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ISSUES IN TEACHER EDUCATION IN AFRICA

> *Edited by* **Prof. J. Gbenga Adewale**



PROF. AKINWOLE FALAYAJO

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As a master degree student in the Department of Teacher Education, Wole Falayajo taught me statistics, data processing and computer programming. Most of us came from the backgrounds of humanities and so were scared of the esoteric language employed in these courses. Some had indeed closed their minds to the seemingly impossible task of mastering the contents. However, as time progressed, it became clear that the teacher himself was aware of our serious impediment. He decided to tread softly, slowly, cautiously, often having to repeat himself and re-teach those areas that scared most of us. Gradually, my mind was ready to absorb the contents, and indeed to like the subjects. Before I was aware of it, I started thinking statistics in most everyday issues. I found myself debating the statistical probability of IICC scoring three goals against the Zamalek of Egypt before they could win the African Nations Cup. I found myself talking of the inverse correlation between attendances at cinema houses in Ibadan and Ibadan people's possession of television sets. Henceforth, the payday was no longer a day to smile to the bank, but one that demanded that I should first sit down and carefully plan a budget since I now realised the statistical worth of each naira earned. The fact was that Wole Falayajo brought each of the courses he taught us down to earth. The formula in each case was important, but far more important was the problem to which that formula was applied. Of course, I began to enjoy statistics and to perform well in the test. Trouble came when the grades showed me at the top of the class, and some mates approached me to teach them the concepts they found most difficult. It was then that I realised that not every teacher could do what Wole was doing.

The courses ended, and soon thereafter, I found myself in the university wearing a different toga: that of a research fellow –

like Wole Falayajo. We were now colleagues! Before long, I found him and I addressing the same assigned task, usually on a practical teaching assessment in a college of education. Much as I tried to remind myself of my new status vis-à-vis his, I could not easily shed off the old toga of a student before his teacher. But he kept me at ease. He related to me as an equal. Thus, I discovered that he was not only a good teacher but also a good colleague.

We in the Institute of Education have had Wole as our Director on two occasions, the first in an acting capacity and the second in a full-fledged capacity. On each occasion, he has tried his best to raise the tone of work among colleagues. He brought in the first two computers we ever had, and then on his return he secured five more from an international agency for which he had conducted a national assignment. The purchase and/or acquirement of the computers might be great, but greater still is that Wole used the computer to introduce many of his colleagues, including those in the non-academic cadres, to the computer. I learnt my first lessons in word processing and data analysis on the computer in his office. I have not been taught by any other programmer since, but I have been using the computer to typeset all my books and other materials ever since. In 1996, when he gathered the clerical staff together to teach them computer, one or two of the junior clerical staff were at first overwhelmed by the fact they were being taught by a professor that they talked about it to everybody who cared to listen. The sad side of this was that no sooner had the non-academic staff mastered enough of the computer that the university transferred them to some other units where their new skills would be more useful.

Quiet and easy going as ever, Wole related to all of us in as civil a manner as possible. To him it was human relations first and foremost. Thus, when in 1993, he took ill about a month after assumption of office as the Director of the Institute, and was diagnosed of a life-threatening heart ailment, it was as if most of his colleagues had equally taken ill. There being no medical

intervention available in Nigeria for the problem, most of us did what we could -- pray. And the prayer was answered when a distant relative sponsored his way to the United Kingdom for the much needed surgical intervention. We were all the better for that Godsent solution.

We are much aware that he has mentored many others outside this university, especially in his capacity as the leading MLA expert in the country, but the fact remains that in mentoring any outsider he mentors his colleagues doubly. There are in the Institute of Education enough hands to conduct MLA studies for the federation and each state within it.

Any reader of this volume would readily discover that contributions are from several parts of the federation. Many are from the academia, but some are from non-university educational agencies. We were much pleasantly surprised about the response because within weeks, the contributions came pouring in. Such was the regard for this man that all those who had gone through the Institute and Faculty of Education of this university while Wole was here wished to express their feelings through their contributions. Even the problem of financing the publication was solved through some unexpected quarters.

The chapters might appear to be talking in different languages about different concepts, but the bottom line is that they are all pointing towards what the man represented in academics: education, and measurement in education. Most of these are from those he once taught, but many are from those he shared his career with. All of them are saying in effect that they appreciate what he has been. His life has had a positive impact on theirs. To all these people, it is not self-enhancement they are seeking through this forum; the purpose is to register their appreciation and love for our Wole.

As we celebrate with him, it is with our best wishes that he would find fulfillment in his old age.

Prof. Sam. O. Ayodele.



The book project was the initiative of the Educational Research and Assessment Network in Africa (EARNiA) with its Headquarters in Cameroon. Nevertheless, the responsibility to ensure that the dream was realized was entrusted to me. The main reason for this project was to give honour to him that it is due; an honour to a man whose influence on many of us has been unique, tremendous and all pervading in our career as academics and other facets of the world of work. This book is written as a token of appreciation for the enormous contributions of our Professor 'Wole Falayajo (who turned 80 today 20 May 2016) to education in Nigeria and beyond. His influence can better be appreciated when one examines the geographical spread of the chapter contributions to this.

It is interesting to note that there were 46 chapters running to 800 pages. At the advice of the Printer, the book was divided into two: "Emerging Trends in Educational Measurement, Assessment and Evaluation in Africa" and "Issues in Teacher Education in Africa" all in honour of Professor 'Wole Falayajo. This second book which is "Issues in Teacher Education in Africa" contains 22 chapters written by active scholars in education. The different loci captured include educational measurement, assessment and evaluation and programme evaluation the areas in which Professor 'Wole Falayajo was involved during his academic career.

The chapters discussed challenges in the use of indigenous language, assessment of indigenous knowledge, parenting style, school connectedness, self-efficacy, virtual facilities for quality teaching and research, education for all goal on mothers' level of awareness of health, safety and nutrition of pupils in primary schools. It also examines knowledge sharing quality service delivery among non-teaching staff in the federal universities in Nigeria. Other issues raised include: quality control in teacher preparation and professional teaching ethics as essentials for contemporary pre-service and serving teachers service delivery in Nigeria, teaching students with low vision. Other chapters focused on science education. The section started with how to sustain and retain students' interest in Science, Technology, Engineering, and Mathematics (STEM) through motivation and active engagement and ended with the response of Mathematics teaching and learning to educational innovations and reforms in Nigeria.

The Network (EARNiA) would be glad to see that this book is used as a companion by students and teachers in education. The belief is that it will further encourage educational discourse that Professor Falayajo is reputed for.

On behalf of the Educational Assessment and Research Network in Africa, I wish to thank all who did not mind my idiosyncrasies using text messages, phone calls and physical presence to meet the deadline. I also like to appreciate everyone who has made this project a huge success through their commitment and advice.

Editor J. Gbenga Adewale

May 8, 2016

Tribute on Prof. Akinwole Falayajo on the occasion of his 80th Birthday and 55 years of Blissful Marriage Prof Akinwole Falayajo, the quintessential human being. *Tribute by Prof Samuel O. Ayodele*

I have been sufficiently close to Professor Wole Falayajo to assert that those who have the present privilege of witnessing his 80th birthday anniversary should sincerely thank the Lord for his life. This is because it is rare for a Nigerian to scale through two heavily shaky health challenges and still live to see a ripe old age. Those close to him would recall that barely a couple of months into his ascendancy into the office of the Director of the Institute of Education, University of Ibadan, he was floored by a heart related dysfunction that rendered him unable to fully function in his new role. Even his most optimistic well-wishers had their hopes fading off when it was learnt that Nigerian medical service was not equipped with the facilities to help him out. Britain was the only option, and there was no fund for that. The University could not rise up to the challenge, and certainly not the Institute. The Federal Ministries of Education and of Health each in turn responded in the negative. All human hope appeared to be ending. Meanwhile, our man was progressively declining, right under our nose, day after day. It was just at this crucial juncture that his fairer half ran around, to an almost forgotten uncle, and was able to pull through a near miracle rescue. A short visit to Britain completed the miracle.

If what has been proffered thus far is a serious indictment of the governmental and administrative systems, so be it. Even if the contract of employment did not clearly impel the administration to take full responsibility for the health and wellbeing of employees, simple respect for fellow feeling should have dictated that those in the right positions should have gone the extra mile to rescue a fast sinking intellectual. We are talking of a government manned by hundreds who could afford hundreds of trips to Britain if they were personally involved. And to learn that dozens in the university and in the ministry were jostling to occupy the role of accompanying the patient on the trip leaves a rather sour taste in the mouth.

Thank God, the patient made it and returned to the Institute full of health and ready to work. His three year tenure was uneventful as he was able to steer the ship of the Institute smoothly through some of the most eventful periods. He handed the baton over to Prof Bajah in 1996 with the same number of academics that he started with in 1993, but was able to secure two worthwhile programmes- the M.Ed. degree in Ilesa and on the main campus itself. Throughout his tenure none in the Institute could point to any act of impropriety or of unfairness. It was during those three years that one of his senior colleagues, described him as straight forward and upright as his lean 'I' figure. That senior colleague stressed that "Falayajo has no corner in his mind; it is all a straight one street that doesn't bend anywhere. What he agreed with you yesterday is what he will act on, no matter how strongly others may have tried to convince him to the contrary."

Thus, it was that when I took over from his own successor in 1999, I had a model to copy. People soon knew me for telling them the blunt truth even when it hurt. If your promotion case was weak I was not afraid to tell you to go back and re-prepare; if your candidate's thesis was faulty, I had no problem telling you to go back to tidy up for some more months. That was precisely Falayajo's way of life and of administration, even though it earned him a few critics here and there, just as I received some myself.

I earlier referred to two solid health challenges. I have discussed one. The second occurred a few months into my own

administration in 2000. It was the first time I learnt of what was called amnesia. I have since then learnt of some other elderly citizens with this condition and also learnt that all individuals progressively manifest instances of it as they grow older. Today, when I suddenly fail to recall the name of an individual that I have known for years I realize that I myself am growing older. But when it occurred to our man, it was sudden and in a much greater dose than usual. From then on, he has had to rely progressively more on the support of those closest to him. This is especially with regard to communication, the aspect in which the problem is most manifest. Today, when I recall how I myself have experienced a devastating but a totally different health condition, occasioned partly by the process of ageing and even more significantly so by the inept medical system that we have been saddled with in this nation, I realize how essential the reliance on the support of friends and relatives is. Prof Falayajo has been able to pull through thus far mainly because there are relatives and friends to support him in his long hours of loneliness.

Looking back over the long corridor of his life, it can be said to his credit that once any of his doctoral candidates had his thesis presented for defence, that one was sure of earning the degree. His supervised theses were known to be almost 100% flawless. No external examiner ever had any seriously challenging adverse comment. Indeed, they often had more to learn from the exercise than to criticize. A man of few words, he would throw in a word only once in a while; the candidate himself/herself had already been sufficiently cooked for the task of taking on any challenge that might arise.

Most of those candidates are today high up in their careers. Most are professors; at least one occupied the seat of his university's vice-chancellorship. Thus, Prof Falayajo is a vast contrast to the genre of supervisors who take it as a golden rule to stand stolidly against the way of those who would qualify for the esteemed title of doctorate degree holders. I did not pass through his supervision, but I was taught statistics by him. In those days in the 1970s, we saw him as a strong pillar in his field. And we saw statistics as a veritable tool for tackling most of life's problems. And, you see, if only we are ready to analyse issues and accept what the facts and figures tell us, our ways would be more straight forward.

Now at 80, for Prof Falayajo, writing seriously earth-shaking academic papers and presenting them at high profile seminars are out of the question. Nor does he need to. Those are now the tasks for his children with whom God has endowed him. What remains for him is to constantly intercede for their welfare and progress. He once moaned that one of his most academically imbued sons has gone into evangelism, though still in secular service; I calmed him down that God Himself may have charted the course for the young man. Today, he has no regrets; the boys and girl are all doing well, and are sufficiently close to their old man.

What is there left to say about a man who has lived for four full scores? I can only wish him a restful old age. He has paved his way sufficiently for that and it is my strong and sincere belief that that is what he is going to have.

Congratulations.

Rev Prof Samuel O. Ayodele.

Professor 'Wole Falayajo, a unique man in Physique and Character Tribute by Professor & Mrs Gbenga Adewale

It all started in 1989 after my NYSC. I went to the Director's office, Institute of Education, University of Ibadan to ask about the status of my admission to pursue M.Ed. Degree in Educational Evaluation. The Secretary to the Director allowed me to enter his office. Here was a daunting looking man glued to the 186 computer with 5¼" floppy disc and two pairs of glasses. He removed one and wore another to attend to me. I explained to him that I had not received my admission letter. He left what he was doing and took me to the then Head of ICEE and Sub-Dean (Prof J. O. Obemeata)'s office. I was surprised that he did not ask his secretary to take me to Prof Obemeata's office nor did he give me directions there but he took me to Prof. Obemeata's office personally and asked him to attend to me. I did not think of him as friendly because he was too serious.

During our classroom interactions, his teachings were more in the abstract than concrete, one could imagine what we had to cope with as he would not miss his classes. At the end of the one year M.Ed. Programme, my lecture notes in his courses were the fullest. At the initial stage, I found it difficult to understand what he was teaching because I could not separate his teachings from his looks. I hardly asked any question because I could not tell if he would be impressed or not. Throughout the one year programme, I could not remember if he smiled once. Amazingly, as I read his notes at my own pace, they became easy to understand. I could relate with the lectures notes more as they made more sense to me. This was also the experience of some of my colleagues. His notes became indispensable at a time I needed to teach similar courses. Towards the end of the semester, the supervision roster was pasted and I was assigned to him as my supervisor. It was with mixed feelings, because I needed someone who was very sound in research and he was qualified by my assessment. On the other hand, pieces of information from past students and my impressions made me think twice. Of course, I had solace in the words of Jeremiah "O LORD, I know that the way of man is not in himself: it is not in man that walks to direct his steps." (Jer 10:23). So, I concluded that God was the one that ordered my life. We started the journey from one that looked like a common student-teacher relationship to that which involves my entire family. My children refer to him as "grandpa Prof."

Being my supervisor was the best thing that ever happened to me in my academic endeavour. He made his materials available to me. You would hardly know who owned his office. The only way you would know the owner was through the name tag on the door and that he had the keys to the office. I often went to his house to collect the office keys. The first sets of computers I met in his office were my first learning tools in the world of ICT. He supervised my M.Ed project and Ph.D Thesis. At that time many of my classmates would ask how I was coping with a man that would neither talk nor smile. He was always wearing 'a serious minded look.' It was not as if I was luckier than they because several times before I entered his office I would have rehearsed what I was going to discuss with him. Immediately I was done, I would not spend an extra second before he asked "eh…heh, what else?"

The situation changed when we became colleagues in the same Institute of Education where I was his student. We could sit down for hours talking. In one of such times, he told me why he was always looking serious. In his words, students coming for education were few in number maybe 20 at the most. However, there was a time there was an upsurge in student enrolments, many students used his class as an entertainment gallery. When he said something, they would laugh uncontrollably to the point that he would not be able to finish his lectures. At that point in time, he decided not to have any of such jokes again and to look serious.

During the Education Sector Analysis (ESA) of the Federal Ministry of Education, he received an invitation letter and was asked to nominate someone who could develop questionnaire for parents and pupils. He called me and said, "you should be able to do that." I agreed and that was my in-road to Abuja in 2003. Like one of my colleagues would say about my relationship with Prof. Falayajo, that 'your father did not only teach you how to fish but he also took you to different rivers and said, the fishes here are tiny, don't fish here, come to this other river, the fishes are big. You can fish here.' True to his words, one of his past students working in UNICEF in another country came looking for him after he had retired. I took the man to his house and it turned out that the UNICEF wanted Prof to conduct an MLA study for the country in which he was working. The long and short of it was that Prof sent me to the country to conduct the MLA on two missions for five weeks, for which I will always be grateful.

He is committed to his family. My wife and I went to visit him one day at home, I noticed he had a burden, we asked what the matter was, it was his son-in-law's health. He was away in another country for a major surgery. As we prayed for his son-in-law and the daughter, Prof was in tears. To God be the glory! I felt that God saw this old man's tears and decided to answer our prayers.

One of the outstanding lessons I learnt as Prof's student was his sincerity about his knowledge. I rated and still rate him as very intelligent but I was amazingly surprised when he would many times tell me 'I don't know, let's see Dr or Prof so and so, he/she should be able to answer the question.' This actually qualifies him with the appellation given by one of his senior colleagues who described him as "being straightforward and upright as his lean 'I' figure." That senior colleague also stressed that "Falayajo has no corner in his mind; it is all a straight one street that doesn't bend anywhere."

It is indeed a blessing to arrive at the octogenarian age with 55 years of blissful marriage. As Prof Wole Falayajo and his sweetheart wife (Mrs Anke Falayajo) continue to grow together, I wish them a very sound health and more years on earth. I also pray that our Almighty God will give them the grace to witness more joy, peace and prosperity.

Hearty congratulations

Professor & Mrs Gbenga Adewale

A TRIBUTE TO PROF FALAYAJO AT 80

To me, it is indeed an honour of immeasurable proportion to be asked to write a short tribute on a distinguished scholar of the caliber of Prof Falayajo. This is because I do not rank tops among those who are qualified for the honour. Since the assignment has been given to me, I therefore, have to respectfully pay this short tribute to a great teacher, an accomplished scholar, a symbol of humility, a great father and an excellent administrator. I predicate my tribute on the following premises.

I first met the celebrant as the Director, Institute of Education, University of Ibadan in 1990 when I was coming into the International School as a teacher. During this period, I found him as a good listener and someone who was willing and everready to help and make the system move smoothly. I later discovered him to be the father of one of the brilliant students - Funmi - in the SS I class of 1990 - 1991. This discovery made it possible for me to observe and work closely with him and to ensure that he had a good impression of me as a young teacher. I must confess that I was greatly motivated to work harder at my work at the International School to avoid disappointing him as the then Chairman of the Board of ISI and make progress in my quest for success in my pursuit in the field of academics. I thank God because it is evident today that I have not disappointed him on both grounds.

As God would have it, I actually became one of his students in the Ph.D class of 1993/1994 academic session. We were lucky to be taught Data Processing and Analysis by Prof. The class was lucky to be taught by him for one very special reason which was not clear to many people. The reason was that most of us in the class never had it funny coping with a similar course during the M.Ed programme because of the way it was handled. We dreaded the course and wished it was never part of what we had to undergo. We were therefore glad when Prof Falayajo brought his simplicity, thoroughness and ever-smiling face to the teaching of the course. That disposition of his contributed to the success that members of the class recorded during the programme and for which we are eternally grateful to him.

My relationship with him grew closer after the programme and I began my sojourn in the field of academics. Prof Falayajo would always and in a gentle tone, say good words of encouragement to me anywhere he met me and others in the Faculty and outside. He was such a jolly fellow we loved to relate with because it was certain that we would leave his office better. I must confess that we had missed his gentle mien and encouraging words since he retired from the service of the University. I am particularly very glad now that I have this opportunity to say a big thank you to him through this tribute and to put down these few words for posterity.

Prof Falayajo is a man to be emulated in several ways including the following: being ever-smiling and willing to help everybody that came his way whether young or old, always having words of encouragement to give in any situation, being good at teaching his discipline as 'hard and uninteresting' as it is to those who never liked the discipline of mathematics and being a good example of what a good child of God should aspire to be. He is indeed a 'gentleman in whom there is no guile'.

My tribute will not end without a mention of my recent encounter with him and his amiable wife at the banking hall of Skye Bank, University of Ibadan, Ibadan Branch. After we exchanged few pleasantries, I informed them that I would be delivering my inaugural lecture on April, 14 and would love them to attend. Rather than take offence at my audacity, they, in their characteristic way of doing things, took time off to explain to me why they would not be able to make it to the Trenchard Hall. They also prayed for the success of the lecture. Those who attended the lecture would bear witness of the fact that their prayers were answered. Since I cannot possibly write everything I knew and

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enjoyed with working under the shadow of this amiable man of God, I pray that as he grows older in grace, God will continue to renew his strength, grant him good health and help him to enjoy the fruits of his labour to the fullest extend possible in Jesus' Name.

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LANGUAGE ENDANGERMENT: THE CASE OF IGBANKE AND ITS IMPLICATION FOR THE TEACHING AND LEARNING OF INDIGENOUS LANGUAGES IN NIGERIA

I. N. Ohia & Patience Igubor

Introduction

Nigeria is a multilingual nation blessed with many languages. Contemporary patterns of global communication and immigration have made bi/multilingual education programs a way of allowing children to experience their rich bi/multilingual backgrounds as an added advantage and a means of thriving in a bi/multilingual world. Giving children proficiency in the language spoken in their homes (LI) as well as the language spoken by the larger community (L2, L3, ..., Lx) can benefit individuals and society by increasing cognitive skills, humanistic understanding, achievement, economic benefits, linguistic ability, social skills and political cooperation between groups (Crystal, 2011). Having access to learning in more than one language also allows individuals to use different languages for different functions, for example, literacy in national and/or international languages often open doors to the world of work and facilitates mutual intelligibility between the local context and the "outside world" politically and culturally. In turn, mother tongue literacy can foster cultural identity and support the strengthening of ethnic communities as well as the pursuit of ethnic continuity

(Fishman,1991). The advantages of mother tongue education in either a bi/multilingual society is limitless. However in Nigeria and in quite some other bi/multilingual societies, some languages are endangered and so cannot perform these functions. This paper focuses on one of such languages- the Igbanke language. It will examine the factors responsible for this state of affairs in the language as well as the pedagogical implications for multilingual education policy in Nigeria.

Language, Dialect and Code

Language is perhaps the most complex of all human interactions. It is a fundamental and distinctive human attribute which allows for the transmission of culture. It is by means of language that people are able to communicate even the most basic needs and desires, relate to other humans, and form social networks. In all spheres of life, human existence depends and centers on language. There are no "primitive" or "advanced" languages- all languages are equally complex and capable of expressing any ideas of those who speak it hence according to the theory of Linguistic relativity and cultural relativity (Sapir- Wolfian theory), you cannot judge the "goodness" or "badnesss" of a language using the parameters of another language (Knutson, 1996). In addition, the use of a particular language does not reflect "superior" or "inferior" traits since every "normal" child is capable of learning any language to which he or she is exposed. Because of this universal acquisition process, many researchers theorize that all humans are born with the genetic capacity to learn language and that the content and structure of the language we learn is purely the result of the circumstances of our socialization (Fromkin and Rodman 1993). Since culture is tied to language, it therefore follows that if an individual has no access to his/her indigenous language, a portion of that person's culture may be lost. People who speak a particular language use sets of terms that are unique to them to organize, or categorize their experiences and perceptions (Kottak 1994). Through this reflection of culture, language is an essential mode of transmission to future generations. Therefore, inasmuch as people have the right to retain their culture, they must also have the right to maintain their language (Knutson, 1996).

However, it should be noted that the interpretation of the term "language" at times overlaps the interpretation of the term "dialect". This accounts in part for the difficulty linguists face when they have to determine the exact number of languages spoken in a particular region. Thus it is important that a delimitation of the two terms is done. Trudgill (2003) argues that the term "language" is not only a linguistic, but also a political, cultural, social and historical term. He therefore refers the German sociolinguist Kloss, who distinguishes between Ausbau-type and Abstand-type of languages. An Ausbau-type is a variety which derives its status as a language, rather than a dialect, not much from its linguistic characteristics, like an Abstand-type language, but from its social, cultural and political characteristics. These characteristics will normally involve autonomy and standardization. Trudgill (2003) gives Norwegian and Swedish as examples of Ausbau-type of languages. Although these two languages have mutual intelligibility, they are regarded as two languages because they are associated with two separate, independent nation states, and they have traditions involving different writing systems, grammar books and dictionaries. Hence it is possible to have so-called two languages whose speakers can communicate effectively without recourse to an intermediary. On the contrary, an Abstand language is a variety of language which is considered as a language on its own right, rather than a dialect, by virtue of being very different in its linguistic characteristics from all other languages (Trudgill, 2003). Such a variety is clearly a single language because its dialects are clearly similar and unlike a dialect, it is not related historically to another language; its grammar, vocabulary and pronunciation are completely different from neighboring languages.

The term "dialect", on the other hand, is a variety of language which differs grammatically, phonologically and

lexically from other varieties, and which is associated with a particular geographical area and/or with a particular social class or status group (Trudgill 2003). Subsequently, whereas a language is typically composed of a number of dialects and standard varieties are just as much dialects as any other dialect, it has been agreed that there are instances when what are typically dialects have been considered languages (Hudson 1980). For example, Urdu and Hindi which are mutually intelligible are typically dialects of one language. However these are treated as distinct languages in Pakistan and India, respectively. Similarly, what are typically dialects in Kenva have been considered languages either in Kenya, e.g. Gikuyu, and Embu, or in neighboring countries, i.e. Sabaot (in Kenya) and Sebei (in Uganda). When faced with such a distinction difficulty, sociolinguistics normally opt for the middleground term "code". A code is a cover term for language and dialect (Ogechi 2012).

Endangered Languages/Codes

Language endangerment is a serious concern. Efforts to define what an "Endangered Language" is have been hampered by the complexity of the phenomenon, which has made it difficult to provide a succinct, generalizable, and readily comprehensible categorization scheme (Lewis 2006). There are many ways of defining endangered languages, the most simplistic being languages below some critical number of speakers. Smaller languages are in more danger, but the complex social, economic, political, or religious factors are decisive for the transmission of an original language from parents to children (Kindell 1994).

Dorian (1980) lists three symptoms of language death: fewer speakers, fewer domains of use, and structural simplification. Fishman (1991) uses an eight-stage intergenerational disruption scale, where the most threatened languages are those used only (1) by socially isolated old folks, (2) by a socially integrated population beyond child-bearing age, (3) only orally, with no literacy. Krauss (1992) notes that it is impossible to be completely accurate in assessing the language situation in the world; what is clear however is that language extinction has reached an unprecedented level in recent times. Thus, the outlook for a good percentage of the world's surviving languages is very poor. In his comparison of languages to endangered biological species, Krauss (1992) defines three categories of languages:

- 1. *moribund*: languages no longer being learned as mother-tongue by children;
- 2. *endangered* languages which, though now still being learned by children, will- if the present conditions continue- cease to be learned during the coming century; and
- 3. *safe:* languages with official state support and very large numbers of speakers

The United Nations Educational, Scientific and Socio-Cultural Organization (UNESCO 2003) defines an endangered language as one on a path towards extinction. It expatiates on this definition further:

> A language is in danger when its speakers cease to use it, use it in an increasingly reduced number of communicative domains, and cease to pass it on from one generation to the next. That is, there are no new speakers, adults or children (p. 2)

Bernard (1996) observes that about 97% of the world's people speak about 4% of the world's languages; and conversely, about 96% of the world's languages are spoken by about 3% of the world's people. This shows that the majority of the world's language heterogeneity is under the stewardship of a very small number of people.

A number of factors are responsible for language loss, shift or endangerment. Grimes (2001) cites parents' push for their

children to learn prestige language thinking that they can only learn one language well, natural or man-made disasters (for example, the case of the Paulohi language speakers in Maluku, Indonesia who experienced a severe earthquake and tsunami several years ago which killed all but about 50 of them), migration outside of traditional territory, use of a second language in school, national policy, urbanization, industrialization, government changes and small population and others as responsible for language shift. According to UNESCO (2003), language endangerment may be the result of external forces (military, economic, religious, cultural, or educational subjugation), or internal forces (a community's negative attitude towards its own language). Both forces do not act independent of the other. Similarly, Austin and Sallabank (2011) argue that while languages have always gone extinct throughout history, they are currently disappearing at an accelerated rate due to the processes of globalization of neo-colonialism, where the economically powerful languages dominate other ones.

However, it is pertinent to ask: why be concerned about language endangerment? The answer is not farfetched. The extinction of each language results in the irrecoverable loss of unique cultural, historical and ecological knowledge (UNESCO 2003). Every time a language dies, there remains less evidence for understanding patterns in the structure and function of human language, human prehistory, and the maintenance of the world's diverse ecosystems. Above all, speakers of these languages may experience the loss of their language as a loss of their original ethnic and cultural identity (Bernard 1992; Hale 1998). Hale (1992) puts it this way:

Of supreme significance in relation to linguistic diversity, and to local languages in particular, is the simple truth that language- in the general, multifaceted sense- embodies the intellectual wealth of the people who use it. A language and the intellectual productions of its speakers are often inseparable, in fact. Some forms of verbal art-verse, song or chant- depend crucially on morphological and phonological, even syntactic, properties of the language in which it is formed. In such cases, the art could not exist without the language, quite literally. Even where the dependency is not so organic as this, an intellectual tradition may be so thoroughly a part of a people's linguistic ethnography as to be, in effect, inseparable from the language (p. 36)

Generalizations about language are a key to how the human mind works, and endangered languages contribute to scientific knowledge. In addition, language and human dignity are inherently linked (Cahill 2012).

Over the years, various sets of parameter have been applied to test the level of endangerment or vitality of a language. Fishman (1991) in his work, Reversing Language Shift, developed many of the major sociolinguistic concepts that inform our understanding of language use in society. He also introduced the Graded Intergenerational Disruption Scale (GIDS). Fishman's GIDS focuses on the key role of intergenerational transmission in the maintenance of a language. If children do not learn a language from their parents, there is little possibility that they in turn will be able to pass the language on to their children (Lewis and Simons 2009). The GIDS also takes in to account the fact that parental decisions regarding their language in regard to their children are influenced by societal and institutional choices. These choices may lead to the diminishing of a language (that is, the language loses uses) and also losses users as well. The GIDS provides a means of evaluating where a language is on a scale of disruption from full use by many users to no use by any users. While the

GIDS, at its introduction almost two decades ago, provided new insights into the new dynamics of language shift and its reversal, several shortcomings have become apparent as it has been applied in the context of efforts for language preservation, language revitalization, and language development (Lewis and Simons 2009). Thus, there arose the need for an alternative framework.

An alternative framework for assessing the status and vitality of languages in danger was proposed by a UNESCO panel of experts in 2003 (Brenzinger, Akira, Noriko, Dimitri, Anahit, Arienne et al, 2003). The UNESCO framework establishes six categories in a scale of language vitality. For the purpose of assessing the status of a language, the framework provides a set of 9 factors that can be analyzed to determine the category. The most salient of these factors is intergenerational transmission. In contrast to Fishman's GIDS, the UNESCO framework provides a richer set of categories at the weaker end of the scale. Like Fishman's GIDS however, the UNESCO framework also has some significant obstacles to its ready implementation. Despite the shortcomings, the UNESCO Framework was used and reported on a broad scale in the UNESCO Atlas of the World's Languages in Danger (UNESCO 2009).

*The Ethnologue (*Gordon 2005, Grimes 2000, Lewis 2009)categorizes language vitality in terms of a five level scale which is focused more on the number of first-language speakers than on other factors. There are other data reported in Ethnologue which also contribute to a more well-rounded understanding of the status of each language, but those are not tied together in a single index. Like Fishman's GIDS and the UNESCO Framework, the Ethnologue also has its shortcomings.

In an attempt to harmonize the three schemes (Fishman's GIDS and the UNESCO Framework and the Ethnologue) and provide a framework that could be useful and relevant for both analyst and practitioners, an expanded version of Fishman's GIDS

was proposed by Lewis and Simons in 2009. The framework is known as EGIDS. However, the UNESCO framework and the Ethnologue vitality categories still continues to be widely used and relied upon.

The Language Situation in Nigeria

Nigeria is a culturally and linguistically heterogeneous society. There is no comprehensive census on Nigerian languages to date; the exact number is not known (Makinde 2007). But, there are varying accounts of the number of language spoken in Nigeria by linguistic and language experts based on approximations and estimation (Ndimele, 2012). Banjo (1975) in Ayilam and Oyedeji (2000) puts it at 500; Agheyesi, 1984; Brann, 979; Hoffman,1976; put theirs at about 400; Hansford (1976) gives the figure at 395, Bendor-samuel and Standford (1976) estimates 396, Blench and Crozier (1992) agree on 440, According to Lewis (2009), the country has over 527 languages of which 514 are living languages, two are "second languages" without mother tongue speakers, and eleven have no known speakers.

Nigeria's many languages are spread broadly throughout the country's thirty-six states, varying considerably in number of speakers, with three major indigenous or endoglossic languages making up over half of the total population. The three major indigenous or endoglossic languages dominating the Nigeria linguistic landscape are: Hausa-fulani spoken in the North as a first language by 20% of the population ; Yoruba in the west spoken by 25%; and Igbo in the East, spoken by 20% of Nigerians. The remaining 35% are speakers of the so- called 'minority" languages. Efik, Edo, Ibibio, Fulfulde, Tiv, Idoma, Igala and Kanuri are special class of the minority languages for they have a minimum of about a million speakers, are used in national broadcast and are associated with the states where they are predominately spoken (Awonusi, 2007) .

The foerign or exoglossic languages in evidence in Nigeria are English, Arabic and French, spoken by 30%, 15%, and 5-10% of the population respectively(Orekan, 2010). English is the constitutionally recognized official language in Nigeria. it is the language of education, legislation, media, business and administration. French is recognized as the second official language(National Policy on Education, 2004). French does not have the popular acceptance, influence and spread as an exoglossic language in Nigeria. It is mainly used within educational domain as an examinable subject or taught course especially educational domain as an examinable subject or taught course especially in Colleges of Educational and Universities. Arabic is the least influential among the foreign languages in Nigeria. (Ndimele, 2012).it is mostly used in the northern part of the country for religious, educational and regional communication. other exoglossic languages (e.g, German, Italian and Russian) have a minimal presence as they are mainly used in embassies and the families of embassy employees among a few individuals, in universities classrooms and among modern foreign languages departments' staff (orekan, 2010). The third type consist of the pidgin varieties of languages, the most dominant being the largely English-based Nigerian pidgin English (NPE) (Kaplan and Baldauf, 2007).

Despite the fact that Nigeria has an education policy that allows for trilingual education in the modern tongue (MT), a national language and English in practice, only the three major languages- Hausa, Igbo and Yoruba- have widespread use at the primary level, particularly in the state where they are used as L1, along with English (Igboanusi, 2008). A factor that contributes to the state is the number of language with approved orthographies. of the minority language, only thirty-six have approved orthographies while the development of the orthographies is ongoing (based on the figures released by the Nigerian educational research and development council {NERDC}). The implication is that these 36 are the only languages with the prospects of literacy, literature and cultural expression (Ndimele, 2012).

Igbanke:Location and People

Igbanke is one of the biggest villages in Orhionmwon Local Government Area of Edo State in Nigeria. It is bounded in the East by Mbiri, West by Oza- Nogogo and Alisime, North by Ekpon and Amahor and South by Agbor (Owie, 2005). Igbanke is segmentary community of six autonomous villages- Ake, Idumuodin, Igbontor, Oligie, Omolua and Ottah (presenting them alphabetically) - that emigrated at different times in history from neighbouring places like Benin, Esan and Agbor (Acha, 2008). The people of Igbanke speak their own language, Igbanke.

As earlier mentioned, many factors contribute to the death or survival of a language. the rate of endangerment of Igbanke will be estimated in the present study and reference will be made to the criteria as formulated by the UNESCO Ad Hoc Expert Group on Endangered languages (Bfrenzinger et al. 2003). the framework uses nine factors of vitality and endangerment for the assessment of endangerment of the world's languages. the nine factors are: (1) Intergenerational language transmission; (2) Absolute numbers of speakers; (33) Proportion of speakers within the total population; (4) Loss of existing language domains; (5) Response to new domains and media; (6) Materials for language education and literacy; (7) Governmental and institutional language attitudes and policies; (8) Community members' attitudes towards their own language, and (9) Amount and quality of documentation.

UNESCO (2003) however notes that the vitality of languages vary widely depending on the different situations of speech communities. Thus, it cautions against assessing languages by simply adding up the numbers. the factor descriptions are simply offered as guidelines. each user is to adapt these guidelines to the local context and to the specific purpose.

Igbaka Language Level Of Endangerment :

To determine Igbaka language level of endangerment we will grade the language on the six category scale of language vitality-Safe ,Unsafe, Definitely Endangered, Severely Endangered, Critically Endangered, and Extinct measured with numerical scores-5,4,3,2,1 & 0 in that order, on a nine (9) factor analyses table This shown on Table 1.

Table 1: UNESCO Ad Hoc Expert Group FrameworkForEndangered Languages

Factors	Grade	Levels
Intergenerational Language Transmission	4	Unsafe
Absolute Number of Speakers	Nd	
Proportion Of Speakers Within The Total Population	4	Unsafe
Trends in Existing Language Domains	3 and 4	Definitively Endangered
		and Unsafe
Response to New Domains and Media	1	Critically Endangered
Materials for Language Education and Literacy	1	Critically Endangered
Governmental and Institutional Language Attitudes and	4	Unsafe
Policies including Official Status and Use		
Community Members' Attitudes Towards their own	3	Definitively Endangered
Language		
Amount and Quality of Documentation.	1	Critically Endangered

Source: Mufwene (2003) Note: Nd signifies no data is available

A close look at the table and graphic representation in Fig. 1 on the analyses of the nine (9) factors used in evaluating the vitality of the language reveals that the Igbanke language is really endangered. According to the rating the language is said to be unsafe in three factors, Definitely endangere and unsafe in one factor, Definitely endangered in one factor, Critically endangered in four factors. It is obvious that the language is the danger of going into extinction See endangerment level. This should be a cause for concern.



Figure 1: Graph showing the level of endangerment of Igbanke language The pedagogical implications for the multilingual education policy for Nigeria

The challenge facing the Igbanke Language is also being faced by a number of indigenous languages in Nigeria. If the government is truly committed to preserving the cultures of its peoples and intends to achieve its multilingual education policies as stated in the NPE then its passive attitude towards the indigenous languages must change. In the absence of trained indigenous language teachers, standardized rthography or written materials on a language, it becomes difficult to use such language in formal education.

In order to remedy this trend, several suggestions have been given. Emenanjo (2005) among other suggestions gave the following:

- 1. A qualitative and quantitative increase in the number of teachers for Nigerian Languages.
- 2. A qualitative and quantitative increase in texts of all descriptions available in Nigerian languages Science and Mathematics books should be available for primary education in the major as well as the minority languages.
- 3. General awareness about the role of indigenous languages in initial literacy, mass literacy/mobilization and adult literacy.
- 4. More proficient numeracy and literacy in Language use in Nigeria.

Similarly, UNESCO (2003) suggests the following can be done to halt the trend of languages endangerment.

- 1. Basic Linguistic and Pedagogical Training: Trained teachers should be provided for the indigenous languages. The training should include courses in basic linguistics, language teaching methods and techniques, curriculum development, and teaching materials development.
- 2. Sustainable Development in Literacy and Local Documentation Skills: Language workers should be trained to develop orthographies if needed, read, write, and analyse their own languages, and produce pedagogical materials. This can be done by establishing local research centres where speakers of endangered languages will be trained to study, document and archive their own language materials.
- 3. Supporting and developing national language policy: National Language policies must support diversity, including endangered languages. then, the government must have the political to act and implement the language policy

- 4. Supporting and Developing Educational Policy: Mother tongue education should be what the name implies- educaiton in the ancestral languages of ethnolinguistic minorities (i.e endangered language) rather than teaching these languages as school subjects. While it is not wrong to teach the locally or nationally dominant language, this should not be done at the expense of the endangered minorities (The Hagne Recommendations on the Educational Right of National Minorities. 1996; Skutnabb-Kangas, 2000). for example UNESCO (2003) notes that fewer than 100% of the approximately 2000 African languages are currently used in teaching and more of the 10% of the approximately 2000 African languages are currently used in teaching and none of these 10% is an endangered language. A great deal of research shows that acquiring bilingual capacity need no way diminish competence in the official language.
- 5. Improving living conditions and respect for the human rights of speaker communities: A way to halt migration of community members to cities in search of economic and other advantages is to develop the communities of the minority groups. more often than not, attention is paid to the rural areas while the urban areas are neglected. Providing basic social amenities for dwellers of such communities and gainful employment will go a long way in stemming the tide of rural-urban migration which contributes to language loss.

Apart from the aforementioned suggestions, all members of a language community must be dedicated to seeing that their language thrives. the traditional rulers, language associations, the three tiers of government and parents should do their part in promoting the use of our indigenous languages. Issues in Teacher Education in Africa

Conclusion

Preserving the world's languages has never been more urgent as it is now. Everyone must pool their resources together and build on the strengths of their linguistic and cultural diversity (Brenzinger et al, 2003). The suggestions given in this work should be implemented. It should be noted that everyone shares the responsibility of ensuring that our languages do not disappear but rather, are maintained and perpetuated into the future generations.

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PARENTING STYLE, SCHOOL CONNECTEDNESS AND ACADEMIC SELF EFFICACY AS DETERMINANTS OF ACADEMIC SUCCESS OF SECONDARY SCHOOL STUDENTS IN IBADAN NORTH LOCAL GOVERNMENT

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Introduction

The degree of discrepancy between students' academic scores and success score line in Nigerian educational institution of learning has been and is still a source of concern and research interest to educators, government and parents. This is so because of the great importance that education has on the national development of the country. All over the country, there is a consensus of opinion about the current state of education in Nigeria (Adebule, 2004). Parents and government are in total agreement that their huge investment on education is not yielding the desired dividend. Teachers also complain of decline in students' academic success at both internal and external examination. The annual reports of Senior Secondary Certificate Examination results (SSCE) conducted by West African Examinations Council (WAEC) revealed the problematic nature and generalization of poor secondary school students' performance in different school subjects.

Academic success according to Aremu (2003) is a summary of learners' academic score equal or above expected bench mark. However, decline in academic success has been observed in school subjects especially mathematics and English language among secondary school students (Adesemowo, 2005). Aremu (2000) stresses that academic success decline is not only frustrating to the students and the parents, its effects are equally grave on the society in terms of dearth of manpower in all spheres of the economy and politics. Education at secondary school level is supposed to be the bedrock and the foundation towards higher knowledge in tertiary institutions. It is an investment as well as an instrument that can be used to achieve a more rapid economic, social, political, technological, scientific and cultural development in the country. The National Policy on Education (2004) stipulated that secondary education is an instrument for national development that fosters the worth and development of the individual for further education and development, general development of the society and equality of educational opportunities to all Nigerian children, irrespective of any real or marginal disabilities.

The role of secondary education is to lay the foundation for further education and if a good foundation is laid at this level, there is likely to be no problem at subsequent levels. However, different people at different times have passed the blame of not meeting up to success in secondary school to students because of their low retention, parental factors, association with wrong peers, low achievement, low retention, low achievement motivation and the likes (Aremu & Sokan, 2003; Aremu & Oluwole 2001; Aremu, 2000). Morakinyo (2003) believe that the falling level of academic achievement is attributable to teacher's non-use of verbal reinforcement strategy. Others found out that the attitude of some teachers to their job is reflected in their poor attendance to lessons, lateness to school, unsavory comments about student's performance that could damage their ego, poor method of teaching and the likes affect pupils' academic success. The question therefore is what are the variables determining academic success?

School is a creation of community and students found in schools are from different homes, the home activities go a long way in determining academic success. For instance, Bakare (2004) advanced four causative phenomena that could affect individual scholastic achievement, these include: the child's attitude, family, school and society. From these phenomena, parents stand in the position of the family. This shows the importance of the involvement of parents in the improvement of students' academic achievement. Parental involvement includes a wide range of behaviours, but it generally refers to parents' mode of training and investment of resources in their children's schooling. Parenting style at home can include activities such as discussions about school, helping with homework, and reading with children (Dauber & Epstein, 1993; Atanda, 2013). Parental beliefs and perception have also been shown to be strong predictors of parental involvement. In addition, Atanda (2013) opined that the more favourable children perceived their parents behaviour towards them, the more they are likely to perform successfully in school.

Authoritative parents are characterized to be caring, warmth towards their children in setting rules and limits. Authoritative parents' exhibits low to moderate level of control and less demanding. Authoritarian parents are characterized as having a high degree of control and over-demanding, with no openness toward their children's input regarding rules and limits. Authoritarian parents are extremely strict and exhibit little or no warmth. Permissive parents are characterized as either indulgent or neglectful. Indulgent parents are characterized by a high degree of responsiveness and warmth, but exhibit no control or demandingeness in setting rules or limits. Neglectful parents do not exhibit any degree of either responsiveness or warmth, nor do they exercise any degree of control or demandingness.

Parenting style has been examined in several studies as a strong predictor of adolescent achievement outcomes (Wintre &Yaffe, 2000). Findings have indicated that a significant relationship exists between the type of parenting style and academic achievement. In fact, some researchers have proposed that authoritative parenting is associated with higher academic achievement (Hickman, Bartholomae & McKenry, 2000). Although recent studies have supported the significant influence of parenting styleon academic achievement, such findings have not been consistent across different cultures, ethnicity and socioeconomic status (Spera, 2005).

When investigating variation in students academic success, academic efficacy could also be put in to consideration since it expresses students belief in their capability to perform a task. Academic efficacy is defined as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Academic efficacy beliefs determine how people feel, think, motivate themselves and behave. Such beliefs produce diverse effects through four major processes. They include cognitive, motivational, affective and selection processes. A strong sense of efficacy enhances human accomplishment and personal wellbeing in many ways. People with high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided. Such an efficacious outlook fosters intrinsic interest and deep engrossment in activities. They set themselves challenging goals and maintain strong commitment to them. They heighten and sustain their efforts in the face of failure (Bandura, 1994, 2000). Academic efficacy, also called perceived ability, refers to the confidence people have in their abilities for success in a given task. If they possess the ability to successfully perform, then that task will be attempted (Bandura, 1997; Tenaw, 2013).

Academic efficacy is explained in the theoretical framework of social cognitive theory by Bandura (1986 and 1997) which stated that human achievement depends on interactions between one's behaviours, personal factors and environmental conditions (Mahyuddin et al, 2006). According to the Social Cognitive theory, academic efficacy is one of the most important variables that influence the academic performance and achievement. Collins (1982) demonstrated in a clear way the importance of academic efficacy beliefs and skill application on academic performance. The study showed that people may perform poorly on tasks not necessarily because they lack the ability to succeed, but because they lack belief in their capabilities (Shkullaku, 2013).

Baron and Byrne (2004) introduced three types of academic efficacy: self-regulatory academic efficacy (ability to resist peer pressure, avoid high-risk activities); social academic efficacy (ability to form and maintain relationships, be assertive, engage in leisure time activities); and academic academic efficacy (ability to do course work, regulate learning activities, meet expectations). Many studies have been carried out on this concept of academic efficacy in the academic settings. Researchers have reported that mathematics academic efficacy is a good predictor of mathematics interest and choice of mathematics-related courses (Mahyuddin et al., 2006). Students with strong academic efficacy beliefs are more likely to successfully complete their education and be better equipped for a range of occupational options in today's competitive society (Bandura et al., 2001; Zimmerman, 1990). Conversely, it has been found that students who have a low sense of self-regulatory and academic academic efficacy are more likely to engage in problem behaviors such as delinquency, dropping out of school, and school failure (Bandura, 1997).

During adolescence, the need to belong and feel connected to one's larger social ecology increases dramatically (Roth & Brooks-Gunn, 2003).Given this developmental transition, a growing body of literature has focused on the impact of school connectedness in relation to adaptive and maladapative outcomes for youth (Anderman, 2002; Catalano, Haggerty, Oesterle, Fleming & Hawkins, 2004; Karcher, 2003). School connectedness can be defined as a general indicator of a student's perceived acceptance and quality of relationship with others in the school environment (Goodenow, 1993). More recently, however, scholars have asserted that connectedness is not synonymous with feelings of relatedness and belonging; rather connectedness is a behavioral and attitudinal *response* to those feelings (Karcher, 2003). Thus, school connectedness includes the reciprocal experience of caring about school and feeling bonded to those in the school environment.

A sense of school connectedness also relates to student attitudes toward the importance of school as well as level of personal involvement and commitment (McNeely & Falci, 2004). A strong sense of connectedness to school has been found to be positively related to numerous aspects of adolescent academic success (Graves, 2014). Considering the essentiality of students' academic success there has been a challenge of time-lag and confusion in the selection of predictors when investigating academic success. Most researchers have delved in to other aspects (bulling behaviour, examination malpractices, addiction and cyber crime) of adolescent behaviour and development leaving academic success fallow, especially in terms of modeling its predictors. However, this study is much interested in seeing how two predictor model with one mediator can predict academic success using neo-classical path analysis approach.

Purpose of the Study

The general purpose of this study is to undertake neo-classical path analytical explanation of academic success variables. Specifically it intends to;

- 1. Investigate the relationship that exists between the independent variables (school connectedness, parenting style and academic efficacy) and the dependent variable (students' academic success).
- 2. Examine the contribution effect of the independent variables to the prediction of students' academic success in Ibadan, Oyo State.
- 3. Determine the relative contribution of the independent variables to the prediction of students' academic success in Ibadan, Oyo State.
- 4. What is the most parsimonious causal model for explaining students academic success in Ibadan, Oyo State.

Research Design

The descriptive research design of the *ex-post facto type* was adopted for this study. (Kerlinger and Lee (2000) states that ex-post facto research is systematic, empirical research, in which the researcher does not have direct control over independent variables because their manifestations have already occurred, or because they are inherently not manipulated). Inferences about relations among variables are made without direct interaction from concomitant variation of independent and dependent variables.

Study Population

The population for this study comprised all secondary school students in Ibadan, Oyo State. Ibadan has eleven local government areas (L.G.A). Among the eleven L.G.A, Ibadan North is the largest of them. Ibadan North L.G.A has twenty six (26) secondary schools.

Sample and Sampling Techniques

Multistage sampling technique was used to select respondents for the study. The first stage involved the selection of fifteen (15) secondary schools (that is 42% of the population) from the entire Ibadan North Local Government Area. The second stage includes the random selection of 20 (10 male and 10 female) students in each of the schools. In all three hundred (300) students were selected as the sample for the study.

Research Instrument

A copy of questionnaire was used for data collection on the variables under study. The school connectedness, parenting style and academic efficacy, (SPS) scale was used in this study. The adaptation was made after extensive review of literature as advised by experts within and outside the Faculty of Education. The score on academic success was determined by an examination of three terms academic score in mathematics and English language. This was collected from the school administrators. An average score on the three terms above 50% is rated high academic success, while below 50% is rated low academic success. Questionnaire was used to collect data on other variables. The questionnaires were divided into four sections.

Section A: This section contains demographic information of the students such as age, gender, and class. This section was developed by the researcher.

Section B: Parenting Style Scale

Parenting Styles Scale (PSS), was adapted from Lamborn (1991) based on Maccoby and Martin"s (1983) revision of Baumrind"s (1967, 1971) parenting style conceptual framework, was employed to measure parenting styles. This scale consisted of 25 questions in which students were asked to rate their parents in terms of two dimensions: Acceptance/involvement and strictness/supervision. The responses were made on a four-point Likert-type scale ranging from Strongly Disagree (coded as 1) to Strongly Agree (coded as 4). A pilot study was conducted for localization and adaptation of the scale was done through single administration method of reliability and the internal consistency estimate was computed using Cronbach alpha = 0.73

Section C: School Connectedness Scale

The Hemingway Measure of Adolescent Connectedness (MAC; Karcher, 2003) was initially 78-item, 6-point, Likert-type response measure that assesses connectedness among adolescents in 15 domains most important to their ecology, including connectedness to parents, religion, peers, school, and neighborhood. Response options range from "1 = not at all true" to "5 = very true," with a sixth option of "Not clear" for some questions. From that measure, was used a composite variable, "School Connectedness," pertaining to connectedness to one's school experience, teachers, and school peers (16 items). Connectedness to school experience

assesses the importance youth place on school and how actively they try to be successful in school (e.g., "I get bored in school a lot").Internal consistency for the composite variable "school connectedness" with this sample is $\alpha = .80$. A pilot study was conducted for localization and adaptation of the scale was done through single administration method of reliability and the internal consistency estimate was computed using Cronbach alpha = 0.81

Section D: Academic Efficacy Scale (AES)

It consists of 14 items Academic Efficacy Scale adapted from Chris (2008). The scale measures the level of confidence a staff has in his ability to perform organizational task. The scale has 5 point-likert response format, ranging from SA=strongly agree to SD= strongly disagree. It has a reliability coefficient of 0.87 using Cronbach-alpha method. A pilot study was conducted for localization and adaptation of the scale was done through single administration method of reliability and the internal consistency estimate was computed using Cronbach alpha = 0.73

Method of Data Analysis

The Structural equation Modelling (S.E.M) was adopted for the analysis of Data collected in this study, with the use of Analysis of Moment Structures (AMOS). This will provide causal influence of wash-back variables (parenting style, school connectedness and academic efficacy) on the criteria variable (academic success) under investigation.

Path Analysis is an extension of regression model used in testing a theory. Path analytical model is a causal model that explains the network of variables that accounts for the variation in a criterion variable. This is usually a test of how the data fit (justify the correctness) of the hypothesised model. Causal modelling technique is advantageous in examining whether a pattern of intercorrelations among variables "fit" the researcher's underlying theory of which variables are causing other variables in a study. The A.M.O.S model is usually depicted in a square-and-arrow figure in which single-headed arrows indicate causation. The curved, double-headed arrows however represent bivariate correlations among independent variables in the model.



The hypothesized variables are represented in the model as: X_1 -parenting style, X_2 -School connectedness, X_3 – academic efficacy X_4 – academic success.

Structural Equations for the 4 Variables

The following structural equations labeled were formed. Each equation corresponds to each independent variable. X_i (i=3,4).

$$X3 = P_{31}X_1 + P_{32}X_2 + e_2$$

2. $X4=P_{41}X_1+P_{42}X_2+P_{43}X_3+e_1$

The above equations raise the necessity for a regression analyses in order to compute values of the path coefficients for the hypothesized model of academic success. An estimation of maximum likelihood would be done for both the exogenous and endogenous variables in the model at once. The regression weights generated will show the strength of relationship among the variables. Goodness of fit index and other multiple indexes will be generated along side with the model using analysis of moment structure (AMOS) to justify the significant pathways instead of the old method of using regression analysis. The trimming will help this researcher to identify meaningful paths needed to understand students' academic success.

Result and Interpretation

Research Question 1:What is the joint contribution of the independent variables (parenting style, academic efficacy and school connectedness) to the prediction of dependent variable (Academic success)?

Table 1: Summary of regression showing the joint contributions of independent variables to the prediction of academic success

R =.557									
R Square =.311									
Adjuste	d R square =.304	4							
Std. Erro	or =11.45049								
		Sum of			Mean				
Model		Squares	Df		Square	F	Sig.		
1	Regression	17435.724		3	5811.908	44.327		.000 ^a	
	Residual	38678.577		295	131.114				
	Total	56114.301		298					

Table 1 above reveals a significant joint contribution of the independent variables (parenting style, academic efficacy and school connectedness) to the prediction of academic success. The result yielded a coefficient of multiple regressions R= 0.557, multiple $R^2=0.311$ and Adjusted $R^2=.304$.

This suggests that the three independent variables combined accounted for 30.4% (Adj.R²= .304) variation in the prediction of academic success. The other variables accounting for the remaining 69.6% are beyond the scope of this study. The ANOVA result from the regression analysis shows that there was a significant joint contribution of the independent variables on academic success, F (3,295)=44.327, P<0.001.

Research Question 2: What is the relative contribution of the independent variables (parenting style, academic efficacy and school connectedness) to the prediction of dependent variable (academic success)?

Table 2: Summary of regression for the relative contribution of theindependent variables to the prediction of academic success.

Model	Unstandardize	d Coefficients	Standardized Coefficients		
	В	B Std. Error		t	Sig.
(Constant)	17.758	3.119		5.693	.000
Academic efficacy	.626	.066	.467	9.475	.000
School connectedness	.197	.051	.211	3.877	.000
Parenting style	.037	.055	.036	.667	.505

Table 2 shows that two out of three predictor variables (parenting style, academic efficacy and school connectedness) are potent predictors of academic success. The most potent factor was academic efficacy (Beta = .467, t = 9.475, P<0.001).Followed by school connectedness (Beta = .211, t = 3.877, P<0.001). Parenting style (Beta = .036, t = .667, P>0.05) is not a potent predictor of academic success. This implies that the higher the students academic efficacy and school connectedness the higher the likelihood for high academic success.

Research question 3: What is the most parsimonious (recursive) model explaining academic success among senior secondary school students.

The most parsimonious model for explaining secondary school students academic success was obtained after trimming of the insignificant pathways by re-specifying the model through Analysis of Moment Structure (AMOS) along side with the fitness index analysis.



The variables under study are represented in the model as: X_1 -parenting style, X_2 -School connectedness, X_3 – academic efficacy X_4 -academic success.

From the path model parenting style had significant direct effect on academic efficacy (beta= 0.32). This indicates that for every 1% increase in the standard deviation of parenting style will increase students academic efficacy by 32%. Academic efficacy had significant direct effect on academic success (beta=0.47). This implies that 1% increase in students academic efficacy will increase their likelihood in achieving academic success by 47%. School connectedness had significant direct effect on academic success (beta= 0.21). By implication 1% increase in students school connectedness will increase their chances for academic success by 21%. School connectedness had direct effect on academic efficacy (beta= .42). This implies that 1% change in school connectedness will increase students academic efficacy by .42%. School connectedness had indirect effect through academic efficacy to academic success. This implies that for the effect of school connectedness to be strong enough in improving academic success of students it has to go through the students' academic efficacy. While for parenting style to be efficient in improving

students academic success it must go through high academic efficacy. However, the predicting effect of parenting style and school connectedness on students' academic success is based on the mediating effect of their academic efficacy.

Table 3: Maximum Likelihood Estimate showing Goodness of Fit Index of the just-identified model

Model	X ²	Df	Р	GFI	NFI	CFI	RMSEA	RMR
Initial	223.304	3	.000	.949	.834	.832	.558	8.98
Model								
Reduced model	20.422	2	.054	.995	.993	.997	.012	.341

Based on the criteria for the goodness of fit that says; Goodness of fit index (GFI): for a good model fit should exceed 0.9. Normed fit index (NFI): should range between 0 and 1, with a cutoff of .95 or greater indicating a good model fit. The comparative fit index (CFI): range from 0 to 1 with a larger value indicating better fit; a CFI value of .90 or larger is generally considered to indicate accepted model fit. The Root mean square error of approximation (RMSEA). The RMSEA ranges from 0 to 1, while smaller values indicating better model fit with a value of .06 or less is indicative of acceptable model fit.

Table 3 reveals that the initial (hypothesized) model displayed an appealing value; $X^2(2)=223.304$, p>.001, but inferior to the reduced model which recorded $X^2(3)=20.422$, p<.05. The non-significant Chi-square here indicates that the fit between the just-identified model and the data is not significantly worsened. This inference is made based on the affinity goodness of fit estimate have for sample size. Based on the recommendation by Cohen, (2000) and Tabachnik and Fidel (2007) the p-value notwithstanding the lesser the chi-square value the better the model. To further ascertain the fitness of the reduced model over the initial model other fit indexes were considered: Normed fit index (NFI)=.993 > .95; Comparative fit index (CFI)=.999> .90;

Root mean square error of approximation (RMSEA)= .012 < .06. However, root mean square residual (RMR)= .341; indicates the amount by which the estimated model variance and covariances (i.e re-produced) differ from the observed variance and covariances = .381. This implies that the reduced model gained an incremental fitness over the initial (hypothesized) model, satisfying all the criteria for a good model. This indicates that significant path ways are possible paths that predict the variation observable in academic success. Therefore the reduced model is a true representation of the data.

Hypothesis 1: There is no significant relationship between academic efficacy and academic success of students.

Table 3:PPMC showing the relationship between academic efficacy and academic success.

Variable	Ν	Mean	St-Dev	Df	R	Р	Remark
Academic success	299	48.8294	13.72235	297	.510**	<.001	Ho1 Rejected
Academic efficacy	299	33.7960	10.24671				

Table 3 reveals that the relationship between academic efficacy and academic success; r (297)= .510, p<.001. That is, there is a significant relationship between academic efficacy and academic success. Hence the null hypothesis is rejected. The table further reveals that academic efficacy positively influenced academic success of students. This implies that a high academic efficacy increases the tendency for students to display high academic success. Coefficient of determination (r^2 = 0.260), reveals that academic efficacy had large influence on students academic success. That is, it accounts for 26.0% in the variation of students' academic success. **Hypothesis 2:** There is no significant relationship between school connectedness and academic success among students.

Table 4:PPMC showing the relationship between school connectedness and academic success.

Variable	Ν	Mean	St-Dev	Df	R	Р	Remark
Academic success	299	48.83	13.72	297	.309**	<.001	Ho2 Rejected
School connectedness	299	41.67	14.68				

Table 4 reveals that the relationship between school connectedness and academic success; r(297)=.309, p<.001. That is, there is a significant relationship between school connectedness and academic success. Hence the null hypothesis is rejected. The table further reveals that school connectedness positively influenced students' academic success. This implies that a high school connectedness increases the tendency for students to display high academic success score. Coefficient of determination ($r^2=0.095$), reveals that school connectedness had moderate influence on students academic success. That is, it accounts for 9.5% in the variation of students' academic success.

Hypothesis 3: There is no significant relationship between parenting style and academic success among students.

Table 5:PPMC showing the relationship between parenting style and academic success.

Variable	Ν	Mean	St-Dev	Df	R	Р	Remark
Academic success	299	48.83	13.72	297	.202**	<.001	Ho3 Rejected
Parenting style	299	47.04	13.54				

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Table 5 reveals that the relationship between parenting style and academic success; r(297)=.202, p<.001. That is, there is a significant relationship between parenting style and academic success. Hence the null hypothesis is rejected. The table further reveals that parenting style positively influenced students' academic success. This implies that a high parenting style will increase the tendency for students to display high academic success score. Coefficient of determination ($r^2 = 0.041$), reveals that parenting style had small influence on students academic success. That is, it accounts for 4.1% in the variation of students' academic success.

Discussion of Findings

The first research question assessed the joint contribution of the independent variables (parenting style, academic efficacy and school connectedness) to the prediction of dependent variable (Academic success). The result shows that there was a significant joint contribution of the independent variables (parenting style, academic efficacy and school connectedness) to the prediction of academic success. This suggests that the three independent variables combined accounted for 30.4% (Adj.R²= .304) variation in the prediction of academic success. This implies that parental style, academic efficacy and school connectedness had significant contribution to the variance in student academic success. This result is in support of several studies that concurrently confirmed that authoritative parenting style is associated with higher academic achievement (Steinberg, Lamborn, Dornbusch & Darling, 1992; Hickman, Bartholomae, & McKenry, 2000).

Similarly Jeffreys, (2008) also noted that an authoritative parenting style, which emphasizes both responsiveness and demandingness, is superior in fostering higher academic performance. In research that has examined the relationship between academic efficacy and academic achievement of students at different levels of education, with the exception of a few studies (Jeffreys, 2008), it has been consistently documented that students

with higher levels of academic efficacy have significantly higher academic performance compared to their counterparts who are low in academic academic efficacy. That is, when students have strong beliefs in their academic capabilities to perform well, they will have higher academic achievement than their counterparts with low beliefs in their capabilities to perform well academically. Considering all the three variables that jointly contributed to academic success. It is obvious these variables might not be as effective as possible when they are not available at the same time. and in a person. This is consistent with reports from empirical studies (Boon, 2007; Ingoldby, Schvaneveldt, Supple, & Bush, 2004) which have scrutinized the influences of different types of parenting styles on academic efficacy beliefs documented that adolescents with authoritative parents have the highest academic efficacy beliefs, whereas those with non-authoritative parents have the lowest levels of academic efficacy beliefs.

The second research question tested the relative contribution of the independent variables (parenting style, academic efficacy and school connectedness) to the prediction of dependent variable (academic success). While the third research question tested for the most parsimonious causal model using neoclassical path analytical model. The result shows that school connectedness had direct and indirect effect on academic success through academic efficacy. It was also found in the model that parenting style hard significant indirect effect on academic success through academic efficacy. Indicating that academic efficacy is a strong mediating factor that other factors rely on to boost students academic performance. On the other hand the regression model (OLE) also revealed academic efficacy as the most potent factor predicting academic success. Followed by school connectedness. Parenting style is not a potent predictor of academic success. This implies that the higher the students academic efficacy and school connectedness the higher the likelihood for high academic success. This result partially corroborate findings from various studies reporting a strong sense of connectedness to school has been found

to be positively related to numerous aspects of adolescent adjustment including achievement (Boon, 2007). This implies that the level of sense of belonging students develop for school influences their seriousness for the school, teachers and subject taught. The result is also consistent with previous studies; academic efficacy has been confirmed as an important predictor of school functioning including academic achievement, aspirations, (Pajares, 2008; Schunk, 2001; Zimmerman, Bandura, & Martinez-Pons, 1992), and school retention (Caprara et al., 2008). Similarly this result corroborates Bandura, (2001) who concluded that students with higher academic efficacy have been shown to work harder, demonstrate more persistence with challenging tasks, and develop better goal-setting and time-monitoring strategies than other students. This is an indication that self confidence which is refered to as academic efficacy is significant in determining the level of academic success a student can gain; because academic efficacy is a self belief system that determines students effort, focus and commitment which is the hallmark of success.

The first hypothesis states that there is no significant relationship between academic efficacy and academic success of students. The result shows that there is a significant relationship between academic efficacy and academic success. The result further reveals that academic efficacy positively influenced academic success of students. This implies that a high academic efficacy increases the tendency for students to display high academic success. This result supports Bandura and his colleagues (1996; 1997 & 2001), who reported that adolescents with a strong sense of efficacy for learning are also more resilient to setbacks and better able to resist the adverse influences of low-achieving peers than are those with a weak sense of academic efficacy. Bandura and his colleagues (1996; 1997 & 2001), further reported that maintenance of high academic efficacy can also have positive influence on youth career trajectories and continuing academic performance throughout college. Similar studies also justified the result of this study; Jeffreys, (1998) and Reynolds and Weigand,

(2010) who examined the relationship between academic efficacy and academic achievement of students at different levels of education, with the exception of a few studies, it was consistently documented that students with higher levels of academic academic efficacy have significantly higher academic performance compared to their counterparts who are low in academic academic efficacy. That is, when students have strong beliefs in their academic capabilities to perform well, they will have higher academic achievement than their counterparts with low beliefs in their capabilities to perform well academically.

The second hypothesis states that there is no significant relationship between school connectedness and academic success among students. The result shows that there is a significant relationship between school connectedness and academic success. The result further reveals that school connectedness positively influenced students' academic success. This implies that a high school connectedness increases the tendency for students to display high academic success score.

This result is in-support with Fredricks, Blumenfeld, and Paris, (2004) who confirm that school connectedness is a function of the adolescent need to belong and has been conceptualized as a student's response to interpretation of interactions with his or her environment. This was buttressed by the submission of Karcher, (2004) who opined that schools can facilitate connectedness by implementing conditions that provide opportunity for attachment, interpersonal social support, or group-level experiences of belonging. In support of the findings Whitlock (2006) also used both quantitative and qualitative methods to examine the correlates of connectedness in 8th, 10th, and 12th grade students. Findings from this study suggested that school connectedness is strongly influenced by opportunities for academic and creative engagement, a safe school environment, and meaningful roles given to the students. In another recent investigation. This implies learners most be able to feel a tie between them the school which could make them academically productive.

The third hypothesis states that there is no significant relationship between parenting style and academic success among students. The result shows that there is a significant relationship between parenting style and academic success. The result also reveals that parenting style positively influenced students' academic success. This implies that a high parenting style will increase the tendency for students to display high academic success score. The result of this study corroborates previous studies like Fredricks, Blumenfeld, and Paris, (2004) who explored associations between parenting and multiple adolescent outcomes in a sample of adolescent girls and their female caregivers from impoverished neighborhoods. The results indicated that parenting style groups were significantly related to teenagers' reported grades, and adolescents with disengaged (neglectful) mothers had significantly lower grades than adolescents with mothers who displayed any other parenting style. The researchers concluded that adolescent girls with authoritative mothers showed the best adjustment of all parenting style groups, while girls with disengaged (neglectful) mothers showed the worst adjustment of all parenting style groups. The submission of Steinberg, Elmen and Mount (1989) does not differ from this, that adolescents who describe their parents as treating them warmly, democratically and firmly are more likely than their peers who develop positive attitudes towards and beliefs about their achievement, and as a consequence, are more likely to do better in school. Corroborating this, Aremu (1999) found that students whose parents adopt the democratic style of parenting fare better in their performance than their counterparts, whose parents are autocratic. This indicates that parenting styles adopted by parent is essential in determining the level of success achievable by any students.

Recommendations of the study

Considering the result obtained in this study, the following are suggested;

Academic efficacy was found as the strongest predictor as well as mediating factor of students academic success therefore it is recommended that parents should inculcate the confidence of "I CAN" in their wards from childhood so as to help them to be bold enough to face academic challenges now and in the nearest future. Teachers should always make their student feel they can be the best in their subjects. This will encourage learners to put more effort to see that they achieve the assumption of their teachers. While school counselors should expose students especially the underperforming students to academic efficacy intervention to help them build their confidence in their ability to perform academic task.

This study revealed that school connectedness is the second predictor of students' academic success. Therefore it is recommended that school administrators and educational planners should provide attractive environment that can make learners attracted and feel belonged to the school. Academic activities like academic club creation (e.g inventors club, literary and debating society), physical activities (e.g sport competition) and media facilities (e.g laboratories) should be in cooperated in to the secondary school system.

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3 EASE OF ACCESS OF THE AVAILABLE VIRTUAL FACILITIES FOR QUALITY TEACHING AND RESEARCH IN AFRICA TERTIARY EDUCATION INSTITUTIONS

A. Tella

Introduction

The 21st Century has witnessed rapid changes in education. This change is moving teaching and learning away from face-to-face learning to teaching and learning online. Teaching and learning online using electronic information resources has many advantages over traditional information resources and is made possible through the World Wide Web.

It is observed that, the revolution brought about by information and communication technology (ICT) has made Libraries of the 21st century to prefer digital collections to what? Although, this could be due to many reasons, including, but not limited to, the following: digital journals can be linked from and to indexing and abstracting databases; access can be from the user's home, office, or dormitory whether or not the physical library is open; the library can get usage statistics that are not available for print collections; and digital collections save space and are relatively easy to maintain (CLIR, 2003). When total processing and space costs are taken into account, electronic collections may also result in some overall reductions in library costs (Montgomery and King 2002).

The ICT revolution which is making libraries to prefer digital or electronic collections put the researchers and users of the

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library in higher education at the advantage of having many resources available for use, development and conduct of research. The dramatic switch from print collections to digital collections has an impact on library users and users' perceptions of the library. Many researchers have attempted to predict or measure that impact through surveys, transaction log analysis, and other research techniques. However, this paper only considers this issue from the assessment of electronic resources or digital collections that are available. The assessment of the availability of these resources is the centre of this paper. In the light of this, the paper aim at assessing the availability of electronic resources for the use, development and conduct of research by the researchers in higher education the world over.

Available Electronic Resources for Research Development

Electronic Books (E-Books) — Digital documents, (including those digitized by the library), licensed or not, where searchable text is prevalent and which can be seen in analogy to a printed book (monograph). Include non-serial government documents. Ebooks are loaned to users on portable devices (e-book readers) or by transmitting the contents to a user's personal computer for a limited time. Include e-books held locally and remote e-books for which permanent or temporary access rights have been acquired. Report the number of physical or electronic units, including duplicates, for all outlets. For smaller libraries, if volume data are not available, the number of titles may be counted. E-books packaged together as a unit (e.g., multiple titles on a single e-book reader) and checked out as a unit are counted as one unit. Note: Under this category, report only items the library has selected as part of the collection and made accessible through the library's Online Public Access Catalog (OPAC). Electronic versions of printed books that can be viewed online via any PC connected to the Internet

An e-book is an electronic version of a traditional print book that can be read by using a personal computer or by using an eBook reader. (An eBook reader can be a software application for use on a computer, such as Microsoft's free Reader application, or a book-sized computer that is used solely as a reading device, such as Nuvomedia's Rocket ebook) Users can purchase an eBook on diskette or CD, but the most popular method of getting an eBook is to purchase a downloadable file of the eBook (or other reading material) from a Web site (such as Barnes and Noble) to be read from the user's computer or reading device. Generally, an eBook can be downloaded in five minutes or less.

Although it is not necessary to use a reader application or device in order to read an Ebook (most books can be read as PDF files), they are popular because they enable options similar to those of a paper book - readers can bookmark pages, make notes, highlight passages, and save selected text. In addition to these familiar possibilities, eBook readers also include built-in dictionaries, and alterable font sizes and styles. Typically, an eBook reader hand-held device weighs from about twenty-two ounces to three or four pounds and can store from four thousand to over half a million pages of text and graphics. A popular feature is its back-lit screen (which makes reading in the dark possible).

Some eBooks can be downloaded for free or at reduced cost, however, prices for many eBooks - especially bestsellers - are similar to those of hardcover books, and are sometimes higher. Most eBooks at Barnes and Noble, for example, are comparable in price to their traditional print versions.

E-Books

A Book available fully electronically via a web-site on the Internet.e-Book readers have been developed for devices such as Palm Tops and PC's, including the notebook PC. While reading on a computer screen remains fairly controversial, buying every book one wants to read is becoming too costly for many readers.

E-Journals

These are electronic versions of printed journals that can be viewed online via any PC connected to the Internet. An article or complete journal available fully electronically via a web-site on the Internet. It could be available free or as part of a paid for service. This trend is older and more established than the trend of providing e-book content via the Internet. These are available through subscription databases. There are also some which are available through open access on the internet. An e-journal (electronic journal) is a journal published online.

Full-text journal articles are available via a platform that provide both browsing and searching functions. Library users can access e-journals on the Library Website, within the campus network, or via remote access. Sometimes, an e-journal is also available in printed format (Serials Collection, 3/F, MMW Library and Town Centre Library) or Microform (Microform Room, G/F, MMW Library). E-Journal Titles included journals from publishers such as Elsevier, Springer, and Wiley, as well as some freely accessible journals

There are always terms of Use for E-Journals and other Electronic Resources. It is observed that Libraries the world over subscribe to numerous electronic journals, databases and similar resources through licenses. The publishers and distributors of these resources require compliance with the terms and conditions of use of these products. Violation of the terms of use may result in loss of access to the resource and termination of library privileges. In some exceptions, access may be limited to current students, faculty and staff of a university which its library subscribe to such electronic resources and to members of the general public on a walk-in basis, for non-commercial research purposes. The typical terms of use include: 1. the generally permitted and 2, the generally not permitted. A. Tella

- making limited printed or electronic copies
- using for personal, instructional or research needs
- sharing with MSU students, faculty, and staff
- posting links to specific content

While the generally not permitted include the following:

- systematic or substantial printing, copying or downloading (such as entire journal issues or books)
- selling or re-distributing content, or providing it to an employer
- sharing with people other than MSU students, faculty, and staff
- posting content or articles to web sites or listservs
- modifying, altering, or creating derivative works

Individual licenses and copyright law are more specific than these guidelines. Many resources post a "terms of use" link for users to view their rights. In some situation all use is governed by the acceptable use policy and academic standards regarding plagiarism.

E-Magazine

E-magazine shares some features with a blog and also with online newspapers, but can usually be distinguished by its approach to editorial control. Magazines typically have editors or editorial boards who review submissions and perform a quality control function to ensure that all material meets the expectations of the publishers (those investing time or money in its production) and the readership.

Online magazines that are part of the World Wide Web, that is, all or part of a web site, are sometimes called webzines. Ezine (also spelled e-zine is a more specialized term appropriately applied to small magazines and newsletters distributed by any electronic method, for example, by electronic mail (e-mail/email). Some social groups may use the terms cyberzine and hyperzine when referring to electronically distributed resources. Similarly, some online magazines may refer to themselves as "electronic magazines" to reflect their readership demographics, and more importantly to capture alternative terms and spellings in online searches. Many large print-publishers now provide digital reproduction of their print magazine titles through various online services for a fee. These service providers also refer to their collections of these digital format products as online magazines, and sometimes as digital magazines.

Online magazines representing matters of interest to specialists in or societies for academic subjects, science, trade or industry are typically referred to as online journals. Your existing printed magazine can be bulky and not fitting into his carriage. The reader may thus opt for reading it online where he gets multitude of benefits such as easy browsing, convenient in handling, pages not getting stale and probably the worst, not getting misplaced. It provides ease and comfort to the end users who can utilize the magazine more effectively than carrying a printed magazine. Further they can share the magazine to their peers and subordinates. It acts as a digital replica of magazine containing information about the magazine (with images and features) that are offered in and thus increasing value for the reader. Benefits of emagazines are saves printing and distribution costs associated with print media, E-Magazine being accessible anywhere and anytime, Easy to distribute - via the Web, email, floppy or CD-ROM; Outstanding for viral marketing as it can be passed on easily by email: Issues of E-magazines can be stored and viewed lately and accessed off-line; Can be upgraded easily on timely basis (if needed) and Permanent information is read-only.

E-Library

The e-Library provides access to all electronic resources, including e-journals, available to University staff, researchers and

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students. E-Library is a records information system that contains: Electronic versions of documents and Documents received and issued by a library. The later may include:

- a. A description/index of documents
- b. Microfilm and aperture cards of documents
- c. Scanned images of paper documents and
- d. Native files electronically submitted

The images and native files are available on the desktop. Through e-library, users may request copies of older documents, which are available only on microfilm and aperture cards. The elibrary features an Acrobat-based search engine that uses key words to search as many. PDFs as one may want at once. It lists the documents by relevance (number of times the key word is used in the document) and takes the user directly to the key words in the various documents. A document index is included, and the user can conduct advanced searches by title, author, and other information criteria.

The e-Library resources are governed by licence agreements, which normally require access to be made available only to staff and students. Logging in confirms that you are one of the users and should have access to the resource. For some databases logging in will allow you to access additional services such as saved searches, or allow you to set up alerts for new content in your subject area.

To log in on the Library home page, users choose the Login to e-library link. This may be at the top right of the page. If you are using Internet Explorer on a standard PC, it should recognise that you are logged on to the network and automatically log you in. If you are using another browser, such as Firefox, or if you are using a laptop then you will need to type in a username and password. The username is your network username this may be the same one you use to login to the institution's computers.

What can be accessed from the e-library are the e-journals, e-books, and databases.

- e-Journals Access to full text journal titles the Library subscribes to.
 - Databases Search across collections of journal articles, electronic books and other material. The A-Z list of Databases is useful when you know which resource you want to use. Otherwise it is recommended that you consult the Subject pages.
 - Find It Simultaneously searches across books, journals, journal articles. This can be a good starting point when deciding what resource to search on.

Users might not need to pay to access any of the resources because the Library has already paid a subscription. This means that they are free to staff and students at the point of use. Provided the e-Library does not have what you need as user, all you need to do is to firstly check the Library catalogue to find out if what you need is available in print. The Library will normally try to get hold of material recommended on your reading lists. If you are an undergraduate, the Library will hold most, if not all, of the material you need to consult. If you are a postgraduate or researcher, you may want to make use of resources the library do not have in stock. In this instance, you may wish to: consult your subject liaison librarian to discuss alternative sources; request the item via inter library loan, or consider using other libraries.

On the issue of copyright, users have access to several copyright resources through the e-Library and this use is governed by copyright law and licensing regulations and by additional terms and conditions set by the copyright owners or their agents. Users must ensure that their use complies with these as well as the Acceptable Computer Use Policy.

Media

This category consists of streaming music and video performances, still and moving pictures, recorded voices and speeches. Most of these are used to aide research in some instances. Some of the music is available in electronic formats which give users the opportunity for downloading them. Examples are: streaming music-including African America Song, Classical Music library, Contemporary world music, music online, etc. There are also streaming video including theatre in video, historical voices etc. Pictures are also worth mentioning here; such as AP images, ARTstor, CAMIO, etc.

Databases

Databases are tertiary sources information. Databases allow you to search across a range of journal articles from different journals. Always check the 'scope' or 'about' feature of a database to see what years it covers.

Newspapers

Newspapers are primary sources of information. They are an excellent source when looking for current and up-to-date information. There are print and electronic versions of newspapers. Library provides access to both print and electronic versions of daily newspapers.

Conference proceedings

Conference proceedings are primary sources of information and records, papers presented at conferences, etc.

Websites

Websites are useful sources of current information and for an overview on a topic. However, pages downloaded from the web need to ensure the information you find is reliable. For a selection of reliable websites in your subject area, have a look at the relevant subject portals.

Subject Gateways

Subject Gateways provide a useful starting point when searching for information on the Internet. They provide access to relevant and reliable websites. In some Libraries, subject portals are subject gateways. It should be noted that this subject portal provides a gateway to essential resources and guides for each major subject area, e.g. Information science, library and information studies, information management, media studies, geography, economics, etc. They are usually selected by the Subject Librarians to support your study and research.

Electronic Laboratory Notebook (ELN)

An ELN is an analog of a paper laboratory notebook, designed to allow distributed teams to record and share a wide range of notes, sketches, graphs, pictures, and other information. The ELN can be used to store literature references, experimental procedures, equipment design drawings, summary tables, annotated graphs and visualizations, etc. The Web-based EMSL ELN was developed as part of a collaboration with researchers at Lawrence Berkeley National Laboratory (LBNL) and Oak Ridge National Laboratory (ORNL). The EMSL ELN (Figure 3) presents an initial login screen requiring the user's name and password, and then displays a main window containing a table of contents with a user-defined hierarchy of chapters, pages, and notes. The content of the currently selected page appears in a separate browser window. All entries are keyword searchable. Notes on a page are created using a variety of "entry editors" which are launched from the main window. The notebook currently includes editors to create text (plain, HTML, or rich text), equations (LaTeX), and whiteboard sketches (using the CORE2000 whiteboard), to capture screen images, and to upload arbitrary files. Once a note is created, a click on the "submit" button publishes it to the notebook page and makes it available to other authorized users of the notebook. Entries are shown as part of a page, tagged with the author's name and the date and time of the entry. The current ELN restricts access to group members using passwords. The next version of the notebook will include certificate-based user authentication. encrypted data transmission, and digital signatures to provide stronger protection and to begin to address the issues related to using a notebook as a legally defensible document.

E-learning

E-learning is rapidly growing as an acceptable way of education. Remarkable progress has been made in e-learning in couple of last decades (Raymond, 2000; Rao, 2006). A very simple definition defines e-learning as a learning which is supported and/or made possible by the use of modern ICT and computers (Hoppe and Breitner, 2003; Lee et al., 2007; Learning Online, 2008). Elearning is also defined as usage modern ICT to deliver learning and training programs (Newman, 2008). Different format of elearning in higher education institutions in Africa are:

Web supported – an e-learning format which is complementary to traditional (face-to-face) learning process, where all participants are collocated (class sessions are held in the same place and at the same time). There is a Web site (i.e. portal for distance education) for the class that contains course materials, assignments, goals, exercises and short tests.

Blended or mixed-mode e-learning – course is structured so that part of the class sessions are held in a traditional (face-toface) setting and part of them are held with usage of modern ICT over internet. Thus mixture of face-to-face mode (traditional learning) and distance mode (e-learning) has become very popular in nowadays education processes. In face-to-face learning participant (i.e. student) establish a rapport with educator and get clear instructions how to study in distance mode (i.e. submitting of assignments). Many universities in Africa have converged to mixed-mode of education (few class sessions, assignments are done and submitted via e-learning).

Fully online e-learning format – every class session is held in distance mode in comparison to previously mentioned formats, when face-to-face mode is complementary with distance mode. WebCT is the common e-learning platform in African Universities. Examples of universities in Africa using e-learning (WebCT) are University of South Africa UNISA, University of Pretoria, University of Johannesburg, and Cape Town University of Technology, CPUT, University of Botswana, etc. Other common platforms are sakai, module, etc.

E-Portfolio

A portfolio is a systematic and purposeful collection of work and achievement documentations (Drier, 1997). E-portfolios are highly personalized, customizable, Web-based files which document learning portfolios and demonstrate individual and collaborative learning process (McCowan, Harper, & Hauville, 2005). An e-portfolio system is a Web-based repository management system that stores students' learning documents (known under the name of artifacts) such as academic records, essays, project reports, assignments, assessments, and personal and professional development related contents. Students use eportfolio systems to present artifacts, receive feedback from instructors and advisors, and communicate with each other.

E-portfolios are stored online and have great accessibility for the portfolio owners themselves, teachers, colleagues, and employers (Bruder 1993; Bushweller 1995; McCowan et al. 2005). Eportfolios are a mechanism for students and education institutions to improve and demonstrate their teaching/learning skills and to display competencies to the society (Lumsden, Garis, Reardon, Unger, & Arkin, 2001). E-portfolio systems enable administrations at all levels to survey and to conduct comprehensive assessment of teaching and learning accomplishments (Barrett, 1994).

Institutional and Learning Object Repositories

Crow (2003) in a Scholarly Publishing and Academic Resources Coalitions (SPARC) position paper, adds that IRs are digital collections capturing and preserving the intellectual output of a single or multi-university community. Crow (2003) outlines the attributes of institutional repositories to include the fact that content is scholarly in nature and digital in format; employs selfarchiving methods; has open access, is interoperable and managed by individual academic communities and the research library. An institutional repository contains diverse intellectual output of an institution that may include the following:

- Pre-prints of articles or research reports submitted for publication,
- The text of journal articles accepted for publication,
- Revised texts of published work with comments from academic readers,
- Conference papers,
- Teaching materials,
- Student projects,
- Doctoral theses and dissertations,
- Datasets resulting from research projects,
- Committee papers,
- Computer software,
- Works of art,
- Photographs and video recordings,
- Materials documenting the history of the institution or area.

LORs are a recent technological innovation aimed at supporting, sharing and reuse of resources for teaching and learning (Margaryan, Milligan and Douglas, 2007). They are digital storage boxes that host collections of digital resources in a learning object format: i.e., resources that are designed to be integrated, aggregated, and sequenced in an efficient way to produce "units of learning" that are meaningful to learners. Resources in such repositories are collected on a personal, departmental, institutional, national, regional or international basis (Margaryan et al, 2007).

Blogging

Researchers, academics, teachers, and students are excitedly embracing blogs (Davi, Frydenberg & Gulati, 2007). Blogging is a personalized, community-linked, social, interactive, innovation built on the distinctive attributes of the Internet. The blogging format includes archives, links, time stamps, chronological listing of thoughts and links. The most promising use of blogging is in the

educational opportunities in corporations and institutes. Blogs are increasingly being used within companies and universities for educating students and employees. Instructors use blogs to post class times and rules, assignment notifications, suggested readings, and exercises and instructional tips for students Blogs are used pass along links and comments about subjects and course announcements and readings Blogs are used to organize in-class discussions and for organizing class seminars. Instructors are using blogs to provide summaries of readings and lectures. Instructors use blogs for networking and personal knowledge sharing and Knowledge management. Blogging also offers speed and the opportunity to interact with diverse viewers both faculty and students globally. For learners, blogs are an inventive way for learners to engage in reflective writing on classroom topics. Blogs provide information dissemination, and provide learners with the opportunity to present his or her thoughts and opinions. Blogs provide individual feedback to the learners from instructors. Blogs are great for disusing ideas, experiences or opinions and allow learners to discuss publicly what they are studying with other students and experts globally. Blogging is helping learners to think and write more critically, learners tend to research and study

Conclusion

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It is interesting to speculate about the long term impacts of VFs on researchers, research institutions, and commercial providers of scientific equipment and software. Clearly, VFs have the potential to make state-of-the-art instrumentation, computational resources, and software accessible to a broader audience of faculty, students, industrial, and government researchers. They will form at a scale sufficient to provide advanced services and support (perhaps shared with other virtual or physical facilities) in areas ranging from machining and electronics fabrication, to software engineering, training, etc. Their scale will also allow individual researchers associated with such a facility to specialize, using

harder when blogs are used (Gorsky, Caspi & Chajut, 2008).

A. Tella

these services and focusing on the development of new instrumentation, experimental procedures, or software for analysis and visualization. The ability to support such specialists will keep VFs at the forefront of scientific instrumentation and software advances. Other researchers may generalize, focusing more on the scientific questions driving their research and relying on multiple VFs for the resources and expertise required to obtain, interpret, and compare data from different techniques. VFs may merge or form alliances to provide cross-disciplinary capabilities.

Collaboratories and VFs are quickly becoming a viable means of conducting scientific research. They hold promises of cost saving and convenience and will likely become an important means of providing advanced scientific resources to a wide range of users. They will enhance our ability to quickly address new scientific questions and will lower the barriers to crossdisciplinary research. Our own experiences with the EMSL VNMRF have shown that researchers can quickly become productive using the Internet to run experiments and work with colleagues. As VFs mature, they will expand their capabilities, integrating, packaging, and supporting an ensemble of tools tailored to make their user communities more efficient and effective. While the exact nature of their evolution is unclear, their scale, and their ability to support both research into new experimental techniques and the rapid deployment of the resulting advances, will place them at the forefront of 21rst century scientific research.

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INFLUENCE OF VOCABULARY KNOWLEDGE AND ATTITUDE TO ESSAY WRITING ON SENIOR SECONDARY SCHOOL STUDENT'S ACHIEVEMENT IN ENGLISH ESSAY WRITING IN BENIN CITY

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Introduction

Language comprises the four skills - listening, speaking, reading and writing. These skills are taught to learners to make them proficient in the target language. Of all the language skills, however, writing, the last in the hierarchy of acquisition, is perhaps the most difficult to acquire. Writing performs important functions in the society and in the lives of individuals. For students specifically, writing is pivotal to attaining success in their educational pursuit. In spite of the importance of writing to students' lives, research has shown that many students find writing difficult and perform poorly in it in the Senior School Certificate Examinations (SSCE) and in situations in their personal lives which call for the use of the skill of writing (Chief Examiners' Reports of WAEC, 2007-2014, Adedeji, 2008, Okedara and Odeh, 2002;).

The effects of the poor writing skill of students extend beyond the secondary school level. Many college lecturers complain about the prevalence of poor writing skill in both undergraduate and graduate students (Alter & Adkins, 2006, Manzo, 2003; Whitehead, 2002;). A number of studies have shown that Nigerian students in institutions of higher learning lack adequate writing skill. For example, Onuoha and Ikonne (2013) assert that most of the students in Nigerian tertiary institutions cannot write well. Imhonopi and Urim (2014) aver that Nigerian undergraduates and graduates are not proficient in spoken and written English. Bodunde and Sotiloye's (2013) study revealed that students in 100 and 500 levels in an agricultural college in a Nigerian university had problems with the writing skill. In addition, some studies discovered the poor writing skill of students (Aborisade, 2003; Oguntuase, 2003; Adelabu and Fadimu, 2004; Ugochi, 2009; Anyadiegwu, 2012; Ngadda and Nwoke, 2014; Ibbi, 2014).

Several reasons have been identified as causes of the poor performance of students in essay writing. They include quality and qualification of teachers (Aguoru, 2008; Fakeye, 2012), neglect/non-availability of instructional materials (Tijani and Ogbaje, 2013), focus of English Language textbooks (Amuseghan, 2007; Akinwamide, 2012), complexity of the writing task (Westwood, 2013), unusually large class sizes (Babalola, 2011), and teaching methods (Ajibola, 2010; Imoh, 2013). Although a number of research efforts aimed at improving students' writing abilities have been carried out, their focus have predominantly been on teaching methodology. However, there are variables besides teaching methods and strategies that can influence students' academic achievement in writing. One of such is students' vocabulary knowledge.

According to Kolawole (1998), students' problem in essay writing begins from their inability to express themselves. In the process of learning a second language, vocabulary is considered an important component; in writing, it can determine the whole essay length (Pikulski and Templeton, 2004). The importance of vocabulary in second language (L2) writing in formal academic settings requires L2 learners to have a strong language background and a vast range of lexical skills (Flinspach, Scott, and Vevea, 2010). If L2 learners do not have a broad range of productive vocabulary knowledge, they will be unable to produce the type of writing expected of them in academic settings. Several studies indicate that language instructors rate the lack of vocabulary knowledge as one of the most serious issues in students' writing and that L2 learners feel that the quality of their writing is influenced by their lack of vocabulary knowledge (Engber, 1995; Laufer and Nation, 1995, 2001; Hyland, 2003; Deng and Hu, 2007; Zhou, 2010). For example, Astika (1993) used a scoring technique which analysed content, organisation, vocabulary, language use, and mechanics, to score 210 writing samples. Findings reveal that 84% of the variance could be accounted for by vocabulary. The results of Engber's (1995) study shows that measures of lexical richness (vocabulary knowledge) of texts correlates substantially with holistic ratings of texts. Similarly, Laufer and Nation's (1995) findings indicate that vocabulary size, use of words of different frequency (all aspects of vocabulary knowledge) and composition rating correlate highly. For writers to write fluently, their vocabulary knowledge cannot be limited. Beglar and Hunt (1999) compared the TOEFL Structure and Written Expression subsections with two of the four versions of the Vocabulary Levels Tests (VLT), versions A and B. Results show a correlation of 0.61 and 0.65 respectively. Muncie's (2002) study confirms that it is difficult to write in a second language with limited vocabulary.

Similarly, a qualitative study by Alwasilah (2004) highlights the fact that essay writing increases students' mastery of English vocabulary. Apart from grammar, the low mastery of vocabulary was perceived by a majority of the students as increasing the difficulty of essay writing. Zimmerman's (2004) correlation of the writing part of an English placement test with the score of Productive Vocabulary Levels Test (PVLT) indicates a high correlation coefficient of .60. Alderson (2005) correlated the writing section of DIALANG (a web-based language proficiency test) with the Vocabulary Size Placement Test (VSPT). Findings show a strong correlation between the score of VSPT and the score of writing (.70). Using Jacob, Zinkgraf, Hartfiel and Hughey's

(1981) ESL Composition Profile, Espinosa (2005) correlated the vocabulary section with the overall score of writing for two groups of subjects with different levels of proficiency. The findings reveal a high correlation in both groups – .90 and .98 respectively.

However, a few studies have yielded findings contrary to the aforementioned ones. Joyce (2003) found a very low correlation (.19) between the total score of VLT (excluding the 10, 000 word level section) and the writing part of an English placement test. In the same vein, Putra's (2009) investigation into the relationship between writing ability and vocabulary size reveals a moderately low relationship (0.435 for Receptive Vocabulary and 0.481 for Productive Vocabulary). Although there are some studies which do not show a positive relationship between vocabulary and writing, a majority of the results support the fact that vocabulary knowledge is one of the important features to influence essay scores (Pikulski and Templeton, 2004). Hence, this study sought to determine the influence of vocabulary knowledge on students' achievement in writing (argumentative and expository essays).

Another variable that could influence academic achievement in writing is students' attitude towards writing. General research on attitudes and learning supports the deduction that attitudes towards writing affect writing quality (Hall, 2014). Ismail, Hussin and Darus (2012) posit that one of the most important considerations affecting students' success in college writing is the students' attitude toward their writing task. In other words, how students feel and respond with regards to their writing tasks and activities greatly influence the quality of their composition. The results of the study by Charney, Newman and Palmquist (1995) suggest that attitudes and beliefs about reading and writing affect what students consider important to do when they read and write and that these priorities affect their achievement. Petric's (2002) study confirms that in the area of L2 writing, attitudes are as important as in language learning in general.

Similarly, Chou (2004) reveals that one of the most prominent problems affecting students' success in college compositions besides language area difficulties are the students' attitudes towards their writing tasks. In Lin, Liu and Yuan's (2006) study where students were asked to perform a web-based writing assignment, the results reveal that students who felt more positive attitude towards web-based writing achieved higher scores than those who did not. Merisuo-Storm's (2007) investigation into students' attitudes with regard to foreign language learning and the development of literacy skills in bilingual education shows that students in bilingual education classes, who showed significantly more positive attitudes towards foreign language learning than students in the monolingual classes, also performed significantly better in literacy skill than those in the monolingual classes. Ismail, Maulan and Hassan's (2008) study of 200 ESL students in a university of technology reveals that many of the students were unable to produce high quality essays due to their negative attitudes and habits toward writing.

However, there are some studies with contrary findings to the ones earlier presented. Kolawole's (1998) study reveals no significant relationship between students' attitude to essay writing and their performance in it. Oden's (1999) study indicates that attitude to writing had no significant effect on the achievement scores of the subjects. Similarly, the results of Jahin and Idrees's (2012) study show no relationship between students' attitude toward writing and their academic achievement in writing. The inconclusive nature of these findings prompted the determination of the influence of students' attitude toward essay writing on their achievement in writing (argumentative and expository essays).

Statement of the Problem

Writing is an important tool of learning and for advancement in the contemporary world. It is also considered to be the most difficult of the language skills to acquire. In spite of the centrality of writing to educational advancement, the literature reveals that students

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perform poorly in English essay writing. In a bid to improve students' writing performance in English, various interventions have been applied. However, a large number of these interventions have focused on teaching methodology. The results of studies which have dwelt on factors such as vocabulary knowledge and attitude to writing have been largely inconclusive. It is against this background, that this study determined the influence of vocabulary knowledge and students' attitude to essay writing on their achievement in two genres of English essay writing (argumentative and expository). It also examined the interaction effect of both variables on the dependent measures.

Hypotheses

Based on the stated problem, the following null hypotheses were tested at 0.05 alpha level:

 H_{01} : There is no significant main effect of students' vocabulary knowledge on their achievement in

- a. Argumentative essay.
- b. Expository (cause/effect) essay.
- c. Argumentative and expository (cause/effect) essays combined.

 \mathbf{H}_{02} : There is no significant main effect of students' attitude to essay writing on their achievement in

- a. Argumentative essay.
- b. Expository (cause/effect) essay.
- c. Argumentative and expository (cause/effect) essays combined.

 H_{03} : There is no significant interaction effect of students' vocabulary knowledge and students' attitude to essay writing on their achievement in

- a. Argumentative essay.
- b. Expository (cause/effect) essay.
- c. Argumentative and expository essays combined.

Methodology

This study adopted a 2x2 factorial design. Two categories of variables were used in the study – independent variables and dependent variables. The independent variables are vocabulary knowledge (varied at three levels – high, medium and low) and students' attitude to essay writing (varied at two levels – positive and negative). There are dependent variables, namely: students' achievement in argumentative essay writing; students' achievement in expository (cause/effect) essay writing; and students' achievement in argumentative and expository (cause/effect) essay writing combined.

The participants in the study comprised 303Senior Secondary two students in public secondary schools in Benin City, Edo State. From the five local government areas in Benin City (Egor, Ikpoba-Okha, Oredo, Ovia North and Ovia South), two were randomly selected. Further, six schools comprising three schools from each of Oredo and Ikpoba-Okha Local Government Areas, were purposively selected. The criteria for the selection of schools were:

- i. The schools must have professionally qualified (minimum of a B. A. + PGDE or B. Ed degree in English) English Language teachers with at least three years postqualification teaching experience.
- ii. The schools must have presented candidates for WAEC and/or NECO examinations for at least five years.
- iii. The schools must be far away from each other.
- iv. The schools must be willing to participate in the study.

Thereafter, two intact classes were randomly assigned to each of the treatment and the control groups.

The following instruments were used in the study: (1) Achievement Test in Argumentative Essay Writing (ATAEW) (2) Achievement Test in Expository (cause/effect) Essay Writing (ATEW) (3) Questionnaire on Students' Attitude to Essay Writing (QSAEW) (4) Vocabulary Knowledge Test (VKT)) (5) Achievement Test in Argumentative and Expository (cause/effect) Essay Writing Marking Guide (ATAEMG) (6) Vocabulary Knowledge Test Marking Guide (VKTMG).

Four of the measurement instruments are discussed in details in the following paragraphs.

Achievement Test in Argumentative Essay Writing (ATAEW)

This is a self-designed instrument. The instrument was used to measure students' performance in argumentative essay. It is a three-item instrument based on parallel items from WAEC and NECO examination questions. The test was scored using the WAEC and NECO analytical method of grading essays viz:

Content = 10; Organisation = 10; Expression = 20; and Mechanical Accuracy = 10. Total = 50

Achievement Test in Expository (Cause/Effect) Essay Writing (ATEW)

This is a self-designed instrument. The instrument was used to measure students' performance in expository essay. It is a threeitem instrument based on parallel items fromWAEC and NECO examination questions. The test was scored in the same way as the Achievement Test in Argumentative Essay Writing (ATAEW).

Questionnaire on Students' Attitude to Essay Writing (QSAEW)

This is a self-designed instrument. The instrument was designed to solicit students' views, beliefs and feelings about essay writing. It is divided into two sections – A and B. Section A covers students' demographic data. Section B, a 33-item modified Likert type scale with four options – Strongly Agree, Agree, Disagree, and Strongly Disagree – captures information on students' attitude to essay writing. The questionnaire was scored thus: SA = 4; A = 3; D = 2; SA = 1. For negative items, the reverse was the case. The instrument was administered on participants before the achievement test in argumentative and expository essays.

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Data from the questionnaire was used to classify students as having either positive or negative attitudes to essay writing. Students with mean attitude scores equal to the mean and above (X=77, i.e. 77 to the maximum score of 132) were classified as having positive attitude to essay writing while students with mean attitude scores below the mean (i.e. the lowest score of 33-76) were classified as having negative attitude to essay writing.

Vocabulary Knowledge Test (VKT)

This is an adapted instrument. The Vocabulary Knowledge Test (VKT) was used to measure the students' knowledge of words – meanings, antonyms, synonyms and the context in which some words are used. It is a 44-item instrument made up of three sections – A, B, and C. Section A contains 24 items selected from Laufer and Nations' (1999) "Productive Vocabulary Levels Test" which requires completing missing words based on the context of the sentence. Sections B and C each contains ten parallel WAEC and NECO objective question items dealing with the synonyms and the antonyms of words respectively. The test was scored using the Vocabulary Knowledge Test Scoring Guide (VKTSG). Each question in Section A carries 2.5 marks (a total of 60 marks for the section), while each question in Sections B and C carries 2 marks (a total of 40 marks for both sections). This brings the total marks to 100.

Students' scores from the VKT were used to classify them into low, medium and high vocabulary knowledge levels. The scores and percentage cumulative frequencies were used to plot a cumulative frequency curve i.e. OGIVE. The vertical (x) axis was cut into three equal parts. The first third (1/3) was traced to the OGIVE. The distance between 0 and the corresponding score on the horizontal (y-axis) was classified as low (i.e. 0-33.3). Again, the second third (2/3) was traced to the corresponding score on the y-axis. The distance between X_1 (the end of the low group) and X_2 (the corresponding 2/3 score on the y-axis) was classified as medium (i.e. 33.31-66.7). The last third (3/3) was also traced to the corresponding score on the y-axis. The scores between X_2 and X_3 (the highest score) were classified as high (i.e. 66.71-100).

The four measurement instruments were subjected to expert opinions of some lecturers in the field of Language Education and English Language from the Faculties of Arts and Education, University of Ibadan, to read for face and content validity. Thereafter, the instruments were test-run for reliability and co-efficients of .79, .80 and .83 were obtained respectively for the Achievement Tests in Argumentative and Expository Essay Writing and Vocabulary Knowledge Test using Pearson Product Moment Correlation. A reliability co-efficient of .73 was obtained for the Questionnaire on Students' Attitude to Essay Writing using Cronbach's alpha.

Research Procedure

The VKT and QSAEW were administered to the students and directions were given on how they were to be filled out by the research assistants. Thereafter, the ATAEW and ATEW were administered on the students on two separate occasions. The completed tests and questionnaires were collected immediately after completion by the research assistants.

Data Analysis

The data were analysed using Analysis of Variance (ANOVA). All hypotheses were tested at .05 alpha level.

Results

The results are presented in the order in which the hypotheses were formulated.

 $\mathbf{H}_{O1 (a)}$: There is no significant main effect of students' vocabulary knowledge on their achievement in argumentative essay.

In order to test this hypothesis, the Analysis of Variance was computed. The summary is presented in Table 1.

Source	Type III Sum of	df	Mean	F	Sig.	Partial
	Squares		Square		_	Eta
						Squared
Corrected Model	472.465 ^a	5	94.493	6.523	.00	.099
					0	
Intercept	19148.537	1	19148.	1321.8	.00	.817
			537	01	0	
ATTITUDE	23.474	1	23.474	1.620	.20	.005
					4	
VOCAB.	409.543	2	204.77	14.135	.00	.087
KNOWLEDGE			1		0*	
ATTITUDE *	.662	2	.331	.023	.97	.000
VOCAB.					7	
KNOWLEDGE						
Error	4302.552	297	14.487			
Corrected Total	4775.017	302				

Table 1: Summary of ANOVA of Achievement Scores of Participants in Argumentative Essay by Attitude and Vocabulary Knowledge

* Significant at p < .05

Table 1 indicates that vocabulary knowledge has significant main effect on students' achievement in argumentative essay (F $_{(2, 297)} = 14.135$; p<.05; $\eta^2 = .087$). Therefore, Hypothesis 1(a) is rejected.

 Table 2: Estimated Marginal Means for Low, Medium and High Vocabulary Knowledge

 Level in Argumentative Essay

N= 357

Vocabulary Knowledge	Mean	Std. Error	95% Confidence Interva		
			Lower Bound	Upper Bound	
Low	6.69	.392	6.116	7.658	
Medium	8.04	.391	7.269	8.807	
High	9.83	.397	9.050	10.611	

Table 2 shows students in the high vocabulary level (\overline{X} = 9.83) performed better than those in the medium level (\overline{X} = 8.04) while those in the medium level performed better than those in the low level (\overline{X} = 6.69).

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Table 3: Summary of ANOVA of Achievement Scores of Participants in Expository Essay by Attitude and Vocabulary Knowledge

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	330.884 ^a	5	66.177	3.472	.005	.055
			20126.53			
Intercept	20126.533	1	3	1056.007	.000	.780
ATTITUDE	5.822	1	5.822	.305	.581	.001
VOCAB. KNOWLEDGE	304.348	2	152.174	7.984	.000*	.051
ATTITUDE * VOCAB. K	21.027	2	10.514	.552	.577	.004
Error	5660.549	297	19.059	Ì		
Corrected Total	5991.432	302				
	* Significant at	t p < .0)5			

Table 3 indicates that vocabulary knowledge has significant main effect on students' achievement in expository essay (F $_{(2,297)} = 7.984$; p < .05; $\eta^2 = .051$). Hypothesis 1(b) is therefore rejected.

Table 4: Estimated Marginal Means for Low, Medium, and High Students' Vocabulary Knowledge in Expository Essay

N = 357

Vocabulary			95% Confidence Interval			
Knowledge						
lest.						
	Mean	Std. Error	Lower Bound	Upper Bound		
Low	13.98	.656	12.686	15.269		
Medium	16.71	.655	15.421	17.998		
High	19.45	.664	18.140	20.754		

Table 4 shows students in the high vocabulary knowledge level $(X \equiv 19.45)$ performed better than those in the medium level (=X 16.71) while those in the medium level performed better than those in the low level (X=13.98).

 \mathbf{H}_{o10} : There is no significant main effect of students' vocabulary knowledge on their achievement in argumentative and expository essays combined.

Table 5: Summary of ANOVA of Achievement Scores of Participants in Argumentativeand Expository Essay (Combined) by Attitude and Vocabulary Knowledge

	Significant at p < .05							
	Type III		Maan			Doutiol Eta	Та	
Source	Squares	df	Square	F	Sig	Squared		
Corrected Model	1515 628ª	5	202 126	7 459	000	112		
	1313.028	5	303.120	7.438	.000	.112	ł	
Intercept	78537.961	1	78537.961	1932.420	.000	.867		
ATTITUDE	52.676	1	52.696	1.296	.256	.004		
VOCABULARY KNOWLEDGE TEST.	1394.194	2	697.097	17.152	.000*	.104		
ATTITUDE * VOCAB. K	14.241	2	7.121	.175	.836	.001		
Error	12070.868	297	40.643					
Corrected Total	13586.595	302						

indicates that vocabulary knowledge has significant effect on students' achievement in argumentative and expository essays combined (F $_{(2, 297)} = .17.152$; p <.0.5; $\eta^2 = 10$). Hypothesis 1(c) is therefore rejected.

Table 6: Estimated Marginal Meansfor Low, Medium, and High Students' Vocabulary Knowledge in Argumentative and Expository Essays Combined

N = 357

5

Vocabulary			95% Confidence Interval			
Knowledge						
Test.						
	Mean	Std. Error	Lower Bound	Upper Bound		
Low	7.09	.450	6.206	7.975		
Medium	8.67	.448	7.790	9.554		
High	9.62	.455	8.722	10.512		

Table 6 reveals that students in the high vocabulary knowledge level (X=9.62) performed better than those in the medium level X= 8.67) while those in the medium level performed better than those in the low level (X=7.09).

 $\mathbf{H}_{O2(a)}$: There is no significant main effect of students' attitude to essay writing on their achievement in argumentative essay.

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Table 1 indicates that students' attitude to essay writing has no significant main effect on their achievement in argumentative essay (F $_{(1, 297)} = 1.620$; p > 0.05; $\eta^2 = 0.005$). Hypothesis 2(a) is therefore not rejected.

 $H_{02(b)}$: There is no significant main effect of students' attitude to essay writing on their achievement in expository essay.

Table 3 indicates that students' attitude to essay writing has no significant main effect on their achievement in expository essay (F $_{(1, 297)} = 0.307$; p > 0.05; $\eta^2 = 0.001$). Hypothesis 2(b) is therefore not rejected.

 $H_{o2(e)}$: There is no significant main effect of students' attitude to essay writing on their achievement in argumentative and expository essays combined.

Table 5 indicates that students' attitude to essay writing has no significant main effect on their achievement in argumentative and expository essays combined (F $_{(1, 297)} = 1.296$; p >0 .05; $\eta^2 = 0.004$). Hypothesis 2(c) is therefore not rejected.

 $H_{O3(a)}$: There is no significant interaction effect of students' vocabulary knowledge and students' attitude to essay writing on their achievement in argumentative essay.

Result in Table 1 shows that the interaction effect of students' vocabulary knowledge and students' attitude to essay writing on their achievement in argumentative essay is not significant (F_(2, 297) = 0.023; p > 0.05; η^2 = 0.000). Based on this finding, Hypothesis 3(a) is not rejected. This result implies that students' vocabulary knowledge and students' attitude to essay writing do not influence their achievement in argumentative essay.

 $H_{O3(b)}$: There is no significant interaction effect of students' vocabulary knowledge and students' attitude to essay writing on their achievement in expository essay.

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Table 3 indicates that the interaction effect of students' vocabulary knowledge and students' attitude to essay writing on their achievement in expository essay is not significant (F $_{(2, 297)} = 0.552$; p > 0.05; $\eta^2 = 0.004$). Based on this finding, Hypothesis 3(b) is not rejected. This result implies that students' vocabulary knowledge and students' attitude to essay writing do not influence their achievement in expository essay.

 $H_{o_{3(e)}}$: There is no significant interaction effect of students' vocabulary knowledge and students' attitude to essay writing on their achievement in argumentative and expository essays combined.

From Table 5, it is revealed that the interaction effect of students' vocabulary knowledge and students' attitude to essay writing on their achievement in argumentative and expository essays combined is not significant (F _(2, 297) = 0.175; p > 0.05; η^2 = 0.001). Based on this finding, Hypothesis 3(c) is not rejected. This result implies that students' vocabulary knowledge and students' attitude to essay writing do not influence their achievement in argumentative and expository essays.

Discussion of Findings

Vocabulary knowledge and achievement in argumentative and expository essays

Vocabulary knowledge was found to have significant main effect on students' achievement in each of argumentative and expository essay and in both combined. These findings are contrary to the results of studies such as those of Joyce (2003), Putra (2009) and Lemmouh (2010). However, the results of this study are in agreement with studies which found knowledge of vocabulary to be a factor influencing students' writing (e.g. Engber, 1995; Laufer and Nation, 1995; Muncie, 2002; Zimmermann, 2004; Alderson, 2005; Llach and Gallego, 2009; Iyere, 2013) in terms of shaping the perception of teachers' regarding the quality of students' writing, predicting the quality of students' overall writing performance and improving the quality of students' essays.

Moreover, as Krashen and Terrel (1983) note, vocabulary is basic to communication. An adequate vocabulary is vital for expressing ideas and thoughts accurately. "Words are the unit of meaning which in turn make up sentences, paragraphs, and entire texts" (Lemmouh, 2008, p.163). Similarly, Fisher and Fray (2009) posit that vocabulary is the vehicle by which learning is expressed. They add that in writing or discussion, the ability to use vocabulary accurately and incisively is an indicator of a person's command of a topic. Poor linguistic control, of which vocabulary is a major part, can result in linguistic coherence problems and misinterpretation (Allison, 1995; Flinspach, Scott, and Vevea, 2010, Olajide, 2010). Thus, the more knowledge of words students have, the better they would be at putting across their thoughts correctly.

Further evidence for the importance of students' having a high level of vocabulary knowledge can be seen in the fact that the students' mean scores across the groups in the result for all the essay groups followed the same trend. This indicates that students differed in their achievement in each of argumentative and expository essay as well as in both combined based on their level (high, medium and low) of vocabulary knowledge, with students in the high level achieving better in writing than students in the medium and low levels and those in the medium level achieving better than students in the low level.

In summary, the literature indicates that both the quantity and quality of language readily available to a writer are crucial to creating well written texts (Yonek, 2008). The review of literature on vocabulary knowledge alludes to the fact that the possession of a large and sophisticated vocabulary enables a writer produce quality text by limiting the cognitive demands during a writing task.

Attitude to essay writing and achievement in argumentative and expository essays

The results of the study revealed that students' attitude to essay writing had no significant effect on their achievement in each of argumentative and expository essay and in both combined. This result is contrary to the findings of a number of studies such as those of Petric (2002), Lin, Liu and Yuan (2006), Merisuo-Storm (2007), Barbeiro (2011), Clark (2012), Hashemian and Heidari (2013) and others. These studies found significant relationships between positive attitude to writing and achievement in writing.

However, the results of this study concur with some other studies which did not find a significant relationship between attitude to writing and writing achievement. Examples of these studies include Kolawole (1998), Adeosun (2004) and Jahin and Idrees (2012). On English Language learning generally, Fakeye's (2010) study revealed no significant relationship between students' attitude to English Language and their achievement in the subject. Similarly, in Graham, Berninger and Abbott's (2012) study, attitude measure did not predict writing performance. As is the case of this study, Hashemian and Heidari (2013) found no relationship between negative attitude to writing and L2 writing achievement.

Moreover, several factors might explain why attitude to essay writing had no significant main effect on students' achievement in each of argumentative and expository essays and in both combined. One of them is the nature of attitude. Attitude is a disposition to act in a certain way or to view an object as favourable or unfavourable (positive or negative). It is not a guarantee of performance in itself. Positive attitude on its own might not suffice to lead to high performance. To be effective, positive attitude must be accompanied with hard work and practice. As observed by Walford and Walford (2009), positive attitude is one of the most misunderstood psychological factors in relation to ensuring successful performance. This is because, in order for a positive attitude to be effective, it must be regulated by rational thinking, skill and experience with the situation. F. O. Ezeokoli & Patience Igubor

Thus, in the case of writing, while a student may possess a positive attitude to writing, if that disposition is not matched with actual activities aimed at improving writing achievement, such as engaging in extensive readings, frequent writing practices and self-regulated strategy use, the positive attitude might not accomplish much success in terms of improving writing achievement. For example, Nabiryo (2011) investigated factors influencing the basic writing skill of students in Kampala, Uganda. Findings showed that although the learners had positive attitude to writing, they did not practise enough to develop their writing skills and so the positive attitude could not translate into better writing performance of the students. So, learners should be encouraged to read a lot and practise writing frequently if they are to improve upon their writing skill.

Furthermore, students' attitude can change (Lennartsson, 2008). If attitudes change after they are assessed, they will tend to be poor predictors of later behaviour. Erber and Hodges (1995) note that attitudes fluctuate over time, an observation consistent with a growing body of research indicating that attitudes are constructed from whatever information happens to be accessible to individuals at a particular time. Thus, while attitude can motivate (or demotivate) individuals towards achievement, it must be developed and sustained.

In sum, emanating from the preceding discussions on the plausible reasons responsible for the lack of attitude-behaviour consistency in this study, is the fact that whether attitude affects behaviour is dependent on several factors such as the quality (strength) of the attitude, aspects of situation and characteristics of the individual. The stronger an attitude, the more likely it is to predict behaviour. In relation to situation (context), how well learners write is related to environmental variables such as home literacy background (Merisuo-Storm, 2006) and the setting in which education takes place (Walberg and Ethington, 1991; Berliner, Calfee, Alexander and Winne, 2012). The characteristics of the learner refer to such personal factors as reading and oral language competence which is thought to play a role in writing development (Berliner et al., 2012). Gender is also related to writing achievement as girls tend to be better writers than boys (Bank, 2007). Similarly, socio-economic status is related to writing achievement as children from poorer families tend to be weaker writers compared to their peers from more affluent background (Walberg and Ethington, 1991; Berliner et al., 2012). Other factors include motivational constructs such as writing selfefficacy, interests and writing apprehension.

Finally, the role of affect in writing cannot be underestimated. McLeod (1987) observes that writing is as much an emotional as well as a cognitive activity; affective components influence strongly, all phases of the writing process. Thus, the affective aspect of writing is an important consideration in the writing process.

Conclusion and Recommendations

Writing is an important language skill needed for active participation in the society, in the world of work and more importantly, in education settings. While several factors can affect the development of effective writing skill, this study has identified vocabulary knowledge and students' attitude to essay writing. Vocabulary is central to communication as it is viewed as a strong predictor of students' writing performance. In addition, a person's attitude to writing could affect and reflect how well such a person can write. It is thus reasonable to conclude that both vocabulary knowledge and attitude to writing are factors that could affect students' writing achievement. It is recommended that parents and teachers should encourage students to develop and increase their vocabulary knowledge of English words. This can be done by encouraging students to engage in extensive readings and checking the meanings of new words encountered. Teachers should adopt effective strategies in teaching vocabulary explicitly as part of the English Language lesson. As has been observed, a positive relationship exists between reading and writing (Sovik,

2003; Olness, 2005; Adeyemi, 2011). Reading materials, in addition to helping students improve upon their vocabulary knowledge, can serve as models for discussions, not merely imitation. Therefore, parents should endeavour to acquire suitable reading materials for their children and provide a conducive home environment for student' engagement with reading materials. Furthermore, while students' attitude to essay writing was not found to have a significant effect on their achievement in essay writing, it should not be overlooked. As noted by Leable (2014), attitude does have an effect on learners' motivation and writing ability because affect (of which attitude is a part), serves both as a context and as a precursor of cognitive processing and learning engagement. Thus, parents, teachers and significant others can help students to be better writers by helping them develop a positive attitude to writing. In the same vein, English Language teachers should emphasise the importance of essay writing in the language classroom by giving adequate attention to its teaching. Writing should no longer be the most neglected of the 3 r's (The National Commission on Writing in America's Schools and Colleges, 2003).

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Pai Obanya

5 SUSTAINABLE HUMAN DEVELOPMENT IS ALL ABOUT EDUCATION

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The knowledge age, and the knowledge economy that has come along with it, is really in the service of sustainable human development and Education is its foundation, its corner stone, its major building block and its major life line. This discussion will (based on the above premise) explore the concept of Education in its holistic and comprehensive sense, to be followed by an explanation of the concept of sustainable human development. The Millennium Development Goals (MDGs) will then be examined to show every one of them is really education-loaded. The overall purpose is to zero down on inter-disciplinarity as future direction for the pursuit of sustainable human development with Education as the pivot.

EDUCATION IN ITS HOLISTIC AND COMPREHENSIVE SENSE

This is what we have often referred to as 'Education with a capital E'. The concept is intended to emphasize the point that Education is a lot more than schooling, even though schooling has become a major route to Education. In every society (whatever the level of development and irrespective of age group) there is a large out-of-school population (for Nigeria's case, see figure 1). In fact, major challenge to the universalisation of educational opportunities has been that of developing and implementing strategies for out-of-education.

'Education with a capital E' also accords importance to the four main routes to learning.

- Incidental Learning: when specific life experience teaches us a lesson and show results in fresh insights and a change of behaviour
- Informal Learning: gaining knowledge and insight as we go through life and take on new responsibilities at different phases and different situations of life
- Non-formal Learning: cases in which learning in life and from life becomes more or less formalised, as in societybased apprenticeship systems
- Formal (or formalised) Learning: largely institutional based learning with official curricula and syllabuses, grade systems and regulated examination/certification mechanisms

Above all, the concept emphasizes the point that Education is both a lifelong and a life-wide process. Lifelong Education refers to learning throughout a person's life span, while life-wide education refers to the acquisition of adaptation skills needed for new responsibilities that go with demands of different stages of life and career.



As figure 2 below shows, the holistic view model of Education (Education with a capita E) takes care of citizens in all phases and conditions of life, employing the different routes to Education as may be appropriate to different situations. The ultimate goal here is to make Education both life-long and life-wide.



Fig, 2: The Comprehensive and Holistic Model of Education

The dividing lines between these routes to education are never clear cut in real life situations. A good deal of incidental, informal and non-formal learning often goes on to enliven formal education. In like manner, some amount of formal instruction does infiltrate informal and non-formal learning situations.

All the four routes to acquiring Education do have their basic, post-basic (secondary), tertiary and post-tertiary (quatiary) levels. This is what makes Education with a capital E a life-long as well as a life-wide undertaking-life long as we progress in age through life, and life-wide as we take on new responsibilities at different phases of life.

Education in this holistic and comprehensive sense has as its horizontal dimension the mix in different forms of the four routes to learning, while the vertical dimension is concerned with

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the upward movement of our educational endeavour through basic, secondary, tertiary and quatiary.

In summary, our position that Education is at the root of sustainable human development is an affirmation of the point that living is all about Education (in the comprehensive and holistic sense just described).

SUSTAINABLE HUMAN DEVELOPMENT

The United Nations Organisation (UNO) has observed four development decades, as follows

- First UN Development Decade: 1960-1970
- Second UN Development Decade: 1971-1980
- Third UN development Decade: 1981-1990
- Fourth Development Decade: 1991-2000

All of these tended to target development in national incomes (as measured by GDP – gross domestic products), physical infrastructure and increase in energy consumption, agricultural and mineral productivity, etc. With the increasing realisation that such quantifiable dimensions of growth do not necessarily translate to human happiness, the emphasis has since shifted to the human dimensions of development

The shift in emphasis is manifest in attempts by the United Nations to develop Human development Indices (now used in its annual HUMAN Development Reports). These reports have been published since 1990, with the assertion that

> 'Human development is about putting people at the centre of development. It is about people realizing their potential, increasing their choices and enjoying the freedom to lead lives they value'

The reports concentrate on three aspects of human happiness, as follows

- HEALTH: life expectancy at birth
- KNOWLEDGE: adult literacy rate

- Combined primary, secondary and tertiary gross enrolment ratios
- STANDARD OF LIVING: GDP per capita (PPPpurchasing power parity with US \$)

The Human Development Report presents each year a rank order of countries of the world, classifying them into High, Medium and Low (HDIs-Human Development Index-explained in box 1 below). Some 25 countries of Sub-Saharan Africa belong to the league of low HDI countries.

BOX I: HDI – HUMAN DEVELOPMENT INDEX and HPI – HUMAN POVERTY INDEX (Source: UNDP)

- 1. Human Development is a development paradigm that is about much more than the rise or fall of national incomes. It is about creating an environment in which people can develop their full potential and lead productive, creative lives in accord with their needs and interests. People are the real wealth of nations. Development is thus about expanding the choices people have to lead lives that they value. And it is thus about much more than economic growth, which is only a means —if a very important one —of enlarging people's choices.
- 2. Fundamental to enlarging these choices is building human capabilities —the range of things that people can do or be in life. The most basic capabilities for human development are to lead long and healthy lives, to be knowledgeable, to have access to the resources needed for a decent standard of living and to be able to participate in the life of the community. Without these, many choices are simply not available, and many opportunities in life remain inaccessible
- 3. Rather than measure poverty by income, the HPI uses indicators of the most basic dimensions of deprivation: a short life, lack of basic education and lack of access to

public and private resources. The HPI concentrates on the deprivation in the three essential elements of human life already reflected in the HDI: longevity, knowledge and a decent standard of living.

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- a. The first deprivation relates to **survival**: the likeliness of death at a relatively early age and is represented by the probability of not surviving to ages 40 and 60 respectively for the HPI-1 and HPI-2.
- b. The second dimension relates to **knowledge**: being excluded from the world of reading and communication and is measured by the percentage of adults who are illiterate.
- c. The third aspect relates to a **decent standard of living**, in particular, overall economic provisioning.

The term SUSTAINABLE DEVELOPMENT was first used in a publication titled: *Our Common Future*, a report from the United NationsWorld Commission on Environment and Development (WCED), also in 1987. The also known as the Brundtland Report in recognition of former Norwegian Prime Minister Gro Harlem Brundtland's role as Chair of the commission that produced it An oft-quoted definition of sustainable development is defined in the report as:

<u>"</u>Development that meets the needs of the present without compromising the ability of future generations to meet their own needs,"

While Sustainable Human Development is considered as:

'The development that promotes the integral development of the people today without compromising the integral development of the people tomorrow' Issues in Teacher Education in Africa

Education is concerned with the nurturing of human potentials for the integral (all-round) continuous development of the individual and to harness these potentials for the integral development of Society for ensuring sustainable human progress. It is at the very foundation of sustainable human development, as seen from item 2 in table 1 above.

THE MILLENNIUM DEVELOPMENT GOALS AS EDUCATION-RELATED GOALS

The Millennium Development Goals (MDGs) were adopted by the Millennium Summit of the UN General Assembly in the year 2000 and required Member States to attain the following sustainable development goals by 2015.

- 1. Eradicate poverty and hunger
- 2. Achieve universal primary education
- 3. Promote gender equity and empower women
- 4. Reduce child mortality
- 5. Improve maternal health
- 6. Combat HIV/AIDS and malaria and other diseases
- 7. Ensure environmental sustainability
- 8. Develop global partnerships for development

It has become customary to refer to MDGs 2 and 3 as 'educationrelated.' However, as table 1 shows, Education has a good deal to contribute to every one of the MDGs, while they all contributions to make to Education. The lesson here is that sustainable human development goals in any sector of national development cannot be meaningfully pursued from one single perspective. A multidisciplinary approach would most likely yield sustainable dividends.

It is pertinent at this point to recall that the MDGs are expected to run their course this year with many developing nations unable to attain their desired goals. Work has reached advanced stage towards the development of a successor MDG currently referred to as the post-2015 Sustainable Development

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Agenda, with the following focus areas:

- 1. Leave No One Behind. After 2015 we should move from reducing to ending extreme poverty, in all its forms.
- 2. Put Sustainable Development at the Core. We have to integrate the social, economic and environmental dimensions of sustainability.
- 3. Transform Economies for Jobs and Inclusive Growth. A profound economic transformation can end extreme poverty and improve livelihoods, by harnessing innovation, technology, and the potential of business...
- 4. Build Peace and Effective, Open and Accountable Institutions for All. Freedom from conflict and violence is the most fundamental human entitlement, and the essential foundation for building peaceful and prosperous societies.
- 5. Forge a New Global Partnership. A new spirit of solidarity, cooperation, and mutual accountability must underpin the post-2015 agenda.

Table 1: All the MDGs are Education Goal

Goal	Estimated	Estimated	Comments
	Education	Contribution:	
	Sector	other Sectors	
	(%)	(70)	
1. Eradicaate poverty	50	50	Education can empower people with the skills and
and hunger			vaalues needed
			to combat poverty and hungerPublic
			enlightenment
			(non-formaal education) is also a key factor
2. Achieve Universal	75	25	Political/social/economic factors also have a great
Primary Education			role to play
Promote gender	50	50	A great bulk of the task lies in other sectors:
equity and empowr			political/
women			socio-economic
			actions also key
4.Reduce Child	35	65	Political/technicalmedical/economic/social factors
Mortality			at play,
			but formal and non-formal education also valuable
5. Improve maternal	35	65	Same as in 4 above
6 Combat	50	50	Proventive heath advesttion on dresserab for
HIV/AIDS malaria	50	50	hetter
and other diseases			understanding of these threats are strictly
and other diseases			education issues
7 Ensure	40	60	A good deal of the challenge here is
environmental	40	00	educational even
sustainability			though political will and technical action would be
sustainaonny			naramount
			The environment as a scientific/social
			phenomenon is also largely an education issue
8. Develop global	20	80	Education is key to all forms of development.
partnerships for			In this particular case, public enlightenment is
development			imortant.
1			Above all , development planning involves
			tehniques that have to be learned through some
			fom of Education.

We have, in several workshop settings, attempted to quantify the Education-MDG link shown in table 1. Interestingly, successive exercises on the subject have yielded results similar to that presents in figure 3 below, thus justifying our stand that all the MDGs are 'education-related goals'.



- 1. Addressing the learning needs of all segments of the population
- 2. Enhanced commitment to the non-formal sector
- 3. Promoting 21st century skills through the Education System
- 4. Curriculum reforms to avoid early, narrow specialisation
- 5. bridging the humanities-science divide

Meeting the Learning Needs of ALL segments of the population

<u>Basic Education for All</u> has often been misinterpreted to mean a focus exclusively on children. However, as table 2 below shows, persons in all conditions and at all phases of life, have distinct basic needs that require appropriate education-related responses. Even the lucky few, who have sailed through formal schooling at the highest possible level can still be disadvantaged since they are still candidates for lifelong and life wide Education. Responding to the learning needs of each segment of the population is therefore crucial to the awakening of human potentials for sustainable human development

Tuble	22. W nai	Education for what AL	
TARG	ET	BASIC NEEDS	APPROPRIATE EDUCATIO N
GROU	P		EMPHASES
1.	Early Childhood	Health, survival, balanced development, awakenin g of aptitudes and potentials	HEALTH (for the child, the mother, the family, the community) NUTRITION AWAKENING of physical, emotional social intellectual
			potentials
2.	.School-	Fitting into the immediate	Literacy and numeracy in all their
	Age	environment and culture	ramifications, life skills in all its
	Children	(socialization), harmonious	ramifications, strengthening of
		self-development	learning-to- learn skills
3.	Illiterate	Broadening of personal	Functional Literacy in the broadest
	Adults	horizons,	and true sense
		Psychological/social/political/	
		economic empowerment	
4	751	Improved quality of life	
4.	I nrown-	ditto	General culture (enhanced literacy
	the		skills training entrepreneurship
	Eormal		skins training, entrepreneurship
	School		cuucanon
	System		
5	The	Adaptation to rapidly	Re-education
5.	Lucky	changing times particularly	Re-skilling
	Minority	the changing requirements of	Re-tooling
	money	the world of work	

Enhanced commitment to the non-formal sector

Non-Formal Education has often been misconstrued as basic literacy and numeracy for adults who have been denied the opportunity for formal education. The concept of 'Education with a capital E' however draws attention to the need to provide educational opportunities to the large segments of persons out-ofschool who should also be learning in a lifelong and life wide manner, as illustrated in figure 1.

Table 3 further illustrates this point. It shows that the nonformal sector could have its basic, secondary tertiary and beyond tertiary phases. Each of these levels of non-formal education has its specific target audience that needs its group-specific skills to be inculcated through targeted educational provisions. An expanded Pai Obanya

conception of non-formal education is what is needed to ensure that 'no one is left behind', or 'pushed aside'. It would also be a viable strategy to creating a learning population required for sustainable human development in the context of a knowledge economy.

Table 3: Levels of Non-Formal Education

Level	Target	Purpose	Emphasis			
	Audience					
Basic Education	ALL persons (children, adolescents, youth and adults) without basic Education	Laying the foundation for lifelong learning	? Literacy and numeracy fundamentals? Fundamentals of Life skills? Lifelong learning Skills			
Secondary Education	ALL adolescents, youth and adults who have acquired the basics of literacy, numeracy, life skills and are internalizing learning and self- development skills	 ? Consolidating the gains of basic education ? Broadening the scope of experience ? Preparation for the world of work ? Preparation for a life of continuing learning 	 ? Literacy and numeracy ? Exploration of the physical and socio -cultural life skills ? Practical/vocational skills ? Entrepreneurial skills ? Communication skills 			
Tertiary Education	ALL Youth and Adults who have been through formal or non -formal secondary education	 ? Consolidation of skills acquired at the secondary level ? Preparation for life ? Sustained interest in learning 	 ? Consolidation of literacy and numeracy ? analytical and logical reasoning skills ? inter-personal skills ? knowledge/information search skills ? Communication skills ? Leadership skills ? Entrepreneurial skills ? Exploration of the physical and cultural/social world 			
Further Education	ALL persons who have been through tertiary education – formal or non - formal	 ? Sustained interest in Learning ? Enhanced ability to cope with rapid social change ? Re-skilling and re-tooling 	 ? Knowledge/information search skills ? Self-management skills ? Communication skills ? Entrepreneurial skills 			

Promoting 21st century skills through the educational system

Old time pedagogy talked about all-round education that addresses the three H's of the individual—the head, the heart and the hands. This principle is being emphasized in the world of work of contemporary knowledge economy. The new emphasis is being driven by the low level of employability skills in products of today's educational system

Table 4: Elements of a Tripartite Skills Set for Today's World of Work	5

HARD SKILLS	SOFT SKILLS	GO-GETTING SKILLS
Cognitive Intelligence	Emotional Intelligence	Imaginative Intelligence
Self-Expression Skills	Character formation skills	Creative thinking skills
(Oral, written, etc.)	(for strengthening the total person)	(thinking out of the box)
Logical Reasoning Skills	Intra-personal Skills	Ideational fluency skills
(for analysis and problem	(for the individual to understand	(proclivity in generating novel
solving)	his/her personal strengths and	ideas)
	weaknesses, as well as	
	possibilities/potentialities)	
Computational Skills	Inter-personal skills	Opportunity-grabbing skills
(for mathematical	(for understanding and 'teaming'	(perceptivity in making the
reasoning)	with others)	best of opportunities)
Design/Manipulative Skills	Lifelong learning Skills	Experiential learning skills
(for purely technical	(knowledge-seeking skills)	(making the best use of the
reasoning and action)		lessons of experience; ever
		working on new ideas)
Conceptual Skills	Perseverance Skills	Idea-to-product skills (Ease
(for generating ideas and	(for seeing ideas and projects	and passion for turning ideas
translating them int o	through to fruition)	into products and services
'action maps')		skills, ability to apply head -
		hands-heart

There can be no sustainable human development if the population remains non-productive. What is being advocated therefore is the inculcation through education of the skills required for dealing with a world in which there may be very few jobs but in which there is so much work requiring 21st-century compliant skills. Our work and thinking on the subject has led to the proposition of a tripartite skills set outlines in table 4 above.

Eliminating Early and Narrow Specialisation

The knowledge economy has created the demand for 'knowledge workers' and has consequently transformed the demands of the world of work. There has therefore been a reappraisal of 'which knowledge is of the most worth', which is in itself an old philosophical question in Education. The general consensus today is as follows:

- Specific subject-matter is known to have a short shelf life: they therefore have to yield grounds to fundamental skills (language, mathematical reasoning, scientific and social enquiry), technical skills (analysis, communication, etc.), and learning-to-learn skills
- Factual knowledge is also less important (i.e. more difficult to transfer to life and further learning situations) than over-arching knowledge
- Intra-personal skills (as typified in the age-old "Man, know thyself" maxim) is being brought to the fore
- Inter-personal skills, to enable the individual to function in socially and professionally heterogeneous work settings
- Specialization is likely to lead to a dead-end in a knowledge economy, hence more emphasis on broadbased knowledge that dwell more on processes, methodologies, and personal initiative
- A shift from

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- Fixed curricula to more flexible curriculum frameworks
- A focus on Teaching to focus on learning
- The transmission and acquisition of information to a constructivist approach to knowledge.... to the acquisition of skills needed to continue learning throughout life
- Categorised subject content to a more interdisciplinary approach around integrated areas.

The demand for broad general knowledge and the emphasis on how well one has learnt to learn – as opposed to how much one knows – has resulted in a pyramidal structure for curriculum (especially in higher education). As shown in figure 3 below, the base of the pyramid is the level at which the emphasis is on learning how to learn. This includes remedial work in tool subjects like language, mathematics and ICT, as well as in self- directed and team learning activities. It is only when a solid foundation for learning skills have been laid that students would go on to explore life issues and everyday concerns from a variety of perspectives – literary, artistic cultural, scientific, etc. – in the course of which they broaden their intellectual horizons. This phase prepares the ground for field specific knowledge, focussing on anyone of the humanities, the sciences and the applied disciplines



Fig. 3: A Higher Education Curriculum Pyramid

The steps in the pyramid do not represent years of study. They are concerned with steps towards preparing students for a knowledge dominated world propelled by knowledge-intensive systems and processes.

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Humanistic Science and Technology along with Scientific Humanistic Studies

A major curriculum blunder that has lingered over the years is that labelling secondary school students as either 'arts-oriented' or 'science-oriented'. The knowledge economy does not allow for narrow and early specialisation. Secondly, the boundary between 'arts and science' has become blurred, in real life. What used to be called 'the two cultures' are progressively coalescing? In fact, being educated in only one of the two 'cultures' is like developing only one hemisphere of the brain while neglecting the other.

Related to this blunder is our failure to de-mystify mathematics, science and technology, by not relating these subjects to everyday life and not demonstrating their utility to the student. We have also taught these subjects simply as specialisation subjects, instead subjects needed for the all-round development of students with concepts and materials for their everyday use.

To meet the demands of the knowledge person in the Knowledge Economy, the American liberal arts model would be an answer. This would imply a broad-based (non-specialisation) curriculum at the base of the curriculum pyramid. This would be followed by the practice of integrated humanities exposure to all science students and an integrated science and mathematics exposure for the student of the humanities at the apex level of the curriculum pyramid.

This humanistic science and technology/scientific humanistic studies approach does not rule out intensified efforts to improve and science and technology teaching and to attract more students to these disciplines. What the approach envisages – in terms of learning outcomes- are (a) 'arts' graduates imbued with the methods of science and (b) 'science' graduates who would not function as robots but would give a human touch to the applications of science.

LET'S NOW CONCLUDE

This conference is premised on multi-disciplinarity, which is the way to go in meeting the challenges of sustainable human development that requires a multi-pronged strategic response based on a multi-perspective analysis of multi-dimensional and multi-various issues. Education is widely acknowledged as the bedrock of the multi-disciplinary, multi-tasks involved, especially as the world embarks on the post-2015 sustainable development agenda.

However, we would need to re-equip Education to be able to play its pivotal role in this regard, by

- 1. building on the philosophy of Education with a capital E
- 2. inculcating 21st century skills
- 3. eliminating early and narrow specialisation
- 4. reinforcing multi-disciplinarity, and
- 5. carrying the multi-disciplinarity message to our respective institutions and , most importantly, translating the message into concrete action with a view to strengthening the cornerstone role of Education in promoting sustainable human development



THE INFLUENCE OF SHORT MESSAGE SERVICES (SMS) LANGUAGE ON STUDENTS' WRITTEN ENGLISH: A CASE STUDY OF ADELEKE UNIVERSITY, EDE, OSUN STATE

Serifat O. Labo-Popoola

Introduction

A very important feature of communication is that for effective communication to take place between two or more people, the two speakers must be familiar or conversant with the language being used. Language is therefore an important instrument or element of communication. Language is the principal means through which human beings communicate. Since language is human, it undergoes changes, thereby resulting in the development of varieties of the language. Terna-Abah (2010) noted that the varieties that speakers use reflect aspects such as their region, social/ethnic origin, gender and ways of speaking.

Some other researchers have identified some other factors as bringing about changes and varieties in language. Those factors include social context, age of speakers, formality, and intimacy of participants in the subject being discussed among others. Whichever way, it is considered, the objective of variety is for the language or variety of language to take care of the needs and situation that the speakers find themselves. These considerations have therefore led to a host of varieties of the English Language. Thus, there is British English, American English, Nigerian English, etc. In human language, there are kinds of varieties which can be grouped using different criteria. All languages have variations and speakers of such languages make constant use of the different possibilities offered to them. Varieties of language that speakers use reflect their regional, social or ethnic group. The variety also show their gender and ways of speaking, Wardhaugh (1986). Apart from these varieties, there are varieties of English along the social context. These are pidgin, slangs, argot, jargon, etc.

The advent of Information and Communication Technology has brought about another variety into the world of English Language. The new variety has emerged from the use of text message on cell phones especially when texting via social media such as Facebook, Whatsapp, Twitter, and short message services. Short Message Service (SMS), more popularly known as text messaging, developed as an initial by-product of the cell phone industry (Faulkner &Culwin, 2004). SMS messaging is closely related to instant messaging (IM) (Goldstuck, 2006). IM is a function of online chat rooms and has expanded to mobile phones due to their ability to carry applications that can be downloaded to the handset (Goldstuck, 2006) Texting or text message refers to a brief written message on the mobile phone and other portable devices. The very first text message was sent in December, 1992 by Neil Papworth who used this medium to wish a friend a merry Christmas (Arthur, 2012). Since then, text messaging has become the order of the day worldwide. There is the claim that approximately 4.2 million people are active users of the short message service (SMS). This is a medium of communication that many people cannot live without because virtually every individual has a cell phone. SMS is assessed as a phenomenon that has grown and spread around the globe at an amazing speed, Sulaiman and Zolait (2012). Text messaging is an act of sending short messages with cell phones using SMS which has a limit of 160 characters per message. Due to the cumbersome nature of typing text into the phone, and limited words per message, a new form of shorthand has emerged, especially among the youth.

Text messaging has reduced drastically the number of personal letters to family and friends. The use of papers by people has also been reduced since messages are sent online. A great advantage of this form of sending message is the benefit of receiving the message almost immediately as against what obtained in the past when it could take about a week or more for a letter to get to its destination. This form of message has come with its own language, usually abbreviations that might not be universally accepted. It makes use of abbreviations to craft short messages, instant messages (IM), Blackberry messages (BBM), Facebook messages, etc. The abbreviations are too numerous to list. Some of these abbreviations are listed below with their full meaning.

Table	1:	List	of	few	abbre	viations	and	their	full	meaning.	

S/N	ABBREVIATION	FULL MEANING
1	U	You
2	D	The
3	Ur	Your
4	Dt	That
5	Ds	This
6	n, nd	And
7	gd,gud	Good
8	Mk	Make
9	2	to/ two
10	4	for/ four
11	Txt	Text
12	Bn	Been
13	Pm	evening/afternoon
15	Am	Morning
16	lol	Laugh out loud
17	rotl	Roll on the floor
18	9ce/9c	Nice
19	9t	Night
20	lyf	Life
This form of communication has its own language register which is largely due to the proliferation of mobile phones. Sending short text messages is almost an everyday activity. Hardly does a day passes, without an SMS being sent by an individual as not wanting to speak, no credit/airtime, etc. Though sending SMS helps in passing on information, it has its inherent dangers. SMS, IMs and BBMs do not express the true mood of the sender. At times, the information may be mis-constructed or mis-interpreted. A very great danger is the use of the SMS language that seems to be having influence – a negative one- on the written and spoken forms of English language of students.

With the use of SMS becoming a household event among students, it is also posing a great threat to teachers, lecturers in schools and higher institutions. The use of SMS language is not restricted to Nigeria. Text message has helped in developing a 'new language', though many people are of the opinion that the new language has affected students negatively. Confirming this, Lenhart, Arafeh, Smith and Macgill, A. R. (2008) cited by Vosloo (2009) reported that 64% of the US teens confessed that some form of texting has sneaked into their academic /formal writings. There is hardly any user of SMS facility who does not abbreviate his words or use the SMS language. To make matters worse, it seems the SMS language is fast replacing both verbal and written communications; as the grammatical rules and regulations are now jettisoned. However, on the contrary, Verheijen (2013)as cited in Vosloo (2009) argued that fluent texting leads to better literary skills.

Many individuals have advocated for SMS language to be accepted; and even be used in classrooms. Michael (2007) argued that text messaging is most often used between private mobile phone users, as a substitute for voice calls in situations where voice communication is impossible or undesirable. Use of SMS is worldwide. It is very popular in India where youngsters often exchange lots of text messages; companies provide alerts, news etc. Railway/airline booking and online banking are some of the services that are provided online. In Nigeria, text messaging is not limited to students only, as almost everyone who uses /has a mobile phone sends messages to their friends and family members. Many employers engage in text messaging especially when there is a need to get instructions across to their workers. Text messages are also employed when the network is poor; there is the belief that the text message will be delivered, no matter how late.

Students, at various levels, too engage in text messaging. They use text messages in exchanging information on assignments, football match scores, chatting, even dating, to mention a few. In the attempt to pass as many pieces of information as possible on a page, there is the tendency to use abbreviations. This has led to the idea of deriving certain abbreviations that can be regarded as SMS language, which has become a global tendency with the number of mobile phone owners increasing worldwide, Tanimu, Hoon and Mohammed (2014).

This study focused on the influence of the SMS language on students' written English. The SMS language is a peculiar one in the sense that some grammatical rules and injunctions are not really adhered to. To a very large extent, punctuations are used sparingly; even if they are used at all. If grammatical rules are not adhered to or punctuations are not used in text messages, are these limited to text messages only? Going through students' notebooks and even examination scripts, it has been observed that the abbreviations and SMS language have flown into the formal writings of students.

The following research questions were formulated to guide the conduct of the research work:

- 1) Why do students use SMS language in their SMS?
- 2) What can be done to improve students' use of SMS language?
- 3) How has the SMS language affected writing skills of the students?

Methodology

The study employed the descriptive survey method. All 100 and 200 level students of Adeleke University formed the total population for the study. There are three faculties namely: Arts, Business & Social Sciences and Sciences. Two departments were randomly selected from each faculty to give six departments. The departments involved in the study were:

- i. Faculty of Arts Department of Languages & Literary Studies
- Department of History & International Studies
- ii. Faculty of Bus. & Social Sciences Department of Mass Communication
- Department of Political Science
- iii. Faculty of Sciences -Department of Computer Science
 - Department of Biological Sciences

For each faculty, 40 respondents were randomly chosen from both 100 and 200 levels. This gave a total of 120 respondents for the study. In analyzing the data, the study employed the use of frequency and percentages.

Instrumentation

The study used a questionnaire titled 'Influence of SMS language on students' written English Questionnaire'. The instrument had two sections – Section A required the respondents to give their biodata information. The second part focused on items eliciting information on issues such as their style of sending SMS, their agreement or otherwise as regards effect or influence of SMS language in their written form of the English language.

Respondents' Bio-Data

Tables 1 and 2 present the bio-data of the respondents. There were three faculties in the university- Arts, Science and Business and Social Sciences. At the time of data collection, there were two levels i.e. 100 and 200 Levels Serifat O. Labo-Popoola

Table 1a: 100 LEVEL respondents

FACULTY	MALE	FEMALE	TOTAL
ARTS/FOA	05	13	18
SCIENCE/FOS	14	10	24
SOC.SCIENCE/FBSS	10	13	23
TOTAL	29	36	65

Source: Fieldwork, 2014

Table 1b: 200 LEVEL respondents

FACULTY	MALE	FEMALE	TOTAL
FOA	04	11	15
FOS	04	01	05
FBSS	07	08	15
TOTAL	15	20	35

Table 2: Age of Respondents on Faculty basis.

Age	Arts	Science	Social Science	Total	Percentage
Below 18	7	6	3	16	16%
18-20	11	15	24	50	50%
20-25	10	08	11	29	29%
Above 25	05	-	-	05	5%
Total	33	29	38	100	100%

In conclusion, the total number of respondents/samples used for the study wasone hundred comprising 65 respondents at the 100 Level and 35 respondents at the 200 level. In terms of age, the study revealed that 50% of the respondents have the age range of 18-20 years; 5% of the respondents are above 25 years of age and this age range is seen only in the Faculty of Arts.

Results

Research Question 1: Why do students use SMS language in their messages? Table 3: Reasons for using SMS language.

Items	Yes	No	Total
Abbreviation/Slangs in SMS saves	91	05	96
time			
Abbreviation reduces the number	82	14	96
of pages to be used on the phone			
Grammatical rules need not be	59	37	96
observed in SMS			
No answer	-	-	04
			100

The finding shows various reasons why students use abbreviations or slangs in their online messages on phone. The reason with the highest frequency count (91%) was that the language saved time used in writing. Another factor was that the language reduced the number of pages to be used in sending message. One would recall that each page on the phone takes only 160 characters. The service providers- MTN, GLO, etc. also charge #4:00 on every message sent. Therefore, the sender is always conscious of the number of pages to be used in sending messages because of the financial implications. The respondents (82%) agreed with this notion that they were conscious of the fact that abbreviation reduced the number of pages used.

However, respondents have shown that not all of them agreed that grammatical rules should be observed. 59% of the respondents opted for SMS language because they do not have to observe grammatical rules in their writing. Only 37% of the respondents did not believe in this. To these respondents, grammatical rules have to be observed even if the SMS language has to be used.

Research	Question 2:	What can be done to improve students' use of SMS language?	
Table 4:	Improving st	udents' use of SMS language.	

No.	Items	Frequency	%
1.	Avoid the use of Slangs	59	19.22
2.	Avoid the use of	35	11.4
	abbreviation		
3.	Use correct grammar all the	74	24.10
	times		
4.	Assume that others are	57	18.57
	reading the messages		
5.	Always be conscious of	74	24.10
	your language use in formal		
	and informal settings		
6.	No answer	08	2.61
	Total	307	100

To answer this question, respondents were asked to pick from five options that could improve the use of SMS language. They were free to choose as many options as they wished. This means a respondent can choose all the options i.e. the highest score from a respondent would be five, hence from the 100 respondents, there may be 500 responses. The study came up with 307 responses from the 92 respondents because eight of the respondents did not respond to this item in the questionnaire. The responses obtained i.e. 307 represented 61.4% of the total responses expected. Of the five suggested ways of improving the students' use of SMS language, the majority of respondents agreed with using correct grammatical forms all the times and consciousness of language use in informal and informal settings. These two options received the highest percentage of 24.10% each. Only 11.4% of the respondents believed that the avoidance of abbreviations would improve their use of SMS language. This can only mean that not many of the students would want to avoid the use of abbreviations. However, 19.22% of the respondents were of the opinion that avoiding abbreviations could improve their written form of the English Language. Another suggestion – assume that others are reading the messages- attracted only 18.57% of the respondents.

No.	Item	Yes	No	No answer	Total
1.	Are you mindful of your language/grammar in your SMS.	85	15	-	100
2.	Are you concerned about the effects of SMS language on written form of English Language.	87	13	-	100
3.	Are you very conscious of your language while writing formally e.g. during examinations	90	04	06	100
4.	Does the use of SMS language (slangs/abbreviations) stray into your writings	24	71	05	100
5.	I use these slangs and abbreviations in my class notes.	44	51	05	100
6.	SMS language has not influenced my written English negatively.	65	30	05	100
7.	SMS language has influenced my spoken English.	33	62	05	100
8.	Teachers/Lecturers should endeavor to learn the SMS language.	50	45	05	100

Research Question 3: How has SMS language affected writing skills of the students? Table 5: Effect of SMS language on writing skills of students

The study investigated the effect of the SMS language on the entire skills of the students. Table 5 presents the result on this question. 44% of the respondents confirmed that they use the SMS languageslangs and abbreviations in their class notes. This finding is in congruence with a survey by Pew Internet and America Life Project as reported by Ochonogor, *et al*(2012). The survey showed that 64% of US teens admitted that some forms of texting language have crept into their academic writings. However, 90% of them are very conscious while writing formally such as while writing an examination. It is important to observe that some of the respondents (50%) would want their teachers/lecturers to learn the SMS language. The implication of this can only be that they would not want to be penalized or marked down whenever they use the SMS language in their formal writings.65% of the respondents noted that the SMS language has influenced their written English negatively; though the data showed that 90% of them are very conscious of their language use while writing formally. This means that the students are aware of the dangers inherent in the use of the SMS language. It is not surprising therefore that 87% of them are very much concerned about the effects of SMS language on written form of English Language. This is in line with Ochonogor, Alakpodia and Achughue (2012) who reported that Delta State University Students are aware of the dangers associated with the SMS language and its effect on their performance. However, despite the awareness, the students still use the SMS language in their class notes. Rankin (2010) investigated the impact of the SMS language in formal writing and discovered that participants in the usage of SMS shortcuts have become common in their academic writing assignment. Errors were also found alongside SMS shortcuts in students' formal writings.

Going through some of the students' lecture notes, it was discovered that students make use of the abbreviations as they do in their SMS. The explanation was that the use of such abbreviations helps them in being able to write as much as possible while the lecturer delivers his/her lecture. Again, grammatical rules need not be maintained while writing lecture notes.

Conclusion and Recommendations

The use of abbreviation in writing especially in informal writings has become a common practice among students. Students at all levels, especially the undergraduates have designed various abbreviations/slangs to suit their purposes. This has really been evident especially in their short messages sent via mobile phones. Various reasons have been adduced for using the abbreviations cost-effectiveness, time-saving, non-compliance with grammatical rules. This study therefore revealed that many of the students prefer the use of SMS language in their SMS which they considered as informal writing. Though this form of writing strays into their lecture notes, majority of them will not make use of the SMS language in their formal writing. They also agreed that avoidance of SMS language will definitely improve their writing skill. Another finding was that the students would want their lecturers to be conversant with their coined abbreviations in order not to be penalized whenever SMS language 'slips' into their formal writing.

There is no doubting the fact that the SMS language has come to stay as it has evolved another variety of English language. The new variety though has not been acknowledged formally, has become a household language, especially for those who engaged in the short messaging services. This paper therefore recommends that the SMS language be considered as a new variety in English language. It also recommends that teachers, especially teachers of English language use the variety' in teaching the oral aspect of English language; as the words are written as they are pronounced. Teachers may not have a choice other than to learn this variety as their students will always use the variety in their writings. However, teachers are encouraged to insist that grammatical rules have to be used along with the variety in formal write-ups.

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CAUSAL INFLUENCE OF INSTITUTIONAL AND LEARNER FACTORS ON STUDENTS' ACHIEVEMENTS IN SENIOR SECONDARY SCHOOL ENGLISH LANGUAGE AND MATHEMATICS

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Introduction

Education has multiple purposes and benefits. In the long run, higher levels of Education are associated with higher earnings and economic mobility, better health, lower mortality rates, and greater democratic participation and higher socio-economic prospects. For these reasons, most societies provide their children with access to education for a specified number of years or until they reach a certain age. Many of the benefits of education occur in part because students learn some new knowledge or skills that enhance their ability to communicate, solve problems, and make decisions. Much of the debate over education is essentially about how to maximize the amount of student learning, typically as measured by various assessment instruments such as standardized achievement tests. From a societal viewpoint, since resources most notably, time are required for learning, and are scarce, the amount of learning needs to be maximized at least cost.

Unfortunately, the rate of decline from expected academic performance of students in Nigeria had resulted to economic and social wastage and this have become a great concern to all stakeholders in education. For instance, in 2008, 25.94% of the students had a credits pass in English language and Mathematics.

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Also in year 2009, it was another year of poor result across all states of the federation. In August 2010, WAEC reported 73.64% percent failure in English Language and Mathematics, the report further showed that only 26.38 percent of the candidates who sat for the examinations, made five credits, including English Language and Mathematics. The WAEC Nov. /Dec. 2010 SSCE examination result in English and Mathematics, two subjects widely believed to be the pivot of the major fields of sciences and arts, was also nothing to write home about (Adeiza, 2011). The failure was not just intense; it was truly unimpressive of the quality of students produced by secondary schools in Nigeria. In this case and as earlier declared on December 23, 2010 by the examinations body, only 20.04% or 62.295 candidates obtained credit pass in English, Mathematics and other three subjects. This is a pointer to the fact that all is not well with the students' attainment in the cognitive domain (Alimi, Ehinola, & Alabi, 2012).

Consequently, mass failure in public examinations impedes students' free access to proceed to higher educational institutions. Similarly it has made many students to; start seeking for special examination centre, lost interest in post secondary education, increase in examination malpractices and many more. On this premise, stakeholders in education became curious to know the causal factors associated with decline in student's academic performance. Causes of the poor academic performance could include material and non-material factors. Material in the sense that it could involve physical facilities needed to make learning easy for students. While on the other hand non-material could include the teacher and the students. Teacher factors could be conceptualized as teacher quality, while students' factor could be study habit and academic resilience.

Physical facilities could also be explained as the entire school environment such as blocks of classrooms, staffrooms, laboratories, workshops, libraries, laboratory equipment, consumables, audio-visual aids, electricity, water, chairs, tables, stationeries, playground, storage spaces and others. It has always been realized that facilities are very important in the development and improvement of education in Nigeria. An educational institution without facilities, either private or public, may not be able to achieve the stated goals and objectives of the system. When facilities are available and skillfully utilized, they influence learning and making it more meaningful. Facilities in education are very vital because they aid teaching and learning.

Bandele (2003) noted that the importance of physical facilities cannot be relegated. Facilities like modern laboratories, libraries and classrooms are to be put in place in all our educational system. Akinfolarin (2008) identified facilities as a major factor contributing to academic performance in the school system. These include classroom furniture, recreational equipment among others.

Teacher quality can be described as the level of resourcefulness of personnel disseminating knowledge in the school sector. Like personnel in other fields of human endeavour, teachers in schools are at the core of learning and are equally expected to possess the desirable personal and professional qualities that will enable them perform well and achieve the aims and objectives of education as spelt out in the National Policy on Education. Since education has been identified as one of the important keys that unlock the door of success in life; therefore teachers' holds the key to modernization. They can also be described as director of learning, instructors, disciplinarians, pacesetters, an evaluator and a judge (Abdulkareem, 2009).

It is believed that the more experienced a teacher is the more productive he will be in his teaching and the more likely his students will perform more brilliantly in school examinations than those students taught by an inexperienced teacher. Oakland (1999) opined that "the success of any educational enterprise depends solely upon the quality of teachers employed to run the instructional programmes in the school system". Their duties and functions which determine their quality vary widely. It is also of importance to note that their functions dictate the size, rules, policies and the general organization of their institutions. No wonder the Federal Government decided that teachers' education be given a major emphasis in all educational planning because "no education system can rise above the quality of its teachers" (FRN 2004).

In the same vein, Obanya (2003) is of the opinion, that like the case in any other area of human activity, a teacher should have both natural and acquired characteristics to be able to perform satisfactorily. Natural qualities are traits which the typical teacher is born with, while acquired characteristics are, in addition to natural traits, those that come through learning. Studies further contend that quality teachers focus on the needs of the contextual dimension of the subject matter and emphasize the relevance of what is learned. Mrozowski (2002) reports a linkage between teacher quality and student progress in a study of students and teachers in grades 3-8 under the Cincinnati Public Schools' teacher evaluation system. This however implies that the quality of teachers have high tendency to influence students learning and performance.

Study habits can be defined as study routines, including but not restricted to, frequency of studying sessions, review of material, self-testing, rehearsal of learned material, and studying in a conducive environment (Crede & Kuncel, 2008). Some students with high scholastic abilities perform poorly in examinations while others with average abilities often do well. Such unpredictable occurrences have been found to be intimately connected with study habits and skills. Each learner is unique with different abilities, interests, way of thinking and responding thus these characteristics have a significant influence on study habits.

Many students fail not because they lack ability, but because they do not have adequate study skills (Shabbir & Rukhsana, 2011). Study habit is the tendency of a student to learn in a systematic and efficient way, when opportunity is given. It is also defined as the devotion of time and attention to acquire information or knowledge especially from books or in other words it's the pursuit of academic knowledge by a detailed investigation of a subject or situation (Oxford Dictionary & Thesaurus of English Language, 2003). Good students are not born but are made by constant and deliberate practice of good study habits, for which there is no substitute (Ames & Archer, 2008). Thus, in order to improve academic performance of students, it seems essential to improve their study habits without which desired outcomes cannot be achieved. The role of Study habits in academic performance of students has been studied repeatedly during the past five decades. Laxminarayanan (2006) and Sarwar (2009) found that overachievers possessed better study habits than underachievers while Sirohi (2004) concluded that poor study habits were one of the main causes for low performance. Lidhoo and Khan (2000) observed that poor study habits and low need-achievement were associated with poor performance among bright students.

Academic resilience can be referred to as the ability to bounce back the in the face of school related adversity. Going to school to learn comes with a lot of challenges such as enforcement to comply to all school rules either loved or not, teachers giving long notes and short explanation, classmates might be troublesome and yet a lot of take home assignment to be done. At-times learners might be struggling to create time to understand difficult subject and yet the personality of the teacher taking the subject might not be friendly at all. This could make a student feel like quitting school or such class. Resilience among the adolescents referred to the notion that some succeeded in the face of adversity, in a riskprotective model of resilience, a protective factor interacts with a risk factor to mitigate the occurrence of a negative outcome (Zimmerman, Ramírez-Valles, & Maton, 1999).

Students with high academic resilient ability often scale through academic related challenges coming out victorious. It comes with determination, assurance of purpose and focus. However, it has been reported that adolescents who experienced specific learning difficulties frequently exhibited few protective factors and struggled to adapt successfully when confronted by difficulty and their inherent strengths or resilience skills were frequently lacking (Donald, Lazarus, & Lolwana, 2002). From the foregoing there appears to be no agreement among researchers on reasonable model for testing academic performance or specific factors predetermining student's academic performance. On the other hand, most studies tend to model students academic performance with multiple regression analysis using ordinary least square estimation method without considering its inability to estimate error appropriately (it estimates pooled error instead of individual), inability to test for causal relationship and to test a theoretical assumption as it is done in structural equation modeling (SEM) using maximum likelihood estimate (MLE).

Purpose of this study

The general purpose of this study is to investigate the predictive quality of institutional (physical facility and teacher quality) and learners (study habit and academic resilience) factors on students academic performance. Specifically, the primary focus was twofold: a) to investigate the relationship between physical facility, teacher quality, study habit academic resilience and academic performance. b) To develop a structural equation model to explain interrelationship among the study variables (physical facility, teacher quality, study habit academic resilience and academic performance.).

Rationale for Structural Equation Modeling (SEM) Approach

Latent SEM is an appropriate procedure for use with nonexperimental data (Keith, 1998; Quirk, Keith & Quirk, 2001). In this study, developing a SEM to best represent the data required two key steps: first, measurement models for each of the four latent variables was specified and tested using confirmatory factor analysis (CFA) and a structural model that provided linkages among the four latent variables and student academic performance (mathematics and English language scores) as an endogenous variable. In evaluating CFA models, several criteria can be used. This study focused on four: a) model convergence and an "acceptable range" of parameter estimates, b) fit indices, c) significance of parameter estimates and related diagnostics, and d) standardized residuals and modification indices.

Research Design

The study adopted descriptive survey research design of the *expost facto type*. This design is appropriate for this study because the design is systematic, and empirical, in which the researchers does not have direct control over independent variables because there are inherently not manipulated. Inferences about relations among variables are made without direct interaction from concomitant variation of independent and dependent variables.

Study Population

The population for this study consists of senior secondary school students in Ibadan North Local Government Area of Oyo State. Ibadan North local government area is the largest local government area in Oyo state. The L.G.A has about 26 secondary schools within the geographical coverage.

Sample and Sampling Techniques

Multistage sampling was adopted for this study. The first stage involved a random selection of 20 secondary schools from the entire population. The second stage involved the selection of 22 senior secondary students (11 male and 11 female students) (SS2) from each selected secondary school. In the whole a sample of four hundred and forty (440) respondents were randomly selected.

Research Instruments

A questionnaire was used for data collection on the variables investigated. The study habit, physical facility and teacher quality (SPT) scale was used in this study. The adaptation was made after extensive review of literature as advised by experts within and outside the faculty of education. The scale were piloted a week before the real administration to establish the suitability of the instrument for this study. The questionnaire was divided into three sections. The sections are: A, B, and C.

Academic Performance Data

AP data was collected on mathematics and English language for each respondent who participated in the study. An average of their academic score in three consecutive academic terms was considered (on a 1–100% scale where 40% is a pass and 70% is a first or distinction). A letter of permission was collected to this effect. The results were predominantly based on the overall exam grades, that is, the arithmetic mean of the total marks for each student. Overall exam grades ranged from 39.66 to 77.43, with an average of 64.52 (S.D.=4.34).

Study Habits Inventory

The Study Habits Inventory is a self-reporting inventory which enables the individual student to describe the situations, habits and conditions which affect his use of study time and his subsequent performance on tests and examinations (Bakare, 1977). The inventory which consists of 32 items in form of direct questions to which the students are required to provide answers includes sections on: (i) homework and assignments; (ii) time allocation; (iii) reading and note taking; (iv) study period procedures; (v) concentration; (vi) written work; (vii) examination; (viii) teacher consultation. Test-retest reliability of the SHI was established by administering it twice to a group of students (N = 58; 30 boys 28 girls); mean age = 14.5 years S.D. = 1.73 years with a time interval of 3 weeks. The test-retest reliability was 0.83, P < 05.

Physical Facility Scale

Physical facility scale is a 14 item self-report scale developed by the researcher. It measures the various physical resources available in the school. The scale adopted 4- response format ranging from 1= strongly disagree to 4= strongly agree. The least score obtainable on the scale is 14, while the highest score obtainable is 56. Higher scores indicate facilities are available and sufficient. A typical example of this is "equipped library", furniture in your classes". The reliability was established after pilot study of the scale. The Cronbach alpha value generated was 0.82.

Teacher Quality Scale

Teacher quality scale is a 14 item instrument measuring various aspects of teacher quality. The scale was adopted from Creswell, (2009).The scale adopted 4-reponse format ranging from 1= none of the time to 4= always. The least score obtainable on the scale is 14, while the highest score obtainable is 56.Higher score indicates high teacher quality, while low score indicate low teacher quality. A typical example of this is "very discipline." very unstable". The reliability was established after pilot study of the scale outside the sample area. The Cronbach alpha value generated was 0.78.

Data Analyses

This study used both primary and secondary data from the selected schools (with permission). Upon the completion of construction of various data files, a variety of analyses were completed that included). A series of exploratory Principal axis factoring (PAF) to identify empirically derived dimensions of the study factors, Confirmatory Factor Analysis (CFA) to operationalize the latent variables, goodness of fit indices for the measurement model, and for structural equation modeling (SEM) using analysis of moment and structure (AMOS) (Alburckle, 2009). Indicators of the latent variables were initiated by the researchers deviating from Aremu five factor model of academic achievement (2005). The correlations and covariance matrices calculated using SPSS (version 21) were used as input into AMOS to develop the Structural Equation Model (SEM). Individuals comprising the senior secondary school students (SSII) were used as the units of analysis.

SEM was used as the primary method for analyzing data. SEM allows a researcher to specify a priori relationship among variables included in the model. This specification is necessary for testing the model of academic performance developed from literature review. Further, SEM allows a researcher to establish

direct and indirect effects of each variable included in the model on the outcome variable. The model parameters were generated via maximum likelihood estimation. Several fit indices were used to assess the fit of the proposed model based on recommendations of Kline (1998) and Hu and Bentler (1995) as well as a review of the fit indices commonly reported across the SEM studies included in the literature review. These indices included the generalized likelihood ratio chi-square values (x^2) with associated degrees of freedom (*df*), root mean square error of approximation (RMSEA), normed fit index (NFI), comparative fit index (CFI), root mean residual (RMR), and goodness of fit (GFI) index values for each variable in the measurement model. The results for the model = sgoodness of fit indices were within acceptable limits (Diamantopoulus & Siguaw, 2000; Kline, 1998; Keith, 1997). The allowable fit values for the NFI, CFI and GFI indices are those close to 1.00. For RMSEA values less than 0.08 are considered acceptable, and RMR values as close to zero as possible are preferred (Browne, & Cudeck, 1995; Kline, 1998).

Table 1: PPMC summary showing the relationship between independent variables and academic performance.

Variables	Ν	Mean	Stand.Dv	r
Academic	432	45.742	7.022	1.000
Performance				
Teacher Quality	432	46.438	6.363	0.403**
Physical Facility	432	32.631	4.234	0.224**
Study Habit	432	46.252	5.234	0.332**
Academic	432	37.833	6.235	0.634**
Resilience				

Table 1 reveals that there is a significant relationship between academic performance and academic resilience (r=0.634, p<0.01), teacher quality (r=0.403, p<0.01), study habit (r=0.332, p<0.01) and physical facilities (r=0.224, p<0.01). This implies that improved academic resilience, teacher quality, study habit and physical facilities will increase the likelihood for improved students' academic performance.

To test for the fitness of the measurement model explaining the factor structure for each independent variable (teacher quality, physical facility, academic resilience and study habit), a confirmatory factor analysis was done using analysis of moment structure (AMOS).

Measureme	χ^2	Df	GFI	CFI	NFI	RMR	RMSEA
nt Model							
Teach Qual	40.25	9	0.98	0.85	0.82	0.019	0.08
Physical Fac	7.86	5	0.99	1.00	0.99	0.010	0.03
Academic res	26.34	9	0.98	0.98	0.97	0.049	0.06
Study hab	19.90	9	0.91	0.99	0.99	0.011	0.05

Table 2: Summary of Hypothesized Measurement Model Fit Statistics for Each Study Variable.

Note: Teach Qual: Teacher quality, Physical fac: physical facility, Academic res: academic resilience, study hab: study habit.

The results for the model = goodness of fit indices were within acceptable limits (Byrne, 1998; Diamantopoulus & Siguaw, 2000; Schumacker & Lomax, 1996). The allowable fit values for the NFI, CFI and GFI indices are those close to 1.00. For RMSEA values less than 0.08 are considered acceptable, and RMR values as close to zero as possible are preferred. The results shown in Table 2 support a good fit of the variables to the measurement model.

The correlation coefficients among the SEM exogenous latent variables and path coefficients between each exogenous latent variables (teacher quality and academic resilience) and the endogenous latent variable (physical facility, study habit and academic performance). The conceptual focus guiding the development of the SEM was to develop a SEM model to examine the influence of teacher quality, physical facility, academic resilience and study habit on student's academic performance and to investigate the nature and degree of relationship among the exogenous latent variables. The latent variables (ovals) are constructs inferred from the measured variables (indicators shown in rectangles) previously developed using CFA procedures. The paths from the latent variables (ovals) to the measured variables (rectangles) show the weighting (not included in the schematic due to its large number) of the measured variables as they operationalize the latent variables. All the measurement weights (loadings) were significantly different from zero. Paths from the latent variable (teacher quality, physical facility, academic resilience and study habit) to the academic performance of students in mathematics and English language are standardized regression coefficients that suggest the extent to which each independent variable affects the dependent variable (academic performance). The curved lines and the double-headed arrow lines indicate bivariate correlations between the various latent variables. (teacher quality and academic resilience). Disturbance (eg. D1, D2, D3) is included in the model to represent influence on the latent variable (physical facility, study habit and academic performance) other than those already contained in the model. The exogenous latent variables also take into account any error or other influences not shown (e.g., e1, e2, e3...) that may be influencing the variables beyond the latent variables. Separating error from the model enhances the interpretation of the constructs of interest and their effects on each other (Keith, 1998; Quirk, Keith, & Quirk, 2001).



Figure 1: SEM most parsimonious recursive model

Note: Teach Qual: Teacher quality, Physical fac: physical facility, Academic res: academic resilience, study hab: study habit.

The results of the final SEM model indicated that the structural model fit the data reasonably well for the study sample ($\chi 2$ (223) = 541.83, p = .00, GFI = 0.92, CFI = 0.94, NFI = 0.90, RMR = 0.033, and RMSEA = 0.048).

From the SEM diagram teacher quality had significant direct effect on academic performance (beta=.37) indicating that 1% increase in the standard deviation of teacher quality will increase students academic performance by 37%. Academic resilience had significant direct effect on students academic performance (beta= .72) indicating that for every 1% increase in students academic resilience will increase their academic performance by 72%. Academic resilience had significant direct effect on study habit (beta=.45) indicating that 1% increase in academic resilience will increase study habit by 45%. Teacher quality had significant direct effect on physical facility (Beta=.32) indicating that 1% increase in teacher quality will increase the usefulness of physical facility by 32%. Teacher quality had indirect effect on academic performance through physical facility (Beta=.12). Indicating that 1% increase in the use of physical facility in the presence of quality teacher will increase students' academic performance by 12%. Academic resilience had significant indirect effect on academic performance through study habit (Beta= .67) indicating that 1% increase in study habit in the presence of academic resilience will increase academic performance by 67%.

Discussion of Findings

This study modeled the variables predicting academic performance through structural equation modeling approach. It was discovered that latent exogenous variables were all significant predictors of latent endogenous variable (academic performance); Teacher quality, academic resilience, physical facility and study habit were significant predictors of students' academic

performance. By implication a unit change in the standard deviation of teacher quality, academic resilience, physical facility and study habit will increase students' academic performance. The result of this study concerning the place of study habit corroborates previous studies such as Laxminarayanan (2006) and Sarwar (2009) who reported that over achievers possessed better study habits than underachievers while Sirohi (2004) concluded that poor study habits were one of the main causes of underachievement. On the other hand, concerning the place of quality teacher and physical facility the result of this study corroborates Filardo (2008) who confirmed that school building deficiencies impair the quality of teaching and learning and also contribute to health and safety problems of staff and students. However, the United States Department of Education (1999) summarized from various studies that student achievement appeared to be more directly related to cosmetic factors than to structural factors such as substandard science facilities, air conditioning, locker conditions, classroom furniture, graffiti, and noisy external environments. By Implication the lack of basic facilities like laboratories has compromised the teaching of science subjects. Topics that are meant to be taught practically are taught theoretically as part of adaptive mechanism by teachers due to inadequate resources to enable effective teaching of the same. This ends up affecting negatively students' performance reducing their competitiveness for opportunities whose placement is pegged on performance.

Recommendations

It was found in this study that teacher quality had significant indirect effect through physical facility on students' academic performance. Meaning that if physical facilities are made available, students' academic performance cannot increase except in the presence of quality teachers. Therefore it is recommended that teaching service commission and ministry of education should work together to enforce the policy that guide the employment of quality teachers in terms of right qualification and experience.

Teaching service commission (TESCOM) and state universal basic education board (SUBEB) should employ qualified teachers who actually have interest in teaching and committed to the profession.

The Ministry of education and the State Governments are enjoined to assist in the development of physical facilities in Nigerian secondary school so as to ensure the development of quality output.

The study indicated that academic resilience had indirect effect through study habit to academic performance. Meaning that students study habit can be strong enough to improve their academic performance when the students' academic resilience is high. Therefore it is recommended that counselling psychologists and educational social workers should through their educational programmes improve learners' academic resilience and study habit in order to guarantee student success in the midst of adversity.

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8

SOCIO-ECONOMIC SECURITY IN NIGERIA: ATTRIBUTES, APPROACHES AND AWARENESS THROUGH SOCIO-ECONOMIC SECURITY-SPECIFIC EDUCATION POLICIES AND PROGRAMMES

Joel B. Babalola

Introduction

Socio-economic security (SES) is guaranteeing the prevention, protection and pliability of people against threats that jeopardize valued attributes of social standing and economic status in the society. With the increases in socio-political violence, armed violence, kidnapping, international terrorism, corruption, income inequality, unsafe business environment, poverty, graduate unemployment, poor health, poor education, economic meltdown, child trafficking, money laundering, wide-spread vandalism of cables and pipes, Nigeria has progressively been faced with threats to social life and economic livelihood. Nigeria has become an unsafe country to live and conduct businesses in spite of various enactments of laws, institutions and a network of law-enforcing agents to prevent threats to socio-economic security. Without doubt, the country is not ignorant of the contemporary approaches to ensure socio-economic security; neither is she oblivious of the role of education in creating security awareness. The question is with all the efforts of successive governments at ensuring socioeconomic security in Nigeria, why is the country still experiencing insecurity from various dimensions? To answer this question,

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there is need to understand the conceptual attributes, the contemporary approaches and how to create awareness for socioeconomic security. Thus, this paper is inthe following three parts: conceptual attributes of socio-economic security, contemporary approaches to socio-economic security, and creating awareness through SES-specific education.

CONCEPTUAL ATTRIBUTES OF SOCIO-ECONOMIC SECURITY

This section focuses on socioeconomic-security framework, forms and factors. Each of these aspects of socio-economic security will be discussed in turn making a special reference to Nigeria.

Education and Socio-economic Security Framework

Figure 1 shows a simple explanatory model to provide an insight to possible links between education and socio-economic security. It reveals that socio-economic security can be viewed from three angles of: (1) prevention of socio-economic insecurity, (2) protection from socio-economic threats and (3) pliability or resilience of socio-economic security victims. From the preventive angle, socio-economic security entails plans, policies and programmes as well as actions that serve as deterrence to various sources of threat to life and livelihood. Education serves as a means of gathering proactive information through effective socio-economic security research the outcome of which can be used for relevant policy making, programmes and public awareness campaigns. Socio-economic security as protection involves all activities aimed at shielding people from socioeconomic threats. These include the building of social and economic shields to fortify weak areas and people where there are identified threats that jeopardize valued attributes of individual or family's social standing and economic status in the society. It also includes rescue operations for those who are facing socioeconomic challenges. Education enters into the protective

calculus through formal training of socio-economic security workers on how they could quickly respond to the cry and needs of the victims. Informal education can be organized to educate the victims of socio-economic security in the areas of prompt responses to threats to life and livelihood. Formal education can be used to instruct young Nigerians from elementary schools to tertiary level so as to prevent future incidences of socio-economic perils. Lastly, psychosocial education can be used by social workers as a pliability tool in the process of rehabilitation of socioeconomic victims so that such victims can quickly bounce back to normal life and gainful livelihood.



Figure 1: Education and Socio-economic Security Framework

Forms of Socio-economic Security

Having discussed the framework, this section of the paper is to highlight the main forms of socio-economic security in line with the existing socio-economic pathways to success in the Nigerian society. In Nigeria, a young person is socialized through the normal pathways such as the homes, the community, schools, social institutions and workplaces.

Dynamics in the society have continued to dictate the level of safety along the normal pathways to successes in life. The Nigerian society and what young people need in order to succeed have changed drastically in the past 30 years, thus rendering archaic the traditional ways of socializing the young by homes, schools, and other institutions. In the 1970s and early 1980s, young people in Nigeria followed straightforward, swift, stable and similar pathways from primary education to public engagement or employment. Relatively few Nigerians continued on to higher education because irrespective of variation in the social background of young Nigerians, jobs were easily available for primary and secondary school leavers. Teaching jobs were readily accessible not only to the few trained teachers, but to those who were untrained. Once a young person finished secondary school education relatively stable employment soon followed. Between 1986 and today (2016), the pathways to success in the Nigerian society have become indirect, winding, insecure and unequal for children from various backgrounds. This could be attributed to some shifts in the youth labour markets such as slower transition rates between schools and work, rising unemployment rates, job competition with experienced people, earnings devaluation, increasing hopelessness and violence. Moreover, there are decreasing youth social supports necessitating increasing youth self-reliance rapidly replacing the historic social reliance or reliance on government in which Nigerian youths depended heavily on the formal organizational structures. There is an increasing demand by service-oriented economy for self-help, social or relational skills and soft skills, thus necessitating increasing emphasis of the education system on freedom of choice and personalized (self) learning rather than the traditional strict child control and social learning. These dynamics have rendered

the pride of school and home education previously associated with virtue-creating institutions in the Nigerian society useless. In the 1970s, it was a common practice in the city of Ibadan to see newspapers being displayed along the major roads without the seller(s) staying to watch over them. Surprisingly, buyers would go there, drop money and go with the corresponding number of the newspapers. More surprisingly is that the money and the newspapers would not be stolen until the owner came to collect them. The society then was that transparent, honest and virtuous. Today, nobody would try that because the society is no longer safe. If such is tried, thieves would not only steal the money and the newspapers but would equally attempt to kidnap the seller and rob him of his sales and would kill anybody making an attempt to stop them from carrying out their criminal exercise.

One basic issue is the increasing gap in the ways past and present young Nigerians are socialized for life and livelihood. This socio-economic shift can be traced to factors enumerated by Margo and Dixon (2006), such as:

- Increases in the number of rich parents who could afford household services that could enhance personal and social development of their children. This is a good development but often abused since in some cases those houses have also served as hangouts for poorer children who spend time out to watch TV and movies.
- Increased access of young people to persuasive advertising, with many children now owning their own televisions, computers and mobile phones, has raised the issue of childhood consumerism and materialist concerns (early engagement with consumption of goods, services, fun, intercourse, sex tips in youth magazines and entertainments). Research shows that young people as consumers of household products (youth magazines, audio, video, and computers) have become an increasingly lucrative target audience for unscrupulous advertisers

eager to harness their 'tease power'. Children are also taking greater control over spending decisions, a trend that is encouraged by advertisers and corporations but viewed as unwelcome by many parents.

- Increased dependence of young people on brands (trademarks and online models) to give them a sense of social aspirations, values and possessions implying that brands are beginning to dictate social hierarchies in a way formerly done by communities, churches and parents.
- Changes in the family structure, such as more parents working, and rising rates of divorce and single parenthood, have undermined the ability of families to effectively socialise young people the traditional routes of better childcare and more flexible working arrangements as well as increased investment in parenting education, relationship education and support.
- Reduction in community intervention in youth life resulting in low levels of collective efficacy affecting the ability and willingness of local residents to intervene in youth violence and antisocial behaviour. Institute for Public Policy Research (Margo and Dixon, 2006) shows that countries like Britain are less likely to intervene in youth violence and behaviour and more likely to blame young people (not the community) for their behaviour. This is also true in Nigeria.

Consequently, the new direction of suggestions is towards helping the youth to know how to take informed personal decisions about life and livelihood. This has been made possible by ensuring that young people take informed decisions to break through all barriers and attain the following eight forms of socioeconomic security: (1) labour market, (2) employment, (3) job, (4) work, (5) skill production, (6) participation, (7) occupational and (8) income. Since the old socialization methods have failed to bring about a safe environment for today's businesses, it has then become pertinent to search for a new way of socializing the young ones, through education, to prevent the occurrence of, protect them against and push through socio-economic insecurity. Having highlighted various forms of socio-economic security, the next part of this paper elaborates more on the centrality of lack of sufficient and sustainable income, otherwise known as poverty, in handling issues of socio-economic security.

Socio-economic Security Factors

As earlier listed, there are eight forms of socio-economic security pathways, eight interrelated and interdependent factors that have been found (Institute of Economics and Peace, 2015:86)to be associated with positive peaceful environments and by extension with socio-economic security. These are (1) well-functioning government, (2) equitable distribution of resources, (3) free flow of information, (4) good relations with neighbours, (5) high levels of human capital including education, (6) acceptance of the rights of others, (7) low levels of corruption, and (8) sound business environment. These eight factors are considered in the methodology for calculating the global peace index or GPI that has been used to rank Nigeria as one of the most unsafe countries in the world (this paper will be expatiating on this shortly).

According to Williams (n.d), socio-economic "factors ... impact an individual or family's social standing and economic status ... [these] include ...the ethics, fairness and results of policies, theories and institutions ...that may result in a different standard of treatment and opportunities."Based on the US data, Williams rightly identified poverty as the major socio-economic factor that makes poor people to become easily predispose to other socio-economic deficiencies such as disparities in health, justice system inequalities and low education attainment. Using the available data on poverty, health, justice system and education in Nigeria, it has been confirmed that poverty serves as a predisposing factor that can influence socio-economic security. The Nigerian poverty statistic as revealed by UNICEF (2015) shows that between 2007 and 2011, more than half or 54.4% of the Nigerian population were below international poverty line of US \$1.25 per day. Table 1 further reveals that 52.8% of the Nigerian rural population were below the national poverty line in 2010. There was obvious income inequality in Nigeria between 2007 and 2011 as the household income share by the richest 20% was 46% against 5.4% held by the poorest 40% (Table 1).

Table 1: Income Inequalities in Nigeria	
Household income share held by the richest 20% 2007-2011)*	46.0
Household income share held by the poorest 40% (2007-2011)*	16.0
Income share held by lowest 20% (2010)**	5.4
Rural poverty headcount ratio at national poverty lines (% of rural population) (2010)**	52.8

Data Sources: 1 *UNICEF At a Glace Nigeria: 2

**http://www.ruralpovertyportal.org/country/statistics/tags/nigeria (accessed on the 17 March, 2016)

Thus the prevalence of poverty and income inequalities in Nigeria have made more than half of the Nigerian teaming population to become susceptible to several socio-economic hazards. In essence, more than half of Nigerians are more likely to live in slums, suffer from poor nutrition and develop health conditions. Table 2 reveals that between 2011 and 2012 only 2.0% of the GDP was spent on health while large percentages of Nigerians had no access to improved drinking water sources and improved sanitation facilities respectively. Although the available data on Nigerian health status are not disaggregated by socio-economic status, the data show that poor people are less likely to have equal access to quality health care and more likely to develop health problems.

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Table 2: Nigerian Health Status (Last Available Year)

Use of improved drinking water sources (%) 2011, total	61.1
Use of improved sanitation facilities (%) 2011, total	30.6
Adult HIV prevalence (%) 2012	3.1
Public spending on health as a % of GDP (2007-2011)	2.0

Source: UNICEF (2015) At a Glance Nigeria.

http://www.unicef.org/infobycountry/nigeria_statistics.html(accessed 17/03/2016)

Beyond the available health statistics, the state of health system in Nigeria has continued to be a serious public concern. There is a general complain about wrong diagnoses owing to the use of obsolete equipment, wrong prescription, prevalence of fake medicines and poor attitude of health workers as well as lack of essential medical equipment even in the teaching hospitals. Consequently those who could afford foreign medical costs generally opt for health services in India, South Africa, Europe and the USA where there is a relatively high health security. There is absolutely the fear that hospitals in Nigeria are generally death traps and unfortunately the poor ones have little or no access to health insurance in the country.

The unsafe health system aside, Nigeria suffers from inequalities in the justice system (Table 2). In Nigeria, it appears that the justice system for the rich is different from the justice system for the poor. In most cases poor Nigerians deal with the criminal justice system than rich people. This is because more than the rich Nigerians, poor people face the risk of being arrested and being processed through and prosecuted in the courts. Moreover, poor defendants face harsher treatment than others who can pay court fees.

It is a common knowledge that education is both a cause and consequence of socio-economic status. Adequate and good education can boost employability, raise productivity and thus enhance earnings of educated workers. However, it is generally believed that people of lower socio-economic status are less likely to be educated. Consequently, children from poor background often have reduced employment levels and make lower wages. Table 3 present the education status of Nigerians. Having established in this paper that the Nigerian population is dominated by poor people, it is not surprising that the education statistics reveal that a substantial number of Nigerians do not participate in pre-primary, primary and secondary school education between 2008 and 2012.

Table 3:	Nigerian	Education	Status
Table 5.	1 viget lan	Luucation	Status

Youth (15-24 years) literacy rate (%) 2008-2012*, male	75.6
Youth (15-24 years) literacy rate (%) 2008-2012*, female	58.0
Pre-primary school participation, Gross enrolment ratio (%) 2008 -2012*, male	14.0
Primary school participation, Survival rate to last primary grade (%), 2008-2012	79.9
Secondary school participation, Net attendance ratio (%) 2008-2012*, female	54.3
Source: UNICEF (2015) At a Glance Nigeria.	

http://www.unicef.org/infobycountry/nigeria statistics.html (accessed 17/03/2016)

Although this paper lacks the scientific evidence to support a direct link between poverty and national safety, it appears there is a close link between poverty and violence levels in Nigeria. Based on the 2014 Global Peace Index (GPI), Nigeria has been ranked 151st peaceful country out of 162 countries, making it one of the 12 most unsafe nations in the world (Institute of Economics and Peace, 2014). Nigeria ranked 40^{th} out of 44 countries in Africa making it to be one of the five unsafe African countries in 2014. Nigeria which was ranked 148th most peaceful country or one of the most unsafe 15 countries in the world in 2013 (Institute of Economics and Peace, 2013) became the 151st most peaceful country in 2014 and 2015 respectively (Institute of Economics and Peace, 2015). Figure 2 shows that between 2013 and 2015, Nigeria has increasingly continued to be an unsafe nation owing perhaps to the insurgence of 'Boko Haram' in the North Eastern part of the country and the pervading cases of kidnappings in several parts of the South.



Figure 2: Nigeria is increasingly an unsafe nation (lowest GPI being the safest) Data Source: Institute of Economics and Peace, 2013, 2014 and 2015

CONTEMPORARY APPROACHES TO SOCIO-ECONOMIC SECURITY

This section focuses on the contemporary approaches to address the aforementioned socio-economic security issues in Nigeria highlighting the prevention, protection and pliability or resilience of Nigerians against increasing threats to life and livelihood.

Based on the shared knowledge that there is a strong link between poverty and insecurity, it is assumed that people's ability to cope with insecurity is a factor of: (1) prosperity or resources measured at different levels (individual, household, community, and national) as well as (2) perception of their own ability to control events.

- 1. Prosperity is a contributory factor to socio-economic security since poverty is a cause of insecurity. It thus follows that solutions to poverty can be sought through employability, employment, income generation, savings and investment (or asset creation). Thus, to ensure socio-economic security from the angle of prosperity or poverty alleviation or pro-poor interventions, there must be improvement in the following two areas:
 - a. Participative or **social security** to enhance skill production, labour market efficiency, employment status, job and work securities. Participative (or social)

security should be emphasized because without access to organizations that can represent people's interests, they will always remain vulnerable to social, economic and other discriminatory pressures that characterize market societies

- b. Pecuniary or **economic security** to enhance savings and investments in asset creation and to further boost social security. Pecuniary (economic) security should be emphasized because it is believed that without sufficient income to survive, people cannot be expected to be able to make rational choices about how to develop their skills and work capacities through education.
- 2. Perception control can be used to enhance socio-economic security. This has to do with fear of insecurity or feeling that one is unsafe. One can feel unsafe as a result of the general public perception about the likelihood of occurrence of socio-economic perils or owing to past and present bad experiences in the society in respect of socio-economic insecurity. For instance, an individual is likely to experience a feeling of insecurity if such a person, on a daily basis, sees and hears about widespread cases of unemployment, job loss, economic meltdown, irregular payment of salaries, high rate of mortality owing to poor health service, poor sanitation, epidemic, robbery, insurgences and kidnapping. The general assumption is that the probability of occurrence of socio-economic insecurity can be controlled through preventive, protective and palliative interventions. Moreover, in the unwanted circumstances when the peril of socio-economic insecurity is experienced, one is left with how to build the resilience of the victims through palliative measures targeted at the poor citizens in form of pro-poor humanitarian and rehabilitation activities.

Lawrence (2016) strikingly summarized socio-economic approaches into three when he said:

One security approach is to prevent a threat from arising in the first place, especially by addressing its underlying causes. When the threat cannot be prevented, security as protection aims to defend against, if not eliminate, the threat. But if we cannot fully protect ourselves from the threat, security as resilience (pliability) considers our ability to "bounce back" and alter the ways in which it affects our social systems — our ability to adapt to threats that actually strike us.

The Preventive Approach

Security as prevention or aversion of socio-economic threats that can jeopardize human happiness and public wellbeing is made up of labour market and employment measures.

- 1. Labour market security: this has to do with enhancing the chances of securing a gainful job through adequate employment opportunities irrespective of the socioeconomic status of any person who wants to work.
- 2. Employment security: closely related with easy availability of employment opportunities is the issue of employment security which has to do with the enactment and enforcement of institutional legal framework against arbitrary employment, promotion and dismissal procedures so that the pathway to career success will be straight, simple and fair to all.

The Protective Approach

Security as protection is made up of job security, work security and skill security.

1. **Job security**: once there are wide opportunities to secure gainful employment with respected rules of engagement by private and public institutions with respect to appointment, promotion and dismissal, the next safety proof to be put in place is to secure the job through the possession of a specific and clear career path that guarantees tenure through confirmation of appointment.

- 2. Work security: once the career path of a person is guaranteed through confirmation of appointment, it then becomes important to ensure the safety of workers at work and their working conditions in terms of protection against accidents and illness at work through safety and health regulations setting limits on working time, unsociable hours, night work for women, among others.
- 3. **Skill production security**: in order to protect people from redundancy and sudden risk to livelihood and status meltdown, there is a platform of skill production security in form of access to opportunities to gain and retain skills on the job.

The Pliability Approach

Security as pliability is about resilience building to reinforce the ability of people to recover from shocks and suffering associated with socio-economic insecurity such as lack of power or influence, dignity or prestige, voice and sustainable income. Thus efforts are made to guarantee participation, occupational security and sustainable income.

- 1. **Participation security**: building the resilience of workers or employees, especially the junior ones, requires that the seemingly voiceless people be reinforced to have a voice in relevant labour market and workplace decisions, protection of collective voice through independent trade unions and employers' associations, boosting dignity at work by ensuring that there is no child labour, slave labour, bonded labour, discrimination and imbalance between work and family life.
- 2. **Occupational security**: enhancing the feeling of being involved aside, one important aspect of resilience building

is through the provision of socio-economic platforms that will guarantee that individuals in the society are able to follow their chosen professions or that activity that gives purpose, identity, direction and fulfilment to life and livelihood.

3. Income to secure basic things of life: though hereby classified under the pliability instrument, income security cuts across the three forms of socio-economic security. Income security has to do with having access to decent job, adequate food, health services, decent housing, affordable transport and happy family formation involving affordability of children basic education and access to a pension scheme. The income security can be in the form of existence of policies on minimum wage machinery, wage indexation, social security and taxation to reduce inequality in the society.

Pliability security measures are aimed at providing immediate relief of a limited nature to those experiencing insecurity in one area or the other for example, give food as a relief to those experiencing food insecurity or a house to the internally displaced people (IDP). These are mitigating the welfare vulnerable and dependent population who lack alternative means of support. The level and quality of education influence the ability to access and utilize available relieve measures

The Pro-Poor Approach

While this is not a socio-economic security tactic that can stand alone, it is important to discuss the pro-poor 'approach' so as to underscore the centrality of targeting the marginalized or underprivileged people while planning and implementing each of the aforementioned approaches. When resources are limited, how should they be allocated to the most venerable ones? Vegas and Coffin (2012) provide a well-documented answer to this question in relation to financing of ECCE programmes. This answer will be adapted in this section. There are two ways of targeting resources; these are geographical and by income

targeting. Other ways include group targeting such as the disabled and those in emergency situations. As far as targeting is concerned, it is well acknowledged that private stakeholders are not likely to invest in the education in areas considered as unsafe for businesses. Therefore, it is difficult to adopt the public-private partnership in the provision of formal education for victims of insurgences. Under this condition, the government must be forced to target these areas so that public investment in education could enhance balanced development. The issue of targeting the needy through subsidy, mid-day meals to enhance balanced diet and cash transfer is important in a country like Nigeria. Income targeting is very common and it includes restricting eligibility, subsidizing the enrolment of the poor and providing vouchers. These include programmes on food security, employment creation, asset redistribution often targeted at the poor adults and working-age group to gain employment, make money, possess the basic, save and invest. These measures could take between two and five years to have impact on socio-economic security of workers and the poor. The level and quality of education of recipients will definitely influence the ability to access and utilize available pro-poor measures

CREATING AWARENESS THROUGH SES-SPECIFIC EDUCATION

Creating socio-economic security awareness through education is an all-embracing concept in that it does not only involves the provision of free basic quality education, health, water, sanitation and nutrition to children so as to promote measures to enhance human capital development that impacts on socio-economic security, it also involves socio-economic security research, response education and training as well as rehabilitation education and training. This section of the paper discusses each of the three components of education for socio-economic security:

Research (Intelligence gathering) for socio-economic security

Figure 3 highlights the major roles of research or intelligent gathering in enhancing socio-economic security of individuals

and communities in a society. Research is generally useful as an investigative and problem-solving tool in the process of enactment of public policy and decision making on socio-economic security. It is publicly acknowledged by Nigerian politicians and policymakers that Nigeria is very good in enactment of policies but very weak in implementing policies. The gap between policy making and policy implementation might be as a result of so many factors including inadequate policy research to identify proven best practices, causes of policy failure and success stories from other countries of the world (Babalola, 2015).



Figure 3: Research for Socio-economic Security

Apart from the fact that security research can improve the enactment of effective socio-economic security policies, it can provide the needed scientific evidence to enlighten the public to be safer, more secure, healthier and more prosperous. Various communication channels can be used to disseminate scientific information in a manner that can be best understood by the public, politicians and policymakers. These channels include the mass media, print media, the community, religious houses, schools and the Internet. Intelligent gathering can further be used to target critical encumbrances against socio-economic security such as poverty, health, education, energy, environment, justice, and military affairs. Research is a problem-solving instrument that can be used to identify and prioritize critical causes of socioeconomic insecurity in a particular society. Once identified and prioritized, it becomes easy to identify ways to remove the encumbrances standing as obstacles to national security. Lastly, research plays the useful role of providing scientific information to empower enforcement agents, private education providers, philanthropists, politicians, policymakers and the general public. There is every reason to believe that Nigeria is weak in enforcement of public laws, rules and regulations perhaps because of the high level of corruption in the society. Investigative research can reveal the activities of violators, victims, and regulatory bodies thus serving as a deterrent to prevent the occurrence of a particular socio-economic violation. For the target groups to effectively access and utilize the product of intelligent gathering for the purposes of preventive, protective, pliability and pro-poor security there is need to:

- a. enhance the quality of basic education and increase the literacy and gross enrolment ratio at lower levels of education,
- b. widen access to telephones, computers and the Internet;
- c. improve the innovation system with emphasis on the encouragement of domestic production of royalty, journal articles, patents especially in the areas of agriculture, industrialization, local manufacturing and efficient technologies,
- d. strengthen the research institutions, universities and other innovation systems, and
- e. invest in Research for Development (R4D) in strategic areas

Response education of socio-economic security workers and victims

Table 4 contains the link between response education and socioeconomic security. Response education is the instruction provided to enhance the response of all security stakeholders on prevention, protection and palliative modes and means. This type of security education can be in form of formal, informal and non formal instruction. For young people to be secured (in terms of health, employment (work), environment, economic productivity and political participation) in this modern world, they will need to pass through schools so as to acquire basic life skills at the lower level; entrepreneurship education; citizenship education, environmental education, creative skills as well as innovative and analytical skills especially at the upper level.

Formal education is often organized and guided by a curriculum, the teacher and a credential (a diploma or a degree). Consequently, formal education reforms often target curriculum relevance, teacher preparation and development; transition to the labour market; and enhancing the productive, analytical and innovative skills of workers. Table 4 shows that there are two targets for formal instruction on the art and science of socio-economic security. These are the agents of socialization and security as well as the general public with special emphasis on the victims.



Figure 4: Response education for Socio-economic Security

According Obanya (2013a:13):

EDUCATION can be exploited as a response to a variety of human crisis situations. Every situation would have to be analysed in-depth to determine its most appropriate educational response. Most importantly, educational responses to crises situations must resort to the EDUCATION WITH A CAPITAL 'E' model, as human crises are threats that transcend the confines of the formal school and formal schooling.

Consequently, response education usually counts on the informal and non formal knowledge and knowhow. The informal education does not involve formal organization, curriculum and recognized credentials. The teacher is simply someone with more experience or more exposure in the socio-economic security matter such as community leaders, faith-based organizations, nongovernmental organizations, development partners and so on. It is a cheap and effective mode for specific training and educational programmes to upgrade life skills and know-how among citizens to create jobs,, raise incomes and improve their productivity as well as resilience to overcome any socio-economic insecurity.

The non-formal education is particularly good in building entrepreneurial skills often as a palliative measure. Recent examples of private-driven non-formal education in Nigeria include the Innovative Enterprises Institutes or IEIs and Vocational Enterprise Institutes or VEIs that are designed for school leavers who wish to acquire skills to secure employment; persons seeking to secure career paths that do not need credentials adults without time for full time study persons wishing to go into self-employment (to secure new job), workers seeking re-skilling opportunities (to secure one's job).

Moreover, as practiced in Nigeria, some faith-based organizations and philanthropists often provide informal education to internally displaced persons (IDPs) found in the official and the unofficial camps in the country. In most cases, they normally target basic education with special emphasis on moral and citizenship education. Some non-governmental organizations also provide formal basic education without walls for children of the IDPs in the official camps in Adamawa, Bauchi, Gombe, Taraba and Yobe states, Nigeria. According to the data provided by NEMA (2014) on Nigeria's IDP camps, the IDP population is composed of 54 % women and 46% men. Fifty eight percent of the total IDP population are children of which more than half are up to 5 years old, while 42% are adults. Majority or 92.4% of IDPs live with host families while 7.6% live in camps. Many of these victims once had good employment, decent accommodations and good education for their children but owing to insurgency, community clashes and natural disasters are now in pitiable conditions. So, emergency activities are usually directed towards the general organization through a management committee, health, shelter, water, sanitation, food, education, protection, livelihood and protection of the most vulnerable such as women, children and camp security. NEMA (2014) further explained that as at 2014, there was formal or informal education taking place in 60% of Nigerian sites. NEMA, however hinted that over 75% of children are attending schools in about 30 percent of the camps while education facilities were located within 1 to 2km from the camps for those sites where there were no educational facilities.

Recovery or resilience-building education

Rescuing and then rehabilitating those who have suffered socioeconomic perils requires acquisition of rehabilitative attitude, knowledge and skills. This stage is to ensure that socio-economic victims recuperate from the experienced social and economic shocks and recover the lost socio-economic grounds through education. Integrating resilience-building in the curriculum appears to be the most acceptable approach. For instance, Obanya (2013b:24) rightly said: ...the seeds of insecurity are sown in the minds of men; it is in the minds of men that the foundation for security should be built'. Education addresses the minds of men. Therefore, let every nation of the world genuinely promote Education, the surest way to invest in national security.

There are so many studies on building resilience in the mind of men through education. One of such reports is that of UNICEF and UNISDR (2011). The report analysed disaster risk reduction in the context of education at country level. It studied inclusion of disaster risk reduction in the formal education curriculum and found that in some countries the government has already included elements of disaster risk reduction in the formal education system, while in others certain activities are undertaken by national and international organizations. According to the report, the integration of disaster risk reduction in to education is a long-term process which aims to ensure that knowledge about hazards, risks and appropriate safety behaviour is deeply embedded within communities, with children as "agents of change". To achieve this the report argued that there is a need to promote knowledge of disaster management and behavioural change with regard to disaster risks through both formal and nonformal education, while at the same time reinforcing partnerships and encouraging cooperation on disaster risk reduction policies and practices.

The question of whether disaster risk reduction education has been incorporated into the Nigerian formal education curriculum prompted this paper to draw inspiration from the study conducted by Wand, Ayuba and Asika (2015) on the need to integrate disaster education in educational institutions curriculum in Nigeria. Although the paper did not examine the extent to which disaster risk reduction has been integrated into Nigerian education curriculum, it perhaps, listed some areas that might beincorporated into disaster risk reduction education; namely:

1. Risk assessment and analysis: The communities need to know the risks that they are facing and to minimize

their vulnerability to the risk. The risk assessment activity identifies potential risks hazards and their location. It assesses the magnitude of impacts and monitoring to comprehend signs of stress, pattern and time of occurrence.

- 2. Education and awareness involving basic training on signs of environmental stress and risks existence.
- 3. Development of early warning system involving forecast and prediction of slowdown-on-set and rapidon-set of disaster by collecting data and mounting of the environment. Announcing warning by community leaders through available means like radio, GSM, and town criers.
- 4. Disaster risk management which involves building people's capacity to protect their lives and properties thus, teaching the community about necessary measures required to reduce the likelihood of disaster.

UNESCO and UNICEF (2012), however listed Nigeria as one of the 30 countries covered in their case study of disaster risk reduction in school curricula. As at the time of publishing the report, Nigeria was undertaking a formal curriculum review with a view to integrating climate change adaptation, disaster risk reduction and gender issues at all levels of curricula (UNESCO and UNICEF 2012:190). While this paper is unable to determine the present status of the reviewed curriculum on disaster risk reduction in Nigeria, it is appropriate to say that the implementation of the said curriculum needs to be properly monitored for proper implementation. Even then, Nigeria being a country where more than half of the population is poor, efforts should be made by the government to adopt a propoor approach in implementing the reviewed curriculum in which disaster risk reduction is incorporated in the country's education Consequently, Nigeria should henceforth prioritize system. equitable inclusive quality education with special emphasis on reduction socio-economic insecurity so as to heal the mind of Nigerians who are increasingly becoming affected by socioeconomic adversities in the country.

CONCLUSION

Citizens often encounter various risks in the process of schooling, securing employment, ensuring a sustainable income, acquiring the basic needs of life, forming a family, living a healthy life, and in ensuring a full participation at work and in the society. Consequently, governments usually design and implement policies, programmes and projects to ensure that their citizens are prevented and protected from various socio-economic risks associated with work and life. In the unwanted events of socio-economic shocks, governments often ensure that victims are supported to wriggle out of such traumatic experiences. Effective protection of citizens from various risks requires a combined effort by the government, public and private institutions, the community, the household and the individual. As a socialization agent, intelligent gathering as well as formal, informal and non-formal instruction, are expected to contribute to socioeconomic security of people living in the society. Based on the analysis and discussion presented in this paper, it can be concluded that targeted research and training can enhance socio-economic security in all dimensions of human life and livelihood. Therefore, in this perilous time when Nigeria has been globally ranked as one of the most unsafe countries, the government should design and invest in specific educational policies, programmes and projects aimed at boosting the socio-economic safety of people.

Governments should particularly spend on research, formal, informal and non-formal programmes since these are the right bridges that connect vulnerable people to the good things of life. Nevertheless, knowing the right bridge to connect citizens with socio-economic security does not mean that the available bridge will be wide and safe enough to give sufficient room and confidence for vulnerable people to easily cross to the other side where necessary facilities are provided. It is on this note that this paper calls on policymakers and implementers of education not only to provide formal, informal and non-formal education, but should also ensure that the education provided at all levels is accessible, inclusive and qualitative.

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KNOWLEDGE SHARING AND QUALITY SERVICE DELIVERY AMONG NON-TEACHING STAFF IN THE FEDERAL UNIVERSITIES IN NIGERIA

F. S. Akinwumi & Adekemi D. Fadun

Introduction

Non-teaching staff in Nigerian universities operate at varying levels as administrators to implement management plans, towards achieving mission and objectives. The capability of an administrator to implement and produce intended results conveys administrative effectiveness. Through various administrative processes, non-teaching staff are expected to leverage on improved services and achieve operational excellence while discharging their duties to attain effectiveness in the administrative procedures. Non-teaching staff are involved in daily activities of interpreting and implementing policies in educational institutions to facilitate organisational objectives.

Non-teaching staff are charged solely with the responsibilities of keeping records, giving and storing information, maintaining active and neat work environment for effective administration. Non-teaching staff are administrators, not teachers. James (2013) defines administration as the component part of management concerned with facilitating the accomplishment of the objectives of an organisation through systematic management of constraints, and careful utilisation of the available limited resources. Non-teaching staff are concerned

with facilitating the accomplishment of objectives in organisation. This objective is achieved through systematic management of constraints, and careful utilisation of the available limited resources within the system. Skills and strategies are required by administrators to implement plans and objectives of management towards efficient and effective administration.

It appears to some extent that administrative ineffectiveness among non-teaching staff in public universities is becoming unbearable and served as a bane to achievement of educational goals. Administrative ineffectiveness of workers has added to incapability of higher education managers to achieve stated university mission and objectives. The reflection of low productivity achieved by some non-teaching staff might have in a way contributed to failure of other stakeholders that is, the academic staff and the students in the university system to achieve objectives. Non-teaching staff exhibits this low productivity through poor record keeping of staff and students' document, delayed action due to negligence and a form of sub-standard secretarial duties. Also, display of looseness by some of these nonsecretarial staff in task performance as a result of lack of selfcommitment and teamwork among employees constitutes strong challenges to smooth running of administrative procedures in the university system.

The need for quality service delivery from employees in Nigerian university system, especially the non-teaching staff is becoming inevitable. Employers of labour find it difficult to establish a relationship between qualifications obtained by graduates and competencies (Olatokun, 2007). Certificates obtained and performances in tasks are becoming unrelated; hence employers depend on competencies of applicants rather than certificates. Employers are fully aware that no organisation can grow beyond the strength and knowledge of its workforce. The lukewarm and non-challant attitude of non-teaching staff towards their assigned duties in the university system have advanced to inefficient service delivery. Probably, that is why Okebukola (2010) viewed the need for Nigerian university staff to undergo reorientation in line with international standards that aim at delivery of quality services. To achieve this, the university system may require a thorough overhauling of its activities, especially among administrators meant to implement policies and action plans.

Administrative staff needs to be equipped with current management practices, such as knowledge management, that aim at effectiveness. Armstrong (2009) define knowledge as "a dynamic combination of experiences, values, subject and professional information that provides a framework for evaluation and acquiring new experiences and information in a coherent and integrated manner". This implies that knowledge is sometimes acquired through experience, perceptions or reports by people to guide, direct thoughts and actions. It is what is understood that gives direction to how to do things in general. Knowledge Management (KM) is viewed as a new and critical issue in today's management dispositions. Shivshankar (2013) expressed knowledge management as an "integrated approach which focuses on identifying, capturing, utilizing, retrieving and sharing the information assets of an organisation". Knowledge management in recent years has flourished as it supports continuous performance improvement for the organisation that employed its practices. Foss (2007) expressed Knowledge management as "an approach that enables people within an organization to develop a set of practices to collect information and share what they know, leading to action that improves outcome."

Knowledge management practices according to Foss (2007) include knowledge identification, knowledge utilisation, knowledge sharing and knowledge transfer. This paper focuses on knowledge sharing as one of the practices that ensures quality service delivery. Knowledge sharing is one of the practices of knowledge management that involves mutual exchange of ideas, views and opinions among individuals. Knowledge sharing activities occur in an atmosphere such as seminars, conferences,

training and orientation sessions, workshops, apprenticeship, newsletters, teaching and learning process. Knowledge sharing offers administrators opportunity to deliver quality service by encouraging individual to source for and share new skills and innovations among themselves in order to aid efficiency in task performance; making work more satisfying for staff by overcoming obstacles to effective performance.

University administrative system needs to develop knowledge sharing procedure through effective technological activities that will enrich and equip the non-teaching staff towards quality service delivery and thus enhance effective performances. The need for knowledge management practices to support administrative functions in the university system today, therefore, cannot be overemphasized. Educational managers need to give adequate attention to non-teaching staff, like other stakeholders in the system, if the mission, goals and objectives of the higher educational institutions are to be achieved.

Educational managers have observed a downward trend in the administrative effectiveness of non-teaching staff in federal universities in the South-west, Nigeria. This is evident in low quality service delivery of administrators and unaccomplished institutional goals and missions of higher education. Scholars have thus indicated the need for the deployment and adoption of a practice that encourages information collection and sharing among stakeholders, with a view to improving service delivery and outcomes. The main purpose of this study is to examine the relationship between knowledge sharing and quality service delivery of non-teaching staff in the federal universities in the south-west, Nigeria.

Research Questions

The following research questions were posed to guide the study:

1. What is the status of knowledge management among nonteaching staff of the federal universities in south-west, Nigeria?

- 2. To what extent is administrative effectiveness achieved among non-teaching staff of the federal universities in south-west, Nigeria?
- 3. What pattern of relationship exists between knowledge sharing and service delivery (administrative effectiveness) of non-teaching staff of the federal universities in southwest, Nigeria?

Hypothesis

Ho1: There is no significant joint and relative contributions of knowledge sharing (knowledge management practice) on service delivery (administrative effectiveness) of non-teaching staff of federal universities in the south-west, Nigeria.

Methodology

The study adopted the descriptive survey design to investigate the opinion of the non-teaching staff of three federal universities in the south-west (University of Ibadan, Federal University of Agriculture, Abeokuta and Obafemi Awolowo University). These universities were purposively selected because administrative ineffectiveness was more pronounced among non-teaching staff as against their private counterparts. More so, these federal universities were long established to provide the needed information.

The proportional and stratified random sampling was adopted to select 1156 non-teaching staff across the three universities along the three existing layers of the non-teaching staff: secretarial (senior=311; junior=224), non-secretarial (senior=147; junior=241) and technicians (senior=130; junior=103). Knowledge Sharing (α =0.79) and Service delivery (α =0.81) questionnaires were used for data collection. The ratings for the instruments are as follow:

1 = Extent Administrative Effectiveness (EAE), 2 = Little Extent (LE), 3 = Moderate Extent (ME), 4 = Great Extent (GE), 5 = Very

Great Extent (VGE)

Data were analysed using descriptive statistics, Pearson product moment correlation and Multiple regression at 0.05 level of significance.

Results

Research Question 1

What is the status of knowledge management among non-teaching staff of federal universities in south-west, Nigeria?



Fig. 1.1: Pie chart showing status of knowledge management in the universities

Figure 1.1 shows that level of knowledge management practices among non-teaching staff of the universities is low. Majority of the respondents (59.8%) showed low level of knowledge management while minority of the respondents (40.2%) showed high level of knowledge management practices in the universities.

Research Question 2:

To what extent is administrative effectiveness achieved among non-teaching staff of federal universities in south-west, Nigeria?





Figure 1.2 shows that the extent of administrative effectiveness of non-teaching in the universities is little. Majority of the respondents (42.5%) showed little extent of administrative effectiveness while others showed moderate extent (17.0%), great extent (23.6%) and very great extent (16.9%). This implies that administrative effectiveness of non-teaching staff in the universities was very low and requires attention of the educational managers and administrators.

Research Question 3

Table 1.1

What pattern of relationship exists between knowledge sharing and service delivery (administrative effectiveness) of nonteaching staff of the federal universities in south-west, Nigeria?

Fable 1.1: Mean and interrelationship	s between the independent	endent and dependent	variables
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$\mathbf{r} = (r = 0.815, p < .05).$						
Variables	Mean	EAE	LE	ME	GE	VGE
Service	30.76	1.000				
delivery						
Knowledge	20.23	0.815	0.098	0.110	1.000	
sharing						

shows interrelationship between the independent (knowledge sharing) and dependent (service delivery) variables. The table shows positive relationship between the independent and dependent variables: knowledge sharing (r = 0.815, p < .05). This implies that

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knowledge sharing has a high value and positive relationship with service delivery.

Hypothesis 1. There is no significant joint and relative contributions of knowledge sharing (knowledge management practice) on service delivery (administrative effectiveness) of non-teaching staff of federal universities in the south-west, Nigeria.

Table 1.2 shows the Joint effect of knowledge management practices on service delivery

	Model	Sum of	Df	Mean of	F-Ratio	Sig.
		Squares		Square		Р
	Regression	98335.658	4	24583.915	719.801	0.000
	Residual	39310.967	1151	34.154		
	Total	137646.6	1155			
R = 0.8	45					
$R^2 = 0.$	714					
Adj R ²	= 0.713					
Std. err	ror = 5.844					

Table 1.2 shows joint contribution of knowledge management practices to service delivery. Knowledge management practices jointly predicted service delivery (R = 0.845) and contributed significantly; F $_{(4\cdot1151)} = 719.801$, p <.05. The variables jointly accounted for 71.3% variance in the prediction of service delivery among non-teaching staff in the universities.

Table 1.3: Relative effect of knowledge sharing practices on service delivery

Model	В	Std. error	Beta (β)	Т	Sig. P
Constant	-2.035	0.750		-2,715	0.007
Knowledge	0.649	0.057	0.389	11.487	0.000
sharing					

Table 1.3 shows independent contribution of knowledge sharing on service delivery. It was observed that knowledge sharing contributed relatively to service delivery: knowledge sharing ($\beta =$ 0.389, t = 11.487, p<.05). The result implies that knowledge sharing contributes potently to service delivery among nonteaching staff in the universities.

Discussions

The result indicated that the level of knowledge management practices by non-teaching staff of the federal universities in the south-west were low. From the analysis of the study, the findings showed that there are a lot of challenges associated with the adoption of knowledge management in educational system. Some of the challenges may be traced down to the fact that knowledge management processes has its origin in business industry. Therefore, most educational managers and administrators have little or no awareness of the activities of knowledge management processes, hence could not adopt its practices in the administrative procedures of the university system. Nzewi (2009) opined that human beings are generally resistant to change and thus found it difficult to embrace new ideas. Many employees are rooted in sustaining old and workable practices, even though the output may be low. New innovations for improved output are usually perceived as a problem rather than being seen as challenges. Educational managers need to exert effort that would encourage employees to embrace knowledge management strategies for improved performance that will increase rate of productivity. Perhaps the ineffectiveness or poor performance of administrators as identified by Ogbonnava (2003) might have resulted from the low level of application of knowledge management processes such as knowledge sharing among administrators. There is need for educational managers to create an enabling environment whereby knowledge sharing would be adopted as a practice towards achieving quality service delivery.

It was also found by this study that majority of the nonteaching staff showed little extent of administrative effectiveness. The result therefore, revealed that administrative effectiveness achieved by non-teaching staff in the universities is to a little extent. This result was in line with the view of Olatokun (2007), Akinbohun (2008) and Okebukola (2010) that there is need for reorientation and thorough overhauling of activities of administrators towards enhancing improved task performance. The result implies that educational managers require immediate attention to their quest for attaining administrative effectiveness of staff.Babalola (2011) posits that there is the need for administrators to acquire managerial skills, which could be found in the constituents of knowledge management practices to aid effectiveness in administrative procedures.

Also, findings reveal that the null hypothesis formulated was rejected. This is an indication that knowledge sharing has a very strong prediction on quality service delivery of workers. Table 1.2 and Table 1.3 show the significant joint and relative contribution of knowledge sharing on service delivery. Findings of this study revealed that positive joint interrelationships existed among the knowledge management practices and service delivery. The results show that out of the knowledge management practices, knowledge sharing has the most positive relative contribution on service delivery. Acquiring skill in knowledge sharing could to a very great extent enhance quality service delivery. Sharing of thoughts and ideas toward performing certain task would result to high performance. Failure to attain effectiveness would hinder the achievement of educational objectives. Organisations around the world today face a common challenge, that is, the need to improve performance of the workforce in order to capitalise on rapid change, and to establish or regain competitive edge. In the same vein, education industry is not exempted in the struggle for high quality service delivery. There is need for administrators to become more quality-conscious and be more customers serviceoriented towards achieving effectiveness. Knowledge not utilised according to and Oyekan (2011) is useless. This implies that knowledge created, shared and utilised would enable user to perform best in assigned duties. Gamelgaard (2007) opines that incentives could be one of the strong tools that could enhance knowledge sharing. Knowledge of what should be done usually enhances implementation and encourages best performance. This would lead to organisational growth and development. Similarly, the position of Pankaj (2008) and Grey (2011) supports these

findings. They posit that adopting the practice of knowledge sharing among administrators is an antidote for creating value in organisation. Knowledge sharing tends to improve service delivery among workers. Problem shared is half solved. Through sharing with someone who is more knowledgeable, stress is reduced drastically and high task performance is ensured.

Implications of Study

In order to enhance quality service delivery in Nigerian universities, knowledge sharing practice should be adopted and acquired by non-teaching staff. This will enhance effectiveness of administrative procedures. The study further provides basis for training needs of non-teaching staff. Provisions should be made for adequate knowledge sharing practices among administrators, if improved task performance will be achieved. Educational managers should ensure that organisation culture does not affect interaction between staff, as this may hinder knowledge sharing.

Conclusion

The major concern of educational managers is to ensure that plans and procedures are effectively implemented to the core. The achievement of educational goals is one of the main challenges of educational administrators, hence the need to harness all resources towards achieving the goal timely. In the light of the findings, it could be concluded that low knowledge management among non-teaching staff was responsible for the extent of administrative ineffectiveness in federal universities. Shivshankar (2013) expressed one major challenge of adopting knowledge sharing practices, which was lack of teamwork and commitment to achieving organisational goals among individuals. The study serves as eye-opener to the administrators that not only 'knowledge is power' but most importantly 'sharing knowledge is power'. This study has equally established the need for people to work together and create a knowledge sharing culture in their system of operations. Among other facts, the study recommended that:

Educational administrators should put in place an organisation culture that embraces knowledge sharing. Incentives may be used to motivate individual to embrace and imbibe sharing culture within the system.

Education managers should embrace knowledge management activities in order to increase the level of knowledge management participation among nonteaching staff of universities.

Workers should be computer literate and develop their information technology (IT) systems; as it has become a necessary tool used in knowledge management activities and for its essential role in storing, organizing, disseminating, and sharing knowledge. Both secretarial and non-secretarial non-teaching staff should be encouraged to undergo skill acquisition in ICTs and other operations that will facilitates information sharing culture. Managers utilise a variety of resources in the process of striving to achieve organisational goals. Hence, education planners that gives credence to achievement of missions and objectives of higher education should conduct regular training needs for employees, especially non-teaching staff in order to identify areas that required on-the-job-training towards eradicating administrative ineffectiveness.

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10

SIGN LANGUAGE INTERPRETATION IN NIGERIA: PAST, PRESENT AND FUTURE

Adebomi M. Oyewumi

Introduction

Language is an instrument of communication, a vehicle of interaction and psychosocial adjustment. Language has always possessed an added cultural importance as a tool of the dominant ideology that bound people of similar biosocial characteristics together which help in maintain a variety of the social bond, a shared sense of values and communal awareness. In other words, it is the crucial component of cultural identity and the most striking factor in distinguishing one culture from another. The importance of communication to mankind is incalculable, especially when daily human interaction is considered. Long before the postmodernist, the value and the primacy of language in human history has never been in doubt (Danladi, 2013). Currently, one of the dominant and pervasive problems Nigeria has is the language issue. It is assumed that Hausa, Yoruba and Igbo are the three main languages, and each is widely spoken in their various regions in Nigeria while the over 400 others spoken languages throughout the country are seen as 'minority' languages which are majorly use by a few group of individuals within their communities (Ouane and Glanz, 2010).

One of these few minority groups include persons with hearing impairment. They represent about 10% of Nigeria's population (Mba, 1995; Ademokoya and Oyewumi, 2005; Oyewumi, 2013). Individuals with hearing impairment represent those who are Deaf or hard of hearing. Persons with hearing impairment frequently experience unusual language and communication barriers, difficulties in initiating and maintaining oral interaction, limited access to incidental learning, partial understanding of what is happening around them and difficulties in abstract thinking. This communication problem extends to socialization, education and ultimately occupation. The condition predisposes an individual to both resentment and hostility from their counterparts with 'normal' hearing, rejection or subtle denials by parents, family members or the community at large. This group of individuals with hearing impairment often experience negative and u stigmatized because they have challenges in communicating the auditory-verbal mode like every other members of the community. Hence, they depend solely on visual clues, body gestures, fingerspelling and sign language. According to Adigun and Ajavi (2015), sign language is a visual language that requires manipulation of the hand into shapes, body movement, systematic placement and movement of the hands, facial expressions in order to convey spoken words to individuals with hearing loss. However, there is tendency for interruption of communication between persons with hearing impaired and those with 'normal' hearing. Fortunately, this communication gaps are bridged by sign language interpreters (SLIs).

It is not surprising, then that hearing loss often leads to linguistic and communication problems and confines an individual to make use of sign language for communication. A sign language interpreter is a trained professional who facilitates communication and conveys all auditory and signed information so that both hearing and deaf individuals may fully interact.

Sign Language Interpretation in Nigeria: Past

Person with special needs in Nigeria has a history of neglect and marginalization within their families and communities. Indeed, their conditions were seen and perceived by many as a form of divine punishment. It is in this context that

missionaries and humanitarian organisations started working with persons with special needs (Abang, 1995 cited in Ajavon, 2003) and in particular, those who are Deaf and Hard of hearing. The passion for educating children who are deaf in Miss Alison Izzet, a retired Social Welfare Officer and a few others in the Ministry of Health and Education formed the nucleus of the Society for the Care of the Deaf which was headed by Mr. S. A. Dawodu. The efforts of members of the Society for the care of the Deaf in the teaching of Arithmetics, Reading and Writing were so effective that the Society for the care of the Deaf soon enlisted the sympathy of the Federal Government which established and financed a school for the deaf children at Yaba Methodist Church on 10 June. 1957. Within the same year, the number of enrolled increased from 14 to 30 and the children were divided into two classes because of the activities in the two classes were influenced by parents and modes of communication. In 1958, the Wesley School for the Deaf was then established by the Society for the Care of the Deaf (Abang, 1995). In 1957, Mr. Andrew Forster, an American Negro, established a Deaf school known as the Mission School for the Deaf in Ibadan in the Western State of Nigeria. The mission school merged with a centre set-up by Mrs. Ovesola in 1963 to become the Ibadan Mission School for the Deaf in 1974 (Mba, 1987).

Between 1957 and late 1970s, there was no special curricula prepared for deaf instructions except that individual schools adapt their own means of communication to suit their demands. However, the governing principles were individualization of instructions, stimulation of initiatives and creativity. Emphasis was laid on speech, lip-reading, language development for those fitted with hearing aids as well as local sign languages. Local sign languages used the conventional gestures to represent ideas and phenomenon which is societal specific. In other words, such meaning is only understood among persons who are deaf/hard of hearing in the same community. Typically, the local sign language used by a small group of deaf signers who regularly have signed interaction with hearing people accounts for

the significant influence of sign language structures. For example, Signs for:

"lady" = "touching an imaginary breast."

"I want to eat pounded yam" = "a gesture of pounding + eating".

Invariably, individuals with 'normal' hearing who has interest in individuals with hearing loss and understand their gestures serves as intermediary when there was needs to communication feeling, emotions or idea to people without hearing loss. Hence, such individuals at that time were sign language interpreters of the day.

The Present Situation of Sign Language Interpretation in Nigeria

The emergence of the Department of Special Education, University of Ibadan and the Federal College of Education (Special) Oyo, in the late 1970s brought the much awaited formal training opportunity for teachers and the society at large means of effectively adopting a standard mode of communicating with students who are Deaf and Hard of hearing. Until now, the American Sign Language is comprehensively taught in these institutions of higher learning for at least two years in a 4 year programme, hence, given students the ample opportunities to be well grounded in the use of sign language for teaching and interacting with students with hearing impairment. While some of the students of these institutions chose to teach in the classroom, some chose to be professional sign language interpreters. However, Sign language interpretation is currently endangered due to some factors which include but not limited to the following:

Societal Attitude: Deaf/hard of hearing consist of a minority group who share one or more characteristics and are in a subordinate position in society vis-à-vis a more powerful majority group in Nigeria and other African countries. Mba (1995) observed that one in every one thousand Nigerian has a serious hearing problem. Considering the Nigeria population which is put
at 160 million, it can be deduced that nothing less than 10 percent of her population suffers one form of hearing disability or the other. The population of those who are deaf or hard of hearing underscore why they are often stigmatized by the 'hearing' majority who most times shows negative attitude towards the minority group due to difficulties in the exchange of information via the oral-aural mode. Adeniyi, Oyewumi and Fakolade (2011) noted that such negative societal attitudes is associated with loss of values, segregation, loss of information about sexuality, career development, entrepreneurship skills, exhibition of unsatisfactory behaviours such as bullying, withdrawal and throwing of tantrums. Due to a significant lack of the ability to respond to verbal stimulus, absence of the Sign Language Interpreters and negative attitudinal behaviour of the hearing community towards the deaf/hard of hearing, results into inadequate access to acquiring vital and useful health information

Skills and Professionalism: Sign language interpretation requires appreciable skills in how a professional sign language 'drives home' his/her discussion for proper understanding. Accuracy, speed and concise expression are of the essence during sign language interpretation. In other words, the interpreter must be able to interprete every feelings, idea, comments, expressions of the speaker without missing out any of the important ideas of the speaker. It is quite unfortunate that many interpreters in Nigeria have fall short of personal development and therefore lack the ability to project appropriately the mind of the speaker to their client. Many, now rely on what they have learnt in previous years to communicate the present situations to their client or dwell on constant use of fingerspelling which may not fully and adequately present the mind of the speaker. Many a times many words of the same spellings but different meaning are often sign the same way without adequate differentiation or explanations has most times negatively influence the understanding and perception of users of sign languages. For example, the word 'right' could mean 'position', 'correctness', 'usual' or 'consistent'. Therefore, even if the speaker used the word right, the context of discussion should apply in whatever sign an interpreter would use to convey the appropriate idea to the Deaf and Hard of hearing. Below are examples of some sentences that requires adequate skills and professionalism to be able to interpreter the speakers mind.



A model of interpreter's information processing work (Source: Woodcock and Fischer, 2008)

Preparing for Future Challenges in Sign Language Interpretation

- Sign Language Interpreters should reduce the duration of a sign bout of interpreting.
- Team interpreting should be encouraged with 2 or 3 person interpreting intermittently at an agreeable length of about 15 – 20 minutes. This process will help to limit boredom among the participants. Team interpretation can prevent physical overload by building rest into the scheduled appointment time, aid cognitive workload by providing

backup for message equivalent interpretation, and also serve as a debriefing partner to relieve emotional stress.

- Scheduling of appointment sign language interpreters should take into account the physical, cognitive and emotional work because there is high cognitive load.
- When necessary, sign language interpreters should reduce the frequency of hand movements within a specific frame. More so, sign language interpreters should improve subject knowledge to reduce the need for fingerspelling, hence, there in need for personal and professional development.
- Sign language interpreters should improve communication between them and the speaker to enhance subject matter knowledge, and selective matching between interpreters and jobs or appointments to ensure interpreters are working at their skilled level.
- Sign language interpreters should warm-up and be active prior to interpreting, this may enhance flexibility and increases blood flow to the muscles. The following warmup exercises can be done:

Exercise	Time
Brisk walk up/down 3-4 flights of stairs	2-3 minutes
Wrist circles	30 seconds
Wrist stretches	15 seconds per stretch
Arm stretches	30 seconds
Shoulder stretches	15 seconds per stretch
Shoulder roll	30 seconds
Neck roll	30 seconds

Conclusion

Bridging communication gaps between persons with hearing impairment and the 'hearing' is a long standing crucial issue which had been given the Deaf/Hard of hearing a sense of belonging over the years. As a result, this paper had taken reminiscence about the past and present situation of sign language interpretation in Nigeria. The paper also telescoped in to the future of sign language interpretation in Nigeria and the task analysis of what a sign language interpreter is expected of for the future challenges of sign language interpretation in Nigeria.

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PREDICTIVE ESTIMATES OF TEST ANXIETY AMONG SECONDARY SCHOOL STUDENTS IN IBADAN METROPOLIS

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Introduction

Test anxiety is a construct that must be taken into account when discussing academic performance. Test anxiety is a "situationspecific personality trait" that occurs before, during and after a testing session. Research reports that test anxiety may occur when an afflicted individual views any type of evaluative situation as being a personal threat. Researchers have found that test anxiety negatively affects academic performance. They also discovered that the impact of test anxiety on students' performance is frequently affected by the evaluation practices of the classroom teacher (Maehr & Midgely, 1991). Students who become anxious in testing situations do not achieve well on standardized achievement tests, leading to poor grades, retention, and eventual school dropout (Cizek & Burg, 2006; Lowe, et al; 2007). These negative effects can also lead to potentially higher amounts of test anxiety (Cizek & Burg, 2006) and impact students' current and future level of academic standing, degree achievement, entrance into college, and selection of occupation, with test anxious students pursuing careers that involve infrequent evaluation that may not challenge them mentally (Ergene, 2003).

Test anxiety is a psychological condition in which people experience extreme distress and anxiety in testing situations. Test anxiety can develop for reasons. There may be some prior negative experience with test taking that serves as the activating event. Students who have experienced, or have fear of blanking out on test or the inability to perform in testing situations can develop anticipatory anxiety. Worrying about how anxiety will affects can be as debilitating as the anxiety itself. This kind of anxiety can build as the testing situation approaches, and can interfere with the student's ability to prepare adequately.

The nature of test anxiety, what causes it, and how one can treat it has been an area of concern to psychologist and educators for many years. Test anxiety research has prospered because test situations occur frequently and assume much importance in the lives of many people in all school environments, public and private, grade school through college. Estimates on the prevalence of test anxiety among a school aged population range from 10-30%. Birenbaum and Nasser (1994) claimed that test anxiety is a widespread problem in schools, and Shaked (1996) estimated that 30% of all students suffer from some level of test anxiety. Test anxiety begins in childhood, and as testing experiences increase, an individual's test anxiety level may also increase because of compounding episodes of poor performance. These implications demand that the factors that impact test anxiety be looked at, so that methods for reduction of test anxiety can be toiled to the student, and implemented by school psychologist thereby reducing test anxiety, and ultimately improving students performance. Test anxiety has been found to be correlated with poor performance and relating inversely to individuals self esteem, and directly to fears of negative evaluation, defensiveness and other forms of anxiety (Ergene, 2003).

There are different factors that contribute to increase of test anxiety; one of them is low academic efficacy. Academic efficacy refers to an individual's belief that they can successfully achieve at a designated level on an academic task or attain a specific academic goal (Eccles & Wig 2002). Academic efficacy is grounded in self efficacy theory by Albert Bandura. Academic efficacy is believed to be situational in nature rather than being viewed as a stable trait (Linen Brink & Pintrich 2002). Academic efficacy can be low or high depending on an individual's level of confidence.

Low academic efficacy results in an individual perceiving a task as more difficult than it is in reality, which in turn creates anxiety (Eccles 2005). An individual who exhibit low academic efficacy will never belief that they can successfully achieve academically and this make them to always be anxious before or during test because they don't belief in themselves and this always lead to poor performance.

Many studies have been carried out on this concept of self-efficacy in the academic setting. Bakhtiarpour et al.(2010) showed in their researches that there is a significant relationship between selfefficacy and test anxiety and this finding was coordinate with the findings of current studies in this area (Akbary Boorang &Yazdi, 2009; Juretic, 2008; Zinta, 2008, Akbani & Ogundokun, 2006; Seif & Latifian, 2004). Pintrich & Groot (1990) reported that academic self-efficacy is correlated with academic performances in examinations & quizzes.

Another factor is locus of control. Locus of control is considered to be an important aspect of personality. The concept was developed originally by Julian Rotter in the 1950s. Locus of control refers to an individual's perception about the underlying main causes of events in his/her life and the individual's generalized expectations concerning where control over subsequent events resides. A locus of control is a belief about whether the outcomes of our actions are contingent on what we do (internal control) or on events outside our personal control (external control). An individual who exhibits external locus of control beliefs that his/her behaviour is guided by fate, luck, or other external circumstance while someone with internal locus of control believes that his/her behaviour is guided by his/her personal decision or efforts. Barlow's (2002) model of anxious apprehension states that any individual who feels as if they have no control over external events that cause them anxiety or no control over their emotional or physical reaction to the stressor tend to

have anxiety problems. A number of studies found that low perception of control over external threats and emotional and physiological reactions are related to increased the level of anxiety (e.g. Weems, Silverman, & Rapee, 2003;).

Research has examined the relationship between locus of control and anxiety which shows that internals experience more state-anxiety than externals in situations related to "luck" whereas externals showed to have more state-anxiety in "ability" situations (Biaggio, 2004). In a more related investigation, the relationship between locus of control, procrastination and anxiety (Carden et.al. 2004) were examined in which internals experienced higher academic procrastination and test anxiety than externals.

Self-attribution is also an important factor predicting test anxiety. Self-attribution is how people attribute the cause of an event and how those beliefs interact with internal perception of themselves. The level of test anxiety experienced during testing situations depends on students self-attribution about testing. If the student frequently fails and does not attribute the failure to his / her own actions, he/she will experience higher anxiety level (Bandalos, Yates, & Thorndike-christ, 1995). Students who recognize that the effort they put into a task is reflected by their grades often report lower levels of anxiety.

Psychologists have taken a keen interest in attributions. In fact, several empirically supported theories outline the relationship of people's attributions to their thoughts, feelings, and behaviour. Attribution theories (e.g., E. E. Jones & Davis, 1965; Kelley, 1967, 1973; Weiner, 1986) have emphasized the types of causal explanations that people make, the processes by which they make them, and the impact of specific attributions on subsequent cognitive, affective, and behavioural functioning.

As much as research has been conducted on test anxiety, not much has been done on the relationship between locus of control, self attribution, academic self efficacy and test anxiety among secondary school students. As an indicator to a child's future, poor academic performance due to test anxiety is putting a great pressure on the minds of students especially the adolescents and their parents. Thus against this background the questions that come to mind are: What are the actual causes of test anxiety? Is there any relationship between test anxiety and academic achievement? Does locus of control, self attribution and low academic efficacy work along with test anxiety to determine student's academic performance? How do low academic efficacy, self attribution and locus of control increase the level of test anxiety in students? And how can we reduce the level of test anxiety among secondary school students?

Research Questions

- a) What pattern of relationship exists between self attribution, low academic efficacy, locus of control and test anxiety?
- b) What are combined effects of the self attribution, locus of control and low academic efficacy on test anxiety?
- c) What are the relative effects of self attribution, locus of control and low academic efficacy on test anxiety among secondary school students.

METHODS

Research Design

This study adopted the use of descriptive research design of an expose facto type. Variables in this study were observed without manipulation by the researcher i.e the researcher did not manipulate the variables of this study as the case in experimental studies.

Population

The targeted population for the study comprised secondary school students within Ibadan metropolis, Oyo state.

Selection and Sampling Techniques

Six (6) secondary schools were randomly selected in the study area, in Ibadan, Oyo State. However, fifty (50) participants were selected in each school were sampled. This gives a total number of three hundred (300)participants chosen from the selected schools as sample size of this study.

Instrument

The researcher made use of questionnaires for the study, which was used exclusively to collect information from the participants. The questionnaires are divided into five sections i.e. A to E.

Section A: This section contains the background information about the respondent bio-data.

Section B: Test anxiety scale was adapted from Wren & Benson (2004). It was a scale developed by these researchers to measure level of anxiety exerted by individuals when taking test. 10 items were adapted from this measurement. The response format of the scale ranged from Strongly Agree (SA) = 5 to Strongly Disagree (SD) = 1. The reliability coefficient as reported by author was 0.89. The researcher reported Alpha coefficient of 0.87 after revalidation.

Section C: Locus of control scale was adapted from Rotter (1966). It was a scale developed by the researcherto measure internal and external locus of control of participants. 10 items were adapted from this measurement. The response format of the scale ranged from Strongly Agree (SA) = 5 to Strongly Disagree (SD) = 1. The reliability coefficient as reported by author was 0.91. The researcher reported Alpha coefficient of 0.88 after revalidation.

Section D: Academic efficacy scale was adapted from Schwarzer and Jerusalem (1992). It was a scale developed by these researchers to measure self-efficacy of the participants. 10 items were adapted from this measurement. The response format of the scale ranged from Strongly Agree (SA) = 5 to Strongly Disagree (SD) = 1. The reliability coefficient as reported by author was 0.90. The researcher reported Alpha coefficient of 0.87 after revalidation.

Section E: Self attribution scale was developed by the researcher. It has a response format ranging from Strongly Agree (SA) = 5 to Strongly Disagree (SD) = 1. The original number of items of the instrument was 24. The items were later reduced to 11 through internal consistency method. The scale yielded an Alpha Coefficient of 0.90. The Guttman Coefficient 0.88, Equal Length Spearman Brown was 0.86 while Unequal Length was 0.85. In the split half analysis, Alpha observed for part 1 (6 items) was 0.74 and Alpha for part 2 (5 items) was 0.73.

Data Analysis

The data obtained from the study was analyzed using Pearson product moment correlation and multiple regressions analysis to test the research questions at 0.05 significant levels.

Results

Research Question 1: What pattern of relationship exists between

What pattern of relationship) exists between	self attribution,	, academic self e	fficacy, locus of
control and test anxiety				

	0	1	0	•		
Variables	Mean	Std. Dev	1	2	3	4
Test Anxiety	57.32	17.94	1.000			
Academic Self Efficacy	47.81	15.36	424**	1.000		
Self Attribution	49.33	13.82	480*	.604*	1.000	
Locus of Control	53.12	13.15	231**	059**	.205**	1.000

Table 1: Correlation matrix showing the relationship among study variables.

**Correlation is significant at 0.01(2-taied)

Table 1 above reveals the relationship among independent variables (academic self efficacy, self attribution and locus of control) and the dependent variable (test anxiety); test anxiety negatively correlates with academic self efficacy (r =-.424, P<0.05), self attribution (r=-.480, P<0.05), and locus of control (r= -.231, P<0.05). This implies that an increase in academic self efficacy will definitely bring about a decrease in their test anxiety.

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Likewise an increase in their locus of control will also decrease test anxiety among the students.

Research Question 2:

What are combined effects of the self attribution, locus of control and academic self efficacy on test anxiety?

Table 2: Summary of regression for the joint contributing effect of independent variables to the prediction of test anxiety.

R =.539 R Square =.291 Adjusted R square =.280 Std. Error =15.22172						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	18644.200	3	6214.733	26.822	$.000^{a}$
	Residual	45413.320	196	231.701		
	Total	64057.520	199			

*P<0.05

Table 2 above reveals significant combined effect of the independent variables (Academic self-efficacy, Self attribution and Locus of control) to the prediction of test anxiety. The result yielded R = 539, R-square = .291 and Adjusted R square = .280.

This suggests that the three factors combined accounted for 28% (Adj. R^2 =.280) variation in the prediction of test anxiety. The other factors accounting for 72% variation in the prediction of test anxiety are beyond the scope of this study.

The ANOVA result from the regression analysis shows that there was a significant combined effect of the independent variables on the dependent variable, F(3,196) = 26.822, P < 0.05.

Research Question 3:

What are the relative effects of self attribution, locus of control and academic self efficacy on test anxiety among secondary school students?

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Table 3: showing the relative effect of study variables to the prediction of test anxiety

	Unstandardized Coefficients		Standardized Coefficients	Т	Sig.
	B Std. Error		Beta		
(Constant)	103.197	5.779		17.857	.000
Academic Self Efficacy	310	.091	265	-3.416	.001
Self Attribution	365	.103	281	-3.550	.000
Locus of control	257	.086	189	-2.987	.003
*P<0.05					

Table 3 above shows that the three predictor factors (academic self efficacy, locus of control and self attribution) are potent predictors of test anxiety. However, the most potent factor was self attribution (Beta = .281, t=3.550, P<0.05) followed by academic self efficacy (Beta= .265, t=3.416, P<.05) and locus of control (Beta = .189, t=2.987, P<0.05) to the prediction of test anxiety.

Discussion

Research question one examines the nature of relationship between independent variable (academic self efficacy, locus of control and self attribution) and the dependent variable (Test anxiety). Table one reveals test anxiety negatively correlates with academic self efficacy (r = -.424, P<0.05). This implies that, an increase in academic self efficacy will definitely bring about decrease in test anxiety. This findings corroborates the study of Bakhtiarpour et al.(2010) which postulated that there was a significant relationship between self-efficacy and test anxiety and this finding was consistent with the findings of current studies in this area (Akbary boorang &Yazdi ,2009; Juretic,2008; Zinta,2008, Akbani & Ogundokun,2006; Seif & Latifian ,2004). In line with this study, Heidari et al. (2010) stated in their research that there is a relationship between self efficacy belief & students' test anxiety. The present findings corroborates previous studies by Bandura 1995, Bandura 1997, Grau, Salanova \$ Peiro 2001, and Jing 2007, which showed a negative relationship exists between self efficacy and test anxiety.

Table one also reveals that test anxiety negatively correlates locus of control at a low degree (r = -.231, P< 0.05). This implies that the type of locus of control of students has great impact on their level of test anxiety. This finding is incongruence with Frieih (2005) which found that there is a negative relationship between locus of control and test anxiety. Students who are internalized will experience higher anxiety in exam. Creed et al.,(2002), and Baker & Cook,(2003), found the same results in their studies. In line with this study, Basım and Sesen (2006) posited that students with external locus of control have more tendencies to exhibit high anxiety during testing situations when compared with the ones with internal locus of control. Chen and Silverthorne (2008) have also mentioned that these qualities of the individuals with internal locus of control have considerable impact upon performance and anxiety levels.

Table one also reveals that test anxiety negatively correlate with self attribution (r = -.480, P<0.05). This is in line with the findings of Beck (1986) which posited that anxious individuals over perceive the likelihood and magnitude of threat and doubt their ability to respond effectively. It is interesting to note that Schlenker and Leary (1982) suggested that success events may also result in external and uncontrollable attributions by highly anxious individuals. Test anxiety and more general trait anxiety are also related to internal attributions for failure in both adults and children (Diener & h e c k , 1978, 1980; Fincham, Hokoda, & Sanders, 1989; Hedl, 1990; Leppin, Schwarzer, Belz, Jerusalem, & Quast, 1987).

Research question two examined the combined effect of academic self efficacy, locus of control and self attribution on test anxiety. Table two reveals that the three factors combined accounted for 28% (Adj.R²= .280) variation in the prediction of test anxiety. The ANOVA result from the regression analysis shows that there was a significant combined effects of the independent variables on the dependent variable, F (3,196) = 26.822, P<0.05. It is mentioned in research by Shokrpour et al.,

(2011), that different approaches have been used to enhance the students' academic performance and reduce their test anxiety, Students who develop a positive approach about their capabilities (or what is known in the literature as high "self-efficacy" beliefs) are said to possess the "power" and the "faith" needed to succeed. Students with high levels of test anxiety tend to have reactions based on threat perceptions, reduced feelings of self-efficacy, selfderogatory conditions, anticipatory failure attributions and more intense emotional reactions and arousal at the first signs of possible failure (Ergene, 2003). On research using test anxiety scales, those who scored high in anxiety described themselves in negative self-devaluing terms (Wine, 1971) and also felt social derogation, the fear of a negative reaction of someone significant associated with failing tests (Lowe & Lee, 2007). They also typically experience lower-self esteem, self-acceptance, and selfcontrol than their peers and are more likely to have an external locus of control (Johnson, 2007). Although these thought processes in anxious persons have been proven during the pressure of a testing situation, it is hard to determine if these tendencies are only brought about in testing situations (Wine, 1971).

Research question three investigated the relative effect of academic self efficacy, locus of control and self attribution on test anxiety. Table three reveals that the three predictor factors (academic self-efficacy, locus of control and self attribution) are potent predictors of test anxiety. The most potent predictor is self attribution (Beta = .281, t=3.550, P<0.05) followed by academic self efficacy (Beta=.265, t=3.416, P<0.05) and locus of control(Beta = .189, t = 2.987, P>0.05) in prediction of test anxiety. This finding is in line with Naveh-Benjamin et al (1987)'s study which found that when compared with less anxious students, highly test-anxious students exhibit external locus of control. This finding is also in line with Pajares and Schunk (2001) which postulated that self efficacy is a strong factor that enhances human accomplishment and confidence. Pajares and Schunk (2001) submitted people who doubt their efficacy may believe that

things are tougher than they really are, a belief that foster test anxiety and narrow vision of how best to solve a problem. In the environment where this study was conducted, examination fraud is rampart, many students approach examination with much anxiety.

Conclusion

This study has looked into various factors, such as academic self efficacy, locus of control, and self attribution as predictors of self anxiety. The role these factors play on test anxiety has been well established. This study has provided more details to the existing information on test anxiety as a factor that requires immediate solution. From this research, it becomes clear that various strategies should be designed to moderate test anxiety among students various educational institutions. Attention should be drawn to the various factors identified to predict test anxiety and proper measures should be taken on them to reduce the level of anxiety in the students.

Limitations

Like other studies, this study is not without its limitations. The sample consists of randomly selected secondary school students in Ibadan which may limit the generalization of the results. This study is also limited because only three hundred participants who were selected to participate in this study. This study can be strengthened by increasing the sample size as the data analysis results and findings may vary substantially when the sample size is increased or decreased.

Recommendations

With respect to the findings made so far, the following are recommended for reduction of test anxiety:

1. This therefore indicates that effort is needed to be invested in helping student build confidence in their ability and to see possibilities in themselves.

- 2. Students should be assisted on how to build internal locus of control in them to bring positive changes. They should also be taught on the implication of external locus of control as it can affect their performance.
- 3. Counseling services should be offered to students on the negative effects of self-attribution.

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PERCEIVED INFLUENCE OF STRESS ON ACADEMIC PERFORMANCE AMONG STUDENTS OF UNIVERSITY OF EDUCATION, WINNEBA, GHANA.

B. O. Ogundele & W. W. Agbeko

Introduction

Stress is not defined by its cause but by the various reactions that these causes bring (about in) out of man. These reactions are present in ten areas of health and they are stated as follow: the physical growth and development, the mental, the social and family health, the spiritual nutrition, exercise and fitness, drugs, disease and disorders and consumer and personal health, safety and first aid, community and environmental health.

Stress according to Meeks Mitchel and Heit (1987) is the non-specific response of body to any demand made upon it. Ohaeri and Olajide (1991) asserted that stress is the biological response to events that threatens to overwhelm the individual's capacity to come satisfactorily in the environment. In the analysis given by Webster "Stress" which was short of "dis tresses" or "distress" and the middle French world "estrecier" (to constrain or to force); the middle French from comes from the Latin word "strictus" which is the participle of stingers and means to draw tight or to press together.

Stress is a prevalent reaction in the lives of every individual, regardless of race or cultural background (Oyerinde, Oloyede 1997) Garrett, 2001). The authors simply defined stress as emotional disturbances or changes caused by stressors. It could also be defined as a state of mental or emotional strain or suspension of normal reaction of the body (mental, emotional and physiological) designed for self-preservation. Most well know definitions emphasized stress as any factor that threatens the health of an individual or has an adverse effect on the functioning of the body. Shoyemi (2013) opines that stress is a normal, desirable and beneficial part of our lives that can help one learnand grow, it has influence on people's behaviour, reactions, communication and efficiency. Shovemi (2013) further stated that prolonged un intercepted, unexpected and un manageable stress is damaging. Coping with the help of drugs, analgesics, alcohol, smoking and eating are counterproductive (Oyerinde (1996) and Carter (2003) asserted that stress can best be managed by regular exercise, meditation or other relaxation techniques, structured time outs, and learning new coping strategies to create predictability in peoples' lives.

Students' life is subjected to different kinds of stressors such as the pressure of academics with an obligation of success uncertain future and difficulties envisaged for integration into the system. The students face social, emotional, physical and family problems which may affect their learning ability and academic performance (Fish and Nies 1996, Shoyemi, 2013). Some of these students find it hard to cope with the stress and lag behind, while others see pressure as challenge to work harder.

Overinde (2004) asserted that stress can developed via two primary channels. The circumstances and situations that are external to us can cause stress. Such situations include our environment, job, families, studies and religion the other primary source is dependent on our state of physical and mental health that is internal to us. These influence the amount of stress we experience. He further stated that our biological make up personality, temperament, self control and ability are in fact sources of stress. Some of the external causes of stress are traumatic experiences (earthquakes, hum cane, flood, war, nuclear disaster, accidents, murder, assault, rape and armed robbery attack) Stressful events day-to-day frustration, physical and social environment. Internal causes of stress include: hurrying been unable to predict the future (uncertainty) and the feeling of not being in control (uncontrollable event) competition, consumption and guilt (Overinde, 2004)

Stress is not only a factor in working places; it is also common factor in educational environment experienced by learners and other members of the school community. Tertiary school life can be stressful, although it is undoubtedly one of the most memorable experiences in one's life. Walck&Hensby (2003) Shoyemi (2013) and Oyerinde&Oloyede (1997) emphasized that poorly structured assignment within uncomfortable classrooms act as individual academically based stressors that contribute to students stress experience. This assertion was Corroborated by MacDonald (1992) Amusa and Udoh (1982) that students considered tertiary education as the most stressful part of their educational programme.

This study therefore examined perceived influence of stress on academic performance among students of University of Education, Winneba, Ghana.

Research Objectives

The objectives of this study was to find out:

- 1. The perception of students of stress on their academic performance.
- 2. The perceived influence of stress on their academic performance based on gender.
- 3. The perceived influence of stress on their academic performance based on age.
- 4. The perceived influence of stress on their academic performance based on religion.

5. The perceived influence of students of stress on their academic performance based on faculties.

Research Hypotheses

The following Hypotheses were formulated and tested

- 1. There is no significant difference in the students' perception of influence of stress on their academic performance based on gender.
- 2. There is no significant difference in the students' perceived influence of stress on their academic performance based on age.
- 3. There is no significant difference in the students' perceived influence of stress on their academic performance based on faculties.
- 4. There is no significant difference in the students' perceived influence of stress on their academic performance based on religion.
- 5. There is no significant difference in the students' perceived influence of stress on their academic performance based on departments.

Research Methodology

This study adopted descriptive survey research design. A survey method is a operational tool of research for social and behavioural enquires Ted, Clinton and Larry (2002) described descriptive survey method as an attempt to gather information from groups of subjects in order to describe systematically, factually and accurately specific characteristics of interest or conditions that presently exist. This method was considered appropriate for this study.

Population

The population of this study comprised all students' in five faculties in University of Education, Winneba Ghana.

Sample and Sampling Techniques

The multistage sampling technique was used to select the respondents because the population is homogenous. Ogundipe, Lucas and Sanni (2006) recommended the use of multistage sampling technique for this type of research in which the population is homogeneous. Simple random sampling technique using fish bowl method with replacement was used to select the faculties and departments respectively.

Participants were selected based on departments using proportionate stratified sampling technique. The selected Faculties are Science, Educational Studies, Education and Psychology, Social Sciences and Creative Art, while the selected departments include Health, Physical Education, Recreation and Sports Basic Science, Guidance and Counseling, Social Studies, History, Political Science, Geography, Psychology, Home Economics, Creative Arts, Business Administration, Economics Studies and Early Childhood.

Research Instrument

The research instrument for this study was a self-structured questionnaire which has a four-point Likert Scale. Section A contained the Demographic information about the respondents, Section B has information about perceived influence of stress on academic performance. The responses were rated on four point likert scale of SA=Strongly Agree, A=Agree, SD=Strongly Disagree and D=Disagree.

Validity of the Instrument

The validity of the instrument was determined by giving the questionnaire forms to experts in the department of HPERS, Home Economics, Guidance and Counseling, University of Education, Winneba and experts from Department of Human Kinetics and Health Education, University of Ibadan, Ibadan, Nigeria. To determine reliability, questionnaire forms were administered to 30 students from Department of Mathematics and English

Language who are not part of the sample. The test-retest method was used to test the reliability of the instrument, while Pearson'sProduct Moment Correlation Coefficient and CronbachAlpha were used to determine the reliability and internal consistency of the instrument respectively. The reliability coefficient of 0.76 was returned which was considered high and good enough for the study.

Administration of the Instrument

The instrument was administered to the students during the second semester examination period with the help of five research assistants. The research assistants were the 2 administrative staff of HPERS with three other students from the department. The questionnaire forms were collected on the spot.

Data Analysis

The data was analysed using descriptive statistics of frequency, percentages, mean and standard deviation while inferential statistics of t-test and ANOVA were used to test the formulated hypothesis at 0.05 alpha level.

Results and Discussion of the findings of Demographic information.

 Table 2:
 Frequency Distribution and Demographic information of the respondents by age, gender, religion and faculty.

	Demographic	Characteristi	Mean	Std Dev.	StdError
		cs			Mean
	Male	282	67.4149	13.8084	.8223
Gender					
	Female	184	63.6250	13.6127	1.0035
	Christian	430	65.9326	13.7877	.6649
Religio					
n	Islam	36	65.7500	14.6724	2.4454
	18-22 yrs	70	69.771	66.538	1.645
	23-27 yrs	118	65.996	63.476	1.267
Age	28-32 yrs	131	63.985	61.621	1.203
-	Above 33yrs	147	65.769	63.537	1.135
Faculty	Educational studies	215	63.977	62.142	.934
	Science	149	65.832	68.036	1.121
	Educational				
	Psychology	6	67.333	78.315	5.588
	Creative Arts	3	67.333	82.864	7.908
	Social Science	93	70.409	73.198	1.419

Table above showed the demographic information of the respondent as per gender, religion, age and faculty distribution with their corresponding means and standard deviation.

Hypothesis Testing

Hypothesis 1:There is no significant difference in the students' Perceived Influence of Stress on Academic Performance based on gender.

 Table 3:t-test Analysis showing the difference between the Students' Perceived Influence of

 Stress on Academic Performance based on Gender.

Influence of Stress on	Ν	Mean	StdDev	Crit-t	Cal-t	Df	Р
Academic Performance							
Male	282	67.4149	13.8084				
Female	184	63.6250	13.6127	1.96	2.912	464	.004

The above table showed that there was a positive significant difference in the Students Perceived Influence of Stress on Academic Performance based on Gender (Crit-t =1.96, Cal-t =2.912 df=464 P <.05) alpha level. The null hypothesis is rejected. This findings supports that of Oyerinde and Oloyede (1997) and Shoyemi (2013) who found a positive significant difference in the students perceived influence of stress on academic performance among secondary students in Ilorin metropolis, Kwara State Although this findings did not support the findings of Lazarus and Folkman who found no significant difference in the student perceived influence of stress on their academic performance based on gender.

 Ho_2 : There will be no significant difference in the Students' Perceived Influence of Stress on Academic Performance Based on religion

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Table 4: t-test Analysis showing the difference in Students'	Perceived Influence of Stress on
Academic Performance based on Religion.	

Influence of Stress on Academic Performance	N	Mean	StdDev	Crit-t	Cal-t	Df	Р
Christian Muslim	430 36	65.9326 65.7500	13.7877 14.6724	1.96	0.76	464	.940

The table 4 above showed that there was no significant difference in the influence of Stress on Academic Performance of Christian and Muslim respondents (Crit-t=1.96, Cal-t=0.76, df=464, P>.05 level of significance) The null hypothesis is accepted. The findings of this hypothesis corroborated that of Aktein (2001), Oyerinde (2004) and Brownell (2005) who found no significant difference in the influence of stress on academic performance of Christian and Muslim respondents.

Ho₃: There will be no significant difference the Students' Perceived Influence of Stress on Academic Performance based on Age.

 Table 5: ANOVA Table showing the Analysis of Influence of Age on Stress on Academic

 Performance based on Age.

Source	Sum of Square	DF	Mean square	F	Sig	Eta Square
Age	1532.589	3	510.863	2.696	.045	0.17
Error (Residual)	87556.313	462	189.156			
Total	89088.901	465				

Table 5 above showed that there were significant difference in the Students' Perceived Influence of Stress on Academic Performance based on age (F(F(3,462) = 2.696, P<.05)) alpha level. The null hypothesis is hereby rejected.

Table 4b: Estimated Marginal Means on Age Categories

Age	Mean	Std Error
18-22 years	69.771	1.645
23-27 years	65.966	1.267
28-32 years	63.985	1.203
Above 33 years	65.769	1.135

In the above table, the respective means score based on Age Categories are: the mean score for group 18-22 years is 69.771, the mean score for age group 23-27 years is 65.966, the mean score for 28-32 years is 63.985 and the mean score for those who are 33 years and above is 65.769.

Age	Age	Sig	
18 - 22 years	23 - 27 yeas	.344	
	28 - 32 years	.046	
	Above 33 years	.262	
23 - 27 yeas	18 - 22 yeas	.341	
	28 - 32 years	.733	
	Above 33 years	1.000	
28 - 33 yeas	18 - 22 yeas	0.46	
	23 - 27 years	.733	
	Above 33 years	.762	
Above 33 yeas	18 - 22 years	.262	
	23 - 27 yeas	1.000	
	Above 33 years	.762	

 Table 4c:Scheffe Post-Hoc Pairwise significant difference among the various ages

As shown Table 4c, there are pairwise significant difference between age group 18-22 years and age group 28-32 years while none of the other pair groups were significant.

The findings of this study was in line with that of Shoyemi (2013) Oyerinde (1996) and Kyriawu (2001). However the findings did not support that of Lan (2003) who found that there was no significant difference on the students' perceived influence of stress on academic performance based on age.

 Ho_4 : There will be no significant difference in the Students' Perceived Influence on Stress on Academic Performance based on Faculty.

 Table 5:ANOVA Showing the Analysis of the Influence of Stress on Academic Performance among the Faculties

Source	Sum of Squares	Df	Mean Square	F	Sig	Eta
						Square
Faculty	2704.739	4	676.185	3.609	.007	0.03
Error (Residual)	86384.162	461	187.384			
Total	89088.901	465				

Table 5 showed there were significant difference in the Students' Perceived Influence of Stress on Academic Performance based on Faculty (F(F4,461) = 3.609, P<.05) alpha level. The null hypothesis is rejected.

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Table 5b: Estimated Marginal Means of Faculty.

Table 55. Estimated Marginar Means of Faculty.				
Faculty	Mean	Std Error		
Science	65.832	1.121		
Educational studies	63.977	.934		
Education & Psychology	67.333	5.588		
Social Science	70.409	1.419		
Creative Arts	67.333	7.903		

In Table 5b, the respective means score of the Faculty are Faculty of Science had a mean score of 65.832, Faculty of Educational Studies had a mean score of 63.977, Faculty of Education and Psychology had a mean score of 67.333, Faculty of Social Science had a mean score of 70.409 and Faculty of Creative Arts had a mean score of 67.333 respectively.

Table 5c:Scheffe Post-Hoc Pa	rwise significant Differences an	mong the various Faculties.

Faculty I	J Faculty	Sig
Science	Educational Studies	.806
	Education & Psychology	.999
	Social Science	.173
	Creative Arts	1.000
Educational Studies	Science	.806
	Education & Psychology	.986
	Social Science	.007
	Creative Arts	.996
Education & Psychology	Science	.999
	Educational Studies	.986
	Social Science	.991
	Creative Arts	1.000
Social Science	Science	.173
	Educational Studies	.007
	Education & Psychology	.991
	Creative Arts	.997
Creative Arts	Science	1.000
	Educational Studies	.996
	Education & Psychology	1.000
	Social Science	.997

Table 5c showed that only in the Faculty of Social Sciences and Faculty of Educational Studies had significant differences.

The findings of this hypothesis supports that of Lan (2003), Oyerinde (2006), Kyriawu (2001) and Hughes (2006) who found no significant difference in the students' perceived influence of stress on their academic performance based on school types.

Early Childhood

Table 6: ANOVA showing the Analysis of the Influence of Stress on Academic Performance
among the Departments

Score	Sum of Square	DF	Mean Square	F	Sig	Eta
						Square
Department	4311.719	12	359.310	1.920	.030	.048
Error (Residual)	84777.182	453	187.146			
Total	89088.901	465				

Table 6 showed that there were significant differences in the Students' Perceived Influence of Stress on Academic Performance Based on Department F(12,458) = 1.920, P <.05) The null hypothesis is rejected.

Table 6a: Estimated Margin Means on Departments					
Department	Mean	Std Error			
HPERS	65.518	1.169			
Basic Science	66.438	3.420			
Guidance & Counseling	67.333	5.585			
Social Science	67.750	4.837			
History	68.333	7.898			
Political Science	68.000	4.560			
Geography	74.000	5.171			
Psychology	68.261	2.853			
Home Economics	64.417	3.949			
Creative Arts	67.333	7.898			
Business Administration	70.518	1.828			
Economic Studies	74.364	4.125			

In Table 6b, the receptive mean scores of the departments are HPERS had a mean score of 65.518, Basic Science 66.438, Guidance and Counseling had a mean score of 67.333, Social Science had a mean score of 67.750, History had a mean score of 68.333, Political Science and Geography had a mean score of 68.000 and 74.000 respectively. Psychology had a mean score of 68.261, Home Economics had a mean score of 69.417, Creative Arts had a mean score of 67.333, Business Administration,

63 006

1 0 3 4

Economic Studies and Early Childhood had mean scores of 70.518, 74.364 and 63.006 respectively.

The findings of this hypothesis did not support that Lai (2001) and Liselotte et al (2005) who found no significant difference in the students' perceived influence of stress on academic performance based on their class levels.

Conclusion

The following conclusions were drawn from the study;

- 1. There was a positive significant difference in the students' perceived Influence of stress on academic performance based on gender
- 2. There was no significant difference in the influence of stress on academic performance of christianand muslimrespondents
- 3. There was a significant difference in the students' perceived influence of stress on academic performance based on age
- 4. There was a significant difference in the students' perceived influence of stress on academic performance based on faculties.
- 5. There was a significant difference in the students' perceived influence of stress on academic performance based on departments.

Recommendations

Based on the findings of this studying, it was recommended that:

- Stress management should be entrenched in the curriculum of GES of the University
- The department of HPERS should set a machinery in motion with regards to introducing sport activities that will reduce stress among the students.

- The Faculties especially Science Faculty should organize seminars, symposia to educate the students on some of the habits that can lead to stress and recommend some coping strategies.

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13

QUALITY CONTROL IN TEACHER PREPARATION AND PROFESSIONAL TEACHING ETHICS AS ESSENTIALS FOR CONTEMPORARY PRE-SERVICE AND SERVING TEACHERS SERVICE DELIVERY IN NIGERIA

O.A. Moronkola

Introduction

Teaching is a personality task (profession) that is both an art and science of guiding and inspiring learners through appropriate teaching methods, materials and learning experiences that takes into consideration the age, interest, needs, gender and sociocultural backgrounds of learners in a conducive learning environment to make them have inquiry minds to be creative and critical thinkers, problem solvers that should enable them make the world a better place. This implies that learners are made the world changers but who will be fair recognize individual differences and carry out daily tasks in a way that peace is promoted. Teaching is highly demanding academically. emotionally, socially and physically. It centers on a social practice or human relationship with the learner, co-staff, government officials, parents, community members and other stakeholders for the teacher to be effective. In the process of making teaching a profession, in Nigeria, Teacher Registration Council was established.

The Teachers Registration Council in 2004 noted that teaching is the oldest and noblest of all professions as all other professionals like lawyers, pharmacists, medical doctors are made by teachers. In addition, it has more members than any other professions which make it unique and most indomitable profession in the world.

A professionally trained teacher, must be one trained in a competent and certified institution as teacher whose occupation is nothing but teaching and has the following attributes; avid reader, peaceable, planner and organise, humble, strong imaginative skills, empathizers, strong communication skills, listener, counsellor, gender and culturally sensitive, respectable member of the community, professionally competent, verse in and use appropriate teaching and learning materials and resources, a believer in continuous training, learners motivator, team player, committed to professional association etc. No matter how difficult a learning task is, a professional teacher is expected to devise appropriate learning experience to facilitate learning. Moronkola (2012) reasoned that education is the bedrock of any national development. The Federal Republic of Nigeria in its National Policy on Education states that no nation can rise beyond the quality of its educational system as the quality of the workforce will be determined by its system of education (FRN, 2004). Falaye (2012) documented that education solves more than societal problems like poverty, ignorance, disease, hunger and insecurity but also a catalyst for development. Also, Kolawole (2016) noted that societies from time immemorial, have always used education through the school to ensure their development and transformation.

Since teachers are supposed to make education one that should empower learners to be better informed so that they can solve societal problems and agents of national development, teachers themselves must therefore be properly trained.

Teacher Education in Retrospect

Teacher education is the totality of all educational aspects that leads to a person being addressed as a qualified or trained teacher. When this is done, the quality of education will increase in standard as this will be reflected in learning outcomes of learners. In his own review of literature Thomas (2013) recognised that the issue of teacher preparation started in the first decade of the 18th century in Germany and around the same period it was also started in France by a Roman Catholic Monk, Jean Babtiste de la Salle. In England, Joseph Lancaster and Andrew Bell established teacher training institutions by the first quarter of the 19th century while the Teachers College founded in 1888 in New York, was incorporated into Columbia University. At the end of 19th century. the idea of teacher teachers became a global phenomenon. In Nigeria, the first attempt at training teachers for secondary school level started at the Yaba College of Technology which was established in 1932. It was after the nation's independence that teacher education received a boost in Nigeria. Prior to independence, the idea to have teachers trained was as a result of activities of Christian missionary of the whites activities among the Yoruba especially in Abeokuta, Lagos, Oyo, Ogbomosho, Calabar, etc.

During the period up till early 1970s teacher education in Nigeria was very promising as staff and students in teacher training institutions were dedicated to their callings, while the government and religious organisations provided the necessary environment to facilitate well trained effective and efficient teachers who knew their onions as far as teaching was concern and most if not all were morally upright and proud to be called teachers.

Then came a time when due to government decision to liberalise education without a commensurate financial input and in addition compromises in terms of admission policies, accommodation, etc., so, the quality of teachers nosedived. The quality and quantity of available teachers at all levels of education determines among others a nation's educational development. According to Taiwo (1985) the Ashby Commission report of 1960 radicalise the need for trained teachers and changed the nation's thinking about the quality of teachers needed. The need for teacher education also show glaringly in the National Policy on Education (FRN, 2004), the document recorded that since no education system can rise above the quality of its teachers, teachers at all levels of education will be professionally trained. The purpose of teacher education should be to: a. produces highly motivated, conscientious and efficient classroom teachers for all levels of education system; b. encourage further, the spirit of enquiry and creativity in teachers; c. help teachers to fit into the social life of the community and society at large and to enhance their commitment to national objectives; d. provide teachers with the intellectual and professional background adequate for their assignment and to make them adaptable to any changing situation, not only in the life of their country, but in the wider world; and e. to enhance teachers commitment to the teaching profession (Federal Republic of Nigeria, 2004).

Professionally recognized trained teachers in Nigeria today are those with: Grade ll (gradually going into extinction), Nigeria Certificate in Education (NCE), B.Ed /B.A, B.Sc degrees in Education, Postgraduate Diploma in Education (PGDE). Other variants that are not common are Certificate in Education, Diploma in Education and Postgraduate Certificate in Education. In essence, anybody with MEd or PhD degrees in education without any foundational teacher certificates can only be regarded as a researcher in education and not a trained teacher. According to TRCN (2005), teachers can be trained in Colleges of Education, Faculties of Education, Institute of Education and National Teachers Institutes (NTI).

Teacher preparation or teacher education programme is one that is well structured in planning, monitoring and evaluation by appropriate/relevant authorities so that at the end of the training, the products, will be teachers with appropriate and

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sufficient content knowledge, an undying positive attitude towards teaching which should be reflecting in their sustaining interests in the profession, demonstrating appropriate relevant contemporary pedagogical skills that should facilitate learners to critical thinkers with relevant ideas, problems solvers and assets to themselves, communities, nations and the world at large.

Quality Control in Teacher Preparation

In ensuring quality control in teacher preparation in Nigeria, a lot still needs to be done. This is because, Okebukola (no date) at the 50th Anniversary lecture of Faculty of Education, University of Ibadan affirmed that though teacher quality is hinged on content knowledge, pedagogic knowledge and pedagogic-content knowledge, many teachers in the education system are frequently deficient in them and that the existing model and practice of teacher education turn out those that are deficient in content and methodology. More serious are the products of "outreach" and "sandwich" centers for teacher education that are very deficient in pedagogical bases, frameworks and doubtful inputs. They are also deficient in rigour, quality and quantity of teacher trainers and the quality of contact make their products to be weak in content and pedagogic knowledge.

To stem the tide and improve the standards /the control in any type of teacher preparation in the country, the following elements must be factored in the process, monitored and evaluated by relevant authorities;

(a) Guiding policy issues for standards to be maintained and key into by all relevant stakeholders, must be one that ensure that the training programme must be participatory in nature which need not involve the teacher trainers alone but also the trainees, teachers and school principals in schools where teacher trainees do their teaching practice.

(b) Curriculum contents in terms of teaching subjects/courses/disciplines, methods and materials, ICT,

teaching practice/internship must be relevant to the needs of the nation and be globally relevant.

(c) Recruitment of trainees must be rigorous in terms of academic qualifications, personality traits, and attitude/interest in teaching profession.

(d) Training institutions environment/climate must be promoting in all ramifications in terms of diversity in cultural, religious and gender issues .They must also promote learning /academic achievement of trainees as well as health services and sports/recreational activities.

(e) Monitoring and evaluation must be ensured internally and externally by relevant agencies to ensure the process of teacher training/preparation go on as expected and the product are evaluated appropriately before certification before practice.

When all these are carried out faithfully in teacher preparation then the teachers graduating from different outlets or institutions are credible in evidence based teaching, culturally competent, good role models and encourager to learners and seek always the progress of the teaching profession.

Professional Teaching Ethics

People can be regarded as professionals when they have with specialized knowledge and skills acquired through professional training that enables them to work in well-established and known professions. Such professions must have most if not all the following features; membership restricted to certain category of people based on certain criteria, distinct and well defined body of knowledge, attitude and skills, a virile professional association, with codes of conducts, rules and regulations provision of known services that meets people's needs ,members are remunerated directly or indirectly for their services ,members are respected for their services, maintain confidentiality of beneficiary of their services etc. With the aforementioned, we can safely say that to a large extent, teaching is a profession. TRCN (2004) asserted that teaching should be regarded as a profession. It is a form of public service requiring teacher's expert knowledge and specialized skills, acquired and maintained through rigorous and continuing study. It also requires a sense of personal and corporate responsibility for the education and welfare of learners in their charge.

Ethics are moral principles governing a person's or group's moral behavior or conduct of what is acceptable or not acceptable or general knowledge about moral principles of life or a system of moral values guiding one's or group's ways of life or their moral judgments. Therefore, pre-service teacher must be well exposed to professional teaching ethics while in training while service teachers must have continuing education opportunities on it.

Teachers Registration Council of Nigeria (2005) recorded ethical issues as regard teaching thus:

(a) On role of teachers as administrative/academic leaders, they are expected to; inspire subordinates by exemplary character or behaviour, motivate one another, exhibit good personality, avoid what would bring down the dignity of the profession, be democratic in their behaviour, develop themselves academically and ensure all round development of learner.

(b) On relationship with learners, teachers should do the following ;have respect for all learners' rights and dignity ,responsible for educational programmes ,display empathy when circumstances that require such arise, exhibit confidentiality towards their learners ,have fair remuneration ,not sexually misconduct each other and abuse their respective offices ,avoid every form of examination malpractice not patronize illegal learners groups ,serve as exemplary role models to their learners , avoid all corrupt practices, not administer any corporal punishment except otherwise permitted by the school authority, be disciplined in their dealings and should not use their ideological influence in a negative way.

© On relationship with parents/guard they should provide the right information, communicate about the affairs of the learners to the parents/guardians regularly, show respect to parents and guardians avoid favouritism and encourage and actively participate in Parents Teachers Association.

(d) On relationship with employers, they must be professional independent, seek to perform only tasks that are within their professional competence, respect their contract and obliged to respect agreement entered between their union and the employers.

(e) On relationship within the society, teachers must demonstrate embodiment of exemplary citizenship, integrity and industry, advise the government and stakeholders when necessary, obey the law, tolerate others and imbibe a habit that portrays good personality.

(f) On general note teachers are bound to be liable for any acts or omissions that run contrary to professional standards, exhibit constructive criticism, be open minded, distinguish themselves for good behaviour and have a vast interpretation of teachers code of conduct. Also, Teachers Registration Council of Nigeria (2007) documented the following as acts, commission or omission adjudged to be misconducts which may be regarded as against ethical issues in teaching profession; forgery, mutilation of official documents, fighting, assault of student or teacher, abuse, intimidation, harassment, unauthorized absenteeism, extortion, stealing, bribery, habitual late coming examinational malpractices etc. which are also against professional ethics.

Conclusion

Since according to Nakpodia, (2011) good teaching does not begin an end in pre-service training but goes on building on the pre-service work which culminates in in-service training, capacity building in the area of professional should not be only during pre-service training but also during active service years. Therefore, there is the need to have an overhaul in teacher education programmes of many authorizing agencies and institutions because of seemingly poor control of the process of how teachers are trained now as well as poor demonstration of professional teaching techniques and exhibition of ideal professional teaching ethics among serving teachers in their daily professional activities.

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PROSPECTS AND CHALLENGES OF

IMPLEMENTING INFORMATION AND COMMUNICATION TECHNOLOGY POLICY IN IBADAN MUNICIPAL SECONDARY SCHOOLS

E. A. Isah & J. E. Oshevire

Introduction

Information and Communication Technology (ICT) has become the vogue of all professions in the 21st century. This period can be described as the information age where information is accessible anytime, anywhere, at the snap of fingertips. ICT has become more essential for staying connected in an increasingly digital society which has in its domain provision of social welfare services, warfare, planning, marketing, information sharing and utilization among others. ICT has introduced a new paradigm in the way we live and learn. Levin and Wadmany (2008), affirms that the ability to use ICT has become the new literacy for the 21st century.

Education is considered as one of the most vital aspects of any society. It is worthy of note that ICT has been integrated into education bringing its implementation into emerging issues on elearning, programmed learning, distance learning etc giving it a place of prominence on educational issues as a discourse for its inclusion in the training and preparation of pre-service teachers. Research has suggested that using ICT in education enables students to take a more active role in learning rather than been a passive observer or listener (Balanskat, Blamire, and Kefala, 2006; Cradler & Bridgforth, 2002; Gao and Hargis, 2010; Saleh, 2008), developing pursuing problem-solving skills, fostering collaborative learning abilities, providing flexible learning opportunities and increasing productivity (Bitter & Legacy, 2008; Chambers, 2011; Hatt, 2007).

Advocating the importance of ICT, Sulaiman (2011), contended that;

...the increasing use of technology in all aspects of our lives makes effective use of Information and Communication Technology (ICT) an indispensable skill for life... ICT's capability is essential to participation and engagement in modern society... it must be acknowledged that the development in telecommunications has impacted enormously on the applications of ICTs and its uses... ICT can be used to find, develop, analyze and present information, as well as to model situations and solve problems. It enables rapid access to ideas and experiences from a wide range of people, communities and cultures, and it is a powerful force for change in any society...

The foregoing are reasons all progressive countries have national Information Technologies (IT) policies and an implementation strategy to respond to the emerging global realities to avert becoming a victim of the digital divide (National IT Policy, 2012). A developing nation like Nigeria that aspires to participate effectively and become a key player in the emerging information age needs to have in place, a highly efficient Information and Communication Technology System driven by a vibrant national ICT policy (National IT Policy, 2012). A good policy document is expected togive direction to the implementation of the policy in terms of provisions of the conceptual framework, objectives, strategies, action plan and evaluation of the successes of its integration (Oyelekan, 2008).

However, while the whole world alludes to the potentials of ICT in national developments, only a few countries have established comprehensive policies where such exist (Lundu and Mbewe, 1993), while such policies make little or no reference to implementation (James, 2001, cited by Evoh, 2007). Ojo and Olaniyan (2011), explains that one of the greatest challenges facing Nigeria's educational system is not the formulation of policies but their implementation. In other words, ICT policy statements are not translated into reality. For instance, in 1988, the Nigerian government enacted a policy on computer education. The plan was to establish pilot schools and diffuse computer education innovation to all secondary schools. Unfortunately, the project did not really take off beyond the distribution and installation of personal computers (Okebukola, 1997; cited by Aduwa-Ogiegbaen and Iyamu, 2005). Okebukola (1997) cited by Aduwa-Ogiegbaen and Iyamu(2005), concluded that the computer is not part of classroom technology in more than 90 percent of Nigerian public schools. This implies that the chalkboard and textbook continue to dominate classroom activities in most Nigerian secondary schools.

In addition, in 2003, the Federal Ministry of Education launched an ICT-driven project known as School Net (Federal Republic of Nigeria, 2006; Adomi 2005; Okebukola, 2004; Amoo and Adewale, 2010), which was intended to equip all schools with ICT equipment including computers, radio and television sets, phones and fax machines, communication equipment, scanners, digital cameras, and copiers, among other things. It was also meant to connect students to the Internet. Despite these laudable policies among others, the only way this policy was implemented was the distribution of computers to federal government high schools, which were never used for computer education of the students. No effort was made to distribute computer to state government or private schools (Kpangban, 2010).

Similarly, the Federal Government of Nigeria (2004) in its National Policy on Education, recognized the prominent role of ICTs in the modern world, and has integrated ICT into education in Nigeria. To actualize this goal, the document states that government will provide basic ICT infrastructure and training in the secondary school system. However, efforts geared towards integration of ICTs into the secondary school system have not had much impact. Problems such as policy project implementation strategies militate against these efforts (Adomi and kpangban, 2010).

In the same vein, the Federal government of Nigeria, through the ministry of communication Technology, formulated a policy on ICT known as the National Information and Communication Technology Policy in June 2012. The policy is an integrated policy which made provision for many other sectors of the economy including Education and Capacity Building. One of the cruxes of this policy is to improve teaching and learning standard through the introduction of ICT in the curriculum and provision of computers and other ICT elements in public schools.

From the foregoing, it is obvious that the ICT policy is faced with the challenges of implementation. There is therefore, a need to carry out a holistic study into challenges confronting the successful implementation of the ICT policy on Education in Oyo State. It must be noted that ICT is much more practical than theoretical. It cannot be reasonably argued that students in secondary schools will acquire the requisite skills without proper tools. The tools expected here include; computers, internet and access to these facilities. Are there computer laboratories with computer equipments? How about trained teaching personnel? These reasons are enough not to fall into the reasons for frequent changes of policy and specifically, Ibadan being a major centre accommodating the premier University and a first generation University, it is important to find out how the secondary schools in this city are faring concerning the implementation of the ICT policy.

Statement of the Problem

The importance of ICT to developed and emerging nations cannot be over emphasized as it has grown over the last 3 decades in leaps and bounds making ICT availability, acquisition, and utilization part of our national school life. ICT has become a solution providing items in all facets of life and the national economy

especially with the advent of such infrastructure as Treasury Single Account (TSA) which is completely IT driven and is expected to bring about other trends that professional Nigerians will be expected to operate in the years to come. It is thus clear that in a few years from today, ICT would have over run all areas of life. Nigeria seeing the direction of the world has not rested on its oars but rather has developed its own policy relating it to the emerging future population who will rule in a few years time. It becomes necessary that ICT be introduced to schools which has been done by making it an examinable subject at senior secondary school level. Previous studies concentrated on how ICT could be introduced requesting for urgent policy reforms which has been carried out by government. In other cases, scholars have examined how the absence of critical national infrastructure like electricity, building, bandwidth, computer systems could affect schools but the problem is that now that the policy has been formulated, how effective is its implementation in secondary schools? The infrastructure needs to be available, accessible and applicable in schools failure which all efforts so far could be in vain and policy formulation defeated. It is for this reason that the study is considering the challenges of implementing the ICT national policy in secondary schools using Ibadan municipal local government secondary schools.

Research Questions

The following research questions guided the study;

- 1. What is the level of ICT equipment availability in Ibadan municipal secondary schools?
- 2. What is the level of ICT equipment adequacy in Ibadan municipal secondary schools?
- 3. To what extent are the available ICT equipment utilised in Ibadan municipal secondary schools?
- 4. What is the level of ICT policy implementation (awareness) in secondary schools in Ibadan Metropolis?

Methodology

This study adopted the survey research design. The study population consisted of teachers and principals of public senior secondary schools in the five (5) Local Government Areas (LGA)s that make up Ibadan Municipal Area from which 3 Local Government Areas (LGA)s were selected using the simple random sampling technique as shown in Table 1.

Table 1: Sampling of Respondents

Local Government	Total Number of	Total Number of	Total Number of
Area	Schools Sampled in	Teachers	Principals Sampled in
	Each LG 40%	Sampled in Each	Each Local
		LG 20%	Government 20%
Ibadan North	14	314	22
Ibadan North West	5	76	15
Ibadan South West	12	222	17
Grand Total	31	612	54

Two instruments were designed and used for data collection. The first is a structured questionnaire namely "Implementation of the Nigerian National Information and Communication Technology Policy Questionnaire" (INNICTPO), while the other is an audit checklist. Section A attempted to elicit demographic information Section B contained questionnaire items carefully structured to elicit information that bordered on the implementation of ICT policy in teaching and learning process, (availability, utilization, adequacy). Section C contained items based on the challenges of the ICT policy implementation in schools. The Audit Checklist contained equipment for ICT in schools sampled. The two instruments were given to lecturers, research experts and colleagues in the field of study for face validation. All comments, suggestions and modifications were studied carefully and made use of to improve the quality of the instrument in relation to the research questions. The data collected were analyzed using descriptive statistics of simple percentage, mean and standard deviation for the research questions.

Results and Discussion Research Question 1

1. What is the level of ICT equipment availability in Ibadan municipal secondary schools?

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					Cumulative
		Frequency	Percent	Valid Percent	Percent
	Not Available	68	10.3	10.3	10.3
Valid	Rarely Available	592	89.7	89.7	100.0
	Total	660	100.0	100.0	

Out of the 660 respondents, 592 respondents representing (89.7%) stated that ICT equipments in Ibadan metropolis secondary schools were rarely available while 68 respondents representing (10.3%) opined that ICT equipment were not available. Therefore, ICT equipment are rarely available.

Research Question 2

What is the level of ICT equipment adequacy in Ibadan municipal secondary schools?

Table 3 ICT Equipment Adeq	uacy in Ibadan Municip	al Secondary Schools

					Cumulative
		Frequency	Percent	Valid Percent	Percent
	Inadequate	647	98.0	98.0	98.0
Valid	Rarely Adequate	13	2.0	2.0	100.0
	Total	660	100.0	100.0	

Out of the 660 respondents, 647 respondents representing (98.0%) stated that ICT equipment in Ibadan metropolis secondary schools were inadequate while only 13 respondents representing

(2.0%) agree that ICT equipments were rarely adequate. Therefore, ICT equipment are very inadequate in secondary schools located in Ibadan metropolis.

Research Question 3

There is no significant difference in ICT equipment utilisation among principals and teachers in Ibadan Metropolis secondary schools.

Table 4: ICT Equipment Utilisation in Ibadan Municipal Secondary Schools

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Utilized	374	56.7	56.7	56.7
	Rarely Utilized	286	43.3	43.3	100.0
	Total	660	100.0	100.0	

Out of the 660 respondents, 374 respondents representing (56.7%) agreed that the available ICT equipment were not utilized while 286 respondents representing (43.3%) stated that the equipment was rarely used. Therefore, the available ICT equipment in Ibadan metropolis secondary schools are not used.

Research Question 4

What is the level of ICT policy implementation (awareness) in secondary schools in Ibadan Metropolis?

Table 5 ICT Policy Implementation in Ibadan Municipal Secondary Schools

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	462	70.0	70.0	70.0
	Some extent	198	30.0	30.0	100.0
	Total	660	100.0	100.0	

Out of the 660 respondents, 647 respondents representing (98.0%) stated that ICT equipment in Ibadan metropolis secondary schools were inadequate while only 13 respondents representing

(2.0%) agree that ICT equipments were rarely adequate. Therefore, ICT equipment are very inadequate in secondary schools located in Ibadan metropolis.

Out of the 660 respondents, 462 respondents representing (70.0%) agreed that ICT policy is not implemented at all in Ibadan metropolis secondary schools, and 198 respondents representing (30.0%) stated that it was only implemented to some extent. Consequently, ICT policy was not implemented in Ibadan metropolis secondary schools.

Discussion of Findings

Table 1 showed the level of ICT equipment availability among secondary schools in Ibadan Metropolis. The study found out that ICT equipment was rarely available in secondary schools in Ibadan metropolis. This finding is in consonance with that of Akuegwu, Ntukidem, and Jaja (2012) which stated that availability of ICT facilities in Nigerian schools is significantly low. The finding is also consistent with findings made by Kolawole (1997) and Afolabi, Jegede and Projector (1999) who indicated that ICT equipment and facilities for effective teaching and learning are deficient in schools. Similarly, Alebiosu (2000) and Adeosun (2002) revealed that equipment and facilities for effective teaching and learning are deficient in Nigerian schools. The findings from the afore mentioned studies could be as a result of inadequate funding of schools by the government. The absence of ICT equipment in most Nigerian secondary schools leads students to resort to cybercafés for Internet access (Adomi, Okiy and Ruteyan, 2003) leading to the acquisition of vices on the internet. Availability of ICT equipment create the potential for students to imbibe ICT skills which is one of the objects of the national ICT policy and those who are to acquire these skills fall in the category of youth between the ages of (11-23) years. These categories of youth are faster in acquiring ICT skills. This finding therefore implies that it may take a long time for the youth to acquire ICT skills.

Table 2 showed that in schools where ICT was available, it was inadequate as it could not go round the students. The result means that such students are meant to share computer systems or only the teacher will have a computer system for demonstration purposes only. In some cases, the computer (laptop) available in schools may be owned by the computer teacher which was borrowed for the purpose of teaching or owned by the Principal. Most times, students who acquired the ICT skills from home, come with smart phones which they use for studies but except for internet surfing, the smart phones are not able to do what computers do. However, Bandele (2006) posited that the various ICT facilities used in the teaching and learning process in schools include; radio, television, computers, overhead projectors, optical fibers, fax machines, CD-ROM, internet, electronic notice board, slides digital multimedia, video/VCD machine and so on. The study concluded that ICT facilities are not sufficiently provided for teaching-learning process in secondary schools.

Table 3 revealed the level of ICT equipment utilisation in secondary schools in Ibadan Metropolis. The study found out and revealed that the available ICT equipment in Ibadan metropolitan secondary schools are not sufficiently utilised. This finding is consistent with that of Saiden (2000) which explained that the usage of ICT equipment in schools was at a low level. (Uhaegbu, 2001), further revealed that there is low level usage of ICT equipment and facilities in secondary schools. Ovelekan (2008), explained that the utilization of ICT in the Nigerian educational system is still at a very low level. It could be that quite a number of teachers did not use the available ICT facilities because of either low computer literacy skills or ignorance of their availability and relevance. The low level usage of ICT equipment might not have been unconnected with the shortage of such equipment in the schools. This finding are in line Akuegwu et al (2011), Yusuf (2005), Enyi (2004).

In Table 4, it was shown that the level of ICT policy implementation of secondary schools in Ibadan Metropolis did not conform with the stipulations of the national policy. The study found out and revealed that ICT policy was not being well implemented in Ibadan metropolitan secondary schools to a very large extent. This finding agrees with scholarly findings generally in respect to ICT policy implementation in schools. Mkpa (2007), affirmed that national ICT policy has not been fully implemented in our secondary schools. James (2001) cited by Evoh (2007) agreed that countries where policies exist tend to make little or no reference to implementation. Ojo and Olaniyan (2011), said

Conclusion and Recommendations

The policy document is expected to translate into reality in terms of the provision of the conceptual framework, the objectives, the strategy, the action plan and the evaluation of the successes of the integration. However, while all countries acknowledge the strategic role of ICTs in development, only a few have established a comprehensive policy. Where such policies exist as in Nigeria, little reference has been made its implementation. Therefore, the major challenge facing ICT implementation from this study has to do with providing ICT equipment to schools and providing the enabling environment for their full accessibility and utilization.

In line with the findings of this study, the following recommendations are made;

- i. Government should ensure that ICT policy statements are translated into reality by creating an ICT policy implementation commission, funded and given powers to allocate and redistribute ICT facilities to schools. The commission should also monitor ICT utilization in schools. ICT tools should be made available in all secondary schools.
- ii. ICT tools should be made available in all the secondary schools.
- iii. The government should also provide an enabling environment for accessing these ICT equipment by students and teachers to enable practical skill acquisition.

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15

TEACHING STUDENTS WITH LOW VISION

A. F. Komolafe

Introduction

The visual sense is of utmost importance because much of the learning a child does is through visual cues. Within a moment, much information can be gathered casually from the physical environment merely by looking. However, when the organs of sight have become seriously impaired, the individual needs to depend largely on the use of the other senses, especially the auditory and tactual senses for information gathering. No wonder that some centuries ago, individuals with visual impairments were among person with special needs whom people in the society that time believed they could not benefit from formal educational provisions. Persons with visual impairment were therefore left to beg for alms for sustenance. The tide of events turned dramatically for this group of people with the advent of special education, when special schools were established to cater for them. All these took place over a century ago, and many persons with visual impairments worldwide have benefited from special education programmes. Are all persons regarded as being blind actually totally blind? How are learners with profound but not total vision loss served and included in the regular school? These are some of the issues which this paper is out to examine.

Definition of Low Vision

It is not uncommon to hear the term low vision used to describe the visual functioning of individuals who are with

visually impairment (Hallahan & Kauffman, 2011). The World Health Organisation (2010), which uses a metric designation for recording visual acuity, clinically defined the term low vision as visual acuity that is less than 6/18 (20/60), but equal to or better than 3/60 (20/400), or corresponding visual field loss to less than 20 degrees, in the better eye with best possible correction (Hallahan & Kauffman, 2011). Mangal (2009) defined low vision as limited distance vision, in which case the individual has some useful near vision at a range of several feet. The individual's visual function varies with light, task, and personal characteristics.

Smith (2007) in her own definition, stated that low vision is a level of vision which, with standard correction, hinders an individual in the planning and/or execution of a task, but which permits enhancement of the functional vision through the use of optical or non-optical devices, environmental modifications and/or techniques. Low vision implies a visual acuity between 20/70 and 20/400, with the best possible correction, or a visual field of 10 degrees or less. Individuals with low vision use sight to learn, but their visual disabilities interfere with daily functioning (Smith, 2007). Low vision is a reduced level of vision that cannot be fully corrected with conventional glasses. Unlike a person who is with blindness, a person with low vision has some useful sights. However, low vision usually interferes with the performance of daily activities, such as reading or driving. A person with low vision may not recognize images at a distance or be able to differentiate colours of similar tones (University of Michigan, 2015).

Causes of Low Vision

Vision loss can be caused by a number of factors such as disease, trauma, inheritance, events during pregnancy at birth later in life, or a combination of any of these. Loss of vision can be progressive or stable, treatable or untreatable, and depending upon the location or site for the loss, individuals may be with total blindness or partial sight – peripheral loss with central vision

intact, central loss with peripheral vision intact, overall loss in both central and peripheral vision.

Loss of usable or functional vision exceeds the typical reduction of vision often associated with correctable errors of refraction (Hallahan & Kauffman, 2011). Schwartz (2010), listed some eye disorders and diseases which could result in partial or total loss of vision such as; albinism, amblyopia, aniridia, cataract, coloboma, cortical visual impairment, glaucoma, Leber's congenital amaurosis, macular degeneration, microphthalmia, nystagmus, optic nerve hypoplasia, retinitis pigmentosa, retinoblastoma, retinopathy of prematurity, stargardt's disease, strabismus, usher's syndrome and the likes.

Symptoms of Visual Problems

Students with visual problems or eye disorders can be identified through the appearance of their eyes, behaviour and movement patterns. When students experience certain difficulties with their school work, this can also be an indication that such students do not see well. Smith (2007) outlined some signals of visual problems which are listed below:

- 1) **Appearance of the eyes**: the student's eyes water excessively; are red or continually inflamed; appear crusty; seem dull, wrinkled, or cloudy; are swollen; look grey or white (one or both pupils); are not aligned.
- 2) **Problem with school work**: The student has difficulty: reading small prints; identifying details in pictures; discriminating letters; with close works.
- 3) **Behaviour and movement**: The student appears clumsy; bumps or trips over objects; cannot catch a ball, button clothes, or tie shoes lace; covers an eye while reading; tilts head; holds objects close to an eye to view it; complains of dizziness after working on an assignment.

Symptoms of low vision given by University of Michigan (2015) are:

- 1. Difficulty recognizing objects at a distance (street signs or bus signs)
- 2. Difficulty differentiating colours (particularly in the green-blue violent range)
- 3. Difficulty seeing well while reading or cooking

Educational Considerations

Students with low vision, like others with visual impairments are usually catered for educationally in regular schools. Young learners with visual impairments who are at the elementary level, attend either special schools or regular schools. In Nigeria, as in some other developing countries, many children with visual impairments attend special primary schools where all the children in the school are with visual impairment, or special schools which also cater for children with other kinds of special needs. However, at the secondary and tertiary levels of education, students with visual impairments are mainstreamed in regular schools. That is, they are taught together with sighted students in the classroom by the same general education teacher. Although, students with visual impairment may sometimes require the assistance of the resource-room staff. In integrated secondary schools meant for students with visual impairments, the resourceroom staff is a special education teacher who specializes in education of persons with visual impairment, that is he/she is a teacher of students with visual impairments.

Before planning a student's educational programme, a series of assessment need to be conducted in order to come up with an Individualised Education Programme (IEP) that will sufficiently address the students unique learning needs. The various assessments that should be conducted include ophthalmologic and optometric evaluations, low vision clinical evaluations, functional vision assessment, learning media assessment, and expanded core curriculum assessment (American Foundation for the Blind, 2015a).

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Learning Media Assessment

It is necessary to find out what the student's primary reading medium will be. Teachers and parents may be uncertain as to whether a student should learn Braille, rely on large print or use regular print for accessing reading material. The purpose of the learning media assessment is to determine the most effective medium for accessing instruction and teaching methods and this should be completed by a certified teacher of students with visual impairments. The learning media assessment covers both general learning media and literacy media. General learning media are instructional materials and instructional methods. Literacy media refers to reading and writing in print and Braille (American Foundation for the Blind, 2015a).

The Individualised Education Plan (IEP)

Each student who is eligible for special education has his/her own unique set of educational needs, learning abilities, and aspirations. An IEP documents the educational and related services a student needs to reach specified short-term and longterm goals. All special needs students deserve access to an education that will best prepare them for independence, employment, and life after graduation. IEPs are designed to ensure these basic rights and help each student reach his/her full potential. The Individuals with Disabilities Education Act (IDEA) requires all school districts to develop IEPs for students with special needs. Under the Act, when a student has a disability and is eligible for special education and related services, a team of people work together in determining what special instruction, accommodations, and services the student needs to excel in school as well as daily life. This team includes classroom teachers, special educators, providers of specialized services related to the student's disability, and the student's parents. The unique knowledge and resources offered by the individual team members are united to provide greater support and subsequent success for the student (Perkins School for the Blind, 2012).

IEPs serve three key objectives:

- 1. Involvement and progress of each student with special needs in the general curriculum as well as addressing unique needs tied to the student's disability.
- 2. Involvement of parents, students, special educators, and general educators in meeting the individualized educational needs of students with special needs.
- 3. The critical need to prepare students with special needs for independence, employment, and other post-school activities (Perkins School for the Blind, 2012).

Accessing the Curriculum

The core curriculum designates the minimum standards students must meet in order to advance to the next grade level. Examples of core curricular areas are mathematics, reading, and sciences. Modifications and adaptations are needed to make these curricular accessible to students who are with visually impairment as students with low vision are often at a disadvantage when presented with information in regular classrooms. If a student has difficulty seeing materials at a distance, writing on chalkboard will be hard to discern. A distance optical device, preferential sitting arrangement, and handouts containing pertinent information are all ways that the information can be more easily accessed by the student with low vision. Curriculum areas such as the sciences that require hands on activity and interaction with materials can also present a challenge to students with low vision but can be overcome by the use of specialized instruments with bolder markings or inventive ways of using existing materials. The use of groups to complete assignments is also useful for providing support, not only for students with visual impairments but for all categories of students. In addition, teachers should encourage students to indicate when they are having difficulty in accessing information, completing a task, or understanding a process or skill (American Foundation for the Blind, 2015c).

The Expanded Core Curriculum

Apart from the core curriculum, students who are with total blindness or have low vision also require additional instruction to compensate for their inability to gather information adequately from the environment through visual cues. Sighted children and youths learn a lot of things incidentally, that is, simply by observing others and objects around them. Children and youths who have total or severe loss of vision are not capable of visually observing what others do and how they do these things. Such learners therefore, need instruction in certain areas in order for them to gain full access to the core curriculum and learn at the same pace as their sighted peers. The additional set of skills which they thus require make up what is known as the Expanded Core Curriculum (ECC). The nine areas of the ECC which should be taught to students with visual impairments are; orientation and mobility, independent living skills, social interaction skills, recreation and leisure skills, sensory efficiency skills, career education, use of assistive technology, self-determination, and compensatory skills (which include communication modes).

Access to Information

Students with low vision may need to access information through print. While some students with low vision require their text to be transcribed into Braille, many are able to access regular or large print. Large print books and papers can be created through modern photocopy machines but such copies are often of poor quality. Students who can access regular prints through optical devices need to be taught the proper use of such devices. Lengthy texts such as novels or voluminous notes can be recorded on audio tapes, these audio tapes are often used more by students in university who must access large amounts of information from a variety of sources. Many technology solutions exist for accessing information via computer. Progress is being made towards the ability to download academic text from publishers directly to student's computers, by passing the print medium. Text on computer can be output through speech, large print or Braille, depending on the software and hardware available. Some students can also benefit from any combination of Braille, large print, regular print, optical devices and technology (American Foundation for the Blind, 2015c).

The Use of Braille

Nagel (2011) observed that teaching Braille to low vision students with low vision is a topic which brings varied opinions. Many professionals and parents believe that Braille should not be taught to students with any useful residual vision. Literacy by definition is the ability to read and write and to read one's own writing. Since the 1950s, the literacy rates among individuals with visual impairments have declined. This is due to a number of reasons, including technology which may be mistakenly viewed as a substitute for reading, and the negative attitude which some individuals have towards the use of Braille. Educators are responsible for providing students with the opportunity of developing literacy skills, and to provide this opportunity in the most exciting, appropriate and easiest way, so that students can experience success and the joy of reading.

Nagel (2011) further stated that when a student is successful in an activity, he tends to repeat it. Therefore, the more one reads, the better one becomes. The more accomplished one is as a reader, the more information one gets, and the more prepared one is to become a contributing member of society.

All avenues to reading must be considered. No student should be denied the right to literacy or the joy of reading because educators fail to provide the correct medium. There is a clash of ideas between medical personnel and educators on the use of Braille by students with low vision. Some clinical personnel view the use of Braille as failure rather than an enhancement for success. Each student with low vision must be regarded as having unique needs. Only through collaboration and mutual respect for different mandates and philosophies for the educational and medical models, can students with low vision have the opportunity to rise to the pinnacle of their potential for life long learning (Nagel, 2011).

Teaching Science Subjects to Low Vision Students

For decades, persons with special needs were discouraged from considering career paths in field related to science, technology, engineering, and mathematics (Supalo, Asaacson & Lombardi, 2013). Talking at a national meeting of science teachers, Vermeij, a renowned blind marine biologist stated in 2004 "A conscious effort must be made all the time and everywhere, and by everyone to acquaint a person with blindness with those aspects of the environment that cannot be heard, smelt or easily grasped by hands and fingers, and even those things that can be observed must be pointed out". Teachers can make the world of science more accessible to students with visual impairments through collaboration and specific adaptations in both the science classroom and laboratory (Wild & Koehler, 2013).

The student who is with blindness or visual impairment will typically need some accommodations in order to fully and safely access the science curriculum. It is important to meet the teacher of students with visual impairments to discuss the curriculum, and objectives and content that will be covered during the school year. This is important for students following the standard course of study as well as those following a modified curriculum. The student's unique visual needs should be taken into consideration when determining how to make materials accessible. Science materials may include measuring devices, charts, reading materials, and equipment (willings, 2016).

According to Willings (2016), three-dimensional models are beneficial to all students when learning about science. This is particularly true for students with visual impairments. These students should be provided with models that they can touch, explore and examine. Although, two-dimensional tactile graphics

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can be useful, it is best to start with either the real objects, or when this is not possible, a three-dimensional object. It is ideal for students to first explore the real objects and then compare these to a model.

The American Printing House for the Blind, as well as other sources offer a variety of materials to support the science curriculum. Willings (2016) listed and described some science materials available at American Printing House for the Blind (APH). Some of these resources are as follows: The Talking Digital Thermometer; The Tactile Demonstration Thermometer; Talking Digital Scales; The Basic Tactile Anatomy; Life Science Tactile Graphics; and Azer's Interactive Periodic Table Study set.

Students with visual impairments need access to the science classroom and laboratory as much as their sighted peers do. With a little preparation and collaboration, school staff can all work together to provide the best science education possible to all students (Wild & Koehler, 2013).

Low Vision Aids

When conventional spectacles' can no longer help, and surgery or medical treatment is not appropriate, or is taking so much time, then it is time to consider low vision aids. These come in a large array of strengths and designs. They range from simple hand-held lenses to electronic devices: Different ones are needed for different visual tasks. The use of a low vision aid is dependent upon many factors such as the type of vision loss, the degree of loss, the patient's needs regarding light and glare, the patient's ability to handle and operate the aid, and so on. The best place to obtain a low vision aid from is a low vision specialist, following a comprehensive low vision examination (The Internet Low Vision Society, 2013).

Low vision aids can be classified into three classes: optical devices, electronic magnifiers, and non-optical devices. Students with low vision use optical devices to access the visual

environment. Such devices include magnifiers, microscopes, and tele-microscopes for accessing near information, and monocular telescopes and bioptic lenses for accessing distance information. Near devices aid a student in viewing regular print materials and non-textbook materials. Distance devices are used for viewing information that is beyond arms reach such as the chalkboard, menus in fast food restaurants and sporting events (American Foundation for the Blind, 2015c).

Teaching of Other Academic Subjects

In general, subject teachers in integrated secondary schools where students with low vision are mainstreamed need to liase constantly with the teacher of students with visual impairments on ways of adapting the class lesson to make it accessible to students with low vision. This particularly applies to the fine-art teacher, home economics, geography, physical education and mathematics teachers. For example, the geography teacher may need to have raised versions of maps which students with visual impairments can handle tactually and/or maps drawn with markers, using sharply contrasting colours.

Tips for Teachers

Rao (2015) suggested the following for the classroom teacher of student with low vision:

- Preferential setting is often necessary for a student with low vision. Allow the student select a seat where he/she sees best. The student should sit with his/her back to windows and as close to the board as practical. Reduce glare from windows and lights, as much as possible.
- Read the student's Functional Vision Evaluation to find out if the student can copy materials written on the board or overhead projector.

Purple dittos or fuzzy Xerox copies should not be used with these students. Clear contrast between the print and the background will help the student better. Black print on white paper is usually best.
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If other modifications are required, they should be contained in the list of medications handed out at the beginning of the semester, in his/her Functional Vision Evaluation, kept in the Special Education Folder.

- Contrast, print style, and spacing of letters can be more important than print size.
- Students with low vision may require more time to complete assignments
- Students with low vision are usually slow readers because of the visual impairment
- Standardized tests that require separate answer sheets may be especially difficult for a student to use.
- Word games, puzzles and graphs may be inappropriate for a student low vision. It is advisable to check with the teacher of students with visual impairments.
- Storing and using large print materials may be difficult for the student to manage in a classroom. Help the student find a place for books and supplies.
- Try not to call attention to the student's eye problem in front of the class.
- Always use the student's name when addressing him/her.
- The rules for discipline should be the same for a student with low vision, as for any other, unless the IEP states otherwise.
- Sometimes, communication is non-verbal. Often, a student with low vision is unable to recognize the expression on someone's face or figure out what has happened in a situation that is non-verbal.
- It is helpful if the teacher privately explains the situation to the student with low vision.
- Be aware of the student's frustration level since much of learning at school is visual. It is easy for a student with poor acuity to become frustrated.

- A. F. Komolafe
 - On noticing that the student's cloth is stained with food or ink, discreetly tell him about it.
 - Give a student with low vision the grade he/she earns. Donating a grade to a student really hinders, that is, does not help a student's learning.

Conclusion

Low vision is not a barrier to learning and high academic achievement. Students with low vision can be successfully integrated in regular schools if appropriate measures are taken to include them and carry them along during class lessons and practical work. Adequate access to the visual environment, information and the school curriculum are vital to the academic success of students with low vision.

Recommendations

Students with low vision need all the support they can get from parents, teachers, and other school staff. Parents should therefore, accept and love them for who they are. Parents should not despair if any of their children exhibit symptoms of visual impairment. Instead, they should seek medical attention on time from ophthalmologists, who by virtue of their training, have the knowledge and wherewithal to diagnose and treat various eye conditions. If after thorough medical examination, their child is found to have low vision, a low vision specialist as well as relevant professionals in the field of special education should be consulted, for early intervention and placement in appropriate educational setting. Giving such a student their full support throughout the period of school days will position him for high academic attainment.

Teachers in integrated schools which admit students with visual impairments in Nigeria should be provided in-service training from time to time on how to effectively include students with visual impairments while teaching. Such training programmes will remind the old ones and acquaint the new teachers of the challenges posed on students by profound or total loss of vision, and ways of assisting such students to maximize their potentials. Government should adequately supply needed learning materials and equipment to such integrated schools. In particular, these schools should be adequately stocked with low vision aids and devices so that students with low vision could make effective use of their residual vision and have optimal learning experiences.

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16

SOCIAL MEDIA AND LEARNING STYLES AS CORRELATES OF SENIOR SECONDARY STUDENTS' CHEMISTRY ACHIEVEMENT IN ABEOKUTA, OGUN STATE, NIGERIA

Modupe M. Osokoya & R. Kazeem

Introduction

Most science students who have at least credit pass in English Language and Mathematics have not been able to gain admission into the university or other higher institutions to pursue sciencerelated courses such as medicine, pharmacy, nursing, engineering, etc. simply because they did not pass chemistry at credit level. This has been a major concern to educators and science educators in particular.

Chemistry as a subject contains abstract concepts which are seemingly difficult to grasp except students create and devote more time to study it. But it is noticed that students are not paying enough attention or creating more time to study chemistry, they are being distracted by the use of social media. Hawang, Kessler and Franceso (2004) demonstrated that students' social networking with teachers and peers boosts their knowledge acquisition and improve their academic performance. Since students also learn in different ways, there is need for the students learning styles to align with the instructors teaching style for good performance. The way students learn chemistry could also affect their performance in chemistry.

Modern technology in communication no doubt has turned the entire world into "Global village". But as it is, technology like two sides of a coin, bring with it both the negative and positive sides. It helps to be better informed, enlightened, and keeping abreast with world developments. Also, it helps students to be aware of the current developments in their field of study. Chemistry students especially should see social media as an avenue to enhancing their learning style since it provides medium of sharing new concepts, ideas or development in the field of chemistry among themselves and between them and their chemistry teachers. Alfred, Rosen and Stollak (2006) sees communication as a basic human need. Man has always found a means of meeting this need either through interpersonal or mass communication. According to a Canadian Professor of English, Marshall Mcluhan, "The world is now a global village where the whole world is now compressed into a single electronic chat room".

Katz, (2009) observes that information that usually takes many days or weeks to disseminate now takes seconds or minutes. It is now possible for people to make interpersonal communication with others to get desired information as quickly as possible from other areas of the country or from other countries with the use of social media without leaving their immediate environment.

Social networks as a global phenomenon attract extensive population from all around the world in different ages, cultures, education levels, etc. In addition to routinely checking e-mails, reading daily forums and newspaper or following instant message tools, people now also check their social network profiles by following others' status changes, updating their profiles or looking at others' profiles. Research has shown that many people connect to social network sites at least once a day either to check their profiles or to participate in different online activities (Joinson, 2008; Lenhart, 2009).

Most of the social network users are young individuals most of whom are tertiary and secondary school students. The relationship between the youth and their involvement in social network sites has attracted many researches that focused on young Issues in Teacher Education in Africa

people's social network activities in relation to their privacy concerns and other forms of developments. Lenhart & Madden, 2007; Pempek, Yermolayeva & Calvert, 2009).

Recently, there has been considerable discussion regarding the frequent use of social media tools (e.g. Facebook, Myspace, Twitter, Whatsapp, Eskimi, 2go, Youtube, Friendster, etc.) by students most especially the secondary school students, and the possible effect of those tools on students' academic performance (Hargitai & Hsieh, 2010). At the core of this debate is whether the growing use of social media by secondary school students actually improves or worsens a student's academic performance.

Just as the term social media has obtained a fairly broad meaning the term social networking (SNS) generally refers to internet -based locations that allow individuals and groups to interact. Usenet systems were first conceived by Tom Truscott and Jim Ellis in 1979 in which articles referred to as "news" were posted to newsgroups. Usenet had centralized server or dedicated administrator to set them apart from Bulletin Board Systems (BBSs). However group sites such as Google groups and Yahoo, use many of the conventions established by the original Usenet systems. In succession after these, many social outfits were established. There was dating sites and forums in the early 80s, six degrees in 1997 and live Journal in 1999. The early 2000s brought the emergence of Friendster (2002); Hi5 (2003); LinkedIn (2003); and MySpace (2003). Facebook and YouTube came up in 2004.

Social network sites such as MySpace, Facebook, YouTube, Badoo, Skype etc., have attracted millions of users, many of whom have integrated these sites into their daily practices. In terms of membership and daily usage, more recent estimates show Facebook as having over 750 million users worldwide; LinkedIn over 100 million members; Twitter having over 177 million tweets per day; and YouTube having over 3 billion viewers each day (Vhen, & Bryer, 2012). Lin and Subrahmanyam (2007) found out in their studies that boys are always online more than girls because of earlier forms of technology such as video or computer games. Thelwall (2008) and Lenhart and Madden (2007) also found out that males tend to use more social media than females. However, Giles and Price (2008) reported that girls use the internet more than the boys.

Students consume a lot of time on these sites uploading or downloading, as well as watching pornography. Most students are always online every second, chatting with friends, watching online movies (pornographic films). Social site has become a habit for some students, they find it difficult to study for one hour without login to one network sites, and they can be called "internet addicts."

In Nigeria, the statistics on internet users and population growth from the year 2000 to 2011 that was released by the Internet World Stats shows that 200,000 users out of 142,895,600 population of people in the year 2000 has drastically increased to over 45 million users out of human population of over 155 million by the end of the year 2011. The full statistics is shown in table 1.

Table 1: Internet Usage and Population Growth in Nigeria

YEAR	Users	Population	%Pen	Usage Source		
2000	200,000	142,895,600	0.1%	ITU		
2006	5,000,000	159,404,137	3.1%	ITU		
2009	23,982,200	149,229,090	16.1%	ITU		
2011	45,039,711	155,21,573	26.5%	ITU		
Source: http://www.intorpotworldctats.com/af.ng.htm						

Source: http://www.internetworldstats.com/af.ng.htm

African Digital Statistics 2014 reported that Nigeria leads the way with the highest number of internet users, Facebook users and active mobile subscriptions with over 55 million users despite South Africa having higher internet, Facebook and mobile penetration. Although, it is on record that Africa continent generally, lag behind the rest of the world due to affordability access to internet on the continent. Figure 1 shows the statistics.



Figure 1: Mobile data population in Nigeria as at January 2014.

Source: http://socialmediaweek.org/lagos/2014/02/03/african-diaital-statistics-2014/

According to Internet Live Stats, the internet users in Nigeria have raised to 67,101,472 as at July 2014. There is almost 1 million increase when compared with the 57.8 million reported by NCC in the year 2013. Furthermore, report gotten from Nigeria Communication Commission (NCC) as at September 2015 revealed that Nigeria Internet users have increased to 97 million. It was further analysed that MTN has 41.84 million subscribers browsing the internet on its network. Globacom has 21.89 million subscribers surfing the net on its network, Airtel had 17.73 million internet users and Etisalat had 15.59 million customers.

An effective student can actually learn better in chemistry by sharing some topics or concepts with his/her chemistry teacher or classmates. Also, students can form a forum or group on the social media where they can learn from each other, solve some problems, and share ideas with teachers. This can form a type of learning style. Learning style discusses learner's personal differences in preference to receive and process information during instruction (Johnson, 2002), it influences students innovation and technology use (Bindak, 2012). Individual learning style should be considered by teachers and other education practitioner when designing and implementing

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classroom activities utilizing social network sites. Preparing a learning environment that reflects students' needs is essential in improving their academic performance. Each individual has his or her own preferred way of organizing and retaining information (Chou, & Wang, 2004) and the educational environment should be prepared according to participants' learning preferences. Creating an appropriate environment is possible only when instructional designers and instructors understand how to do so and take effective measures to shape the environment as needed (Kay et al, 2009).

Individual students differ in the way he/she learns, each student has styles or preference in the way they recognise and process information. Recognising the students' learning style may very well aid the teachers in becoming more sensitive to students' differences in the classroom, thus promoting enhancement to teaching practices that best suit the student learning styles. As stated by Cuthbert (2005), awareness of the learning styles is vital for allowing adjustment in the educators' pedagogic approaches. Garth-Johnson and Price (2000) pointed out that learner's unique learning style and academic achievements are strongly related. The researchers found out that students with collaborative learning style performed better in science subjects such as chemistry.

The learning style of the students is a very important subject in today's learner-centred education environments. According to Kolb (2000), it is a reflection of how thought is processed. Kolb developed a model of the learning cycle to illustrate how experience is translated into concepts, which in turn, are used as guide in the choice of new experiences. In Kolb's experiential learning theory, learning is a four-stage process beginning with concrete experience. These experiences form the basis for observations and reflections, which in turn lead to the formation of abstract concepts and generalization. Finally these abstract concepts or hypotheses guide in the creation of new experiences (Burd & Buchanan, 2004). James and Gardner (1995) suggest that the way individual learners react to the overall

learning environment make up the individual's learning style. Grasha and Riechmann (1974) measures learning styles as personal qualities which influence a student's ability to acquire information, to interact with peers and the teacher, and to participate in learning experiences. Grasha and Riechmann's model is associated with three classroom dimensions: student attitudes towards learning, their views of their teachers and peers, and their reactions to classroom procedures (Grasha, 2000).

Grasha and Riechmann Learning Styles Inventory promotes understanding of learning in a broad context, spanning six categories: competitive, collaborative, avoidant, participant, dependent, and independent. Competitive students learn material in order to perform better than others in the class. Collaborative students feel they can learn by sharing ideas and talents. Avoidant students are not enthusiastic about learning content and attending the class. Participants are good citizens in the class. They are eager to do as much of the required and optional course requirements. Dependent learners show little intellectual curiosity and they learn only what is required. They view teacher and peers as sources of structure and support and look for authority figures. Independent learners like to think for themselves and are confident in their learning abilities. They prefer to learn the content that they feel is important. Due to distractions caused by social media and the way students learn, there is need to further research into how students' performance in chemistry have been affected by their use of social media and learning style.

Hwang, Kessler & Francesco (2004) demonstrated that students' social networking with teachers and peers boosts their knowledge acquisition and improve their academic performance. Mobile Facebook has been investigated to be a better learning environment in higher education than commonly used learning management system in facilitating interactions, communication, collaborations and learning motivation (Chen 2014)

Mobile Facebook provides a learning environment more suitable than other learning management system that educators are

already familiar with especially in facilitating opportunities for interaction, disseminating learner-created content, student engagement and immediateness (Gabarret et al, 2013). However, research has shown that online social network does not benefit all aspects of learning (Friesen & Lowe, 2012). According to JAMB news report for 2014 UTME results, analysis of the results by JAMB Registrar, Prof. Dibu Ojerinde, candidates scored higher on CBT than the Paper-Pencil Test. Meanwhile, the WAEC Registrar, according to the punch newspaper of 25th August, 2015 linked poor performance of students in Senior Secondary Certificate Examination to distraction caused by social media.

According to Maloney (2007), chemistry performance can be enhanced if teachers can guide learning by facilitating students' conversations about scientific ideas on social networking sites. He also opined that some students failed chemistry because of boring and abstract nature of chemistry class and suggested that students' performance can be improved if social media learning is introduced in teaching chemistry.

It is commonly believed that learning styles are not really concerned with "what" learners learn, but rather "how" they prefer to learn and it is also an important factor for students' academic achievement. Many researchers like Collinson (2000), Garth-Johnson and Price (2000), Cuthbert (2005), Johnson, (2002), are of the view that teaching styles and learning styles should be aligned in order to improve students' performances in schools. However, no particular study has linked the effect of social media and learning styles to performance of students in chemistry. According to Grasha (2000) students with participative learning style are characterized as willing to accept responsibility for selflearning and relate well with their peers. Participant learners are interested in class activities and discussion, and are eager to do as much class work as possible. They are keenly aware of and have desire to meet teacher expectations. Most of the literatures have been on general effects of social media or learning styles on students' performance. This necessitated the need for the Issues in Teacher Education in Africa

researchers to investigate the effect of learning styles and social media on the academic achievement of students in chemistry.

Uses and gratification theory creates theoretical background for reasons why students become addicted to the use of social media. The theory explains that users of social media become addicted to it because of the gratifications they derive such as meeting new friends, chatting, watching online movies, sharing ideas with their peers, etc.

The Problem

Many factors have been highlighted in many studies to have caused poor performances of students in chemistry especially the inability to meet the required quota of 60 percent intakes in higher institution of learning for science and technology related disciplines as desired by the Nigerian Federal Government. Little attention has been paid to the use of social media and learning styles of students as they affect students' achievement in chemistry most especially in Nigeria.

Learning styles and social media usage by students have ways of playing significant roles in the performance of students in chemistry. It is not a gainsaying that social media has now become part of students' lives which they cannot do without logging on to the internet daily. Various researches have been done on the effects of social media on the academic performance of student without considering learning style as a mediating factor. This study therefore investigated the types of learning styles and social media prevalent among the students and the relationship with their performance in chemistry.

This study provides answers to the following questions:

- 1. What are the things chemistry students usually share on social media?
- 2. What is the most preferred social media among senior secondary chemistry students?
- 3. Is there any difference in the use of social media by male and female chemistry students?

- 4. What is the strength and direction of relationship between the use of social media and students' achievement in chemistry?
- 5. What is the pattern of learning of learning styles among senior secondary chemistry students?
- 6. What is the strength and direction of relationship between the performances of students with different learning styles?

Methodology

This is a descriptive study. The variables studied are users of social media, learning styles and students' achievement in chemistry. The target population is all the public senior secondary school students in class 2 (SSS 2) in Abeokuta South Local Government Areas of Ogun State, Nigeria. Five Secondary Schools were randomly selected from the local government area, while forty SS2 chemistry students from the selected schools were purposively selected. A total of 200 students make up the sample for the study.

Three instruments were used for the study. These are

- 1. Chemistry Achievement Tests (CAT)
- 2. Grasha-Riechmann Student Learning Style Scale (GRSLSS)
- 3. Social Media Usage Scale (SMUS)

The chemistry achievement test was made up of 30 validated multiple choice test covering topics such as atoms, elements and compound; gas laws, organic chemistry and metals and non-metals. Kuder-Richardson formula 20 was used to estimate the internal consistency of CAT with a value of 0.82.

The Grasha-Riechmann Student Learning Style Scale (GRSLSS) was adopted from Grasha-Riechmann (1999). The scale includes six styles (dependent, independent, collaborative, avoidant, competitive and participatory) each of which composed of 10 items. In the present study however, the items were reduced to 5 each with some level of re-construction. The respond format

has four options, in Likert style: *very true of me, true of me, almost true of me* and *not true of me*. The final instrument was re-validated using Cronbach alpha with a reliability coefficient of 0.79.

The social media usage scale (SMUS) was developed by the researchers. It consisted of 15-items with 4-point response like those of the learning style scale. The Cronbach alpha reliability estimate was 0.85. Descriptive and Inferential Statistics were used to analyse the data gathered.

Results and Discussion

Research Question 1: What are the things chemistry students usually share on social media?



Figure 2: Percentage Usage of Social Media

Chemistry students like other youths chat and browse (80%) more in the internet through different social media. As reported by Johnson (2008), Lenhart (2009), Boyd (2007) and Schill (2011), young adults share more information such as pictures, birthday messages video than sharing knowledge. In this present study, only 41% of the students admitted that they try to discuss questions (on any school subject).

Research Question 2

What is the most preferred social media among senior secondary chemistry students?

Figure 3 shows the frequency distribution of the respondents according to the type of social media chemistry students visit Figure 3: Percentage of Respondents and Type of Social Media Prevalent among chemistry students



Social Media

The bar chart above shows the distribution of respondents according to their most preferred social media. From the figure it is shown that 171 respondents use social media while 29 respondents do not use any of the six social media. It is also clear that out of the six types of social media, Facebook accounted for the highest percentage 57% (114 respondents), 2go, 19% (38 respondents), eskimi 4.5% (9 respondents), whatsapp 4.5% (9 respondents) and bad oo 0.5% (1 respondent). This means that Facebook is the most preferred social media among senior secondary students. This agrees with the observation of Chan and Bryer (2012) in which 750 million young adults worldwide admit they use Facebook, the highest among other social platforms. Olukayode and Olukunle (2014) also supported by declaring that 1000 (90.2% of the respondents) of the first year undergraduates from University of Ibadan use Facebook more than other social media outlets.

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The opportunities provided by Facebook to the users might have accounted for the prevalence of the site among secondary school students. These opportunities are; ability of the users to create personalized profiles that includes general information such as education background, favourite interests, date of birth, and city. It also provides opportunity to post messages on friends' page, easy to find old friends, post and tag pictures and video among other things.

Research Question 3: Is there any difference in the use of social media by male and female chemistry students?

Table.3: Showing difference between social media usage by male and female Chemistry students

	Sex	N	Mean	SD	Т	Df	Sig.
Social Media	Male	102	36.69	8.72	1.658	198	.09
Score	Female	98	34.60	9.06			

Table 3 shows that there is no significant difference in the use of social media by male and female chemistry students, $t_{(198)} = 1.658$, p > 0.05; both male and female chemistry students use social media equally. This is in agreement with the findings of Bonds-Raackes and Raackes (2008) which according to the researchers, the number of boys and girls on social media is equally divided In contrast to this result, some studies show variations in the number of males and females on social media. Lin and Subrahmanyam (2007) found out in their study that boys are always online more than girls because of earlier forms of technology such as video or computer games. Thelwall (2008) and Lenhart and Madden (2007) also found out that males tend to use more social media than females. However, Giles and Price (2008) reported that girls use the internet more than boys.

Research Question 4: What is the strength and direction of relationship between the use of social media and students' achievement in chemistry?

The relationship between the use of social media and students' achievement in chemistry though positive, is very low and of no statistical significance r = 0.07, p > 0.05. This means that the use of social media, did not really contribute to students achievement in chemistry. Students are not making any fruitful use of social media in their studies. This is sad, in spite of the proportion of time they devote to these social outlets in the productive age it does not reflect in their academic performances. Ahmed and Qazi (2011) also observed no significant relationship between the use of social media and students' academic performance. However, Pasek & Hargittai (2009), Junco, Heibergert, & Loken (2011) reported that the use of social media actually increase students' academic performance.

4.5: Research Question 5: What is the pattern of learning styles among the senior secondary student?

The pattern of learning styles among the students that took part in the study is shown in figure 5

Figure 5. : Descriptive statistics of Learning Styles



It can be observed that participant learning style has the highest mean (16.46) and highest mode (20), followed by avoidant style (Mean = 15.88, mode = 17). Collaborative (Mean = 15.80, mode = 16), dependent (Mean = 13.38, mode = 14), competitive (Mean = 12.32, mode = 11), independent learning style has the lowest mean score (9.37).

This result is contrary to the findings of Mahamod, Embi and Yunus (2010), according to them art students have tendency towards collaborative and participative learning styles, while science students prefer independent learning style.

Research Question 6: What is the strength and direction of relationship between chemistry achievement of students and different learning styles?

i enation tab	le of Leaf	ing Sejies	and chemis			
Chemistry	Dependent	Interdepend	Collaborative	Avoidant	Competitive	Participant
achievement		ent				
1						
.002	1					
162*	0.62	1				
020	.370**	.141*	.429**	1		
.033	.288**	.159*	.191**	.268**	1	•
.031	.390**	124	.298**	.469**	.335**	1
	Chemistry achievement 1 .002 162* 020 .033 .031	Chemistry achievement Dependent 1	Chemistry achievement Dependent Interdepend ent 1	Chemistry achievement Dependent Interdepend ent Collaborative ent 1	Chemistry achievement Dependent Interdepend ent Collaborative ent Avoidant 1	Chemistry achievement Dependent interdepend Interdepend Collaborative Avoidant Competitive Competitive 1

 Table 4: Correlation table of Learning Styles and Chemistry Achievement

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

Table 5 shows the relationship between learning style preferences and achievement of students in chemistry. There is negative correlation between chemistry achievement and independent style, r = -.162, p<.05, collaborative style, r = -.082, p> .05 and avoidant style, r = -.020, p> .05. On the other hand, the result shows positive correlation between chemistry achievement and dependent style, r = .002, p> .05, competitive style, r = .033, 0> .05 and participant style, r = .031, p> .05.

Based on the result, there is no statistical significant relationship between chemistry achievement and learning styles. Although there is significant relationship between chemistry achievement and independent style, the strength of the relationship is very small and negative. This result is in line with the submission of Bloomer and Hodkinson (2000) who criticized learning style research, to them students' academic performance does not depend on their learning styles. But contrary to this result, Garth-Johnson and Price (2000) pointed out that learner's unique learning style and their academic achievements are strongly related. Collinson (2000) and Snyder (2000) found out that students' academic achievement differed due to different learning styles. The results of the study conducted by Grasha and Yangarber-Hicks (2000) indicated that students who got distinctions in science courses were independent learners, but there was no relationship between competitive learning style and achievement.

Conclusion and Recommendations

The research has shown that Facebook is the most commonly used social networking site and participative learning style is the predominant learning style among chemistry students. There was no significant relationship between students' achievement in chemistry and learning styles, though a weak but positive relationship exist between independent learning style and achievement in chemistry. There is no remarkable relationship between use of social media and students' achievement in chemistry, even though students spend a great proportion of their time on chatting and browsing they do not use it productively to enhance their academic achievement in chemistry.

Teachers can make students more participative and independent in their learning by engaging them in social media learning since most students are on social media network. Chemistry teachers can share topics, ideas and information with students on social media. He/she may posts assignment to them on social media, and the students post back the solutions to assignment to their teacher within a stipulated time; though this will require more commitment from the teachers. School administrators should try to find ways of incorporating social media into learning and this can only be achieved if school proprietors and government create internet access in schools.

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17

USE OF COMPUTERS, COMMUNICATION MEDIA TECHNOLOGIES, COMMUNITY RESOURCES AND INNOVATIVE TEACHING APPROACHES IN IMPLEMENTATION OF THE ICT SENIOR SECONDARY SCHOOL CURRICULUM

A. O. Otunla

Introduction

The Nigeria secondary school education system is presently going through curriculum review and re-classification with the intent to transform Nigeria as one of the twenty world economies by the year 2020. The attempt has led to the reviewed National Policy of Education with the inclusion of newly introduced and revised thirty-four trade/entrepreneurship subjects in the Nigeria senior secondary school system. The new trade and entrepreneurship subjects were included with the main goal of preparing beneficiaries for higher education as well as to acquire relevant functional skills in trade and entrepreneurship education so to prepare them for career prospects that fits into future jobs and employment opportunities.

This chapter analysed some important issues on curriculum review and its implications on the newly introduced and reclassified trade and entrepreneurship subjects in the Nigeria senior secondary school education. The chapter made suggestions on technology-based teaching approaches which integrate ICT tools and resources, communication media as well as community resources and innovative teaching approaches for effective implementation of the new secondary school curriculum to bring about the realization of the dream to bring about industrialization to the Nigeria economy. The chapter also recommends teachers' capacity building in innovative and technology-based learning, engagement of resource persons within the community to inculcate trade practices and functional education in students.

The curriculum is an integral part of all formal system of education mostly driven by schools, colleges and universities in all parts of the world. The main goal and objectives of any curriculum should be geared towards meeting desirable societal needs in terms of economic, social-political and technological growth and development. Curriculum in its wider meaning is a planned action of activities or experiences that students are to be exposed to, under the guidance of the school; it also encompasses the entire programme of activities teachers and students engage in (Okwilagwe, 2012). According to Clinical Educational Services Analysis (CESA, 2009) curriculum is used to refer to what students should know and be able to do in each content area; and it encompasses the district or school adopted progress and written plans for providing students with learning experiences that lead to expected knowledge and skills. Curriculum review and modification is the process of re-inventing the existing ones in line with new ideas, new knowledge and emerging trends that are borne out of daily living, research and technological development. This implies that the curriculum is an organised framework for learning that requires proper implementation.

General Components or Elements of the School Curriculum

According to (Okwilagwe, 2012) the curriculum layout encompasses four main components or elements; they are:

- **The objectives:** The objectives give direction to what is to be taught and how it should be assessed.
- The learning experiences: Learning experiences are related to development of skills in critical thinking, logical

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thinking and inductive thinking which can lead to problem solving. It also involves acquisition of information in terms of principles, laws, theories, ideas, facts, terms and so on.

- **The methodology:** The methods usually include the materials to be used to present the contents meaningfully and learnable.
- **The evaluation process:** The process of evaluation must be relevant to the objectives set-out and should be achievable

Rationale for Curriculum Review and Development of New Curriculum

There are many factors that may necessitate the need for curriculum review or introduction of a new one. Some of the factors identified by Okwilagwe (2012) are enumerated as follows:

- Change in societal development and modernity,
- Change in values, attitude and philosophy of a group of people,
- Rapid technological changes such as when old technology cannot be sustained,
- When there is need for reforms in line with country's need to comply with global best practice and competitiveness.

The author further listed some factors that may necessitate the update of an existing curriculum which include:

- Changes in educational objectives,
- Changes in ideas, or ways of thinking,
- Changes in attitude and ways of doing things e.g. strategies and methods of teaching,
- Societal irrelevance or inability of the curriculum to meet social needs of the people.

Structure of the Nine-Year Basic Education Curriculum and the New Secondary School Education Curriculum

According to Obioma (2012) the structure of the Nigerian Educational Research and Development Council (NERDC) curriculum has three levels i.e. Primaries 1 - 3, Primaries 4 - 6 and Junior Secondary School 1-3. Thus the curriculum was reviewed in 2006 and its implementation began in 2008, the first set of the beneficiaries graduated from JSS in 2011. Obioma, (2012) states further that NERDC in the process of conducting monitoring of the curriculum implementation, because it observed and discovered some challenges on the curriculum, thus the need to reduce the subject overload to the extent of monitoring the implementation is take a critical look at the strengths and weaknesses in the entire process and improve upon it and at the end to revise the curriculum as it is done all over the world.

General Overview of the new secondary school curriculum recently launched was developed with following objectives:

- To prepared graduates of the programme for higher education
- To produce graduates who have acquired relevant functional trade/entrepreneurship skills.
- To produce graduates who have value for job creation, wealth generation and poverty eradication.
- To produce graduates who have foundation in ethical, moral and civic values

Challenges of Curriculum Implementation

There is no doubt about the fact that new initiates in curriculum development and or review come with some unique problems. Falaye (2012) identified some of the challenges of new or newly reviewed curriculum to include:

- Provision of adequate and improved infrastructure,
- Production of teachers in quantity and quality,

- Provision of instructional materials e.g. new textbooks, etc
- Re-orientation of the society about the new curriculum Okwilagwe (2012) further added another dimension of

these challenges, which are regarded as negative effects that are observable in the implementation of any new curriculum, these are:

- Poor production or re-production of the curriculum,
- Curriculum over-load,
- Subject teacher incompetence,
- Confusion in students' learning outcomes,
- Constant revision of textbooks or dearth in relevant books,
- Development of apathy by school authority and potential subject teachers,
- High failure rate and possibly increase in school drop-out.

Integration of Computers, Communication Media Technologies, ICT Tools and Community Resources into the New Secondary School Curriculum Implementation

In line with the global trends and international best practice in education, effectively implementation of any new curriculum depends on application of modern technology and use of relevant community resources. Community resources refer to harnessing and maximum use of available skills and resources of both human and materials within the community (including the school or academic community) for production and educational advancement leading to economic and knowledge growth within the community (Otunla, 2014). The United Nations Educational, Scientific and Cultural Organization (UNESCO) being a catalyst in policy formulation and capacity building has made useful contributions to provision of ICTs resources for the development of education, science and culture. In area of policy formulation, UNESCO in 2002 sponsored a consultative workshop that formulated a working definition of ICT which states that: ICT is the term used to describe the tools and the processes to access, retrieve, store, organise, manipulate, produce, present, and exchange information by electronics and other automated means. These means include hardware, software and telecommunication in the form of personal computers, scanners, digital cameras, phones, faxes, modems, CD and DVD (digital view disc) players and records, digitalized video, radio and TV programmes, database programming, and multimedia programmes (UNESCO, 2002, P.75)

Furthermore, UNESCO (2008) proposed technology literacy approach which was designed to prepare learners, citizens and a workforce that is capable of taking up new technologies to support social development and improve economic productivity. Therefore, the UNESCO (2008) ICT-Computer Standard for Teachers (CST) provide guidelines for all teachers that will prepare them to play an essential role in producing technologycapable students by providing technology-supported learning opportunity for their students. Teachers' development of competences in relation to the technology literary approach includes ability to:

- Use word processing, presentation, graphic, record keeping software package and digital resources to support instruction and record management.
- · Create and use; an e-mail account for correspondences, common social networking communications and web-based collaboration technologies to help students collaborate, access information and communication external experts.
- Use a search engine to access web or ICT resources to enhance productivity and acquisition of subject matter and pedagogical knowledge e.g. on-line journal,

Table 1 present a summary of the Computer and ICT relatedskills and activities.

Computer Literacy Skills: Teachers are required to demonstrate ability to use;		Computer Communication Skills: Teachers are required to demonstrate ability to create and use:			Internet Search Skills: Teachers are required to demonstrate ability to use a search engine to:		
?	word processing,	?	an e -mail account for	?	access web or ICT		
?	presentation software,		correspondences,		resources to enha nce		
?	graphic applications,	?	common social networking		productivity,		
?	record keeping		communications,	?	acquire subject		
	software package,	?	web-based technologies to		matter, pedagogical		
?	digital resources to		helpstudents collaborate,		knowledge,		
	support instruction and		access information and	?	access on -line		
?	record m anagement		communicate with external		journals and		
	software packages.		experts.		resources.		

Source: ICT-Computer Standard for Teachers (CST); UNESCO (2008)

Approaches to Integration of Computer Technology, ICT Tools, Community Resources and Innovative Teaching in the New Secondary School Curriculum Implementation

The UNESCO and the Federal Government of Nigeria (FGN) programme for about a decade organized series of workshops, seminars and trainings in form of capacity building for teachers in Technical and Vocational Training and Education (TVTE). The programme was sponsored by the UNESCO in conjunction with the Federal Government of Nigeria on Computer and ICT application in teaching for teachers alongside provisions of infrastructural facilities (UNESCO, 2002). All these efforts are geared towards effective integration of computers and ICT tools and media resources into teaching and learning of TVET especially in the post-secondary technical institutions like polytechnics and technical colleges of education.

There are three major approaches to Computers and ICT tools and resource integration in teaching and learning especially in the 21^{st} century classroom, they are:

- a. **Direct Integration:** where computer-mediation substitutes for teachers on a temporary basis i.e. whole delivery of topics or concepts or modules or courses using computer tools and devices.
- b. **Supplementary integrationinto Classroom Teaching:** where computer-mediation provides complementary teaching resources not otherwise available within the classroom environment; and
- c. **Out of Classroom Integration:** where computer mediation provides general and informal educational opportunities through the open source, for students' information, personal studies, home assignment, supplementary resources e.t.c. outside the classroom or learning environment.

The three approaches are graphically presented and illustrated in Figure 1:



Figure 1: Approaches to Computers and ICT Integration into the New Secondary School Curriculum

Thus, instructional use of computers, ICT tools and resources including mobile devices are applicable to a variety of concepts and skills acquisition under the technical, vocational and entrepreneurship curriculum. Hitherto, instructional application of computers in teaching and training is also termed as 'Computer-Mediated Learning' (CML), Otunla (2012) define Computer-Mediated Learning as 'the integration and use of computers, discbased and/or web-related tools and applications in combination with multimedia technology useful for a broad range of interactive learning modules that enhance learners' knowledge and performance'. The following are suggestions on how to effectively integrate computers and communication media technologies into the new curriculum secondary school curriculum as contained in the National Policy on Education (FRN, 2013). Details of suggested ICT integration strategies are presented in Table 2. Table 2: Integration of Computers, Communication Media Technologies, Community Resources and Innovative Teaching Approaches for Compulsory, Science, Technology, Humanities and Business Subjects

Subject Classifications / Compulsory Subjects	Computers and Communication Media Technologies	Community Resources and Innovative Teaching Approaches
Compulsory Cross-Cutt	ing Subjects	
 English Language, General Mathematics, One Trade /Entrepreneurship Subject Civic Education 	 ? Computer-Mediated Learning (CML) in form of: ? Robots, ? Animation objects ? Learning objects, ? e-books, ? Electronic simulation, ? Internet tools, ? Multimedia resources; video and audio materials, ? Digital photographs, ? Documentary videos, ? Streaming video, et c. 	 ? Use of Community resource persons within the school locality e.g. ? Playwrights / Poets, ? Artiste, ? Dramatist/ ? Artists / Artisans, ? Local Drummers ? Technicians / Repairers, ? Traders/Entrepreneurs, ? Community / Religions leaders ? Study visits, ? Excursions ? Internching et c.
Other Fields of Studies	· Streaming video c.t.e.	? Internships, e.t.e
Science & Mathematics 3. Biology 4. Chemistry 5. Physics 6. Further Mathematics 7. Health Education 8. Agriculture 9. Physical Education 10. Computer Studies	 ? CML in form of ? Robots, ? Animation objects / ? Learning objects, ? e-books, ? Electronic simulation, ? Internet tools, ? Multimedia resources; ? Video / audio materials, ? Digital photographs, ? Documentary videos ? Streaming video e.t.c. 	 ? Use of Community resource persons within the school locality e.g. ? Farmers, ? Scientist, ? Statisticians, ? Doctors, ? Nurses, ? Health workers. ? Technicians / Repairers, ? Study visits / Excursions ? Internships, e.t.c
Technology 11. Technical Drawing 12. General Metal Work 13. Basic Electricity 14. Electronics 15. Auto Mechanics 16. Building Construction 17. Woodwork 18. Home Management 19. Food and Nutrition	 ? Computer hardware and software applications: ? Corel Draw, ? Instant Artist, ? Microsoft Office Package: ? MS Word, ? MS Excel, ? MS PowerPoint, ? MS Access, ? MS Publisher, ? Digital camera, 	 ? Engagement of Community resource persons within the school locality e.g. ? Draftsman / surveyor ? Artisans, ? Mechanics / Repairers, ? Technicians/ Electricians ? Builders / Bricklayers ? Masons / Carpenters, ? Caterers / Bakers,

 Table 3: Integration of Computers, Communication Media Technologies, Community

 Resources and Innovative Teaching Approaches for Trade and Entrepreneurship

Trade / Entrepreneurship		Computers and		Community Resources		
Sul	ojects	Communication Media		and Innovative Teaching		
	-	Technologies	A	pproaches		
1.	Auto Body Repair and Spray Painting	? Computer-mediated	?	Engagement of		
2	Auto Electrical Work	2 Multimadia resources:		persons within the		
3	Auto Mechanical	2 Video and audio		school locality e g		
	Work	2 Video and addio	2	Artisans / Craft men		
4.	Auto Parts	2 Video Clins of	· 2	Spare parts traders /		
	Merchandising	procedures and	·	seller		
5.	Air Conditioning and	demonstrations	2	Technicians		
	Refrigeration	2 Animated objects	1	Artigong		
6.	Welding Fabrication	2 Multimadia matariala		Waldans		
	and Engineering Craft	2 - h 1		Craft man		
	Practice	? e-books,				
7.	Electrical Installation	? Digital camera,	?	Electricians,		
	and Maintenance Work	? Simulated hatchery,	?	Technicians,		
8.	Radio, TV and	? Simulated farms,	2	Broadcasters,		
	Electronic Servicing	? digital photographs,	2	Radio Repairers		
9.	Block Laying, Brick	? Documentary videos,	?	Television Repairers,		
	Laying and Concrete	? Home video,	?	Masons,		
	Work	? Movies,	?	Builders		
10.	Painting and		?	Block makers		
	Decoration	? Computer hardware and	?	House Painters		
11.	Plumbing and	software applications:				
	Pipefitting	? Corel Draw,	?	Plumbers,		
12.	Machine	? Instant Artist,				
	Woodworking	? Microsoft Office	?	Saw millers		
13.	Carpentry and Joinery	Package:				
14.	Furniture Making	? MS Word,	?	Joiners / Carpenters		
15.	Upholstery	? MS Excel,	?	Furniture makers,		
16.	Catering Craft Practice	? MS PowerPoint,	?	Caterers /Bakers		
17.	Garment Making	? MS Access.	?	Tailors/Fashion		
18.	Clothing and Textiles	? MS Publisher,		Designers,		
19.	Dyeing and Bleaching	? Digital camera.	?	Local weavers		
20.	Printing Craft Practice	? Internet tools.	?	Cloth makers e.g. Adire		
21.	Cosmetology	? Multimedia resources:	2	Hairdressers.		
22.	Photography	?Video / Audio materials	2	Photographers.		
23.	Mining	2 Digital photographs	2	Local miners		
24.	Tourism	2 Documentary videos	2	Tourist Guides		
23.	Leatner Goods	2 Animations / Simulations	2	Leather makers		
	Manufacturing and	2 Comifications / Comes	·	Louder makers,		
	Repairs	? Gamifications / Games				

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Conclusion

Nigeria being one of developing nations aspiring to become one of the twenty highly industrialized nation of the world by the year 2020 should revitalize see to the effective implementation of new secondary school education curriculum. This feat is achievable through the use of relevant computers and communication media technology tools and resources alongside engagement of relevant human capital within the community as resource persons. It is envisaged that young secondary school leavers should benefit from the new drive in entrepreneurships and get them prepared for higher education. The lists of computer and information and communication technology tools and resources that are applicable to curriculum implementation are inexhaustible. The recommended tools and resources may be applicable depending on their availability and technical knowhow of teachers on how to use them. Moreover, for the proposed framework to become a reality there should be provision of technology facilities and infrastructure to be accompanied by capacity building of manpower in the Nigeria secondary school system.

Recommendations

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Arising from the facts presented above the following suggestions are put forward:

- Teachers should engage their students using available technology devices and tools in teaching and studio / laboratory demonstrations.
- The school management should engage and collaborate with individuals who are experts and professional within the community to assist in the implementation of some areas of the trade curriculum especially as regards practical skills.
- The school should organise study visits, excursions and field trip to places where students could learn directly from local practitioners like artisans and other professionals.

- The school authorities should solicit for support from parents and old students for provisions of personal computers tools and accessories, multimedia equipment Internet access, modems, accessories e.t.c.
- Furthermore, computer and ICT skills capacity building should be organised for all teachers within the school system.

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18 SUSTAINING AND RETAINING STUDENTS' INTEREST IN SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) THROUGH MOTIVATION AND ACTIVE ENGAGEMENT

Temisan A. Ige

Introduction

The need for nations to prepare a diverse work force to meet the science and engineering challenges of the twenty-first century has brought about a flurry of activities mainly targeted at preparing students at various levels of the educational system.. Governments have also shown great commitment as evidenced by policies enacted and funds provided to support this quest. In a world that is becoming increasingly complex, where success is driven not only by what you know but by what you can do with what you know it is more important than ever for students to be equipped with knowledge and skills to solve tough problems, gather and evaluate evidence, and make sense of information. These are the types of skills that students learn by studying Science, Technology, Engineering and Mathematics, the subjects collectively regarded by the acronym STEM.

Tsupros, Kohler and Hallinen (2009) refer to STEM education as an interdisciplinary approach to learning where rigorous academic concepts are coupled with real-world lessons with a view to ensuring that students apply science, technology, engineering, and mathematics in contexts that make connections among school, community, work and the global enterprise maximally harnessed to enable the development of STEM literacy and with it the ability to compete in the new economy. Therefore STEM in the submission of President Obama (2015) is more than a school subject, or the periodic table, or the properties of waves. It is an encounter with the natural world or rather an approach to the world. It is a critical way to understand and explore as well as engage with the world, and then have the capacity to change that world.

It follows that, STEM should prepare the youth to think deeply and to think well so that they can have the chance to become the innovators, educators, researchers, and leaders who can solve the most pressing challenges facing our world, both today and tomorrow. The part to be played by teachers in implementing STEM education is crucial especially in the light of revelations from various researches conducted in Nigerian universities that there is gross under-achievement of students in STEM subjects. This is as a result of various factors related to students, teachers, schools, government, parents and stakeholders (Okpala,2011). Researchers in other countries have also found that at higher levels many students lose interest and drop out from STEM classes for reasons linked to classroom climate(high anxiety levels),teachers who were disengaged and uncommitted to students learning, and stereotyping (Seymour, & Hewitt, 1997, O'Neal, Wright, Cook, Perorazio, & Purkiss, 2007).

Therefore it is pertinent for schools and teachers to devise ingenious ways of sustaining and retaining students' interest in STEM subjects through motivation and incentives in order to maximize learning opportunities.

This paper examines the issue of students' interest in STEM and proposes strategies that could be used to initiate and sustain students' interest in STEM and to support their retention in the field.

Factors that Influence Students Interest in Stem

One concern of science educators as highlighted in literature is the increasing reluctance of students to participate in STEM education (Boe, Henriksen, Lyons & Schreiner, 2011;Okpala, 2011).Many suggestions have been made as to reasons why students may not want to continue in STEM. Brown, Hershock, Finelliand O'Neal (2009) in their study of retention of college students in STEM identified four factors which predisposed students to stay or leave STEM. These related to pre-college characteristics (family background, skills and abilities and prior schooling) and institutional experiences (including classroom climate, feedback on learning, inquiry based learning, and exposure to realworld/application to careers). In the study, students indicated interest in classes where the classroom climate was favourable in decreasing their anxiety levels, where they felt welcome in the class, and felt well supported by their teachers. However they lost interest when the teacher was perceived as unsupportive, disrespectful and uncommitted. The classroom climate with respect to teacher - student interactions could encourage or limit students' interest or involvement especially when some students feel excluded in class activities or questioning patterns of the teacher.

Another influence has to do with the time of exposure to STEM education. More interest and commitment was recorded where children are introduced to STEMearly (Bagiati., Yoon, Evangelou & Ngambeki, 2010; Boe et al., 2011). Early exposure to STEM supports children's overall academic growth, develops early critical thinking and reasoning skills, and enhances later interest in STEM study and careers (National Research Council, 2011).Other issues which could affect students' interest relate to their home background and school factors such as well-prepared teachers and good learning environments. Where home backgrounds are rich, students are exposed to science based learning resources like computers, internet, games and toys and may have the opportunity to experience diverse science Temisan A. Ige

phenomena such as visits to Zoos, parks and fairs. This may not be the case for students from more disadvantaged backgrounds.

Schools may have a shortage of qualified and experienced teachers who have the required content and pedagogical knowledge to anchor STEM education or the confidence to let students know that there is nothing mystical about science. Such unqualified and inexperienced teachers may exhibit poor preparation for instruction, avoid the topics they find difficult, show a lack of commitment to class instruction. They are also unable to use novel teaching strategies and to deploy technology in instruction; In addition, the provision of resource rich environments to support instruction may be inadequate as many schools lack the necessary equipment and materials to support the teaching and learning of science. Laboratories may also lack the creativity and knowledge to improvise instructional materials and equipment.

Strategies to Increase Students' Interest in Stem.

The teacher has a very vital role to play in initiating and sustaining students' interest in STEM. To be able to do this, he/she must have been exposed to adequate training to acquire the knowledge and skills relevant to his/her field. Many pre-service and in-service teacher education programs prepare their graduates with insufficient skills on technology use. As a result, many newly graduated teachers do not have sufficient experience to use computers in the teaching-learning processes (Kurz& Middleton, 2006). Brush, Glazewski, and Hew (2008) found that though technology education classes adequately prepare pre-service teachers with lower-level technology skills, they do not provide pre-service teachers with the requisite knowledge to provide technology-based instruction in their classrooms. In Nigeria, the use of technology is virtually non-existent in most public schools. Where computers exist, teachers are not skilled enough to use them. Another area where teachers need to be adequately trained

if they are to motivate students' interest in STEM is in the use of novel teaching strategies mainly those that encourage active learning and full engagement of students in the learning process. For students also to develop interest in STEM, they must be actively engaged in the learning process using a variety of these engagement strategies.

According to Kuh, Cruce, Shoup, Kinzie, and Gonyea (2008), students' engagement is defined as students' involvement in activities and conditions that are linked with high-quality learning. A key assumption is that learning outcomes are influenced by how an individual participates in educationally purposeful activities. While students are seen to be responsible for constructing their own knowledge, learning is also seen to depend on institutions and staff generating conditions that stimulate student involvement. According to Meyers and Jones (1993), active learning involves providing opportunities for students to meaningfully talk and listen, write, read, and reflect on the content, ideas, issues and concerns of an academic subject. The following are some suggested engagement strategies that can be used by teachers to foster interest in STEM.

Strategy 1- KWL

In this strategy, students interact with the material to be learnt according to the steps as indicated.

- K What do you Know about the topic?
- W What do you Want to know?
- L What did you Learn?

The type of answers the students give to the first question reveals what students already know(their prior knowledge). Where this is correct and relevant, the teacher can help students connect to new content to create interest as they answer the second question. If prior knowledge is faulty or deficient, the teacher can use remediation or give additional scaffolding to aid comprehension. The last question enables the teacher monitor students' comprehension.

Strategy 2 - Think, Pair, Share

Think: Students think independently about the question. Pair: Students are grouped in pairs to discuss their thoughts. Share: Student pairs share their ideas with a larger group

Strategy 3: Think Aloud

Think - aloud strategy helps students learn to monitor their thinking as they are presented with materials to be learned. Students are directed by a series of questions which they think about and answer aloud while interacting with the material to be learnt in text form or as a taught lesson. This process reveals how much they understand the lesson. Here, students express their thoughts regarding the material to be learnt. The teacher can follow and monitor students thought patterns as they respond to relevant questions such as

- 1. What do I know about this topic?
- 2. What do I think I will learn about this topic?
- 3. Do I understand what I just been taught?
- 4. Do I have a clear picture in my mind about this information?
- 5. What more can I do to understand this?
- 6. What were the most important points in this lesson?
- 7. What new information did I learn?
- 8. How does it fit in with what I already know?

This strategy could be carried out either in pairs, small groups or individually; and the teacher could offer structured feedback to students.

Strategy 4: Concept mapping

Concept maps are diagrammatic representations of the major semantic relationships among a set of conceptual terms. Modes represent concepts and lines between the concepts show relationships between concepts. In a concept map, the diagram goes from the top to bottom of a page with the core concept at the top and associated concepts below it in bubbles or boxes, with lines or arrows illustrating the relationships between the concepts. The purpose of a concept map is to organise ideas or concepts, and to show how they are interconnected. Figure 1 shows an example of a concept-map.



Strategy 5: Use of games

Using games as teaching tools are an effective way to stimulate students' interest in learning especially for the digital generation. When learning is made more engaging through the use of games, students will be better motivated. Games train students to follow directions, make decisions and find out new information by themselves thereby taking charge of their learning. In addition, the features of competition, teamwork and reward in many games make them motivating for students. The presence of quick and specific feedback enables students to figure out the right way to succeed. Games could be used individually or collaboratively. They could also be traditional board games or electronic/ digital games.

Other strategies that could be used to motivate students for learning STEM include problem-solving, integration of technology in instruction (computer based instruction), Reflections using a variety of strategies (journaling/diary keeping, storytelling and focus group discussions), Use of songs and rhymes, field trips, individual and group projects.

The Role of the Teacher in Implementing Motivational Engagement Strategies

The teacher has a vital role to play in ensuring that students' interest in STEM is aroused and sustained throughout the duration of schooling such that students become committed to remaining in STEM fields. According to Darling Hammond(1998), teaching is the most important element of successful learning as what teachers know and can do makes the crucial difference in what children learn. Therefore, for teachers to be effective in implementing engagement strategies and in motivating students to remain in STEM, they need to be mindful of relevant issues related to the teaching and learning of STEM and be committed in carrying out actions that will ensure success in attaining the required objectives. The relevant issues to be borne in mind are:

- The nature of STEM Education
- The characteristics of STEM learners and,
- · Effective learning environments for STEM

The Nature of STEM Education

Science, Technology, Engineering and Mathematics education integrates concepts that are usually taught as separate subjects in different classes and emphasizes the application of knowledge to real-life situations. A lesson or unit in a STEM class is typically based around finding a solution to a real-world problem and tends to emphasize project-based learning. Through STEM education, students learn to become problem solvers, innovators creators and collaborators. Though the use of engagement strategies are ideal for helping students learn, these strategies must be aligned with the developmental stage of the students, the nature of topics to be learnt, availability of materials, interests of the learners and even constraints posed by the time-table. In addition the teacher should teach in a way consistent with the nature of STEM by doing the following:

- Engage students in scientific inquiry, asking questions about the universe and nature.
- Involve students in the use of science processes (observation, formulating hypotheses, experimentation, making measurements and interpreting data, communicating findings etc)
- Engage students actively in carrying out authentic problem-solving tasks
- Get students involved in the collection and use of evidence
- Make students design and carry out projects individually and collaboratively
- Make students work in teams (team approach).
- Encourage active and meaningful learning and deemphasize rote learning.
- Provide abundant experience in using tools.
- Provide opportunities for students to participate in school/industry partnerships.

The Characteristics of STEM Learners

The nature of STEM education demands that learners 1. should exhibit certain attitudes and values typical of scientists. Some of these are: curiosity, objectivity, suspended judgement, avoiding dogmatism, accuracy in reading instruments and being meticulous in experimentation and data collection. STEM learners should be active learners prepared for both hands on and minds on learning tasks and be good communicators who can clearly express their findings and interpretations with reasonable arguments. These learners need to develop skills for critical thinking and making judgements, creativity and independent learning and ultimately for taking control and monitoring their own learning (metacognition). The STEM teacher has to provide opportunities for students to develop these characteristics and enrich their experiences as they are enabled to become active participants in a learning community.

Effective Learning Environments for STEM Education.

The environment in which teaching and learning takes place contributes to a large degree to the learning success attained by students. According to Henderson, Fisher and Fraser(2000) and Scott(2003) an effective strategy for achieving better examination results is to create and maintain more effective learning environments through the development of more studentcentered classrooms and greater reflectivity in classroom interactions of teachers.

Alausa (2007) holds the view that teacher classroom interaction is central to effective curriculum implementation as it has a strong influence on students' learning outcomes. The type of classroom interaction that will influence students' learning outcomes is manifested in effective learning environments where the teacher exhibits good students' motivation, instructional organization and management. When students are motivated in their studies their interest is aroused and this leads to better achievement and as Terry (2008) noted, students' academic achievement best predicts the kind of motivation students derive from their teachers. Therefore, poor motivation results in low interest and poor achievement. Instructional organization and management deal with issues relating to how a teacher plans, organizes and disseminates information to accomplish tasks or meet goals. It ensures that:

i).the transition from one activity to another is done with minimum loss of instructional time, ii).that students feel a sense of belonging and are relaxed as they learn. Well organized learning environments also help students develop a positive self-concept. A classroom where students feel cared –about, where the teacher is enthusiastic and has good relationships with students is more likely to reduce their learning anxiety and make them more receptive of instruction (AI-Mahrooqi, Abrar-ul-Hassan, & Ashante,2012). For teachers to create effective learning environment for STEM education they should be involved in carrying out the following:

- plan effectively for each class activity making sure learning is hands-on, inquiry-based, and open-ended, content is relevant to students' lives and experiences and be there to give support when necessary,
- build on students success and build in reward systems for completed tasks where possible and provide incentives.
- Ensure the environment students work is free of threats both physical and psychological and facilitate trust relationships (between staff: students and students: students) in order to reduce learning anxieties.
- Encourage collaboration on tasks and provide authentic tasks students can carry out both in and out of the class e.g. use of environmental resources, participation in science clubs and fairs.
- Encouraging school community partnerships, especially in form of school projects based on solving community problems.
- Employ the use of Virtual Learning technologies which are ideal STEM learning tools because they help students formulate authentic mental models of complex phenomena. Mental models begin the process of providing "meaning and form" to ideas (Riggins and Slaughter, 2006).
- Monitor students learning using viable assessment tools to ensure instructional objectives are met.

The use of motivational engagement strategies and the provision of effective learning environments for STEM education imply that teachers must be exposed to vibrant pre-service training and also be involved in continuous professional development, activities; they should also be committed members of professional organizations.

Conclusion and Recommendations

Science, Technology, Engineering and Mathematics, are defined as much by what they do and how they do it as they are by the results they achieve. To understand them as ways of thinking and doing, as well as bodies of knowledge, requires that students have some experience with the kinds of thought and action that are typical of those fields.

Success in STEM requires both technical and nontechnical skills and dispositions. Curiosity, the ability to think logically and creatively in problem-solving, communication skills and the ability to work in teams are all required to succeed in STEM careers. Students need to be inspired in STEM subjects beginning in the basic level of education with course work and extracurricular activities focusing on honing problem-solving skills at higher levels.

The solution to the STEM education problem should be handled in an interdisciplinary manner, which must be grounded in the STEM discipline departments as well as the Colleges of Education and Faculties of Education. Science, Technology, Engineering and Mathematics education should be considered as a targeted education component for graduate students who will later after work experience become the future STEM undergraduate and graduate faculty. Meaningful preparation for STEM teachers should be a priority since they will be responsible for translating the curriculum into classroom practice.

Government also must be committed in terms of appropriate and adequate funding for STEM, support of teacher education programmes, adequate and prompt payment of salaries allowances and incentives for exemplary practices.

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L9 میکی العاد الع

S. A. Amoo & A. O. Amoo

Introduction

In the recent past, the incidences of unstable temperature, heavy rainfall accompanied by flood, desertification accompanied by famine had been a trend in various parts of world. The situation in Nigeria is much alarming. Reports show that these incidences had led to the loss of lives and property in the country and had somewhat crippled the economy (Adepoju and Amoo 2005; Oke, 2010). The denominator of these situations is climate change.

According to the United Nations Framework Convention on Climatic Change (UNFCCC), climate change can be defined as a change of climate which is attributable directly or indirectly to human activities that alter the composition of the global atmosphere and which are in addition to natural climate variability observed over a comparable time periods.

Ayoade (2004) also defines climate change as a long-term shift, alteration or change in the type of climate prevailing over specific locations, regions or the entire planet. From the two definitions above, it is obvious that change is an inherent attribute of climate. And this change is caused by both natural and human factors. The human factors have been identified majorly as industrialization which releases greenhouse gases, followed by

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technological development, urbanization, deforestation and burning of fossil fuel among others. On the other hand, natural factors include solar radiations- quality and quantity, astronomical position of the earth among others.

These factors have been observed to alter the climatic conditions of different parts of the world, resulting in climatic change and devastating extreme weather conditions Leadership (2012). The extreme weather conditions include global warming, drought, desertification, flood, sea-level rise, wind and rainstorm and thunderstorm among others. These actions pose a lot of challenges to mankind. To respond effectively to these challenges, education has a key role to play in promoting, understanding and assisting individuals, the society and the government to make informed choices in relation to activities they take up.

Secondary education is a phase of the Nigerian educational system referring to the six years preceding primary education. It marks the level of educational attainment that prepares students for further education. According to the National Policy on Education (FRN, 2004), it is divided into two parts of three years each – the Junior and Senior Secondary School levels. The content of what is taught in the latter is a result of the foundation built from the former. This level of education is noted to be the climax of basic education every citizen must have even when they decide not to proceed for further education. Vocational subjects taught alongside core subjects are to prepare the students for global competitiveness occasioned by sustainable national development.

Nigeria is regarded as a developing country among the comity of nations. For it to meet with global competitiveness, sustainable industrial development coupled with economic progress cannot be ruled out. Sustainable industrial development and sustainable economic progress cannot be divorced from healthy environment. In fact, sustainable economic development must be linked with healthy environment which is one of the essential needs of the present and future generations.

In response to the importance of education in this, there have been concerted efforts on environmental education in Nigeria in the last two decades, the latest of which is the development of the climate change curriculum. The growth of Environmental Education (EE) in Nigeria was enhanced in the 1990s when the National Council on Education (NCE) approved the National Conservation Education Strategy (NCES) and directed the infusion of EE elements into all school subjects at all levels, starting with the citizenship Education Curriculum (Adepoju and Amoo, 2005; IPCC, 2005). All states were further requested to designate state conservation education coordinators and encourage the establishment of conservation clubs in schools. Subsequently, governmental and non-governmental organizations as well as international agencies collaborated and are achieving some landmarks. The Nigerian Government, through the Federal Environment Protection Agency (FEPA) and other relevant agencies, has undertaken programmes to enlighten, educate, and raise awareness of the Nigerian population through media (both print and electronic) campaigns on environmental issues (Teachers Guide, 2002; NEST, 2003; Leadership News, 2012). Identification, education, and training of officials that would form the cores of the Environmental Education Network nationwide are being undertaken. In addition, the FEPA has encouraged the establishment of Environmental Conservation Clubs in Secondary Schools. It has also collaborated with the Federal Ministry of Education through the National Educational Research and Development Council (NERDC) on the development of an Environmental Educational Master plan and Curricula for both the formal and informal educational system in Nigeria.

Importantly, for Nigeria to be well positioned for active participation in the charge for awareness on Climate Change issues, it would be determined largely by the level of knowledge of students at the secondary school level. Integrating the teaching of climate change issues in various school subjects would no doubt position the country for progressive growth (Akinwunmi and Odunsi, 2008; Oke, 2010). The United Nations Children Fund (UNICEF) recently noted that the compilation of a standard climate change curriculum will create awareness and regulate the effects of climate change on existing and future projects in Nigeria.

It is one thing to develop the curriculum in that line. It is another to observe whether they are implemented appropriately. At the secondary school level, it is expected that the knowledge of a teacher is a prelude to the way he presents his teaching. In view of the fact that across the various subject areas, topics discussing one climate change issue or another are already being embedded and the level of individual students' experience, this paper focuses on analysing secondary school students' knowledge of climate change issues in relation to the implementation process. With this background, the following research questions guided the outcome of the study.

- 1. What are the sources of students' knowledge of climate change?
- 2. What are the sources of students' knowledge of environmental issues?

The choice of these two questions necessitated were based on the objectives of this paper and the next section, which describes how the instrument used to capture the data manipulated together with appropriate methods of presentation.

Methodology

This is a survey research designed purposely to analyse secondary students' knowledge of climate change issues. It is considered appropriate because secondary school students constitute a reasonable percentage of a nation's formal education population. And it is secondary school students that translate into undergraduates. Therefore, their climatic change awareness can go a long way to further understand our planet earth. Also, this design would permit the description of the relationship between the independent (predictor) variables and the dependent variables, thereby answering the research questions and development of generalizations. The researchers designed the instrument to analyse students' reactions to global climatic issues based on their knowledge of them. The instrument consists of a questionnaire comprising of fourteen (14) different items including the personal profile of each student which were all responded to under the supervision of the researchers. The items were grouped into two (1) Climatic change issues (2) Environmental issues. The instrument was subjected to face and content validity. Reliability of the instrument was obtained using Cronbach's Alpha and this was 0.62 for 30 students and with this, the material consistency was ensured.

The researchers personally administered the instrument (questionnaire) to each student in the selected schools. The data collected were coded for the purpose of computer analysis. The research under consideration uses Statistical package for social sciences to run simple percentage and results were discussed.

Results and discussion

The results are presented in tables in this section Research Question One

What are the sources of students' knowledge of climate change? To analyse the source, reference has to be made to Table 3.1.1

Table 3.1.1 Source of Knowledge of climatic change

	Home	School	Magazine	TV Radio	Friend
Knowledge of climatic change	(0.8)	(15.2)	(1.7)	(72.9)	(9.3)
	1	18	2	86	11
Knowledge of global warming.	1(0.8)	75(63.5)	5(4.2)	32 (27.1)	5 (4.2)
Knowledge of greenhouse effects	(0.8)	(69.5)	(5.1)	(22.0)	3
	1	82	6	26	(25)
Knowledge of ozone layer	(4.2)	(29.6)	(5.9)	(54.2)	(5.9)
	5	35	7	64	7
Knowledge of causes of flood	(6.8)	(17.8)	(3.4)	(61.0)	13
	8	21	4	72	(11.0)
Knowledge of acid rain	(5.9)	(39.0)	(4.2)	(44.9)	(5.9)
	7	46	5	53	7

The major source of knowledge of Climatic change Adolescents students is through TV/Radio (72.9%). The same goes for the knowledge of Ozone layer (54.2%), causes flood (61.0%) and causes of acid rains (44.9%). Whereas, the major sources of awareness of the knowledge of Global Warming (63.5%) is other sources not included in the options of home; school; magazine; TV/Radio and friends. The same goes for the knowledge of Greenhouse gases (69.5%).

Research Question Two

What are the sources of students' knowledge of environmental issues?

Table3.2.1 Students' k	nowledge of environmental is	ssues
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	Home	School	Magazine	TV Radio	Friend
Knowledge of causes of environmental	(5.1)	(17.8)	(3.4)	(66.1)	(7.6)
pollution	6	21	4	78	9
Knowledge of effects of environmental	(5.1)	(24.6)	(4.2)	(57.6)	(8.5)
pollution	6	29	5	68	10
Knowledge of indiscriminate bush	(4.2)	(37.2)	(1.7)	(49.2)	(7.6)
burning	5	44	19	58	9
knowledge of deforestation	(4.2)	(47.5)	(1.7)	(45.8)	(0.8)
	5	56	2	54	1
Knowledge of the impact of using fossil	(4.2)	(52.5)	(3.4)	(32.2)	(7.6)
fuels	5	62	4	38	9
Knowledge of improper waste disposal	(9.3)	(43.5)	(3.4)	(38.1)	(7.6)
	11	49	4	45	9
Knowledge of the impact of Industrial	(46.6)	(50.6)	(4.2)	(34.7)	(5.1)
Effluents on the environment	55	60	5	41	6
Knowledge of the impact of Medical	(5.9)	(62.7)	(4.2)	(20.3)	(6.8)
Wastes on the environment	7	74	5	24	8

The major source of knowledge of causes of Environmental pollution is TV/Radio with 66.1%, likewise the knowledge of the effects of Environmental pollution which is 57.6% and knowledge of indiscriminate bush burning effects with 49.2%. The knowledge of effects of deforestation shows a bracket of 45.8% between TV/Radio sources and other sources. For the knowledge of impact of using fossil fuels on the environment, the major sources are others with 52.5%. 43.5% is a percentage for the knowledge of improper waste disposal from TV/Radio since other sources is 3 7.3% for the same knowledge. The most prominent sources of knowledge of impact of Industrial effluent on the environment and impact of Medical wastes are others not stipulated which are 50.6% and 62.7% respectively.

The high awareness levels for climatic change, ozone layer, causes of floods, acid rains, environmental pollution, waste disposal and effect of indiscriminate bush burning among science students could be our indication of the inclusion of these issues in the Social Subjects, Geography, Chemistry and other Science subjects curricula.

Whereas, the low awareness levels of Greenhouse gases, impact of fossil fuel usage on the environment, impacts of industrial effluents on the environment and even the impact of disposal of Medical wastes into the environment could be attribute to the unfamiliarity or low campaign levels of these issues on the mass media.

Most of the respondents claimed that their source of awareness to climate changes issues are the Television and Radio and other sources not stipulated. School source was very low likewise home. This could be an indication that even the general public is less familiar with environmental issues. It then translates to the fact that what parents do not have they cannot give to their children. Jekayinfa and Yusuf (2005) noted this that the ordinary citizen and youths living in rural areas unawareness of the simple steps they might take within their means to manage and control their environment. Oke(2010) also noted climatic and environmental themes are not considered and discussed sufficiently at secondary schools and that secondary school student are not included in environmental projects.

So far, this paper had analysed the knowledge of secondary school students about climate change issues. It was generally observed that there were some variances in the knowledge sources even though they generally have above average knowledge about issues relating to climate change. The study is limited by the case that the location of the secondary schools used are in the Lagos West Senatorial District have no traces of being rural. So, the students reside and school in urban or semi-urban areas generally. It is suggested that a similar study be done in rural/river areas.

Also, to the fact that the majority of the respondents did not trace the source of their knowledge to school and home, it is recommended at this juncture that, first; teachers themselves should be given proper orientation about climatic and environmental issues so that they can effectively teach these issues as they ought to. Secondly, environmental awareness campaign should be taken to the grassroots so as to enable parents and guardians including communities to orientate or create environmental consciousness in every member of the community which in effect, breeds a healthy global environment.

Lastly, it is recommended that students especially in the secondary schools should be included in the environmental development projects such as climate changes summit, tree planting and beautification project as well as related activities so as to build in them a sense of environmental responsibilities.

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PHYSICS TEACHER EFFECTIVENESS AND TIME MANAGEMENT

Edidiong E. Ukoh

Introduction

Physics is the study of energy and its relation to matter and it is one of the science subjects offered in senior secondary schools and a course of study in higher institutions that has been described in different ways by different people basically because of the nature of the subject. The usefulness of this subject is seen in virtually all spheres of life and advancement in physics has brought about better life for man. This is seen in the areas of medicine; communication, agriculture, construction, oil exploration, security, transportation, sport and entertainment just to mention a few. Elaborating on just two of these namely: medicine and communication.

In medicine for instance, in time past, X-ray was used to examine the internal organs like the bones, the heart and so on even when its side effect was eminent. But with advancement in physics electronics and acoustics, ultrasound could be used to study these internal organs and even to monitor more delicate things like a growing fetus with little or no side effect.

In communication, Graham Bell's invention of telephone in the early 1900 opened a new chapter in the sector but limited coverage area with much difficulty but now with advancement in physics, products like chips are possible, satellite could be launched to space and communication is made easier and all part of the globe could be assessed in a matter of seconds just by torch of a finger.

As important as physics is in the sustenance and improvement in technological development, physics has been reported to be the less popular science subjects and fewer people go into further studies in physics in relation to the general population (Ukoh, 2015. This gives concern to experts in the field because if the situation is not checked, it could post a threat to the sustenance of physics and in fact the whole science enterprise.

Causes of low participation in Physics

There are many factors adduced to be responsible for this low participation in Physics, some of these factors could be grouped as:

- (1) Student factors (Jimoh, 2004 and Babosa, 2003)
- (2) Teacher factors (Gbolagade, 2009; Adepitan, 2003; Ivowi and Oludotun, 2002 and Iroegbu, 1998)
- (3) Home background factors (Ogundijo, 2014 and Stephen and Ceci, 2001)
- (4) School factors (Akingblugbe, 2015and Ndukwu, 2002)
- (5) Government factors
- (6) Nature of physics (Ukoh, 2015)

The last factor will be considered here.

Nature of physics

Nature of an object means characteristics of that object that could be used to describe the object. So we could say nature of Physics means some features of the subject that could be used to describe it. The following features could be used to describe Physics:

- 1. Abstract nature (Ukoh, 2015)
- 2. Mathematical nature (Ogunsola-Bandele, 1996)
- 3. Full of formulae
- 4. Full of laws and principles
- 5. Physics is very wide.

Abstract Nature

Physics appears abstract for several reasons

- A good number of things considered in Physics cannot be seen with the naked eyes. For example the atom, energy levels, force and so on. Most people outside the field may describe Physics as an abstract subject because of this.
- (ii) Terms used to describe concepts in Physics are not familiar terms and when they are, they could have different meanings, for example, the term 'work'. Many new comers in Physics are familiar with the term work but are dismayed when work is defined as force applied to move a body through a certain distance. This is different from the common meaning of work, so they find this confusing.
- Physics concepts are used to explain what everybody (iii) does and experience in nature so the point here is that everybody experience Physics and does Physics even though they do not know those actions as Physics. Take for instance, a lady looking at herself in the mirror to be able to arrange her hair well makes use of the principle of reflection of light. The driver that looks at his car tyre and considers it for change to avoid slips because the marks are chopped off is using the principle of friction, also a nursing mother who quickly mops the floor if water spills on it because of the toddler who is crawling and playing in the room to avoid slips. An old woman in the village that is unable to remove the cork in her palm oil bottle that brings the neck of the bottle close to fire and turns it round several times and then removes it is using the principle of expansion even though she does not know that she is doing Physics. The same thing applies to all physical activities of man.

If this submission holds, the question now is why is Physics described as abstract if it explains what we do? Things are abstract when it cannot be seen nor felt but Physics can be seen and felt. The reason for this misconception about Physics could be from the way teachers present Physics concepts to the students without linking them to real life situations of the learners and using examples from the immediate environment of the learner.

Way out for teachers: When presenting Physics concepts to students, the following can be done:

- (i) terms used should be explained properly with common examples from the environment of the students.
- (ii) the teaching of Physics should include the application of the concepts in life.
- (iii) where concepts appear abstract, models should be used to explain them to avoid creating misleading images in the minds of the students.
- (iv) terms where common meaning is different from scientific meaning should be properly explained and distinguished to avoid confusion

Mathematical Nature

It is true that Physics is mathematical in nature even some students see Physics as a branch of mathematics. This is because there is no concept in Physics without mathematical expressions. The point here is, if all students do mathematics at least in basic and secondary schools without running away from it, there should be no reason why using mathematics to explain Physics should scare people away from Physics.

Way out: The mathematics used in explaining the physics should be explained first for students to understand before using it to explain the physics. Also how it is being used so that they will have good understanding, so that having to contend with the mathematics in Physics and physics itself will not cause double jeopardy

The wide nature of Physics

As earlier said, Physics is used to explain the physical activities of man, what man does under the ground is explained using Geophysical principles, what man does in space-ionosphere physics, what man does in the atmosphere-atmospheric physics, what man does on earth covers mechanics, electricity, electromagnetism, thermal physics, light and optics, electronics and many others. So it could be agreed that Physics is wide.

Way out for teachers: With the understanding that even though Physics is wide, the different areas are interrelated, the teachers should teach to bring out these relationship so that it would be easier to transfer knowledge from one area to the other to facilitate better understanding.

Physics is characterized by laws

Physics observes how events occur in nature, if variations are noticed, measurements are done and the data collected are studied to see if any relationship exist and the pattern of the relationship. If this relationship is consistent, then some statement could be made to show this relationship which if proved with enough experimental evidence could be accepted as a principle and with further experimental proofs could be accepted as a law. It should be noted that the process of doing this is more complex and rigorous than what has been described here.

All the concepts in Physics have underlining principle(s) and law(s) but these should not hinder learning of physics. The problem encountered is that most learners cram the principles and laws without understanding the relation that established the law. If the relation is understood, it would be easy to understand the laws.

Way out for teachers:

The following can help:

- (1) The teaching of Physics should be practical based.
- (2) During the practical, the relationship that brings about the laws should be explained to the students and they should be allowed to make the observations themselves.
- (3) Physics practical should be done simultaneously with the theory so that the practical willenhance understanding of the theory.
- (4) Emphasis should be on the correct understanding of the law not cramming the law.

Physics is full of formulae

This is needful and it should not be scary. The formulas are borne out of the laws and if there is good understanding of the laws, then working with these formulas should be not be a problem. With constant practice with the formulas mastery is achieved and it would be easy to remember.

The above discussed nature of Physics and other ones seem to be the reason why people describe Physics as difficult and if you follow the explanation given on the nature of Physics and other factors listed on the page two above, it is clear that the picture ascribed to physics as a difficult subject may not necessarily be true. However the physics teacher has a major role to play in putting physics in the right perspective and this is what will be addressed in the preceding section.

Teacher Quality factor in Learning physics

The teacher has been described asone of the factors that determine student learning (Jusuf, 2005) and Kolawole (1999) had earlier asserted that if the quality of our teachers is not improved through an effective teacher preparation programmes nationwide, education will be doomed in the country, while our aim of developing technologically and scientifically will remain a mirage. This emphasis the importance of the teacher quality In USA, according to Liston, Borko and White comb (2010) for instance, teacher quality is seen as a key policy lever to narrow achievement gap that exist along racial and economic lines.

Considering the nature of Physics and all surrounding the learning of the subject, the need for quality teacher is obvious. Olowoye (2001) described quality teacher as a teacher that possesses good teaching skills of:

- i. creating effective, conducive and enabling learning environment that will stimulate the minds of students to learn,
- ii. engaging students in active learning,
- iii. classroom management and
- iv. planning and assessing for effective learning.

These will help the students to learn physics well and the desire of becoming technologically developed will be achieved by the nation. However, the teacher needs time to be able to do his work well.

The Issue of Time in Teacher Effectiveness

Every program of study is time bound. For the senior secondary school Physics curriculum, it is a program that last for three years and at the end, students are expected to take the external examinations. For colleges of Education and universities, the program last for three and four years respectively even though in some universities of technology, the course could last for five years.

The difference in higher education is that different aspects of physics are drawn out as courses and taught semester by semester and at the end of each semester, examinations are conducted to assess the learning in each of those courses, each semester last between 14-15 weeks. The point here is to establish that there is fixed time limit for any school program and if this be the case, for a teacher to be described as effective, he should be able to complete the course outline and ensure that learning of the content is achieved within the stipulated time. However, time in this work is looked at in two ways namely:

- 1. Duration for the subject or course
- 2. Period of the day

Duration for the subject or course:

On the school time- table, each subject or course is allocated the duration for the subject or course so that all subjects or courses could be catered for. For physics in secondary schools, in most cases, three slots are given; one slot of 40 minutes that is single period and 2 slots of double periods of 80 minutes per week. Whilst in higher institutions, the number of hours allotted for a course depends on the course units of that course.

Emphasizing the secondary school physics which we said earlier to be a three year program, all the topics are shared into the three years and they have what will be covered in the 1st, 2nd and 3rd year. Each year's work is shared for the three terms that make one academic year and each term's work is shared into weeks. This is what is in the scheme of work. You will see that the whole content is shared to cover the duration of the program. So at the beginning of the term, the teacher knows what he is starting with and what he will end with so that no part of the scheme of work is left out. Every teacher is expected to cover the whole content because assessment and evaluation will cover every area of the syllabus.

Now looking at the nature of physics as explained earlier, the approach stipulated in the curriculum that physics teaching should be practical -based and the content to be covered, you will agree that the physics teacher has work to do, and if he will be effective, it depends on so many factors like his knowledge of the subject, understanding of the nature of the subject, his pedagogical knowledge, his knowledge of the students he is teaching, the time at his disposal to deliver the content and many other factors.

Period of the day

This has to do with, if the lesson is taught in the morning or afternoon. First periods are usually affected by unforeseen circumstance during morning assembly where some minutes would have been lost. In some schools also, where the school management is art-inclined, may take all subjects as the same and could be taught any time, may fix physics classes after long break in the afternoon. Generally, as a physics teacher, imagine the stress you will go through to get students to the level where they will be interested to learn.

Factors that militate against the time available to the teacher in Nigerian senior secondary schools.

The following factors militate against the time available to the teacher in Nigerian senior secondary schools.

- 1 Incessant strikes: Government insensitivity to the plight of teachers especially in the paying of their salaries as at when due, has always resulted to months of strikes by teachers. The questions here are with the fixed time of 3 years for the program, also bearing in mind that examination bodies will not shift the time for examinations and the way the content is structured in the scheme of work;
 - What will happen to the weeks lost without classes?
 - If few weeks are added to extend the term, is it always effective?
 - If a state has lost up to 8 months to strike, is there any way this could be made up?
- 2 Incessant declaration of public holidays: In the planning of the scheme of work, are there provisions for public holidays? If there are for national holidays, what about state declared public holidays like when an Oba is to be sworn in, when an Oba is to be buried, when the governor's mother or father is to be buried, when any notable
politician dies and a day of mourning is declared and so on and so forth? All these deplete the time available to the teacherts.

3 Government orders to close down schools during election and disease outbreaks:

In Nigeria, there are instances where the government would order that schools be closed down because of national election and disease outbreaks like the ebola outbreak. One could not but wonder how the lost time could be recovered.

- 4 Sporting activities: Whenever schools are preparing for inter-house sports, many weeks are usually used for preparations without classes. This too eats into the time meant for class work.
- 5 Major market days: This is common in rural areas. On major market days in the area, students would be absent from schools because they would all go to the market to assist their parents to sell their farm produce. If this happens, say once in a week, what happens to the lesson for that day?
- 6 Manual labor: In cases where manual labor-day is not given a slot in school time-table, whenever this is carried out, the subject for that time suffers.
- 7 Continuous Assessment: In some schools, duration for continuous assessment last for a whole week and they have it two times in a term, meaning that two weeks out of the 13 or 14 weeks per term may not be accounted for in the scheme of work.

A teacher that is faced with all these time depleting factors will need special talents to be effective. This is a call to looking away from teachers' teaching methods as a major cause of students' poor performance in physics and considering lack of enough time as a major factor for poor performance in physics because even the most effective teacher if he has no time to do his work may also be seen as an ineffective teacher. Also most novel teaching methods recommended for teaching science and physics specifically have time as a major limitation.

Another reason for considering time as a serious factor in teacher effectiveness is the curriculum. The latest physics curriculum has been attested to be overloaded with more advanced topics but the time remains fixed even with more depleting factors.

Also, the experiment-based approach: The curriculum recommended the use of this approach to deliver the content but it is obvious that this approach is time consuming.

Conclusion and Recommendations

Based on the submissions above it could be concluded that time is a major factor in teacher effectiveness and should be considered seriously.

- 1. Curriculum planners should consider the issue of time and relate it to the amount of content in the curriculum.
- 2. Government should be mindful of declaring public holidays knowing the effect it has on school work.
- 3. In drawing out the scheme of work for physics, care should be taken to incorporate public holidays.
- 4. Physics teachers should be made to understand the effect time has on their own performance so that they could employ world best practices to help them do well.

5. School management should be educated on the nature of physics so that they give the subject the needed attention in the time-table by allotting adequate duration and period to aid effective physics teaching and learning.

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EFFECTIVENESS OF CONTINGENCY MANAGEMENT AND SYSTEMATIC DESENSITISATION AS BEHAVIOUR MODIFICATION TECHNIQUES IN REDUCING FOOD CONSUMPTION AMONG OBESE STUDENTS IN SOUTH WEST NIGERIA

E. O. Babatunde

Introduction

Behaviour management and behaviour modification had been used interchangeably by several researchers. In behaviour modification, the focus is on changing behaviour, while in behaviour management the focus is on maintaining order. Behaviour management skills are of particular importance to teachers in the educational system. Behaviour management include all of the actions and conscious inactions to enhance the probability people, individually and in groups, choose behaviours which are personally fulfilling, productive, and socially acceptable (Baldwin&Baldwin, 1986). Considerable efforts had been given to behaviour change by several researchers using different approaches chief among them is the approach propounded by Skinner and Carl Rogers (2000) where rewards of an individual is first identified and this is tied to good behaviour. This is what Skinner referred to as "Positive Reinforcement Psychology" On the other hand, Rogers proposes that in order to effectively address behaviour problems, individual must be persuaded to want to behave appropriately. This is done by teaching the individual the difference between right and wrong

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including why he or she should do what is right. Rogers believes that the individual must have an internal awareness of right and wrong.

According to Brophy (1986), contemporary behaviour modification approaches involve students more actively in planning and shaping their own behaviour through participation in the negotiation of contracts with their teachers and through exposure to training designed to help them to monitor and evaluate their behaviour more actively, to learn techniques of self-control and problem solving, and to set goals and reinforce themselves for meeting these goals. Generally, this had been very effective in incorporating principles of functional assessment into the process. Over the years, behavioural management principles such as reinforcement, modeling and even the use of punishment have been explored in the building of pro-social behaviour.

Two studies exist in which modeling by itself did not increase pro-social behaviour; (Elliot, & Vasta, 1970; Boyce, 2004), however, modeling is much more effective than instruction giving (such as "preaching") (Bryan & Walbek, 1970). The role of rewards has been implicated in the building of self-control and empathy. Recent research (Adediran, 2011, Egbochuku, 2012) indicates that behavioural interventions produce the most valuable results when applied during early childhood and early adolescence.

Contingency management techniques involved provision of incentives to individuals who provide objective evidence of having achieved a targeted element of behavioural change. The instructor arranged the environment such that target behaviour (for example school attendance) is readily detected, tangible reinforces are provided when the target behaviour is demonstrated and incentives are withheld when the target behaviour does not occur (Boyce, 2004). A key term in contingency management (CM) is reinforcement and an important tenet of CM and other behavioural approaches is that rewards work better and seem to have more lasting impact in shaping new behaviour than do punishments (Adediran, 2011). In other words, the most successful strategies involve rewarding or positively recognizing achievement rather than punishing or applying negative sanctions to a lack of achievement. In CM studies with substance abuse treatment clients, rewards in the form of incentives have been successfully utilized. These incentives have included extra privileges, vouchers for inexpensive prizes such as gas coupons or retail goods, or actual cash payments. The incentives that a programme uses to reinforce client behaviour are usually guided by factors such as type of treatment, programme philosophy, logistics and staff availability, and resources available to the programme (Aderanti, 2006).

Systematic desensitization is a procedure by which new behaviours are learned in response to stimuli that previously elicited other behaviours. Systematic desensitization involves three steps:

- The first step is to teach the student relaxation techniques, typically with teaching the students to tighten and relax various groups of muscles. This should be practiced for 10

 15 minutes every day to become comfortable with the technique.
- 2. Following this the students and therapist develop a fear hierarchy. In the hierarchy the student will develop a list of 15 20 items that become increasingly more fearful on a scale of 0-100.
- 3. The third and final step is to have the students imagine each of the items on the hierarchy in order from least fearful to most, while engaging in the relaxation technique taught by his or her therapist

Kearney and Silverman (2000) and Egbochuku (2012) revealed that systematic desensitization is effective in modifying deviant behaviour while acknowledging the fact that different studies had established the efficacy of contingency management (Adediran, 2007, & Brook, 2001) at ameliorating some anti-social behaviour (e.g. bullying, stealing and truancy). Little efforts have been made to investigate the effectiveness of contingency management and systematic desensitization as behaviour modification techniques among senior secondary school students. The effectiveness of systematic desensitization in ameliorating nightmares was evaluated in a controlled study. Twenty-nine subjects were assigned to either systematic desensitization, a nightmare discussion placebo, or continuous self-recording. The placebo treatment did not differ from desensitization in terms of rated logicalness and potential effectiveness. However, the desensitization group showed a significantly greater reduction in the frequency of nightmares as well as a decrease in rated intensity. Moreover the desensitization subjects also had a significantly greater decrease in reported fear and state anxiety. However, there is growing evidence to suggest that a shared approach could be of benefit, with the joint goal of utilising health promotion to shape the knowledge and behaviours of young people to prevent disease and improve health. We should also adopt strategies that consider both eating disorders and obesity as a coupled illness and that seek to communicate joint messages that are relevant to both areas, such as negative body image and disordered eating behaviours. Coordinated and consistent messaging promoting health outcomes for overweight and eating disorder problems is possible, especially in the area of prevention. Focusing on the risk factors and protective factors that are common to both obesity and eating disorders presents an opportunity to collaborate and redirect people in a positive direction.

Weight and eating-related conditions often occur in an environment where ambiguous and opposing demands and messages are present; for example, "taking diet pills will help you lose weight and are therefore good for your health" is often presented in the same space as warnings to the effect of "diet pills are unhealthy and dangerous." According to Boyce (2004) four percent of boys in grade nine and ten reported anabolic steroid use in a 2002 study, showing that body preoccupation and attempts to Thirty-seven percent of girls in grade nine and 40% in grade ten perceived themselves as too fat. Even among students of normal-weight (based on BMI), 19% believed that they were too fat, and 12% of students reported attempting to lose weight (Boyce, King, & Roche, 2008). Body dissatisfaction and weight change behaviours have been shown to predict later physical and mental health difficulties, including weight gain and obesity on the one hand and the development of eating disorders on the other (Field, et. al., 2003; Neumark, Wall, Haines, Story, Sherwood, van den & Berg, 2007).

In a survey of adolescents in grades 7–12, 30% of girls and 25% of boys reported teasing by peers about their weight. Such teasing has been found to persist in the home as well -29% of girls and 16% of boys reported having been teased by a family member about their weight. Body-based teasing can have a serious impact on girls' attitudes and behaviours. According to one study, girls who reported teasing by family members were 1.5 times more likely to engage in binge-eating (eating too much) and extreme weight control behaviours five years later (Eisenberg & Neumark, 2003; Neumark, et. al. 2007). In view of the above, overweight and obese children are more likely to be bullied than their normalweight peers. For example, in a survey of 11-16 year-olds, 10% of normal-weight children reported being bullied, compared to 15% of overweight and 23% of obese children. Obese girls were 2.7 times more likely than normal weight girls to be verbally bullied on a regular basis and 3.4 times more likely to be excluded from group activities.

Evidence shows that it is possible to prevent obesity in children and adolescents through limited, school-based programmes that combine the promotion of healthy dietary habits and physical activity. Overweight and obesity are growing problems in much of the world. Obesity has a negative impact on health and quality of life. From the perspective of both the individual and society, it is therefore essential to identify strategies for managing this problem. Once present, obesity is difficult to treat, making effective preventive intervention all the more important

This study investigated the effectiveness of Contingency Management and Systematic Desensitization as behaviour modification techniques in reducing food consumption patterns among obese students in South West Nigeria.

Methodology

The study adopted a pre-test, post-test quasi-experimental control group design. Three hypotheses were tested using a 3x2x2 factorial design. The variables of study are treatments which exist at two levels (contingency management, systematic desensitization and control). Gender, which exist at two levels (male and female) and body mass index which was observed at three levels (normal, average and high). The dependent variable was food consumption reduction among obese students. Participants consist of ninety-six students in four co-educational schools in Ibadan, Ovo State, Nigeria who are purposively selected to participate in the study because of the are regarded as obese. Twenty-four students were purposively selected from each of the four co-educational schools with equal proportion of male and female students. The participants were assigned to the two treatment and the control groups randomly. To be qualified as a participant in the study, a participant must have body mass index (BMI) for age by calculating the proportion of their height and weight based on national reference data and cut off point of between 75^{th} and 95th percentile. The three hypotheses formulated and tested in the study are

 $Ho_{1:}$ There is no significant difference in the effect of contingency management and systemic desensitization on food consumption reduction behaviour of obese students.

Ho₂: There is no significant gender difference in the effect of contingency management and systemic desensitization on food consumption reduction behaviour of obese students.

 Ho_3 : There is no significant interaction effect of treatment on body mass index (BMI) of obese students food consumption in Nigeria.

Two validated instruments used in the study for data collection are Contingency Management Treatment Package, with reliability coefficient of 0.87 and Systematic Desensitization Treatment Package, with reliability coefficient of 0.86 respectively. A pre-test score using Obese Students' Food Consumption Scale (OSFCS) was obtained prior to the beginning of the intervention package which lasted six weeks and a post-test score obtained at the end of the intervention package. The control group was not given any intervention. Descriptive and Inferential statistics of means, standard deviation and ANOVA was used to analyse the data collected.

Results

 $Ho_{1:}$ There is no significant difference in the effect of contingency management and systematic desensitization on food consumption behaviour of obese students.

 Table1: ANOVA Summary of Treatment on food consumption behaviour pattern

	Sum of Square	DF	Mean Square	F	Sig
Between Groups	300.834	2	150.412	47.240	.000
Within Groups	179.576	94	1.274		
Total	480.410	96			

The result in table1 revealed a significant effect of the treatment (contingency management and systematic desensitization) on students food consumption behaviour reduction (F = 47.240; p<0.05). Therefore the first hypothesis is accepted since a significant effect exists in the effectiveness of the two treatment groups. This result agrees with the conclusion of Field, Austin, Taylor, Malpeis, Rosner, Rockett, Gillman, & Colditz, (2003), that

opined that "Dieting for weight loss is often associated with weight gain, due to the increased incidence of "binge-eating". The result is also in agreement with the report of Abramovitz& Birch (2000) who concluded that children learn (unhealthy) mainstream attitudes towards food and weight at a very young age. In a study of five-year-old girls, a significant proportion of girls associated a diet with food restriction, weight-loss and thinness. The result is also supported by the conclusion drawn in a study by Boyce, King, & Roche, (2008)whereThirty-seven percent of girls in grade nine and 40% in grade ten perceived themselves as too fat. Even among students of normal-weight (based on BMI), 19% believed that they were too fat, and 12% of students reported attempting to lose weight.

Ho₂: There is no significant gender difference in the effect of contingency management and

systemic desensitization on food consumption behaviour of obese students.

 Table 2: Descriptive Statistic of Scores of Subjects Under Contingency Management And
 Systemic Desensitization Treatment Groups.

 LSD POST HOC multiple companies
 1

SD POST HOC multiple companies

Contingency Management Systemic Desensitization	vs	0.7555*		1671	000
Control		1.4123*		1460	.000
Systemic Desensitization Contingency Management	VS	0.7555*		1671	.000
Control		1.3571*	1447	.000	
Control Contingency Management	vs	- 1.4123*		1460	.000
Systematic Desensitization		-1.3571*		1447	.000

Table 2 shows the extent of difference. The result revealed a significant difference between contingency management and systemic desensitization with a mean difference of **0.7555** and significant at .000 and also a significant difference between contingency management and control with a mean difference of 1.4123, significant at .000. This revealed therefore, that contingency management is superior to both systemic desensitization and control in food consumption pattern of obese students' management. It also shows a significant at .000 meaning systematic desensitization is also superior to control in food consumption reduction pattern of obese students' management.

Ho₃: There is no significant interaction effect of treatment on body mass index (BMI) of obese students in food consumption pattern management in Nigeria.

Table 3: ANOVA Summary of Treatment on Gender

	Sum of Square	DF	Mean Square	F	Sig.
Between Groups	1.736	1	1.736	.064	.366
Within Groups	20697.928	95	364.400		
Total	20699.664	96			

Table 3 shows the summary of one way ANOVA of treatment on Gender. The analysis of variance on table 2 shows an F ratio on the effect of gender to be .0.64, with df = (1,95). This was not significant at p > .05). The null hypothesis stating no significant gender difference in the effect of contingency management and systematic desensitization on food consumption reduction pattern of obese students was not rejected. It was concluded that there was no significant difference in treatment of males and females on food consumption pattern of obese students. It means that the treatment is efficient for both males and females.

Table 4: ANOVA Summary of Treatment on BMI of obese students.

	Sum of Square	DF	Mean Square	F	Sig.
Between Groups	57.646	2	28.823	0.079	.329
Within groups	20642.018	94	146.397		
Total	20699.664	96			

In the one way ANOVA in table 4, there was no significant interaction effect of treatment on body mass index (BMI). The result shows an F ratio of interaction effect of treatment to be 0.079. with df = (2,94) This was not significant at p > .05. This implies that there was no significant interaction effect of treatment on BMI. This indicates that participants of different body weight gained after treatment. Thus, the null hypotheses stating no significant interaction effect of treatment on BMI in food consumption reduction pattern of obese students. This implies that the difference in the treatment groups is the same across the entire body mass index.

The result of the study indicates that a significant difference exists in the effectiveness of the treatments on food consumption behavior pattern which is an indication that the two treatments (Contingency Management and Systemic Desensitization) are effective in the treatment of food consumption pattern of students in Nigeria. The reason for this result could be as a result of the six weeks exposure to treatment after controlling for other moderator variables that can contaminate the result. It is therefore clear that positive changes in behaviour can be achieved especially in behaviour modification as facilitated by using these techniques (Coon, 2000; Oliha, 2010).

From the outcome of the data analysis, there was an indication that there was no interaction effect of gender on treatment on the students' food consumption behaviour pattern. This is an indication that contingency management and systematic desensitization work effectively on both male and female. No significant body mass index (BMI) difference on the effect of contingency management and systematic desensitization on student food consumption behavior pattern was found. This result is not surprising since the approaches to prevention of obesity are universal and these universal programmers address an entire population of children irrespective of body weight (Wasserman and Miller 1993). By this finding it is clear that the two behavioural therapies are effective in the management of food consumption behaviour pattern among obese students.

Conclusion

This paper thus had provided an overview of the core principles involved in the use of contingency management and systematic desensitization along with a brief discussion of issues that may relate to the use of reinforcements in addition to treatment programmes. Even though, manuals of models are available, the use of principle-based dissemination becomes the more useful approach to the treatment of behaviour modification. Practitioners in education and psychology may be able to use their clinical creativity to develop interventions that will match the specific needs of their clients and the goals of their programme.

In view of the findings of the study, it is advanced that contingency management and systemic desensitization are effective approaches that could be used for behaviour modification in our society. It is therefore recommended that the two approaches could be used to treat obesity among adolescent in Nigeria. The result had shown that the finding is also instructive to counsellors, psychologists, teachers, school administrators and parents whose business among other things in behaviour modification is that contingency management and desensitization are best in the treatment of obese students food consumption behaviour irrespective of gender and body mass index (BMI) especially among adolescent. Parents who reside with these obese students could use any of these techniques alongside with any other corrective measures in the various Nigerian correctional institutions such as approved schools. It is also an eye opener for individual adolescents who are obese and have formed the habit of eating disorder that needs to be discontinued and wishes to stop the behaviour that both treatments (CM and SD) could be better options.

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RESPONSE OF MATHEMATICS TEACHING AND LEARNING TO EDUCATIONAL INNOVATIONS AND REFORMS IN NIGERIA

S. S. Afolabi

Introduction

Education is a tool for social, political and economic development of any nation or society. Nigeria considers education as a tool "par excellence" to bring about its needed all round national development (Federal Republic of Nigeria - FRN, 2004). It is an effective instrument to bring about desired societal changes. Education is the anchor on which all other developments depend. It provides the direction and as well addresses the needs of the society at each point in time (Ekanem, 2008).

The culture, norms, values of any society is organic in nature, thus having the capability of growing, developing and even changing. This is also peculiar to our contemporary world. The modern world is dynamic, cultural and societal dynamics have become highly progressive. Development in information and communication technology (ICT) has globalized the world into a village. Through the knowledge of information technology, ideas, policies, discoveries travel at high speed from one part of the world to the opposite end (Obanya, 2010).

Knowledge economy has also enhanced cultural dynamics of every society. Education with 'mind on' is giving way for education with 'hand on'. The use of internet for online transactions, social networking, registrations, e-learning and other activities through the use of world wide web have made many country's' education to advance drastically towards achieving their goals on global focus for <u>Education for All.</u>

For education to develop an individual and his society there must be continuous innovations and reforms. Innovation is considered new and positive trends, new ideas; new methods of discoveries that are purported to improve educational theories and practice (Denga, 1993). Obanya (1999) in Olagunju and Afolabi (2011) define innovation as any action designed to improve the quality of any given (aspect of the total education) or course.

According to Doll (1996), innovation is considered as betterment, amelioration and improvement. This is synonymous to reforms. This educational reforms or innovation refers to a positive attempt to improve the quality of education theory and practice so as to yield optimal benefit to the recipient and the society as a whole. In recent years, there have been a lot of reforms and innovations in Nigeria educational system and all these have directly or indirectly affected what happens in the whole system.

Guiding Questions

There have been a lot of policies, reforms and initiatives in the history of Nigerian education since its inception. This write up may not be able to cover all. It is therefore necessary to set a scope at this juncture. Further discourse shall be guided by the following questions in order to be focused;

- What are the major educational innovations or reforms, initiatives and policies in Nigeria in the last two and a half decades?
- 2 How have the educational reforms affected the teaching and learning of mathematics?
- 3 Has mathematics teaching and learning adequately responded to these innovation?
- 4 Is mathematics teaching and learning static or dynamic (borrowing or importing ideas, policies objectives content) to match innovation and to compete with global world?

In the spirit of universal declaration of Education for All (EFA) and the challenge of globalization, the last two and half decades have witnessing a lot of educational reforms in Nigeria. This is also made possible due to many years of civilian rule within the two decades. Although the agenda of Education for All has been in existence for many years the intervention of the military government in power for many years before this time has rendered the pursuit redundant due to the international standing order of exclusion of nations in military rule from some privileges. Some of the educational reforms are:

- 1 Education policy on structure of education.
- 2 Continuous Assessment (CA).
- 3 Unified or tertiary institution Entrance examination.
- 4 Science and technology integrated,-Basic science/basic science and technology
- 5 Information and Communication Technology (ICT)
- 6 Education Tax Fund (ETF)
- 7 Teachers, Registration Council
- 8 Universal Basic Education(UBE)
- 9 Nigeria Certificate of Education (NCE) as minimum Entry Qualification to Teaching Profession
- 10 Migrant and Nomadic education
- 11 Civic and Citizenship Education
- 12 Sandwich programme
- 13 Guidance and counselling in schools
- 14 Distance learning programme
- 15 MDGs/SDGs
- 16 NOUN
- 17 Public Private Partnership Initiatives

All these reforms, policies and initiatives had affected certain part of our educational programme as a whole at different times.

The focus of this paper is to consider how each of these educational innovations and reforms have affected the teaching and learning of mathematics at all levels of our educational system in the last 25 years. This time frame is copious enough for consideration because of global challenges and global changes expected of nations concerning 21st century. Beside this, it was a transition period between two millenniums.

Before these years there were mathematics curricula (at various levels of education). There were goals and objectives of mathematics teaching at primary school and secondary school levels. Clearly documented curricula on mathematics spelt out curriculum contents for all levels. These policy reforms must have affected the curriculum goals, aims and objectives, the content and the policy on the teaching and learning of mathematics over the years.

The Objectives of Mathematics Teaching and Learning in Nigeria

There are different objectives of mathematics teaching at different levels of education in Nigeria. Thus, we have i) objectives for mathematics learning at the primary level; ii) objectives for mathematics learning at the secondary level

(i) The objectives of mathematics learning at the primary school levels in Nigeria.

The objectives of learning mathematics at the primary school levels in Nigeria are to:

- 1. acquire mathematical literacy that will make the child become effective in information stage
- 2. cultivate the understanding and application of mathematics skills and concepts needed for prospering in the ever dynamic technology

- 3. build up knowledge of the vital aspects of problem solving, communication, reasoning and connection within the study of mathematics
- 4. vibrant in harnessing the numerous opportunities provided by mathematics
- 5. be ready to upgrade knowledge in mathematics and other related fields (Federal Ministry of Education, 2012)
- ii) Objectives for mathematics learning at the secondary level in Nigeria

This objectives of mathematics learning in Nigeria secondary school is divide into two- these are objectives for junior secondary school and the objectives for teaching mathematics in the senior secondary school.

- a) The objectives of mathematics learning at the junior secondary school include to:
- 1. Gain mathematical literacy to function in an information age
- 2. Develop the thoughtful and relevant mathematical skills and concepts required to succeed in the present dynamic technological world
- 3. Expand the important aspect of problem solving, communication, reasoning and connection within the study of mathematics
- 4. Realize the major ideas of mathematics with the awareness of the fact that the world has ever been changing (Federal Ministry of Education, 2006).
- b) The objectives of mathematics learning in senior secondary school include to:
- 1. Prepare for further and tertiary institution
- 2. Develop skills that enhance capital market skills
- 3. Be proficient in the application of ICT

4. Acquire competency in various vocations they may wish to pursue at tertiary level (Federal Ministry of Education, 2007).

The senior secondary mathematics curriculum takes into cognisance the relevance of mathematics to a global world.

Philosophical thought in mathematics teaching and learning bothers on the 'why' of mathematics learning, 'what' are the useful mathematics, how students learn mathematics, what material and methods are to be used? It is upon these philosophical thoughts that the goals and objectives of mathematics teaching were formulated. It is also the basis for the mathematics curriculum content, design, organisation and objectives. The challenge of globalisation, ICT and knowledge economy have made the weakness of the curriculum and its philosophy obvious. Thus, the philosophy of the old mathematics curriculum have been criticised by researchers and educators like Grouws (1992), Ernest, (1991) on the basis that:. 1) It was argued that the curriculum was contentcentered. The teaching learning activities was organised around the content; 2) the role of teacher was that of purveyor of knowledge with dictatorial or (at the best) didactic pedagogy, the talker and not a listener; 3) the curriculum was not flexible. The tone, outlook and organisation of the curriculum was rigid. It has to be followed even if altering it will enhance learning outcome; 4) learning was isolated without proper link with other subject areas. no adequate relationship with the environment and relevant phenomena of daily life, thus making it abstract.

As the problem of teaching and learning is not limited to Nigeria, world wide solutions to learning problems have always been sought out to; i) close the gap between mathematics makers and mathematics users. (ii) find out how students learn (iii) find out the causes of learning difficulties, Sharma (2001). (iv) lead students to explore, experiment, hypothesis (v) help students to link up between old and new ideas (vi) give room to learners for research and discovery.

In Nigeria, rebranding the National Economic, Empowerment Development Strategy (NEEDS) which is an arm of Millennium Development Goals (MDGs) focused on (1) value re-orientation (2) poverty reduction (3) job creation (4) wealth generation (5) education for empowerment. To meet this laudable goals a new philosophical perspective was used to formulate new mathematics curriculum. The new curriculum was designed, restructured and re-organised with relevant objectives of providing learning environment for (1) acquisition of mathematical and manipulative skills (2) inculcation of value reorientation, civic and moral responsibility (3) acquisition of skills for poverty reduction (4) acquisition of knowledge and application of ICTs (5) empowerment of citizens to face-national and global challenges (6) acquisition of sufficient knowledge to pass external examinations (7) equip students adequately to cope with challenges at either technical college or tertiary institution.

The UBEC (2008) has seen the challenge posed on education by the national and global reforms formulated new objectives for new mathematics curriculum:

- 1. To provide the students with diverse basic knowledge and skills for entrepreneurship, wealth generation and educational advancement;
- 2. Inculcate new values and raise morally upright individuals capable of independent thinking, and who appreciate the dignity of labour;
- 3. Provides opportunities for the child to develop manipulative skills that will enable the child to function effectively in the society and to realize his or her full potentials.

The challenges posed on teachers by these reforms are numerous. The teacher needs to;

- 1. Know the objectives and content of the new curriculum
- 2. He needs to find the solution of (i) how does learning

difficulties occur? (ii) how do students learn mathematics?

3. How can one teach mathematics to ensure (1)-(3) objectives above?

The Educational Reforms and Mathematics Teaching

1. Policies on Educational Structure. The educational structure refers to the various stages or levels of education with respect to the years and its associated programme of learning goals. This is commonly referred to as educational system. The last two decades was the era of 6-3-3-4 structural system. The 6-3-3-4 was launched and stared in 1982 became a generally adopted system nationwide in Nigeria in 1985 when the federal government made it compulsory for all states (Osokoya, 1987). The pupils are to experience six years of junior secondary school, the next three years is for the brilliant scholarly inclined students to proceed to three years of technical education. Those who successfully complete the senior secondary school are to proceed into the university through entrance examination.

During the 6-3-3-4 system separate curriculum was prepared for mathematics at J.S.S level and another one for the S.S.S level. The objectives and content of three year junior school level was to prepare the student adequately for mathematics learning at the senior secondary school level. Also, another curriculum was put in place as Further Mathematics while Additional Mathematics was abolished due to its deficiencies. The new Further Mathematics curriculum was not a core curriculum for all students but for those who are to study physical sciences, engineering and technology in the tertiary institution. 2. Universal Basic Education: the Universal Basic Education (UBE) is the off shoot of the 6-3-3-4 system, following its failure. The latter short lived due to the multitude of its inherent problems. The UBE was launched in May 1999 by president Olusegun Obasanjo. This was in the spirit of EFA and in consonance with section 18 of 1999 constitution,

Universal Basic Education is the education given as the early childhood care education (ECCE), primary and junior secondary schooling. It also include adult literacy and non-formal education skills acquisition programme and the education of special groups such as nomads, migrant children and women, Almajiri-(street children and disabled groups) (Babalola & Atinmo, 2009). It is noteworthy that UBE embraces ECCE. The nine-year basic education in place of 6 years will enable further learning of mathematics by the less privilege ones who may likely terminate their schooling at the basic stage.

The threatening problems of UBE include limited space to accommodate the ECCE, pre primary section, (some schools do not have this for lack of facilities) unprepared teachers to take care of this section, inadequate infrastructure, inadequate instructional materials.

3. Nigerian College of Education- NCE (minimum entry qualification into teaching profession). Before the minimum condition for entry into teaching was set, all manner of teachers qualification such as Grade III, Grade II teachers were phased out. Those with this qualifications were encouraged to go for NCE or a degree in education. The NCE which was higher than grade II became the minimum entry qualification to teaching. The implication of this is that the teachers in our classroom will be more equipped intellectually. The level of exposure in mathematics at the NCE level is higher than the grade II level. Idea of majority on a teaching subject (subject specialist) will

make it to be more effective in teaching mathematics and any other subject of his specialisation.

In the classroom practice, the teachers were made to teach the subjects of their specialisation (in the JSS) and those related to it (in the primary school). Recently, the idea of subjects specialisation has been abolished for those who major in Primary Education Studies at the NCE level just as the former grade II. This makes the teacher to be 'master of all'. NCE graduates from other schools - science, languages, arts and social science, vocational and technical education also specialize on subject areas which can make them qualified to teach in the JSS. The idea of having no specialisation for subjects in education may make them ineffective in handling mathematics at the primary school level. When personal interest and skill emanating from specialization is removed, the (mathematics) teacher may feel that he is forced to teach. Though qualified but might not be efficient or competent talk less of being effective.

As good as it were the NCE to remain as minimum entry qualification of teaching profession on subject area should still be retained for education and students who will serve in the primary school. It is a known fact that all NCE preservice teacher take mathematics every year/level of the programme as General Studies in Education-GSE, it may not suffice to teach mathematics effectively.

4. The Public-Private Partnership (PPP). It is an initiative by the Nigeria government to encourage and motivate the private sector to collaborate and support provision of laudable education. It was considered as part of strategies to enhance the achievement of goals set for 9-3-4 educational system. The partnership may be in form of donation-finance or infrastructure, sponsorship award of some areas of interest by individuals or institutions, e.g. cowbell math award, founding

of school, formidable PTA. Establishing private or community institution etc.

- 5. The National Open University of Nigeria (NOUN). The NOUN was 1st established 22nd July, 1983 and was closed down on 25th April 1984.(NOUN, 2007). The concern for the achievement of EFA and meeting the challenge inability to fully provide education by the conventional universities warranted the reopening of the NOUN on 12th of April 2001. It is an Open and Distance Learning institution (ODL). It was dimmed fit to tackle the problem of equity, and accessibility in education. NOUN was mandated to offer courses leading to award of diploma, post graduate diploma. They offer varieties of courses including degrees in the sciences humanities, agriculture, health sciences and education. Instructional media include audio, video tapes and C-D ROMs, on-line learning and contact session in learning centres. The institution offers B.Sc mathematics and B.sc ed mathematics haven obtained full accreditation by the National University Commission (NUC). These and other courses offered by this institution could be found in the university website (http://www.noun.edu.ng).
- 6 Distance Learning System. This is an approved learning opportunity made available by the government. It is also to enhance access and give opportunity for learning and working. This would enable those who missed the first chance to go for second chance (Ekanem, 2007). Some colleges of education and universities run distance learning programme outside their environment. Various courses mathematics inclusive are been run in the centres. Learning outcomes varies from one centre to another. Availability of any course in a centre depends on enrolment population of such courses. Poor coordination, poor conduct of tests and assignment, poor supervision of students, problem of proper relationship between teacher and students do

plague the programme. Ekanem (2007) is of the opinion that study centres should be put under the supervision of any nearby tertiary institution.

7. Emphasis on Science, Information and Communication Technology

Globally and nationwide, the need to expose learners to science, information and communication technology (ICT) is on the high side. There is increased awareness of development on these areas. Both state and federal governments have established ministries of youth science, culture and technology. It is obvious that mathematics as the centre of science and technology cannot be left out. The mathematics OLYMPIAD is a mathematics competition which takes place in primary and secondary schools nationwide. The competition at the school level makes successful students to represent his or her school at the local level. Further success makes them represent their states level and national levels. The programme has encouraged mathematics enthusiast. Through the competition, students that are mathematically competent are identified and encouraged.

8. Migrant and Nomadic Education.

The reforms targeted migrant fishermen and nomadic pastoralists. Ezeomah (1993) reported that migrant fishermen reside along the riverine areas of about six states while the nomadic pastoralists are found in twenty five (25) states in Nigeria and the federal capital territory. The national policy on education has always had concern for migrants and nomads; thus documented, since 1981, 1998 and revised 2004 the objectives of nomadic education in Nigeria. The efforts of nomadic education before this time in Borno province (1920), Katsina 1950s and Kano in mid 1970s were unsuccessful (Osokoya & Lawal 2003). The official launching of the

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nomadic education programme by the federal government in 1986 brought about drastic improvement. The mathematics related objectives of nomadic educations include how to keep records relating to the number of their herds, cost, grazing distance covered on seasonal movements, interest charges on credits rental rates on lands, measurements, of land and building to hold family and herds, birth and death statistics.

In their research, Osokoya & Lawal (2003) reported that (70) 87.5% of respondents (who were policy makers, implementers as well as nomads themselves) perceived by indicating that the nomads can keep records relating to the number of their herds, distance covered on seasoned movement while about the same number 70 (87.5%) could also do simple calculations.

There were other researchers thereafter who have also reported a better progress and success of nomadic education programmes, although at a slow pace due to numerous problems such as cultural, finance, personnel.

9 The Millennium Development Goals (MDGs)

The United Nations (UN) millennium declaration at new York in 2000 to set a time frame for eradication of poverty made Nigeria to set 2015 as a time to achieve the MDGs through functional basic education. The MDGs include (i) eradication of poverty and hunger (ii) promotion of gender equity and women empowerment, (iii) ensuring environmental stability, (iv) reduction of child mortality, (v) combating HIV/AIDS, (vi) eradication of malaria and other diseases.

In 2004, Nigeria launched National Economic Empowerment and Development Strategies (NEEDS) in response to the UN joint signatory on the declarations on MDGs. The goals of NEEDS are: (i) value orientations (ii) poverty reduction (iii) job creation,(iv) wealth generation and It was on this note that new mathematics curricula with new objectives were formulated for Nigeria primary and secondary schools by NERDC in 2007. These were reviewed and restructured to accommodate the laudable intentions. Under this new direction; there were challenges of developing ICT driven curricula in mathematics, and how to redirect mathematics content to properly cater for the objectives for NEEDS.

10 The Teachers Registration Council of Nigeria (TRCN)

The registration of teachers by teacher's registration council is a reform in teacher education in Nigeria. It is an initiative to make teaching attain a full status. Saying that teaching is a profession is highly debateable. This is because there is free entry and free exit into teaching. Also, there are unqualified professionally who are still in the job. The National Policy on Education has put in place TRCN as a measure of quality control in teacher education. The TRCN ensures that the professionally trained and qualified teachers are given certificate of practice like any other professions like law and medicine. The policy reiterated that those who would not go for a training in teacher education are shown way out of teaching profession at all levels. The TRCN is to checkmate such unprofessional practices. This is done gradually. When it is fully implemented, well professionally qualified mathematics teachers will be found in all our classrooms. The knowledge of mathematics content is different from the knowledge and ability for mathematics instructional skills. The efforts of TRCN ensure only professionally trained mathematics teachers are found in the classroom. The present situation

whereby we have square pegs in round holes in such a way that chemistry, physics, mathematics degree holders are made to teach mathematics just because they have the knowledge of mathematics will no longer be the case.

11 The Continuous Assessment (CA) system is a practice in education whereby the teacher makes progressive evaluation of the learner periodically before the end of term or semester. The attempt is to evaluate the 3 domains (cognitive, affective and psychomotor of learning). The basis for CA is the argument against single shot examination as a means of evaluating the learner in the end of term or semester.

In some schools or higher institutions the CA score is 30% or 40%. Common problems of CA is lack of standardization of test, insincerity of teachers in awarding or manipulating marks (Ekanem, 2007) or use of bench-mark. The use of bench-mark as a minimum pass mark in the examination makes the CA score of the weak students to be raised so as to make the weak students have a minimum pass mark. The idea of bench-mark as used by some educators is that if the students can obtain certain level of score in an examination, some additions will be made to his/her CA so as to get the minimum score of 40%. Such approach has demerits of reflecting false condition about the student. It also make a mess of the CA.

In whichever form the CA is administered, it enhances the performance of students in mathematics. It improves the attitude and performance of many students. The students who have maths-phobia are helped to have gradual successful attainment due to CA. In this case all their efforts are not measured by single exam that is done in anxiety. CA can take d form of class work or activity, test assignment, project etc which in some decades ago were not reckoned with in students' evaluation.

Conclusion and Recommendations

A look at some of the various educational reforms and innovations in the last two and a half decades and the resultant effect on the teaching and learning of mathematics, it has become imperative to give room for useful reforms that can cause a favourable improvement of mathematics learning. The information Technology (IT) initiative should be revisited by the government and made active. More of the IT initiatives should be loaded towards education. The importance of the subject should make room for more commitment in studying and researching to increase the knowledge on mathematics and also to minimise anxiety of learners. Reforms and innovations are good if only they will be carefully pursued to achieve their goals.

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TEACHER VARIABLES AS CORRELATES OF WORK ABSENTEEISM AMONG PUBLIC SECONDARY SCHOOL TEACHERS IN THE SOUTHWESTERN NIGERIA

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Introduction

Absenteeism has long been considered a significant and pervasive problem in industries and schools. Absence is more prevalent in schools serving disadvantaged children. This suggests that teacher work absenteeism compounds the disadvantages already faced by students in developing countries. As a result, theories have been developed and numerous studies conducted to identify the causes of absenteeism (Oluwatoyin, Muraina & Muraina, 2013). Probably one of the most common theories is the notion that absenteeism is caused by employees avoiding a painful or dissatisfying work situation. The teacher serves as the most important curriculum implementer in the classroom. Teachers all over the world are recognized as critical factors in the delivery of quality education at whatever level (Oluwatoyin, Muraina & Muraina, 2013). Becki (1983) opined that the successful attainment of the educational aspiration of any country depends on the inputs of its teachers.

The recognition of the key role of teachers in any curriculum implementation has prompted several interaction studies in Education in Nigeria (Edu, 2006). For decades business and industry have struggled with the problem of employee absenteeism, a fact that is supported by the vast body of literature that addresses the issue. In fact, absenteeism and staff turnover are the two most frequent outcomes studied in organizational research (Long & Ormsby, 2001). Teacher absence often means that students have lost opportunities to learn. Furthermore, teacher absences disrupt the routines and relationships which support the learning process (Oluwatoyin, Muraina & Muraina, 2013). Moreover, teachers' work absenteeism in the schools may be determined by several factors which among others could be job satisfaction, job burnout, school climate and emotional intelligence among others. As such, the present study concentrates on teacher variables (job satisfaction, job burnout and emotional intelligence) as correlates of work absenteeism among public secondary school teachers in Southwestern Nigeria.

Job satisfaction is the level at which the secondary school teachers satisfied with the teaching profession. George and Jones (2002) maintain that many researchers have studied the relationship between absenteeism and job satisfaction in an attempt to discover ways to reduce absenteeism. Early job satisfaction research has emphasized the underlying assumption that job dissatisfaction represents the primary cause of absenteeism (Steers, Porter & Bigley, 1996). Steers (1978) supported the notion that employees who are dissatisfied with various aspects of their jobs are more likely to be absent. Studies by Mcshane (1984) found job satisfaction to be more highly related to frequency of absences than to number of days lost.

Kim, Leong and Lee, (2005) believed that employees with job satisfaction have lower levels of absenteeism than employees with higher job dissatisfaction. Thus, Mobley (1977) states that if dissatisfaction of employees with their work increases, they will develop intentions to absent from organization for other job conditions. Employees' job satisfaction has been related to organization outcomes such as teachers' work absenteeism (Farkas & Tetrick, 1989). According to some studies (Yang & Chang, 2008; Punnett, Greenidge & Ramsey, 2007; and Abraham, 2000) teachers' work absenteeism is related to job satisfaction. Some studies (Deconinck, 2009; and Rutherford, Boles, Hamwi, Madupalli & Rutherford, 2009) indicated that some factors of job satisfaction (satisfaction with supervision, satisfaction with overall job, satisfaction with policy and support, and satisfaction with pay) were direct indicators of teachers' work absenteeism.

Job burnout refers to the response of school teachers towards stress placed on them in the course of their duties in the school. Bradley (2007) found teacher's control as potential resources for buffering the effects of burnout on the overall functioning of new start teachers in Australian schools. He found that teachers, who had more control as psychological resource, were having lower absenteeism as compared to other teachers (Bradley, 2007). Like teachers' control, the teacher's hardiness has also been found to have buffering effects on the burnout in such way that teachers who have more psychological hardiness are in better positions to handle burnout at work and they can perform well. Their performances are particularly good during tough times and when their jobs demand and pressures are higher. Hargreaves (2009) revealed role overload to be a major variable in teacher attrition. Teaching has been identified as a stressful profession (Kyriacou & Sutcliffe, 2008; Milstein and Golaszewski, 2005). High stress among teachers has many negative consequences. including higher than average levels of anxiety and depression and a desire to quit the profession and to use drugs (Watts & Short, 1990). Indeed, according to Bakewell (1988) and Kyriacou and Sutcliffe (2008), teachers' relationships with their students affect their stress levels significantly.

Emotional intelligence is the level at which the secondary school teacher is able to understand the emotion of other people and relate with them based on their emotions or thoughts. A number of studies revealed weak to moderate relationships between trait emotional intelligence measures and absenteeism (Adegoroye, 2009; Adeyoju, 2009). Wong and Law (2002) observed a positive association between an ability based emotional intelligence and absenteeism in employees and their managers. Kulshrestha and Sen (2006) found a positive correlation between high levels of emotional intelligence and subjective well-being among executives. Bar-On (1997) found that measures of emotional intelligence predicted a slightly significant relationship between total emotional intelligence scores and absenteeism. Platsidou (2010) found a positive relationship between emotional intelligence and absenteeism and special education teachers. Guleryuz, Guney, Aydin and Asan (2008) found emotional intelligence to be significantly and positively related to absenteeism and organizational commitment. Anari (2012) revealed a positive significant relationship between emotional intelligence and absenteeism among high school English teachers.

Fasilizadeh, Oreyzi and Nouri (2012) report a positive significant relationship between emotional intelligence and absenteeism. Najafi and Mousavi (2012) also report a significant positive correlation between emotional intelligence and all dimensions of absenteeism. Mousavi, Yarmohammadi, Nostrat and Tarasi (2012) studied the relationship between emotional intelligence and absenteeism of Physics Education teachers in Iran. The results showed that there was a significant positive relationship between emotional intelligence and absenteeism. On the contrary, Donaldson-Feilder and Bond (2004) found no association between emotional intelligence and absenteeism of 290 workers in the United Kingdom.

On this note, the presents study examines the teacher variables (job satisfaction, job burnout and emotional intelligence) as correlates of work absenteeism among public secondary school teachers in Southwestern Nigeria. In recent time, the performance of students in the school is declining to the expectations of the stakeholders (parents/guardians, policy makers, educationists, school administrators and teachers.) In the 2014 WASSCE result, Osun and Oyo states fell into the group of States which had 15-24% percentage of students that had five credit passes including English and Mathematics, next only to the group of Zamfaraand

Gombe states with 10% pass. In addition, Ogun, Ondo, Ekiti and Lagos states were in the category of states with 26-45% pass.

With these glaring statistics of poor performance at the secondary school education level, public opinion has among other reasons, put the blame on the doorsteps of teachers. Often, teachers have been blamed to be responsible for students' poor academic performance. The forgoing therefore attests to the importance of teachers in students' academic performance. In view of this, the present study concentrates on teacher variables (job satisfaction, job burnout and emotional intelligence) as correlates of work absenteeism among public secondary school teachers in Southwestern, Nigeria. Specifically, the study sought for the following:

- examine relationship between the independent variables (job satisfaction, job burnout and emotional intelligence) and teachers' work absenteeism.
- · Investigate joint contribution between the independent variables (job satisfaction, job burnout and emotional intelligence) and teachers' work absenteeism and,
- Determine relative contribution between the independent variables (job satisfaction, job burnout and emotional intelligence) and teachers' work absenteeism.

Research Questions

Taking into consideration, the set objectives of this study, the following questions were raised.

1. What is the relationship between the independent variables (job satisfaction, job burnout and emotional intelligence) and teachers' work absenteeism?

2. What is the joint contribution of the independent variables (job satisfaction, job burnout and emotional intelligence) and teachers' work absenteeism?

3.What is the relative contribution of the independent variables (job satisfaction, job burnout and emotional intelligence) and teachers' work absenteeism?

Methodology

Design

The research design used in this study was descriptive survey of *ex-post- facto* type. It is going to ascertain the effects of the independent variables (job satisfaction, job burnout and emotional intelligence) on the dependent variable (teachers' work absenteeism) without manipulations. However, it is carefully observed and recorded information as it naturally occurred at the time the study was conducted.

Participants

The population for the study comprise all public secondary school teachers in Southwestern Nigeria. The study will cut across all schools and the teachers in the schools.

Sample and Sampling Procedure

The respondents for this study were randomly selected from five (5) states of the South west using the multistage random sampling technique. Ten (10) Local Government Areas were randomly selected in each state and five (5) public secondary schools were randomly selected from each Local Government Areas. 5public secondary school teachers were randomly selected each of the secondary schools. This gave a total of one thousand, two hundred and fifty (1,250) public secondary school teachers.

Measures

Demographic information of the teachers such as age, gender, length of service, religion and marital status were collected from the respondents. The respondents completed the four questionnaires: Work Absenteeism Scale (WAS) developed by Mohamed and Uli (2010); Emotional Intelligence Scale (EIS) developed by Shuttle, Malouff, Hall, Haggerty, Cooper, Golden, and Dornheim (1998);Job Satisfaction Scale (JSS) developed by Worrell (2004) and **Job Burnout Scale (JBS)** developed by Cohen and Williamson (1998).

Work Absenteeism Scale

? Absenteeism Scale developed by Mohamed and Uli (2010) was adapted for the study to measure teachers' work absenteeism. The original version of the scale has eighteen (18) items by trial testing it with responses hinged on agreement and based on the four points of: Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). According to the Authors, the scale has Cronbach alpha coefficient of .80. The adapted instrument has twenty (20) items with frequency response format of: Often (1), Sometimes (2), Rarely (3) and Never (4). It was re-validated by trial testing it on a selected sample of thirty (30) public secondary school teachers across five (5) local government areas in Lagos State, Nigeria. And Cronbach alpha value of .80 was obtained.

Emotional Intelligence Scale

? The Emotional Intelligence Scale developed by Shuttle et al. (1998) was used as a measure of teachers' Emotional Intelligence. It is a thirty three (33) item scale of a four point response format. According to Shuttle et al. (1998), the scale has the Cronbach alpha coefficient of 0.85. The instrument was however re-validated and Cronbach alpha value of .88 was obtained after administering the instrument in a trial testing to a selected sample of thirty (30) public secondary school teachers across five (5) local government areas in Lagos State, Nigeria which were not part of the respondents for the study.

Job Satisfaction Scale

Job satisfaction scale developed by Worrell (2004) was used as a measure of job satisfaction of the teachers. The instrument has twenty two (22) items with a reliability coefficient of .80. The response format is the four point- response of: Strongly Agree (4), Agree (3), Disagree (2) and Strongly Disagree (1). The instrument

was however re-validated and Cronbach alpha value of .82 was obtained after administering the instruments in a trial testing to a selected sample of thirty (30) public secondary school teachers in Lagos State, Nigeria which were not part of the respondents for the study.

Job Burnout Scale

Burnout scale developed by Cohen and Williamson (1998) was used to measure job burnout among teachers. According to Cohen and Williamson (1998), the scale has a Cronbach alpha reliability coefficient of 0.64. The responses anchored based on four points. The instrument was however re-validated and Cronbach alpha value of .84 was obtained after administering the instruments to a selected sample of thirty (30) public secondary school teachers in Lagos State, Nigeria which were not part of the study.

Procedure

The instruments were administered to the respondents on the day approved by the school authorities for the exercise. The researchers were assisted by research assistant in the administration and collection of the instruments. In each of selected school, the administration and collection of instruments were done on the same day of administration. The instruments were administered on the respondents in their various schools by the researchers with the support of the research assistant. Out of one thousand, two hundred and fifty (1,250) questionnaire distributed one thousand, one hundred and ten (1,110) were properly filled and used in the data analysis.

Data Analysis

? The Pearson's Product Moment Correlation (PPMC) and Multiple Regression analysis were used to analyse the dataat 0.05 level of significance.

Results

The results based on the research questions were presented below:

Table 1: Product Moment Correlation Distribution comparing the predictor variables (Job Satisfaction, Job Burnout and Emotional Intelligence) and the criterion variable (Teachers' Work Absenteeism)

Variables	Ν	Mean	SD	Work Absenteeism	Job Satisfaction	Job Burnout	Emotional Intelligence
Work Absenteeism	1110	34.01	23.38	1.00			
Job Satisfaction	1110	24.73	16.89	.761**	1.00		
Job Burnout	1110	21.85	14.47	.895**	.678	1.00	
Emotional Intelligence	1110	26.83	18.27	.743**	.719	.729	1.00

*denotes correlation is significant at the 0.05 level (2-tailed)

Table 1 contains descriptive statistics and inter-correlations among the study variables. As shown in the table 1, teachers' work absenteeism is significantly correlated with job satisfaction (r = .761; p<.05), job burnout (r = .895; p<.05) and emotional intelligence (r = .743; p<.05). Also, there were also significant correlations among the independent variables.

Table 2: Multiple Regression Analysis on Adolescents' Teachers' Work Absenteeism Data

Multiple R (adjusted)=.725 Multiple R ² (adjusted)=.692 Standard error of estimate= 40.26					
Source of variance	Sum of square	(SS)	DF	Mean square	F
Regression	9590.94		3	3196.98	39.42
Residual	89699.08		1106	81.10	
Total	32290.02		1109		

The above shows that the independent variables when pulled together have significant contribution to teachers' work absenteeism. The value of R (adjusted) =.725 and R^2 (adjusted) =.692. The analysis of variance performed on the multiple regressions yielded an F-ratio value of 39.42 p

	Unstandardized coefficients	Standardized coefficients		1	Р
Model	В	Standard	Beta		
Constant	14.176	.518		11.385	p<.05
Job	.072	.341	.076	5.071	p<.05
Satisfaction					
Job Burnout	.380	.183	.662	9.542	p<.05
Emotional Intelligence	.407	.065	.248	6.471	p<.05

 Table 3: Multiple Regression showing relative contribution of the independent variables to the prediction teachers' work absenteeism

The above shows that each of the independent variables made a significant contribution to the prediction of teachers' work absenteeism. In term of magnitude of contribution, job burnout made the most significant contribution (β =.662; t=9.542; p<0.05). Other variables made contribution in the following order: emotional intelligence (β = .248; t=6.471; p<0.05) and job satisfaction (β =.076; t=5.071; p<0.05).

Discussion

The result of the present study shows that job satisfaction had a significant correlation with teachers' work absenteeism. This finding is consistent with the earlier research findings of Abraham (2000); Yang and Chang (2008); Punnett, Greenidge and Ramsey(2007) who revealed a substantial result concerning the relationship between work absenteeism and aspect of job satisfaction. Kim, Leong and Lee (2005) also revealed that employees with job satisfaction have lower levels of absenteeism than employees with higher job dissatisfaction. Rutherford, Boles, Hamwi, Madupalli, and Rutherford, 2009) indicated that some factors of job satisfaction like satisfaction with supervision, satisfaction with overall job, satisfaction with policy and support, and satisfaction with pay were direct indicators of teachers' work absenteeism. This shows that if the more dissatisfaction of employees with their work increases, the more they will develop intentions to absent from work for other job conditions.

Job burnout was found to be significant contributor to the teachers' work absenteeism. This lends support for the credibility of the findings which have shown positive correlations between job burnout and teachers' work absenteeism (e.g. Hargreaves, 2009; Kyriacou and Sutcliffe, 2008; Milstein and Golaszewski, 2005) emphasized the link between beliefs and behaviours, suggesting that high stress among teachers has many negative consequences, including higher than average levels of anxiety and depression and a desire to quit the profession and to use drugs. One explanation for this phenomenon relates to the fact that teachers who have more psychological hardiness are in better positions to handle burnout at work and they can perform well and relationships with their students affect their stress levels significantly.

The findings of this study indicate that a significant correlation was found between emotional intelligence and teachers' work absenteeism. This result is in consonance with prior studies (Fasilizadeh, Oreyzi & Nouri, 2012;Adeyoju, 2009) who found a significant relationship between emotional intelligence and absenteeism. The effect of emotional intelligence on teachers' work absenteeism is well documented in the literature (Najafi & Mousavi, 2012; Adegoroye, 2009). This result is easily explainable bearing in mind that emotional intelligence competences, such as ability to regulate one's feeling, problem solving, intrapersonal and interpersonal skills are highly germane to work success.

Implications of the findings for educational and counselling practice

This study has implication for the work of counselling and educational psychologists. They need to develop a greater awareness and understanding of the various interactions involving variable that predicts teachers' work absenteeism.

For the fact that job satisfaction, job burnout and emotional intelligence are predictors of teachers' work absenteeism, there is

need for the government at all level, parents, teachers, educational planners, decision and policy makers as well as other stakeholder in educational settings to know and ascertain the contributions of these factors on teachers' work absenteeism, thereby making the school to prepare appropriate working condition in finding lasting solution to such in the school.

There is hope that with the improvement of school climate and job satisfaction, the situation can be changed for the better.

The public and private schools should endeavour to provide enabling environment for the staff and students of the schools, so as to reduce the level of teachers' work absenteeism in the school. School management also should motivate their teacher and give attractive welfare packages to enhance their job satisfaction, because their level of job satisfaction has significant influence on teachers' job absenteeism in the school.

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