	.430	.060	.367	.000 ^c
Ordinal by Ordinal	Spearman Correlation	.319	.064	.825	.000 ^c
N of Valid Cases		210			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Source: Field Survey, 2018

Where R = Spearman's rank correlation coefficient, n = sample size, P – value = probability value, α = significance level.

Comment/Interpretation

The above table showing spearman's rank correlation test on the null hypothesis that "there is no significant relationship between employee's professional stress on employee's job satisfaction and commitment". The test revealed that the p-value is 0.000, the calculated value for Spearman's rank is 0.319 and the sample size is 210. We found from the above result that p-value (0.000) is less than the level of significance (0.05), hence the null hypothesis (H_0) is rejected at 95.0% confidence level. It was therefore, concluded that there is a significant relationship between employee's professional stress on employee's job satisfaction and commitment.

3. Discussion

The findings indicate that employee's financial stress, occupational stress, personal stress, and professional stress have a significant effect on employee's job satisfaction and commitment. These findings concur with Michael, (2015) that examines the impact of job stress on the organizational commitment of a sample of coordinators in the Israeli educational mentoring organization PMP. It revealed that stress hinders the coordinators' sense of emotional commitment. As the stress level rises, the coordinators' sense of belonging decreases.

4. Conclusion

Human resource practice is a very important role in order to increase employee's satisfaction and commitment. If the employee is not free from stress and working under stressful environment then it is not possible for the organization to achieve its goals and objectives. In order to gain employee commitment towards the organization, the organization should provide stress free environment to the employees. The results also indicate a negative and significant relationship between job stress and organizational commitment. As

employee stress increases, employee commitment towards the organization decreases and vice versa. The result of this research is consistent with the research results of Lee (2007), Lambert and Paoline (2008) and Omolara (2008). Considering the importance of organizational commitment, organizations can promote the commitments among the employees by reducing the stress. There are different factor that contribute to the job stress like risky work, work pressure, poor co-workers relationship and family work conflicts. All these factors contribute to the job stress and also decrease the organizational commitment.

Recommendations

In consonance with the findings derived from the research, the following recommendations are made forums.

1. Management of an organization should make room for stress management courses and also organizing stress management forums and campaign to help address stress among their employees. Thus, guidance and counseling units should be part of the management system so that the staff can come there to discuss issues affecting them.
2. Organizations should make proper strategies to reduce the job stress among employees like flexible work hours, career growth opportunities and development of good relationship with co-workers and supervisors. In this way organizations will able to reduce the job stress and increase the organizational commitment.
3. There should be frequent interaction between the management staff and their subordinate on how best to schedule intensive courses on stress palliative measures in the course of the semester programme
4. The study also recommends that organizations offer differentiated and tailored development routes that can meet individual needs and strengths to help improve the engagement of those identified as talent and avoid perceptions of under-utilization. Rewards and compensation structures which will be geared towards incentivizing line managers to spot and allay stress among employees should be developed.
5. Organizations should always upgrade their policies and practices about their talent management system in order to come out with an effective way to always retain and enhance the talents of the employee.
6. Finally, the study recommends that the talent management system be integrated across all aspects of human resource management. There are clear inter-dependencies between talent management and recruitment, development, diversity, retention and succession planning practices.

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Mathematical Model on Investment and Profitability Using Swiss Gold as a Case Study

BAKRE F.O. and IGE S.A.

Department of Mathematics, Yaba College of Technology, Lagos, Nigeria

Abstract: The main objective of this paper is to expose investors to both risk and profit making in the chain investment on Swiss Gold using mathematical models and approach. Mathematical models are generated to determine the extent of profit as well as the number of personnels involved at any stage for different investment plans while critical attention is drawn to investment/profit ratio.

1. Introduction

For any investor interested in investing in the chain business of Swiss Gold, some key factors must be put into consideration. Some of which are (i) how much to invest and for how long? (ii) what investment plan should be adopted? (iii) how long can the recycle take place before investment can stop logically? And so on. It is worth maintaining that there are four different investment plans each of them with its advantages alongside the disadvantages. It is important that the four-level investment plan are critically analysed to enable us know the best among them which can be recommended for prospective investor(s) based on the substantial productivity of the investment plan.

2. Model

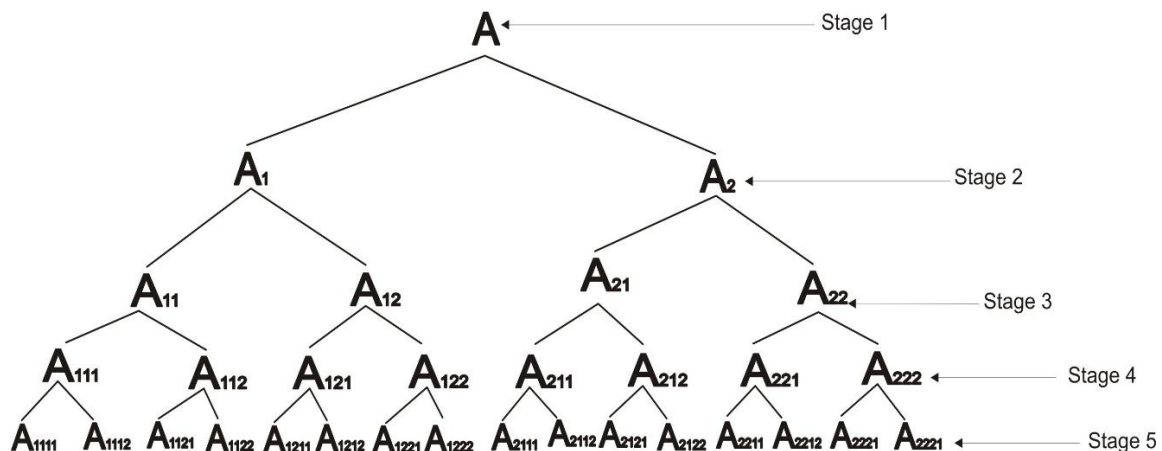


Figure 1: Model of the Investment

3. Analysis of Investment

Let A be the first investor for any of the levels of investment then, A brings 2 people A_1 and A_2 whose investments each is same as A . Then A_1 and A_2 each lures (A_{11}, A_{12}) and (A_{21}, A_{22}) respectively to invest with the same amount as they did. The chain continues, bearing in mind that the same amongst must be invested. A gets 100% increase or more of the amount invested after third stage (depending on the level of investment) so as well for other investors after their 3rd stage. However, a chain is complete after 2 stages from an investor's stating point. Thereby getting paid for every completed 2 stages.

Table 1: Evaluation result of investment plans

Investment plan	Investment (₦)	Payback (₦)	Percentage increase
Plan A	125,000	250,000	100%
Plan B	450,000	1,000,000	122%
Plan C	1,500,000	3,600,000	140%
Plan D	4,600,000	14,000,000	203%

From table 1:

For stage 1 = 1 person is involved

For stage 2 = 2 people are involved

For stage 3 = 4 people are involved

For stage 4 = 8 people are involved

i = stage number

n_i = Total number of people involved at a given stage i

$$n_i = \frac{a(r^i - 1)}{r - 1}$$

Since $a = 1, r = 2$

$$n_i = 2^i - 1$$

when $i = 1$, $n_i = 1$

$i = 2$, $n_i = 3$

$i = 5$, $n_i = 31$

Total amount (M_i) invested for any investment plan at any stage is

$M_i = C \times n_i$ (C = Amount with respect to investment plan)

Table 2: Evaluation results of investment plan A

i	Total number of people (n_i)	Total amount invested (M_i) at any stage i (₦)	Total amount received (R_i) at any stage (₦) in Millions
1	1	125,000	-
2	3	375,000	-
3	7	875,000	0.25
4	15	1,875,000	$0.25 + 0.5 = 0.75$
5	31	3,875,000	$0.25 + 0.5 + 1 + (0.25) = 2$
6	63	7,875,000	$0.25 + 0.5 + 1 + 2 + (0.5) = 4.25$
7	127	15,875,000	$0.25 + 0.5 + 1 + 2 + 4 + (1.25) = 9$
8	255	31,875,000	$0.25 + 0.5 + 1 + 2 + 4 + 8 + (2.5) = 18.25$
9	511	63,875,000	$0.25 + 0.5 + 1 + 2 + 4 + 8 + 16 + 5.25 = 37$
10	1023	127,875,000	$0.25 + 0.5 + 1 + 2 + 4 + 8 + 16 + 32 + (10.5) = 84.25$
11	2047	255,625,000	$0.25 + 0.5 + 1 + 2 + 4 + 8 + 16 + 32 + 64 + (21.25) = 149$

Table 3: Evaluation results generated for Investment Plan B

i	Total number of people (n_i)	Total amount invested (M_i) at any stage i (₦)	Total Amount Received at any stage i (R_i) in millions (₦)
1	1	450,000	-
2	3	1,350,000	-
3	7	3,150,000	1
4	15	6,750,000	$1 + 2 = 3$
5	31	13,950,000	$1 + 2 + 4 + (1) = 8$
6	63	28,350,000	$1 + 2 + 4 + 8 + (2) = 17$
7	127	57,150,000	$1 + 2 + 4 + 8 + 16 + (5) = 36$
8	255	114,750,000	$1 + 2 + 4 + 8 + 16 + 32 + (10) = 73$
9	511	229,950,000	$1 + 2 + 4 + 8 + 16 + 32 + 6 + (21) = 148$
10	1023	460,350,000	$1 + 2 + 4 + 8 + 16 + 32 + 64 + 128 + 42 = 297$

From table 3:

R_i after 10 stages

$$(R_i) = 297m + 3\% \text{ of } 460,350,000$$

$$= 297m + 138,105,000$$

$$= 435, 105,000$$

Table 4: For Investment Plan C

i	Total number of people (n_i)	Total amount invested (M_i) at any stage i (₦)	Total Amount Received at any stage i (R_i) in millions (₦)
1	1	1500,000	-
2	3	4500,000	-
3	7	10,500,000	3.6m
4	15	22,500,000	$3.6 + 7.2 = 10.8M$
5	31	46,500,000	$3.6 + 7.2 + 14.4 + (3.6) = 28.8m$
6	63	94,500,000	$3.6 + 7.2 + 14.4 + 28.8 + (7.2) = 61.2m$
7	127	190,500,000	$3.6 + 7.2 + 14.4 + 28.8 + 57.6 + (18) = 129.6m$
8	255	382,500,000	$3.6 + 7.2 + 14.4 + 28.8 + 57.6 + 115.2 + (36) = 262.8m$
9	511	766,500,000	$3.6 + 7.2 + 14.4 + 28.8 + 57.6 + 115.2 + 230.4 + (75.6) = 568.8m$
10	1023	1,534,500,000	$3.6 + 7.2 + 14.4 + 28.8 + 57.6 + 115.2 + 230.4 + 460.8 + (151.2) = 1,1105,200.00$

From Table 4:

$$R_i \text{ after 10 stages} = 1,105,200,000 + 30\% \text{ of } 1, 534,500,000$$

$$= 1105,200,000 + 460,350,000$$

$$= 1,565,550,000$$

Table 5: Evaluation results generated for Investment Plan D

i	Total number of people (n_i)	Total Amount invested at any stage i (M_i)	Total Amount Received at any stage i (R_i)
1	1	4.6m	-
2	3	13.8m	-
3	7	30.1m	14m
4	15	64.5m	14m + 28m = 42m
5	31	133.3m	14m + 28m + 56m + (14m) = 112m
6	63	270.9m	14m + 28m + 56m + 112m + (28m) = 238m
7	127	546.1m	14m + 28m + 56m + 112m + 224m + (70m) = 504m
8	255	1,096.5m	14m + 28m + 56m + 112m + 224m + 448m + (140m) = 1022m
9	511	2197.3m	14m + 28m + 56m + 112m + 224m + 448m + 896m + (294m) = 2072m
10	1023	4,398.9m	14m + 28m + 56m + 112m + 224m + 448m + 896m + 1792m + (588m) = 4058m

The formula for R_i can be deduced thus

$$\begin{aligned}
 i = 3 &\rightarrow R_i = 2^{i-2}C \\
 i = 4 &\rightarrow R_i = 2^{i-2}C \\
 i = 5 &\rightarrow R_i = \left(2^{i-2} + \frac{2^{i-3}}{2}\right)C = (2^{i-2} + 2^{i-4})C \\
 i = 6 &\rightarrow R_i = \left(2^{i-2} + \frac{2^{i-3}}{2}\right)C = (2^{i-2} + 2^{i-4})C \\
 i = 7 &\rightarrow R_i = \left(2^{i-2} + \frac{2^{i-3}}{2} + \frac{2^{i-4}}{4}\right)C = (2^{i-2} + 2^{i-4} + 2^{i-6})C \\
 i = 8 &\rightarrow R_i = \left(2^{i-2} + \frac{2^{i-3}}{2} + \frac{2^{i-4}}{4}\right)C = (2^{i-2} + 2^{i-4} + 2^{i-6})C \\
 i = 9 &\rightarrow R_i = \left(2^{i-2} + \frac{2^{i-3}}{2} + \frac{2^{i-4}}{4} + \frac{2^{i-5}}{8}\right)C \\
 &= (2^{i-2} + 2^{i-4} + 2^{i-6} + 2^{i-8})C
 \end{aligned}$$

Hence,

$$R_i = C \sum_{i-j}^2 2^{i-j} \text{ where } j \text{ is step of even no from 2 to } i - j = 2$$

Also

$$R_i = C \sum_{i-j}^1 2^{i-j} \text{ for odd no from 3}$$

4. Conclusion

After critical analysis of the four stage Investment plan, A – D it is observed that investment plan A and B are not good at all due to their unproductive nature and should not be recommended for any prospective investor. However, the investment plan C is fair because it only generates little interest which is not encouraging enough compare to the amount invested. Investment Plan D is the best among all the four investment plan. It is substantive in nature as a result of the substantial interest it will generate compare to the initial capital invested. This investment plan can be conveniently recommended for any prospective investor to embark upon.

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The Inadequate Knowledge of Concord as a Major Cause of Wrong Sentence Constructions in the Context of a Nigerian – English Bilingual.

EHUWA, M.F

Yaba College of Technology, Lagos, Nigeria

ehuwamonday@gmail.com

Abstract: This paper intends to explicate the role of concord in English grammar. A typical Nigerian-English bilingual constructs sentences every day during their various facets of communication, without really knowing why they are right or wrong at times. The concord in English grammar is responsible for the acceptable and unacceptable of some expressions hence these expressions deal with some vital concord rules in English. This will be very useful for all users of English as L2, which differs from their mother's tongue – L1, such as the situation in Nigeria.

Keywords: concord, bilingual, sentence, communication, mother's tongue

1. Introduction

Concord in English grammar plays a tremendous role in determining the correctness of the different expressions we make in our daily life. It is a fact that people could express themselves correctly, but are unaware of some basic rules of grammar that make such expressions accepted grammatically. On the other hand, when they err in their sentence constructions, they do not know why because they lack the basic rules of concord in English. In the context of this paper a Nigerian-English bilingual is the main focus. There is no gainsaying the fact that most Nigerians use English as a second language as a result of language-contact situation.

The Nigerian indigenous languages such as; Yoruba, Hausa and Igbo Languages are acquired naturally as the mother tongue-serving as L1. But later come into contact with English language which must be learnt. While learning the English language, an average Nigerian does not learn the basic concord rules governing the correctness of sentence constructions. When the situation of languages in contact arise an average Nigerian becomes a bilingual. He is now exposed to two different languages that have different linguistic properties. It must be mentioned that a portion of his brain has been attuned to the linguistic systems of his mother's tongue, while the English language is superimposed on him through learning.

Significance of the Study

The aim of this paper is to identify the lack of adequate knowledge of concord rules in the life of a Nigerian-English bilingual and to expose him to some existing concord rules in English. When equipped with these concord rules, it becomes easier for him to construct meaningful and correct sentences thereby bringing out the aesthetics of the communication traits in him.

Bilingualism

The term bilingualism describes a speech community where people are exposed to two different languages for communication and interaction. Asha (2004) states that bilingualism is the fluent use of two languages by an individual. It is a fluctuating system in children and adults whereby proficiency in two languages may change depending on the opportunities to use the languages. The Association later identifies two types of bilingualism; simultaneous bilingualism and sequential bilingualism. In the view of Smart-words, bilingualism is the phenomenon of speaking and understanding two or more languages. It can also refer to individuals (individual bilingualism) as well as to an entire society (social bilingualism).

Bilingual

A bilingual is a person that possesses the ability to use two different languages for communication. The two languages may be acquired simultaneously or at different stages in life. According to Dictionary.com, bilingual is - able to speak two languages with the facility of a native speaker. In its own view the Cambridge English Dictionary sees bilingual as-(of a person) able to use two languages equally well, or (of a thing) using or involving two languages. An individual living within a speech community, exposed to two languages is a bilingual. Speech community otherwise known as linguistic community is a geographical expression referring to a group of people or speakers of a particular language. Such people normally share the same linguistic, political and cultural identity.

The essence of this paper as earlier spelt out is to identify the inadequate knowledge of the rules of concord as the major reason why a bilingual Nigerian cannot construct English sentences adjudged to be correct and grammatical. In syntax, it has been established that words are not just put together arbitrarily to form sentences, but must conform to the relevant syntactic rules. Despite this fact, we also know that factors; such as culture contribute to the construction of sentences full of errors. In Yoruba speech community for instance, the people are noted for being very respectful to elders or people in authority. This is why the Yoruba man will use the third person plural pronoun-“They” to replace “He” or “She”-third person singular pronoun.

Examples:

A student sights the rector working towards their classroom; he rushes in to alert the other students- saying:

“Won bo” meaning They are coming

The class will definitely be expecting more than one person, but in this situation, it is one person. The right sentence should be “He is coming”

This type of error arises as a result of what we call “Honourific Pronoun”.

In order to focus on the main objective of this study, then we should discuss concord vis-à-vis its rules in English grammar.

2. What Is Concord?

The word concord has been defined from different perspectives by different scholars, but they are pointing to the same fact, direction and submission. The chambers dictionary sees concord as “the state of being of the same opinion or feeling, harmony, agreement, a treaty or pact to agree or harmonize”. In the same vein the Longman dictionary states that concord is “the state of having a friendly relationship, so that you agree on things and live in peace. In grammar concord between words happens when they match correctly”.

Ehuwa (2012) pg134 is of the view that in the English Language “concord means the harmony between the elements in given sentence, this harmony or agreement is usually between the subject and the verb; however, it also covers the harmony between the subject and its complements. That is subject - complement concord and subject – object complement”. Ogunye (2018) pg64 opines that concord “refers to the rules that govern the inter-relatedness of the various parts of the sentences to ensure there is connectivity between the common components when these parts of a sentence agree and unite, it gives us correct syntactic structure”

Apart from the fact that concord covers the agreement between the subject and the verb in a sentence, it also extends to the pronoun agreement. That is why Onaye (1996) pg138 is of the opinion that “a pronoun must agree in number, gender and case with its antecedent”. Further research shows that concord can be a synonymous term for grammatical agreement that exists between the subject and verb in a stress of sentence – Thought Co (2018). He also mentions that concord is derived from the Latin word for agreeing, and that harmony is relatively limited in modern English. Furthermore, Subject–verb agreement in relation to numbers is traditionally marked by inflections (words endings).

In addition, we must emphasize here on the notion of Noun-Pronoun agreement which calls for harmony between a pronoun and its antecedent in terms of numbers, persons and gender. Mark Aronoff and Kirsten Fudeman (2011) are of the view that “harmony occurs when one element in a sentences agrees with the

morphosyntactic features of another element. "From the above different definitions of the term concord, it is glaring that all are pointing to one direction via different fingers of divergent views. Therefore, concord can be seen as all agreements that exist among all the elements of sentences. Having gone this far, let us discuss types of concord and some existing grammatical rules that are entrenched in the Syntax of English. These will give a clear picture to all the aforementioned definitions.

Basically we have three main categories of the English concord; these are;

- Grammatical concord
- Notional concord and
- Concord of proximity

(i) Grammatical Concord

This type of concord occupies a large space in the English concord. It shows the harmony between the subject element and the verb element. From another perspective, it is the match between grammatical elements that concur in number, case and gender.

Below are some grammatical rules to show case and support the grammatical concord.

(1) Singular subjects take singular verbs

Examples:

- (a) The baby eats always
- (b) Common sense is not common
- (c) Buhari has a good habit
- (d) Dayo sings every week in the church.

All the above examples have singular subjects-baby, common sense, Buhari and Dayo, that is why their verbs are singular-eats, is, his and sings respectively

(2) A plural subject takes a plural verb

Examples:

- (a) They are afraid of the lion
- (b) The students read all the time
- (c) The thieves have two cars each
- (d) Men are mortal beings

(3) Two singular subjects joined by and take plural verbs

Examples:

- (a) The boy and the girl are playing
- (b) Yemi and Adeniyi have private jets of their own
- (c) The doctor and the nurse are on duty
- (d) The president and his vice were at the meeting

(4) Two plural subjects joined by and take plural verbs

Examples:

- (a) The men and his wives have aids
- (b) Only married couples and matured minds are invited for the dinner
- (c) All the teachers and their students are expected by 2pm
- (d) Lions and goats are permanent enemies

(5) When any of the auxiliary verbs come in between the subject and the lexical verbs, then the verb should be plural irrespective of the number (s) of the subject.

Examples:

- (a) Ade will go tomorrow
- (b) They ought to have gone
- (c) The boy must dance in the show
- (d) I may come next week

- (6) Interrogative sentences that start with modal auxiliary verbs must always have plural lexical verbs.
Examples:
(a) Can he go now?
(b) Must she participate in the contest?
(c) Will your spouse agree?
(d) Can a girl do it?
- (7) When primary auxiliary verbs start a question, they must agree in number with the subject of such questions.
Examples:
(a) Has he given you the money?
(b) Have they gone?
(c) Are you sure?
(d) Does she think she is the most beautiful girl on campus?
- (8) When two or more adjectives qualify a singular subject, then the verb must be singular
Examples:
(a) The brilliant lanky boy is my nephew
(b) The tall and slim girl has distinction in Mathematics
(c) The gentle but cruel boy is around
(d) The fat beautiful woman jogs everyday
- (9) In the same vein when two or more adjectives qualify the same plural subject, then the verb must be plural
Examples:
(a) The lonely and ugly girls are on rampage
(b) All the lazy and unserious students want the examination postponed.
(c) The renowned brave hunters have killed sixty elephants
(d) All the qualified and competent lecturers have been employed.
- (10) When two or more singular subjects are connected by correlations such as; neither nor, either, or, not only but, the verb must be singular
Examples:
(a) Either the governor of the class or the course representative is to attend the service.
(b) Neither the lawyer nor the suspect was court last week
(c) According to the invitation letter, not only Sola but Tade is also invited
(d) Either Funmi eats her dinner or she goes to bed
- (11) When two subjects joined by words like, “with” “together with” “as well as” in addition to” not less than, the verb is singular if the first subject is singular and plural if the first subject is plural:
Examples:
(a) My aunty together with my wife is praying
(b) My principal as well as his students is around
(c) The couples with their children are playing
(d) The soldiers as well as their commander have gone to the battle field.
- (12) A singular subject followed by a plural modifier requires a singular verb.
Examples:
(a) The behaviour of these boys is bad
(b) A list of successful candidates has been released
(c) One of the ladies in the back seat is pregnant
(d) Just one of the applicants was invited for the interview

- (13) When indefinite pronouns such as everybody, everyone, somebody, someone, anyone, each, none, are used, the verb must be singular.

Examples:

- (a) None of the student has been London
- (b) Someone is after the clergyman
- (c) Anyone who pays for the commodity online does so at his own risk.
- (d) Each applicant is to come with his credentials

- (14) Certain nouns which are plural in form but singular in meaning take a singular verb.

Examples:

- (a) Mathematics is not my favourite subject
- (b) Economics is a good subject
- (c) Measles is a dangerous disease
- (d) Statistics involves calculation

- (15) A collection followed by of and a plural noun should attract a singular verb.

Examples:

- (a) A flock of sheep is on the loose
- (b) A case of instruments is available
- (c) A bunch of keys is missing
- (d) A collection of paintings is on display

- (16) Plural numbers take singular verb when they are used in a phrase to indicate a sum or unit

Examples:

- (a) Thirty million pounds is a huge amount of money
- (b) Seventeen years is too long to wait for your love
- (c) Ten percent of your earnings is a tithe for the church
- (d) Thirty members is the quorum for the meeting to start

- (17) Mathematical computations take a singular verb

Examples:

- (a) Five times five is twenty five
- (b) Twelve by twelve is one hundred and forty-four
- (c) Four and four is sixteen
- (d) Two times two is four

(ii) Notional Concord

Ehuwa, (2012) pg135 is of the opinion that notional concord means: “the agreement of verbs with their subjects according to the idea of the numbers the speaker intends to convey to his listener”. The interpretation of this is that the speaker may have the plural idea of the subject or singular idea of the subject; this depends solely on the speaker. That is why you do not preempt a speaker’s idea-especially in the Yoruba Community. This can be supported with examples via the grammatical rules

- (18) A collective noun takes a singular verb when the class it names is considered as a unit and takes a plural verb when the numbers of the class are considered individually. This of course refers to notional concord

Examples:

- (a) Your flock is amazingly increasing
- (b) The cattle are expensive because of the festive mood
- (c) The gang are very powerful
- (d) The committee have been bribed

- (19) When two singular subjects refer to the same person or thing, then the singular verb is required.

Examples:

- (a) My lecturer and husband is travelling to Canada (the husband of the speaker is also her lecturer)
- (b) Bribery and corruption is the greatest problem in Nigeria
- (c) Eba and Egusi Soup is a delicious meal
- (d) Rice and beans is my best food

(iii) Concord of Proximity

In English grammar, when we have two different subjects within an utterance joined together by correlative conjunctions such as: neither..... nor and either or, the verb must agree with the nearest subject. In this situation, the rule of proximity is applied, hence proximity means nearness. The subject in question could be singular or plural.

- (20) When the subjects of a sentence joined by correlative conjunction differ in number, the verb must agree in number with the nearest subject.

Examples:

- (a) Neither the pupils nor their teacher was at the exam hall yesterday
- (b) Either Paul or his parents were allowed into the hall
- (c) Neither the eighty experts from London nor the Ebola patient has been compensated
- (d) In the history of our company, either the managing director or the managers were sent on overseas training.

If any second speaker such as a Nigerian – English bilingual can conform to the aforementioned rules of concord in English grammar, then he or she can confidently construct sentences devoid of grammatical errors.

3. Conclusion

There is no gainsaying the fact that the knowledge of concord in English grammar will go a long way to enhance the efficiency and competency of the use of English by Nigerians. This of course could be an eye opener to many L2 (second user of English Language) speakers. This paper has exposed them to some grammatical rules that will help in constructing correct and meaningful sentences. It also acquaints them with the grammatical knowledge to determine whether their expressions are correct or wrong-if only the rules could be applied diligently.

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Deterrents to Ease of Book Publishing Business in Nigeria

ELONYE Gloria U., OWOJUYIGBE Ayodeji A., ADEYANJU, E. O

College Library, Yaba College of Technology, Lagos, Nigeria

Abstract: Books are instruments for addressing the information, communication and educational needs of all classes of individuals in the society. As such, the importance cannot be underestimated in the society. Thus, it is necessary the industry that produces the books (i.e. book publishing sector) should thrive in their operations. However, in Nigeria, this is not the case, as running book publishing business is threatened by several deterrents. These deterrents include piracy, import duties on raw materials, absence of functional indigenous paper mills, lack of libraries in primary and secondary schools, non-existence of community information centres (rural libraries), -poor reading culture, government negligence, sub-standard works from self-publishers, among others. This paper analyses the ways these deterrents are affecting the book publishing business, concludes that addressing the deterrents are inevitable and serves as key to having an information-conscious Nigerian society, with recommendations that will pave the way for a thriving book publishing business in the country.

Keywords: Book Publishing Business, Ease of Doing Business, Nigeria

1. Introduction

The emergence of publishing is directly related to the need to satisfy the information, communication and educational needs of individuals in the society. This is predicated on the fact that information accessibility and utilization is the core solution to all problems affecting humanity. In other words, the problems of man, no matter the angle or perspective, are 'information-based'. Thus, information be it health information, agricultural information, socio-cultural information political information, business information, scientific information, technological information, and the like, is an identified need to address in the life of individuals in the society. Publishing therefore covers all branches of knowledge.

Ordinarily, the ease of doing business concept looks at the feasibility of identifying, establishing, running and managing businesses without hindrances and obstacles in a given society. The assessment of issues surrounding ease of doing business can be limited and specific to different business opportunities. In other words, it is not out of context to examine the factors associated with ease of doing various kinds of businesses in the society. In this case, the focus is on book publishing business. The society is made of different categories of individuals with diverse information needs. These information needs may be political, economic, social, business, academic or educational, which are mostly addressed through the availability, accessibility and utilization of information resources.

The process of producing and making the information resources available, especially books, is through publishing. Thus, Adikpo and Ihwa (2009:26) describe books as materials that promote knowledge of all kinds, serve as media of access to knowledge, values, wisdom, aesthetics and human imagination, as well as a form of communication symbol that convey meaning, and are used for the circulation and distribution of knowledge. To Okpobo (2012:12), books are basic to our system of education and are repositories of our culture and all types of knowledge, and serve as medium of storing and retrieving information from generation to generations. Books are channels of communication, and parts of instruments that are contributing significantly to national development (Mohammed, 2001:34; Omekwu & Igbo, 2010:56; Brown, 2013:292). Unfortunately, book publishing is one of the business opportunities in Nigeria that are threatened by various impediments. The analysis of the deterrents, using Nigeria's environment as focal point, and with reference to how they are affecting the book publishing business are explored in this work.

2. Understanding Publishing

Different scholarly authorities have described publishing from various standpoints. For instance, Nyeko (1999:10) sees publishing as the whole process of producing for dissemination, books, films, records, newspapers, periodicals, discs, bulletins, magazines, and other literacy materials. It is a social responsibility to record human activity, for posterity, to provide entertainment, and to inform. According to Okwilagwe (2001:2), publishing involves planning, selecting, cutting, designing, producing, marketing (promotion, sales and distribution) of materials such as books, newspapers, magazines, newsletters, journals, and many others, including electronic products.

According to Igwe and Ahmed (2015:3), publishing is the process of articulating and documenting the intellectual ideas, insights, initiatives, innovations, thoughts, experiences and perceptions of man into information products, and making them available to the public for consumption. It is a set of processes that involves the creation, compilation, and mass reproduction of text, graphic, audio, audio-visual and digital images, and making them available to the public for accessibility and utilization. In some cases, authors may be their own publishers, meaning that originators and developers of content also provide media to deliver and display the content to the public, i.e. self-publishing. Before now, publishing centred mostly on the creation, development and distribution of printed works such as books (through book trade) and newspapers. But, with the advent of digital technologies and the Internet, the scope of publishing has expanded to include electronic resources, such as the electronic versions of books (e-books) and periodicals (e-journals, e-magazines, e-newspapers, e-newsletter), as well as micropublishing, digital video disks (DVD), websites, video game publishing, and the like (Oso, Osunbiyi & Biobaku, 2008:10; Owuamanam, 2010:15; Smith & Bold, 2018:26).

From a holistic angle, Igwe and Ahmed (2015:254) argue that publishing is a field of study, a vocation, a profession, a tool for development, and above all, a business venture. As a field of study, publishing is a key component of the curriculum of information and knowledge management institutions for the education and training of future publishers. In some developed and even developing climes, it is studied as a separate course in tertiary institutions for the award of degrees and diplomas. As a vocation, various individuals work in publishing firms as graphic designers, editorial assistants, editors, copy editors, proof-reading assistants, printers, indexers, marketers and distributors of published works. As a profession, publishing outfits and businesses owned by publishers have registered associations with approved laws and regulations that protect the interests of their members, and the society at large.

As an instrument of development, the impact of publishing cuts across educational, political, social, economic, and other areas of human endeavor at both national and international levels. In fact, publishing contributes strategically to development through facilitating access to the intellectual ideas and insights of individuals, creation of employment and entrepreneurial opportunities, documentation and preservation of culture and traditions, elongation of histories of societies, aiding research and educational development, facilitating entertainment and leisure, encouraging development and use of natural resources such as establishment of papermills, implementation of the practice of bibliotherapy, among others. Then, as a business, publishing is an entrepreneurial opportunity which provides avenue for individuals to establish publishing firms as publishers, and render fee-based services to the public; and this could be in the form of sole proprietorship, partnership or joint venture, or limited liability companies, as the case may be (Igwe & Ahmed, 2015:17; Smith & Bold, 2018:41).

Publishing encompasses all kinds, forms, shapes and formats of information materials and resources. The types of published information materials, which appear both in print-based format and digital medium include books (children's books, educational books, tertiary/academic books, reference books, and general books; fiction and non-fiction); newspapers (subject and general newspapers); magazines (subject and general magazines); journals (subject and interdisciplinary/multidisciplinary journals); newsletters and bulletins, and many others. Thus, when publishing is limited to books alone, it then refers to book publishing, which is the focus of this paper. In sum, book publishing entails making information resources available to the public for consumption and satisfaction of their information needs. This is carried out in four major publishing processes or stages

(Adesanoye & Ojeniyi, 2005:115; Ihebuzor, 2006:10; Ajibola & Oluyide, 2008:10; Galadima. 2013:15; Smith & Bold,2018:39), which are:

- i. *Conceptual/Development stage*: The idea of what to write and publish is conceived at this stage. It is followed with several drafts that will be developed as a manuscript. It will be proof-read, fine-tuned, and made to appear better.
- ii. *Production stage*: This covers editorial, designing, typesetting, printing, binding (or conversion to digital versions).
- iii. *Marketing and Distribution stage*: This stage involves publicity, promotions, distribution, marketing and sales of the published book to the public.
- iv. *Fulfillment stage*: The development of a manuscript with the aim of making it a published work like books are sometimes based on market research or perceived information needs of people. After production, it is proper to ensure that it gets to the group that will need it. This is the stage where the objective of publishing is achieved. In other words, the pre-determined goals for conceiving and developing an idea, may be for a segment of the society, need to be accomplished. This is done by channeling distribution and marketing to the intended audience. Thus, it is the duty of the publishing firm to ensure that the mission of published works is realized.

3. Book Publishing Business: Overview and Categorization

Book publishing businesses are also known as publishing enterprises, publishing organizations, publishing establishments, and publishing companies. These firms are business establishments with the responsibility of producing information materials for distribution and consumption in the society. They are responsible for production and distribution, thereby making the works and intellectual ideas of writers and authors available and accessible to the public for consumption. In other words, such firms undertake the business of publishing as their main function, and establish formal systems of sourcing manuscripts, producing them into finished products (books) and consequently marketing same to the consumers for the satisfaction of their information needs.

Although businesses are structured or categorized into sole proprietorship, partnership/joint venture, limited liability companies, corporations, etc, book publishing firms are broadly categorized into two major models - traditional publishers and non-traditional publishers. It is either a traditional publishing firm publishes for an author, or the author adopts the non-traditional approach, otherwise known as self-publishing model. The traditional publishers are also known as commercial publishers or trade publishers. In traditional publishing, the publisher has the right (based on publishing agreement) to publish manuscripts of authors, sell the produced materials, and pay royalty to the authors. Traditional publishers are highly selective, because they publish only a tiny percentage of manuscripts submitted, or the few they commissioned.

They handle every aspect of editing, publication, distribution, and marketing. They fund the actual production of the book and the distribution channels making it available to the public. Thus, there are no costs to the author, but traditional publishers pay royalties to authors, based on publishing contract/ agreement. The author is just expected to receive his or her royalty depending on the percentage agreed with the publisher. The non-traditional publishers are those into self-publishing. Historically, the term self-publisher refers to an author who starts his or her own publishing company, pays all costs of printing, and is responsible for marketing, promotion and distribution of his/her works, but the situation has changed, due to emerging trends in publishing. Self-publishing is a publishing model in which the author makes financial commitment with either a publishing firm or publishing service providers for the production, marketing and distribution of his/her work. In other words, the self-publishing model depicts all types of publishing methods in which the author absorbs some or all of the cost of publication and marketing of his/her books to the final consumers. There are many variations of self-publishing such as subsidy publishing, vanity publishing, true/core self-publishing, and author service providers (Brighton Publishing, 2010:n.p;

Igwe & Ahmed, 2015:17; Smith & Bold, 2018:26) Subsidy Publishing can be described as a self-publishing model in which the author pays for a part of the production and marketing process; may be pay for the printing and binding process of the book, whereas the publisher contributes a portion of the cost to editing, distribution, warehousing, and marketing. In this case, the publisher owns the books until they are sold and the author makes money from royalties, of which the percentage will be determined by the publishing contract/agreement. A subsidy publisher enters into an agreement with the author to publish the author's manuscript. It is more of a partnership between the publisher and the author, whereby the author makes a financial commitment to subsidize parts of the costs required in the publishing process.

For Vanity Publishing, it is a self-publishing model in which an author pays for the services of a publisher for editing, design and production of a work and the author is left with his/her bulk copies of books to market and distribute in order to recover the cost of publication and make profits. A vanity publisher, also known as a book manufacturer, publishes anyone's work provided they have the money to pay for their services. The vanity publisher/manufacturer prints and binds a book on the author's dime and does not offer marketing and promotional assistance. However, the author owns the printed books and retains all profit from sales.

In vanity publishing, authors should consider cost of publishing and transportation to the author, quality of the book after printing, including art, typesetting and gram of the paper, extra offer and additional services for authors like editing services and how to obtain International Standard Book Number (ISBN), marketing and distribution services through online store or websites that market books like Amazon. Apart from subsidy and vanity publishers, we have the true/core self-publishers, Self-publishing requires the author to invest his/her own money to produce, market, distribute, and warehouse the book. While this can be a huge time commitment, the process can be more cost-effective than vanity or subsidy publishing. The author handles everything needed to get his/her work published.

In most instances, the author contracts with companies providing self-publishing services such as ISBN, editing, printing, binding, and so on. The author funds the entire cost of production and publication from manuscript development to the completion of the book, as well as marketing, distribution, and takes charge of all proceeds from sales. There is also the existence of author-service providers. Author-service providers are not publishers in the true sense of the word; rather, the Internet has spawned thousands of companies, print shops and graphic design houses that simply added "publishing and publishers" to their names. These firms are not recognized as publishers in the industry, but service companies providing publishing-related services to authors

4. Deterrents to Book Publishing Business and their Effects

There are various deterrents to the ease of book publishing business in Nigeria. The major include piracy, absence of functional indigenous paper mills, import duties on raw materials, lack of libraries in primary and secondary schools, non-existence of community information centres (rural libraries), poor reading culture, substandard works from self-publishers, foreign publications and e-publishing, government negligence (Okwilagwe, 2001:81; Adesanoye & Ojeniyi, 2005:120; Okpobo, 2012:13; Adikpo & Ihwa, 2009:26; Galadima, 2013:16; Smith & Bold, 2018:41), among others. The effects of these impediments on the book publishing business are explored below. For piracy, pirates are taking advantage of the creative works and intellectual property of authors, thereby making the creative industry less attractive and probably not rewarding to authors. This is in consideration of the fact that a book produced in Lagos today, can easily find its way the next day into Abuja, Kaduna, Enugu or Port Harcourt without the knowledge of the author. A cross examination of such works shows that they are pirated copies that are being sold far below the main cost fixed by the author and publisher. In this situation, for authors to recover the cost of producing their books, let alone making profits from the works becomes a challenge. Unfortunately, the Nigerian Copyrights Commission (NCC), which is a government agency scheduled with the responsibility of protecting the intellectual property of authors in Nigeria, is not doing enough to address this menace.

Indigenous paper mills in Nigeria appear not in existence in the society. This is affecting the cost of production and marketing of published books in the country. Affordability of published books is a factor to consider, which will in turn increase the availability and accessibility of books to the final consumers. Because the cost of paper is on the increase, coupled with import duties on imported papers and other raw materials for book production, the cost of book publishing and marketing will continue to increase, thereby affecting the purchasing power of the citizens in the society.

The absence of libraries in public primary and secondary schools is affecting book publishing business in Nigeria. There are a lots of children literature and other educational books published in Nigeria that need to find their way into the libraries of primary and secondary schools for improving the reading skills, reading habits and reading culture of the students. Unfortunately, the absence of libraries in these pre-tertiary institutions is affecting the book publishing business in the country. This is because the number of copies of books to be published will reduce since there are no school libraries to acquire them for use by the students.

Community information centres (rural libraries) which are information agencies that are responsible for taking care of the information, education, communication and knowledge needs of rural dwellers are not in existence in Nigeria. These community information centres (CIC), if in existence, will contribute to the expansion of the scope of book publishing business in the country, and as well serve as institutions for the development of rural areas. This is because the books produced by publishers will be acquired for processing and dissemination by the CIC to the rural dwellers to meet their diverse information and knowledge needs,

The issue of poor reading skills, poor reading habits and poor reading culture among students, parents, artisans, corporate workers, civil servants, and other classes of individuals in the society, is no longer news in Nigeria. Many students in primary schools, secondary schools, and tertiary institutions hardly read, except during examinations. As such, the rate of acquisition or purchase of published books by Nigerians is on the decline. This affects book publishing business in Nigeria. Self-publishing is gradually taking over the publishing landscape of the country without necessary regulations. Majority of self-published works, mostly from author-service providers that pose as publishers, do not adhere to publishing standards; as such there are cases of poor editing, poor design, poor printing, poor binding, absence of cataloguing in publication (CIP) data, and so on.

In many cases, there are no considerations of language style, diagrammes, font size, gram of paper, and other essential factors required for publication of books for different classes of individuals in the society. The aspect of publishing mostly affected here is children's literature, thereby affecting the intellectual development of the younger generation. The quest for publication of books overseas is equally affecting book publishing business in Nigeria. Unfortunately, most of these books are making reference to issues concerning Nigeria, and the authors will still go ahead for foreign publishers. This is not helping indigenous publishers in Nigeria, and as such will negatively affect the book publishing industry in Nigeria.

In addition, e-publishing or digital publishing are also on the increase. Although there is nothing wrong with it, majority of Nigerians may not have the necessary facilities to access and read e-books and other digital publications. The government at federal and state levels is neglecting the book publishing industry in the country. For instance, the NCC, which is an agency of government, is not living up to the expectation of fighting piracy despite having offices across the geo-political zones of the country. Governments are not establishing functional libraries in public primary and secondary schools, as well as rural communities that will support mass production of books thereby encouraging the publishing industry. Import duties on raw materials for publishing like paper and ink need to be addressed by the government. In addition, government is neither establishing new ones nor reviving existing paper mills in the country that will produce paper for serving indigenous publishing outfits.

5. Conclusion and Recommendations

For our society to thrive and become conscious of information and knowledge there is need for a functional book publishing sector that operates without much impediments and bottlenecks. These deterrents, no doubt, affect the ease of doing publishing business in the country, and therefore need to be holistically addressed. There is need for NCC to engage more human resources and step up the fight against piracy, which is expected to boost the morale of authors and writers, so that they can reap the fruits of their intellectual property. Governments at federal and state levels should establish more indigenous paper mills that are functional with the capacity to address national publishing needs; and import duties on raw materials for book production should be waived, so as to encourage indigenous book publishers to operate without impediments in the business.

Poor reading culture in the society needs to be addressed by establishing functional libraries in primary and secondary schools, as well as community libraries and information centres. This will enable the book publishing business to thrive and succeed in the country, as there will be supplies of books to the libraries. In addition, it is time for planners of the Nigerian educational system at primary and secondary school levels to include use of library and information skills period in the time table, which should be spent in the school library. There is need to regulate the book publishing business in Nigeria to avoid the way and manner self-publishing is gradually eroding the industry. This is where the government needs to come in with relevant laws, and empower the Nigerian Publishers Association (NPA), Nigerian Library Association, and other stakeholders in the book industry so that there will be standardization of published works across the country.

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The Inevitability of Information Communication Technology (ICT) Utilization for Improved Librarian's Job Performance (A Case study of Tertiary Institutions in Lagos State Nigeria).

FADIMU, Adefunke .A.¹, FADAIRO, Oyelola. O.² and ALUKO, Janet. O.³

¹ College Library, ²Centre for Applied Research and Technology Innovation,

³School of Liberal Studies,

Yaba College of Technology, Lagos, Nigeria

Abstract: Information Communication Technology (ICT) is a veritable tool for the development and growth of any nation. Information Communication Technology (ICT) has gained access to every area of human endeavour and the educational sector is also following the trends of the technology advancement. The fundamental roles of ICT in the educational sector and library in particular are keys to the success of any academic system. Library operations such as administering, acquisitions, cataloguing, classification, information retrievals and serials control are enormous. Some librarians prefer the manual operations because they believe the utilization of ICT cannot produce a positive or better result. This study adopts the expo-facto research design because the variables were not manipulated but studied as they occurred. The target population comprises some librarians in Federal tertiary institutions in Lagos State and data was collected from 60 Librarians. The reliability of the questionnaire was determined using Cronbach alpha and the reliability co-efficient of the instrument is 0.83. The study reveal that majority of the participants utilize ICT facilities such as the INTERNET, Online charging and discharging, e-reference services, institutional repository, online registration and E-materials like abstract, index and data base. The study concludes that ICT facilities influence librarians' job performance positively with average weighted mean of 3.10 but notwithstanding as indicated by the constraints average weighted mean of 3.30

Keywords: Information Communication Technology (ICT), Job performance, Information, Communication

1. Introduction

Information Communication Technology (ICT) is a veritable tool to the development and growth of any nation. The utilization of the tool has been seen as a means to improve accessibility, efficiency and quality of learning by facilitating access to information resources and services as well as remote exchanges and collaboration (Fayomi, Ayo, Ajayi & Okorie , 3).The recent trend in the growth of technology and applications is inevitable and cannot be overlooked. The libraries are also moving with the trend of technological development. According to Kumar (335), the use of ICT in libraries includes the growing importance of delivery of digital contents and management of electronic resources, integration of database system with the web environment, and managing information system.

By the beginning of the 21st millennium, educational technology has stretched educational boundaries and created new ones on a daily basis. Several breakthroughs have been experienced in the field of information and communication technologies (ICT) to have tremendous opportunities for teaching and learning which the library is part of. In light of this assertion, the need to employ ICT in facilitating library activities cannot be overemphasized. However, transfer of data over communication lines such as telephone lines since the mid-1960's and internet use has revolutionized access to information for the business world, libraries, education and individuals. A few of the most popular include E-mail, www (World Wide Web), FTP (File Transfer Protocol) Usenet, and Telnet. All these technological devices are regarded as central to the concept of globalization.

The Internet and its technology continue to have profound effects on the promotion of information sharing, especially in the academic world, making possible rapid transactions among businesses and supporting global collaboration among individuals and organizations. These technologies have the potentials to develop "virtual campuses" and "virtual libraries" thus, increasing students' access and participation (Ogunsola, 5). Communication is deeply rooted in human behaviour and societies and it equally applies to shared behaviour and properties of any collection of things, whether they are human or not. The transactional paradigm shows

the element of communication which encompasses the speaker and the listener. This involves sending and receiving which includes three implications in the paradigm. The ongoing is referred to as transactional and continuous changing process. Also, in the transactional paradigm which enable a relationship among the elements any transactional process, each element exists in relation to all other elements.

The elements depend one another because there can be no message without a receiver. Everybody involved in the communication process responds with respect to factors such as their background, experiences, cultural, beliefs and attitudinal behaviour (Aluko & Kazeem, 11). Emuakpor (2) defines ICT as all forms of technology applied to the processing, storing and transmitting of information in electronic form; stressing that the physical equipment used for this purpose includes computers, communication equipment and networks; fax machines and electronic, pocket calculator. Ayo (82) notes that ICT is the use of computer systems and telecommunications equipment in information handling; consisting of essentially three basic components viz: Electronic processing using the computer; Transmission of information using telecommunication equipment; and dissemination of multimedia information.

Aina (1) defines the Library as a place where print and non-print materials are collected, organized and made available for access and use. He further states that libraries: public academic, research or school are important cornerstones of a healthy community which informed, giving opportunities to explore research in various fields of interest, educate and provide aesthetics enjoyment in the course of their study or work. It becomes explicit from the above that the use of ICT in libraries is fundamental and comprises all the electronic infrastructure and facilities employed by libraries for effective and efficient services. Such facilities, in broad terms, consist of hardware, software and communication links between the service outlets of different libraries to facilitate the sharing of common resources especially the library networks.

The roles of libraries cannot be neglected in any tertiary institution. That is, the libraries established in higher institution of learning such as Universities, Polytechnics, Monotechnics, Colleges of Education and school of preliminary studies. The major duties are to provide information and services of different formats to aid teaching, learning and research. Osundina cited in Abdulwahab, Agun, Usman and Mulikat (2) points out that the library of today should not merely store documents and preserve them; it must also device means by which the contents of such documents can be rapidly and effectively transmitted for use.

Capron (178) reveals that mail, telephone, television, radio, books, newspapers and periodicals are the traditional ways users send and receive information. The organization of information and knowledge is an essential preliminary to its effective exploitation and dissemination. As the quantity of knowledge expands, the need to organize it becomes more pressing. A vast number of different means of organizing information have been devised and exploited since the earliest times. With the vast output of new information and ever-increasing degree of specialization in all areas of human knowledge, heavy demands are being placed on library information storage and retrieval systems, which can be scarcely met by traditional methods except with the use of IT devices.

The improvements and changes in computing and telecommunications and the integration of the two fields have had a huge role to play in the methods of information processing and dissemination in academic libraries; thus improving the quality of use to which such libraries are put. Among the various services provided through ICT to meet users need are Users Education, Selective Dissemination of Information (SDI), Online Charging and Discharging, Current Awareness Services, Renewal Services, Online Registration, E-materials like Abstract, index, institutional repository and Online Database Searching. On the other hand, Job performance is the ability of an employee to perform well on the job. Job performance revolves around the area of studies in industrial and organizational psychology which deals with sources management and aspect of human resources management. Besides, performance is key to any organization attaining and achieving the mandate. Job performance means an employee achieving a greater height towards the organizational goals.

Adeyemo (6) elucidates that job performance is fundamental to any organization or institution. It is an element of a subset while organization performance or national performance is the major set. Therefore, the need for synergy between ICT and staff job performance could be a catalyst to success and productivity of an organization. Information Communication Technology (ICT) has gained access to every area of human endeavour and the educational sector is also following the trends of the technology advancement. The fundamental roles of ICT in the educational sector and library in particular are keys to the success of any academic sector. Library operations such as administering, acquisitions, cataloguing, classification, information retrievals and serials control are enormous. Some librarians prefer the manual operations because they believe the utilization of ICT cannot produce a positive or better result. This study sought to investigate ICT use on librarians' job performance in tertiary institutions.

1.2 Objectives of the Study

The research aim at addressing the following objectives:

- (i) To assess the availability of ICT services in tertiary institutions libraries
- (ii) To assess librarian's utilization of available ICT facilities
- (iii) To examine the influence of ICT facilities on librarians job performance
- (iv) To investigate the constraints to the use of ICT on Librarians job Performance.

1.3 Research Questions

- (i) What is the level of availability of ICT facilities in tertiary institutions libraries?
- (ii) To what extent do librarians utilize the available ICT facilities?
- (iii) What is the influence of ICT facilities on librarian's job performance?
- (iv) What are the constraints of utilizing ICT on Librarians job performance?

2. Theoretical Frame work and Methodology

2.1 Theoretical Framework

This study reviews some theories that are related to the study. The most appropriate theory that guides this study is the connectivity theory propounded by George Siemens in 2004 (Hungwa & Ramatu , 5). It should be noted that digital age has information and communication technology (ICT) as the driving force. This theory is preferred because it emanates from the psychological learning theories of behaviourism, cognitivism and constructivism. The application and manipulation of ICT resources could enhance librarians' job performance. It will assist in the diversification of ideas and explore capacity based on the connectivity principle such as creating, preserving and utilizing information which is the major thrust of librarianship (Hungwa & Ramatu, 5)

2.2 Methodology

This study adopts the expo-facto research design because the variables were not manipulated but studied as they occurred to see after the effect of the variables in the study. This design was utilized to examine the variables and enable the researcher to collect data which is not subjected to manipulations. The target population comprises some librarians in Federal tertiary institutions in Lagos State. Multi stage sampling technique was employed in this study. The first stage involved purposive sampling of all the Librarians at University of Lagos, Yaba College of Technology and Federal College of Education (Technical), Akoka. The second stage involved random sampling of 60 librarians with twenty from each tertiary institution. The reliability of the test was determined using Cronbach alpha method after pilot testing the instrument with twenty librarians from the National Library of Nigeria (Public) Yaba, Alagomeji in Lagos State. This was done to ensure the reliability of the instrument. The reliability co-efficient of the instrument is 0.83

3. Presentation and Discussion of Data

Table 1: Distribution of Librarians by Years of Experience

Age	Frequency	Percentage %
0-5	7	11.7%
6-10	15	25.0%
11- 15	13	21.7%
16 above	25	41.7%

Also from table 1 above, 41.7% of the participants have 16 and above years of experience, 25.0% have (6-10) years of experience and 21.7% have (11-15) and 11.7% have (0-5) years of experience.

Table 2: Distribution of Librarians by Qualification

Qualification	Frequency	Percentage %
Diploma	11	18.3%
BSc/HND/BLIS	27	45.0%
MSc/MLIS	20	33.3%
Ph.D	1	1.7%
Others	1	1.7%

Also from table 2 above, 45.0% of the participants have Bachelor of Science or Higher National Diploma, 33.3% of the participants are Masters Holder, 18.3% of the participants are Diploma holder while 1.7% of the participants are Doctor of philosophy or others

Table 3: Distribution of Librarians by Designations

Designation	Frequency	Percentage %
Assistant Librarian	4	6.7
Higher Lib officer	16	26.7
Senior Lib officer	12	20.0
Principal lib Officer	5	8.33
Librarian 1	12	20.0
Librarian 11	6	10.0
Library attendant	2	3.33
Hall supervisor	1	1.67
Higher Executive officer	1	1.67
Chief Library officer	1	1.67

Also from table 3 above, 26.7 % of the participants are Higher Library Officer, 20.0% Senior Library Officer and Librarian I, 10.0% Librarian II , 6.7% Assistant Library Officer, , 3.33% Library Attendant and 1.67 % were Hall Supervisor, Higher Executive Officer and Chief Library Officer

Research Question 1: To what extent do librarians utilize the available ICT Facilities?

Table 4: Ranking of utilization of ICT facilities

S/N	ICT Facilities	Frequency	%	Rank	Remark
1	Internet	60	100.0	1.0	1 st
2	Online charging and discharging	40	98.3	2.0	2 nd
3	E- References services	42	65.0	5.0	5 th
4	Institutional repository	42	85.0	3.0	3 rd
5	Online registration	43	71.7	4.0	4 th
6	E-materials like Abstract, index and data base	50	56.7	6.0	6 th

From the table 4 above, it shows the ranking of utilization on ICT facilities. It was observed that all the participants 100.0% said they utilize INTERNET, followed by 98.3 % that said they utilize online charging and discharging and 85.0% said they utilize institutional repository. The table 1.5 also reveals that 71.7% of the participants use online registration, 65.0% utilize E-references services and 56.7% use E-materials like Abstract, index and data base. This means majority of the participants utilize ICT facilities like INTERNET, Online charging and Discharging, E-references services, institutional repository, online registration and E-materials like abstract, index and data base.

Research Question 2: What is the level of availability of ICT facilities in the tertiary institutions library?

Table 5: Ranking of availability of ICT facilities

ICT Facilities	Frequency	%	Rank	Remark
Internet	60	100.0	1.0	1 st
Computer or laptops	59	10.0	8.0	8 th
E-users Education	39	65.0	4.0	5 th
E-mails	79	85.0	3.0	3 rd
Online registration	17	71.7	5.0	5 th
Index	26	56.7	7.0	7 th
Abstract	9	61.7	6.0	6 th
Online data base searching	22	81.7	4.0	4 th
Printers	7	93.3	2.0	2 nd

Table 5 above, shows the ranking of availability of ICT services in our tertiary institution libraries. All the participants, 100% said INTERNET as ICT service is available, 93.3% said printers is available , 85.0% said e-mails are available while 81.7% said online database is available. The table1.6, also revealed that 81.7% of the participants said online database searching are available, followed by 71.7% said online registration is available followed by 61.7% who said abstract is available, 56.7 % said Index is available while 10.0% said Computer or laptops and mobile phones were available. This means majority of the librarians said INTERNET, Printers, E-mails, Online database searching, Online registration and Abstract were available while Index and computer or laptops were not readily available

Research Question 3

What is the influence of ICT facilities on librarians' Job Performance?

Table 6: Distribution of responses on ICT facilities on librarians' job performance

S/N	Statement	SA	A	D	SD	\bar{X}	Remark
1	Use of internet facilities enhance compilation of reading list	32 (53.3)	24 (40.0)	2 (3.3)	2 (3.3)	3.43	Positive
2	The issuance of clearance facilitated with internet	21 (35.0)	27 (45.0)	8 (13.3)	4 (6.7)	3.05	Positive
3	Online signing of library cards enhance my job performance	19 (31.7)	30 (50.0)	8 (13.3)	3 (5.0)	3.08	Positive
4	Online registration of library users affected my job performance negatively	12 (20.0)	20 (33.3)	12 (20.0)	16 (26.7)	2.46	Negative
5	The use of e-mail at discharging and charging of information materials will enhance my job performance	25 (41.7)	26 (43.3)	7 (11.7)	2 (3.3)	3.23	Positive
6	The use of software will assist in compilation of data of library users	23 (38.3)	28 (46.7)	8 (13.3)	2 (3.3)	3.23	Positive
7	Electronic indexing and abstracting will promote my job performance	22 (36.7)	27 (45.0)	7 (11.7)	4 (6.7)	3.16	Positive
8	Cataloguing and classification of information resources will be facilitated with computer operating system	20 (33.3)	29 (48.3)	9 (15.0)	2 (3.3)	3.12	Positive
9	Internet facilitate the processing of spine label	17 (28.3)	30 (50.0)	8 (13.3)	5 (8.3)	2.98	Positive
10	The use of internet facilitate the processing of charging and discharging of information	24 (40.0)	27 (45.0)	7 (11.7)	2 (3.3)	3.22	Positive
11	Internet would facilitate the processing of book card	30 (50.0)	28 (46.7)	1 (1.7)	1 (1.7)	2.95	Positive
12	Use of laptops enhanced generating of reports	30 (50.0)	22 (36.7)	6 (10.0)	2 (3.3)	3.33	Positive
Weighted Mean = 3.10							

N.B *Figures in parentheses are in percentages

From table 6 above, 53.3% of the participants strongly agree with the statement that the use of internet facilities would enhance compilation of reading list while 40.0% agree with the statement. 45.0% of the participants agree with the statement that the issuance of clearance would be facilitated with internet while 35.0% strongly agree. 50.0% of the participants agree with the statement that online signing of library cards will enhance their job performance while 31.7% strongly agree with the statement. 33.3% of the participants agree with the statement that online registration of library users will affect their job performance negatively while 20.0% strongly agree and disagree with the statement respectively.

Also, 43.3% agree and 41.7% strongly agree with the statement that the use of e-mail at discharging and charging of information materials will enhance their job performance while 11.7% disagree. 46.7% agree and 38.3% strongly agree of the participants with the statement that the use of software will assist in compilation of data of library users while 8% disagree. 45.0% agree and 36.7% strongly agree with the statement that the electronic indexing and abstracting will promote their job performance while 11.7% disagree with the statement. 48.3% and 33.3% of the participants agree and strongly agree respectively with the statement that cataloguing and classification of information resources will be facilitated with computer operating while 15.0% disagreed with the statement. Half of the participants' 50.0% agree and 28.3% strongly agree with the statement that Internet would facilitate the processing of spine label while 13.3% disagree with the statement. Also, 45.0% of the participants agree and 40.0% of the participants strongly agree with the statement that the use of internet would facilitate the processing of charging and discharging of information while 11.7% disagree

with the statement. The average weighted mean is 3.10 which implies that ICT facilities influence the librarian's job performance positively

Research Question 4: What are the constraints of utilizing ICT on Librarians job performance?

Table 7: Constraints to use ICT on Librarians job performance

Variables	SA	A	D	SD	\bar{X}	Remark
The incessant power outage hinder the use of ICT services	30 (50.0)	28 (46.7)	1 (1.7)	1 (1.7)	3.45	Agreed
The lack of computer facilities affect the use of ICT facilities	30 (50.0)	22 (36.7)	6 (10.0)	2 (3.3)	3.33	Agreed
INTERNET disruption hinder the use of ICT services	27 (45.0)	26 (43.3)	5 (8.3)	2 (3.3)	3.30	Agreed
The competency level of librarians on IT affect the use of ICT services	22 (36.7)	32 (53.3)	4 (6.7)	2 (3.3)	3.23	Agreed
IT technical manpower affect use of ICT	21 (35.0)	31 (51.7)	6 (10.0)	2 (3.3)	3.18	Agreed
Weighted Mean = 3.30						

***Figures in parentheses is percentages**

From table 7, half of the participants, 50.0% strongly agree and 46.7% agree with the statement that the incessant power outages hinder the use of ICT services while 1.7% strongly disagree with the statement. Also, almost half of the participants 50.0% strongly agree and 36.7% agree with the statement that lack of computer facilities affect the use of ICT facilities while 10.0% disagree respectively. 45.0% of the participants strongly agree and 43.3% of the participants agree with the statement that INTERNET disruption hinder the use of ICT services while 8.3% disagree with the statement. 53.3% agree and 36.7% strongly agree with the statement that the competency level of librarians on IT affect the use of ICT services while 6.7% disagree. More than half of the participants, 51.7% agree and 35.0% strongly agree with the statement that lack of information technology manpower affect use of ICT. Also, the weighted mean is 3.30 which mean there are constraints at utilizing ICT on Librarians job performance

4. Summary of Findings and Recommendations

4.1 Summary of Findings

Tertiary institution such as University of Lagos, Yaba College of Technology and Federal College of Education (Technical) all in Yaba area of Lagos State, utilize ICT facilities such as the INTERNET, Online charging and discharging, e-references services, institutional repository, online registration and e-materials like abstracts, index and database especially in their libraries. In addition, for quality service delivery and to achieve the set objectives of establishing the library, the availability of some ICT facilities like E-mails, Online database searching, Online registration and abstract will ease the flow of information and services between the library and the researchers and also increase the speed at which services like acquisition, processing, storage and dissemination are carried out in this information explosion dispensation. The ICT facilities will promote librarian's job performance positively.

4.2 Recommendations

Information Communication Technology has come to stay. For librarians in academic libraries to deliver effective and efficient services to achieve the aims and objectives of establishing academic libraries the use of ICT must be embraced to enhance high productivity in service delivery. The following solutions are proffered to increase the use of ICT in academic libraries in Lagos State:

- Library Management should have stand-by generator whenever there is power outage
- Library should employ technical personnel who will be responsible for repairing the computer system

- (c) The library should provide personal laptops for each librarian to enable him or her perfect already acquired skills
- (d) There is need for regular training of library officers on current trends regarding the use of ICT facilities.
- (e) Regular training should be carried out frequently so librarians would be acquaints with the computer system.

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Effect of Improvised Materials on Student's Achievement and Retention of the Concept of Simple Machine

ALUKO Faith O¹ and JAMES Timothy PhD²

¹Department of Food Technology, Yaba College of Technology, Lagos, Nigeria

²Department of Science Education, Faculty of Education,
National Open University Of Nigeria

Abstract: This study investigates the effect of improvised material on students' achievement and retention of the concept of simple machine with four research questions and four null hypotheses through non randomized, quasi experimental research design. Ninety-eight (98) students in J.S.S. 2 intact classes from two federal governments owned junior secondary school in Yaba Area of Lagos State Nigeria were used. There were two types of treatments that lasted for three weeks. Students in the experimental group were exposed to treatment (improvised material) while the participants in the control group were not. Simple machine achievement test (SMA) was used for data collection. A Cronbach alpha of 0.78 was obtained to confirm the reliability of the instrument. The research questions were answered using descriptive statistics while analysis of covariance (ANCOVA) was used to test the hypothesis at 0.05 level of significance. Results show that there is no significant difference in academic achievement between experimental and control group, but a significant difference in the retention scores between experimental and control group. The paper concludes that Basic Science teachers need to know the reasoning pattern of the learners.

Keywords: Improvised material, student's achievements retention, simple machine

1 Introduction

There has been a growing worldwide movement towards basic science education in the last one and half decades. Countries all over the world are striving to improve their technological knowhow and this can only be achieved through a solid foundation in science and technology studies. Science, the bedrock of technological development, is the systematic study of nature both living and non-living things, including natural phenomena. The objectives of teaching Basic Science at Junior Secondary School level are spelt out by the National Policy on Education (FME, 2004) and reinforced by the following curriculum development. These objectives have been thought of in terms of what basic science can contribute to the realization of the aims and objective of junior secondary school education in Nigeria which include: to develop interest in science and technology, to acquire basic knowledge and skills in science and technology, to apply their scientific and technological knowledge and skills to meet societal needs, to take advantages of the numerous career opportunities offered by science and technology, and to become prepared for further studies in science and technology (NERDC 2007).

In line with the realization of these objectives and in order to achieve a holistic presentation of science and technology content to learners, the thematic approach to content organization was adopted. Four themes were used to cover knowledge, skills and attitudinal requirements and was planned using guided inquiry method of teaching and learning as implied in the activities prescribed under each topic in order to promote learning by doing and skill development. These are: You and environment Living and non-living things (living things, human body), you and Technology (ICT information and communication technology), Crude oil and petrochemicals), you and Energy (work, energy, power, simple, machine, kinetic energy). The study is of the effect of improvised material on students' achievement and retention of the concept of simple machine using improvised material to teach the concept of simple machine.

Machines are devices that make working easier for man (STAN, 2008). Machine is a material or project which enables a large weight or resistance to be overcome when a small effort is applied. There are various forms of machines, from simple to complex machines, but for the purpose of this research work, we will lay emphasis on simple machines; such as screw, wheel and axle, pulley machine, inclined plane etc. Simple pulley machine is a concept in the junior secondary school syllabus taught under energy. This concept has never been set in practice because other equipment for the experimental set up is absolutely lacking at this level, but taught or

explained with the aid of a chart and pictures. This is the reason improvisation is very necessary. The use of improvised material will make the teaching of simple machine concept easier for teachers and more interesting and meaningful to students (Abdulkarim 2010) Academic achievement has been defined by Ogundukun and Adeyemo (2010) as the exhibition of knowledge attained or skills developed by students in a subject designed by test score assigned by teachers. Science teachers association of Nigeria (STAN 1992) identifies gross under funding, large class size, shortage of qualified science teachers and poor teaching strategies among others as contribute to students under achievement in science subjects including Basic Science.

Report by Mbah (2015) and Emmanuel (2015) confirm that the problem still exist in schools. These reports are of concern to teachers, science educators, curriculum planners and other key stakeholders including government, Asoutlined by Aderogba (2012), they includes large classes, students limited interest in science, compounded by limited teaching aides and poor teaching technology. Apart from obsolete and inadequate equipment in the laboratories, some teachers lack in-depth knowledge of the subject matter and they apply inappropriate teaching methods. The kind of instructional strategies to be adopted by teachers for meaningful learning is dependent on teachers' competence, concepts to be taught, learner's age and available resources and space. Atadoga & Onaolapo (2008).

Lawal (2007), Atadoga & Lakpini (2013) found that persistent low academic achievement in science education is attributed to teachers' instructional strategies among other. Thus, instructional strategies used by teachers in the teaching-learning process have significant influence on learners' academic achievements. This study investigates the effect of improvised instructional material on students' academic achievement and retention of the concept of simple machine.

Retention is the ability to remember tasks or materials learnt concepts. Retention is the ability of the mental structure of an organism to keep that which is given over a long period of time. Retention is the ability to retain and recall information or knowledge gained after learning. Meanwhile, Mengal (2010) and Obeka (2010) investigate and define several variables that affect retention which include the content or tasks to be performed, learners past experience, like interval between lessons, evaluation and instructional strategies employed. Thus, the study incorporates the use of improvised instructional materials in teaching and observes its effects on students' retention ability in simple machine concept at junior secondary school in order to find a solution, to the mass failure of students in Basic Science.

Statement of Problem

Various studies have shown that the persistent low academic achievement in science among students at junior secondary school level continues to exist, especially in Basic Science. Despite several innovative strategies adopted by the teachers on the use of hands-on and mind-on activities in teaching the subject, the poor academic achievement, low retention of the learned concept as well as limited interest by the students persist as reported by the scholars (Amosun 2008; Aderogba 2011; Abudukarim 2012). Limited literature exists on the effect of improvised material on students' achievement and retention in Basic Science at junior secondary school in the study area.

Hypotheses

- i. There is no statistically significant difference in the mean posttest achievement score between students taught with simple machine and those taught without improvised material.
- ii. There is no statistically significant difference in the mean retention score between student taught with simple machine with improvised materials and these without improvised material.

2. Research Methodology

Pre-test post-test non-randomized quasi experimental research design with two levels of treatment was used in this study. The research was at two Federal Government secondary schools in Lagos State. The schools were Federal Science and Technical College, Yaba and Yaba College of Technology Secondary School, Yaba Lagos. One school was assigned the control group while the other was assigned the experimental group. In

each of the schools selected, the intact classes were used. The experimental group was thirty-eight (18 male and 20 female) while control group was sixty (31 male and 29 female). A total number of ninety-eight (98) basic science students formed the study group that lasted for 3weeks. An instrument called Simple Machine Achievement Test (SMAT) was constructed by the researcher, validated by experts in science education and used for the study. The instrument (SMAT) is a thirty (30) multiple choice items, twenty-five objectives with option A-D and five true or false questions.

Two experts each in Basic Science and science education from Federal College of Education Technical, Akoka Yaba, and Basic Science teachers with M.ED science degree scrutinized the face and constructed validities of the instrument. Their input led to the restructuring of the items and aligned to the age and level of students for the study. The reliability of the instrument was obtained using Cronbach Alpha and reliability coefficient of 0.78 was obtained, confirming the reliability of the instrument.

Experimental procedure

In the study area, permission was sought out and obtained from the relevant authorities through the head of schools and units. The students were assigned to experimental group (E.G) and control group (CG). The intact classes of each school were used. At the onset the instrument (SMAT) was administered to the students in each group in each school to obtain the pre-test score of their study behaviors'. Thereafter, the exercise commenced fully in each school simultaneously. Prior to the actual execution of the study, the students in the experimental group (EG) were exposed to the treatment through improvised material and the control group was taught through the normal conventional lecture method, without improvised materials for one hour, For three weeks, after which post test was administered to the two groups (experiment and control) to check their level of achievement. After two weeks, the instrument was also re-administered on the students in the two groups to test their level of retention.

3. Data Analysis and Results/Discussion

Here, data collected from the experimental research are presented and analyzed using descriptive statistics (mean and standard deviation) and inferential statistics (T-test and ANCOVA).

Table 1: Anova of Post Test Achievement Score of Students in the Experimental and Control Group

Source		Sum of square	Df	Mean square	F	Sig	Remark
Intercept	Hyp	1456.699	1	1456.688	102.580	.00	
	Err	1327.390	93.474	14.201			
Pre-test	Hyp	2.589	1	2.589	.174	.677	
	Err	1379.767	93	14.836	9.097		
Treatment	Hyp	193.265	1	193.265			
	Err	22.763	1.071	21.245	9.087	.190	n.s
Gender	Hyp	.915	1	.915	.42	8.71	n.s
	Err	21.536	.998	21.583			
Treatment Gender	Hyp	21.572	1	21572	1.454	.231	n.s
	Err	1379.767	93	13.836			

n.s = not significant at $p \leq 0.05$

Table 1: Shows that there is no statistically significant difference in the mean post test achievement score of students taught with improvised material and the score of those taught without improvised material ($f= 9.097$; $p>0.5$). Hence, null hypothesis 1 is not rejected .This is in line with the finding of Owolabi and Oginni, (2012). The reason for this development may be a result of other variables that are not considered by the researchers. Ho2: There is no statistical difference in the mean retention score between students taught simple machine with improvised material and those without improvised material.

Table 2 Anova of Post-Post Test Achievement Score by Treatment and Gender

Source		Sum of square	Df	Mean square	F	Sig	Remark
Intercept	Hyp	11.74500	1	1174.600	123.680	.000	
	Err			9.497			
Pre-test	Hyp	5.592	1	5.592	.562	.455	
	Err	924.782	93	9.949			
Treatment	Hyp	70.701	1	70.701			Significance
	Err	8.314	2.822	2.946	24.000	.019	
Gender	Hyp	0.005	1	.005	.002	.969	n.s
	Err	1.690	.853	1.865			
Treatment	Hypo	1.988	1	1.988	.200	.656	n.s
Gender	Error	924.782	93	9.944			

n.s = not significant at $p < .05$ * = Significant at $p < .05$

Table 2 shows that there is a significant difference in the retention score of students taught with simple machine with improvised material and those without improvised material ($F=24,000$, $p < .05$). Hence null hypothesis 2 is rejected. This is in line with the findings of Akinbobola (2007). This shows that a significant difference in students' retention is attributable to the treatment.

4. Conclusion And Recommendation

In conclusion, this study shows that there is a significant difference in the retention score of students taught with improvised material. This means that the experimental group benefitted at retention level than the control group. Hence, improvised material enhanced retention. In view of the important role of improvisation in the teaching and learning of science, it is recommended that;

- Science teacher should be adequately trained on the use of instructional material to enhance academic performance.
- Curriculum planners should ensure that the reasoning ability of the learners is considered when designing the curriculum as well as the interest of the learner.
- Science teachers should involve students in the improvisation of equipment to give them the opportunity to acquire creative skills.

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Information Sources Availability and Utilization for Entrepreneurial Skills Acquisition among School of Business and Management Studies Students, Yaba College of Technology, Lagos

George .O.ONYENANIA¹, Stella .F.OLALEYE² and Funke .O.OBASA³

¹ Library Unit, ^{2,3}Department of Public Administration
Yaba College of Technology, Lagos, Nigeria

Abstract: Entrepreneurship is fundamental to National growth and development. Thus, most developed nations of the world do not joke with entrepreneurship development issues. One major issue is the acquisition of necessary skills for successful entrepreneurship ventures. This has several underlying factors that include those that centre on availability and utilization of information sources as prerequisites in attaining greatness in business activities and learning. This study examines “Information Sources Availability and Utilization for Entrepreneurial Skills Acquisition among SMBS students, Yaba College of Technology, Lagos. Survey research design was adopted for the study. A questionnaire was administered to 200 SMBS Students. Complete data collected from 148 respondents, representing 74% response rate was analyzed through descriptive and inferential statistics to answer/test the study research questions/formulated hypothesis via SPSS version 20. Major findings of the study include that information sources availability in the College is relatively high; while their utilization among SMBS students is at a low level. Satisfaction level of students on the utilization of available sources was equally low as significant relationship was found not to exist between availability and utilization due to several challenges identified in the study upon which conclusion and recommendations were made. These include that all information related outlets/units of the college should vigorously engage in awareness creation/promotion to ensure their effective utilization among students for entrepreneurship skills acquisition and practices after graduation. Students should on their part involve themselves on holistic utilization of information sources/platforms put in in place by the College management for optimal benefits.

Keywords: Entrepreneurship skills, Students, Information Sources, Availability and Utilization.

1. Introduction

Entrepreneurial advocacy is becoming a recurrent campaign slogan of most nations’ government and scholars for the purpose of economic emancipation and development. Entrepreneurship is the art of engaging in business activities aimed towards earning a living independently. Thus, Kalejaye (2016:2), acknowledges that entrepreneurship is vital to national and societal development, noting that it reflects the innovativeness and the willingness of the human factor (Entrepreneur) to combine economic factors (land, labour/men, capital/money, machine and information) to bring solutions to certain personal and societal challenges or needs. Hence, “entrepreneurship skills acquisition is the driving force behind employment globally” (Owojuyigbe, Fadimu, Onyenania & Owojuyigbe, 2018:441; cite Grey, 2008).

Entrepreneurship skills are two different concepts. Entrepreneurship refers to business proficiency or knowledge and practices directed towards earning a living independently. It involves innovation, creativity, competency in risk taking geared towards self-reliance and sustenance. To Ugwu (2012:15; cites Stevenson & Timmons, 2006), “entrepreneurship is the process or practise of discovering, evaluating and exploring economic opportunities that goes on to show themselves in form of new business ventures/endeavours thereby deriving personal monetary rewards” or satisfaction independently; while skill(s) is concerned with “the ability to do something well”. It therefore connotes special/unique abilities that any person possesses in the production of goods or services capable of meeting or satisfying societal needs upon which the practitioner or entrepreneur could earn a living which could be in form of business ventures or SMSEs engagements. According to Ugwu (2012:20), when entrepreneurial skills’ opportunities are lacking or deficient, and access to public services is limited, indisputably, living standard(s) of the people would continue to be low. Ubabukoh (2018:16); Odunaike and Adeagbo (2015:2) who cited Ademiluyi (2007), simply described entrepreneurial skills as business or commercial skill(s) that individuals acquire to enable them competently engage and function in

any unstable business environment as an entrepreneur or self-employed for the purpose of earning a living and to contribute meaningfully towards national growth and development. They emphasized that entrepreneurial skills prepare individuals not only to be gainfully employed but to be employers of labour.

Such skills include: business vision, planning, creation and execution skills, personnel management skills, marketing or strong sales person's skills, accounting skills, competitive skills, decision making skills, customers and suppliers' relationship skills, products or services design and packaging skills as well as business review skills required for successful business operations. To effectively acquire these varying entrepreneurial skills, it demands that information sources capable of supporting individuals with the requisite knowledge are available and utilized.

In a situation like ours in Nigeria today, where the unemployment rate is increasingly high and worrisome, it is expected that improving entrepreneurial skills among citizens through formal learning environment would go a long way in resolving most of the present socio-economic challenges. Thus, Akinola (2001) cited by Oluwadare, Taiwo and Adekunle (2016:64) acknowledge that it takes special business skills to succeed as an entrepreneur. According to Ugwuand Ezeani (2012:2), most entrepreneurial skills as enumerated earlier in this work, can only occur through learning and practicing. For effective learning and practice to take place, the utilization of information resources/sources to complement classroom teaching and learning process is essential.

Such information sources cannot be utilized if they are not available. Therefore, the various skills embedded in SMBS (School of Business and Management Studies) programmes such as those in the "Department of Accountancy, Banking and Finance, Business Administration, Marketing, Public Administration and Office Technology Management Programmes" need to be explored and sourced for by its students and prospective graduates to enable them succeed as potential entrepreneurs. In present day Nigeria, it is apparent that graduates of business and related management programmes without the relevant entrepreneurial skills and knowledge/information would find the labour market environment most unrewarding and unfavourable (Ezeani, 2012:33). The acquisition of entrepreneurial skills is fundamental for anyone wishing to succeed in business or in any economic ventures through information sources availability and utilization.

Availability refers to the existence of requisite data, information, idea or knowledge sources for the satisfaction of individuals' information needs; while utilization has to do with putting available information sources or resources into use for the purpose for which it is intended. In this ambience, efforts are being made by varying institutions and organizations alike in inculcating these skills on students or people across the country year in, year out, and at various levels. Thus, the Yaba College of Technology, Yaba – Lagos, undoubtedly established the School of Management and Business Studies to collaborate with the Centre for Entrepreneurship Development, the Library and Consults Service Units among others to cater for entrepreneurial skills developmental needs among her students and prospective graduates as they all serve as information sources in this regard. African countries, including Nigeria are however recording increasingly high rate of unemployment and poverty. Nigeria unemployment rate was put at 57.8% (National Bureau of Statistics 2004; as cited by Ugwu, 2012: 24); while about 87 million Nigerians are presently unemployed (Omegoh, 2018:18).

It was also pointed out that Nigeria is now one of the countries of the world living in abject poverty and has taken over the first position from India in World's Poverty Ranking List in the first Quarter of 2018 (Omegoh, 2018:18; cites Brookings Institute, USA, 2018). According to Omegoh (2018:18), The Institute expressed that six (6) Nigerians go into poverty or become poorer than they were in every minute of the day whereas adequate availability and effective utilization of information sources could be of immense help out of these unwholesome reports about our country Nigeria in most recent times. Availability and effective utilization of these sources among students could go a long way in equipping them with the necessary and desired entrepreneurial skills for both personal and national economic gains and advancement. The extent of availability and utilization of these all important information sources with regards to entrepreneurial skills acquisition matters a lot in students' overall entrepreneurship capacity building and development. This effects of information sources availability and utilization, has not been seriously or duly considered in available

literature particularly in Nigerian Polytechnics; thus, this work is conceptualized by the authors to fill this important gap. Although it is arguable that many institutions of higher learning such as Technical/Vocational Colleges of Education and Polytechnics in the country have long been involved in entrepreneurial skills development and training activities through their varying commercial and related programmes and facilities, it has not yielded the desired result. Put differently, in spite of recorded and observable efforts made so far, incidences and reports of acute unemployment and business failures abounds in available literature over the years, especially with about 57% of Nigerian citizenry unemployed.

This scenario could be due to one reason or the other which has been rocking untold hardship and related social vices on her citizens and inhabitants throughout the country in form of increased rate of kidnapping, robbery, suicide, insurgency among others. This unpleasant circumstance, could be due to several factors which cannot be separated from the functions of information sources availability, use or underutilization that requires empirical evidence necessary for educational policy makers' or management decisions for improvement and advancement. Thus, this study as a matter of urgency, investigates "Information Sources Availability and Utilization for Entrepreneurial Skills Acquisition among Students in School of Business and Management Studies, Yaba College of Technology, Lagos".

Objectives of the Study

- i. To find out the extent of Entrepreneurial Information Sources availability for use in Yabatech among SMBS students
- ii. To ascertain the extent of information sources utilization for entrepreneurial skills acquisition among SMBS students
- iii. To determine the level of Satisfaction with information Sources utilization for Entrepreneurial Skills Acquisition among students
- iv. To establish the extent of benefits derived in the Utilization of information sources for entrepreneurial Skills Acquisition among students
- v. To identify factors challenging availability and utilization of entrepreneurial information sources among SMBS students in Yabatech
- vi. To find out if significant relationship exists between available information sources and utilization by SMBS Students for Entrepreneurial skills acquisition in Yaba College of Technology

Research Questions

- i. To what extent are Entrepreneurial Information Sources available for use among Yabatech SMBS students?
- ii. To what extent are information sources utilized for entrepreneurial skills acquisition among SMBS students?
- iii. What is the level of satisfaction derived from the utilization of information Sources for Entrepreneurial Skills Acquisition among students?
- iv. What benefits could be derived from the utilization of information sources for entrepreneurial Skills Acquisition among students?
- v. What are the factors challenging availability and utilization of entrepreneurial information sources among SMBS students in Yabatech?

Hypothesis

H₀₁: Significant relationship does not exist between available information sources and utilization among SMBS Students for Entrepreneurial skills acquisition in Yaba College of Technology.

2. Literature Review and Theoretical Foundation

The study literature review and theoretical foundation development is treated under the following subheadings

a) Availability and Utilization of information Sources for Entrepreneurial Skills Acquisition

Several existing literatures have reported low level of information sources and services use among Nigerians. One of such studies is that of Owojuyigbe, Fadimu, Onyenania and Owojuyigbe (2018:436), who revealed

low level of electronic library information services availability, awareness and use among rural young adults in Lagos State for entrepreneurship skills' development due to several factors such as inadequate availability of library information sources and services, inadequate awareness creation, poor information infrastructure and lack of interest in entrepreneurship skills among potential active young people in the State majorly due to the get rich quick syndrome among youths.

In America however, the "Organisation for Economic Co-operation and Development's – OECD (2015)", surveyed 5,000 American citizens on 'Adult Skills' including those tailored towards Entrepreneurial skills acquisition and found relatively high use of available information sources and facilities among her citizens in enhancing her economic development through improved entrepreneurship skills needed for successful living in our 21st Century global economic system. This is an indication that if information sources are available and put into use, it would invariably bring about successful living.

b) Satisfaction and Benefits of Information Sources Utilization for Entrepreneurial Skills Acquisition

The growing importance and benefits of entrepreneurship role in a country's economic growth and development has stirred up both developed and developing countries government in the formulation of related policies in their respective economies wherein entrepreneurship skills acquisition is prioritized. IFLA (2014) as adapted from IFLA/UNESCO Public Library Administration Manifesto (1994) revealed that "about 250,000 people find jobs and entrepreneurship opportunities" through the use of information sources and agencies such as libraries, business and public institutions or organizations among others. The European Union every year enhances the use of enabling institutions and promotes interested individuals' empowerment through entrepreneurial skills development.

Public Institutions such as the US Public libraries have been engaging radical provision of information and training programmes/skills designed for young/prospective investors by facilitating access to vital information on the creation and production of goods and services as well as marketing and management functions necessary for business survival and growth. These programmes are increasing contributing towards the economic well-being of their citizens through the use of entrepreneurial skills (IFLA, 2012 & 2013) thereby decreasing the rate of poverty among nations that recognised skills acquisition programmes/information sources.

Entrepreneurship skills acquisition programmes or education was introduced to Business related programmes in Nigerian tertiary institutions to facilitate the achievement of Government's laudable objectives of self-sufficiency, and poverty alleviation through innovative ideas for economic growth and self-reliance (Owojuyigbe, Fadimu, Onyenania and Owojuyigbe, 2018:441). It is a veritable tool for the improvement of citizens' quality of life in any given nation. The benefits of entrepreneurship skills acquisition are numerous; and it essentially serves as an alternative when paid employment is difficult to secure (Ugwu, 2012:21). Hence, "it is increasing per-capital-income of citizens and stimulating investment interests or new economic ventures towards achieving self-reliance and poverty eradication through skills acquisition, and becoming very important in emerging economies such as Nigeria".

c) Factors Challenging Availability &Utilization of information Sources for Entrepreneurial Skills Acquisition

Available literature has shown that "the Nigerian government and public institutions alike at all levels do not take issues of entrepreneurship skills' acquisition and development seriously". Thus, "her labour market is over flooded by unemployed youths waiting in waste for white collar jobs in the presence of wide array of untapped entrepreneurship and economic opportunities staring on their faces due to required skills deficiencies". Owojuyigbe, Fadimu, Onyenania and Owojuyigbe (2018:442) cite Okwuanaso (2000) also observed that "many Nigerian youths, adults or people who go into entrepreneurship fail because of their little knowledge, idea or information of what it takes to effectively run and manage a business". It was disclosed that young adults in Nigeria lack managerial and marketing skills, as well as financial management skills that most often detriment business motives or their intention to start-up a new business ventures (Omoankhanlen, 2010; cited by Ugwu, 2012:35); who also found "lack of entrepreneurial culture, spirit or zeal to try their hands on self-employment, also lack support, motivational and financial assistance from parents, stakeholders and

government, coupled with lack of confidence and determination to go into entrepreneurship for fear of competition, failure and insult”. Similarly, Nkamnebe and Nkamnebe (2018:81) reported inadequacy of indigenous databases and facilities that makes it difficult to have access to quality information in Nigeria for the purpose of entrepreneurship skills’ acquisition, growth and advancement. Achonna (2008:1); Urhiewhu, Okeke and Nwafo (2015:1) pointed out other factors challenging information sources utilization among students to include: inadequate infrastructure or facilities and programmes such as Radio and Television programmes directed towards skills acquisition. In view of the foregoing, it appears that no study has considered the influence or the relationship that exists between “Availability and Utilization of information sources for Entrepreneurship Skills Acquisition among SMBS Students in Yabatech, Lagos State”.

3. Methodology

The study adopted the survey research design to enable us establish the relationship that exists between the two variables. Study population consisted of 200 ND II students purposively sampled who were also preparing for their final semester’s examination in SMBS under “the department of Business Administration, Accountancy, Banking and Finance, Marketing, Public Administration and Office Technology Management at the Yaba College of Technology Main Campus, Lagos State”. Out of the 200 copies of the validated questionnaire administered to respondents, 148 copies representing 74% response rate that were fully completed, were found useful for the study. Data collected were analysed through descriptive and inferential statistics to answer and test the study research questions and formulated hypothesis using mean and standard deviation for research questions and Pearson Product Moment Correlation (PPMC) analysis to test the relationship that exists between the variables via SPSS version 20.0.

4. Results

Research Question 1: To what extent is Entrepreneurial Information Sources availability for use in Yabatech among SMBS students?

Table 1: Information Sources Availability N = 148

Questionnaire Items	Mean	Std. D	Decision
1. Lecturers’ Hand-outs/ Lecture Notes	2.71	0.772	Accept
2. Lectures’ Text Book	2.83	0.713	Accept
3. Library Information Recourses (e.g. Books, Journals and Magazines)	2.68	0.747	Accept
4. Library ICT Centre/Units in the college	2.86	0.813	Accept
5. Radio Programmes on Entrepreneurial skills	2.15	0.828	Reject
6. Mobile Phones	2.87	0.779	Accept
7. Television Programmes on entrepreneurial skills	1.91	0.799	Reject
8. Worship Centres in the College	1.71	0.706	Reject
9. Students’ Union Association Meetings/Students’ Affairs Unit in the College	2.11	0.922	Reject
10. The College’s Consults Unit/Office	1.97	0.844	Reject
11. Friends/ Business Centres in the College.	2.88	0.748	Accept
Overall Mean Ratings	2.50	0.724	

Source: 2018 Field Report

Table 1 shows the mean and standard deviation ratings of information sources availability. The overall average data shows that necessary information sources for entrepreneurship skills acquisition are considerably available in the College with the average mean score of 2.50 based on the cut-off point of 2.50 on four Likert Scaling used in the study’s measurement. The data specifically shows that the mean rating(s) of item 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11 are 2.71, 2.83, 2.68, 2.86, 2.15, 2.87, 1.91, 1.71, 2.11, and 1.97; and overall average or cluster mean of 2.50. Based on the cut-off point of 2.50, information sources availability for entrepreneurship skills acquisition items rated 1, 2, 3, 4, 6, and 10 were accepted while, item 5, 7, 8, 9, and 11 were rejected

Research Question 2: To what extent are information sources utilized for entrepreneurial skills acquisition among SMBS students?

Table 2: Extent of Information Sources Utilization for Entrepreneurial Skills Acquisition Statements N = 148

Questionnaire Items	Mean	Std. D	Decision
1. Acquisition of clear, realistic and achievable goals in entrepreneurial skills.	2.84	0.505	Accept
2. Learn competitive skills for business advantage.	2.51	0.695	Accept
3. Acquire improved decision making on entrepreneurial skills.	1.38	0.487	Rejected
4. Acquire entrepreneurial skills initiative, creativity/ideas.	2.82	0.616	Accept
5. Acquire knowledge on how to establish business	1.47	0.760	Rejected
6. Acquisition of efficient entrepreneurial management skills.	1.87	0.374	Rejected
7. Acquire customer/supplier intimacy/relationship.	2.62	0.273	Accept
8. For day to day survival of business/ entrepreneurial skills.	2.98	0.543	Accept
9. Acquisition of best personnel management skills in entrepreneurship.	2.92	0.744	Accept
10. To acquire new products, services and business models skills.	2.08	0.528	Rejected
Overall Mean Ratings	2.35	0.552	

Source: 2018 Field Report

Table 2 shows the mean and standard deviation ratings on extent of information sources utilization for entrepreneurial skills acquisition statements. The data shows the mean rating(s) of items 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 are 2.84, 2.51, 1.38, 2.82, 1.47, 1.87, 2.62, 2.98, 2.92, and 2.08 and overall average or cluster mean of 2.35. “Based on the cut-off point of 2.50”, on extent of information sources utilization for entrepreneurial skills acquisition by students is low. However, statements rated items 1, 2, 4, 7, 8 and 9 were accepted by the respondents while items 3, 5, 6, and 10 were rejected. This finding is contrary to the study of “Organisation for Economic Co-operation and Development’s – OECD (2015)”, that surveyed 5,000 American citizens on ‘Adult Skills’ including those relating to entrepreneurial skills acquisition and found relatively high use of available information sources or facilities among her citizens in enhancing their economic growth and development..

Research Question 3: What is the level of Satisfaction derived from the utilization of information Sources for Entrepreneurial Skills Acquisition among students?

Table 3: Extent of Satisfaction with information Sources utilization for Entrepreneurial Skills Acquisition Statements. N = 148

Questionnaire Items’ Statements	Mean	Std. D	Decision
1. Lecturers’ Hand-Outs/ Lectures Notes on Entrepreneurial skills	2.95	0.513	Accept
2. Lectures’ Text books on Entrepreneurial Skills.	2.92	0.567	Accept
3. Library information resources on Entrepreneurial Skills.	2.03	0.420	Reject
4. Library ICT Centres/ Unit in the college on Entrepreneurial skills.	1.99	0.528	Reject
5. Radio information/programmes on Entrepreneurial Skills.	2.59	0.699	Accept
6. Mobile phones information access to Entrepreneurial Skills.	2.62	0.828	Accept
7. Television information or programmes on entrepreneurial skills.	1.29	0.472	Reject
8. Worship Centres in the college information/programmes on entrepreneurial skills.	2.59	0.509	Accept
9. Students’ Union Association Meetings/Affairs units in the college information system or programmes on entrepreneurial skills.	2.68	0.774	Accept
10.The College Consult unit/office information programmes on entrepreneurial skills.	2.59	0.740	Accept
11. Friends and Business Centres in the college information programmes on entrepreneurial skills	1.96	0.450	Reject
Overall Mean Rating:	2.40	0.591	

Source: 2018Field Report

Table 3 shows the mean and standard deviation ratings on the extent of satisfaction with information sources utilization for entrepreneurial skills acquisition statements. The data indicate(s) the mean rating of item(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and 11 are 2.95, 2.92, 2.59, 2.62, 2.59, 2.68, and 2.59; and overall average or cluster mean of 2.40. “Based on the cut-off point of 2.50”, the overall extent of satisfaction with information sources utilization for entrepreneurial skills acquisition among students is low. Specifically, statements of items 1, 2, 5, 6, 8, 9, and 10 were accepted. However, item 3, 4, 7 and 11 were rejected by the respondents.

Research Question 4: What benefits could be derived from the Utilization of information sources for entrepreneurial Skills Acquisition among students

**Table 4: Statements on Perceived Benefits of information Sources
Utilization for entrepreneurial Skills Acquisition. N = 148**

Questionnaire Items	Mean	Std. D	Decision
1. Acquisition of information on entrepreneurship skills as means of creating jobs and wealth independently.	2.84	0.591	Accept
2. Utilized information sources help me acquire entrepreneurial skills as alternative to the meager income in paid employments.	2.24	0.426	Reject
3. Helps to acquire skills for one to show one’s talent & do what one loves doing to earn a living entrepreneurially.	3.28	0.464	Accept
4. Helps in maximizing the usage of one’s time for one’s self (as potential employer of labour)	2.82	0.522	Accept
5. I use it as a way of deriving personal satisfaction in business (Entrepreneurial Ventures) to overcome poverty.	1.69	0.464	Reject
Overall Mean Ratings	2.57	0.493	

Source: 2018Field Report

Table 4 shows the mean and standard deviation ratings on statements on utilization of information sources for entrepreneurial skills acquisition perceived benefits. The data reveals that the mean ratings of item 1, 2, 3, 4 and 5 are 2.84, 2.24, 3.28, 2.82, and 1.69 with corresponding standard deviations of 0.591, 0.426, 0.464, 0.522 and 0.464, as well as the overall average or cluster mean of 2.57. “Based on the cut-off point of 2.50”, statements on utilization of information sources for entrepreneurial skills acquisition benefits items rated 1, 3 and 4 were accepted. However, item 2 and 5 were rejected by the respondents. By implication, information sources could help someone to acquire skills to show one’s talent and do what one loves doing to earn a living entrepreneurially with the highest mean score of 3.28; as well as in the acquisition of information on entrepreneurship skills as means of creating jobs and wealth independently with the mean score of 2.84.

Research Question 5: What are the factors challenging availability and utilization of entrepreneurial information sources among SMBS students in Yabatech?

Table 5: Challenging Factors. N = 148

Questionnaire Items	Mean	Std. D	Decision
Factors on Availability Challenges			
1. Institutional inadequate ICT facilities and training to support access to entrepreneurial skill acquisition.	1.67	0.568	Reject
2. Epileptic power supply needed to use available ICT information source for entrepreneurship skills acquisition	2.55	0.712	Accept
3. Institution's poor awareness programme on the availability of information sources on entrepreneurial skills development.	2.54	0.680	Accept
4. Students more interest in paid employment and so do not want to develop and acquire entrepreneurial, culture& skills	2.90	0.547	Accept
5. Difficulty mentality among students in securing financial support necessary to start a business/entrepreneurial venture	2.72	0.620	Accept
6. The zeal to get rich quickly do not allow students to keenly acquire entrepreneurial skills through available information sources in the college.	1.85	0.545	Reject
7. Lack of self-confidence and encouragements thereby afraid of failure and thus do not bother about the acquisition of entrepreneurial skills via available sources.	2.69	0.597	Accept
Overall Mean Rating:	2.42	0.609	

Source: 2018Field Report

Table 5 shows the mean and standard deviation ratings on challenging factors scale. The data show(s) the mean rating(s) of item 1, 2, 3, 4, 5, 6, and 7 are 1.67, 2.55, 2.54, 2.90, 2.72, 1.85, and 2.69; as well as the overall average or cluster mean of 2.5. "Based on the cut-off point of 2.50", challenging factors scale items 2, 3, 4, 5, and 7 were acceptable, while, item 1 and 6 were rejected by the respondents. These findings are in correlation with those of Achonna (2008) and Urhiewhu, Okeke and Nwafo (2015) as well as Nkamnebe and Nkamnebe (2018) who found irregular power supply, inadequate ICT facilities and inadequate indigenous databases or information sources among others as factors confronting effective skills development in Nigerian tertiary institutions.

Testing of Hypothesis

H₀₁: Significant relationship does not exist between available information sources and extent of SMBS Students' use for Entrepreneurial skills acquisition in Yaba College of Technology.

Correlations		AVA	USE
AVA	Pearson Correlation	1	-.091
	Sig. (2-tailed)		.297
	N	148	148
USE	Pearson Correlation	-.091	1
	Sig. (2-tailed)	.297	
	N	148	148

Source: 2018Field Report

The correlation between available of information sources and extent of utilization among SMBS Students for Entrepreneurial skills acquisition in Yaba College of Technology is -0.091. This indicates a negative relationship as well as a p-value of 0.297 which is greater than the 0.05 level of significance. We therefore fail to reject the null hypothesis and conclude that there is no significant relationship between available information sources and utilization among SMBS Students for Entrepreneurial skills acquisition in Yaba College of Technology.

5. Conclusion and Recommendations

The importance of entrepreneurship skills development in national economic development is essential and cannot be over-emphasized. Information sources availability and utilization are crucial factors in the acquisition of entrepreneurial skills among students. Although, relative high level of information sources availability in College exists, low level of their utilization and satisfaction among SMBS students for entrepreneurial skills acquisition were found in the study. The study therefore concludes that there is no significant relationship between availability of information sources and utilization among SMBS Students for Entrepreneurial skills acquisition in Yaba College of Technology due to several factors identified in the study.

The study therefore recommends that students should be encouraged to augment or complement entrepreneurial skills acquisition teaching and learning efforts in the College with the use of available information sources provided by the Management to gain optimum knowledge and satisfaction for future and effective entrepreneurial practices, growth and development. In other words, all stakeholders and information organs in the College such as the Library, Worship Centres, Students' Union Association Meetings/Students' Affairs Unit, the College's Consults Unit/Office and the incoming Radio-Yabatech to be hosted by Mass Communication Department in the College among others should be actively involved in projecting entrepreneurial skills acquisition programmes in the College among Students especially those in SMBS upon which the study findings were based. Such encouragements and efforts would go a long way in making our prospective graduates to distinguish themselves in the labour market in line with the vision and mission statements of the college after graduation.

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Literature as a Viable Accompaniment in the Teaching of English in Polytechnics

FLAVIAN-OBASI, Jacqueline N

Department of Languages

Yaba College of Technology

yanjutunde@yahoo.com

Abstract: This paper, an attempt to further attest to the usefulness of incorporating literature in the curriculum of Use of English in polytechnics in Nigeria examines the reception of Literature in English as a part of Use of English in Polytechnics in Nigeria. As a work of art that is useful in the socialization, education and integration of individuals into the society, Literature is not well received by students especially those in the Polytechnics. The complaint of the students is that it is a subject for students in the humanities and arts. Among other things, the paper proposes that Literature projects the reality of language while at the same time taking care of the literary needs of the students. It also proposes that students in the polytechnics would benefit immensely from the curriculum which recognizes the need for literature. Finally, the paper suggests that certain aspects of Literature should compulsorily be part of the English curriculum from the primary to the secondary school and that government should ensure that it is implemented in all states.

Keywords: Literature, Polytechnic, Language, English language, Teaching

1. Introduction

Use of English and communication in English are the two major language based general courses offered in polytechnics in Nigeria. Both courses are taught in the first and second semesters respectively in both National Diploma (ND) and Higher National Diploma (HND) programmes. Literature in English has been included as part of the course content of Use of English. In Yaba College of Technology, Literature as Creative Writing has been added to enrich the course contents of Communication in English. Over the years, students have been complaining about the usefulness of Literature to their courses since they are technology based students. To them, they are managing to accept English as part of their course but to add literature as part of the English language is what they cannot understand.

According to the students, as science students, they were not exposed to reading literature in their secondary school. Why should it be introduced to them in the tertiary institution? This paper is an attempt to answer the students' questions and to suggest ways of enhancing English language learning processes. As Nigeria's official language, the English language is the major language for formal education, for social interaction, business communication and in fact for general communicative purposes among others. In the domain of science and technology where polytechnics fall into, the English language is firmly positioned for the communication of the activities and break-through in that field. It is indeed the language of science and Technology. Students in the polytechnics do not just need the English language for educational purposes but also for other communicative reasons.

A sound knowledge of the English Language will not only help them while in the college but will enable them to communicate their innovations and inventions to the world outside the college Environment. In Nigeria, where government is rolling out various loans and grants to National Youth service corps members and the youth in general, a good background in the English Language will enable the individual to write outstanding proposals that will enable them access the various loan and grant schemes. It is on this backdrop therefore that this paper is written to reiterate the relevance and effectiveness of literature in English in the teaching of English in polytechnics

2. Overview of Use of English in Polytechnics

The importance of English as a second language in Nigeria and the premium placed on its learning in Nigerian schools cannot be over emphasized as it is seen at the centre of many Nigerian activities. A cursory look at the National Policy on Education (2014) where it is stated that English should be studied compulsorily as a subject from the pre-primary to the tertiary level of education, repositions our claim in this paper. It is also stipulated that the English language should serve as the language of educational instruction from the senior primary (primary four) to the tertiary level. Considering its role in the National and international sphere, there is need for every Nigerian to have effective command of the language. Proficiency in the language is key to attaining many heights within the Nigerian environment in particular and the international sphere at large. As a nation, have we implemented the provision of the National Policy on Education? Despite the inevitable roles played by English in Nigeria and the implementation of the National policy on Education among others, there is still poor standard on both written and spoken English among Nigerians. The yearly report on poor performance of students in WAEC goes further to attest to that fact.

To function effectively at both the national and international levels, it is expedient that Nigerians exhibit proficiency in English especially among the educated. There is therefore need for every learner of English in Nigeria to be exposed to the right curriculum and learning materials, hence the course content from the National Board for Technical Education which recognizes the need for literature in English as part of Use of English and Communication in English. In spite of the efforts of the board to ensure that students receive the right quality of education especially in the area of language use and communication, students who incidentally are the centre of this effort continue to complain about the inclusion of Literature in English as part of the Use of English curriculum.

The Use of English course was first initiated in the University of Nigeria Nsukka in 1960 and since then, it has spread to other tertiary institutions in Nigeria including the polytechnics (Nwigwe, 1994:130). In the polytechnics, the National Board for Technical Education (NBTE) has provided a uniform course context for Use of English and Communication in English among other courses and have encouraged each institution to make necessary modifications according to the needs of the students. Considering the position of English in Nigeria, Use of English and Communication in English are compulsorily studied at all levels in the polytechnic from National Diploma to Higher National Diploma irrespective of the course of study.

At each level, Use of English (GNS 101, 201 301 & 401) is assigned (2) two credit units and so is its counterpart, communication in English. Most times, the reception accorded both courses in the different departments in the polytechnics is not commendable. These courses are usually taken for granted by the students. The course content of Use of English at the various levels could be broadly divided into language and literature. The course is usually undertaken in different aspects. For example, Use of English undertaken in ND1 is divided into:

- a) Study skills
- b) Language
- c) Grammatical conventions
- d) Paragraphing
- e) Comprehension and interpretation
- f) Literature in English

Among other things, students on completion of the course, should know how to study effectively within the tertiary institutions, know the usefulness of language, understand the concept of grammar, know how to write good essays, interpret written discourses and appreciate works of literary value.

General objectives and course contents of Communication in English

- i. Communication
- ii. Oral presentation
- iii. Correspondence
- iv. Comprehension and interpretation
- v. Creative writing

Part of the goals of the course is to enhance the students' level of proficiency and competence in language use. And to achieve the set goals and objectives, Literature in English which represents the functional aspect of language has a very important role to play. In this study, literature refers to imaginative creative works in English which include prose drama and poetry and literary terms. In addition to literary elements, terminologies and explanations, one of the literary genres: a novel, play or selection of poetry, is usually recommended for analysis each semester. This makes the curriculum very rich and invaluable for the student to embrace. Now, let us examine the concept of Literature.

2. Literature as a Subject

Ogbe (1997:6) is of the opinion that it is difficult to define literature as a subject of study. He is rather of the opinion that there are many perceptions that can provide an overview of what literature as a subject is all about. He sums his definition thus: "Literature is the use of words to create an illusion of life" He further explains that language provides the structural foundation upon which literature is built. In its functionality, literature produces beauty otherwise referred to as aesthetics.

Egudu (1975:1) asserts that literature is a mode or method of expression. He further explains that it is not just a subject that expressed something, but rather, it is a way manner, or method in which something is said or written. Literature in this perception embodies how a subject matter is presented rather than the content. The method is itself the subject. The essence of literature according to him is the fact that it is method or art with certain identifiable features. The novel, drama and poetry being the three facet of literature share in the essence of literature as a method and have these traits which characterize literature.

According to Okolo (2007:11) literature is the attempt to present mankind and the environment via invented sayings and doings. This assertion of Okolo brings together the creativity and beauty seen in the works of literature. Whether in form of prose, drama or poetry, literature has certain kinds of value it transfers to its audience. In other words, we can refer to literature as a creative work of art in either written or oral form which has superior artistic or aesthetic value capable of transmitting moral values to the audience. The major tool of literary invention is language.

Hence literature is language at work and language is made alive in literary works. Whether in the spoken or written form, the literary or creative writers rely on language to tell their stories and convey their numerous themes. It is through words that the literary writer is able to create his/her characters, his settings, his plot and in fact enact the entire story. As language teachers, we are interested in the effective use of language in the literary texts and our focus is on how the writer has been able to effectively convey his story in English.

Mayhead R (1965: 15) has identified three important kinds of value derivable from literature: it vitalizes language, it makes for enjoyment and it gives insight about humanity. The literary artist expresses their views and perceptions through literature employing the most suitable expressive linguistic forms to enact their imagination. Of course, the tool through which literature is expressed is language.

Language teaching is more practical than theoretical, contrary to the beliefs of so many people. Students learn effectively when practical communications are encouraged in language learning classes and this is strengthened in literary texts, whether drama, prose or poetry. Even though literary texts are read, the four language skills; listening, speaking, reading and writing are acquired. Study skills which enhance effective learning are also imbibed through reading and proper interpretation of literary writings.

Ugoji (2016:63) asserts that literature is important as a subject because of its ability to expose learners to the source of unmodified language and with its multiple layers of meaning, is capable of enabling discussions and exchange of ideas and feelings on particular issues among students. As the student is exposed to literature, he experiences different varieties of language usage through the interactions of the characters and the voice of narration. The student of literature is as well exposed to different vocabularies as encountered in the transactions in the literary work.

Going further, Ugoji affirms the potency of Literature in the teaching of language (English) by claiming that: when a literary work is recommended for freshmen in the university, the prime interest of the teacher is to use the text as a language teaching tool to illustrate the language rules and how they respond to actual use in context. It is a tool for learning extensive reading, meaning extendibility in words, complexities in syntax, creative manipulation of phonemes and so on. In this regard, the social vision of the writing becomes secondary; but not discarded (2016:63).

According to Ogwude S.O (1994; 103), “the noticeable change in student’s attitude when they have to discuss any interesting literature reading class is remarkable. Even the least confident ones come alive in such discussions....” This goes further to reiterate the usefulness of literature in language classes. It is capable of transforming the Nigerian student into a more participating and contributing member of the society. In Nigeria today where it is claimed that graduates are unemployable as most of them are not able to communicate effectively in speech situations let alone practical writing, Literature becomes a tool of transformation which if properly taught could elicit communicative ability in the students.

Ogwude (1994: 104) further asserts that three or four language skills are often integrated in a literature based language lesson: reading, writing, speaking and listening. Literary works are meant to be read and recommending a literary work for reading enhances the students’ interest in reading as it is often said that there is poor reading culture in Nigeria. In reading, the student is exposed to the grammar, syntax and vocabulary of the target language. An assignment based on theme or other elements of a piece of creative work enables the student to imbibe and become conversant with the art of writing. This further strengthens the teaching of essay writing, letter writing and the written discourse generally.

Relevance of Literature in General English Courses

Jegede in Ugoji (2016:66) is of the opinion that every learner of English must as a matter of necessity study literature as well. This is because literature exposes the learner to wide registers and varieties of language use. He identifies extensive and sustained interest in reading, writing, listening and speaking as some of the benefits obtained through the study of literature. He claims that literature more than being a mere resource used to develop literacy skills, is also a tool for the enhancement of proficiency in English.

Mayhead (1965: 15) asserts that “All literature uses language...” stating the inevitability of language in literary writing. He further expresses that literature helps to preserve the precision and the vitality of language. Being exposed to literature sharpens the communicative ability of the readers. This is because language is made alive in literature. In other words, the exactness and lucidity of language is realized in literary works such as are studied in Polytechnics in Nigeria. In Yaba College of Technology for example, many literary texts have made the reading lists of the students in both the Higher National Diploma and National Diploma as in other Polytechnics. The literary texts include works from renowned writers and budding writers.

Some of the literary works include: *Once Upon an Elephant* by Bosede Ademilua-Afolayan, *Ordinary Woman* by Chydy Njere, *Esoteric Dialogue* by Emeka Egwuda, *Seasons of Rage* by Emmanuel Babatunde Omobowale among others. In addition to the contents which could enhance national development, the literary texts can serve as effective tools in the teaching and learning of Language and communication skills. The students stand to gain a lot by the incorporation of literature as part of Use of English and Communication in English because the students are exposed to the proper use of words and expressions in those works. Students are also exposed to metaphoric toposes such as metaphors, personification, similes, euphemisms, idioms and other figurative expressions which are naturally domiciled in literary works. Some of the areas where the students would benefit from in their study of literature are as discussed below:

(a) Word building/vocabulary development

The reader is usually exposed to new words each time he picks up a piece of literary work to read. It is said that the literary artist is a working encyclopedia and so the student is exposed to registers of different fields depending on the subject area of the literary works. Exposure to new words helps the student to master the

spellings of these words, their meanings and usage. This will enhance the vocabulary development of the students. The students having a vast expanse of words to work with would surely find communication worthwhile in every facet of their professional life.

(b) Writing skills

The three language skills are interwoven in that they work together towards the enhancement of the linguistic development of an individual. Writing is a psychomotor activity which is usually motivated by the cognitive skill of reading. Constant exposure to literary works will enable the individual to master the art of writing having been exposed to different forms of writing patterns and strategies. In analyzing literature, students are encouraged to express their views and opinions on thematic concerns of a piece of literary work. The best way to become a better writer is by being a good reader and constantly practicing writing. There are different points of view expressed in literary works and different texts may be found in one literary form. A student could enhance his narrative, descriptive or expository techniques by studying literary texts. Literature provides a reliable context for communication, through the provision of variety of discourses. In the long run, a student who reads well would surely not be found wanting in trying to express his ideas and document his research design in his discipline. Studying will become easier for him as he would have been exposed to certain words in his previous reading.

(c) Reading Skills

The language skill employed in studying literature is reading. Every student in a tertiary institution should be made to be involved in constant reading. That is his purpose of enrolling in a tertiary institution in the first place. There is no better way of enhancing reading efficiency other than reading books especially literary works. Reading literary works exposes one to a wide array of vocabulary belonging to different disciplines since the subject areas of creative writings differ. It could also expose one to the different disciplines and cultures of the world.

(d) Meaning/ semantics

Language among other features must be meaningful. Meaning can be denotative and connotative. Both levels of meaning are naturally exposed in literary works and can be assessed by the students who are constantly reading literary works. According to Ugoji (2016:66), literature makes use of special or rather unusual use of language. She opines that linguistic features such as metaphor, simile, assonance, alliteration, repletion of double or multiple meaning of a word, poeticisms and mixing style and registers combine to form a highly unified and consistent effect which strongly reinforces the message of the text. Thus, by reading creative works of literary values, students would be exposed to the different forms of meaning whether in idiomatic expressions, figures of speech, and other forms of connotative and denotative usages of language. Considering the effectiveness of literature in English in inculcating effective communication skills in the students especially, it becomes imperative for the students to be exposed to at least one literary text in each semester, hence the introduction of Creative Writing as part of communication in English in Yaba College of Technology. Creative writing is designed to further discover, develop and enhance creative writing in the students. In addition, it gives the students the opportunity to practice using and writing the English language as each student is encouraged to present one creative work or the other at the end of the course.

3. Recommendations

Having identified the usefulness of incorporating literature in the use of English curriculum for polytechnic students, the following condition would enable its effectiveness in the academic lives of the students if encouraged.

- (a) The national policy on education should ensure that right from the primary school to the secondary different genres of literature should be made part of the English language since literature enlivens language.
- (b) At the senior secondary school examination students should be made to analyze a literary text of any literary genre as part of the English language examination question.

- (c) The Curriculum of the English language at the secondary school level should be re-designed and literature in English incorporated in the new curriculum, the students should be made to study at least one literary text every term.
- (d) And at the tertiary/ polytechnic level, Literature in English should be part of their curriculum every semester as practiced in Yaba College of Technology.
- (e) Lecturers who teach both Use of English and Communication in English should not just emphasize the literariness in such creative works but should emphasize its usefulness in enhancing the learning and understanding of the English language.

The above conditions if implemented will help to resuscitate the dying reading culture in Nigeria and the future of the child would be secured. A reading student would surely make a better student in any discipline he finds himself and a better citizen at last.

3. Conclusion

The language teacher/ lecturer can make literature more relevant in his teaching by creating exercises on vocabulary development, sentence analysis, parts of speech, essay writing, logic, comprehension and summary based on the literary work studied in the semester. This is necessary because an exposure to varieties of language in use will lead to an improved understanding of the communicative functions of language. Literature performs the psychological function of relaxing the mind of the audience and at the same time aid in language teaching by introducing new grammatical structures. A good literary text written in a clearly comprehensible language which the students can always relate to it will be a viable tool in the business of learning.

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Importance of Organizational Culture as a Factor for Employee Commitment: A Study of 9mobile Plc.

RASHEED, Olusola Iyabode & AJAYI, Olukayode Oloyede
Department of Business Administration & Management Studies
School of Management & Business Studies
Yaba College of Technology, Lagos
Email: iyarasheed@yahoo.com

Abstract: This study examines importance of organizational culture as a factor for employee commitment using 9mobile PLC as a study. A sample size of 100 respondents participated in the study. Convenience sampling was used in selecting the respondents. Data collected was analysed using descriptive statistics and correlational test statistic. The study found that organisation's mission; employee involvement; consistency; and leadership are significantly related to employee commitment. The study recommends amongst others that organization's mission should be followed by management in discharging their duties and responsibilities, and should be up-to-date with organization's mission; management should design motivation schemes that would encourage workers to regard the work they do as their own work deserving of their commitment; management should employ employees that have values which are related to organisational values; management should endeavour to train and develop employees to increase their human capability. In addition, they should emphasize participatory management that involves employee in decision-making process and for culture to be boosted, management should be adhered to rules and regulations and set minimum standards to follow by employees so that various departments together can achieve organisational stated objectives.

Keywords: Competencies, managerial competencies, organisational effectiveness, locus of control competency, self-efficacy

1. Introduction

Development of organisations or businesses relies on factors that would make it possible for organisations to be more effective. Most organisations want to employ committed employees that would help to increase production. Hence, values, norms, organisational objectives are introduced by management in order to understanding organizational culture. Organisational culture was introduced by management to its employees to assist them to get familiar with organisational system. Managers must strive to keep the learning environment in the organisation lively. Organizational culture is the glue that unifies an organization. Organisational culture is a "uniform perception of an organization which has common characteristics, descriptive, and can be distinguished from one organization to another. It integrates employees in an organisation (Robbins, 1986).

Black and Richard (2003) described organizational culture as the uniqueness of an organization that differentiates it from other organisations. They control the interaction that exists between employees and stakeholders. According to Black (2003), organizational ideas are goals that employees should pursue. They argued that it is the organisational values that form organisational norms and guidelines that tell the exact behaviours that are expected from employees and it also controls the behaviour. Kotter and Heskett (1992) viewed organizational culture "as shared beliefs and values in organisations which help to shape employees' pattern of behaviour".

Gordon and Cummins (1979) opined that organisation culture enabled employees to understand goals the organisation desired to achieve, the relationship between individual goals and organisational goals, and the process of achieving these goals. Hofstede (1980) argued that organization culture "is a standard that differentiates employees of an organisation from another organisation". This serves as a means of ensuring that employees work towards achieving organisational goals and objectives. Organizational culture can be described also "as standards, type of behaviour, and vision that should exist in organisations" (Kwantes and Boglarsky, 2007).

However, although there are different studies on the importance of organizational culture as a factor for employee commitment but there are contradictions about these studies; and were carried out in Europe and America. In addition, there is no published data on studies carried out in the telecommunication industry in Nigeria examining the influence of organisational culture on employee commitment. As a result of these challenges, the need to determine whether organisational culture affects employee commitment becomes imperative.

Statement of the Problem

It is no gainsaying that most organizations focus only on reward and compensation, and no attention is paid to culture that exists in the organisation. But to ensure excellent performance according to Kandula (2006), an organisation needs to have a culture that is strong. He maintained that organisations using similar strategies cannot produce the same results even though they are located in the same vicinity because of differences in organizational culture. According to Ahmed (2012), a culture that is strong and positive can improve an average employee's performance. But a weak culture can de-motivate an employee to perform below standard. Thus organisational culture has a direct impact on employees' performance. The study therefore examines the importance of organizational culture as a factor for employees' commitment in the telecommunication industry.

Objective of the Study

The main objective of this study was to examine importance of organizational culture as a factor for employee commitment while specific objectives were:

- i. To establish influence of organization's mission on employee commitment
- ii. To establish influence of employee involvement on employee commitment.
- iii. To establish influence of consistency on employee commitment.
- iv. To establish influence of leadership on employee commitment.

Research Questions

The following questions will be answered:

- i. Does organization's mission influences employee commitment?
- ii. Does employee involvement influences employee commitment?
- iii. Does consistency influences employee commitment?
- iv. Does leadership influences on employee commitment?

Hypothesis

The following research hypotheses were tested:

Hypothesis 1

H₀: Organization's mission is not significantly related to employee commitment

H₁: Organization's mission is significantly related to employee commitment

Hypothesis 2

H₀: Consistency is not significantly related to employee commitment

H₁: Consistency is significantly related to employee commitment

Hypothesis 3

H₀: Employee involvement is not significantly related to employee commitment

H₁: Employee involvement is significantly related to employee commitment.

Hypothesis 4

H₀: Leadership is not significantly related to employee commitment.

H₁: Leadership is significantly related to employee commitment.

2. Literature Review

Studies have shown that organizational culture is related to employee commitment. Magee (2002) argued that “organisational culture is connected to organisational practices. Therefore organizational performance depends on organisational culture”. Hellriegel and Slocum (2009) opined that “organisational culture can also enhance performance in a large scale if what sustain culture can be understood”. They argued that organisational culture allows employees to be familiar with organisational history and current operational techniques. These guide employees to be acquainted with organisational norms and values that are acceptable. Ferris, Arthur, Berkson, Kaplan, Harrell-Cook, and Frink (1998) asserted that “effective human resource system of an organization is based on supporting values and then these systems, in turn, create a positive impact on employee attitudes and behaviour, which facilitate organization’s performance”.

Malik (2015) using correlation, regression and analysis of variance by SPSS version 16, examined the impact of awareness of CSR activities and organisational performance in presence of organizational culture. Based on primary and secondary data collated from articles and reports, they found that relationship exists between awareness of corporate social responsibility activities and organizational performance. Leskaj, Lipi and Ramaj (2013) investigating culture of banks in Vlora Region, and its impact on their performance, found that organizational culture is positively related to employee performance. Purnama (2013) using employees of small and medium enterprises (SMEs) in East Java Province examined the influence organizational culture, job satisfaction, organizational commitment and organizational citizenship behaviour (OCB) to employee performance. He found that organizational culture affects organizational commitment which invariably affects employee performance.

3. Methodology

Research Design

Survey research design was employed in the conduct of the research. Data source for the study was basically both secondary and primary sources. Primary source was a well structured questionnaire to elicit responses from the respondents on importance of organisational culture as a factor for employee commitment. Five-point Likert style of SA = 5, A = 4, SD = 3, D = 2, UN = 1 was used to rate the questionnaire.

Population of the Study

One thousand (1000) staff of 9Mobile PLC Lagos serves as population of study. A sample size of one hundred (100) respondents was chosen for the research.

Sampling Method

Convenience sampling was used to select the one hundred (100) respondents who participated in the research study because of their convenient accessibility and proximity to the researcher. Convenience sampling method involves accosting respondents who are close to hand.

Test Reliability

To test the reliability of the questionnaire, a pilot study was carried out. Twenty staff of 9Mobile PLC Lagos (20) was pre-tested using the sample questionnaire. The Cronbach’s alpha value is **0.813**.

Data Collection

Questionnaires were administered to respondents in their different offices. Before the questionnaire was given to the respondents, the researcher explained in details the importance of the research study, and assured their confidentiality.

4. Results

Reliability Statistics

To measure the data's reliability, Cronbach's alpha value is taken. Its' value is 0.813 that shows questionnaire is reliable and conclusion can be drawn on the basis of data collected

Table 1: Cronbach's Alpha

Cronbach's Alpha	N of Items
.813	18

Table 2: Demographic Analysis of Respondents

GENDER					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MALE	56	56.0	56.0	56.0
	FEMALE	44	44.0	44.0	100.0
	Total	100	100.0	100.0	
AGE					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21-30 yrs	24	24.0	24.0	24.0
	31 - 40 yrs	49	49.0	49.0	73.0
	41 - 50 yrs	19	19.0	19.0	92.0
	51years and above	8	8.0	8.0	100.0
	Total	100	100.0	100.0	

HIGHER EDUCATION LEVEL

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid ND/NCE	28	28.0	28.0	28.0
HND/B.Sc	53	53.0	53.0	81.0
MSc/MBA	19	19.0	19.0	100.0
Total	100	100.0	100.0	

Demographic analysis of respondents table 2 showed that majority of the survey's respondent are female with 76.6% while the remaining with 23.3% is male. Age of respondents showed that majority of the respondents is age 18 - 25 years old with 62.5%, 26- 35 years (29.2%), while 36 - 46 years (5.8%). Educational level showed that majority with 69.2% of the respondents are National Diploma and only 30.8% are Higher National Diploma holders.

Table 3: Kendall'S TAU-B Analysis

Null Hypothesis(P =0.05)	Null Hypothesis	Kendall'S TAU-B	Significance (2sided)	Alternate Hypothesis
Organization's mission is not significantly related to employee commitment	Rejected	.737	.000	Accepted
Consistency is not significantly related to employee commitment.	Rejected	.823	.000	Accepted
Employee involvement is not significantly related to employee commitment.	Rejected	.802	.000	Accepted
Leadership is not significantly related to employee commitment	Rejected	.784	.000	Accepted

Findings

- i. Organization's mission is not significantly related employee commitment
- ii. Consistency is not significantly related employee commitment.
- iii. Employee involvement is not significantly related employee commitment.
- iv. Leadership is not significantly related employee commitment.

4. Discussion of Findings

The study findings are discussed thus: The first hypothesis revealed that: Organisation's mission is significantly related to employee commitment. This agrees with the study of Runy (2007). Secondly, hypothesis three revealed that: Consistency is significantly related to employee commitment. This conforms with the study of Khan (2005). Thirdly, hypothesis two showed that: Employee involvement is significantly related to employee commitment. This is consistent with the study of Xenikou and Simosi (2006). Fourthly, hypothesis four revealed that: Leadership is significantly related to employee commitment. This agrees with the study of Achua and Lussier (2013).

5. Conclusion

The study concludes that employee commitment is an important issue in organizations. The main reason employees are not committed to the organisation is the prevailing culture in the organisation. This study revealed that organisational culture such as organisation mission, consistency, employee involvement, and leadership. Organisations therefore can make employees to be more committed, by enhancing these factors. Organizational performance can only occurred as a result of committed employees that believe in organization mission. Good work ethics influence employee commitment and loyalty to the organization.

Employees are emotional beings that when shown and respect by management, they will be committed to organizational goals and objectives. Level of consistency between organisational values and employee values can help organisations to perform excellently, by recruiting employees with specified qualifications. Various departments in the organization can work together harmoniously to achieving organisational goals if there is consistency in culture of the organisation.

Recommendations

Based on the conclusions, the study recommends:

- a) For an organisation to review its performance, it is important for organisations its culture regularly, to an excellent environment.
- b) Organization's mission should be followed by management in the discharge their duties and responsibilities, and should be up-to-date with organization's mission.

- c) Management should endeavour to train and develop employees to increase their human capability. In addition, they should emphasize participatory management that involves employee in decision-making process.
- d) Management should design motivation schemes that would encourage workers to regard the work they do as their own work deserving of their commitment.
- e) For culture to be boosted management should adhered to rules and regulations and set minimum standards to follow by employees so that various departments together can achieve organisational stated objectives.
- f) Management should employ employees that have values which are related to organisational values.

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Effect of Corporate Social Responsibility (Csr) on Organisational Corporate Image in First Bank Nigeria Plc

OSISANYA, Florence Prelaifa¹, POPOOLA-ADEBAYO, Maryam²

SALAMI, Abass Abiodun³

^{1,3}Department of Business Administration & Management

²Department of Banking & Finance

Yaba College of Technology, Lagos, Nigeria

Abstract: This study examines the effect of corporate social responsibility on organizational corporate image. The main objective of the study is to investigate how corporate social responsibility (CSR) enhances brand, image and reputation of an organization. The research approach is survey design. This study was prepared based on primary and secondary data. The instrument used was questionnaire. One Hundred and Eighty (180) copies of questionnaire were administered and One Hundred and Fifty (150) copies were retrieved and analyzed using simple percentages to analyze data while using Pearson correlation statistics to test the hypotheses formulated with the aid of Statistical Package for Social Science (SPSS). Findings show that corporate social responsibility has a highly positive impact on organizational image. Corporate social responsibility can be combined with profit maximization objective and it increases profitability of an organization over time. The study recommends that Corporate social responsibility (CSR) should be seen and taken as an important aspect of business and management of organizations should state out in clear terms their plans, policies and strategies of corporate social responsibility (CSR) with a view of making life better for the people.

Keywords: Business Ethics, Corporate Image, Organizational Survival, Stakeholders, Social Responsibility

1. Introduction

In the current multimarket business milieu, competitiveness, productivity and relevancy of a business organization depends not only on the extent to which the company remains profitable, but also on how socially responsible it is (Crowth & Aras, 2008). At the age of globalization, the issue of national borders has become blurred as the concern for the environment has increased; moreover, more than ever, societies are becoming more wary of the impact of business practices on their lives (Lichtenstein, Drumright & Braig, 2010). In fact, man's greatest challenges in contemporary times is to ensure a sustainable and a balanced development that has little repercussions on the lives of the society and on the physical environment, and the business sector is particularly important in this regard because it can play a fundamental role (Hohnen, 2011). This transformation has dictated that the firms, companies and business organizations in general have to protect, that brand and reputation (Carroll, 2012).

Survey shows that 76% of executives believe that corporate social responsibility (CSR) contributes positively to long-term shareholder value, and 55% agree that the sustainability helps their companies build a strong reputation. In addition, the degree of corporate social responsibility (CSR) can display the whole performance of the company. It is a very popular international tide and economic ways. Indeed corporate social responsibility (CSR) efforts are driven not just by ideological thinking that corporations can be a powerful and positive force for social change, but more by the multifaceted business returns that corporations can potentially reap from their corporate social responsibility (CSR) endeavours. At an earlier history, societal expectations of business organizations did not go beyond efficient resource allocation and it's maximization towards being at least socially responsible to its society.

Today's heightened interest in the role of business in society has been promoted by increased sensitivity to the awareness of environmental and ethical issues. It means our society has become increasingly concerned that greater influence and progress by firms has not been accompanied by equal effort and desire in addressing important social issues including problems of poverty, drug abuse, crime, improper treatment of workers, fault production output and environmental damage or pollution by the industries as it has overnight been reported

in the media. It is therefore very essential for all to realize that public outcry for increased social responsibility will not disappear if business organizations fail to respond to the challenges this has posed to the society.

The role of the business specifically in the developed economics has evolved over the last decades from classical "profit maximizing" approach to a socially responsible approach where businesses are not responsible to the shareholders but also to all its stakeholders. It is therefore imperative for business to engage in corporate social responsibility (CSR) to the environment. The concept of corporate social responsibility (CSR) addresses various corners within the business and social communities. Generally it is the obligation of firms to use its resources in ways to make benefit to the society. A business approach that contributes to sustainable development by the environmental benefits for the stakeholders is the core activities of socially responsive businesses and trade communities. It is now unequivocally recognized that businesses and corporate houses move beyond that strict considerations of profit maximization. One important aspect of corporate social responsibility (CSR) is that it is mandatory rather it is voluntary social and environmental steps for socially responsive business and ethics.

However, in the face of challenges facing banks in Nigeria, the practice of corporate social responsibility (CSR) as a concept entails the practice whereby corporate entities voluntarily integrate both social and environmental upliftment in their business philosophy and operations. A business enterprise is primarily established to create human value by producing goods and services which society demands. It therefore seems that the practice of corporate social responsibility (CSR) will further pose a burden on the financial performance of banks. This has made most observers perceived Nigeria business environment as being hostile.

Following the series of banking reforms undergone during the Soludo (2006) recapitalization exercise and the reform carried out by Sanusi Lamido Sanusi led CBN in (2009), Nigerian banks has always been at the receiving end of their reforms, in terms of improving quality of service delivery to the customers. In the light of these problems, Nigerian banks engage in corporate social responsibility (CSR) to give back to the society and environment, the demands for banks to be socially responsible in recent time on the rise by an increasingly well-informed breed of stakeholders and this has made corporate social responsibility (CSR) a vogue. Business for Social Responsibility (BSR), a leading Global Business partner, in a Forum held in 2006 defined corporate social responsibility (CSR) as achieving commercial success in ways that honours ethical values and respect people, communities and the natural environment.

For Business of Social Responsibility (BSR), corporate social responsibility (CSR) also means addressing the legal, ethical, commercial and other expectations society has for business, and making decisions that fairly balance the claim of all key stakeholders. In its simplest terms, it is: "what you do", "how you do it" and "when and what you say". In this sense, corporate social responsibility (CSR) is viewed as a comprehensive set of policies, practice and programmes that are integrated into business operations, supply chain and decision making processes throughout the company and wherever the company does its businesses that supported and rewarded by top management. It also includes responsibility for current and past actions as well as future impacts. The issue that represents a company's corporate social responsibility (CSR) focus vary by business, size, sector and even geographical region.

It is seen by leadership of companies as more than a collection of discreet practices or occasional gestures or initiatives motivated by marketing, public relations or other business benefits. The relationship between organizations and their host community has become increasingly important. The decision made in an organization may influence community prosperity and also national and even internationally economic activity might be affected. An example of these problems is the on-going crisis in the Niger Delta region which has led to the destruction of lives and properties. There are accusations from the youths in these areas that companies misdirect their efforts and resources they should have used to develop the community to bribe opinion leaders in order to overlook their responsibilities to the community, and these have caused a lot of acrimonies between the two parties, community and the firm.

However, despite the enormous amount of literatures about the link between corporate social responsibility (CSR) and organizational performance, there are relatively few empirical studies about the connections between the facets of corporate social responsibility (CSR) - the firm performance concerning social issues and the firm respects the interests of agents and organizational culture types, market, hierarchy and adhocracy. Although a number of studies have shown that corporate social responsibility (CSR) activities often lead to greater organizational performance in the western developed economies, researchers are yet to examine the strategic value of corporate social responsibility (CSR) in emerging economies such as Nigeria (Adeyanju, 2012). Existing literature shows that determination of the limits to which the policies and actions of organizations should cover in its drive for corporate social responsibility has been a challenge hence, subjecting organizations to excessive agitations by the immediate communities. Research attention is therefore necessary in this area.

Objective of the Study

The main objective of this paper is to explore the impact of corporate social responsibility on the corporate image. The specific objectives are:

- i. To establish if corporate social responsibility (CSR) increases sales and customer loyalty in business environment.
- ii. To identify if CSR improves financial performance of the organization and attract more investment opportunities with immense economic value.
- iii. Assess if CSR improves ability to attract and retain employees.
- iv. To investigate whether CSR enhances brand, image and reputation of the organization.

2. Literature Review

Conceptual Review

The concept of corporate social responsibility (CSR) has been gaining importance in the past two decades not only in the media, within the government and the business world but also in academic circles. Finding the relationship between corporate social responsibility (CSR) and corporate image is the main attempt of the academicians. The leading concern among researchers is the financial effect on firms caused by their social policies (Russo & Fouts, 1997). According to Carroll, (2008), the concept of corporate social responsibility (CSR) is not a recent one. Indeed it dates back to before 1930. However, the watershed in the modern concept can be considered the publication of the book "Social Responsibility of the Businessman" by Howard R. Bowens, in 1953.

Recent studies suggest that corporate social responsibility (CSR) is an instrument to increase firm's legitimacy in the eyes of their stakeholders and to develop positive social responsibility images to burnish their reputations (Maigan & Ralson 2012). It is also considered to be a set of actions to respond to the various stakeholders in order to promote sustainable development in three aspects: economic, environmental and social (Henderson, 2001). In this context, corporate social performance can be seen as a measure of corporate social responsibility (CSR), which evaluates the impacts of firm's behaviour on society by means of a configuration of principles, processes, policies and results obtained through socially responsible practices (Mc Williams & Siegel, 2000; Schuler & Cording, 2006; Wood, 1991). In this scheme, corporate environmental performance is a subcategory of corporate social performance, focusing on environmental aspects (Schuler & Cording; Whiteman & Cooper, 2000).

The term sustainability gained notice in the 1980s in the report entitled "World Conservation Strategy", where it was defined as a strategic way of integrating coherent development by sustainable use of resources (OECD, 2007). Corporate social performance can be analysed more efficiently between the organization and its stakeholders are considered (Clarkson, 1995). Stakeholder's theory is based on relations of firms with their various interested publics (stakeholders), namely their employees, suppliers, customers, civil society organizations, government and society at large, besides their shareholders (Barnett, 2007; Campbell, 2007; Clarkson, 1995).

These theories examine when and why companies satisfy the interest of their stakeholders even in detriment to their own immediate interest (Campbell, 2007). It shows how corporate social responsibility (CSR) contributes to establish and strengthen a relationship of trust with main stakeholders and explains why good stakeholder relations bring financial gains to firms (Barnett, 2007). The financial performance of firms is topic of intense academic study because of its direct relationship with company growth and creation of shareholder value (Barnett & Solomon, 2006). There have been many studies of how corporate social responsibility (CSR) affects the market value of companies (Mackey, Mackey and Barney, 2007). Corporate social performance is usually measured by firms' profitability, market value and growth (Schuler and Cording, 2006). There are three indicators often used by researchers in this effort: accounting indicators, market indicators and perceptions indicators (Dalton & Cosier, 1999).

Various studies have been conducted to find the relationship between corporate social responsibility (CSR) and financial performance, but the findings have often been inconsistent or inconclusive (Mc Williams and Siegel, 2000; Orlitzky, 2001; Orlitzky, Schmidt and Rynes, 2003; Wu, 2006). In a study of environmental and financial performance, Russo and Fouts (1997) found that the relationship is positive and increases proportionally as corporations grow. In another study, Husted and Salazar (2006) used macroeconomic analysis to verify the conditions where corporate social responsibility (CSR) is consistent with maximizing organizational value. The work of Waddock & Graves (1997) found that an increment in a firm's financial performance is positively associated with an increase in its corporate social responsibility (CSR). Wu, (2006) in his study, used meta analysis with the procedures developed by Rosenthal, trying to find a single result, and found a positive relationship between corporate social responsibility (CSR) and financial performance. Because the various studies of the relationship between corporate social responsibility (CSR) and corporate financial performance present varying conclusions and results, there is demand to find a more consistent results.

Business for Social Responsibility (BSR), a leading Global Business Partner, in a forum held in 2006, defined corporate social responsibility (CSR) as achieving commercial success in ways that honours ethical value and respect people, communities and natural environment. For Business for Social Responsibility (BSR), corporate social responsibility (CSR) also means addressing the legal, ethical, commercial and other expectations society has for business, and making decisions that fairly balance the claim of all key stakeholders. In its simplest terms, it is: "what you do", "how you do it" and "when and what you say". In this sense, corporate social responsibility (CSR) is viewed as a comprehensive set of practices, policies and programmes that are integrated into business operations, supply chain and decision making processes throughout the company and wherever the company does businesses that are supported and rewarded by top management. It also includes responsibility for current and past actions as well as future impacts.

The issues that represent a company's corporate social responsibility (CSR) focus may vary by business, size, sector and geographical region. It is seen by leadership of companies as a more than a collections of discrete practices or occasional gestures or initiatives motivated by marketing, public relations or other business benefits. Also, World Business Council for Sustainable Development (WBCSD, 2004) described corporate social responsibility (CSR) as "the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the local community and society at large".

3. Theoretical Review

Stakeholder Theory

The shareholder theory proposed by Friedman (1984) states that a company's only responsibility is to increase its profits. He argued that a company should have no "social responsibility" to the public or society because its only concern is to increase profits for itself and for its shareholders. However, shareholders must rely on management to perform various functions as; managers may prioritize themselves in running of companies, which means that in actual fact, they do not create value for shareholders (Lazonick and O'sullivan, 2000).

Furthermore, companies do not always have the knowledge or competence for different kinds of social and environmental projects. Resources are not used effectively when companies engage in different CSR activities (Henderson, 2001). From an analytical perspective, a stakeholder approach can assist managers by promoting analysis of how the company fits into its larger environment, how its standard operating procedures affect stakeholders within the company (employees, managers, stockholders) and immediately beyond the company (customers, suppliers, financiers). Freeman suggests, for example, that each firm should fill in a "generic stakeholder map" with specific stakeholders. General categories such as owners, financial community, activist groups, suppliers, government, political groups, customers, unions, employees, trade associations, and competitors would be filled in with more specific stakeholders. In turn, the rational manager would not make major decisions for the organization without considering the impact on each of these specific stakeholders. As the organization changes over time, and as the issues for decision change, the specific stakeholder map will vary.

Legitimacy Theory

Another theory from which CSR stems is legitimacy theory. The theory posits that businesses are bound by the social contract in which the firms agree to perform various socially desired actions in return for approval of its objectives and other rewards and this ultimately generates its continued existence. Legitimacy is defined as a generalized perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs, and definitions.

The theory implies that there is interaction between groups and society. Organizations are one part of society and they exist if they are considered legitimate by groups in society. Depending on an organization's perception of its state or level of legitimacy, it may employ "legitimation" strategies (Laan, 2009) to establish, extend, maintain or defend their legitimacy and control for potential, existing or perceived legitimacy gaps following legitimacy threats.

The theory implies that organizations seek to operate within what is considered accepted in society which is the essence of CSR. Stakeholder theory and legitimacy theory have developed from the broader political economy perspective. They both focus attention on the nexus between the organization and its operating environment despite the fact that they are different.

Utilitarian Theory

In the utilitarian theory the corporation serves as a part of the economic system in which the function is mechanical. CSR ideas emerged after a realization that there is a need for an economics of responsibility, embedded in the business ethics of a corporation. Hence, the old idea of laissez-faire business gives way to determinism, individualism to public control, mid personal responsibility to social responsibility. Utilitarian could also be taken synonymously with instrumental models (Garriga and Mele, 2004; Jensen, 2002) in which the corporation is seen as only an instrument for wealth creation, and its social activities are only a means to achieve economic results. Instrumental models were also based on the basic idea about investment in a local community in which Friedman (1970) strongly stated earlier that the investment will in long run provide resources and amenities for the livelihoods of the people in the community.

The utilitarian theory, therefore, suggests that corporation needs to accept social duties and rights to participate in social co-operation. Within it, the functionalist theory, specifically advocates that the corporation is seen as a part of the economic system, which one of the goals is profit-making. The firm is viewed as an investment, and investment should be profitable to the investors and stakeholders. Putting it from the internal point of view of the firm, CSR was coined as a defence tactic of the industrial system against external attacks because there needs a balance between profit making and social objectives for the economic system's equilibrium.

Empirical Review

According to Egels (2005), the area defined by advocates of corporate social responsibility (CSR) increasingly covers a wide range of issues such as plant closures, employee relations, human rights, corporate ethics, community relations and the environment. According to Ruggie (2002), corporate social responsibility (CSR)

is a strategy for demonstrating good faith, social legitimacy and a commitment that goes beyond the financial bottom line. Baker (2005), States that corporate social responsibility (CSR) is about how companies manage the business processes to produce an overall positive impact on the society. In accordance with World Business Council for Sustainable Development (WBCSD) that states, "Corporate social responsibility (CSR) is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large". In the opposite, Frederick (1994) explained a move from corporate social responsibility (CSR) to "corporate social responsiveness" defined as "the capacity of a corporation to respond to social pressures". The World Business Council for Sustainable Development (WBCSD), in its publication "Corporate Social Responsibility: making good business sense" by Holme and Watts (2002) provided different perceptions of what corporate social responsibility (CSR) should mean from a number of different societies. For example, corporate social responsibility (CSR) is about capacity building for sustainable livelihoods. It respects cultural differences and finds the business opportunities in building the skills of employees, the community and the government.

The concept of social responsibility has a very high important components of ethics that are the guidelines going to improve the quality of life of the people in organizations and at the same time, provides industrial competitive advantage for the firm and needs to be developed as a corporate strategy of the firm focusing on the issues of social, environmental and economics. According to Frooman (1997), the definition of what would exemplify corporate social responsibility (CSR) is the following: "an action by firm, which the firm chooses to take, that substantially affect an identifiable social stakeholder's welfare.

A socially responsible corporation should take a step forward and adopt policies and business practices that go beyond the minimum legal requirements and contribute to the welfare of its key stakeholders. Corporate social responsibility (CSR) is viewed then, as a comprehensive set of policies, practices, and programs that are integrated into business operations, supply chain, decision making processes throughout the company and usually include issues related to business ethics, community involvement, environmental concerns, governance, human rights, the marketplace as well as the workplace. Corporate social responsibility (CSR) is "a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis" (European Union, 2001).

Corporate social responsibility (CSR) is a means of discussing the extent of obligations a business has to its immediate society; a way of proposing policy ideas on how those obligations can be met; as well as a tool by which the benefits to a business for meeting those obligations can be identified (CSR Guide). Corporate social responsibility (CSR) is also referred to as corporate or business responsibility, corporate or business citizenship, community relations and social responsibility. It involves the way organizations make business decisions, the products and services they offer, their efforts to achieve an open and honest culture, the way they manage the social, environmental and economic impacts of business activities and their relationship with their employees, customers and other key stakeholders having interest in the business and its operations.

Wood, (1991) defined corporate social responsibility (CSR) as a business organization's configuration of principles of social responsibility, processes of social responsiveness, and policies, programs, and observable outcomes as they relate to the firm's societal relationship. According to the Organization for Economic Co-operation Development (OECD 2001, 2003), corporate social responsibility (CSR) is very similar to the concept of corporate sustainability which remarks the integration of economic and social issues to business management, and in that way a sustainable strategy is developed in the long term. As Warhurst (2001) points out, three major elements of corporate social responsibility (CSR) are "product use" which focuses on contribution of industrial products which help in well-being and quality of life of the society, "business practice" which focuses on good corporate governance and gives high impetus for the environmental well-being and equity, and finally "distribution of profits" equitably across different societies, in particular the host community.

4. Methodology

The research design used was survey design, which studies both large and small population by selecting and studying samples chosen from the population. The populations of the study are workers of First Bank Nigeria Plc in its Lagos Headquarter office. Simple random sampling technique was adopted to select the respondent in order to give an equal opportunity of becoming part of the sample. 180 questionnaires were distributed to respondents while 150 were fully completed and returned. Data were collected through primary and secondary sources.

The validity of the questionnaire was determined by testing face validity which ensures good appearance of the questionnaire and content validity measures the relationship between the content and purpose of the questionnaire. Descriptive and inferential statistics was used as data analysis technique. Descriptive statistics involves the use of percentages, frequency distribution and tables while inferential statistics involve the use of Pearson correlation statistics using Statistical Package for Social Science (SPSS) as software package.

Analysis of Research Questions

Table 1: Presentation of Distribution of industrial conflict experience by respondents

VARIABLE	CATEGORY [n = 150/100.0%]				
	SA	A	U	D	SD
Corporate social responsibility (CSR) increases sales	74.7	19.3	4.0	-	0.7
Corporate social responsibility (CSR) improves financial performance of an organisation and attracts investment to the organization	62.8	27.7	8.8	0.7	-
Corporate social responsibility (CSR) enhances organization's ability to attract and retain employees	46.3	22.4	25.2	4.8	1.4
Corporate social responsibility (CSR) enhances brand in the organizations	74.7	19.9	4.1	0.7	0.7
Corporate social responsibility (CSR) promotes customers confidence and loyalty	75.7	18.2	4.1	0.7	1.4
Corporate social responsibility (CSR) boosts corporate image	86.5	8.1	3.4	1.4	0.7

Source: Field Survey, November, 2017

From table 1 above, it was shown that 94.0% of the respondents believed that corporate social responsibility (CSR) increases sales and customer loyalty in business environment, 4.0% are undecided while 0.7% of them believed that corporate social responsibility (CSR) did not increases sales and customer loyalty in business environment. 90.6% of the respondents stated that corporate social responsibility (CSR) improves financial performance of an organization and attracts investment opportunities to the organization, 8.8% indifferent and the remaining 0.7% stated that corporate social responsibility cannot improves financial performance of an organization and attract investment opportunities to the organization. This result implies that corporate social responsibility increases sales and customer loyalty in business; it also improves financial performance and attracts investment opportunities of an organization.

68.7% believed that corporate social responsibility (CSR) enhances organization's ability to attract and retain employees, 25.2% are indifferent while 6.2% of the respondents believed that it does not enhances organization's ability to attract and retain employees. 94.6% of the respondents strongly believed that corporate social responsibility (CSR) enhances brand and corporate image and reputation of an organization, 4.1% indifferent while 1.4% believed that corporate social responsibility does not enhances brand and corporate image and reputation of an organization.

The table 4.2 above shows that corporate social responsibility (CSR) helps in promoting Nigerian culture (85.7%) and 4.1% indicated that corporate social responsibility (CSR) not helps to promote Nigerian culture. The meaning of this is that corporate social responsibility (CSR) is another means to promote Nigerian culture.

Majority of the respondents believed that corporate social responsibility (CSR) guarantees the customers confidence and loyalty (93.9%) while few of them against the statement. It was shown from table above that 95.9% believed that corporate social responsibility (CSR) facilitates good rapport between company and customers while 3.4% of them stated that it does not facilitates good rapport between company and customers. The result shows that corporate social responsibility (CSR) is a good means to enhance good rapport between company and customers. 94.6% reported that organization's image has been boosted by engaging in corporate social responsibility (CSR) activities, only few of them is against the statement.

Analysis of Tested Research Hypotheses

This is the means to confirm if constructed hypothesis statement is true or not.

Hypothesis One:

H₀: Corporate social responsibility does not significantly increase sales and customer loyalty in business environment

Correlations

	Corporate social responsibility	sales and customer loyalty
Corporate social responsibility Pearson Correlation	1	.268**
Sig. (2-tailed)		.000
N	150	150
sales and customer loyalty Pearson Correlation	.268**	1
Sig. (2-tailed)	.000	
N	150	150

**. Correlation is significant at the 0.05 level (2-tailed).

Interpretation

The interpretation of the hypothesis one tested, evidence from table above shows that corporate social responsibility significantly increase sales and customer loyalty in business environment. This was found out at the significant value of (.000) and Pearson moment correlation value (.268). Hence, the null hypothesis (H₀) was rejected while the alternate hypothesis (H_i) was accepted and thereby concludes that corporate social responsibility significantly increase sales and customer loyalty in business environment

Hypothesis Two:

H₀: Corporate social responsibility does not significantly improve financial performance of an organization and attract investment opportunities to the organization

Correlations

	Corporate social responsibility	financial performance
Corporate social responsibility Pearson Correlation	1	.572**
Sig. (2-tailed)		.002
N	150	150
financial performance Pearson Correlation	.572**	1
Sig. (2-tailed)	.002	
N	150	150

**. Correlation is significant at the 0.05 level (2-tailed).

Interpretation

The interpretation of the hypothesis one tested, evidence from table above shows that corporate social responsibility significantly improved financial performance. This was found out at the significant value of

(.002) and Pearson moment correlation value (.572). Hence, the null hypothesis (Ho) was rejected while the alternate hypothesis (Hi) was accepted and thereby concludes that corporate social responsibility significantly improved financial performance

Hypothesis Three:

H₀: Corporate social responsibility does not significantly enhance organization's ability to attract and retain employees

Correlations		
	Corporate social responsibility	Organisation ability to attract and retain employees
Corporate social responsibility	Pearson Correlation 1	.769**
	Sig. (2-tailed)	.004
	N	150
Organisation ability to attract and retain employees	Pearson Correlation .769**	1
	Sig. (2-tailed)	.004
	N	150

**. Correlation is significant at the 0.05 level (2-tailed).

Interpretation

The interpretation of the hypothesis one tested, evidence from table above shows that corporate social responsibility significantly enhanced organisation ability to attract and retain employees. This was found out at the significant value of (.004) and Pearson moment correlation value (.769). Hence, the null hypothesis (Ho) was rejected while the alternate hypothesis (Hi) was accepted and thereby concludes that corporate social responsibility significantly enhanced organisation ability to attract and retain employees.

Hypothesis Four:

H₀: Corporate social responsibility does not significantly enhance brand, corporate image and reputation of an organization

Correlations		
	Corporate social responsibility	brand, corporate image and reputation of an organization
Corporate social responsibility	Pearson Correlation 1	.172**
	Sig. (2-tailed)	.001
	N	150
brand, corporate image and reputation of an organization	Pearson Correlation .172**	1
	Sig. (2-tailed)	.001
	N	150

**. Correlation is significant at the 0.05 level (2-tailed).

Interpretation

The interpretation of the hypothesis one tested, evidence from table above shows that corporate social responsibility significantly enhance brand, corporate image and reputation of an organization. This was found out at the significant value of (.001) and Pearson moment correlation value (.172). Hence, the null hypothesis (Ho) was rejected while the alternate hypothesis (Hi) was accepted and thereby concludes that corporate social responsibility significantly enhance brand, corporate image and reputation of an organisation.

5. Discussion of Findings

The research shows that corporate social responsibility (CSR) increases sales and customer loyalty in business environment and leads to increment in financial performance of an organization. It also shows that organizations with effective corporate social responsibility (CSR) attract investment opportunities as well as competent and qualified employment seekers are attracted to the organization. Corporate social responsibility (CSR) enhances brand, corporate image and reputation. This is in line with the work of Maigan and Ralson (2012). Also it was found out that there is a significant relationship between corporate social responsibility (CSR) and organizational performance which leads to mutual and cordial relationship between an organization and the hosting community, boosting the sales earnings and subsequently increases the profit margin of an organization.(Barnett 2007, Campbell 2007, Clarkson 1995).

The research also discovers that corporate social responsibility (CSR) can be used by Nigerian banks as a business strategy to promote products and services, improve profit and market growth of an organization. corporate social responsibility (CSR) promotes Nigerian culture and improves the standard of living of y, people. According to Mackey, Mackey and Barney (2007) CSR affects the market value of companies, also corporate social performance is usually measured by firms profitability, market value and growth (Schuler and Cordin 2006)

6. Conclusion

Corporate social responsibility (CSR) is an essential tool in promoting organizational products and services and impacting in quality of life and wellbeing of the society thereby building sustainable development not only in the hosting community but as well as the country at large. CSR is an intermediary between an organization, its stakeholders and the society as it connects them together in a mutual manner that they all benefit from the impact and effect of CSR. The importance of CSR cannot be over emphasized as it leads to improvement in standard of living of people and encompasses the existence, continuity and survival of the organization, the stakeholders and the society.

Recommendations

Corporate social responsibility (CSR) should be seen and taken as an important aspect of business and organizational management should state out in clear terms the plans, policies and strategies of CSR with a view of making life better for the people. Nigerian banks should take more drastic measures to improve their CSR to the society as they are recognized as the major economic driver in Nigerian as the decayed level of infrastructure cannot be left alone to the government and also extend and expand the privilege to the nook and cranny of the country. Government should provide enabling and conducive business environment to promote business activities that would lead to better performance of Nigerian banks and other business entities thereby enhancing their capabilities to contribute to the growth and development of the country.

Suggestions for Further Studies

In view of the findings of this research exercise, it is suggested that further studies on this work should consider areas such as corporate social responsibility (CSR) of small and medium enterprises (SMEs), CSR and organizational growth and development as well as embarking on the study of this nature using qualitative technique.

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Corruption as a Major Menace in Nigeria Civil Service; the Analysis on the Precedence.

'LERE-OYELEYE Oluwayemisi Esther

^{1,2}Department of Public Administration, Yaba College of Technology, Lagos, Nigeria

Email: yemsbuhari@yahoo.com

Abstract: This study examines corruption as a major menace in Nigerian Civil Service; The Analysis on the precedences. Hermeneutics model of Analytical Conceptual pattern was adopted for this study. It deduces its facts from literature on records of activities and proceedings of the Economic and Financial Crime Commission (EFCC) and Independent Corrupt Practices Commission (ICPC) (which are the main anti-corruption agencies in Nigeria) and data from Transparency International on corruption. The submissions of this study present the appraisals on contributions of the civil service officials to corruption and nature of the ever recurring civil service corruption. This study hereby contributes to the body of knowledge through prescription of articulated measures for minimizing corrupt practices in the Nigeria Civil Service.

Keywords: Corruption Plague, Retrospect, Civil Service, Menace

1. Introduction

Corruption is a menace that is long lost in human history and it remains a main challenge for developing countries around in the universe (Heineman, 2006). Nevertheless, corruption is different in gravity in different countries in the areas of social, economical and political concerns and the intensity has historically resulted in the discarding institutions, stripping of presidents of powers as well as removal of bureaucrats. The overall effect of corruption is felt in its threat to development. Development is hampered when development priorities are informed by corruption (Waziri, 2010). Essentially, development includes growth, human development and empowerment, reduction in poverty and dispersion. Development is seen as the transformation of society.

The objectives of increasing the capacity to regulate both internal and external relations cannot be achieved where corruption is widespread. Corruption, therefore poses a serious challenge to development. In economic development, corruption generates inefficiency by promoting mediocrity, and increasing the cost of business through the price for right payment (Oluwasanmi, 2007). Corruption is seen as misuse of public office for selfish gains. This condition is especially created by individual in places of public duties, trust and confidence, both high and low. Corruption thrives heavily in Nigeria, in almost every segment of daily life (Okekeocha, 2013). The remaining part of this paper shall be addressing a review of recent related literature on the subject matter, a discussion on types and nature of corruption practiced in Nigeria, effect of civil service corruption on Nigeria development, summary of the findings, conclusion and recommendations.

2. A Review of Recent Related Literature

A systematic study in concerning corruption may fail, if there is no aptness in the definition of the phenomenon, therefore, any reasonable study in this area requires vivid scrutinisation of the subject matter. This corruption is an ever recurring menace both in public and private institutions in a polity and this fact is supported by Osunyikanmi (2009) opines that the menace cannot be alienated from official manipulations ranging from mere settlements to bribery and its similitude, even to grave cases of fraud which are common in contemporary Nigeria. Dikko (2011) views corruption to be increasing on a daily basis. He indicates that the monies stolen from May 1999 - mid 2006 were more than all the stolen monies by our past leaders from independence till handing over to the democratically elected government. Since then, the endemic act has been on the rise. Adewale (2011) explains corruption as using the funds meant for development for purposes different from the initial intention. Funds intended for public use in Nigeria have been diverted into private purses and accounts run overseas thus, rendering polity poor infrastructure-wise and developmentally. The country is seriously

soaked in this menace to the extent that the international communities have seen corruption as a culture of Nigeria. In year 1995, USA secretary of state was of opinion that corruption is imbued in some cultures. however, this argument has been disputed by illustrating the level of corruption in territories like Russia under Joseph Stalin, Ukraine and the rest in the years of reign of Soviet Union because Communism was and is never a system with culture of corruption, nevertheless, the fore mentioned territories became corrupt, in lieu of this, corruption is rather a universal practice that supersedes custom and culture. Adewale (2011) further entrenches that tracing the cause of corruption in any polity would afford the consideration of the type of government ruling as well as the level of development in the country

Tanzi (2006) among others, has however stated that ruling segments of some countries intentionally create comfortable channels for indulgence in corruption. The researcher has found this to be similar with realities in Nigeria as the menace is at its extreme. This is a common understanding in Nigeria that the state powers intentionally indulge in the menace to break into defenses of the legislative arm in order to control it for perpetration of more corruption. Ogbeidi (2012) examines the level of corruption in Nigeria since independence (1960) and was of the view that the menace is the repelling factor militating against development in Nigeria Anifowose (2007) states;

“Simply defined, corruption is the abuse of public office for private gain. Public office is abused for private gain when an official accepts, solicits or extorts bribe, it is also abused when private agents actively offer bribes to circumvent public policies and processes for competitive advantage of profit.” P 4

The rating of Nigeria on corruption is evidenced in the records of Transparency International Agency from 1997 to 2010 as tabulated below:

“Nigerian Corruption Perception Index 1997-2010

Year	Index of Perception	Number of Countries Evaluation Is Carried Out On	Assessment
1997	1.30	52	52
1998	1.90	85	81
1999	1.90	99	98
2000	1.90	90	90
2001	1.60	102	100
2002	1.70	91	90
2003	1.40	133	132
2004	1.60	145	144
2005	1.90	158	154
2006	2.20	163	142
2007	2.20	183	127
2008	2.20	183	127
2009	2.70	180	130
2010	2.40	178	134

SOURCE: Transparency International Agency 2011

The gross of corruption is evidential on the table above, for instance, 54 countries were evaluated for transparency in 1996 and Nigeria was 54th in ranking, which means Nigeria was the most corrupt of all evaluated in the year, the subsequent years were similar. As ever increasing as corruption is in Nigeria so is its discussion and suggestions on how to prevent it, which can only be materialize through instrumentalities of the law but the legal sector itself is plagued with the menace and is therefore incapacitated in the curbing of

same. (Oyeyipo 2009). The possibilities for Nigerians to engage in corruption has ever been on the increase and begging for urgent attention as most bureaucrats who perpetrate this are officers who has long served in military eras while the younger generations of officers who are corrupt only following the long standing notoriety of their autocratic overlords. (Okekeocha 2013; Ogundiya 2009). The statement is further solidified in the description of the situation thus:

Since the nationalist politicians had gained control of regional state apparatus in 1950s the exercise of state power was closely linked to the economic advancement of individuals, community sectarian and ethnic interests (Stevens, 2004)

Succinctly put, corruption is an illegal act that works in contrary to the structured mode of operation as well as the process. It not only perverts justice, it compromises it (Babawale & Onuoha, 2007, Lawal, 2006). Sequel to the foresaid, this study examines the Nigerian civil service and the inherent corruption in Nigeria. It has been noted that when corruption is highly tolerated, the system fails to extend provision of amenities to majority of the citizens. It is also an open secret that many Nigerians in the public service are highly corrupt and the corruption level increases from year to year (Fabayo, 2011). This research aims at examining the parameters that give rise to unethical behaviours termed corruption in the Nigerian civil service. The central aims of this research are to: (i) Appraise the correlation between corruption and the functioning of the Nigerian Civil Service (ii) Identify the role of civil servants in encouraging the menace in the system (iii) Examine the nature and pattern of corruption in Nigerian Civil Service (iv) Examine efforts that have been made in the past to curb corruption in Nigeria.

Sole proprietorship or jointly owned non-governmental organizations often see bribes as handy tool to manipulate business situations in their favour. On the other hand, civil servants manipulate laid down processes for selfish gains, regardless of what the adverse effect of the abuse of office might bring on the system. The private sector launders money, racketeers in the stock market and engages in fraud. These are all manifestations of corruption. Whenever the civil service established to handle businesses on behalf of government of the day does that unethically, corruption is said to have taken place (Ebegbulem, 2009; Tolu & Ogunro, 2012).

Adewale (2011) researches the impact of corruption in Nigeria, covering the periods between 1996 and 2009. He makes use of the simulation approach to examine the economic implication of corruption in the country. He establishes, after analyzing all the tests, that there exists a negative correlation between corruption and economic growth which implies that the menace negatively affects economic growth in Nigeria. Fabayo (2011), in the course of their research investigates the effects of corruption on investments in Nigeria utilizing the yearly corruption perception record having Nigeria as a case study between the years 1996 and 2010. The research blames abnormal high level of corruption as the cause of low investment rate in Nigeria

In a related research carried out by Akindele (2005), which investigates the correlation between corruption and development in Nigeria, the result reports that corruption intensity diminishes growth as negative correlation is established and any manifestation of corruption combats growth in any polity. Structural functional theory has been found useful and most appropriate for the analysis of this study. Ebegbulem (2009) posits that the central thesis of the structural functionalist theory is the concept of functions and structures. These functions are summarized into inputs and outputs. Inputs involve interest articulation and interest aggregation. On the output side is rulemaking, rule-applications, and rule adjudication.

The function of political communication is to educate all inside the political framework and outside of the differing engagements. Each system plays out the capacity of system maintenance and adjustment through political interrelationship and hiring of personnel. The fore-stated framework is effective if each procedure therein is adequately carried out, as it is established that individual performed activity fulfills the purpose of attempt (Onah 2010). The anti-graft organizations such as the Independent Corrupt Practices Commission (ICPC) and the Economic and Financial Crimes Commission (EFCC) must perform their statutory functions effectively. When these functions are performed, the political system will be at equilibrium. But, when such

functions are not performed due to lack of commitment and self interest as well as inadequate policies, the system is therefore said to have produced strains. As such, the society will be at disequilibrium (Tanzi, 2006).

3. Types of Corrupt Practices in Nigeria

Corrupt practices in Nigeria come in many dimensions but four types were pinpointed by Tolu and Ogunro (2012) and are stated below:

- i. *"Moral Corruption:* This is shown in sexual immoralities, provocative dressing, leaks of classified information, covetousness and the likes; they fall in category of moral corruption.
- ii. *Electoral Corruption:* Forms of corruption under this category range from unauthorized voters registration to registration of unapproved persons, rigging, ballot hijacking, violence and the similitude
- iii. *Economic Corruption:* e.g. producing counterfeit medications, defilement of beverages, theft i.e. replicating someone else's scholarly work to unlawfully advance oneself (Plagiarism), misrepresentation at all levels and so on.
- iv. *Political and Official Corruption:* the forms of corruption under this category are misuse or manipulation of political or bureaucratic status for selfish reasons other than the initial purpose.

Literature is not limited to the above fore-mentioned types; other types are religious corruption, educational corruption, family corruption, and so on

Causes of Corruption

It has been observed that the following are the causes of corruption among others based from facts gathered from thorough review of related frontiers. Firstly, it has been established that ample chances to participate in corruption and availability of established corruption aiding laws enhance and expand the frontiers of corruption. Secondly, lack of sound history of serious punishment meted out to people who engaged in corruption in the past entices people to engage in same. thirdly, greed as another cause of corruption is an uncontrolled thirst after acquisition of wealth and material things at all cost regardless of the law, morality of ethics, the fourth point is the state's undue monopoly on factors of production which places unnecessary pressure on state officials to create illegal alternatives in meeting citizens' needs and demands for monopolized goods and fifth, poverty in the polity and poor condition of services experienced by state officials may trigger thoughts of corruption as the only available option for survival.

Sixth, decadence in morality within the domain of culture, when acts of corruption are no longer pronounced forbidden in a culture, people easily degrade to the level of perpetrating the menace at any opportunity. Seventh, job and social insecurity makes corruption an option for bureaucrats that are neither sure appointment termination nor non-payment of pensions will not be experienced in order to prepare for living at their old ages. Eighth, pressures from families, religions, communities and other commitments on officials often make the earnings insufficient to cater for the numerous needs and these may increase tendencies to be corrupt. Ninth, absence of workers' motivating elements such as job enrichments, career development programmes, sound remuneration system, incentives for exceptional performance may reinforce negligence in duty and perversion of duties for self-gain which is corruption. (Agbor, 2011; Agbor, 2012; Ezirim, 2010; Ebegbulem, 2009; Ogbunwezeh, 2007)

4. Effects of Civil Service Corruption on Nigeria's Development

The challenges mounted on Nigeria's development by the corruption perpetrated in the civil service are now discussed; First, sustainable development is hampered as corruption is found everywhere in Nigeria, from citizens' informal platforms to the core government institutions such as the ministries, military, immigration services, the police and even the legal sector and this has gone a long way in undermining the overall development in the system (Fabayo, 2011; Adewale, 2011). Second, lack of accountability and transparency is a sister to corruption and has immense effect on the polity. In the year 1980, Nigeria had N5.5 billion in her foreign reserves, but no later than two years after, the reserve was just a Billion Naira and no reasonable explanation was made to justify the loss of the chunk of national fund. The most accused foreign taste of

Nigeria can be adduced to corruption as officials collaborate and award import licenses for foreign goods like packed juice, toothpicks, tissue papers, that actually have negative impact on local industries. Thirdly, lack of political will and commitment is another effect, Nigerians are aware of corruption in public offices. Therefore, they have little or no commitment towards political activities as it is seen as a sham and ways of misleading the polity. Fourth, increased violence in the society ensues as a resource of corruption.

The record has it that determined efforts to curb corruption make violence rates rise, this is evident in cases in Italy, Columbia, USA and other countries. In Nigeria, the late Dr. (Mrs.) Dora Akunyili, when she was NAFDAC boss narrowly escaped assassination on her way to Owerri due to her determination to clean the society of fake drugs. (Owolabi, 2007; Ijewereme, 2013). It is undoubtedly a hard venture to submit an accurate record of every bribery, fraud and embezzlement within the civil service, but past Nigerian leaders have attempted curbing the menace. Osunyanmi (2007) made a list of these efforts:

- *“The purging of Corrupt officials in the civil service in 1975 by Muritala’s administration; the establishment of the code of conduct bureau for public officers;*
- *The Ethical Revolution introduced by the Shehu A. Shagari’s Administration in the second republic (1978-1983)*
- *The anti-corruption tribunals established by the Buhari-Idiagbon’s administration to try the politicians who were overthrown in 1983 (1984-1985)*
- *The trial of former Minister of petroleum resources by Babangida Administration in 1991 for corruptly accepting a gold wristwatch and a luncheon from a contractor while in service.*
- *The numerous probe panels established by the Sani Abacha’s administration in 1994/1995 soon after assuming power; and*
- *The enactment of the corrupt practices and other related offences, Act. 2000, by the Obasanjo administration”*

5. Summary of Findings, Conclusions and Recommendations

Going by the foregoing, it is apothegmatic and appealing to truism to recommend that all functioning anti-graft bodies in the system should be empowered technologically and constitutionally more than ever. The individual anti-corruption agencies, having been empowered to enjoy a sizeable independence, should not work individually and in isolation but in collaboration with other similar agencies to pool resources together against corruption. The stated recommendations are submitted as possible solutions and a redemption to the damages that the ever recurring corruption has caused in the Nigerian societies. These damages are manifested in Nigerian politics, economy, religions among others and even to the foreign perception of Nigeria as a country.

The foreign perceptions are informed by various reports of economic sabotage, prioritizing personal interests above due process among the state office holders which has seriously threatened the smooth operations of democracy in the polity. By saturating the system with continuous graft fighting by the authorized agencies, the system will gradually rid self of fertile land of breed for corruption. In respect to the findings of the study, the following recommendations are made: First, Nigeria should ensure the independence of anti-corruption agencies in her system. This simply means freedom from direct control of the agencies from the three arms of government but nevertheless, they should work in synergy.

The executive arm of government should not be given power to directly determine the remuneration of the officers of anti-corruption agencies, the remuneration is recommended to be determined by an act of parliament. This is believed to be a major recipe for uninterrupted combat of corruption regardless of the entities involved. Second, monopoly in areas of manufacturing and services should be highly discouraged. Third, it is also recommended that Nigerian anti-graft bodies form alliances with their counterparts in the international communities in order to spread their web of activities beyond the borders of Nigeria when the need arises. Fourth, Publicity and Orientation of citizens on corruption and its dangers should be seriously upheld and the researcher has found out that in the Nigerian present day setting, National Orientation Agency (NOA) should be charged with this responsibility.

Fifth, as gigantic as the boundaries of corruption are, so should they be given great attention, in considering this, the researcher recommends a special corruption court, working specially on corruption cases. Sixth, any system that will sanitize another needs be clean itself, so, it is recommended that officials of the anti-graft agencies from down to the top down are duly scrutinized on past endeavors in order to check for worthiness of holding such offices entrusted with such trust. Seventh, transparency and accountability is recommended in the government, it should be constitutionally entrenched that political and top bureaucratic office holders carry out periodic declaration of assets and assessed to ensure a transparent system.

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Problems of CBT Exams in Nigeria Tertiary Institutions: Emphasis on English Language Courses

Ehuwa, M.F.

Department of Languages, Yaba College of Technology, Lagos, Nigeria
ehuwamonday@gmail.com

Abstract: The outermost concern of this paper is to give a constructive criticism on the idea of using computer based testing (CBT) to examine or test the knowledge of students of tertiary institutions in English language courses, such as Use of English and Communication in English vis-à-vis Literature. It is an open-secret that most Nigerian tertiary institutions are not equipped to use this method to examine students. The truth of the matter is that this problem also obtains in developed countries. There is no way the CBT can be used to test the knowledge of students in their courses especially English Language courses that are used to test the proficiency, efficiency and competency of our students in the use of English to communicate

1 Introduction

It is pertinent to explain what is meant by CBT. The Computer Based Testing popularly known as the CBT is an act of setting objective questions, or true or false questions via the computer to test the knowledge of the students during their examination period. This type of examination style can be attempted by anyone; either a student that has attended lectures and prepared for it or any other person that is so interested. What is required is just for the person involved to choose from the given options (A – D / A – E). It is so easy that without a student preparing very well, he can still pass based on the fact that there are no theory sections demanding him to write by expressing himself. The main concern of this paper is the effect this brand of examination will have on the standard of education in Nigeria.

With need no soothsayer to tell us that the CBT will have a negative effect on the standard of education because of its shortcomings. Even in the developed countries where this style of examination emanated from, the effect is also negative on the standard of their educational sector. Tennessee scrapped its computerized examination (due to the negative effects it has on the students) and returned to the paper and pencil version when schools recorded a number of problems on the first day of the test. They experienced; grading problems, tests scores inaccurately recorded and in recent times Tennessee and other states in America also experienced cyber hacking of CBT results and massive outage. Schaeffer (2013) pg16 opines that “when the testing administration system is dysfunctional, the results are suspects, if not useless”.

By dysfunctional he means the outcomes of the CBT examinations are abnormal and incorrect. He is a public education director at FairTest – a non-profit organization that serves as a national watch dog on and frequent critic of k – IZ testing. Computer based testing is taking a test on a computer, using the keyboard and mouse to answer questions that appear on the computer monitor. According to Wikipedia, the CBT system is a Java Desktop Application designed by integration of Java and MySQL to help provide a flexible platform whereby Computer Based Tests can be organized and performed. In the same vein Class gist postulates that CBT system is a window based application that was designed to eliminate the problems associated with paper and pencil system to testing the knowledge of students.

2. Discussions

The inventors of the CBT exam acted based on the technological advancement in the universe. Almost everything has been computerized. They never envisaged the negative impacts it will have on students generally in the immediate and nearest future. To them the CBT exam is easy to set and administer to students via the computer, and the fair play of timing. Besides, they see it has reducing the stress of reading while studying hard for an exam. It is also an instant result exam technique. They have forgotten that everything on

earth has two sides; the positive and negative. To this end the negative effects of the computer based testing outweigh the positive effects when placed side by side.

The whole world cannot develop at the same pace, that is why we have the growing pace of countries in three categories, viz;

- i. Developed countries
- ii. Developing countries, and
- iii. Under-developed countries

The three identified categories will make it clear that what obtains and works in one or more countries may not be obtainable or work in other countries. Even when we are in the computer age, some countries are still lagging behind, especially in Africa. This of course can be anchored to our system of governance and the attitude of our people. We have observed with dismay that Africans (leaders and people) are fond of imitating the ways, life and practice of the western world which should not be so. It is better to look before you leap, that is we should study the ways, practice of the whites before we emulate them. It is not wrong to emulate the one that will pay us without any hard adverse effect and the CBT is not one of the ways of the whites to be emulated by the blacks.

As earlier mentioned Tennessee a state in the United State of America has stopped the use of the computer to test the knowledge of their students. This clearly shows that there is a variable in this research that is constant, that variable is the students' knowledge. It is a fact that students do acquire knowledge through learning. This learning is via different subjects and while applying this knowledge it becomes wisdom. Is this possible through the CBT examinations?

The ultimate aim of this paper is to x-ray the negative effects of the CBT to administer English language courses such as Use of English, Communication Skills, Business Communication, Literature in English, etc. in Nigeria tertiary institutions. These are courses made compulsory in the university and polytechnic systems via the NUC and NBTE syllabi. These negative effects of the CBT on the standard of Nigerian education cut across all disciplines.

3. Negative Effects of CBT on Students Performance

The computer based testing used to test the knowledge of students during various examinations has a lot of implications on the students concerned and the standard of education in the country, state or institution that adopts that system of testing the knowledge of students in various subjects especially English. The negative effects are enormous

a) Computer Competency

We cannot shy away from the fact that many of our students' population in Nigeria are not computer literate. Since they are from different backgrounds, some may enjoy the rich parent phenomenon while others suffer the poor parent syndrome. Some homes can afford paying for computer training, while others cannot. A student that cannot operate the computer system or understand the computer language will definitely fail the computer based testing no matter his high level of brilliance. But such a student can perform excellently in the pencil and paper examination.

b) Fluctuating Server

It is a known fact that while working on the computer or using the computer for a research or any other thing, there is bound to be an interruption of the server. In other words the server is not stable. Now when this happens the students concerned are constrained to continue with the exam. What is really affected here is the time allotted to the exam. The time will not stop, but keep on running at the expense of the students. The sad story here is that, the server may not come back till the end of the test.

c) Epileptic Power Supply

As realists we must agree that in Nigeria, we experience epileptic power supply. This happens in all our homes even when some can afford to buy generators of different grades, they still experience the unstable nature of

our power supply. No matter how prepared an institution is to make the CBT works efficiently the power outage will always be there. If the generator is now chosen as the source of power it can still experience mechanical faults or fuel shortage. Again when this happens during the CBT exam, it affects the time allotted for that paper. By interpretation this has a negative effect on the performance of the students concerned.

d) Problem of Communication Skills

The CBT system of testing the knowledge of the students will not allow them to display the use of English in terms of expression via the communication skill. This has to do with the grammaticality and ungrammaticality in the expressions of the students. As we all know English is the only language that is generally spoken in Nigeria. But the CBT will prevent them from displaying the knowledge they have acquired in that course, especially English oriented courses.

e) Problem of Letter Writing

All students in Nigeria tertiary institutions are mandated to offer courses in English on different topics, such as letter writing. The students would have been taught how to write; formal letters, informal letters, semi-formal letters and business letters. The memo and circular are not excluded. It becomes a sad thing to the students when they are denied the opportunity to display the knowledge they have acquired in writing different types of letters. It is these same sets of students that become bosses in their different offices after graduation. Some may not be able to write a query, proposal, application, memo and other relevant business letters germane to their works and positions simply because they only passed through the computer based testing examination throughout their time in higher institution. Some may not even be able to write minutes of a meeting when called to do so.

f) Problem of Essay Writing

The CBT style of examining the students will deprive them the opportunity of writing essays of different types during examination periods. When this happens throughout their stay in the tertiary institution, the resultant effect is that in the future such students would not be able to write any compositions when invited or asked to do so. This again borders on the expressions skills of the students. This also applies to writing seminar and conference papers.

g) Problem of Report Writing

Students are meant to be trained and groomed in schools to become better people tomorrow. A student that is drilled to pass through the CBT form of examination throughout his studentship is now a site supervisor, how will he or she write a good site report. Practice they say makes perfection. If students are allowed to use the pencil and paper style of writing examinations then they can write better after graduation. The report writing cut across almost all the industries, organisations, offices etc. where report writings are inevitable. In fact, without report writing some organisations or companies can never function effectively.

h) It Encourages Indolence

The CBT system of examination encourages laziness amongst our students. This is because the CBT exam does not require serious reading. Some students will not attend classes regularly based on the fact that the CBT is like playing a lottery. Answers are provided for the students to choose the correct option. There is no brain tasking work during the CBT examination. It is possible for a dullard to pass the CBT, but can never pass the pencil-paper based examination.

4. Conclusion

The CBT system of administering examinations is no doubt a global trend, but this method of accessing the knowledge of students in various courses especially English Language courses has some shortcomings and will continue to have them. These shortcomings are the negative impacts this system of examination has on the students and the standard of education in each country or state. These negative impacts have been discussed, including grading problems, tests scored inaccurately and others, all these will in no small measure affect the standard of education in Nigeria. It is never a good way of testing the knowledge of students. It

kills the potentials inherent in each student. The students have been confined and restricted to the extreme in terms of writing examinations. It is only the paper – pencil examination that gives the students the opportunity to display and make maximum use of their potentials and acquired knowledge during examination. It will also affect the spoken English of our students, since they are denied the opportunity of expressing themselves. Practice (they say) makes perfection. And the best way to learn a language is by speaking it.

This system cannot survive in Nigeria, because it is not fit and suitable for our educational system. We therefore advise the schools that have been adopting this style (CBT) should revert back to the paper – pencil style of writing examinations. If Tennessee a state in USA can stop the CBT system of conducting examinations, then we can also stop it in Nigeria.

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Application of Green's Functions in Solving Non-Homogenous Differential Equations Using Initial and Boundary Value Conditions

IGE, S.A., BAKRE, F.O., BAIYERI, J.F., Esan, O.A.

Department of Mathematics, Yaba College of Technology, Lagos, Nigeria

Abstract: Basically, there is particularly close connection between differential, integral operators and the boundary conditions with which one is familiar. This connection between differential, integral operators and the boundary conditions is essentially the theory of Green's functions. In this paper, a brief discussion of basic ideas of functions were considered, various classes of Green's functions were also discussed. The first part deals with the Green's function method that is the construction of Green's function for initial and boundary value problems with illustrative examples. The second and the last part deals with the physical interpretation of Green's functions.

Keywords: ICT, Policing, virtual community policing.

1. Introduction

The use of Green's functions to solve differential equations grew out of a study of a special partial differential equation and the boundary conditions called the Dirichlet problem. It was later discovered that a similar function (Green's function) could also be used in the analysis of ordinary differential equations featuring non – homogeneities. Some of these functions include Neumann's functions, Robin's functions etc. which are generally called Green's functions. Neumann function is a function N_n derived by

$$N_n(z) = \frac{1}{\sin n\pi} [\cos n\pi Y_n(z) - Y - n(z)],$$

Where Y_n is a Bessel differential equation (if n is not an integer) whereas, Robin's function $R_{K,h}(\rho, Q)$ is a function of the form

$$R_{K,h}(\rho, Q) = \frac{1}{4\pi r} + V(\rho),$$

where r is the distance, (ρ, Q) and $V(\rho)$ are harmonic.

In other word, Green's function is a new way to solve differential equation. Another fascinating discovery which is peculiar to Green's function is that there is a particularly close connection between differential and integral operators, and the boundary condition with which one is familiar from the theory of differential equations play a crucial role in linking the two. That is to say the connection between differential and integral operators, and the boundary conditions is essentially the theory of Green's functions.

It is worth noting that before the discovery of Green's functions for solving differential equation, there have been ways/methods for solving differential equations in which case a non – homogeneity arises in the mathematical formulation of the problem. Such methods include: method of undetermined coefficient and variation of parameter technique. However, the main disadvantage in the above approach is that it usually give very little insight as to how the system being studied responds to each input parameter independently, and yet such information is often vital in understanding the fundamental characteristics of the system. In other words, a systematic procedure for solving non-homogeneous differential equations that not only has a special physical significance, but leads itself as well to the development of general solution formulas is attributed to George Green and is of course known as Green's function which is a powerful tool based upon the construction of a special function.

Basic Ideas of Functions

Leibniz first used the term function in 1694 to refer to certain line segment whose lengths depend on lines related to curves. Soon, the term was used to refer to dependent quantities or expressions. According to Euler and Clairant, functions are defined as analytic formulas constructed from variables and constants. Cauchy in his own view, describe function as when there is a relation among many variables, which determines along

with values of one of them, the values of the others we usually consider the others as expressed by the one. We then called one 'independent variables' and the other 'dependent variables'. However, in a more concise manner, a function is simply a correspondence in which values of one variable determines values of others. Today, the word "function" is used in Mathematics in the same sense as mapping. Specialist in each branch of Mathematics have their respective ways of using the word. They refer to some as real valued function or complex valued function. Below are some types of functions: Gamma function, Bessel function, Beta function, Delta function, Harkel function ad Neumann function etc.

Definitions of Green Functions

- (a) The Green's function $g(t, y)$ associated with non homogeneous initial value problem.
 $N(y) = f(t)$, $t > t_0$, $y(t_0) = k_0$, $y'(t_0) = k_1$, where $N = D^2 + a_1(t)D + a_0(t)$, $D = \frac{d}{dt}$ is a function satisfying the following conditions ($Y > t_0$)
- (i) $N(g) = \delta(t - Y)$ (Y fixed)
 - (ii) $g(t_0, Y) = 0$, $\frac{\partial g}{\partial t}(t_0, Y) = 0$
 - (iii) $g(Y^+, Y) = g(Y^-, Y)$ (g is continuous at $t = Y$)
 - (iv) $\frac{\partial g}{\partial t} \Big|_{t=Y^+} - \frac{\partial g}{\partial t} \Big|_{t=Y^-} = 1$
- (b) The Green's function $g(x, s)$ associated with the boundary value problem
 $L[y] = f(x)$, $x_1 < x < x_2$, $B_1(y) = \alpha$, $B_2(y) = \beta$.
 Where $L = D[P(x)] + q(x)$, is a function satisfying the following conditions ($x_1 < s < x_2$)
- (i) $L(g) = -\delta(x - s)$, $x_1 < x < x_2$ (s fixed)
 - (ii) $B_1(g) = \alpha$, $B_2(g) = \beta$
 - (iii) $g(s^+, s) = g(s^-, s)$
 - (iv) $\frac{\partial g}{\partial x} \Big|_{x=s^+} - \frac{\partial g}{\partial x} \Big|_{x=s^-} = -\frac{1}{P(s)}$
- (c) Given the differential equation
 $a_0(x)y'' + a_1(x)y' + a_2(x)y = 0$ and the boundary conditions
 $y(a) = y(b) = 0$.
 A function $G(x, s)$ with the property that
- (i) $G(x, s)$ satisfies the given differential equation for $a \leq x \leq s$ and for $s < x \leq b$
 - (ii) $G(a, s) = G(b, s) = 0$ for $a \leq s \leq b$
 - (iii) $G(x, s)$ is a continuous function of x for $a \leq x \leq b$.
 - (iv) $G_x(x, s)$ is continuous for $a \leq x \leq s$ and for $s < x \leq b$ but has a step discontinuity of magnitude $-\frac{1}{a_0(s)}$ at $x = s$ is called the Green's function of the problem defined by the given differential equation and its boundary conditions
- (d) A function $G(p, p_0)$ of two variables points P and P_0 which satisfies the following conditions will be Green's function for the equation $\nabla^2 u = f(p)$ subject to the conditions $[u]_s = F_0(s)$ or $\left[\frac{\partial u}{\partial s}\right]_s = F_1(s)$ or Green's function for the Dirichlet problem.
- (i) $G(P, P_0)$ is a harmonic function of the point P throughout the domain η including the point P_0 itself
 - (ii) As a function of the point P , $G(P, P_0)$, satisfies the condition $[G(P, P_0)]_s = 0$.
 - (iii) In the domain η , $G(P, P_0)$ can be expressed in the form $G(P, P_0) = \frac{1}{4\pi r} + g(P, P_0)$ where r is the distance between P and P_0 , and $g(p, P_0)$ is a regular harmonic function.

2. Classifications of Green's Functions

There are three basic classifications of Green's functions and they are as follows:

- (a) Green's function in one dimension
- (b) Green's function in two dimensions
- (c) Green's function in three dimensions

(a) Green's Function in One Dimension

We consider the equation of the forced, damped harmonic oscillator,

$$x(t) + 2\gamma \dot{x}(t) + W_0^2 x(t) = F(t) \quad (1)$$

where differentiation with respect to time was indicated by a dot. Unit of mass is chosen such that $m = 1$, γ is essentially the coefficient of frictional drag, W_0 is the square root of the (positive) spring constant, and $F(t)$ is the external driving force.

We assume that $F(t)$ has a Fourier transform

$$F(k) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\infty} e^{ikt} F(t) dt$$

Since we assumed that $F(t)$ has a Fourier transform $F(k)$ must go to zero for large $|t|$. This, coupled with the presence of damping, makes it recognizable to assume that $x(t)$ and its first derivative go to zero for large $|t|$ and therefore their Fourier transforms exist. Taking the Fourier transform of both sides of (1), we get

$$\frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\infty} (x + 2\gamma \dot{x} + W_0^2 x) e^{ikt} dt = F(k)$$

$$\text{Let } x(k) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\infty} e^{ikt} x(t) dt,$$

$$\text{then } \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\infty} \frac{d^2 x}{dt^2} e^{ikt} dt + 2\gamma \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\infty} \frac{dx}{dt} e^{ikt} dt + W_0^2 x(k) = F(k) \quad (2)$$

In the first term we integrate by parts once to get

$$\int_{-\infty}^{\infty} \frac{d^2 x}{dt^2} e^{ikt} dt = \left[\frac{dx}{dt} e^{ikt} \right]_{-\infty}^{\infty} - \int_{-\infty}^{\infty} \left(\frac{dx}{dt} \right) \frac{d}{dt} (e^{ikt}) dt = -ik \int_{-\infty}^{\infty} \left(\frac{dx}{dt} \right) e^{ikt} dt$$

Here the contribution from the end points vanishes since we assume that $x'(t)$ and $x(t)$ may be Fourier transformed and therefore vanish at large distances. Thus, equation (2) implies that

$$\frac{(2\gamma - ik)}{\sqrt{2\pi}} \int_{-\infty}^{\infty} \left(\frac{dx}{dt} \right) e^{ikt} dt + W_0^2 x(k) = F(k) \quad (3)$$

Finally, we integrate by parts once more and use the boundary conditions of infinity to find

$$\frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\infty} \left(\frac{dx}{dt} \right) e^{ikt} dt = -ik \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\infty} x(t) e^{ikt} dt = -ik x(k)$$

Hence equation (3) becomes

$$(-k^2 - 2i\gamma k + W_0^2) x(k) = F(k) \quad (4)$$

Since $(W_0^2 - 2i\gamma k - k^2)$ has no zeroes on the real line

$$x(k) = \frac{F(k)}{-k^2 - 2i\gamma k + W_0^2}$$

and by the basic result on Fourier transforms,

$$x(k) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\infty} \frac{F(t')}{-k^2 - 2i\gamma k + W_0^2} e^{-ikt} dk$$

using the definition of, $F(k)$, we get

$$x(t) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\infty} dk \frac{F(t') e^{ikt'}}{-k^2 - 2i\gamma k + W_0^2} e^{-ikt}$$

Finally, we can add an arbitrary linear combination of solution to the homogenous equation to get the general solution.

$$x(t) = Ax_1(t) + Bx_2(t) + \int_{-\infty}^{\infty} G(t, t') F(t') dt' \quad (5)$$

$$\text{where } G(t, t') = \frac{1}{2\pi} \int_{-\infty}^{\infty} \frac{e^{ik(t-t')}}{-k^2 - 2i\gamma k + W_0^2} dk, \quad (6)$$

and A and B must be chosen to satisfy the boundary conditions.

For the two linearly independent solution of the homogeneous equation, we may take

$$x_1(t) = e^{i\gamma t} \sin\left(\sqrt{W_0^2 - \gamma^2} t\right) \quad (7)$$

$$x_2(t) = e^{i\gamma t} \cos\left(\sqrt{W_0^2 - \gamma^2} t\right) \quad (8)$$

However, the Green's function of interest has been given by

$$G(t, t') = \frac{1}{2\pi} \int_{-\infty}^{\infty} \frac{e^{ik(t-t')}}{-k^2 - 2i\gamma k + W_0^2} dk$$

(b) Green's Function in Two Dimensions

Let us consider a non homogenous P.D.E. in two space variables such as, for instance a Poisson equation

$$\frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2} = f(x, y)$$

Specifically, we shall discuss the static deflection of a rectangular membrane. Then the known function $f(x, y)$ represents the external load per unit area, divided by T (tension in the membrane). The deflection $u(x, y)$ of the membrane must satisfy the boundary condition.

$U(0, y) = u(a, y) = 0$, $u(x, 0) = u(x, b) = 0$. A concentrated force F acting at the point (ξ, η) may be simulated by a two dimensional δ - function.

$$\frac{F}{T} \delta(x - \xi) \delta(y - \eta)$$

According to the concepts of superposition, if we solve the equation

$$\frac{\partial^2 G}{\partial x^2} + \frac{\partial^2 G}{\partial y^2} = \delta(x - \xi) \delta(y - \eta)$$

and obtain the two - dimensional Green's function $G(x|\xi, y|\eta)$, then we can represent the solution of the original P.D.E. by the integral

$$u(x, y) = \int_0^c G(x|\xi, y|\eta) f(\xi, \eta) d\xi d\eta$$

of course, $(G(x|\xi, y|\eta))$ must satisfy the same boundary conditions as $u(x, y)$. One way to approach the problem of obtaining Green's function is to empty the expression in terms of the eigen functions $\Psi_\lambda(x, y)$ of the laplace differential operator, namely, the function of satisfying

$$\nabla^2 \Psi_\lambda(x, y) = \lambda \Psi_\lambda(x, y)$$

and the same boundary conditions we are dealing with. We know that the eigenvalues are of the form

$$\lambda_{mn} = -\left(\frac{m^2 \pi^2}{a^2} + \frac{n^2 \pi^2}{b^2}\right) (m, n = 1, 2, 3, \dots)$$

and the corresponding eigen functions is

$$U_{mn}(x, y) = \frac{2}{\sqrt{ab}} \sin \frac{m\pi x}{a} \sin \frac{n\pi y}{b},$$

which has been normalized to unity, for convenience. Therefore we seek $G(x|\xi; y|\eta)$ in the form

$$G(x|\xi; y|\eta) = \frac{2}{\sqrt{ab}} \sum_{m=1}^{\infty} \sum_{n=1}^{\infty} A_{mn}(\xi, \eta) \sin \frac{m\pi x}{a} \sin \frac{n\pi y}{b}$$

substituting this into the PDE for G , we obtain, by standard techniques,

$$-\left(\frac{m^2 \pi^2}{a^2} + \frac{n^2 \pi^2}{b^2}\right) A_{mn} = \frac{2}{\sqrt{ab}} \sin \frac{m\pi \xi}{a} \sin \frac{n\pi \eta}{b}$$

which immediately yields

$$G(x|\xi; y|\eta) = -\frac{A}{ab} \sum_{m=1}^{\infty} \sum_{n=1}^{\infty} \frac{\sin \frac{m\pi x}{a} \sin \frac{m\pi \xi}{a} \sin \frac{n\pi y}{b} \sin \frac{n\pi \eta}{b}}{\frac{m^2 \pi^2}{a^2} + \frac{n^2 \pi^2}{b^2}}$$

The expression is recognized as a bilinear formula for Green's function. The solution of the Poisson equation can now be written as

$$U(x, t) = - \sum_{m=1}^{\infty} \sum_{n=1}^{\infty} \frac{a_{mn}}{\frac{m^2 \pi^2 a^2 + n^2 \pi^2}{b^2}} \sin \frac{m \pi x}{a} \sin \frac{n \pi y}{b}$$

where a_{mn} are appropriate expansion coefficients for the function $f(x, y)$

$$a_{mn} = \int_0^a \int_0^b f(x, y) \Psi_{mn}(x, y) dx dy$$

(c) Green Function in Three Dimensions

Three dimensional Green's functions is an improvement on both one dimensional and two dimensional Green's functions. Since three dimension corresponds to the real world, it is not surprising that the problems are harder in this case. However, there is a particularly important operator in three dimensions which yields readily to the Fourier transform method.

The operator in question is

$$H_0 = \nabla^2 + \lambda,$$

Where ∇^2 is the familiar Laplacian operator. We shall employ the Fourier transform method to solve

$$H_0 \Psi(r) = F(r) \quad (9)$$

assuming that $\Psi(r)$ and $F(r)$ may be Fourier transformed

Let

$$F(k) = \frac{1}{(2\pi)^{1/2}} \int \ell^{-ik \cdot r} F(r) d^3 r \quad (10)$$

$$\Psi(k) = \frac{1}{(2\pi)^{3/2}} \int \ell^{-ik \cdot r} \Psi(r) d^3 r \quad (11)$$

then from equation (1),

$$\frac{1}{(2\pi)^{3/4}} \int \ell^{-ik \cdot r} \nabla^2 \Psi(r) d^3 r + \lambda \Psi(k) = F(k) \quad (12)$$

Now we use Green's theorem which states that

$$\int_v (F \nabla^2 G - G \nabla^2 F) d^3 r = \int_s (F \nabla G - G \nabla F) \cdot n ds,$$

Where S is the surface enclosing the volume V and n is the unit vector normal to s , pointing outward. Thus, we conclude that

$$\begin{aligned} \frac{1}{(2\pi)^{\frac{3}{2}}} \int_v \ell^{-ik \cdot r} \nabla^2 \psi(r) d^3 r &= \frac{1}{(2\pi)^{\frac{3}{2}}} \int_v \psi(r) \nabla^2 \ell^{-ik \cdot r} d^3 r \\ &+ \frac{1}{(2\pi)^{3/2}} \int_s \ell^{-ik \cdot r} \nabla \psi(r) - \psi(r) \nabla \ell^{-ik \cdot r} \cdot n ds \end{aligned} \quad (13)$$

The region of integration is the entire three-dimensional space. So in evaluating the surface integral, we take the surface to be a sphere of radius R and take the limit as $R \rightarrow \infty$. In this case, n is just a unit vector in the radial direction, so the surface term is

$$\begin{aligned} \frac{1}{(2\pi)^{3/2}} \int_s [\ell^{-ik \cdot r} \nabla \psi(r) - \psi(r) \nabla \ell^{-ik \cdot r}] \cdot n ds \\ = \frac{1}{(2\pi)^{3/2}} \lim_{R \rightarrow \infty} R^2 \left\{ \int \left[\ell^{-ik \cdot r} \frac{d\psi}{dr} - \psi \frac{d}{dr} \ell^{-ik \cdot r} \right] d\eta \right\}_{r=R} \end{aligned} \quad (14)$$

Where $d\eta = \sin \theta d\theta d\phi$. If $\Psi(r)$ tends to zero sufficiently rapidly as $|r| \rightarrow \infty$ (roughly, if Ψ vanishes faster than $1/r$), then the surface term will vanish, so equation (S) reduces to

$$\begin{aligned} \frac{1}{(2\pi)^{3/2}} \int_v \ell^{-ik \cdot r} \nabla^2 \Psi(r) d^3 r &= -k^2 - \Psi(k) \text{ and equation (12) becomes} \\ (-k^2 + \lambda) \Psi(k) &= F(k) \end{aligned} \quad (15)$$

There are now two cases to be distinguished

$\lambda \geq 0$ and $\lambda < 0$. Let us consider the latter case first, and write

$\lambda = -e^2$. Then $(-k^2 - e^2)$ never vanishes,

$$\text{So } \Psi(k) = -\frac{\hat{F}(k)}{k^2 + e^2} \quad (16)$$

and by Fourier integral theorem,

$$\Psi(r) = \xi(r) - \frac{1}{(2\pi)^{3/2}} \int \frac{\hat{F}(k)}{k^2 + e^2} e^{-i.k.r} d^3k,$$

where $\xi(r)$ represents an arbitrary linear combination of solutions of the homogenous equation

$$H_0\phi(r) = (\nabla^2 - e) \phi(r) = 0$$

Thus, we get

$$\Psi(r) = \xi(r) + \int G(r, r') F(r') d^3r' \quad (17)$$

with

$$G(r, r') = -\frac{1}{(2\pi)^{\frac{3}{2}}} \int \frac{e^{ik(r-r')}}{k^2 + e^2} d^3k \quad (18)$$

using the result of equations (9) and (10) we obtain

$$G(r, r') = -\frac{1}{4\pi} \frac{e^{-|r-r'|}}{|r-r'|} \quad (19)$$

One Sided Green's Function

Let us consider a general differential equation

$$y'' + a_1(t)y' + a_0(t)y = f(t), y(t_0) = 0, y'(t_0) = 0 \quad (20)$$

where $y'' + a_1(t)y' + a_0(t)y = 0$ — (2) has $y_H = c_1y_1(t) + c_2y_2(t)$ as its general solution.

By one sided Green's function, we intend to solve

$y'' + a_1(t)y' + a_0(t)y = f(t)$. Using the method of variation of parameter.

This begins with the assumption that there is a solution of (20) of the form

$$y_p = u(t)y_1(t) + V(t)y_2(t) \quad (21)$$

Where $y_1(t)$ and $y_2(t)$ are linearly independent solutions of the associated homogenous differential equation and $u(t)$ and $V(t)$ are two functions to be determined.

By differentiating (21), we obtain

$$y_p' = U(t)y_1'(t) + V(t)y_2'(t) + U'(t)y_1(t) + V'(t)y_2(t)$$

We now impose the assumption

$$U'(t)y_1(t) + V'(t)y_2(t) = 0$$

such that

$$y_p' = U(t)y_1'(t) + V(t)y_2'(t) \quad (22)$$

Another differentiation of (22) yields

$$y_p'' = u(t)y_1''(t) + V(t)y_2''(t) + U'(t)y_1'(t) + V'(t)y_2'(t) \quad (23)$$

The substitution of (21), (22) and (23) into (20) leads to

$$y_p^{11} + a_1(t)y_p' + a_0(t)y_p = u(t)[y_1^{11} + a_1(t)y_1' + a_0(t)y_1] + V(t)[y_2^{11} + a_1(t)y_2' + a_0(t)y_2] + U'(t)y_1'(t) + V'(t)y_2'(t) \quad (24)$$

The bracket and expressions above are both zero since it has been assumed that y_1 and y_2 are both solutions of the associated homogenous differential equation.

$$\text{Therefore, } U^1(t)y_1^1(t) + V^1(t)y_2^1(t) = f(t)$$

using Crammer's rule for the following

$$U^1(t)y_1(t) + V^1(t)y_2(t) = 0 \text{ and } U^1(t)y_1^1(t) + V^1(t)y_2^1(t) = f(t)$$

we have

$$U^1(t) = -\frac{y_2(t)f(t)}{W(y_1, y_2)(t)}, V^1(t) = \frac{y_1(t)f(t)}{W(y_1, y_2)(t)} \quad (25)$$

Where $W(y_1, y_2)(t)$ is the non-vanishing

We wish to take the definite integral of (25) in order to satisfy prescribed homogenous initial condition in (20) in finding the function $U(t)$ and $V(t)$.

Hence

$$u(t) = - \int_{t_0}^t \frac{y_2(Y)f(Y)}{W(y_1, y_2)(Y)} dY, V(t) = \int_{t_0}^t \frac{y_1(Y)f(Y)}{W(y_1, y_2)(Y)} dY \quad (26)$$

The substitution of (26) into (21) upon combining integrals

$$y_p = \int_{t_0}^t \frac{y_1(Y)y_2(t) - y_1(t)y_2(Y)}{W(y_1, y_2)(Y)} f(Y) dY \quad (27)$$

However, by defining the function

$$\begin{aligned} g_1(t, Y) &= \frac{y_1(Y)y_2(t) - y_1(t)y_2(Y)}{W(y_1, y_2)(Y)} \\ &= \frac{\begin{vmatrix} y_1(Y) & y_2(Y) \\ y_1(t) & y_2(t) \end{vmatrix}}{\begin{vmatrix} y_1(Y) & y_2(Y) \\ y_1^1(Y) & y_2^1(Y) \end{vmatrix}} \end{aligned} \quad (28)$$

We can express our particular solution in the form

$$y_p = \int_{t_0}^t g_1(t, Y) f(Y) dY \quad (29)$$

where $g_1(t, Y)$ is the associated Green's function

Illustrate Examples

(i) Determine the one –sided Green's function for D^2 where $\left(D = \frac{d}{dt}\right)$

Solution

$$\text{Let } D^2 = 0 \Rightarrow \frac{d^2}{dt^2} = 0 \quad (30)$$

By rewriting (30) as $y^{11}(t) = 0$

$$\begin{aligned} &\Rightarrow \frac{d^2 y}{dt^2} = 0 \text{ which on integration gives} \\ \frac{dy}{dt} &= 0 + c \text{ (} c \text{ is the constant of integration)} \\ &\Rightarrow \frac{dy}{dt} = c \quad (2) \Rightarrow dy = c dt \end{aligned}$$

By integrating (31) gives

$$\int dy = \int c dt$$

$$\Rightarrow y = ct + k \text{ (k is the constant of integration).}$$

\Rightarrow Let $y_1(t) = t$ and $y_2(t) = 1$ to be the two linearly independently solutions of (30)

By applying (10) i.e.

$$g_1(t, Y) = \frac{\begin{vmatrix} y_1(Y) & y_2(Y) \\ y_1(t) & y_2(t) \end{vmatrix}}{\begin{vmatrix} y_1(Y) & y_2(Y) \\ y_1^1(Y) & y_2^1(Y) \end{vmatrix}}$$

Since $y_1(t) = t$, $y_2(t) = 1$

$$y_1(Y) = Y, y_2(Y) = 1$$

$$\Rightarrow y_1^1(Y) = 1, y_2^1(Y) = 0$$

Therefore,

$$g_1(t, Y) = \frac{\begin{vmatrix} Y & 1 \\ t & 1 \\ Y & 1 \\ 1 & 0 \end{vmatrix}}{\begin{vmatrix} Y & 1 \\ 1 & 0 \end{vmatrix}} = \frac{Y - t}{-1} = t - Y$$

$$\Rightarrow g_1(t, Y) = t - Y$$

(ii) Use the method of Green's function to solve

$$y'' + y = \sin t \quad t > 0, y(0) = 1, y'(0) = -1$$

Solution

We first re-write the problem as two problems,

$$y'' + y = 0, y(0) = 1, y'(0) = -1 \text{ and}$$

$$y'' + y = \sin t, y(0) = 0, y'(0) = 0$$

For the homogenous part i.e. $y'' + y = 0$, we write complementary function as $m^2 + 1 = 0$

$$\Rightarrow m^2 = -1 \Rightarrow m = \pm i$$

$\therefore y_H = c_1 \cos t + c_2 \sin t$ and imposing the initial conditions, we find

$$\begin{aligned} y_H'(0) &= -1 \Rightarrow C_1 0 + C_2 = -1 \\ &\Rightarrow C_2 = -1 \end{aligned}$$

Hence,

$$C_1 = 1 \text{ and } C_2 = -1 \text{ so that}$$

$$y_H = \cos t - \sin t$$

For the second problem i.e.

$$y'' + y = \sin t, y(0) = 0, y'(0) = 0$$

We observe that

$$W(\cos t, \sin t) = \begin{vmatrix} \cos t & \sin t \\ -\sin t & \cos t \end{vmatrix} = \cos^2 t + \sin^2 t = 1$$

$$\Rightarrow W(\cos t, \sin t)(Y) = 1$$

Consequently,

$$\begin{aligned} g_1(t, Y) &= \frac{\begin{vmatrix} \cos Y & \sin Y \\ -\sin t & \cos t \end{vmatrix}}{W(\cos t, \sin t)(Y)} \\ &\Rightarrow g_1(t, Y) = \cos Y \sin t - \cos t \sin Y \end{aligned}$$

Using (11) we have

$$\begin{aligned} y_p &= \int_0^t g_1(t, Y) \sin Y dY \\ &= \int_0^t (\cos Y \sin t - \cos t \sin Y) \sin Y dY \\ &= \sin t \int_0^t \sin Y \cos Y dY - \cos t \int_0^t \sin^2 Y dY \\ &= \frac{1}{2} \sin t \int_0^t 2 \sin Y \cos Y dY - \frac{1}{2} \cos t \int_0^t (1 - \cos^2 Y) dY \\ &= \frac{1}{2} \sin t \int_0^t \sin 2Y dY - \frac{1}{2} \cos t \int_0^t dY + \frac{1}{2} \cos t \int_0^t \cos 2Y dY \\ &= \frac{1}{2} \sin t \left[\frac{-\cos 2Y}{2} \right]_0^t - \frac{1}{2} \cos t [Y]_0^t + \frac{1}{2} \cos t \left[\frac{\sin 2Y}{2} \right]_0^t \\ &= \frac{1}{2} \sin t \left[\frac{-\cos 2t}{2} + \frac{1}{2} \right] - \frac{1}{2} \cos t [t - 0] + \frac{1}{2} \cos t \left[\frac{\sin 2t}{2} \right] \\ &= -\frac{1}{4} \sin t \cos 2t + \frac{1}{4} \sin t - \frac{1}{2} t \cos t + \frac{1}{4} \sin 2t \cos t \\ &= \frac{1}{4} \sin(2t - t) + \frac{1}{4} \sin t - \frac{1}{2} t \cos t \\ &= \frac{1}{4} \sin t + \frac{1}{4} \sin t - \frac{1}{2} t \cos t \end{aligned}$$

$$\begin{aligned}
 &= \frac{1}{2} \sin t - \frac{1}{2} t \cos t \\
 &\Rightarrow y_p = \frac{1}{2} (\sin t - t \cos t) \\
 &\therefore y = y_H + y_p \\
 &= \cos t - \sin t + \frac{1}{2} (\sin t - t \cos t) \\
 &= \cos t - \frac{1}{2} \sin t - \frac{1}{2} t \cos t \\
 &\therefore y = \cos t \left(1 - \frac{1}{2} t\right) - \frac{1}{2} \sin t \\
 &\Rightarrow y = \left(1 - \frac{1}{2} t\right) \cos t - \frac{1}{2} \sin t
 \end{aligned}$$

(iii) Use the one-sided Green's function to solve the given initial value problem

$$y'' + y = e^{t-1}, y(1) = 0, y'(1) = 0$$

Solution

We write the problem as two problems i.e.

$$y^{II} + y = 0, y(1) = 0, y'(1) = 0 \quad (31) \text{ and}$$

$$y^{II} + y = e^{t-1}, y(1) = 0, y'(1) = 0 \quad (32)$$

For the homogenous part equation (31)

$$\text{C. F. } \Rightarrow m^2 + 1 = 0 \Rightarrow m^2 = -1$$

$$= m = \pm \sqrt{-1} = \pm i$$

$$y_H = c_1 \cos x + c_2 \sin x$$

$$y_H^1 = -C_1 \sin x + C_2 \cos x$$

Using the initial condition

$$y_H^1 = 0 \Rightarrow C_1 = 0$$

$$y_H^{(1)} = 0 \Rightarrow C_2 = 0$$

$$\Rightarrow y_H = 0$$

$$y_1 = \cos x, y_2 = \sin x$$

$$W(y_1, y_2) = \begin{vmatrix} \cos x & \sin x \\ -\sin x & \cos x \end{vmatrix} = \cos^2 x + \sin^2 x = 1$$

$$\Rightarrow W(y_1, y_2) = 1$$

$$G(x, Y) = \frac{\begin{vmatrix} \cos Y & \sin Y \\ \cos x & \sin x \end{vmatrix}}{W(y_1, y_2)(Y)} = \frac{\cos Y \sin x - \sin Y \cos x}{1}$$

$$\Rightarrow G(x, Y) = \cos Y \sin x - \sin Y \cos x$$

$$y_p = \int_1^x G(x, Y) f(Y) dY$$

$$= \int_1^x (\cos Y \sin x - \sin Y \cos x) e^{Y-1} dY$$

$$= \sin x \int_1^x \cos Y e^{Y-1} dY - \cos x \int_1^x \sin Y e^{Y-1} dY$$

$$= \frac{\sin x}{e} \int_1^x \cos Y e^Y dY - \frac{\cos x}{e} \int_1^x \sin Y e^Y dY$$

For A

$$\text{Let } I = \int_1^x \cos Y e^Y dY = \cos Y e^Y \Big|_1^x + \int_1^x \sin Y e^Y dY$$

$$= 2 \int_1^x \cos Y e^Y dY = \cos x e^x - e + \sin x e^x$$

$$\Rightarrow \int_1^x \cos Y e^Y dY = \frac{1}{2} (\cos x e^x - e + \sin x e^x)$$

$$\frac{\sin x}{e} \int_1^x \cos Y e^Y dY = \frac{\sin x}{2e} (\cos x e^x - e + \sin x e^x)$$

For B

$$i.e. \frac{\cos x}{e} \int_1^x \sin Y e^Y dY$$

$$\text{Let } I = \int_1^x \sin Y e^Y dY = \sin Y e^Y \Big|_1^x - \int_1^x \cos Y e^Y dY$$

$$= \sin x e^x - \int_1^x \cos Y e^Y dY$$

$$\int_1^x \sin Y e^Y dY = \sin x e^x - \cos Y e^Y \Big|_1^x - \int_1^x \sin Y e^Y dY$$

$$\Rightarrow 2 \int_1^x \sin Y e^Y dY = \sin x e^x - \cos x e^x + e$$

$$\Rightarrow \int_1^x \sin Y e^Y dY = \frac{1}{2} (\sin x e^x - \cos x e^x + e)$$

$$\therefore \frac{\cos x}{e} \int_1^x \sin Y e^Y dY = \frac{\cos x}{2e} (\sin x e^x - \cos x e^x + e)$$

A - B now gives

$$\frac{\sin x \cos x e^x}{2e} - \frac{\sin x}{2} + \frac{\sin^2 x e^x}{2e} - \frac{\cos x \sin x e^x}{2e}$$

$$+ \frac{\cos^2 x e^x}{2e} - \frac{\cos x}{2}$$

$$= \frac{1}{2} e^x [\sin x \cos x - \cos x \sin x] + \frac{1}{2e} e^x [\cos^2 x + \sin^2 x] - \frac{1}{2} (\sin x + \cos x)$$

$$y_p = \frac{1}{2} e^{x-1} - \frac{1}{2} (\sin x + \cos x)$$

$$= \frac{1}{2} e^{x-1} - \frac{1}{2} \sin x - \frac{1}{2} \cos x$$

$$y = y_H + y_P = \frac{1}{2} e^{x-1} - \frac{1}{2} \sin x - \frac{1}{2} \cos x$$

(iv) Solve $t^2 y^{11} - 5ty^1 + 8y = 2t^3$, $y(1) = 1$, $y^1 = 0$

Solution

$$t^2 y^{11} - 5ty^1 + 8y = 0, y(1) = 1, y^1(1) = 0 \quad (33)$$

$$y^{11} - \frac{5}{t} y^1 + \frac{8}{t^2} y = 2t, y(1) = 0, y^1(1) = 0 \quad (34)$$

For the homogenous equation (1) using Cauchy - Eulers method

$$i.e. t^2 y^{11} - t t y^1 + 8y = 0 \quad (35)$$

$$\text{Let } y(t) = t^m, y^1(t) = m t^{m-1}, y^{11}(t) = m(m-1) t^{m-2} \quad (36)$$

Substitute (4) into (3)

$$t^2 [m(m-1)] t^{m-2} - 5t m (t^{m-1}) + 8t^m = 0$$

$$t^m (m^2 - m - 5m + 8) = 0$$

$$\Rightarrow m^2 - 6m + 8 = 0$$

$$m^2 - 4m - 2m + 8 = 0$$

$$\Rightarrow m = 2 \text{ or } 4$$

Therefore the characteristic roots are 2 and 4

$$y_H = C_1 t^2 + C_2 t^4 \text{ (by applying the initial conditions)}$$

$$y_{(H)}^1 = 2C_1 t + 4C_2 t^3$$

$$\begin{aligned}
 y_{(H)}^1 &= 1 \Rightarrow C_1 + C_2 = 1 \Rightarrow C_2 = 1 - C_1 \\
 y_{(H)}'^{(1)} &= 0 \Rightarrow 2C_1 + 4C_2 = 0 \Rightarrow 2C_1 + 4(1 - C_1) = 0 \\
 &2C_1 + 4 - 4C_1 = 0 \\
 \Rightarrow -2C_1 &= -4 \Rightarrow C_1 = 2 \\
 C_2 &= 1 - 2 = -1 \\
 \Rightarrow C_1 &= 2, C_2 = -1 \\
 \therefore y_H &= 2t^2 - t^4 \\
 y_1 &= t^2, y_2 = t^4 \\
 W(y_1, y_2) &= \begin{vmatrix} t^2 & t^4 \\ 2t & 4t^3 \end{vmatrix} = 4t^5 - 2t^5 = 2t^5 \\
 \therefore W(y_1, y_2)(Y) &= 2Y^5 \\
 G(t, y) &= \frac{\begin{vmatrix} Y^2 & Y^4 \\ t^2 & t^4 \end{vmatrix}}{W(y_1, y_2)(Y)} = \frac{t^4 Y^2 - Y^4 t^2}{2Y^5} \\
 y_p &= \int_1^t \frac{t^4 Y^2 - Y^4 t^2}{2Y^5} f(Y) dY = \int_1^t \frac{t^4 Y^2 - Y^4 t^2}{Y^4} dY \\
 &= t^4 \int_1^t \frac{1}{Y^2} dY - t^2 \int_1^t dY = t^4 \int_1^t Y^{-2} dY - t^2 \int_1^t dY \\
 &= t^4 \left[-\frac{1}{Y} \right]_1^t - t^2 [Y]_1^t \\
 &= t^4 \left[\frac{-1}{t} + 1 \right] - t^2 [t - 1] \\
 y_p &= t^4 - 2t^3 + t^2 \\
 y &= y_H + y_p = 2t^2 - t^4 + t^4 - 2t^3 + t^2 \\
 &= 3t^2 - 2t^3 \\
 \therefore y &= 3t^2 - 2t^3 = t^2(3 - 2t)
 \end{aligned}$$

(v) Construct the one sided Green's function for the given operator
 $D^3 - 6D^2 + 11D - 6$

Solution

Let $D^3 - 6D^2 + 11D - 6 = 0$

Since $(D - 1)$ is a factor

then other factor is $D^2 - 5D + 6$ which gives

$(D - 2)$ and $(D - 3)$

Therefore

$$\begin{aligned}
 D^3 - 6D^2 + 11D - 6 &= 0 \\
 \Rightarrow (D - 1)(D - 2)(D - 3) &= 0 \\
 \Rightarrow D &= 1, \text{ or } 2 \text{ or } 3 \text{ which are the characteristic roots} \\
 y_H &= C_1 e^x + C_2 e^{2x} + C_3 e^{3x} \text{ (since } D = \frac{d}{dx} \text{)} \\
 y_1 &= e^x, y_2 = e^{2x}, y_3 = e^{3x}
 \end{aligned}$$

$$\begin{aligned}
 W(y_1, y_2, y_3) &= \begin{vmatrix} e^x & e^{2x} & e^{3x} \\ e^x & 2e^{2x} & 3e^{3x} \\ e^x & 3e^{2x} & e^{3x} \end{vmatrix} \\
 &= e^x (18e^{5x} - 12e^{5x}) - e^x (9e^{5x} - 4e^{5x}) + e^x (3e^{5x} - 2e^{5x}) \\
 &= 6e^{6x} - 5e^{6x} + e^{6x} = 2e^{6x} \\
 \therefore W(y_1, y_2, y_3)(Y) &= 2e^{6Y}
 \end{aligned}$$

To obtain $g_1(x, Y)$ (the required Green's function)

$$\Rightarrow g_1(x, y) = \frac{\begin{vmatrix} e^Y & e^x & e^x \\ e^{2x} & 2e^{2x} & 4e^{2x} \\ e^{3x} & 3e^{3x} & 9e^{3x} \end{vmatrix}}{W(y_1, y_2, y_3)(Y)}$$

$$\begin{aligned}
 &= \frac{e^Y(2e^{2Y}e^{3x} - 3e^{3Y}e^{2x}) - e^{2Y}(e^Ye^{3x} - 3e^{3Y}e^x) + e^{3Y}(e^Ye^{2x} - 2e^{2Y}e^x)}{2e^{6Y}} \\
 &= \frac{2e^{3Y}e^{3x} - 3e^{4Y}e^{2x} - e^{3Y}e^{3x} + 3e^{5Y}e^x + e^{4Y}e^{2x} - 2e^{5Y}e^x}{2e^{6Y}} \\
 &= \frac{e^{3x}e^{3Y} - 2e^{2x}e^{4Y} + e^{5Y}e^x}{2e^{6Y}} = \frac{1}{2}e^{3x}e^{-3Y} - e^{2x}e^{-2Y} + \frac{1}{2}e^xe^{-Y} \\
 g_1(x,Y) &= \frac{1}{2}e^{3(x-Y)} - e^{2(x-Y)} + \frac{1}{2}e^{(x-Y)} \text{ which gives the required Green's function}
 \end{aligned}$$

3. THE BOUNDARY VALUE PROBLEMS (GREEN'S FUNCTIONS APPLICATION)

The general boundary value problem of concern is of the form

$$\begin{aligned}
 M[y] &= F(x), \quad x < x < x_2 \\
 B_1[y] &= a_{11}y(x_1) + a_{12}y'(x_1) = \alpha \\
 B_2[y] &= a_{21}y(x_2) + a_{22}y'(x_2) = \beta
 \end{aligned} \tag{37}$$

Where the differential operator M is defined by

$$M = A_2(x) D^2 + A_1(x) D + A_0(x), \text{ in which case } D = \frac{d}{dx}.$$

To develop a Green's function for this problem, it is usually preferred to first put the Differential Equation in self-Adjoint form. The self-adjoint form of $M[y] = F(x)$ by simply multiplying the Differential Equation by the function

$\mu(x) = p(x)/A_2(x)$, where

$$P(x) = \exp \left(\int \frac{A_1(x)}{A_2(x)} dx \right) \text{ therefore, by so doing we obtain}$$

$$L[y] = f(x), \quad x_1 < x < x_2, \quad B_1[y] = \alpha, \quad B_2[y] = \beta \tag{38}$$

When $f(x) = p(x) F(x)/A_2(x)$, $q(x) = p(x) A_0(x)/A_2(x)$

$$\text{and } L = D[p(x)D] + q(x) \tag{39}$$

By building upon our experience with initial value problems, we assume the solution of (38) has the general form

$y = y_H + y_P$, where y_H satisfies the boundary value problem

$$L[y] = 0, \quad B_1[y] = \alpha, \quad B_2[y] = \beta \tag{40}$$

and y_P is a solution of

$$L[y] = f(x), \quad B_1[y] = 0, \quad B_2[y] = 0 \tag{41}$$

The general solution of (40) is

$y_H = c_1 y_1(x) + c_2 y_2(x)$, where y_1 and y_2 are linearly independent solutions to the homogenous differential equation.

Based on the definition (b) for Green's function, an explicit formula for the Green's function can now be constructed. We observe from condition (i) that if either $x < s$ or $x > s$ then $L[g] = 0$

Next if z_1 and z_2 are solutions of the homogenous D.E. $L[g] = 0$, selected in such a way that

$$B_1(z_1) = 0, \quad B_2(z_2) = 0 \tag{42}$$

Then it follows from conditions (i) and (ii) of the definition that the Green's function has the form

$$g(x, s) = \begin{cases} u(s)z_1(x), & x < s \\ v(s)z_2(x), & x > s \end{cases} \tag{43}$$

Where U and V are functions to be determined.

Imposing conditions (iii) and (iv) from definition, it follows that the unknown functions U and V must be chosen such that

$$\begin{aligned}
 V(s) z_2(s) - u(s) z_1(s) &= 0 \\
 V(s) z_2'(s) - u(s) z_1'(s) &= -\frac{1}{p(s)}
 \end{aligned} \tag{44}$$

By using Cramer's rule for solving (8) we have

$$U(s) = -\frac{z_2(s)}{p(s)W(z_1, z_2)(s)}, V(s) = -\frac{z_1(s)}{p(s)W(z_1, z_2)(s)} \quad (45)$$

Where $W(z_1, z_2) = z_1^1 z_2^1 - z_1^1 z_2^1$ is the Wronskian function.

Now, if y_1 and y_2 are any solutions of the same homogenous differential equation, then $p(x) W(y_1, y_2)(x)$ is a constant. Thus since z_1 and z_2 are two such solutions, we write

$$P(s)W(z_1, z_2)(s) = p(x) W(z_1, z_2)(x) = C_1 \quad (46)$$

and the Green's function in (7) take the form

$$g(x, s) = \begin{cases} -z_1(x), z_2(s) | c, x_1 < x < s \\ -z_1(s), z_2(x) | c, s < x < x_2 \end{cases} \quad (47)$$

or

$$g(x, s) = \begin{cases} -z_1(s), z_2(x) | c, x_1 < x < x_2 \\ -z_1(x), z_2(s) | c, x < s < s_2 \end{cases} \quad (48)$$

Because C is a constant, By inspection, Green's function is symmetrical in x and s , i.e. $g(x, s) = g(s, x)$. It is important to state here that

$$y_p = - \int_{x_1}^{x_2} g(x, s) f(s) ds \quad (49)$$

Illustrative Example

Use the method of Green's function to solve

$$2x^2 y^{11} + 3xy^1 - y = 4x^{3/2}, y(0) = 0, y(1) = 0, 0 < x < 1$$

Solution

We rewrite the given Differential Equation as

$$2x^2 y^{11} + 3xy^1 - y = 0, y(0) = 0, y(1) = 0 \quad (50)$$

$$2x^2 y^{11} + 3xy^1 - y = 4x^{3/2}, y(0) = 0, y(1) = 0 \quad (51)$$

By applying Cauchy – Euler method we have from (1) that

$$y(x) = x^m, y^1(x) = mx^{m-1}, y^{11}(x) = m(m-1)x^{m-2} \quad (52)$$

Put (52) into (50) yields

$$2x^2 x^{m-2} (m^2 - m) + 3mx^{m-1} - x^m = 0$$

$$2(m^2 - m)x^m + 3mx^m - x^m = 0$$

$$\Rightarrow (2m^2 - 2m + 3m - 1)x^m = 0$$

$$\Rightarrow (2m^2 + m - 1) = 0$$

$$\text{i.e. } 2m^2 + 2m - m - 1 = 0$$

$$2m(m+1) - 1(m+1) = 0$$

$$\Rightarrow (2m-1)(m+1) = 0$$

$$\therefore M = \frac{1}{2} \text{ or } m = -1$$

$$\Rightarrow y_H = c_1 x^{1/2} + c_2 x^{-1}$$

By imposing the boundary conditions

$y(0) = 0 \Rightarrow$ we must set $c_2 = 0$ while C_1 is arbitrary.

However, the second boundary condition requires that $y(1) = C = 0$ and thus we obtain the trivial solution $y_H = 0$

In solving for y_p , we must first put the Differential Equation in self –Adjoint form so that we may properly identify $p(x)$ and $f(x)$.

Recall that

$$p(x) = \exp \left[\int \frac{A_1(x)}{A_2(x)} dx \right]$$

$$\text{Since } A_1(x) = 3x, A_2(x) = 2x^2$$

$$\Rightarrow p(x) = \exp \left[\int \frac{3x}{2x^2} dx \right] = \exp \left[\int \frac{3dx}{2x} \right] = \exp^{3/2} \ln x$$

$$\Rightarrow p(x) = e^{\ln x^{3/2}} \therefore p(x) = x^{3/2} \quad (53)$$

And so by dividing the Differential Equation (50) by $2x^2$ and multiply by $p(x) = x^{3/2}$, we have

$$\begin{aligned}
 & x^{\frac{3}{2}} \left(\frac{2x^2}{2x^2} \right) y^{11} + \frac{3}{2} x^{\frac{1}{2}} y^1 - \frac{1}{2} x^{-\frac{1}{2}} y = 2x \\
 & \Rightarrow x^{\frac{3}{2}} y^{11} + \frac{3}{2} x^{\frac{1}{2}} y^1 - \frac{1}{2} x^{-\frac{1}{2}} y = 2x \\
 & \frac{d}{dx} \left(x^{\frac{3}{2}} y^{11} + \frac{3}{2} x^{\frac{1}{2}} y^1 - \frac{1}{2} x^{-\frac{1}{2}} y \right) = 2x, y(0) = 0, y(1) = 0
 \end{aligned} \tag{54}$$

taking z_1 and z_2 as linear combination of $x^{1/2}$ and x^{-1} suitable for constructing the Green's function by using the boundary condition separately.

$y(0) = 0 \Rightarrow c_2 = 0$ and $c_1 \neq 0$ which is arbitrary

$z_1 = c_1 x^{1/2} \Rightarrow x^{1/2}$ (since c_1 is arbitrary i.e. say 1)

$$\Rightarrow z_1 = x^{1/2}$$

$$y(1) = x^{1/2}$$

$$y(1) = 0 \Rightarrow c_1 + c_2 = 0 \Rightarrow c_2 = -c_1$$

$$\text{Hence, } z_1 = x^{1/2}, z_2 = x^{1/2} - x^{-1}$$

$$W(z_1, z_2)(x) = \begin{vmatrix} x^{\frac{1}{2}} & x^{\frac{1}{2}} - x^{-1} \\ \frac{1}{2} x^{-1/2} & \frac{1}{2} x^{-1/2} + x^{-2} \end{vmatrix} = x^{1/2} \left(\frac{1}{2} x^{-1/2} + x^{-2} \right) - \frac{1}{2} x^{-1/2} (x^{1/2} - x^{-1})$$

$$= \frac{1}{2} + x^{-3/2} - \frac{1}{2} + \frac{1}{2} x^{-3/2} = \frac{3}{2} x^{-3/2}$$

$$\Rightarrow W(z_1, z_2)(x) = \frac{3}{2} x^{-3/2}$$

from (4), $p(x) = x^{3/2}$

$$\therefore C = p(x) W(z_1, z_2)(x) = x^{3/2} \left(\frac{3}{2} x^{-3/2} \right) = \frac{3}{2}$$

$$\Rightarrow c = \frac{3}{2}$$

Now to get the Green's function $g(x, s)$, we define

$$g(x, s) = \begin{cases} -z_1(s)z_2(x)/C, & x_1 < s \leq x \\ -z_1(x)z_2(s)/C, & x < s < x_2 \end{cases}$$

or

$$g(x, s) = \begin{cases} -z_1(x)z_2(s)/C, & x_1 < x < s \\ -z_1(s)z_2(x)/C, & s < x < x_2 \end{cases}$$

where $z_1(x) = x^{1/2}$, $z_2(x) = x^{1/2} - x^{-1}$, therefore

$$z_1(s) = s^{1/2}, z_2(s) = s^{1/2} - s^{-1}$$

$$\Rightarrow g(x, s) = \begin{cases} -2/3 s^{1/2} (x^{1/2} - x^{-1}), & 0 < s \leq x \\ -2/3 x^{1/2} (s^{1/2} - s^{-1}), & x < s < 1 \end{cases}$$

The solution we seek is therefore (here $y = y_p$, since $y_H = 0$)

But $y = - \int_0^1 g(x, s) f(s) ds$ when $f(s) = 2S$ since $f(x) = 2x$

$$\therefore y = - \int_0^1 g(x, s) f(s) ds \text{ where } f(s) = 2S$$

$$\Rightarrow y = - \left(-\frac{2}{3} \right) \left(x^{\frac{1}{2}} - x^{-1} \right) \int_0^x s^{\frac{1}{2}} (2S) ds + \frac{2}{3} x^{\frac{1}{2}} \int_x^1 \left(s^{\frac{1}{2}} - s^{-1} \right) 2S ds$$

$$= \frac{2}{3} \left(x^{\frac{1}{2}} - x^{-1} \right) \int_0^x \frac{s^{\frac{1}{2}} (2S) ds}{A} + \frac{2}{3} x^{\frac{1}{2}} \int_x^1 \frac{\left(s^{\frac{1}{2}} - s^{-1} \right) 2S ds}{B}$$

(55)

$$A = \int_0^x s^{\frac{1}{2}} 2S ds = \int_0^x 2s^{\frac{3}{2}} ds = 2 \int_0^x s^{\frac{3}{2}} ds$$

$$\Rightarrow A = 2 \left[\frac{2S^{5/2}}{5} \right]_0^x = 2 \left[\frac{2}{5} x^{5/2} \right] = \frac{4}{5} x^{5/2}$$

$$\begin{aligned}
 B &= \int_x^1 \left(S^{\frac{1}{2}} - S^{-1} \right) 2S ds = \int_x^1 2S^{\frac{3}{2}} ds - \int_x^1 2 ds \\
 &= 2 \int_x^1 S^{\frac{3}{2}} ds - 2 \int_x^1 ds = 2 \left[\frac{2}{5} S^{5/2} - S \right]_x^1 \\
 &= 2 \left[\frac{2}{5} - 1 - \frac{2}{5} x^{\frac{5}{2}} + x \right] = 2 \left[-\frac{3}{5} - \frac{2}{5} x^{\frac{5}{2}} + x \right] \\
 &= -\frac{6}{5} - \frac{4}{5} x^{\frac{5}{2}} + 2x
 \end{aligned}$$

Hence from (5) we have on substituting (A) and (B)

$$\begin{aligned}
 y &= \frac{2}{3} \left(x^{\frac{1}{2}} - x^{-1} \right) \cdot \frac{4}{5} x^{\frac{5}{2}} + \frac{2}{3} x^{\frac{1}{2}} \left(-\frac{6}{5} - \frac{4}{5} x^{\frac{5}{2}} + 2x \right) \\
 &= \left(\frac{2}{3} x^{\frac{1}{2}} - \frac{2}{3} x^{-1} \right) \cdot \frac{4}{5} x^{\frac{5}{2}} - \frac{4}{5} x^{\frac{1}{2}} - \frac{8}{15} x^3 + \frac{4}{3} x^{\frac{3}{2}} \\
 &= \frac{8}{15} x^3 - \frac{8}{15} x^{\frac{3}{2}} - \frac{4}{5} x^{\frac{1}{2}} - \frac{8}{15} x^3 + \frac{4}{3} x^{\frac{3}{2}} \\
 &= \frac{4}{3} x^{\frac{3}{2}} - \frac{8}{15} x^{\frac{3}{2}} - \frac{4}{5} x^{\frac{1}{2}} \\
 &= \frac{20x^{\frac{3}{2}} - 8x^{\frac{3}{2}}}{15} - \frac{4}{5} x^{\frac{1}{2}} \\
 &= \frac{12}{15} x^{\frac{3}{2}} - \frac{4}{5} x^{\frac{1}{2}} = \frac{4}{5} x^{\frac{3}{2}} - \frac{4}{5} x^{\frac{1}{2}} \\
 &= \frac{4}{5} x^{\frac{1}{2}} (x - 1) \\
 \Rightarrow y &= \frac{4}{5} x^{\frac{1}{2}} (x - 1)
 \end{aligned}$$

4. PHYSICAL INTERPRETATION OF GREEN'S FUNCTION

To help motivate our discussion on the physical interpretation of Green's function, we now solve this introductory example. Consider the motion of a particle of mass m in a resistive medium under the influence of an external force $F(t)$. If the resistive force is proportional to the velocity V of the particle, then the equation of motion is

$$m \frac{dv}{dt} = F(t) - CV \quad (56)$$

(via Newton's second law of motion) where C is a positive constant whose value is determined by the nature of the resistive medium. Assuming the velocity of the particle at time $t = 0$ is V_0 , the velocity at all later times is then a solution of the initial value problem.

$$m \frac{dv}{dt} + CV = F(t), t > 0, v(0) = V_0 \quad (57)$$

(58) can be written in the form

$$\frac{dv}{dt} + \frac{c}{mv} = \frac{1}{m} F(t) \quad (58)$$

To solve (59) we first use the integrating factor to solve the homogenous part which will thereafter be written as a single factor to solve the non-homogeneous part.

$$r(t) = e^{\frac{c}{m} t} \int dt = e^{\frac{c}{m} t} t$$

$$\Rightarrow r(t) = e^{\frac{c}{m} t}$$

$$\frac{d}{dt} (v \cdot e^{\frac{c}{m} t}) = \frac{1}{m} e^{\frac{c}{m} t} F(t)$$

$$V \cdot e^{\frac{c}{mt}} = \frac{1}{m} \int_0^t e^{\frac{cY}{m}} F(Y) dY + c$$

Where c is the constant of integration

$$V = \frac{1}{m} e^{-\frac{ct}{m}} \int_0^t e^{\frac{cY}{m}} F(Y) dY + C e^{-ct/m}$$

$$\Rightarrow V(t) = \frac{1}{m} e^{-ct/m} \int_0^t e^{\frac{cY}{m}} F(Y) dY + C e^{-ct/m} \quad (59)$$

Using the initial condition in (2)

$$V(0) = V_0 = \frac{1}{m} \int_0^0 e^{\frac{cY}{m}} F(Y) dY + c$$

$$\Rightarrow V_0 = c \Rightarrow c = V_0 \quad (60)$$

Put (60) into (59)

$$V(t) = \frac{1}{m} e^{-\frac{ct}{m}} \int_0^t e^{\frac{cY}{m}} F(Y) dY + V_0 e^{-\frac{ct}{m}}$$

$$\Rightarrow V(t) = e^{-\frac{ct}{m}} \left[V_0 + \frac{1}{m} \int_0^t e^{\frac{cY}{m}} F(Y) dY \right] \quad (61)$$

The advantage of this solution formula is that it provides a solution of the problem for any initial velocity V_0 and external force $F(t)$. Not only that, but it is composed of parts that each have important physical interpretations. For instance, where $F(t) = 0$, in equation (61) above, the solution reduces to

$$V(t) = V_0 e^{-\frac{ct}{m}} \quad (62)$$

whereas when the initial velocity is zero, i.e.

$V_0 = 0$, (62) above becomes

$$V(t) = \frac{1}{m} e^{-\frac{ct}{m}} \int_0^t e^{\frac{cY}{m}} F(Y) dY \quad (63)$$

Thus, by rewriting (61) as the sum of (62) and (63)

$$V(t) = V_0 e^{-\frac{ct}{m}} + \frac{1}{m} e^{-\frac{ct}{m}} \int_0^t e^{\frac{cY}{m}} F(Y) dY \quad (64)$$

$V_H(t)$
 $V_p(t)$

We see that $V_H(t)$ represents the free velocity of the particle in the absence of an external force and $V_p(t)$ describes the motion of a particle that is initially at rest and then subject at time $t = 0$ to the external force $F(t)$. Because of the physical interpretations derived from (64) and the ease of using this solution formula for different values of V_0 and different forcing functions $F(t)$, it is desirable to obtain similar solution formulas for initial value problems involving differential equations of higher order.

5. CONCLUSION

The conventional approach to solving differential equations with prescribed auxiliary conditions is to find numerical values for the arbitrary constants. The main disadvantage in this approach is that it usually gives very little insight as to how the system being studied responds to each input parameter independently, and yet such information is often vital in understanding the fundamental characteristics of the system. In order to obtain a solution whose form readily provides important information about the physical system, the Green's functions is best used. Also, since the input parameter and the forcing function do not really have an impact on the solution of homogenous part of any differential equation, it is possible to use a constructed Green's function for the solution of any differential equation during the same homogenous part but differential non-homogenous part.

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